

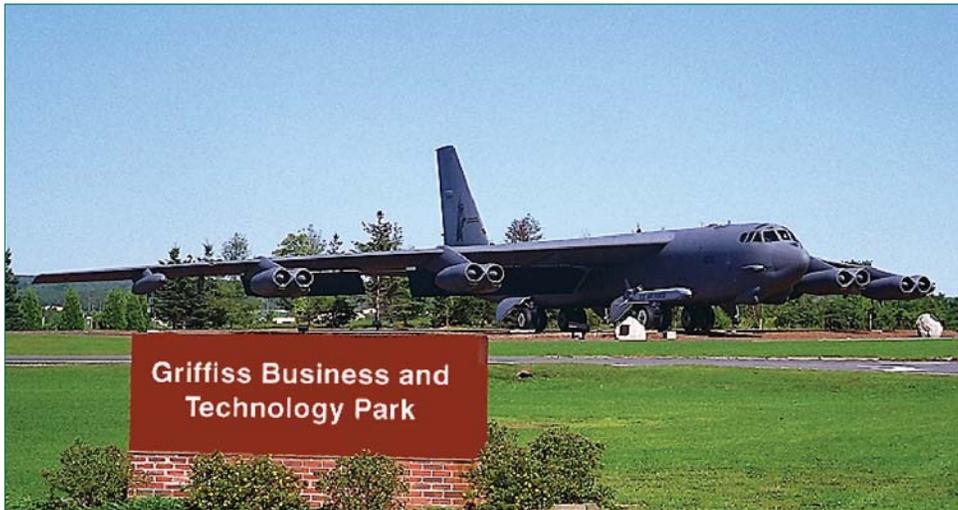


Former Griffiss Air Force Base
Rome, New York
Public Comment Period
Date - Date

Month 2010

Air Force Recommends No Further Action at the Building 133 Storage Vault Area of Concern

Public Comments Solicited



Former Griffiss Air Force Base is located in Rome, New York.

This *Proposed Plan* is issued by the United States Air Force (Air Force) following consultation with the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC). The Air Force recommends no further action at the Building 133 Storage Vault *Area of Concern (AOC)* (site designation ST-53).

This document has been prepared in accordance with public participation requirements of the *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* of 1980, as amended, the *National Contingency Plan (NCP)*, and the former Griffiss Air Force Base (AFB) *Federal Facility Agreement (FFA)*. In this document, the Air Force, EPA, and NYSDEC will be referred to as “the agencies”.

This proposed plan summarizes the previous investigations and removal activities conducted at the Building 133 Storage Vault AOC.

This plan is intended to elicit public comments on the proposal to provide no further action at the site. The final decision or *Record of Decision (ROD)* will be made only after the public comment period has ended and responses and information submitted during this time period have been reviewed and considered. Please refer to the Community Participation section at the end of this document for information on submitting public comments.

This Proposed Plan describes:

- The environmental investigations and removal activities that have been conducted at the Building 133 Storage Vault AOC.
- The proposed plan to take no further action at the Building 133 Storage Vault AOC.
- How you can participate in the final decision process for the Building 133 Storage Vault AOC.

Proposed Plan

A document requesting public review and comment on a proposed remedial action at a particular site.

Area of Concern (AOC)

A location where hazardous substances are or may have been placed or may be located.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Commonly known as Superfund; a federal law that establishes a program to identify, evaluate, and remediate sites where hazardous substances may have been released, leaked, poured, spilled, or dumped into the environment.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

The federal regulation that provides the organizational structure and procedures for responding to releases of hazardous substances, pollutants, and contaminants.

Federal Facility Agreement (FFA)

An agreement between the EPA, the State of New York, and the Air Force to evaluate waste disposal sites at the former Griffiss AFB and perform remediation if necessary.

Record of Decision (ROD)

A public document that identifies the selected action at a site, outlines the process used to reach a decision on the remedy, and confirms that the decision complies with CERCLA.

Site Description

Regional Information

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 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. Due to its high average precipitation and predominantly silty sands, the former Griffiss AFB is considered a *groundwater recharge zone*.

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 and closure 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 site.

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(a)(8)(B) of CERCLA, Griffiss AFB was included on the National Priorities List (NPL) on July 15, 1987. On August 21, 1990, the agencies entered into a FFA under Section 120 of CERCLA.

Groundwater Recharge Zone

An area where the underlying aquifer (water-bearing zone) receives water (recharge) through downward flow from both precipitation which infiltrates into the ground and other surface water bodies such as streams, lakes, etc.

Base Realignment and Closure Act (BRAC)

A federal law that established a commission to determine which military bases would be closed and which would remain active.

Agency for Toxic Substances and Disease Registry (ATSDR)

The federal agency responsible for performing health assessments for facilities on the National Priorities List.

National Priorities List (NPL)

A formal listing established by CERCLA of the nation's worst hazardous waste sites that have been identified for possible remediation. Sites are ranked by the EPA based on their potential for affecting human health and the environment.

Under the terms of the agreement, the Air Force was required to prepare and submit numerous reports to the NYSDEC and EPA for review and comment. These reports address remedial activities that the Air Force is required to undertake under CERCLA and include identification of AOCs on base. A scope of work for a *Remedial Investigation (RI)*, a work plan for the RI, including a sampling and analysis plan and a quality assurance project plan, a *baseline risk assessment*, a community relations plan and an RI report were developed. The Air Force delivered the draft-final RI report covering 31 AOCs to the EPA and NYSDEC on December 20, 1996.

This No Further Action proposal at the Building 133 AOC is based on the comparison of levels of petroleum-related contaminants found at the site with contaminant levels found in federal and state environmental and public laws that were identified as potentially Applicable or Relevant and Appropriate Requirements (ARARs) at the site or guidance and standards referred to as To-Be-Considereds (TBCs, collectively referenced as New York State Standards, Criteria, and Guidance values (SCGs).

One criterion by which petroleum-contaminated soil is considered remediated is its potential impact on groundwater.

To be protective of groundwater quality, the soil must not leach contaminants to groundwater at concentrations exceeding acceptable groundwater SCGs. The NYSDEC in Spill Technology and Remediation Series (STARS) Memo No. 1, Petroleum-Contaminated Soil Guidance Policy (NYSDEC, 1992) recommends using the Toxicity Characteristic Leaching Procedure (TCLP) to estimate concentrations in groundwater resulting from leaching of contaminants from affected soil. Using TCLP, a liquid is extracted or leached from the soil and then analyzed. During the predesign investigation, this methodology was employed and the contaminant concentrations in the extract, or leachate, were then compared to SCGs for groundwater. An alternative approach advocated by STARS Memo No. 1, involves the analysis of contaminants in the soil itself followed by a mathematical determination of potential leachate concentrations, which are again compared to the acceptable groundwater SCGs. This approach was used for the removal actions conducted through 2000. On December 20, 2000, a guidance memorandum was issued by NYSDEC that identified the soil cleanup objectives in NYSDEC's Technical and Administrative Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Soil Cleanup Levels, 1994, as the appropriate values to be used in determining soil cleanup levels at petroleum spill sites.

