
**SITE SS-018
AUTO HOBBY SHOP
AND SITE SS-028
OPEN STORAGE AREA**

— RECORD OF DECISION —

***Plattsburgh Air Force Base
Installation Restoration
Program***



prepared for:

**United States Department of The Air Force
Plattsburgh Air Force Base
Plattsburgh, New York**

**Final
August 2000**

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**PLATTSBURGH AFB
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**PLATTSBURGH AIR FORCE BASE
PLATTSBURGH, NEW YORK**

**UNITED STATES DEPARTMENT OF THE AIR FORCE
INSTALLATION RESTORATION PROGRAM**

**Prepared by:
URS CONSULTANTS, INC.**

FINAL

AUGUST 2000

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DECLARATION FOR THE RECORD OF DECISION

Site Name and Location

Plattsburgh Air Force Base (AFB)
Site SS-018 Auto Hobby Shop, Site SS-028 Open Storage Area
Plattsburgh, New York

Statement of Basis and Purpose

This Record of Decision (ROD) presents a selected remedial alternative for soil and groundwater at sites SS-018 and SS-028 on the Plattsburgh Air Force Base (AFB) in Plattsburgh, New York. It has been developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), 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 at the Information Repository at the Feinburg Library on the campus of the State University of New York at Plattsburgh.

The remedy has been selected by the United States Air Force (USAF) in conjunction with the United States Environmental Protection Agency (USEPA) and with the concurrence of the New York State Department of Environmental Conservation (NYSDEC) pursuant to the Federal Facilities Agreement among the parties under Section 117(a) of CERCLA, dated July 10, 1991. A copy of the NYSDEC concurrence letter is included as Appendix C of this ROD.

Assessment of the Site

The Auto Hobby Shop (SS-018) was used by the Plattsburgh AFB from the early 1970s to Base closure, while the Open Storage Area (SS-028) was used by the Plattsburgh AFB from the 1950s to Base closure. Contamination at SS-018 and SS-028 includes polycyclic aromatic

hydrocarbons (PAHs) and metals present in fill materials along the edge of and underneath pavement at the sites, chemicals in soil related to past small spills of fuel and solvents, and volatile organic compounds (VOCs) present in groundwater at concentrations above New York State groundwater standards.

Remedial investigations (RIs) conducted at SS-018 and SS-028 identified possible migration pathways of chemical contaminants to potential receptors. The investigations determined that there is little potential for human contact with contaminated media under the present use conditions (pavement prevents exposure to soil; municipal water supply obviates the use of groundwater). Assessments of risk to human health, conducted as part of the RIs, assumed that in the future, the sites would be used as commercial or industrial areas, and for a recreational bike/walk path. The risk assessments concluded that, for these future uses, there is no unacceptable risk associated with human exposure to site contaminants. Exposure to soil and groundwater under a residential future use scenario was not considered because residential redevelopment is highly unlikely due to: 1) the land use plans developed for the sites (PARC 1995), 2) the immediate proximity of the area to an active rail line, and 3) the development procedure that will be implemented as a result of the historic status of the area. An assessment of ecological risks concluded that there is no significant risk to ecological resources posed by chemical releases at SS-028 and SS-018.

As a result of RI field activities, an area of contaminated soil on SS-028 believed to be the source for the majority of the groundwater contamination was identified and excavated during a removal action. The removal action was initiated in December 1998 to remove contaminated soil believed to be a source of the chlorinated hydrocarbon contamination detected in the groundwater. The action was documented in a Closure Report (URS 1999c), which included a description of the confirmatory soil samples taken to evaluate the adequacy of the soil removal. The removal action is discussed in greater detail in Section 5.4 of this ROD. The excavated material was treated off base by thermal desorption. Consequently, groundwater contamination is expected to decrease to levels below New York State groundwater standards with time.

The response action selected in this ROD is necessary to protect the public health and welfare from releases of hazardous substances into the environment.

Description of the Remedy

Sites SS-018 and SS-028 are two of a number of sites administered under the Plattsburgh AFB IRP. RODs have previously been signed for nine operable units at the base, and additional RODs are planned for other IRP sites. It is intended that the proposed action be the final action for sites SS-018 and SS-028. A removal action conducted from December 1998 through June 1999 at site SS-028 resulted in the removal of contaminated soil that constituted the principal threat wastes at the sites.

