Vasek
John
Heather

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

SEP 30 2009

RECEIVED
OCT - 5 2009
REMEDIAL BUREAU A

Mr. Robert M. Moore
Director
Air Force Real Property Agency
143 Billy Mitchell Blvd
San Antonio, TX 78226-1816

Re: Records of Decision – Building 43 and Tank Farms 1&3 - Areas of Concern
Former Griffiss AFB, Rome, NY

Dear Mr. Moore:

This is to inform you that after reviewing the Draft Records of Decision (RODs), responsiveness summary and other supporting documents, the U.S. Environmental Protection Agency (EPA) concurs with the final RODs for Building 43 and the Tank Farms 1&3 Areas of Concern, dated September 25, 2009. Therefore, on behalf of EPA, I have co-signed the RODs and will forward a copy to Mr. Michael McDermott of the Air Force Real Property Agency and the New York State Department of Environmental Conservation as requested in your submittal letter.

Please note, that the RODs require implementation of the following:

- Building 43 – no further action for soil, soil vapors and groundwater; and
- Tank Farms 1 & 3 – no further action for soil and soil vapors and a deed restriction prohibiting the use of groundwater because groundwater at the site is still being addressed by the New York State Department of Environmental Conservation Spills Program for residual petroleum constituents.

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

Sincerely,

Walter E. Mugdan, Director
Emergency and Remedial Response Division

cc: Dale Desnoyers, Director
Division of Environmental Remediation, NYSDEC

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S1410
Division of
Environmental Remediation

Building 43 (ST-26)
Tank Farms 1 and 3 (SS-20)

RECORDS OF DECISION

Griffiss Air Force Base
Installation Restoration Program

prepared for:
United States Department of the Air Force
Griffiss Air Force Base
Rome, New York

Final
September 2009

FINAL

RECORD OF DECISION

BUILDING 43 SOURCE REMOVAL AREA OF CONCERN
(IRP SITE ST-26)

FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

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

SEPTEMBER 2009

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APPENDICES

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 Act
BTEX	benzene, toluene, ethylbenzene and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
DFAS	Defense Finance and Accounting Services
EPA	Environmental Protection Agency
FFA	Federal Facility Agreement
FPM	FPM Group, Ltd.
ft	feet
IRP	Installation Restoration Program
MDL	method detection limit
MSL	mean sea level
MTBE	methyl-tertiary butyl ether
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEADS	Northeast Air Defense Sector
NPL	National Priorities List
NYANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
OWS	oil/water separator
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppb	parts per billion
RL	reporting limit
ROD	Record of Decision
RSCO	Recommended Soil Cleanup Objective

ACRONYMS (CONTINUED)

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
TCLP	Toxicity Characteristics Leaching Procedure
UST	underground storage tank
VOC	volatile organic compound
µg/kg	microgram per kilogram
µg/L	microgram per Liter
$\mu g/m^3$	microgram per cubic meter

1.0 DECLARATION

1.1 Site Name and Location

The Building 43 Source Removal Area of Concern (site identification designation ST-26) 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 43 Source Removal Area of Concern (AOC) at the former Griffiss Air Force Base (AFB) in Rome, New York. 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 43 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 standards, criteria, and guidance values (SCGs), and the potential source of groundwater contamination has been removed. In addition, groundwater monitoring has confirmed that contaminant of concern (COC) concentrations are also below SCGs.

1.4 Statutory Determinations

It has been determined that no additional remedial action is necessary at the Building 43 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 43 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 — 25 SEP 09

ROBERT M. MOORE
Director
Air Force Real Property Agency

Date

Walter E. Mugdan — 9/30/2009

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

Date

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 43 Source Removal AOC is located south of the intersection of Turner Street and Brooks Road, topographically adjacent to and upgradient of the T-9 Storage Site. The Building 43 Source Removal AOC location is provided in Figure 1. During base operation, Building 43 served as a fueling station. The station contains three fuel pump islands which, until 1998, dispensed fuel supplied by five underground storage tanks (USTs). The USTs were located northwest of the canopy. In September 1998, the five fuel USTs were removed from service and two above ground storage tanks were temporary installed at the site for Air National Guard use. These tanks were located under the fuel island canopy at Building 43. The site also includes two deicing fluid (propylene glycol) USTs. An underground oil/water separator (OWS) and associated 1,000-gallon underground waste oil skim tank, which were used to collect and treat surface runoff for the station, were located approximately 50 feet west of Building 43. The Building 43 site features are illustrated on Figure 2.

The site-specific geology in the vicinity of Building 43 is characterized by soils consisting of mainly silty sand with gravel. The groundwater in the vicinity of Building 43 exists under unconfined conditions within the unconsolidated aquifer. Observed groundwater levels in piezometers installed in 1997 ranged from 1 to 8.5 ft below ground surface (bgs). The groundwater flow is estimated to be toward the east-southeast. The Building 43 Source Removal AOC Site is located approximately 2,400 ft west southwest of Six Mile Creek. Surface water run-off from the site drains into the storm water system, which in turn discharges to Rainbow Creek and then Six Mile Creek.

The Building 43 Source Removal AOC is associated with soil contamination related to petroleum spills associated with the OWS (corresponding to NYSDEC open spill number 9204543), related to the OWS overflow events, and NYSDEC spill number 9313076, related to the pipeline for the Building 43 tanks. NYSDEC spill number 9312888, associated with the fueling island and assigned in January 1994, has since been closed.

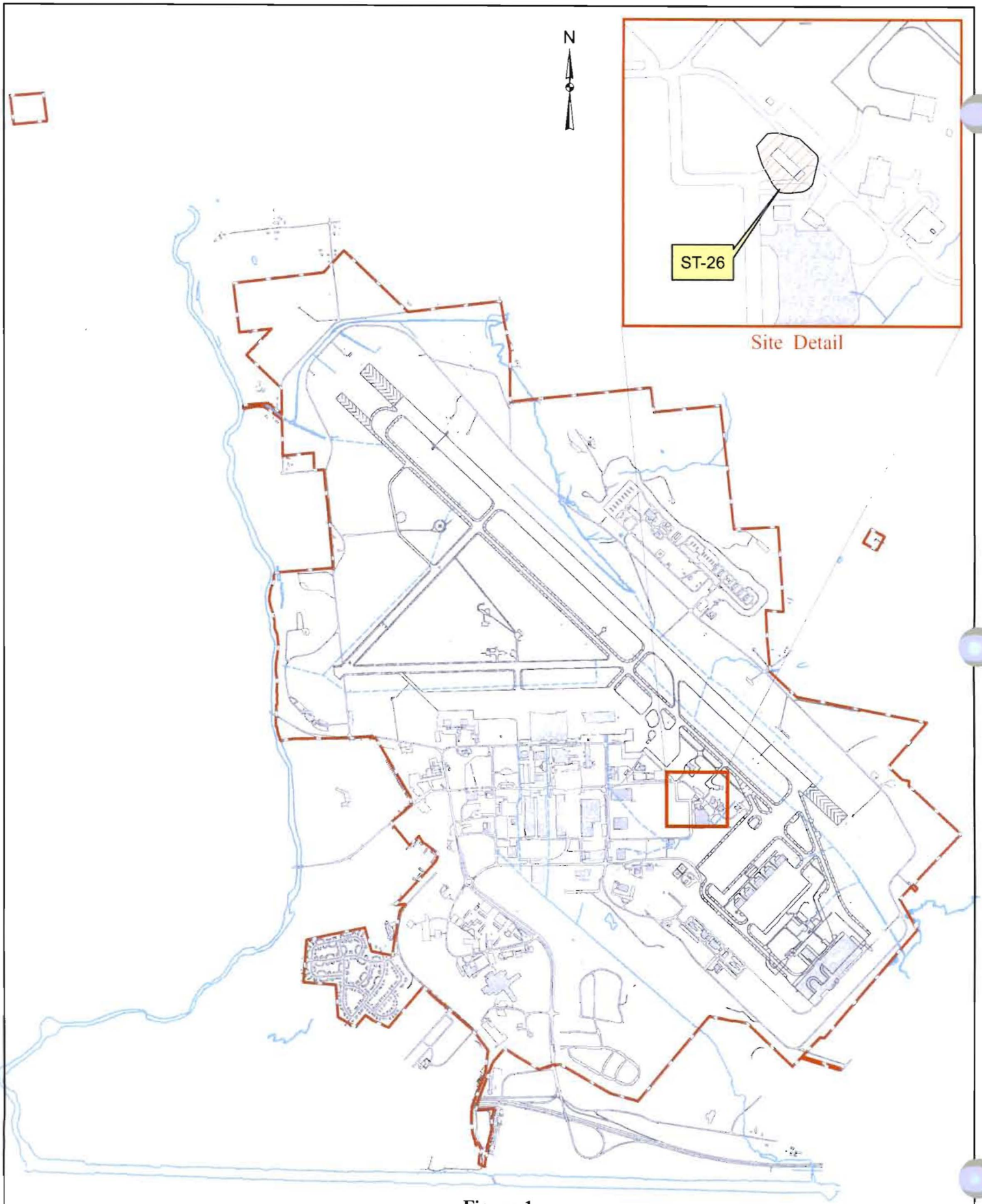
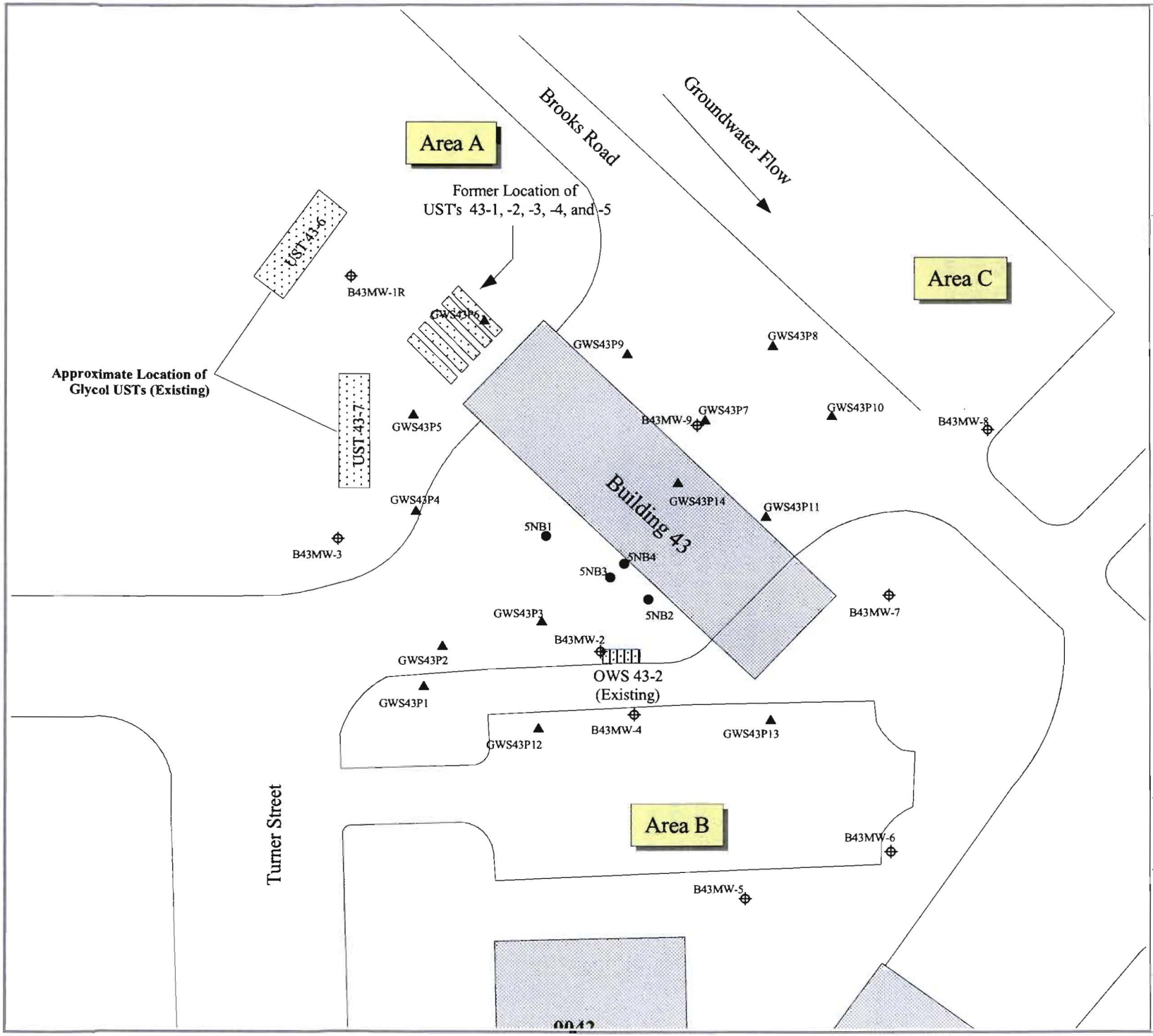


Figure 1
Building 43 Source Removal AOC Site Location Map



N

Legend

- Monitoring Well
- Piezometer
- Composite Soil Sample (2001)
- Road
- Existing Building
- UST
- OWS

8 0 8 16 24 Feet

Figure 2
Building 43 Source Removal AOC
Site Features and Previous Investigations

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 Northeast 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 (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 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 43 Source Removal AOC (AFRPA, July 2009), indicating no further action, was released to the public on June 13, 2009. 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 June 13, 2009. In addition, a 30-day public comment period was held from June 13, 2009 to July 14, 2009 to solicit public input on the final Proposed Plan for the Building 43 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 June 18, 2009 at the Griffiss Institute located at 725 Daedalian Drive, Rome, New York 13441. The date and time of the meeting was 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 43 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 43 Source Removal AOC is one of several sites administered under the Griffiss AFB Installation Restoration Program (IRP). The Building 43 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 43 Source Removal AOC.