Remedial Investigation (RI)

An environmental investigation that identifies the nature and extent of contamination at a site. It also provides an assessment of the potential risks associated with a site.

Baseline Risk Assessment

An assessment required by CERCLA to evaluate potential risks to human health and the environment. This assessment estimates risks/hazards associated with existing and/or potential human and environmental exposures to contaminants at an area.

Standards Criteria and Guidance values (SCGs)

Groundwater sampling results are compared to ARARs and TBCs which include standards, criteria and guidance values (SCGs). To simplify this text, groundwater ARARs and TBCs are collectively referred to as SCGs.

Applicable or Relevant and Appropriate Requirements (ARARs)

"Applicable" requirements mean those standards, criteria, or limitations promulgated under federal or state law that are required specific to a substance, pollutant, contaminant, action, location, or other circumstance at a CERCLA site, e.g., the New York State groundwater standards. "Relevant and appropriate" requirements mean those standards, requirements, or limitations that address problems or situations sufficiently similar to those encountered at the CERCLA sites so that their use is well suited to that particular site.

To-Be-Considereds (TBCs)

Advisories, criteria, or guidance that do not meet the definition of ARAR, but may be useful in developing remedial action alternatives. For example, the New York State groundwater guidance values.

Building 133 Storage Vault

Area of Concern

Building 133 is a steel structure with a concrete slab floor (approximately 5700 sq. ft.) located in the central portion of the former Griffiss AFB (Figure 1). The building is currently being occupied by the Griffiss Local Development Corporation (GLDC) for vehicle maintenance and storage. The storage vault was a concrete underground storage vessel with a 4,000-gallon capacity, 12 ft long by 6 ft wide by 7.5 ft deep, located approximately 10 ft outside the southwest corner of Building 133 (Figure 2). The vault was constructed in 1977, and was used until 1988 to receive waste oil from gun-degreasing operations conducted in the south section of the building. The floor drains emptied into an oil-water separator (OWS-133), a below-floor 30-gallon-per-minute unit of approximately 2 ft by 3 ft wide by 4 ft deep, from which the aqueous phase discharged into the sanitary sewer and the oil phase flowed into the vault via a 3-inch metal pipe. From 1988 to 1992, the vault received condensate from dehumidifiers used in the flight simulators in the building. The OWS and the vault were taken out of service in May 1992.

In May 1992, the vault was scheduled for excavation, but was found with approximately 1,000 gallons of uncharacterized waste liquid. The contents were removed and pumped into a tanker truck already containing approximately 700 gallons of liquid waste of unknown origin. When the vault was empty, what appeared to be water was observed seeping into cracks in the south wall of the vault, indicating that the bottom of the vault was possibly below the water table. When it was determined that the waste could not be transported without characterization, 1,700 gallons of the vault waste, mixed with the unknown waste, were pumped back into the vault. A sample of the vault waste sludge was thereafter collected and analyzed, and indicated the presence of several metals, benzene, ethylbenzene, toluene, xylenes, and 1,4-dichlorobenzene. The vault waste sludge was thereafter removed in April and May of 1997 during the vault removal activities.

In April and May 1997, the OWS and associated piping were cleaned, flushed, and decommissioned in place, the vault was demolished and removed, and some of the contaminated soil near the vault was over-excavated and this site was assigned NYSDEC Spill #9702171 on May 12, 1997. The OWS, which is associated with NYSDEC Spill #9201395, was removed in January 1999. NYSDEC Spill #9201395 was closed on March 11, 1999.

Surface water runoff in the area of the former vault drains to Six Mile Creek. In the vicinity of Building 133, groundwater flows in a south-southwesterly direction towards Three Mile Creek. Groundwater at this AOC was encountered at depths from 8 to 9.5 feet below ground surface (bgs).

Subsurface soil in the area of Building 133 was characterized in the RI as sandy and gravelly silts from 2 to 4 feet bgs and silty and gravelly fine to coarse sand from 4 to 10 feet bgs.

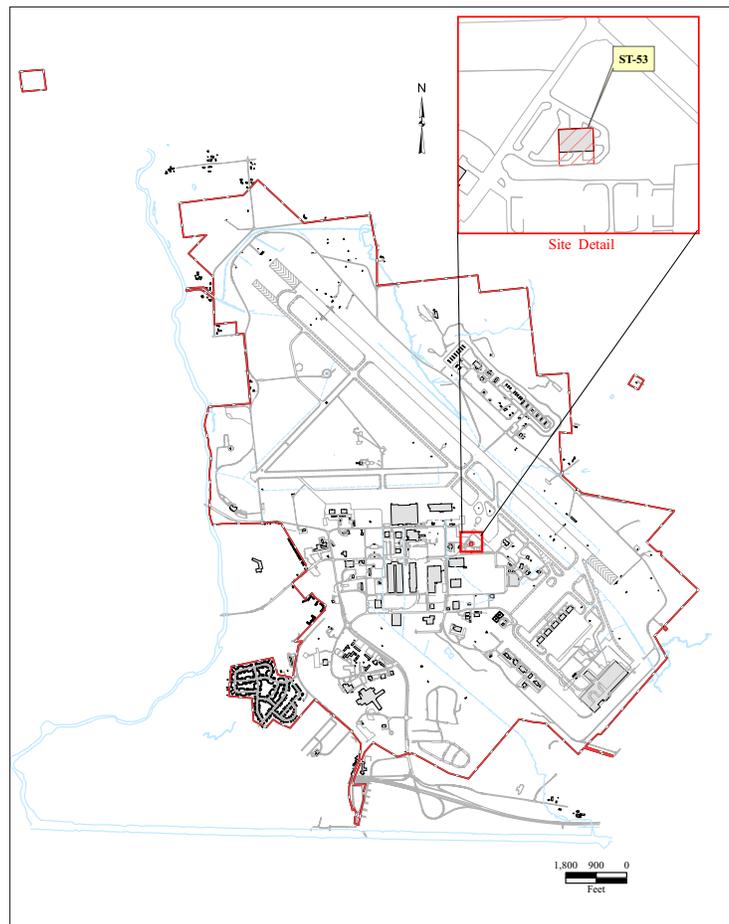


Figure 1: Location of Building 133 Storage Vault Area of Concern at the Former Griffiss AFB