The remedy addresses risks from residual contaminants in soil and groundwater by restricting groundwater use and by limiting land uses to those that have limited potential to threaten public health (nonresidential). The following actions are included in the remedy:

- Restriction of site development to facilities that support nonresidential use
- Prohibition of the installation of any wells for drinking water or any other purposes which could result in the use of the underlying groundwater
- Prohibition of discharge of groundwater withdrawn during construction dewatering to the ground or surface water, without prior approval of the NYSDEC
- Periodic monitoring of site groundwater and groundwater seeps for volatile organic compounds and MTBE until groundwater contaminant levels are below current regulatory standards
- In order to determine if the remedy will continue to be protective of human health and the environment in the future, evaluation of the above institutional controls, which will be implemented through lease and deed restrictions, and review of groundwater monitoring data will be undertaken as part of five-year reviews of the remedy in accordance with Section 121(c) of CERCLA.

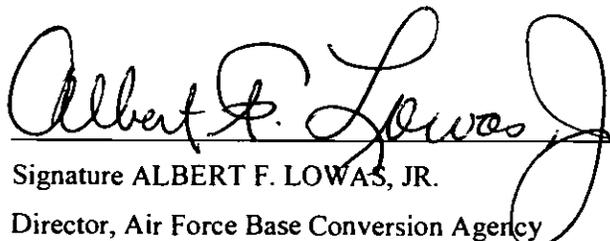
Statutory Determinations

The selected remedy for the SS-018/SS-028 site is protective of human health and the environment, complies with federal and state Applicable or Relevant and Appropriate Requirements, and is cost effective. During the removal action, the remediation goal of removing contaminated soil believed to be the source of chlorinated hydrocarbon contamination detected in the groundwater was achieved. The soil containing contaminants above NYSDEC TAGM HWR-94-4046 thresholds were removed. Resource recovery technologies and treatment technologies were utilized that permanently and significantly reduced the toxicity, mobility, and volume of volatile organic site contaminants. However, polycyclic aromatic hydrocarbon contamination in soil, largely located below pavement, will remain in place untreated. Also, groundwater contaminants will remain above regulatory standards until they are naturally attenuated with time. Because this remedy will result in contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure, reviews according to Section 121(c) of CERCLA will be conducted every five years after initiation of the remedial action, to ensure that the remedy is protective of human health and the environment.

ROD Data Certification Checklist

The following information is included in this ROD. Additional information can be found in the Administrative Record file for this site.

- Chemicals of concern and their respective concentrations (Section 5.0)
- Baseline risk represented by the chemicals of concern (Section 7.0)
- Cleanup levels established for chemicals of concern and the basis for these levels (Tables 1 through 4)
- How source materials constituting principal threats are addressed (Section 4.0)
- Current and reasonably anticipated future land use assumptions, and current and potential future beneficial uses of groundwater used in the baseline risk assessment and ROD (Sections 6.0 and 7.0)
- Potential land and groundwater use that will be available at the site as a result of the Selected Remedy (Section 6.0)
- Estimated annual operation and maintenance (O&M) costs (Section 8.2)
- Key factors that led to selecting the remedy (Section 9.0)

 September 19, 2000
Signature ALBERT F. LOWAS, JR.
Director, Air Force Base Conversion Agency

 Sept. 27, 2000
Signature JEANNE M. FOX
USEPA, Regional Administrator

DECISION SUMMARY

1.0 SITE NAME, LOCATION, AND DESCRIPTION

Plattsburgh AFB, located in Clinton County in northeastern New York State, is bordered on the north by the City of Plattsburgh, on the west by Interstate 87, on the south by the Salmon River, and on the east by Lake Champlain. It lies approximately 26 miles south of the Canadian border and 167 miles north of Albany (Figure 1). Plattsburgh AFB was closed on September 30, 1995 as part of the (third round of) base closures mandated under the Defense Base Closure and Realignment Act of 1993, and its reuse is being administered by the Plattsburgh Airbase Redevelopment Corporation (PARC).