Interim actions conducted at the site have eliminated the source of soil and groundwater contamination. The principal contaminants at the Building 43 Source Removal AOC were petroleum-related hydrocarbons dissolved within the groundwater and soil at the site.

2.5 Site Characteristics

Building 43 served as the base gas station and was operational until 1998. The gas station 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 43 Source Removal AOC. Past investigations and UST/OWS Removal Actions (Section 2.5.1), 2005 Source Removal (2.5.2), Groundwater Monitoring (Section 2.5.3), and Soil Vapor Intrusion Evaluation (Section 2.5.4) are summarized below.

2.5.1 Previous Investigations and Removal Actions

2.5.1.1 Predesign Investigation Activities

A predesign investigation was completed at the site in 1994. The objective of this investigation was to evaluate the presence or absence of any residual petroleum-related contamination in the soils and groundwater at the Building 43 site arising from historical releases of fuel from the former USTs, the OWS, and the diesel fuel lines to determine whether remediation was required or if the site could be closed.

This investigation included drilling six soil borings to the vadose zone and installing one monitoring well. The well was sampled and a confirmatory soil sample was collected from one of the borings. Three borings were located in the service area of the refueling station, one of which was near the dispensing pumps and two near the OWS. The other three borings were located in the drainage ditch parallel to Turner Street. The Building 43 site features, including monitoring wells are shown on Figure 2.

All samples collected were analyzed for Volatile Organic Compounds (VOCs) (including methyl-tertiary butyl ether [MTBE]), Semi-Volatile Organic Compounds (SVOCs), metals and polychlorinated bi-phenyls (PCBs). 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 constituents in the resulting water samples. Groundwater samples were also analyzed for total glycols.

Results of the soil analysis indicated concentrations of ten VOCs at levels above Spill Technology and Remediation Series (STARS) Guidance Values (NYSDEC, August 1992), found mostly in the boring installed in the immediate vicinity of the OWS (B43MB-1), at intervals from 4 to 6 ft bgs and 8 to 10 ft bgs. Soil samples collected within the ditch were found to have no contaminants above guidance values. PCBs were detected in four soil samples ranging from 20 to 130 microgram per kilogram (µg/kg), well below the ARAR of 10,000 µg/kg.

In the groundwater sample collected from well B43MW-2, (converted from soil boring B43MB-1) installed adjacent to the OWS, eleven VOCs and three SVOCs were detected at concentrations above the NYS Groundwater SCGs. These results indicated that the groundwater beneath the

Building 43 Site had been impacted by the historical releases of fuels from the Building 43 Source Removal AOC, from the OWS, diesel fuel line, other petroleum storage or delivery systems at the site, the former USTs, or any combination thereof.

The Predesign Investigation concluded that the removal of residual contaminated soil identified during the investigation was to be implemented under the NYSDEC Spill Program at the Building 43 site and not as a source removal action under the FFA (Law, February 1995).

2.5.1.2 Site Investigation – 1997 and 1998

A site investigation was performed in 1997 to determine the nature and extent of the soil and groundwater contamination at the Building 43 Source Removal AOC. The investigation included a soil gas survey of 33 locations, Geoprobe® soil sampling at 26 locations, and the installation and sampling of 14 temporary piezometers. The site was divided into three Areas; A, B, and C. Area A encompasses an area from Brooks Road northwest of Building 43 and south to Turner Street. Area B is from Turner Street south of Building 43 to the northeast corner of the building. Area C is the area northeast of Building 43 and includes a portion of Brooks Road.

The soil gas survey analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX); only one location north of the pump islands (SGB43-10) reported a detection of toluene at 15 parts per billion (ppb).

Subsequent soil sampling indicated exceedances of the STARS Guidance Values for VOCs and SVOCs for the soil in the same area as the soil gas survey exceedance, north-northeast of the fueling station, and also in the soil south-southeast of the OWS at depths mainly confined between 2 and 6 ft bgs.

- Area A soil sampling showed one SVOC detection above STARS Guidance Values.
- Area B soil sampling indicated four SVOC detections above STARS Guidance Values.
- Area C soil sampling resulted in 11 locations with SVOC and three locations with VOC detections above STARS Guidance Values.

Groundwater samples collected from the piezometers indicated no VOC or SVOC exceedances of the NYS Groundwater SCGs. However, a resampling of the existing well (B43MW-2) installed during the Predesign Investigation reported ten VOCs and one SVOC at levels exceeding the NYS Groundwater SCGs.

An additional site investigation was performed in 1998 to further delineate the extent of soil contamination and to assess the possibility of leakage from fuel USTs 43-1 through 43-5. Four soil borings were completed near the OWS, from which five soil samples were collected and analyzed for VOCs and SVOCs. The sample collected from the groundwater interface of one boring reported levels of seven VOCs and two SVOCs at concentrations above the STARS Guidance Values; within the vadose zone, this boring also reported six VOC exceedances. An additional 12 borings were completed adjacent to the USTs containing deicing fluids (propylene glycol). Samples were analyzed for glycols; however none were detected.

2.5.1.3 Storm Sewer Installation and Excavation Activity

In October 1997, a 60-inch diameter storm sewer was installed along Brooks Road north of the fueling station. During this process, an area of contaminated soil approximately 18 ft wide by 10 ft deep was excavated. The contaminated soil was separated from the noncontaminated excavated soil and brought to the landfarm on Apron 1 for bioremediation. The storm sewer was installed on a bed of crushed rock and the trench was backfilled with clean soil. This excavation was not associated with any removal action and no endpoint confirmation samples were collected. Therefore, soil contamination from either the sides or the bottom possibly remained in this excavation area. Contamination in this area was later excavated in 2005; this removal is discussed in detail in the Source Removal section.

2.5.1.4 Underground Storage Tank Removal and Excavation Activities

A three-month temporary closeout was performed on USTs 43-1 through -5 in December 1998, whereby either gasoline (USTs 43-1 through -3) or diesel fuel (USTs 43-4 and -5) was pumped out, the pipelines were capped, and the vents left open. Approximately 1,000 gallons of residual gasoline and 450 gallons of residual diesel fuel were removed from the USTs (FPM Group, Ltd. [FPM]/PEER Consultants, P.C. [PEER], January 2003).

A removal action of the Area A USTs started in September 2000. 1,500 gallons of petroleum/water was removed from the tanks and transported to Industrial Oil Tank Service Corporation, Oriskany, NY, for recycling. Once the USTs were free of hazardous liquids, they were removed and disposed of off-site. The soil was monitored using a photoionization detector (PID) during the tank removal. Contaminated soils were transported to the Apron 1 landfarm. Overexcavation was performed to remove the residual contaminated soil. Once the USTs were removed and the initial overexcavation was complete, composite soil samples were collected from the sidewalls and the bottom of the excavation pit and analyzed for VOCs and SVOCs.

Due to reported exceedances in two sidewall and one bottom soil sample, overexcavation of Area A was conducted in October 2000. The soil was retested and VOC contamination still existed on the south sidewall which required continued overexcavation. The overexcavation was accomplished on October 10, 2000 and a total of 199 cubic yards of contaminated soil was removed and transported to the Alert Apron Landfarm. Soil testing was performed once the second overexcavation was complete and the results confirmed that Area A was successfully remediated. The site was restored using 362 cubic yards of cobbles up to the top of the water table and 1,785 cubic yards of bioremediated soil to ground surface. About 152 tons of topsoil were placed, compacted, graded and seeded. The site was completely restored on October 11, 2000.

Contaminated soil excavation was initiated on October 12, 2000 in the area south of Building 43 (referred to as Area B) and continued until October 25, 2000. A PID was used to monitor the quality of the soil during the excavation. The contaminated soil was transported directly to the Alert Apron Landfarm. As soil removal continued, composite samples were collected from the walls and floor of the excavation and analyzed for VOCs and SVOCs. In all, twenty soil

samples were collected during the excavation activities. The analytical results of the initial round of Area B soil sampling found that the excavation's north, south and bottom samples indicated SVOC exceedances of the STARS Guidance Values.

To address the SVOC contamination, further overexcavation was conducted. Overexcavation soil samples were then collected and analyzed for VOCs and SVOCs. Continued SVOC exceedances were reported at three sample locations and further overexcavation was conducted. Between October 25 and 31, 2000, the Area B excavation was backfilled to the existing grade using approximately 755 cubic yards of bioremediated soil.

2.5.1.5 Oil / Water Separator Removal

Following the excavation at Area B, in November 2000, the associated OWS was removed. Two soil samples were collected from the OWS excavation and analyzed for VOCs, SVOCs, PCBs, and metals (FPM/PEER, January 2003). Results indicated toluene, barium, calcium, and lead exceedances. 218 cubic yards of contaminated soil were removed from the site and transported to the Alert Apron Landfarm. Additionally, 65 cubic yards of clean rubble and 30 cubic yards of contaminated rubble were removed from the site, staged temporarily at the Alert Apron, and subsequently disposed of off-site.

Monitoring well B43MW-2 was removed to facilitate removal of contaminated soil in the excavated pit. Ten composite soil samples were collected from the excavation pit. Results indicated 22 VOC exceedances in the bottom and four in the sidewalls of the excavation pit. These contaminated areas were later overexcavated in December 2000. The soil was moved to the Alert Apron Landfarm and additional soil sampling was performed with the collection of two more composite samples. Results indicated one SVOC detection exceeding its respective STARS Guidance Value. OWS 43-2 was installed in the same excavation pit from which OWS 43-1 was removed. Prior to the installation, cobblestone and runner crush were placed in the excavated pit and compacted. The 1000-gallon double-wall fiberglass OWS was then installed along with associated fittings, gauges, vent pipes, vent supports, interstitial monitors and a high-level oil gauge. The rest of the pit was backfilled with sand.

Further investigation was conducted in June 2001 at isolated locations within Area B. Three test pits were excavated at locations adjacent to the newly installed OWS to reestablish the edges of contaminated soil identified during the 2000 remedial activities. Excavated material from the test pits was transported to the Alert Apron Landfarm for bioremediation. Confirmatory sampling was performed at all three test pits by collecting one bottom and one sidewall sample per test pit. At one sample location several VOCs were detected, but at concentrations well below the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs).

Two locations indicated SVOC exceedances. Based on analytical results from the test pit samples and field observations during the removal of the OWS in 2000, exploratory excavations were conducted.