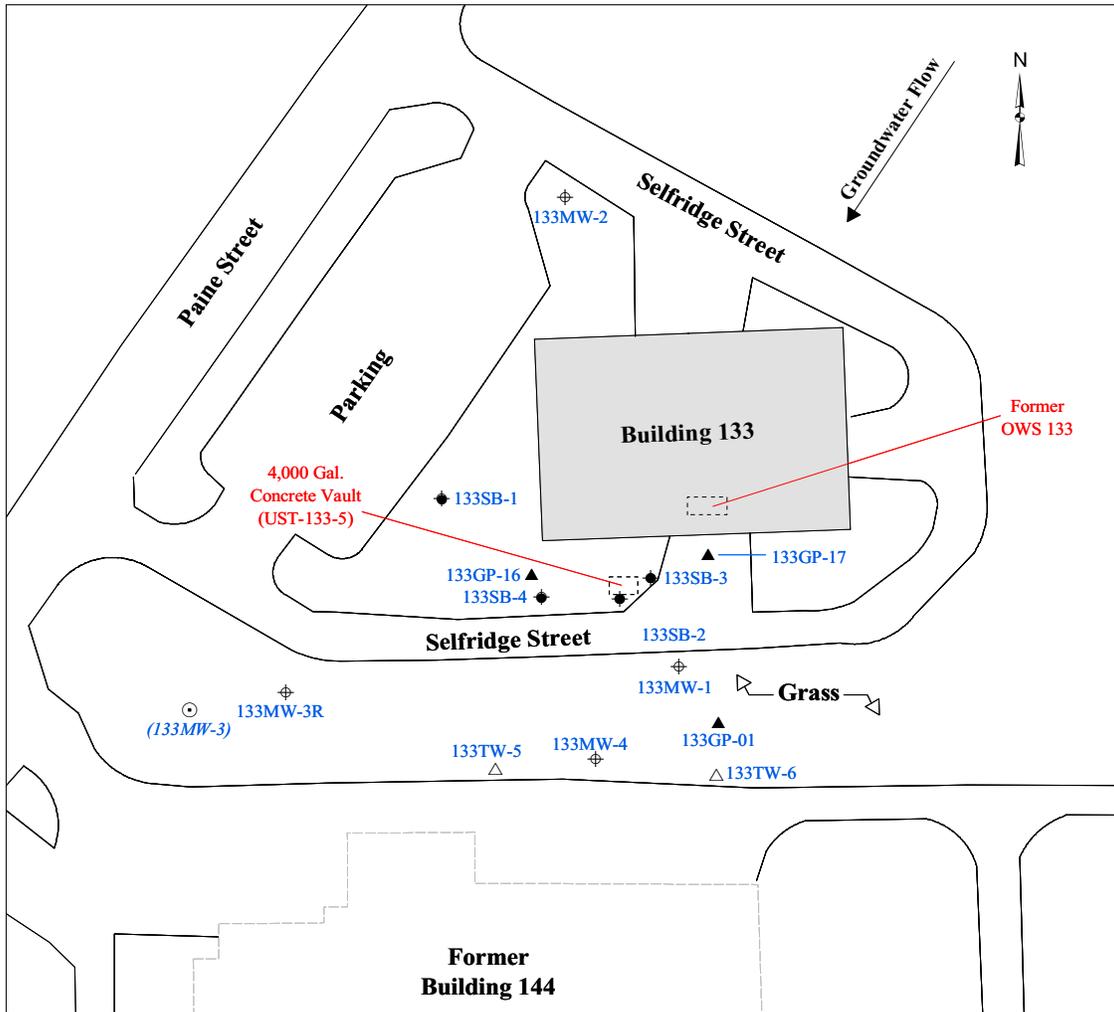


Figure 2 : Building 133 AOC

- | | | | |
|---|--|---|-------------------|
| ⊕ | Existing Monitoring Well | ∩ | Roads |
| ⊙ | Decommissioned Monitoring Well | ■ | Existing Building |
| ◆ | Soil Boring / 1994
Grab Groundwater Locations (RI) | | |
| ▲ | Groundwater Geoprobe
Sample Location (SI) - 1997 | | |
| △ | Temporary Vertical Profile /
Groundwater Sample Location - 2001 | | |



Figure 2: Location of the Building 133 AOC - Sampling Locations at the Former Griffiss AFB

Summary of Site Activities

Remedial Investigation

In 1995, an RI was performed. The main objective of the RI was to investigate the nature and extent of environmental contamination from historical releases at the AOC to determine whether any further remedial action was necessary to prevent potential threats to human health and the environment that might arise from exposure to site conditions. The RI field investigation activities performed at the Building 133 AOC included the installation and sampling of four soil borings (one upgradient and three downgradient or crossgradient from the storage vault), and the collection of grab groundwater samples from each boring.

Volatile Organic Compounds (VOCs)

A group of organic compounds that have a tendency to vaporize readily.

Semivolatile Organic Compounds (SVOCs)

A group of organic compounds that are easily extracted from soil, water, etc., using an organic solvent.

Soil Results

During the RI, soil samples were collected from four boreholes: 133SB-1 through -4 (Figure 2, Page 5). Soil samples were collected at 2-foot intervals down to 10 ft bgs and were submitted for analysis of *volatile organic (VOCs)* compounds, *semivolatile organic compounds (SVOCs)*, and metals. Analysis indicated the presence of 7 VOCs, 22 SVOCs, and 4 metals, mainly found at locations 133SB-2 and -3. In these borings, several compounds were found at levels exceeding potential TBCs and/or background levels in soil. Laboratory analysis results are summarized in Table 1.

Groundwater Results

Analysis of the four groundwater samples collected during the RI indicated the presence of 15 VOCs, 18 SVOCs, and 21 metals. The concentrations of 11 VOCs, 7 SVOCs and 12 metals exceeded groundwater SCG's. These exceedances are shown in Table 2. The groundwater samples collected at the soil borings were grab groundwater samples and analytical samples collected in this manner are typically very turbid which most likely results in elevated analytical results, particularly for metals.

Table 1
Building 133 Storage Vault AOC
Compounds Exceeding Standards and Guidance Values
Soil Samples (RI, 1996)

Compound	Range of Detected Concentrations	TAGM 4046 Recommended Soil Cleanup Objective	Frequency of Detection Above TAGM 4046 Recommended Soil Cleanup Objective	Background screening concentrations	Frequency of Detection Above Background screening concentrations	6-NYCRR Part 375 Unrestricted Use Soil Cleanup Objective*	Frequency of Detection Above Unrestricted Use Soil Cleanup Objectives
VOCs (µg/kg)							
Benzene	61 - 240	60	2/17	NA	NA	60	2/17
Total Xylenes	2,700 - 9,900	1,200	2/17	NA	NA	260	2/17
SVOCs (µg/kg)							
Benzo(a)anthracene	2,000 - 7,300	224	11/17	NA	NA	1,000	11/17
Benzo(a)pyrene	1,000 J - 5,500	61	11/17	NA	NA	1,000	11/17
Benzo(b)fluoranthene	45 J - 6,800	1,100	11/17	NA	NA	1,000	11/17
Benzo(k)fluoranthene	1,100 - 4,000	1,100	10/17	NA	NA	800	10/17
Chrysene	54 J - 9,500	400	12/17	NA	NA	1,000	11/17
Metals (mg/kg)							
Copper	4 - 114	NA	NA	43	3/17	50	3/17

Notes: * = 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 and 375-6

Key: J = Estimated concentration **

NA = Not Available

** = Estimated concentrations are typically due to measuring very low levels below the quantitation limit but above the detection limit or due to a quality control concern identified by a data reviewer.