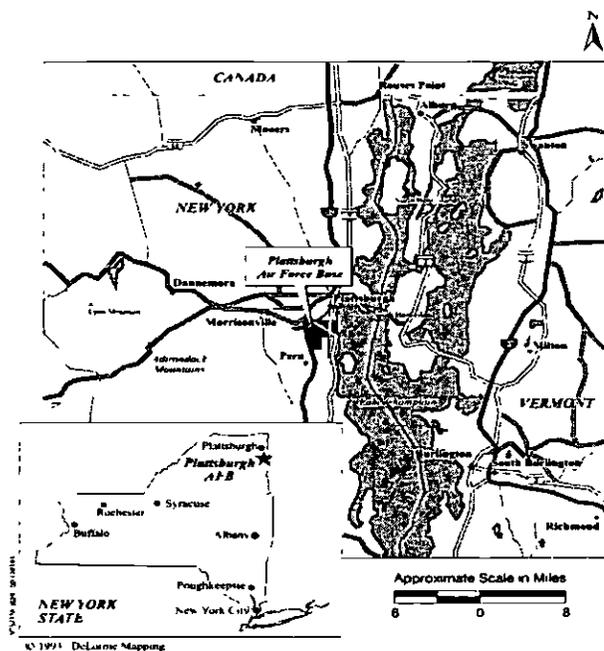


FIGURE 1 – LOCATION OF PLATTSBURGH AFB

As part of the USAF's Installation Restoration Program (IRP) and the Base Realignment and Closure (BRAC) program, Plattsburgh AFB has initiated activities to identify, evaluate, and remediate identified hazardous material disposal areas. The IRP at Plattsburgh AFB is being implemented according to a Federal Facilities Agreement, Docket No. II-CERCLA-FFA-10201, signed between the USAF, USEPA, and NYSDEC on July 10, 1991. Plattsburgh AFB was

placed on the National Priorities List (NPL) on November 21, 1989. Cleanup is being funded by the USAF.

SS-018 and SS-028 are located adjacent to one another on the old base portion of Plattsburgh AFB near the intersection of Wisconsin Street and Ohio Avenue (Figure 2). Two other sites, SS-019 (Civil Engineering Squadron Paint/Shop) and ST-025 (Building 505 Abandoned Underground Storage Tank) are situated in the immediate vicinity of SS-018 and SS-028. All of these sites are shown in Figure 3.