During excavations, two 4-inch fiberglass fuel lines (supply and return) were encountered about 4 ft bgs running parallel to the south edge of the canopy. Strong petroleum odors were noted during the removal and excavation. Approximately 55 cubic yards of rubble, including asphalt, were excavated, staged at the Alert Apron Landfarm, and subsequently disposed of off-site. The fuel lines were also staged and later disposed of off-site as rubble. About 447 cubic yards of contaminated soil were taken to the Apron 1 Landfarm and stockpiled for bioremediation. The excavation extended west until clean fill at Area A was encountered, east to the northeast corner of the canopy (Test Pit 1), south to the OWS excavation clean fill, and north to the canopy. Fuel lines were cut and capped at the edge of the canopy.

Four composite soil samples (5NB1, 5NB2, 5NB3, and 5NB4, on Figure 2) were collected from the eastern side of the excavation near the canopy and analyzed for VOCs and SVOCs. Analytical results from the composite samples indicated no VOC or SVOC detections exceeding their respective TAGM 4046 RSCOs. During this round of remedial activities, approximately 282 cubic yards of additional contaminated soil excavated from the Building 43 Source Removal AOC were transported to the Alert Apron Landfarm. 53 cubic yards of clean rubble and asphalt were generated, staged temporarily at the Alert Apron staging area, and subsequently disposed of off-site.

Final restoration was completed in July 2001 and included backfilling excavated areas with 123 cubic yards of bioremediated soil. 40 tons of crushed rock was placed as a sub-base in the excavation adjacent to Building 43 and a top slab of 4000-psi concrete was poured. Approximately 43 tons of topsoil was spread at areas requiring seeding and grading. Final site restoration was completed by the application of grass seed followed by mulch.

2.5.2 2005 Source Removal

In June 2005 investigatory test pitting took place at the B43MW-9 location, which exhibited perched contamination during the well installation, and showed no contamination from the saturated zone during groundwater sampling. Prior to the test pitting event B43MW-9 was decommissioned by FPM Group, Ltd.

Test pitting was initiated at the former B43MW-9 location and continued southwest toward the pump island and fueling apron, then north and east under the trench drain area. During the excavation, contamination was identified surrounding the former B43MW-9 location but appeared to be confined by a surrounding soil layer. Contamination was followed and excavated northerly and easterly from former B43MW-9 and was mostly limited to a layer near the well location that was approximately 5 ft thick. The area east of former monitoring B43MW-9 appeared to be the source area and contained contamination that was 6 ft thick beneath the trench drain and below the elbows for fuel piping to the center pump island. The trench drain was excavated and removed to facilitate soil removal.

Soil excavation continued beneath the trench drain area until soil screening (PID, staining, petroleum odor) indicated that no contamination remained. The excavation consisted of two different depths. The south area (Excavation Area A, Figure 3) of the excavation was approximately 5 ft deep and the north area (Excavation Area B) was approximately 10 ft deep.

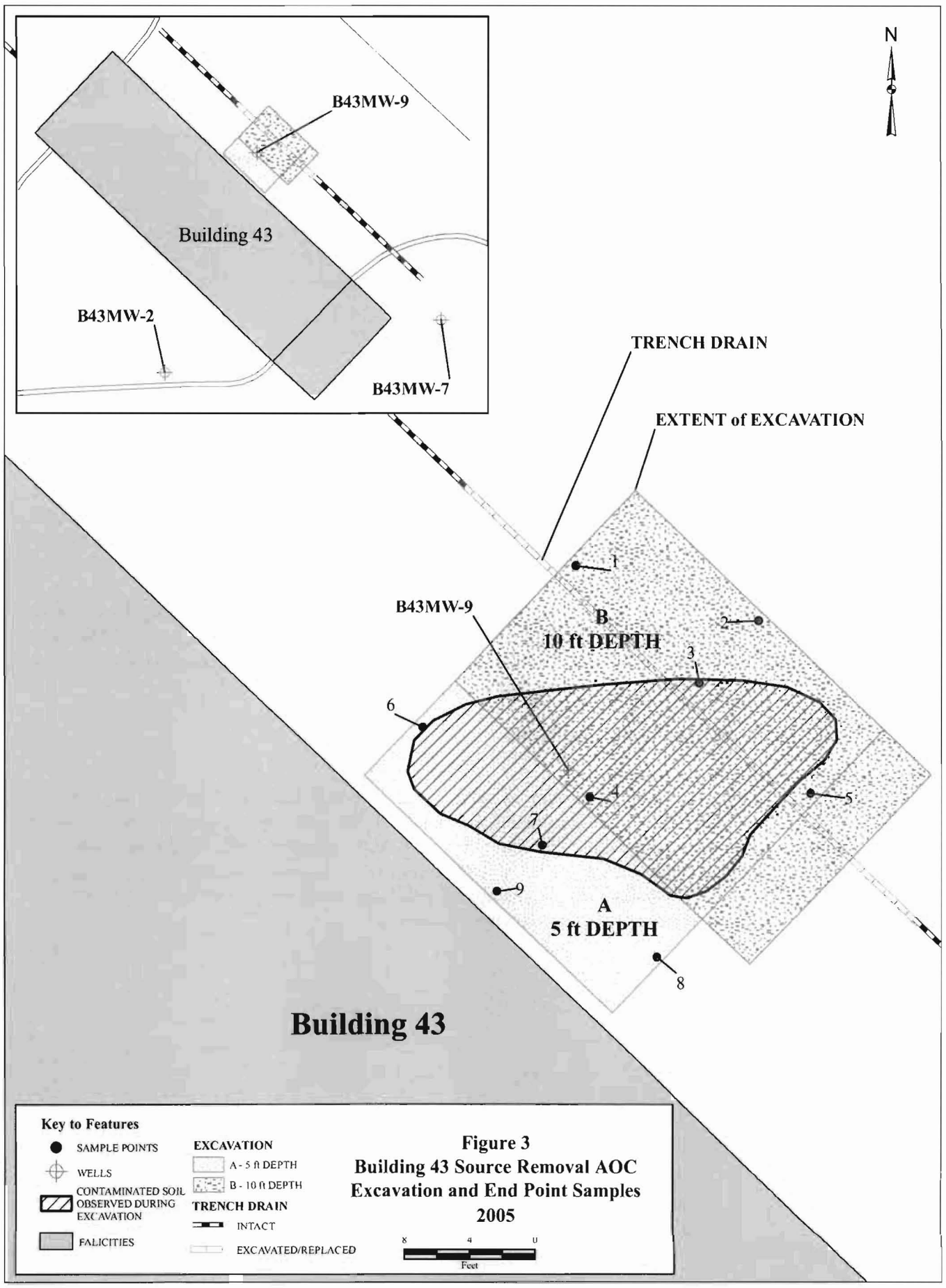


Figure 3
Building 43 Source Removal AOC
Excavation and End Point Samples
2005

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Composite and grab soil samples were collected and analyzed for VOCs only from each sidewall and bottom of the excavations to confirm the effectiveness of the removal action. Additional soil grab samples were collected from the excavation at locations where field screening indicated that contamination was previously present to confirm that all contamination was removed.

Of the eighteen soil samples collected, one grab sample from the south wall of Excavation B indicated an exceedance of MTBE (200 parts per billion (ppb)) that was within the same order of magnitude of recommended soil clean-up objectives (120 ppb). The excavation was then backfilled with offsite material to grade and the site was restored. Figure 3 shows the excavation areas and soil sampling locations.

2.5.3 Groundwater Monitoring

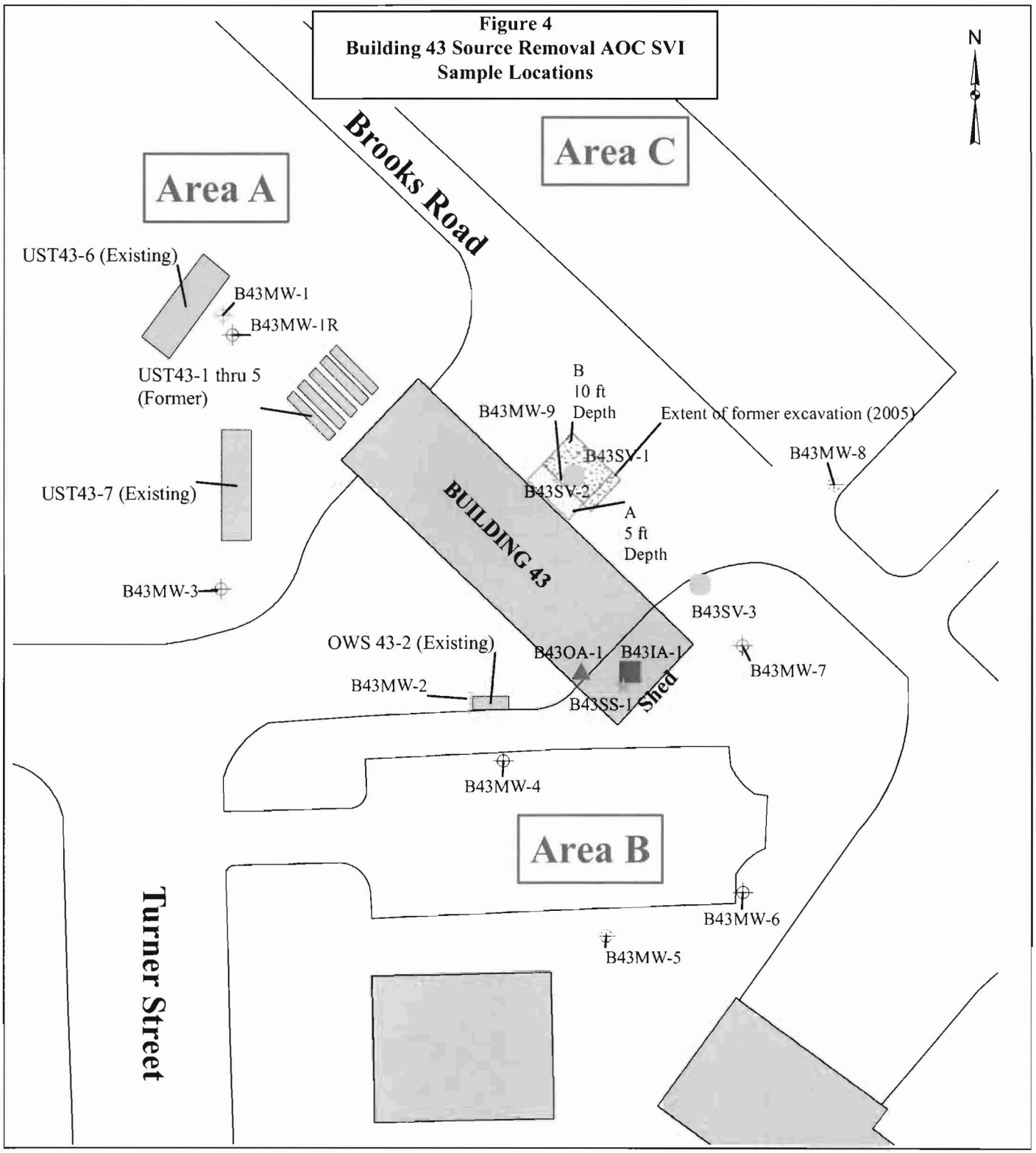
Four groundwater monitoring events were performed in November 2003, March 2004, July 2004, and September 2004. The focus of groundwater monitoring at the Building 43 Source Removal AOC was to assess the groundwater contamination at the area downgradient of Building 43 and Area C and to characterize contamination and delineate localized groundwater flow. The sampling network at the Building 43 Source Removal AOC consisted of eight monitoring wells; two existing wells (B43MW-1R and -3) and six new wells installed in November 2003 (B43MW-4 through -9).

Since November 2003, no groundwater exceedances were reported during sampling events. The Long-Term Monitoring Report for the Petroleum Source Removal AOCs dated August 2005 was issued to the NYSDEC and the EPA recommending closure of NYSDEC spill numbers 9204543 and 9313076. Spill closure is pending and anticipated to occur during 2009.

2.5.4 Soil Vapor Intrusion Evaluation

Although known contamination sources have been removed from the Building 43 Source Removal AOC, the Air Force evaluated the potential for soil vapor intrusion (SVI). SVI sampling occurred at the Building 43 Source Removal AOC in March 2007. Soil vapor, sub-slab vapor, indoor, and outdoor samples, as illustrated on Figure 4, were collected and analyzed for VOCs using the EPA Method TO-15. Sampling results are provided in Tables 1 and 2. Results indicate that all detections are below screening criteria.