Table 2
Building 133 Storage Vault AOC
Compounds Exceeding Standards and Guidance Values
Groundwater Samples (RI, 1996)

Compound	Range of Detected Concentrations	NYS Groundwater Standard	Frequency of Detection Above Most Stringent Criterion	NYS Groundwater Guidance value	Frequency of Detection Above NYS Groundwater Guidance value	Federal secondary maximum contaminant level	Frequency of Detection Above Federal secondary maximum contaminant level	Federal secondary maximum contaminant level	Federal secondary maximum contaminant level
VOCs (µg/L)									
1,2,4-Trimethylbenzene	300 - 6,200	5	3/4	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	380 - 5,600	5	3/4	NA	NA	NA	NA	NA	NA
Benzene	690 - 1,800	0.7	2/4	NA	NA	NA	NA	NA	NA
Ethylbenzene	250 - 2,400	5	3/4	NA	NA	NA	NA	NA	NA
Isopropylbenzene	20 J	5	1/4	NA	NA	NA	NA	NA	NA
Naphthalene	260 - 1,400	10	3/4	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	11 - 200	5	1/4	NA	NA	NA	NA	NA	NA
Tetrachloroethene	0.76	NA	NA	0.7	1/4	NA	NA	NA	NA
Toluene	0.089 J - 7,800	5	3/4	NA	NA	NA	NA	NA	NA
Total Xylenes	1,400 - 19,000	5	3/4	NA	NA	NA	NA	NA	NA
n-Propylbenzene	40 - 580	5	1/4	NA	NA	NA	NA	NA	NA
SVOCs (µg/L)									
Benzo(a)anthracene	0.28 - 13 J	NA	NA	0.002	4/4	NA	NA	NA	NA
Benzo(a)pyrene	0.24 J - 3.5 J	NA	NA	0.002	2/4	NA	NA	NA	NA
Benzo(b)fluoranthene	0.31 J - 5.8 J	NA	NA	0.002	3/4	NA	NA	NA	NA
Benzo(k)fluoranthene	0.14 J - 2.4 J	NA	NA	0.002	2/4	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	1.3 J - 28	NA	NA	4	3/4	NA	NA	NA	NA
Chrysene	0.28 - 11 J	NA	NA	0.002	3/4	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.27 J	NA	NA	0.002	1/4	NA	NA	NA	NA
Metals (µg/L)									
Aluminum	132 J - 827	NA	NA	NA	NA	0.05	4/4	NA	NA
Arsenic	0.012 - 0.035 J	0.025	2/4	NA	NA	NA	NA	NA	NA
Barium	0.62 J - 6.2	1	3/4	NA	NA	NA	NA	NA	NA
Beryllium	0.006 - 0.033	NA	NA	0.003	4/4	NA	NA	NA	NA
Chromium, total	0.13 J - 0.67	0.05	4/4	NA	NA	NA	NA	NA	NA
Copper	0.63 - 4.5	0.2	4/4	NA	NA	NA	NA	NA	NA
Iron	269 J - 1,960	0.3	4/4	NA	NA	NA	NA	NA	NA
Lead	0.18 - 0.56	NA	NA	NA	NA	NA	NA	0.015	4/4
Manganese	19.8 J - 258	NA	NA	NA	NA	0.05	4/4	NA	NA
Mercury	0.0018 J - 0.0033	0.002	3/4	NA	NA	NA	NA	NA	NA
Nickel	0.31 - 1.9	NA	NA	NA	NA	NA	NA	0.1	4/4
Zinc	0.9 - 7.4	0.3	4/4	NA	NA	NA	NA	NA	NA

Key: J = Estimated concentration

NA = Not Available

** = Estimated concentrations are typically due to measuring very low levels below the quantitation limit but above the detection limit or due to a quality control concern identified by a data reviewer.

Vault Removal

In April and May 1997, the vault was demolished and removed, contaminated soil near the vault was over-excavated, and the OWS and associated piping were cleaned, flushed, and decommissioned in place. The excavation pit from the vault removal was approximately 25 ft x 37 ft x 9 ft deep (Figure 3). Samples collected after the over-excavation (approximately 10 ft bgs) from the pit bottom southern and eastern walls indicated exceedances of the STARS Memo #1 Guidance Values for petroleum-related VOCs and SVOCs. The north and west wall samples indicated several petroleum-related VOC exceedances (wall samples were collected from a depth of approximately 8 ft bgs). The contaminated soil was left in place, the pit was backfilled with clean sandy fill, and the site was restored with asphalt paving. Soil samples collected from 5 ft beneath the OWS indicated the presence of acetone and several SVOCs at levels above the STARS guidance values, NYSDEC Spill #9201395 is associated with the OWS. No petroleum-related VOCs or PCBs were detected in the soil below the OWS. The vault site was assigned NYSDEC Spill #9702171 on May 12, 1997. Approximately 250 cubic yards of soil were removed during the vault excavation and transported to the Griffiss AFB on-base landfarm. Approximately 1,900 gallons of aqueous liquid were removed from the OWS and vault and disposed of off-site.

Supplemental Investigation

In August 1997, a supplemental investigation was performed for the Building 133 Storage Vault AOC. A Geoprobe survey was conducted around Building 133 to locate three new permanent monitoring wells, and included the installation of 52 Geoprobe groundwater screening samples. Trichloroethylene (TCE) was detected at 2 locations above NYS Groundwater SCGs (133GP-01, 29 µg/L, and 133GP-17, 45 µg/L) (Figure 2, Page 5), and a low-level TCE plume (concentrations below the NYS Groundwater SCGs) was identified from samples collected at 24 locations west, southwest, and north of Building 133.

Various benzene compounds were found at 133GP-01, 133GP-16, and 133GP-17; a prominent sheen and strong petroleum odor was also observed in association with the sample collected at 133GP-01 (Figure 2, Page 5).

Three monitoring wells were installed during the supplemental investigation, including 133MW-2 (upgradient) and downgradient wells 133MW-1 and -3 (later replaced by 133MW-3R). TCE, tetrachloroethylene (PCE), and 1,1,1-trichloroethane were detected at low levels (concentrations below groundwater SCGs) in all three wells, including the upgradient well, and were therefore deemed not to be associated with the Building 133 AOC. Total xylenes were reported at 16 µg/L at 133MW-1 only, located at the edge of the former vault excavation.