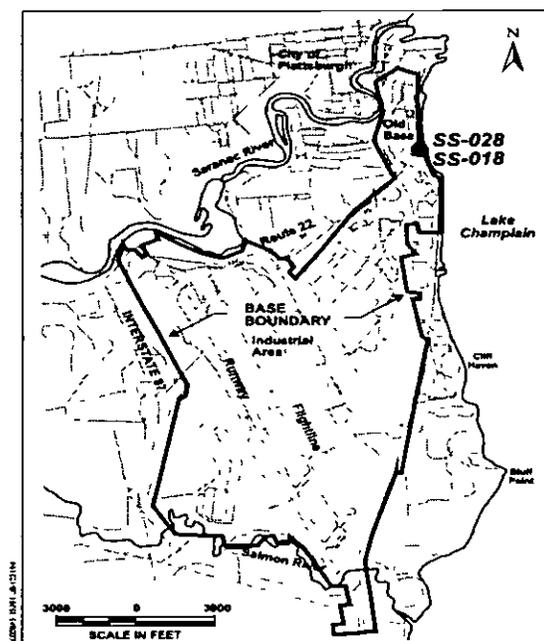
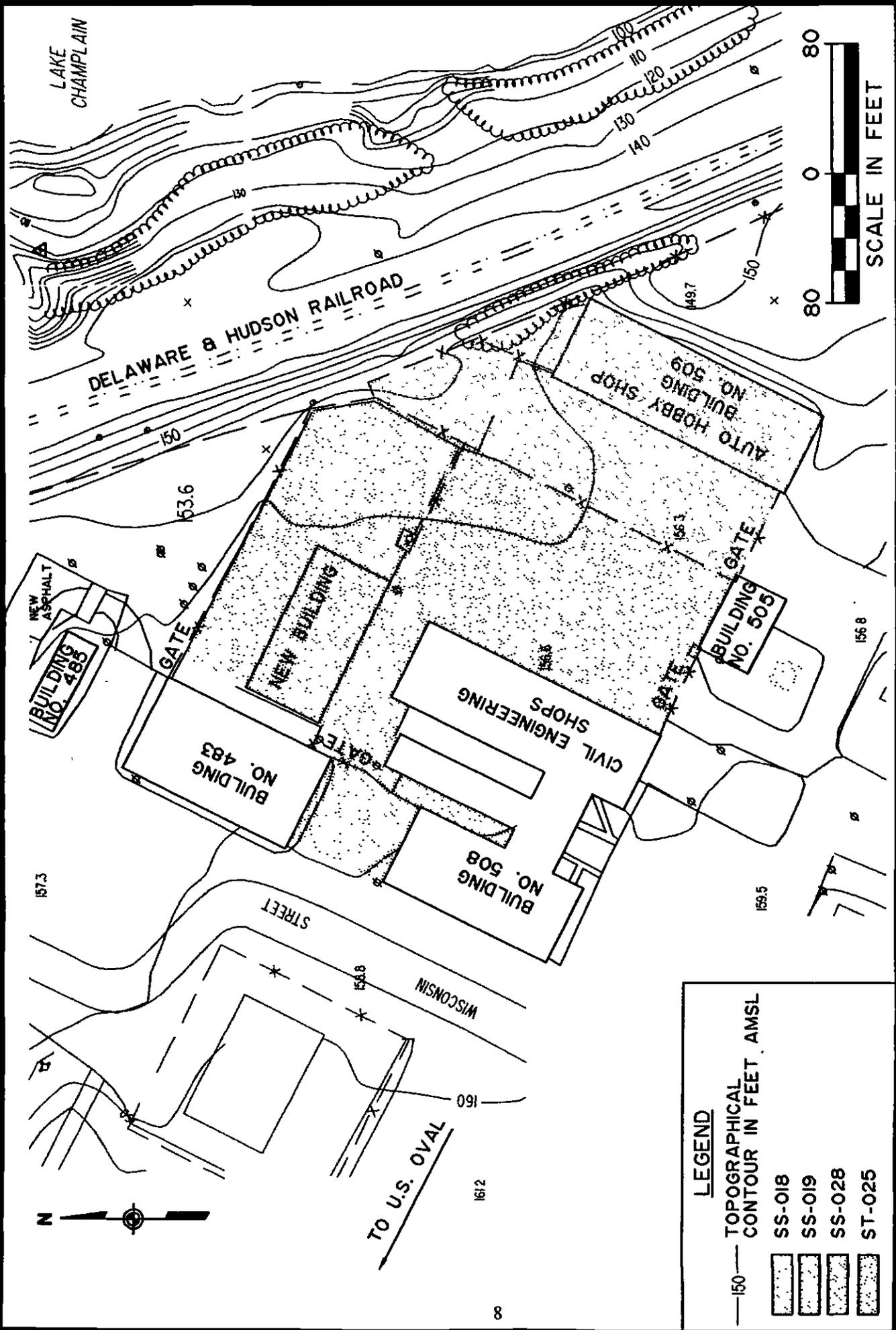


FIGURE 2: LOCATION OF SS-018 AND SS-028

SS-018 (Building 509, the Auto Hobby Shop) was built in 1936 by the United States Army (Plattsburgh AFB was formerly Plattsburgh Army Barracks) for use as a regimental parking garage. From the mid-1950s until the early 1970s, Building 509 was used as a vehicle maintenance shop. From the early 1970s until base closure, the facility was used for the maintenance of private vehicles owned by base personnel. Principal wastes generated by the Auto Hobby Shop were mineral spirits, paints, and petroleum-based automotive waste fluids. A paved waste accumulation point was situated along the fence line west of the Auto Hobby Shop and adjacent to SS-028. One 1,000-gallon fuel oil underground storage tank (UST), one 300-gallon oil/water separator, and one 800-gallon plastic aboveground storage tank (AST) containing



LEGEND

— 150 —	TOPOGRAPHICAL CONTOUR IN FEET, AMSL
[Stippled Box]	SS-018
[Dotted Box]	SS-019
[White Box]	SS-028
[Patterned Box]	ST-025

waste oil/hydraulic fluid were formerly located on site. The 300-gallon oil/water separator, which discharged to the sanitary sewer, was not observed to be leaking upon its removal. Some evidence of spillage was noted during removal of the 800-gallon AST, although the spills were contained within a concrete vault in which the tank was situated. The area was cleaned up after the tank was removed (no soil removal was necessary).