Figure 4
Building 43 Source Removal AOC SVI Sample Locations



Key to Features

SVI Sample Locations
- Indoor
- Outdoor
- Soilvapor
- Subslab

Excavation
- A - 5 ft. Depth
- B - 10 ft. Depth

- Road
- Existing Facilities

Wells
- Decommissioned
- Monitoring

40 20 0 40 80
Feet

Table 1
Building 43 SRA Detected Soil Vapor and Sub-Slab Vapor Analytical Results

Sample Location	B43SS-1	B43SV-1	B43SV-2	B43SV-3
Sample ID	B43SS0101AA	B43SV0105AA	B43SV0204AA	B43SV0305AA
Sample Type	Sub Slab	Soil Vapor	Soil Vapor	Soil Vapor
Sample Date	16 March 2007	16 March 2007	16 March 2007	16 March 2007
Sample Depth (ft bgs)	1	5	4	5
Sample Collection Duration (hr)	1	1	1	1
VOCs (TO-15) in microgram per kilogram (µg/ m^3)				
1,2,4-trimethylbenzene	1.8	10	2.6	9.2 M
1,3,5-trimethylbenzene	U	3.0	0.75	2.0 M
2,2,4-trimethylpentane	0.76	U	75	0.71 M
4-ethyltoluene	U	3.2	0.50 F	2.8 M
acetone	86	190	86	940
benzene	5.5	0.39 F	1.4	0.97 M
carbon disulfide	3.7	U	U	U
chloromethane	0.40	0.76	0.52	0.88 M
cyclohexane	8.7	U	3.5	1.6 M
ethylbenzene	0.66	5.9	9.3	140 M
freon 11	0.97	0.86	0.80 F	0.86 M
freon 12	1200	1.7	1.7	1.8 M
heptane	7.1	1.2	2.7	40
hexane	27	U	1.0	0.64 M
isopropyl alchol	U	3.9	U	U
m,p-xylene (sum of isomers)	1.8	12 F	21 F	370
methylene chloride	1.6	0.78	U	0.71 M
o-xylene	0.57 F	4.9	7.3	65
tetrachloroethylene (pce)	1.9	U	U	U
tetrhydrofuran	2.6	U	U	U
toluene	7.8	1.8	3.1	8.0 M

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 2
Building 43 SRA Detected Indoor and Outdoor Analytical Results

Sample Location	B43IA-1	B43OA-1
Sample ID	B43IA0105AA	B43OA0105AA
Sample Type	Indoor	Outdoor
Sample Date	16 March 2007	16 March 2007
Sample Height (ft above ground)	5	5
Sample Collection Duration (hr)	24	24
VOCs (TO-15) in µg/m^3		
acetone	8.4	11.7 J
benzene	0.357 F	0.357 F
carbon tetrachloride	0.256	0.320
chloromethane	0.777	0.567
freon 11	1.14	0.857
freon 12	2.36	1.71
m,p-xylene (sum of isomers)	0.530 F	U
methylene chloride	0.989	0.671
tetrachloroethylene (pce)	U	4.0
toluene	0.536 F	0.689

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 43 Source Removal AOC are industrial/commercial.

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 43 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.

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FPM, *Field Sampling Plan, Long Term Monitoring Program at the Former Griffiss Air Force Base,* June 2003.

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NYSDEC, *Spill Technology and Remediation Services (STARS) Memo No. 1: Petroleum-contaminated Soil Guidance Policy*, August 1992.

NYSDEC, *Determination of Soil Clean-up Objectives and Clean-up Levels, Division of Technical and Administrative Guidance Memorandum DHWR*, January 1994.

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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.

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 June 13, 2009, AFRPA, following consultation with and concurrence of the EPA and NYSDEC, released for public comment the proposed plan for the Building 43 Source Removal AOC located at the former Griffiss AFB. The release of the proposed plan initiated the public comment period, which concluded on July 14, 2009.

During the public comment period, a public meeting was held on June 18, 2009 at the Griffiss Institute located at 725 Daedalian Drive, Rome, New York 13441. The selected remedy for the Building 43 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 43 Source Removal AOC.

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

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FINAL

RECORD OF DECISION

TANK FARMS 1 AND 3 SOURCE REMOVAL AREA OF CONCERN
(IRP Site SS-20)

FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

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

SEPTEMBER 2009

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ACRONYMS

AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
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
AVGAS	aviation gasoline
bgs	below ground surface
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EE/CA	Engineering Evaluation/Cost Analysis
EPA	United States Environmental Protection Agency
FFA	Federal Facilities Agreement
ft	feet
IRA	Interim Remedial Action
IRP	Installation Restoration Program
JP-4	jet propulsion fuel grade 4
MDL	method detection limit
MOGAS	automotive gasoline
MTBE	methyl tert butyl ether
NCP	National Contingency Plan
NEADS	Northeast Air Defense Sector
NPL	National Priorities List
NYANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
ORC®	Oxygen Release Compound
PAH	polycyclic aromatic hydrocarbon
PID	photoionization detector
ppb	parts per billion
ppm	parts per million

ACRONYMS (CONTINUED)

RL	reporting limit
ROD	Record of Decision
RSCO	Recommended Soil Cleanup Objective
SAC	Strategic Air Command
SARA	Superfund Amendments and Reauthorization Act
SCGs	Standards, Criteria, and Guidance Values
SE	Supplemental Evaluation
SI	site investigation/inspection
STARS	Spill Technology and Remediation Series
SVE	Soil Vapor Extraction
SVI	soil vapor intrusion
SVOC	semivolatile organic compound
TAGM	Technical and Administrative Guidance Memorandum
TCLP	Toxicity Characteristic Leaching Procedure
UST	underground storage tank
VOC	volatile organic compound
µg/kg	microgram per kilogram
µg/L	microgram per Liter
$\mu g/m^3$	microgram per cubic meter

1.0 DECLARATION

1.1 Site Name and Location

The Tank Farms 1 and 3 Source Removal Area of Concern (AOC) (site identification designation SS-20) 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 no further action alternative for soils at the Tank Farms 1 and 3 Source Removal Area of Concern (AOC) at the former Griffiss Air Force Base (AFB) in Rome, New York. 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 of which is located on the Air Force Real Property Agency (AFRPA) website 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 of no further action for soils has been selected by the United States Air Force (Air Force) in conjunction with the United States Environmental Protection Agency (EPA) and with the concurrence of the New York State Department of Environmental Conservation (NYSDEC) pursuant to the Federal Facility Agreement (FFA).

1.3 Description of the Remedy

The Selected Remedy of no further action for soils for the Tank Farms 1 and 3 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 standards, criteria, and guidance values (SCGs), and the potential source of groundwater contamination has been removed. Residual levels of petroleum-related constituents in groundwater at this site are being evaluated under the NYSDEC Petroleum Spills Program, under NYSDEC spill number 9111733.

1.4 Statutory Determinations

It has been determined that no additional remedial action is necessary at the Tank Farms 1 and 3 Source Removal AOC. The Air Force and EPA, with concurrence from the NYSDEC, have determined that the remedy for no further action for soils is warranted for this site.

1.5 Authorizing Signatures

On the basis of the remedial investigations and successfully completed removal actions performed at the Tank Farms 1 and 3 Source Removal AOC, there is no evidence that residual soil 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 — 25SEP09

ROBERT M. MOORE
Director
Air Force Real Property Agency

Date

Walter E. Mugdan — 9/30/2009

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

Date

2.0 DECISION SUMMARY

2.1 Site Name, Location, and Description

The former Griffiss AFB, located in Oneida County in central New York State, covered approximately 3,552 contiguous acres in the lowlands of the Mohawk River Valley in the city of Rome. Topography within the valley is relatively flat, with elevations on the former Griffiss AFB ranging from 435 to 595 feet above mean sea level. 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.

The Tank Farms 1 and 3 Source Removal AOC is a grass-covered area located southeast of the former Building 112 bounded by Brooks Road to the south, Otis Street to the east, and Moody Street to the west (Figures 1 and 2). The immediate area of the Tank Farms 1 and 3 site has little or no change in topography, and roughly 70 percent of the surface is covered by grass or permeable soils and gravel. Tank Farms 1 and 3 were storage facilities for aviation gasoline (AVGAS), jet propulsion fuel grade 4 (JP-4), automotive gasoline (MOGAS), diesel fuel, fuel oil, and deicing fluid.

Periodic spills and leaks occurred during the operating years from 1943 to 1985. In 1984, five inches of fuel were detected on the groundwater table and thus, Tank Farms 1 and 3 were deactivated.

All above-ground and below-ground tanks associated with Tank Farms 1 and 3 were removed in 1985, except for the three bulk fuel aboveground storage tanks (ASTs) at Tank Farm 3, which were removed in 1988 (AST 161, 162, and 163).

The 50,000-gallon deicing underground storage tanks (USTs) at Tank Farm 1 (UST 5885) was removed and destroyed during the demolition of the tank farms. The 40,000 gallons of ethylene glycol was drained from UST 5885 and transported to the fire training facility, F-6365.

The Tank Farms 1 and 3 site is designated as a Source Removal AOC based on the presence of soil contamination identified above the groundwater table related to the previously removed storage tanks. Residual levels of petroleum-related constituents in groundwater in this area are being evaluated under the NYSDEC Petroleum Spills Program, under NYSDEC spill number 9111733.