Subsurface Investigation

In conjunction with the NYSDEC Petroleum Spills Program, a supplemental study was performed in October 1998 to investigate data gaps previously identified in the RI and the SI. The study included the installation of 28 soil borings on the east, south, and west sides of the former vault to delineate the extent of soil contamination (only four soil borings had been collected during the RI); samples were submitted for VOC and SVOC analysis. Figure 3 illustrates the sampling locations.

Six samples collected from five boreholes (H, I, J, R, and T) were found to have from one to nine VOCs at concentrations above STARS guidelines. The samples were collected from 8 to 16 ft bgs within close proximity to the former vault. Seven boreholes indicated SVOCs at levels exceeding STARS guidelines, and included locations G, H, I, O, R, T, and AB, from depths from 8 to 16 ft bgs. This deep SVOC contamination was attributed to the former vault. Two boreholes, K and W, indicated SVOC exceedances of the STARS guidelines, at shallow depths. SVOC contamination in shallow soil was also identified in samples collected from 22 boreholes from 0 to 4 ft bgs; from these locations, at least two SVOC exceedances of the STARS guidelines were found. However, the source of the shallow SVOC contamination at the site is not considered to be associated with the former vault due to the depths at which it was identified. The shallow SVOC contamination is likely associated with pre-existing site conditions.



Figure 3 : Building 133 Excavation & Overexcavation Extents

- | | | | |
|---------------------|---------------------------|---|-------------------|
| ● | Geoprobe Location | ∧ | Roads |
| ⊕ | Existing Monitoring Well | ■ | Existing Building |
| ■ (green stippling) | Initial Excavation Extent | | |
| ■ (cross-hatching) | Overexcavation Extent | | |
| ■ (dotted) | 1997 UST - 133 Excavation | | |

NOTE: Extents are approximated from IRA report, January 2003.



OWS Removal

OWS-133 was removed in January 1999 and was in fair condition with no visible evidence of corrosion or leaks at the time of removal. Soil samples collected from the east sidewall and bottom of the excavation indicated VOC exceedances of the STARS Guidance Values, and samples from the west, east, south sidewalls and bottom indicated SVOC exceedances. No corrective action was conducted following the removal of the OWS. The OWS 133 excavation was backfilled with crushed stone and the floor was restored with concrete. Groundwater samples were collected from existing wells at the site for four quarterly sampling rounds. The results indicated no VOC or SVOC exceedances of the NYS Groundwater SCGs. As a result the NYSDEC Spill #9201395 was closed on March 11, 1999. Remaining contamination was managed under NYSDEC Spill #9702171.

Supplemental Removal Action

From October through December 2001, a removal action was performed to address shallow SVOC contamination encountered during the Geoprobe investigation conducted in 1998. It was determined that the removal of the shallow SVOC contamination from the location of the former UST 133-5 (vault) would mitigate the majority of contamination associated with this site. The work consisted primarily of soil excavation, confirmation sampling, transportation and disposal of excavated materials, backfilling, and site restoration. A brief summary of this removal action is provided below.

The area in the vicinity of the former UST 133-5 pit was excavated from ground surface to a depth of 4 ft bgs. During excavation, the soil was periodically screened for the presence of petroleum hydrocarbons using a photoionization detector (PID). PID readings ranged from 25 to 200 parts per million by volume (ppmv). The highest PID reading was obtained from the bottom of the pit.

Confirmatory samples were collected from the excavation on October 25, 2001, from the pit's bottom and four sidewalls. All samples were analyzed for VOCs and SVOCs and the results were compared to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Determination of Soil Cleanup Objectives and Soil Cleanup Levels, 1994 (as of December 2000, TAGM 4046 soil cleanup guidance values were used in determining soil cleanup levels as previously discussed on Page 3).

No VOCs were detected above the TAGM soil cleanup objectives, but several SVOCs were detected above the TAGM soil cleanup objectives from samples collected from each of the four sidewalls; two SVOCs were also detected in the sample collected from the pit bottom at concentrations exceeding TAGM soil cleanup objectives. Each of the four sidewalls was over-excavated by approximately 5 ft on November 8, 2001. When confirmation sampling indicated continued SVOC contamination in the north, south, and west sidewalls, a second round of over-excavation was performed on November 14, 2001. Confirmation sampling indicated continued SVOC contamination in the west sidewall. A third round of over-excavation was performed on November 20, 2001. Confirmation sampling indicated continued SVOC contamination in the northern section of the west sidewall, and a fourth round of over-excavation was performed on December 3, 2001. No SVOCs were detected above TAGM soil cleanup objectives after the fourth round of over-excavation.

A total of approximately 1,050 cubic yards of excavated soil was transported to the Apron 1 landfarm.

Following the third round of over-excavation and sampling, the site was partially backfilled on December 1, 2001. The site was completely backfilled on December 13, 2001, following the analytical results from the fourth round of over-excavation and sampling. A total of approximately 1,046 cubic yards of clean fill was used to backfill the excavation. In addition, 65 tons of crushed stone and 738 tons of sand were used to completely restore the site. The Final Interim Remedial Action Report for Building 133, was submitted to the regulators in January 2003. Comments from the NYSDEC were received on the report requesting further groundwater sampling at the Building 133 Site to monitor, track, and delineate groundwater contamination.

Groundwater Monitoring

Quarterly sampling of the groundwater was also conducted at the Building 133 Storage Vault AOC in conjunction with the NYSDEC Spills Program (NYSDEC Spill #9702171), beginning in Winter 1998. Monitoring wells 133MW-1, -2, and -3R, (installed in December 1998, to replace 133MW-3, which was installed through a sewer line) were monitored during the first three rounds of sampling. No VOCs or SVOCs were reported above their respective reporting limits at any of the wells. During the fourth sampling round, the three monitoring wells and a fourth well, 133MW-4, were sampled for VOCs, including chlorinated solvents, and SVOCs. TCE was reported in each of the four wells at 2 µg/L (NY Groundwater Standard is 5 µg/L), and chloroform was reported at each of the wells between 1 and 2 µg/L (NY Groundwater Standard is 7 µg/L). These results prompted further investigation to delineate the vertical extent of TCE contamination downgradient of Building 133.

In July 2001, two vertical profile wells (133TW-5 and -6) (Figure 2, Page 5) were installed south and downgradient of the former vault location. Groundwater samples were collected from the top of the water table down to the top of bedrock at 5-ft intervals at each location. Neither PCE nor TCE were detected above the NYS Groundwater SCGs at any interval sampled. Vertical migration of these compounds to deeper intervals was deemed to be not a concern at the site.