SS-028, the Open Storage Area, is associated with Building 508, which housed several base engineer maintenance shops. Building 508 was built in 1935 and also initially served as a regimental parking garage. North and east of Building 508 is a paved open area which the Air Force used for the general storage of equipment and containerized product since the late 1950s. Product stored in drums and tanks at the site included diesel fuel, roofing tar, hydraulic fluid, waste oil and solvents, and antifreeze. In September 1990, approximately thirty 55-gallon drums stored at SS-028 were disposed of off base. Several USTs (fuel oil) and ASTs (fuel oil/gasoline) are or were formerly located near the site. The USTs were properly removed by 1996, and closure reports were completed. Two ASTs remain on site; these tanks meet state and federal regulations.

Currently, the Open Storage Area is used to store excess equipment and construction material, Building 508 houses several PARC caretaker maintenance shops, and Building 509 is used for storage. Because of the age of Buildings 508 and 509 (over 50 years old) and their potential contribution to an existing historic district, the general area surrounding and including SS-028 and SS-018 is eligible to be nominated to the National Register of Historic Places. Negotiations are currently underway with the New York State Office of Historic Preservation (NYSOHP) to establish a programmatic agreement to protect historical resources. The agreement will address protective covenants for Buildings 508 and 509 and adjacent property in accordance with Section 106 of the National Historic Preservation Act.

Sites SS-018 and SS-028 lie about 150 feet west of the shoreline of Lake Champlain. An active Delaware and Hudson rail line is situated between the sites and the lake. The topography drops off steeply between SS-018/SS-028 and the lake; the rail line lies about 10 feet below the grade of the sites and the lake lies about 50 feet below the grade of the sites.

The stratigraphy in the SS-018/028 area generally consists of four hydrogeologic units: an upper unconsolidated sand aquifer, an underlying confining layer formed by a silty clay unit, a glacial till water-bearing unit, and a thinly-bedded limestone which contains the bedrock aquifer. Fill (regraded material) is present below the site asphalt pavement and adjacent grassy areas to a maximum depth of 7 feet below grade. The fill material consists of sand with gravel, coal fragments and dust, cinders, ash, and debris (metal, brick, plastic, and paint chips). Between 1903 and 1924, the United States Army stored up to 815 tons of coal in a shed at the location of what is now Building 508. This 23- by 217-foot shed was destroyed by fire and the area was regraded. Coal storage and regrading activities at this building over its 21-year existence may account for the coal pieces, dust, and cinders found in the fill layer.

Groundwater flows in the sand aquifer eastward beneath the site at a depth of about 15 feet below grade. Eventually, groundwater flows to the steep embankment above the shoreline of Lake Champlain, where it daylights along a seepage face at the sand/clay geologic contact.

2.0 HISTORY AND ENFORCEMENT ACTIVITIES

2.1 SS-018

A site investigation, consisting of a record search and soil gas survey, was performed and concluded that additional soil and groundwater sampling was necessary to characterize the site (E.C. Jordan 1989). Subsequently, a remedial investigation was performed which included advancing of seven soil borings with associated soil sampling, collecting 11 surface soil samples, groundwater screening (used to optimize the location of monitoring wells), sampling the contents of a UST (since removed), and installing and sampling three monitoring wells (Malcolm Pirnie 1996). Contamination at the site was found to consist primarily of PAH-contaminated surface soil in an area of regraded material immediately adjacent to the eastern portion of SS-028.