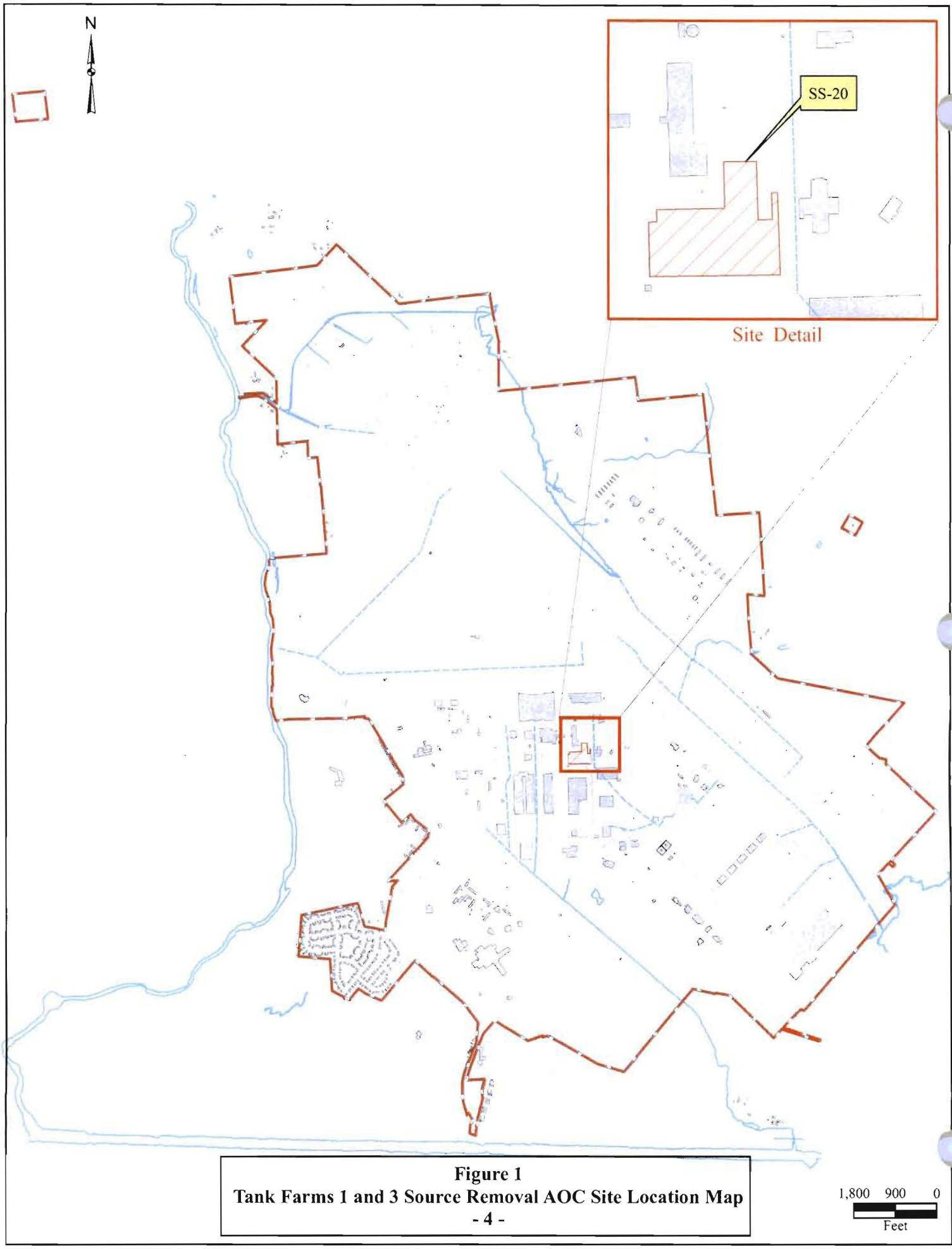
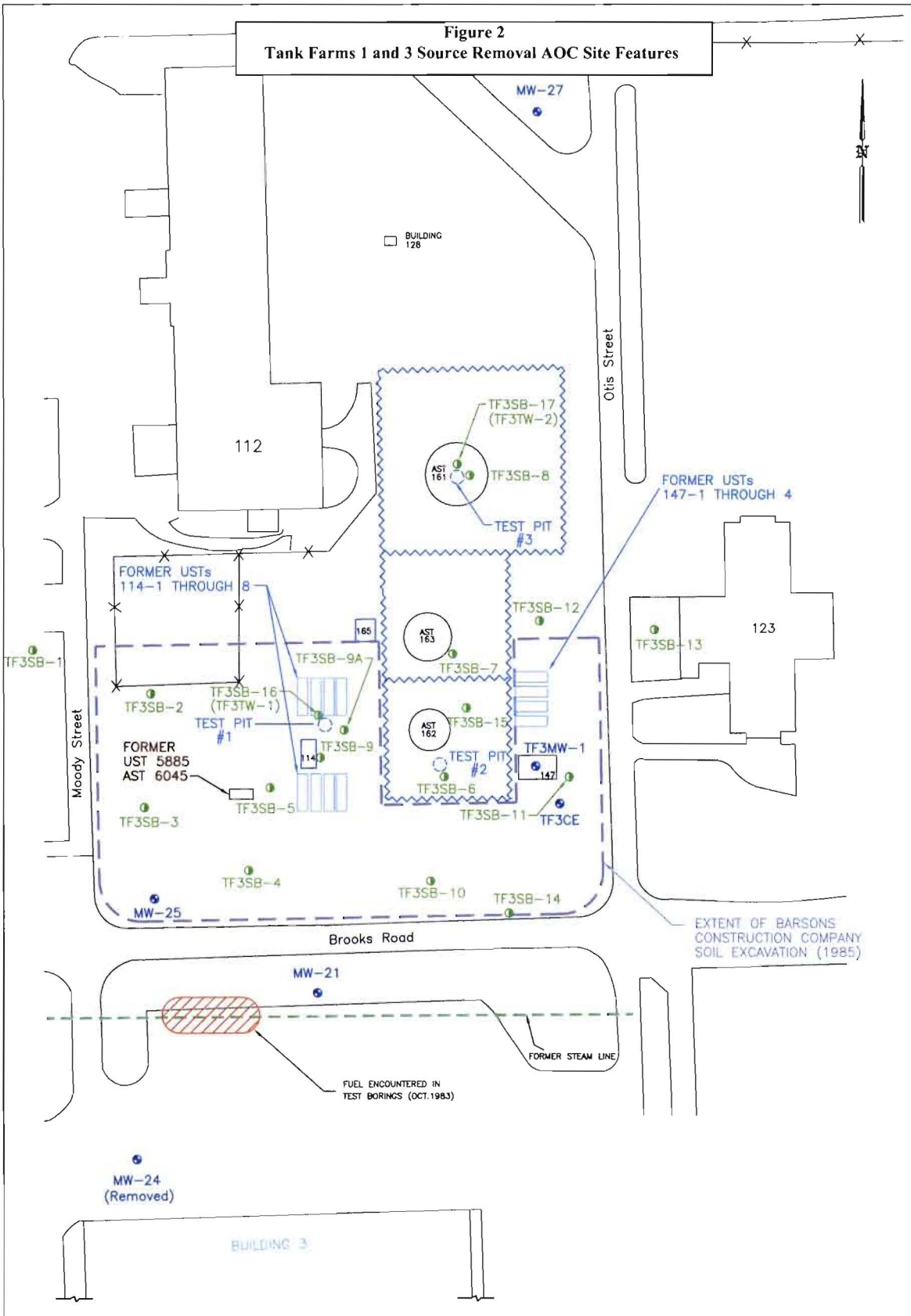


Figure 1
Tank Farms 1 and 3 Source Removal AOC Site Location Map

Figure 2
Tank Farms 1 and 3 Source Removal AOC Site Features



LEGEND

MW-21 — MONITORING WELL LOCATION

TF3SB-3 — SOIL BORING LOCATION

147 — DEMOLISHED OR REMOVED STRUCTURE

STEAM LINE BORINGS EXHIBITING FUEL CONTAMINATION

TEST PIT

SOURCE: PREDESIGN INVESTIGATION (FEBRUARY 1995) AND ADDENDUM TO EE/CA (SEPTEMBER 1995)

0 50 100
SCALE IN FEET

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 Northeast 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 (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 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 Federal Facility Agreement under Section 120 of CERCLA.

2.3 Community Participation

A proposed plan for the Tank Farms 1 and 3 Source Removal AOC (AFRPA, July 2009), indicating no further action for soils, was released to the public on June 13, 2009. 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 June 13, 2009. In addition, a 30-day public comment period was held from June 13, 2009 to July 14, 2009 to solicit public input on the final Proposed Plan for the Tank Farms 1 and 3 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 June 18, 2009 at the Griffiss Institute located at 725 Daedalian Drive, Rome, New York 13441. The date and time of the meeting was 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 Tank Farms 1 and 3 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 the Area of Concern

The Tank Farms 1 and 3 Source Removal AOC is one of several sites at the former Griffiss AFB. The site included both previously contaminated soil in the unsaturated zone and previously contaminated groundwater at the site. No further action for soils is recommended for the Tank Farms 1 and 3 Source Removal AOC. Residual levels of petroleum-related constituents in groundwater in this area are being evaluated under the NYSDEC Petroleum Spills Program, under NYSDEC spill number 9111733 as further described in Section 2.5.3 (and thus this document does not address or select a remedy for groundwater contamination related to those petroleum constituents but defers to the State program).

Interim actions conducted at the site have eliminated the source of soil and groundwater contamination. The principal threat wastes at the Tank Farms 1 and 3 Source Removal AOC were petroleum-related hydrocarbons dissolved within the groundwater at the site.

2.5 Site Characteristics

System operations and residual quantities of AVGAS and JP-4 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 soil or soil vapor at the Tank Farms 1 and 3 Source Removal AOC. Past investigations and the Interim Removal Action at the Tank Farms 1 and 3 Source Removal AOC (Section 2.5.1), interim remedial action (IRA) (Section 2.5.2), Groundwater Monitoring (Section 2.5.3), and Soil Vapor Intrusion Evaluation (Section 2.5.4) are summarized below.

2.5.1 Previous Investigations and Removal Actions

2.5.1.1 Preliminary Investigations and Removal Actions

In November 1981, the Base Fuels Management Group verified that 2 to 3 gallons per day of JP-4 leaked from eight valves at Tank Farm 3 for an undetermined amount of time. In the fall of 1982, investigative soil borings were installed south of Brooks Road and the former Tank Farm 1 in association with the construction of a steam line. The only available description of these borings is that "measurable quantities of what appeared to be light fuel product were observed in the groundwater". In October 1983, 30 test borings were installed along the route of the steam line. An unknown number of soil and groundwater samples were collected and submitted for laboratory analysis, and indicated detectable concentrations (exact concentrations also unknown) of lead, benzene, and xylene in the groundwater, with lesser concentrations of the same constituents measured in soil.

Monitoring well TF3CE was also installed at that time, and indicated the presence of free product. When the well was sampled again in the summer of 1984, no free product was observed.

In the summer of 1984, 33 temporary wells and eight permanent wells were installed to delineate the subsurface distribution of fuel product and the site-specific groundwater flow directions. Two potential sources of contamination of the groundwater were identified: (a) numerous small spills and leaks from the Tank Farms, and (b) a former truck maintenance shed located north of Building 3.

In November 1985, all USTs and ASTs were removed, except for the bulk fuel ASTs 161, 162, and 163 (removed in 1988). While underground piping was being cut and capped at Tank Farm 1, a 4-inch pipe was found to be full of AVGAS.

At Tank Farm 3, three inches of fuel were on the floor of Building 147 (the Tank Farm 3 pumphouse), and fuel was identified in a header pipe. Approximately 1,200 gallons of fuel were removed.

A soil removal action was performed at Tank Farms 3 in December 1985, when 60,000 cubic yards of contaminated soil were removed and replaced with clean fill.

The soil removal depth extended to the water table but did not include the foundations of Buildings 114 and 165 (Tank Farm 1 pumphouses), 147 (Tank Farm 3 pumphouse), or the berms of the bulk fuel ASTs. Endpoint sampling was not conducted, but headspace screening was performed to identify the limits of the contaminated soil (a few samples showed headspace readings above 5 parts per million volume [ppmv], but most were non-detect).

In 1988, the bulk fuel ASTs and associated underground facilities were removed along with contaminated soils. The soil berms surrounding the bulk fuel ASTs were used to fill the excavated areas. Additional cover soil was placed above the former berm material to bring the excavated area to grade.

In 1993 and 1994, monitoring wells downgradient of Tank Farms 1 and 3 were monitored for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). The analytical results indicated no exceedances of the New York State Groundwater SCGs. Data from an upgradient monitoring well also contained no detected VOCs or SVOCs.

2.5.1.2 Predesign Investigation

During the fall of 1993 and spring of 1994, a Predesign Investigation was performed to determine whether remediation of soils and/or groundwater was required, or if closure of the site should be recommended. Fifteen soil borings were installed (TF3SB-1 through -15), and two soil samples were collected from each boring, one from the vadose zone, and one from the groundwater interface. The soil samples were assessed for leachability of contaminants by first processing the soil samples by EPA Method SW1311 Toxicity Characteristic Leaching Procedure (TCLP) and then analyzing for constituents in the resulting water samples.

Results of the soil analysis indicated no exceedances for VOCs or SVOCs in the vadose zone. However, concentrations of 14 VOCs at levels above Spill Technology and Remediation Series (STARS) Guidance Values (NYSDEC, August 1992) were found at the groundwater interface (depths ranging from 13 to 16 ft bgs), mostly in four borings (TF3SB-1, -9, -11, and -14). Many of the highest concentrations were found in boring TF3SB-1 from 10 to 12 ft bgs (this location was converted to a permanent monitoring well, TF3MW-1, located at the former Building 147 [Tank Farm 3 pumphouse]).

TF3MW-1 was sampled and analyzed for VOCs (including methyl-tertiary butyl ether (MTBE), SVOCs, and metals. The groundwater sample collected at TF3MW-1 indicated only slightly elevated concentrations of naphthalene and polyaromatic hydrocarbon (PAH) compounds (these chemicals are SVOCs). The analytical results indicated no exceedances of the New York State Groundwater SCGs. Data from an upgradient monitoring well MW-27 did not detect VOCs or SVOCs.

Samples collected from adjacent borings at the groundwater interface did not exhibit similar levels of petroleum-related contamination, suggesting that the four boring locations may have

been isolated "hot spots" rather than indicators of widespread contamination. In addition, the highest detected concentrations of two SVOCs that exceeded soil Guidance Values were also found in boring TF3SB-1. Two metals, cadmium and lead, were detected at concentrations above Guidance Values in one soil boring only.