To support spill closure, additional groundwater sampling events were conducted quarterly from June 2003 through March 2004 at monitoring wells 133MW-1, 133MW-2, 133MW-3R and 133MW-4. Each sampling location was sampled and analyzed for VOCs using EPA method 8260B and SVOCs using EPA method 8270. The focus of continued groundwater monitoring was to confirm the absence of groundwater contamination at the site. No exceedances were identified during any of the groundwater sampling rounds at the Building 133 site.

The Long-Term Monitoring Report for the Petroleum Spill Sites dated July 2004 was issued to the NYSDEC recommending closure. Closure of NYSDEC Spill #9702171 will be requested once the soil from the Building 133 Storage Vault AOC has been successfully bioremediated at the Apron 1 landfarm.

Soil Vapor Intrusion Evaluation

Soil Vapor Intrusion (SVI) sampling occurred at the Building 133 Storage Vault AOC in March 2007. Soil vapor, sub-slab vapor, indoor air, and outdoor air samples, as illustrated on Figure 4, Page 12, were collected and analyzed for VOCs using the EPA Method TO-15. Sampling results are provided in Table 4, Page 13 and Table 5, Page 14. Results indicate that all detections are below screening levels, but one VOC (acetone) exhibited high concentrations in the sub-slab and indoor samples during the March 2007 event. Sub-slab vapor, indoor, and outdoor air samples were again collected in December 2009 and analyzed for VOCs using the EPA Method TO-15. The results from the December 2009 sampling event indicate that all detections are below screening levels and are presented in Table 4 and Table 5. The acetone concentrations during the December 2009 event were significantly lower than those during the March 2007 sampling event.

Soil Vapor Intrusion (SVI)

Refers to the process by which volatile chemicals migrate from a subsurface source into the indoor air of buildings.

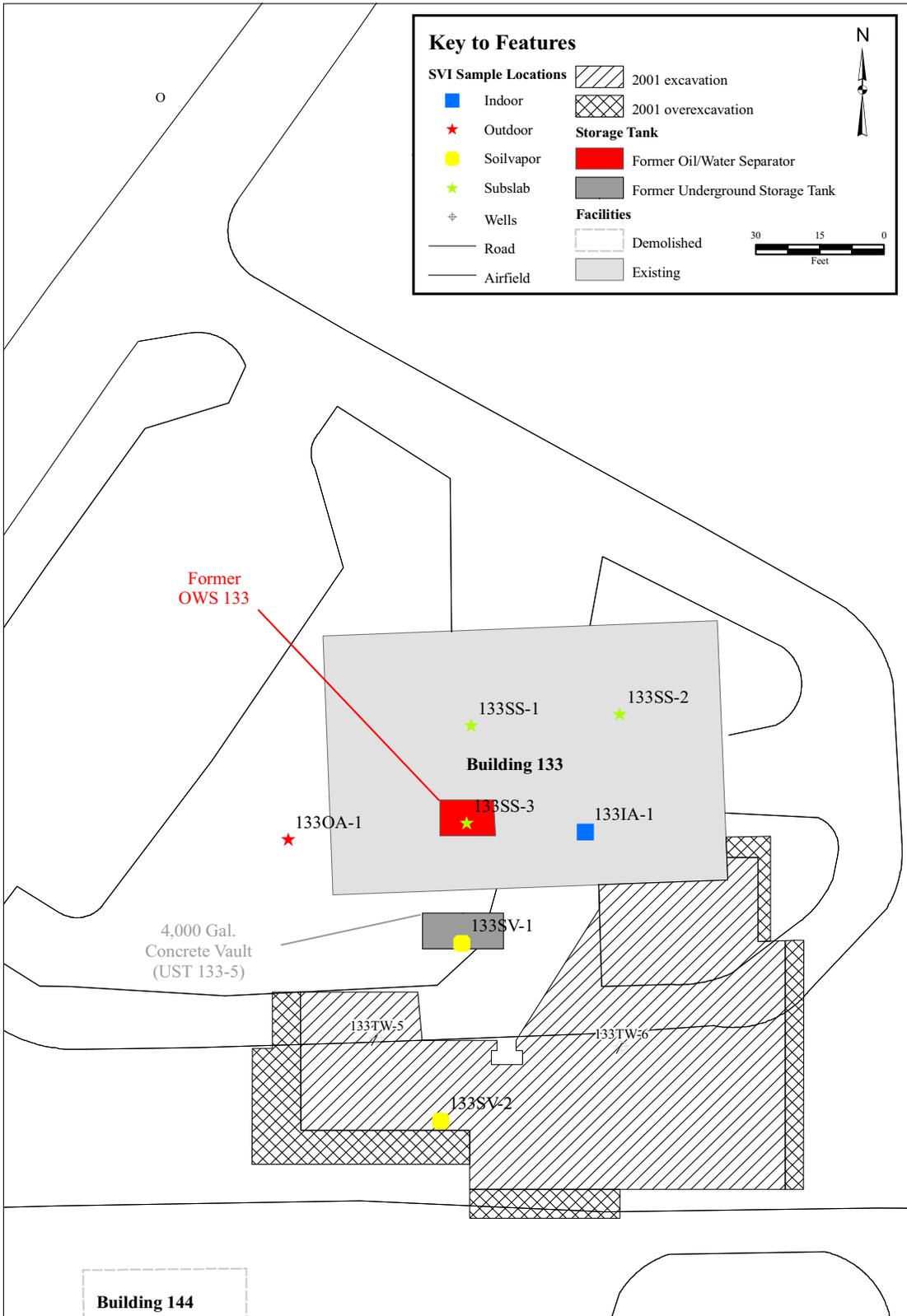


Figure 4: Building 133 Storage Vault AOC - SVI Sampling Locations

Table 3
Building 133 Storage Vault AOC
Detected Soil Vapor and Sub-slab Vapor
Analytical Results