2.2 SS-028

In 1992, a preliminary assessment of the Open Storage Area was completed and included a review of historical records, personnel interviews, and a site walkover (Malcolm Pirnie 1994). A site investigation (SI) was initiated in the fall of 1994 to carry out recommendations of the

preliminary assessment for further investigation of the site, including the analysis of soil and groundwater samples (URS 1995a). Field activities included advancing four soil borings, collecting and analyzing eight soil samples from the borings, installing and sampling two monitoring wells, sampling two site SS-018 monitoring wells, collecting and analyzing one composite surface soil sample, and observing the site's physical condition. PAH-contaminated soil was identified in borings advanced adjacent to site SS-018. The downgradient groundwater samples collected during the site investigation contained low-level chlorinated hydrocarbon contamination.

Consequently, the USAF agreed to a request by the NYSDEC to install two additional wells. Because chlorinated hydrocarbons were detected in the new wells at concentrations exceeding New York State groundwater standards, a remedial investigation was initiated to evaluate the source and extent of chlorinated hydrocarbons at the site. In the summer of 1997, 50 soil samples and 27 groundwater screening samples were collected at 27 boring locations, two groundwater seep samples were collected, three monitoring wells were installed, and groundwater from seven new and previously existing wells was sampled (URS 1999a). The soil samples and groundwater screening samples were analyzed by an onsite portable gas chromatograph. The seep samples groundwater samples from monitoring wells, and 20 percent of the soil and groundwater screening samples (taken in duplicate) were analyzed at an offsite laboratory. Based on the investigation's recommendations, a removal action was initiated to remove soil contaminated to levels above NYSDEC soil cleanup levels (NYSDEC 1994) believed to be a source of the chlorinated hydrocarbon contamination detected in groundwater. The proposed removal action, which recommended the excavation and offsite disposal of the contaminated soil, was presented in the *Building 508 Open Storage Area (SS-028) Action Memorandum* (URS 1998). The proposed action also was presented to the public at a meeting held on November 19, 1998. The soil removal action was undertaken from December 1998 through June 1999 in consultation with NYSDEC and the USEPA. Approximately 158 tons of soil were removed, transported to a thermal desorption facility in New Hampshire, and disposed of (URS 1999c). In June 1999, the excavation was backfilled with clean soil and restored subsequent to regulatory agency concurrence that a sufficient quantity of soil had been removed from the removal action excavation. The removal action is discussed further in Section 5.4

3.0 COMMUNITY PARTICIPATION

The USAF has kept the community informed regarding progress at site SS-018 and SS-028 during Restoration Advisory Board (RAB) meetings open to the public. This board consists of the Base Cleanup Team (BCT) members (key representatives from the USAF, USEPA, and NYSDEC) and seventeen representatives from municipalities, community organizations, and associations including community members with environmental/engineering expertise. The RAB, which was chartered in 1995, serves as a forum for the community to become familiar with the restoration activities ongoing at Plattsburgh AFB and to provide input to the BCT.

The RI reports, the Proposed Plan (URS 2000), and other site-related documents in the SS-018/SS-028 Administrative Record have been made available to the public. The full-length reports have been available at the Information Repository located at the Feinberg Library on the Plattsburgh campus of the State University of New York. The notice of the availability of these documents was published in the *Press Republican* on June 19, 2000.

In addition, a 30-day public comment period was held from June 19 to July 18, 2000 to solicit public input. During this period, the public was invited to review the Administrative Record and comment on the preferred alternative being considered.

In addition, Plattsburgh AFB hosted a public meeting on July 13, 2000 at the Old Court House, Second Floor Meeting Room, 133 Margaret Street. The date and time of the meeting was published in the *Press Republican*. The meeting was divided into two segments. In the first segment, data gathered at the site, the preferred alternative, and the decision-making process was discussed. In the second segment, immediately after the informational presentation, Plattsburgh AFB held a formal public meeting to accept comments about the remedial alternative being considered for the SS-018 and SS-028 sites. The meeting provided the opportunity for people to comment officially on the plan. Public comments have been recorded and transcribed, and a copy of the transcript has been added to the Administrative Record and Information Repository. This transcript is included as Appendix A of this Record of Decision. Public comments on the Proposed Plan, and Air Force responses to those comments, are summarized in the Responsiveness Summary which is included as Appendix B.