Free product was reported at two temporary wells located at the site, TF3SB-8 and -9A. However, no petroleum odors were reported during drilling activities at these locations and the analytical results for the soil samples collected at each boring were not indicative of significant levels of petroleum constituents, although, the headspace analysis at TF3SB-9A was slightly elevated (33 ppmv) at the groundwater interface.

2.5.1.3 Engineering Evaluation / Cost Analysis (1995)

An Engineering Evaluation / Cost Analysis (EE/CA) was prepared in 1995 in support of environmental review and administrative record requirements for the documentation of a removal action selection. The preferred alternative identified for the Tank Farms 1 and 3 Source Removal AOC included:

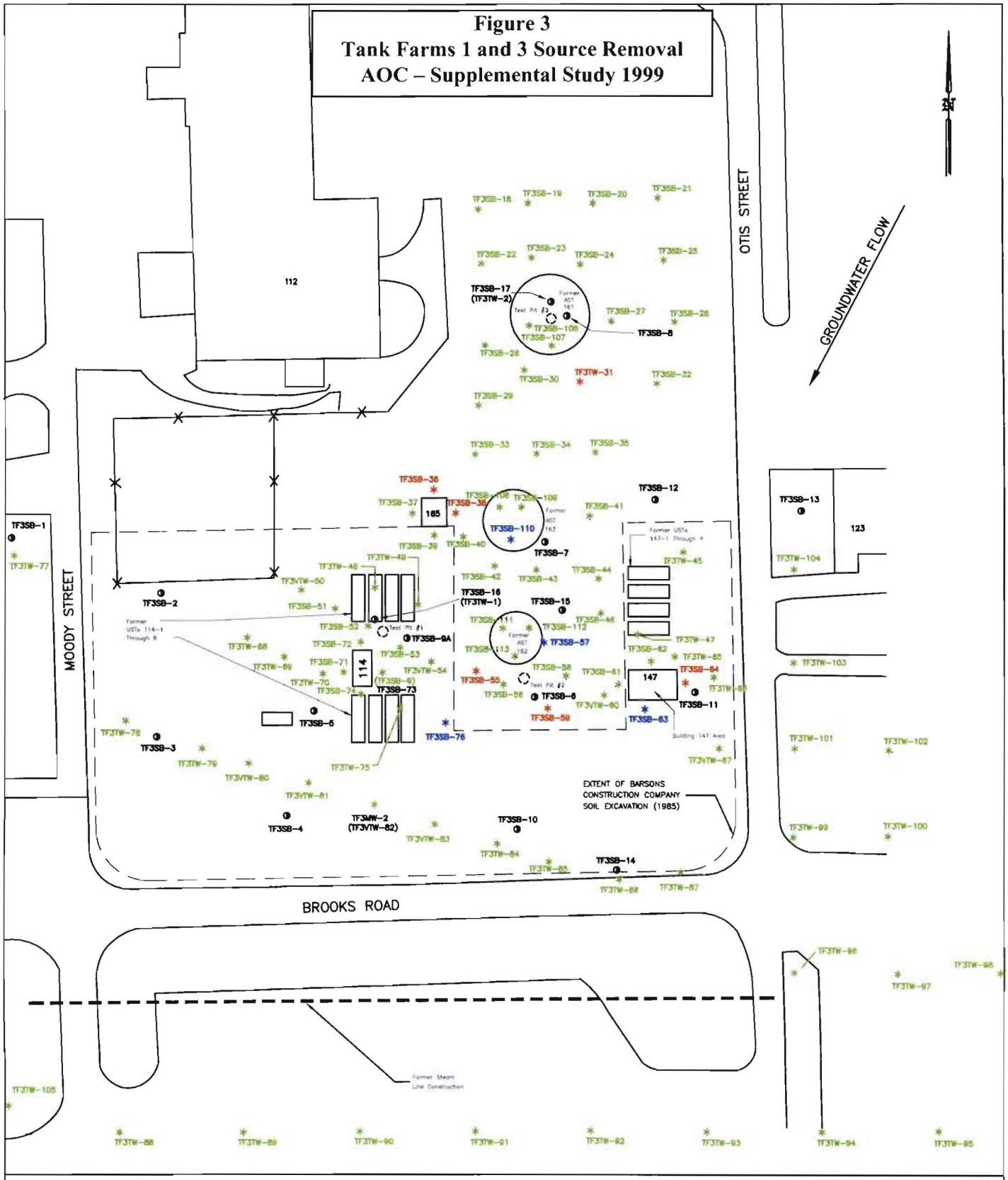
- No further action to remediate soil contamination at the site; and
- The installation of two additional temporary wells to confirm the presence or absence of free product.

These recommendations were based on the observations that contamination appeared to be primarily limited to the groundwater or soil found at the groundwater interface and/or capillary fringe. In April 1995, two additional soil borings/temporary observation wells were installed (TF3SB-16 and -17 /TF3TW-1 and -2), and from each boring, two soil samples were collected (one from the vadose zone and one from the groundwater interface) and submitted for chemical analysis following TCLP.

No regulatory exceedances were found for VOCs, SVOCs, or metals. Also, no free product was noted in either temporary well. The only indication of petroleum contamination in these temporary wells was high readings (1000 parts per million [ppm]) detected in the field with hand-held monitoring equipment near the surface of the water table. Also, there was a reported observation of either a slight or continuous sheen on the soil samples collected during the temporary wells installation.

These conflicting observations prompted the excavation of three test pits for the purpose of confirming the presence of contamination and/or free product in the Tank Farms 1 and 3 Source Removal AOC. The test pits, or trenches, were dug with a backhoe in November 1998 under the observation of the EPA and NYSDEC (Figure 3). The trenches were located at areas reported as "hot spots." Soils were screened with a field instrument and indicated that fuel odors were present in all three trenches with levels generally exceeding 100 ppm. The Air Force, EPA and NYSDEC agreed that further investigation was necessary.

Figure 3
Tank Farms 1 and 3 Source Removal
AOC – Supplemental Study 1999



LEGEND

- TF3TW-68 — SOIL BORING POINT AT LOCATION 68. FIELD SCREENING INDICATED NO SIGNS OF CONTAMINATION, NO SOIL SAMPLE COLLECTED.
- TF3SB-36 — SOIL BORING POINT AT LOCATION 36. FIELD SCREENING INDICATED SIGNS OF CONTAMINATION, SOIL SAMPLE ANALYZED, NO STARS EXCEEDANCES.
- TF3TW-31 — SOIL BORING POINT AT LOCATION 31, FIELD SCREENING INDICATED SIGNS OF CONTAMINATION, SOIL SAMPLE ANALYZED, STARS EXCEEDANCES DETECTED.
- TF3SB-3 — FORMER SOIL BORING LOCATION
- FORMER TEST PIT (1998)
- 147 — BUILDING
- 0 40 80 — SCALE IN FEET

2.5.1.4 Additional Site Investigations

During Fall 1999, a Supplemental Study was conducted at the Tank Farms 1 and 3 Source Removal AOC to delineate the extent of contamination identified in the previous investigations, identify possible contaminant sources, and establish whether contamination had migrated to adjacent properties.

During this investigation, a total of 96 soil borings were installed and screened; soil samples were collected from 12 locations (Figure 3). Residual soil contamination, as characterized by VOC exceedances of STARS Guidance Values, was found primarily within four areas (TF3SB-31, -36/-38, -55/-59, and -64) that were each limited to a localized area of minimal thickness (Figure 3).

Seventy-two groundwater samples were also collected in the vicinity of the Tank Farms 1 and 3 Source Removal AOC (Figure 3). In addition, one monitoring well (TF3MW-2) was installed to monitor possible free product (reported in temporary wells TF3SB-8 and -9A during the predesign investigation), and two piezometers (TF3TW-31 and -77) were installed to help define groundwater flow. Multiple petroleum-contaminated groundwater plumes were identified, originating from former USTs 114 (1-8), 147 (1-4), and AST 162, that appeared to have merged to create one large dissolved petroleum plume. Within the larger dissolved plume, a free product plume or plumes appeared to exist; these are likely to be primarily associated with fuel adsorbed to the soil within the capillary zone. Results are summarized in Table 1 and Figure 4.

In November 2001, 14 test pits (Figure 4) were excavated for the purpose of delineating and quantifying amounts of contamination identified during previous investigations. The test pits extended to a depth of approximately 20 feet. Soil samples taken from the pits indicated that leaching had not contaminated underlying soils.

2.5.1.5 Engineering Evaluation / Cost Analysis (2002)

A second EE/CA was prepared in 2002 in support of removal actions at Tank Farms 1 and 3. The preferred alternative identified for the Tank Farms 1 and 3 Source Removal AOC included:

- Excavation of petroleum-contaminated soil; and
- Ex-situ bioremediation located at the on-base landfarming operation.

2.5.2 Interim Removal Action

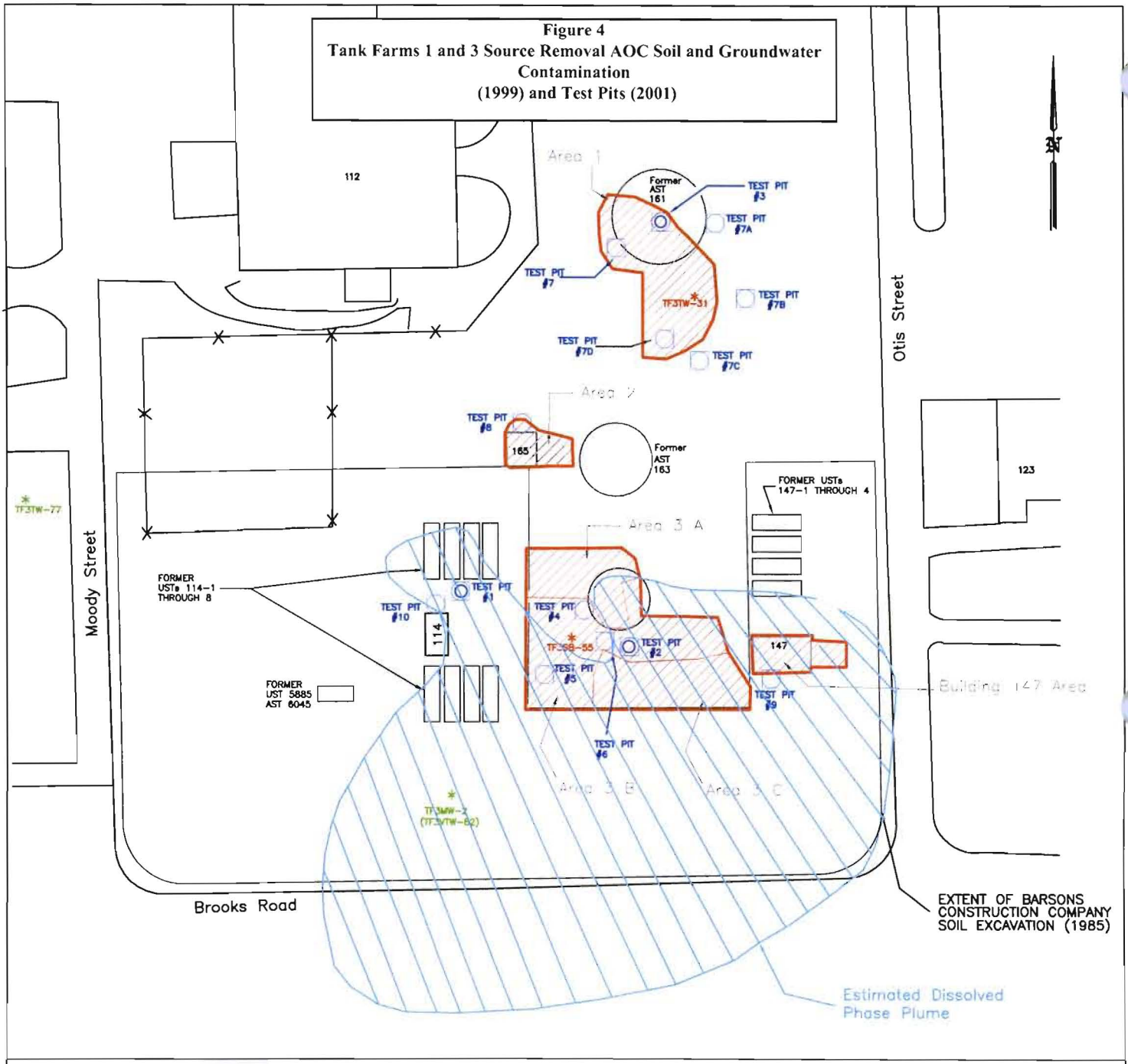
Upon approval of the second EE/CA by EPA and NYSDEC, an interim removal action was performed to remove residual-contaminated soils at the Tank Farms 1 and 3 Source Removal AOC during the fall of 2002. Soil was removed in four primary areas: Area 1 (near former bulk fuel AST 161), Area 2 (near former USTs 114-1 through -4), Area 3 (encompassing former USTs 114-4 through -8 and former bulk fuel ASTs 162 and 163), and the Building 147 area