Sample Location	133SS-1		133SS-2		133SS-3		133SV-1	133SV-2
Sample ID	133SS0101AA	133SS0101BB	133SS0201AA	133SS0201BB	133SS0301AA	133SS0301BB	133SV0205AA	133SV0205AA
Sample Type	Sub Slab	Soil Vapor	Soil Vapor					
Sample Date	16 Mar 2007	4 Dec 2009	16 Mar 2007	4 Dec 2009	16 Mar 2007	4 Dec 2009	16 Mar 2007	16 Mar 2007
Sample Depth (ft bgs)	1	1	1	1	1	1	5	5
Sample Collection Duration (hr)	1	1	1	1	1	1	1	1
Volatiles (TO-15) in µg/m³								
1,1,1-trichloroethane	1.2	24	1.4	4.2	3.1	19	U	62 M
1,2,4-trimethylbenzene	10 F	9.5	7.9 M	4.6	7.9	16	3.0	2.6 M
1,3,5-trimethylbenzene	4.1	3.3	1.7	1.3	1.6	5.8	0.60 F	0.9 M
1,4-dichlorobenzene	U	U	U	U	U	U	U	4.6 M
2,2,4-trimethylpentane	5.0	2.2	1.7 M	U	0.62 F	1.6	U	U
4-ethyltoluene	6.9	2.2	2.5 M	1.5	1.0	4.3	0.60 F	2 M
acetone	190	120	2,700	56	21	150	8.9	150
allyl chloride (3-chloropropene)	U	U	U	U	4.2	U	U	U
benzene	4.7	24	6.6	20	U	12	0.68	6.4 M
carbon disulfide	0.98	16	2.0	4.3	0.57	6.3	U	0.54 M
carbon tetrachloride	U	3.2	0.77 F	1.6	0.77 F	1.2	U	U
chloroform	U	0.79	U	0.74	U	U	U	1.8 M
chloromethane	U	U	U	U	U	U	1.1	0.23 F
cyclohexane	7.7 F	120	15	77	3.8 F	56	U	4.4 M
ethylbenzene	17	9.5	80	3.3	1.1	16	0.44 F	5.0 M
freon 11	3.7	8.2	1.4	2.9	1.9	2.9	0.80 F	0.97 M
freon 113	U	0.86 F	U	3.5	0.93 F	1.6	U	U
freon 12	2.8	4.8	1.7	3.7	1.8	4.9	1.7	1.5 M
heptane	71	130	69	49	1.6	22	U	5.6 M
hexane	13	200	47	110	11	51	0.57	16 M
isopropyl alcohol	U	U	U	U	U	U	3.4	U
m,p-xylene (sum of isomers)	49	31	310	11	3.3	37	1.2 F	7.9 F
methyl ethyl ketone	U	U	U	U	13	U	1.7	U
methyl isobutyl ketone	U	0.50 F	U	U	U	U	U	0.96 F
methylene chloride	26	210	23	66	13	47	0.53	0.53 M
o-xylene	11 F	7.2	48	2.9	1.3	5.6	0.62 F	3.1 M
tetrachloroethylene (pce)	2.3	3.7	3.4 M	4.1	1.0	2.6	U	5.9 M
tetrahydrofuran	5.7	U	U	U	68	U	1.1	U
toluene	28	36	34	28	13	38	1.6	41 M
trichloroethylene (tce)	U	1.8	U	U	U	1.4	U	2.7 M

Notes: F = The analyte is detected and the quantitation is between the Method Detection Limit and Reporting Limit.

M = A matrix effect was present.

U = The analyte was not detected above the MDL.

1 = See Appendix E for sub-slab vapor and soil vapor screening level calculations.

Table 4
Building 133 Storage Vault AOC
Detected Soil Vapor and Sub-slab Vapor
Analytical Results

Sample Location	133IA-1		133OA-1	
Sample ID	133IA0105AB	133IA0105BB	133OA0105AB	133SS0201BB
Sample Type	Indoor	Indoor	Outdoor	Outdoor
Sample Date	11 Apr 2007	4 Dec 2009	11 Apr 2007	4 Dec 2009
Sample Depth (ft bgs)	5	5	5	5
Sample Collection Duration (hr)	8	8	8	8
Volatiles (TO-15) in µg/m3				
1,2,4-trimethylbenzene	10.4	14.0	U	1.75
1,2-dichloroethane	U	U	U	U
1,3,5-trimethylbenzene	2.80	9.34	U	0.550 F
1,4-dichlorobenzene	1.71 J	U	2.51	U
2,2,4-trimethylpentane	9.50 M	3.13	U	U
4-ethyltoluene	4.85	8.34	U	U
acetone	2,490	22.4	5.00	17.4
benzene	12.7 M	5.78	U	0.390 F
carbon tetrachloride	0.256	0.384	U	U
chloromethane	0.420	0.609	0.378	0.609
cis-1,2-dichloroethene	U	0.484 F	U	U
cyclohexane	5.95	14.0	U	U
ethyl acetate	226	U	U	U
ethylbenzene	11.5	9.27	U	0.750
freon 11	0.800 F	0.914	U	0.971
freon 12	1.46	2.31	0.804	2.21
heptane	9.16 M	7.50	U	U
hexane	31.5	10.7	U	U
m,p-xylene (sum of isomers)	36.2	19.4	U	1.72
methyl ethyl ketone	0.958 F	U	U	U
methyl isobutyl ketone	U	1.42	U	U
methyl tert-butyl ether	1.25	U	U	U
methylene chloride	4.20	U	0.847	0.353 F
o-xylene	9.27	8.83	U	U
tetrachloroethylene (pce)	10.4	13.4	U	U
toluene	221	24.5	0.728	1.72
trichloroethylene (tce)	0.765	0.546	U	U

Notes: F = The analyte is detected and the quantitation is between the Method Detection Limit and Reporting Limit.

J = The analyte is positively identified, the quantitation is an approximation.

M = A matrix effect was present.

U = The analyte was not detected above the MDL.

Description of the Preferred Alternative

The Air Force recommends no further action at the Building 133 Storage Vault AOC. As a result of the interim removal action, contaminated soils have been successively removed and replaced with clean fill. Groundwater monitoring has confirmed the absence of contamination above NYS Groundwater SCGs.

Currently, there are no threats to human health and the environment associated with the Building 133 Storage Vault AOC. NYSDEC Spill #9201395 was closed on March 11, 1999 and closure of NYSDEC Spill #9702171 will be approved following the successful soil bioremediation being performed on Apron 1.

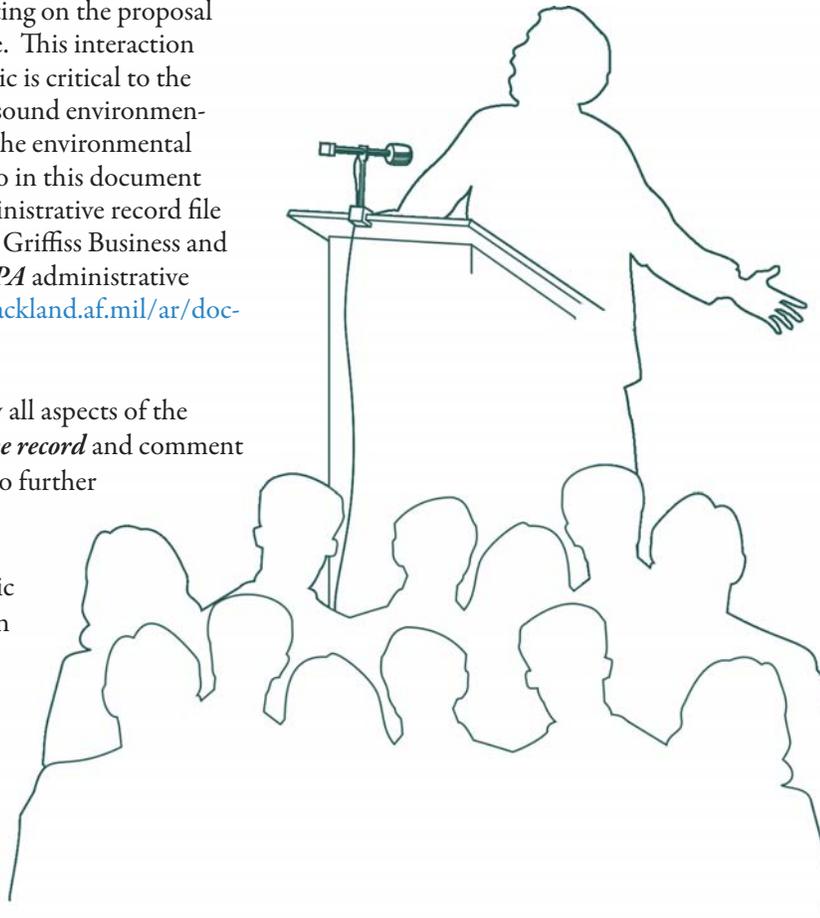
The soil vapor intrusion evaluation conducted at the Building 133 Storage Vault AOC included sub-slab, soil vapor indoor air, and outdoor air sampling at Building 133. All detections in the samples collected at the Building 133 Storage Vault AOC are below established screening levels and are indicative of acceptable risk. No further action or evaluation of SVI is recommended at the Building 133 Storage Vault AOC.