4.0 SCOPE AND ROLE OF OPERABLE UNIT

Sites SS-018 and SS-028 are only two of a number of sites administered under the Plattsburgh AFB IRP. Records of Decision have previously been signed for nine operable units at the base, and additional Records of Decision are planned for other IRP sites. It is intended that the proposed action be the final action for sites SS-018 and SS-028. A removal action conducted from December 1998 through June 1999 at site SS-028 resulted in the removal of contaminated soil that constituted the principal threat wastes at the sites.

5.0 SITE CHARACTERISTICS

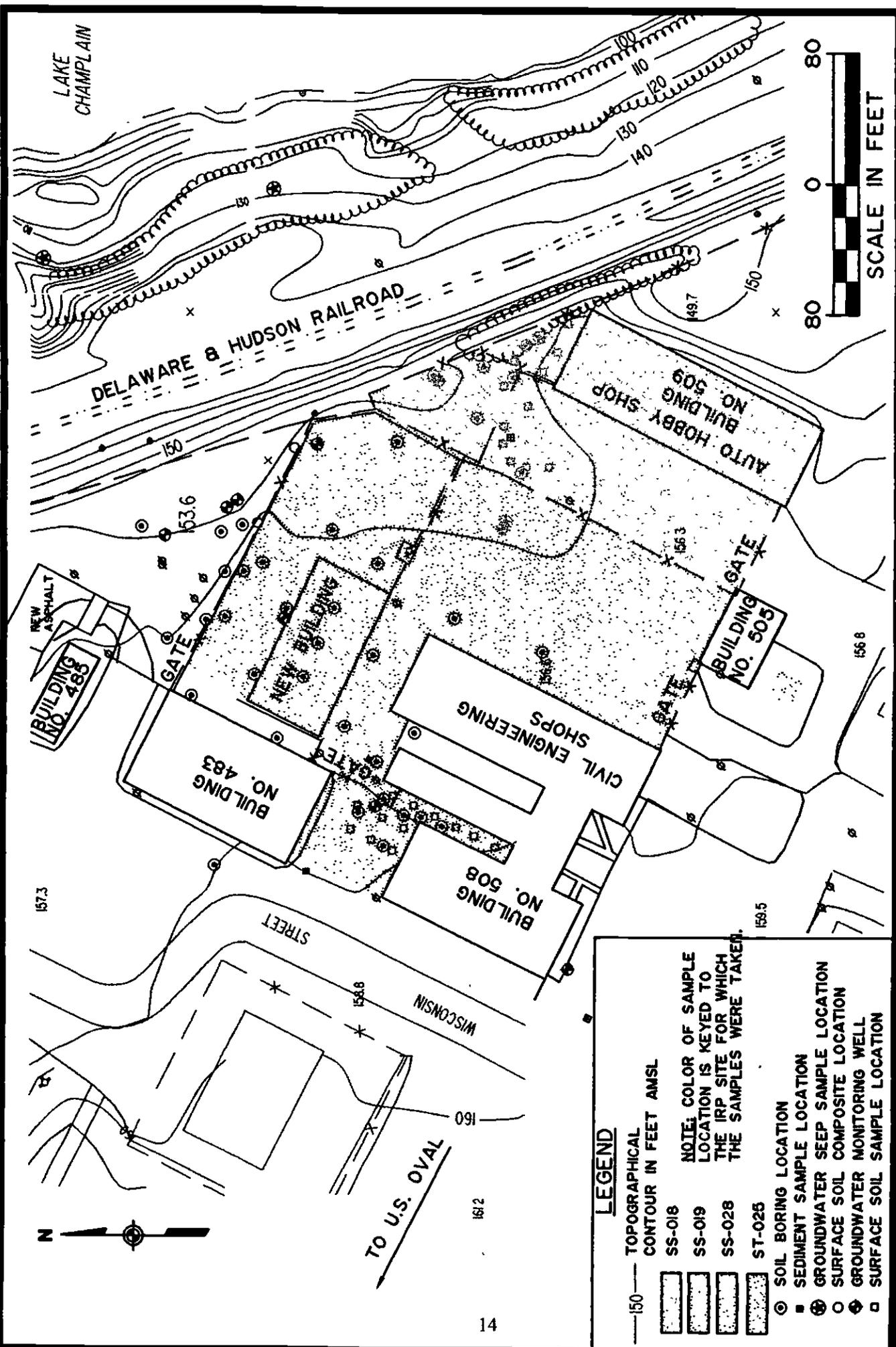
The soil and groundwater sampling at sites SS-018 and SS-028 was extensive and comprehensive. Soil sampling locations from site and remedial investigations in the area are depicted in Figure 4. Samples taken at the sites were chemically analyzed for the following general groups of contaminants VOCs, SVOCs, pesticides, polychlorinated biphenyls (PCBs), and metals. All samples were not analyzed for all parameters; many of the samples were targeted primarily for VOCs, since these compounds were detected in groundwater at the sites and generally are mobile.