Table 1
Tank Farms 1 and 3 Source Removal AOC
Supplemental Study
Detected Groundwater Analytical Results (1999)

Compound	NYS Groundwater Standard (µg/L)	Range of Detected Concentration	Frequency of Detection above Most Stringent Criterion
VOCs (µg/L)			
1,2,4-trimethylbenzene	5	1.1 – 461	16/72
1,3,5-trimethylbenzene	5	031 F – 80.7	11/72
benzene	1	0.208 F – 82.8	7/72
ethylbenzene	5	0.23 F – 245	11/72
isopropylbenzene	5	0.401 F – 66.6	19/72
MTBE	10	0.403 F – 1.14	0/72
n-butylbenzene	5	0.399 F – 72.5	14/72
n-propylbenzene	5	0.296 – 94.5	16/72
naphthalene	10	0.738 F – 123	10/72
o-xylene	5	0.21 F	0/72
p-isopropyltoluene	5	0.369 F – 19.4	9/72
sec-butylbenzene	5	0.602 F – 29.8	15/72
toluene	5	0.645 F – 27.8	8/72
xylenes, Total	5	0.21 F – 730	13/72
SVOCs (µg/L)			
acenaphthene	20	2 F – 18.2 J	0/72
anthracene	50	1 F – 9.05 F	0/72
benzo(a)anthracene	0.002	1 F – 4 F	7/72
benzo(a)pyrene	0.002	0.8 F – 4.86 F	5/72
benzo(g,h,i)perylene	0.002	0.9 F – 2.74 M	4/72
benzo(b)fluoranthene	0.002	1 F – 6 F	5/72
benzo(k)fluoranthene	0.002	1 M – 4.26 F	3/72
chrysene	0.002	1 – 4 F	5/72
dibenza(a,h)anthracene	50	0.8 F – 2.52	0/72
fluorene	50	1 F – 14	0/72
fluoranthene	50	1.14 F – 25.4	0/72
indeno(1,2,3-c,d)pyrene	0.002	1 F – 3.15 M	4/72
naphthalene	10	3.75 F – 96.4	8/72
phenanthrene	50	1.61 M – 46.9	0/72
pyrene	50	1 F – 17.7	0/72

Note
F = Analyte detected above the method detection limit (MDL), but below the reporting limit (RL).
J = Analyte positively identified, the quantitation is approximate.
M = Matrix effect is present.

Figure 4
Tank Farms 1 and 3 Source Removal AOC Soil and Groundwater Contamination (1999) and Test Pits (2001)



LEGEND

TF3TW-68 * SOIL BORING POINT AT LOCATION 68. FIELD SCREENING INDICATED NO SIGNS OF CONTAMINATION, NO SOIL SAMPLE COLLECTED.

TF3TW-31 * SOIL BORING POINT AT LOCATION 31. FIELD SCREENING INDICATED SIGNS OF CONTAMINATION, SOIL SAMPLE ANALYZED, STARS EXCEEDANCES DETECTED.

AREA OF SOIL CONTAMINATION

2001 TEST PIT

FORMER TEST PIT (1998)

147 BUILDING

0 40 80
SCALE IN FEET

(encompassing the former Building 147). Due to the close proximity of the removal Area 3 and Building 147, these areas were consolidated during excavation.

Figure 4 shows the contaminated soil areas that were excavated. Excavation proceeded within each area until Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs) (NYSDEC, January 1994) were met or the water table was encountered.

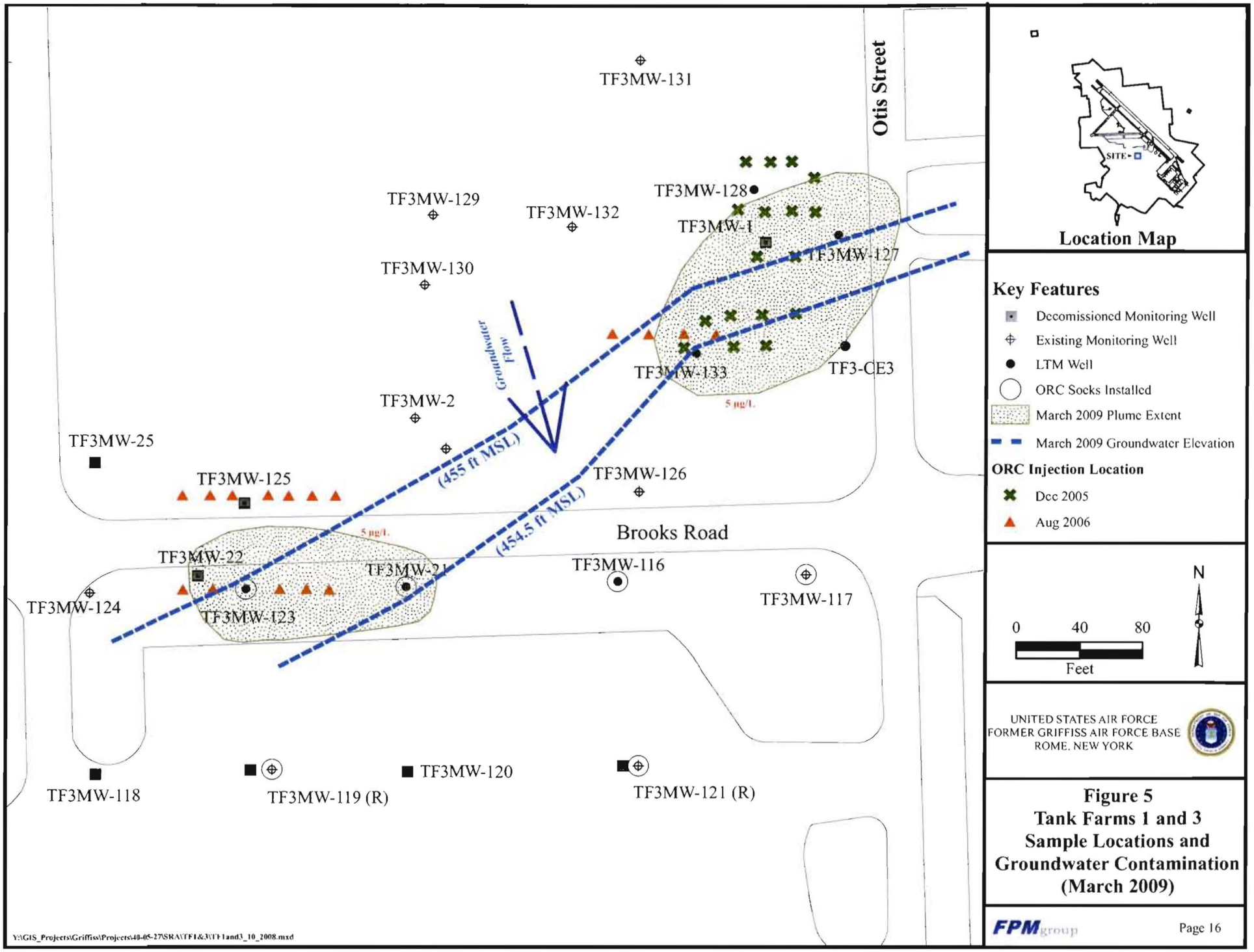
A total of approximately 15,000 cubic yards of petroleum-contaminated soil was excavated from locations within the former bermed area and vicinity, including the former Building 147 footprint. Removal of the residual soil contamination continued into the saturated zone where contamination was located to stop any additional leaching of contamination to groundwater. Confirmation samples were taken after the removal action was completed to verify the effectiveness of the interim remedial action by staking out a 50 by 50 ft grid in each area, and collecting composite samples comprised of five grab samples within each grid. No VOCs or SVOCs were reported above TAGM 4046 RSCOs in any of the endpoint samples collected associated with the excavations. All excavated soil was removed from the site and added to the existing on-base landfarming operation for bioremediation.

The site was backfilled with 2,070 cubic yards of overburden stockpiled soil and 13,040 cubic yards of SAC Hill borrow material, both of which were certified clean (i.e., below STARS guidance values) for VOCs and SVOCs. Gravel road base material from the construction access road, was also used to backfill the excavations, which were compacted and graded in the fall of 2002. Final site restoration included placing topsoil, seeding, and mulching all areas affected during the remedial action, and was completed in the Spring of 2003.

2.5.3 Groundwater Monitoring

Actions to address the groundwater are occurring under the State Petroleum Spills program, and thus this section is provided for information only. Fourteen monitoring wells were installed in November 2001 (TF3MW-116 through -121 and -123 through -130), to monitor the plume extent and identify whether natural attenuation processes are occurring to reduce the dissolved petroleum concentrations. These wells have been included in the groundwater long-term monitoring program for the Tank Farms 1 and 3 SRA AOC (Figure 5), under NYSDEC spill number 9111733. Quarterly sampling was conducted at the Tank Farms 1 and 3 Source Removal AOC from February 2002 to September 2006 with annual sampling in March 2007, March 2008, and March 2009. Oxygen Release Compound (ORC®) injection was performed at the site in fall 2005 and summer 2006. ORC® releases oxygen into a contaminated area to promote the aerobic biodegradation of the petroleum contamination. Groundwater was not sampled in December 2005 because of the ORC® injection.

Following the September 2006 sampling round, due to contamination stabilization, the site sampling frequency was optimized. Groundwater samples are collected annually (every spring) at the Tank Farms 1 and 3 SRA AOC and analyzed for VOCs. In previous sampling rounds SVOCs were also analyzed, but were eliminated from the monitoring program due to their



Location Map

Key Features

- Decomissioned Monitoring Well
- Existing Monitoring Well
- LTM Well
- ORC Socks Installed
- March 2009 Plume Extent
- March 2009 Groundwater Elevation

ORC Injection Location

- Dec 2005
- Aug 2006

N

0 40 80

Feet

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

Figure 5
Tank Farms 1 and 3
Sample Locations and
Groundwater Contamination
(March 2009)

confirmed absence. Table 2 illustrates the detected VOCs reported during these sampling events. Current sampling data shows that natural attenuation/biodegradation of VOC contamination is occurring at the site. The March 2009 VOC plume and Tank Farms 1 and 3 monitoring wells are illustrated on Figure 5. Because minor VOC detections are still present at several wells within one order of magnitude above the NYS Groundwater SCGs, continued management of groundwater is being performed under NYSDEC spill number 9111733. The following land use control/deed restriction will apply to the site until NYSDEC closure of spill number 9111733:

- The owner or occupant of the property shall not extract, utilize, consume or permit to be extracted, any water from the aquifer below the surfaces of the land on the Property unless such groundwater has been tested and found to meet all applicable standards, and unless the owner or occupant obtains the prior written approval from NYSDOH. The owner or occupant will ensure that the aquifer will be managed to preclude the spread or exacerbation of environmental contamination or open exposure pathways to humans or the environment.

2.5.4 Soil Vapor Intrusion Evaluation

Soil Vapor Intrusion (SVI) sampling was performed at the Tank Farms 1 and 3 Source Removal AOC in March 2007 in order to evaluate the potential for SVI at the site. Soil vapor, indoor air, and outdoor air samples, as illustrated on Figure 6, were collected and analyzed for VOCs using the EPA Method TO-15. Sampling results are provided in Tables 3 and 4. Results indicate that all detections are below screening criteria.

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 Tank Farms 1 and 3 Source Removal AOC are industrial/commercial. In addition, a portion of the site is located on Department of Defense retained property and is currently used by the Air Force Research Laboratory.