Community Participation

The agencies desire to have an open dialogue with citizens concerning the results of the removal actions and subsequent investigations at this AOC and encourage citizens to participate by commenting on the proposal to take no further action at the site. This interaction between the agencies and the public is critical to the CERCLA process and to making sound environmental decisions. Details on this site, the environmental program, and all reports referred to in this document are available for review in the administrative record file located at 153 Brooks Road in the Griffiss Business and Technology Park and on the *AFRPA* administrative record website at <https://afrpaar.lackland.af.mil/ar/doc-search.aspx>.

The public is encouraged to review all aspects of the removal actions and *administrative record* and comment on the agencies' proposal to take no further action at this site.

The agencies will consider all public comments on this proposed plan in preparing the ROD. Depending on comments received, the plan presented in the ROD could be different from the actions presented in this proposed plan. All written and verbal comments will be summarized and responded to in the responsiveness summary section of the ROD.



AFRPA

Air Force Real Property Agency

Administrative Record

Documents including correspondence, public comments, and technical reports upon which the agencies base their remedial action selection.

How You Can Participate

Whether you are reading this type of document for the first time or are familiar with the Superfund process, you are invited to participate in the process.

- Read this proposed plan and review additional documents in the administrative record file.
- Contact the Air Force, EPA, or NYSDEC project managers listed on page 18 to ask questions or request information.
- Attend a public meeting and give verbal comments (see details below).
- Submit written comments (see comment form on back cover) by Month ??, 2010.

Public Comment Period

The agencies have set a public comment period from Month ??, 2010, to Month ??, 2010, to encourage public participation in the selection process. Written comments should be sent to:

Mr. Michael McDermott
BRAC Environmental Coordinator
Air Force Real Property Agency
153 Brooks Road
Rome, NY 13441

Public Meeting

The comment period includes a public meeting at which the Air Force will present the proposed plan. Representatives from the agencies will be available to answer questions and accept both oral and written comments. The public meeting is scheduled for 5:00 pm, Day, Month ??, 2010, and will be held at the Location ???

Environmental Timeline

Building 133 Storage Vault AOC

Problem Identification/ Records Search: 1981
▽
Problem Confirmation and Quantification: 1982
▽
Field Investigation: 1985
▽
Griffiss AFB added to National Priorities List: 1987
▽
U.S. Public Health Service Health Assessment: 1988
▽
EPA, NYSDEC, and Air Force enter into Federal Facility Agreement: 1990
▽
Griffiss designated for Realignment by BRAC: 1993 and 1995
▽
ATSDR Health Assessment: 1995 Addendum: 1996
▽
Remedial Investigation Report Draft-Final: December 1996
▽
UST 133 Removed: 1997 OWS 133 Removed: 1999
▽
Removal Action Performed: 2001
▽
Groundwater Monitoring June 2003 - March 2004
▽
Soil Vapor Intrusion Evaluation March 2007 & December 2009
▽
Proposed Plan Final: Month 2010
▽
Public Comment Period: M/D, 2010 - M/D, 2010

More Griffiss Air Force Base Environmental Information

General information concerning the environmental program at the former Griffiss AFB can be found on the AFRPA administrative record website at <https://afarpaar.lackland.af.mil/ar/docsearch.aspx>. Visit the website or call 315-356-0810 to ask about the installation activities or request background information.

Additional Information

Three agencies have been identified in the Federal Facility Agreement: the Air Force, NYSDEC, and EPA. The agreement ensures that environmental impacts on public health, welfare, and the environment associated with past and present activities at the former Griffiss AFB are thoroughly investigated and appropriate remedial actions are taken as necessary to protect the public health, welfare, and the environment. Any of the following agency representatives may be contacted to obtain additional information:



The **Air Force** is legally responsible for the environmental activities at the former Griffiss AFB. Since this site is on the National Priorities List, all investigations and cleanup plans are finalized only after consultation with EPA and NYSDEC.

For additional information concerning the environmental program at the former Griffiss AFB and the Air Force's role in preparing this proposed plan, contact:

Mr. Michael McDermott
BRAC Environmental Coordinator
Air Force Real Property Agency
153 Brooks Road
Rome, NY 13441
(315) 356-0810



**New York State
Department of Environmental
Conservation**

For additional information concerning the state's role in preparing this proposed plan, contact:

Ms. Heather Bishop
NY State Department of Environmental
Conservation
625 Broadway
Albany, NY 12233
(518) 402-9692



**U.S. Environmental
Protection Agency**

For additional information concerning the EPA's role in preparing this proposed plan, contact:

Mr. Douglas Pocze
U.S. Environmental Protection Agency,
Region II
290 Broadway, 18th floor
New York, NY 10007-1866
(212) 637-4432

Building 133 Storage Vault AOC - ST-53

fold here, please use only clear tape to seal

This comment form is provided for your convenience in submitting written comments to the Air Force Real Property Agency concerning the Building 133 Storage Vault AOC. If you would like to receive a copy of the Record of Decision and Responsiveness Summary, which address public comments received on this proposed plan, please ensure sure that the information on the mailing label below is correct.

Comments:

Multiple horizontal lines for writing comments.

(continued on reverse)

Mr. Michael McDermott
BRAC Environmental Coordinator
AFRPA - Griffiss
153 Brooks Road
Rome, NY 13441

*This mailing
is to inform you of
the proposed
environmental plan
for
No Further Action at
Building 133 Storage Vault AOC
at the former
Griffiss AFB,
and to solicit
your comments.*