2.7 Summary of Site Risks

Previous investigations and source removal have confirmed that soil 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 for soils at the site is protective of human health and the environment. Groundwater monitoring is being addressed separately through the State Petroleum Spills Program.

2.8 Documentation of Significant Changes

There are no significant changes between the preferred alternative presented in the Proposed Plan for the Tank Farms 1 and 3 Source Removal AOC and the selected remedy presented in this ROD.

Table 2
Tank Farms 1 and 3 Source Removal AOC
Groundwater Sampling Results
March 2009

Compound	NYS Groundwater SCGs (µg/L)	Range of Detected Concentrations	Wells with Detections
VOCs (µg/L)			
1,2,4-trimethylbenzene	5	1.42 - 140	TF3MW-123,-127,-128,-133
1,3,5-trimethylbenzene	5	0.62 F – 20.3	TF3MW-123,-127,-128,-133
benzene	1	0.63	TF3MW-127
ethylbenzene	5	0.29 F – 92.2	TF3MW-127,-128,-133
isopropylbenzene	5	0.72 – 46.4	TF3-CE3, TF3MW-21,-116, -123,-128,-133
m,p,-xylene	5	0.71 – 41	TF3MW-127,-128
n-butylbenzene	5	0.37 F – 2.01	TF3-CE3, TF3MW-21,-116, -123,-127,-133
n-propylbenzene	5	0.7 F – 26.9	TF3-CE3, TF3MW-21,-116, -123,-127, -128,-133
naphthalene	10	1.18 – 27	TF3MW-127,-128,-133
p-isopropyltoluene	5	0.6 F – 1.78	TF3MW-21,-123,-127,-133
sec-butylbenzene	5	0.22 F – 6.73	TF3-CE3, TF3MW-21,-116, -123,-127, -128,-133
t-butylbenzene	5	0.31 F – 1.01	TF3-CE3, TF3MW-21,-116, -123,-133

Note
F = The analyte was positively identified above the MDL, however the concentrations is below the RL.
J = Analyte was positively identified, the quantitation is approximate.

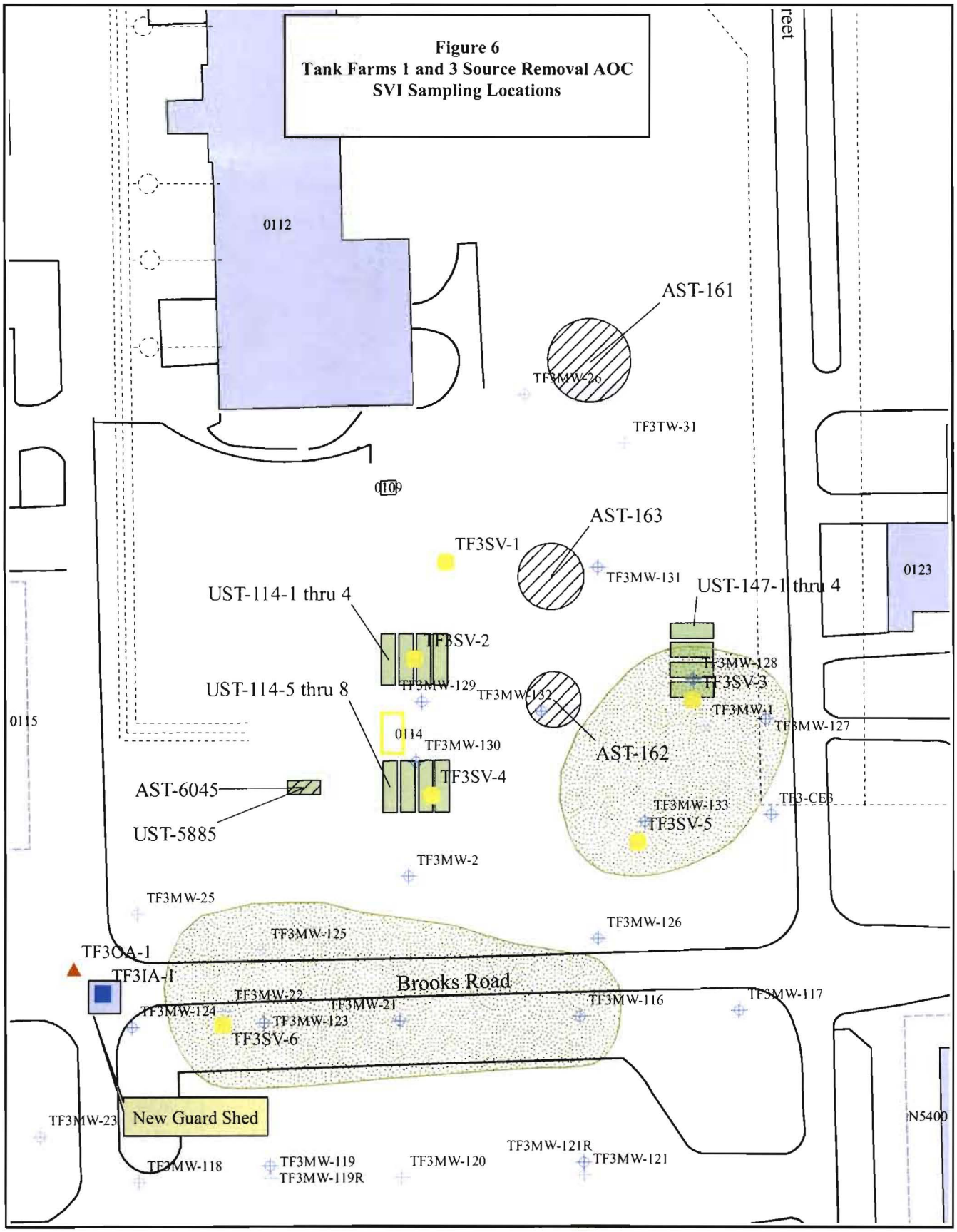


Figure 6
Tank Farms 1 and 3 Source Removal AOC
SVI Sampling Locations
reet
0112
AST-161
TF3MW-26
TF3TW-31
0109
AST-163
TF3SV-1
TF3MW-131
0123
UST-147-1 thru 4
UST-114-1 thru 4
TF3SV-2
TF3MW-128
TF3SV-3
TF3MW-129
TF3MW-132
UST-114-5 thru 8
TF3MW-1
TF3MW-127
0115
0114
TF3MW-130
AST-162
AST-6045
TF3SV-4
TF3-CE3
TF3MW-133
TF3SV-5
UST-5885
TF3MW-2
TF3MW-25
TF3MW-126
TF3MW-125
TF3OA-1
TF3IA-1
Brooks Road
TF3MW-22
TF3MW-21
TF3MW-116
TF3MW-117
TF3MW-124
TF3MW-123
TF3SV-6
New Guard Shed
TF3MW-23
N5400
TF3MW-121R
TF3MW-118
TF3MW-119
TF3MW-119R
TF3MW-120
TF3MW-121
Key to Features
SVI Sample Locations
Indoor
Outdoor
Soilvapor
Subslab
Wells
Existing
Decommissioned
Former Aboveground Storage Tank
Former Underground Storage Tank
VOC Plume (March 2007)
Existing Facilities
Demolished Facilities
Pipeline
Road
N
50 25 0 50 100
Feet

Table 3
Tank Farms 1 and 3 Source Removal AOC Detected Soil Vapor Analytical Results

Sample Location	TF3SV-1	TF3SW-2	TF3SV-3	TFSV-4	TF3SV-5	TF3SV-6
Sample ID	TFSV0105 AA	TF3SV020 5AA	TF3SV030 5AA	TF3SV040 5AA	TF3SV050 5AA	TF3SV060 5AA
Sample Type	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor
Sample Date	19 March 2007	19 March 2007	20 March 2007	19 March 2007	19 March 2007	20 March 2007
Sample Height(ft below ground)	5	5	5	5	5	5
Sample Collection Duration(hr)	1	1	1	1	1	1
Volatiles (TO-15) in $\mu g/m^3$						
1,1,1-trichloroethane	2.7 M	U	U	U	U	U
1,2,4-trimethylbenzene	1.3 M	U	0.95	0.80	1.4	1.0
1,3,5-trimethylbenzene	0.55 F	U	U	U	0.55 F	0.40 F
1,3-dichlorobenzene	1.8 M	U	U	U	2.1	U
1,4-dichlorobenzene	2.1	0.86 F	U	0.98	0.98	1.8
2,2,4-trimethylpentane	3.3	U	U	U	U	U
4-ethyltoluene	0.70 F	U	U	U	0.65 F	0.55 F
acetone	770	350	40	190	93	110
allyl chloride (3-chloropropene)	U	U	U	U	U	2.0
benzene	6.8 M	3.1	1.7	2.1	3.5	U
carbon disulfide	2.0 M	0.35 F	1.0	U	1.2	U
chloromethane	0.71 M	0.36	2.2	0.55	0.78	1.4
cis-1,2-dichloroethene	0.81 M	U	U	U	U	U
cyclohexane	5.4 M	1.8	U	U	U	U
ethylbenzene	1.9 M	U	U	U	1.6	1.4
freon 11	0.69 F	1.1	0.97	0.69 F	0.74	1.3
freon 12	1.7 M	1.3	29	1.6	2.2	2.2
heptane	6.0 M	1.8	0.87	0.87	1.4	1.0
hexane	34	13	7.2	6.2	4.7	5.3
isopropyl alcohol	U	U	U	U	89	42
m,p-xylene (sum of isomers)	3.9 M	0.66 F	1.1 F	0.88 F	3.8	2.9
methyl ethyl ketone	92	U	U	23	U	U
methylene chloride	U	U	0.39 F	0.39 F	U	0.67
o-xylene	1.1 M	U	0.44 F	U	1.2	0.84
styrene	0.69 M	U	U	U	0.69	0.48
tetrachloroethylene (pce)	2.1 M	0.90 F	U	0.76 F	U	0.97 F
tetrahydrofuran	U	U	U	U	2.6	U
toluene	33	7.4	2.4	6.8	21	17 F
trichloroethylene (tce)	1.5 M	U	1.6	U	U	U

Note
F = The analyte is detected and the quantitation is between the MDL and RL.
U = The analyte was not detected above the MDL.

Table 4
Tank Farms 1 and 3 Source Removal AOC
Detected Indoor and Outdoor Analytical Results

Sample Location	**TF3IA-1**	**TF3OA-1**
Sample ID	**TF3IA0105AA**	**TF3OA0105AA**
Sample Type	**Indoor**	**Outdoor**
Sample Date	**19 March 2007**	**19 March 2007**
Sample Height (ft above ground)	**5**	**5**
Sample Collection Duration (hr)	**24**	**24**
Volatiles (TO-15) in µg/m^3		
1,2,4-trimethylbenzene	5.20	0.500 F
1,3,5-trimethylbenzene	1.60	U
4-ethyltoluene	0.700 F	U
acetone	27.3	32.1
benzene	1.07	0.520
carbon tetrachloride	0.256	0.256
chloromethane	1.05	0.588
ethylbenzene	0.706	U
freon 11	0.914	0.857
freon 12	1.66	1.66
hexane	0.896	0.502 F
m,p-xylene (sum of isomers)	2.60	0.662 F
methylene chloride	0.706	0.424 F
o-xylene	1.15	U
styrene	0.779	U
toluene	3.83	1.30

Note
F = The analyte is detected and the quantitation is between the MDL and RL.
U = The analyte was not detected above the MDL.

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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.

Contaminant Plume: A volume of contaminated groundwater with measurable horizontal and vertical dimensions. Plume contaminants are dissolved in and move with groundwater.

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.

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.

Polycyclic Aromatic Hydrocarbons (PAHs): Compounds often associated with combustion process and distillation tars.

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.

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 June 13, 2009, AFRPA, following consultation with and concurrence of the EPA and NYSDEC, released for public comment the proposed plan for the Tank Farms 1 and 3 Source Removal AOC located at the former Griffiss AFB. The release of the proposed plan initiated the public comment period, which concluded on July 14, 2009.

During the public comment period, a public meeting was held on June 18, 2009 at the Griffiss Institute located at 725 Daedalian Drive, Rome, New York 13441. The selected remedy for the Tank Farms 1 and 3 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 Tank Farms 1 and 3 Source Removal AOC.

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

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