The contamination found at the sites can be evaluated by comparing the results of sampling and analysis to established requirements and guidelines. The levels of contamination from organic compounds in soil (both subsurface and surface soil) were evaluated by comparing them to guidance values specified in the *Technical and Administrative Guidance Memorandum HWR-94-4046* (TAGM #4046) entitled, "Determination of Soil Cleanup Objectives and Cleanup Levels" (NYSDEC 1994). As recommended in TAGM #4046, levels of contamination from inorganic chemicals (metals) in soil were evaluated by comparing the detected concentrations to site background levels (URS 1996) referred to as To Be Considered values (TBCs).

For groundwater, contaminant levels were compared to the site groundwater applicable or relevant and appropriate requirements (ARARs), which are derived from the NYSDEC water quality standards and guidance values specified in NYSDEC *Technical and Operational Guidance Series* (TOGS) 1.1.1 (NYSDEC 1998), New York State water standards (Title 6 of

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LEGEND

- 150 — TOPOGRAPHICAL CONTOUR IN FEET AMSL
- SS-018
- SS-019
- SS-028
- ST-025
- SOIL BORING LOCATION
- SEDIMENT SAMPLE LOCATION
- GROUNDWATER SEEP SAMPLE LOCATION
- SURFACE SOIL COMPOSITE LOCATION
- GROUNDWATER MONITORING WELL
- SURFACE SOIL SAMPLE LOCATION

NOTE: COLOR OF SAMPLE LOCATION IS KEYED TO THE IRP SITE FOR WHICH THE SAMPLES WERE TAKEN.

New York Code of Rules and Regulations, Part 703), USEPA drinking water standards (Title 40 of the Code of Federal Regulations, Part 141), and site background.

5.1 SS-018 Surface Soil

A summary of chemicals detected at concentrations above TBCs in surface soil at site SS-018 is presented in Table 1. Chemicals detected at concentrations above TBCs include PAHs and metals; VOCs, pesticides, and PCBs were not detected above TBCs. PAHs are by-products of the combustion of organic materials, such as coal and petroleum products, and are commonly found in creosote, asphalt, and soot. Concentrations of seven of the PAHs detected exceeded TBCs. The pattern of PAH occurrences in surface soil for both SS-018 and SS-028 is presented in Figure 5. The highest concentration of PAHs occur in the northeastern portion of site SS-018 and are associated with a layer of regraded material that contains ash, building debris, cinders, and coal.

The layer of regraded material is believed to contain the burned remnants of a coal storage shed and oil house that were destroyed by fire in the 1920s and appears to be the source of the PAHs. The abundant coal fragments in the layer of regraded material also may have served as an organic matrix onto which PAH compounds from petroleum spills may have been adsorbed. Eight metals (arsenic beryllium, calcium, lead, magnesium, potassium, sodium, and zinc) also were detected at concentrations above TBCs.

5.2 SS-018 Subsurface Soil

A summary of chemicals detected in subsurface soil at site SS-018 at concentrations exceeding TBCs is presented in Table 2. Similar to the surface soils, only PAHs and metals were detected at concentrations above their respective TBCs. These included seven PAHs [benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, ideno(1,2,3-cd) pyrene, and dibenz(a,h)anthracene] and nine metals (cadmium, calcium, chromium, copper, lead, magnesium, manganese, nickel, and zinc). PAHs were detected at decreasing concentrations with depth, with the highest concentrations of PAHs detected between the surface (see Section 5.1 above) and a depth of 2 feet below grade. Metals concentrations also generally decreased in concentration with depth.

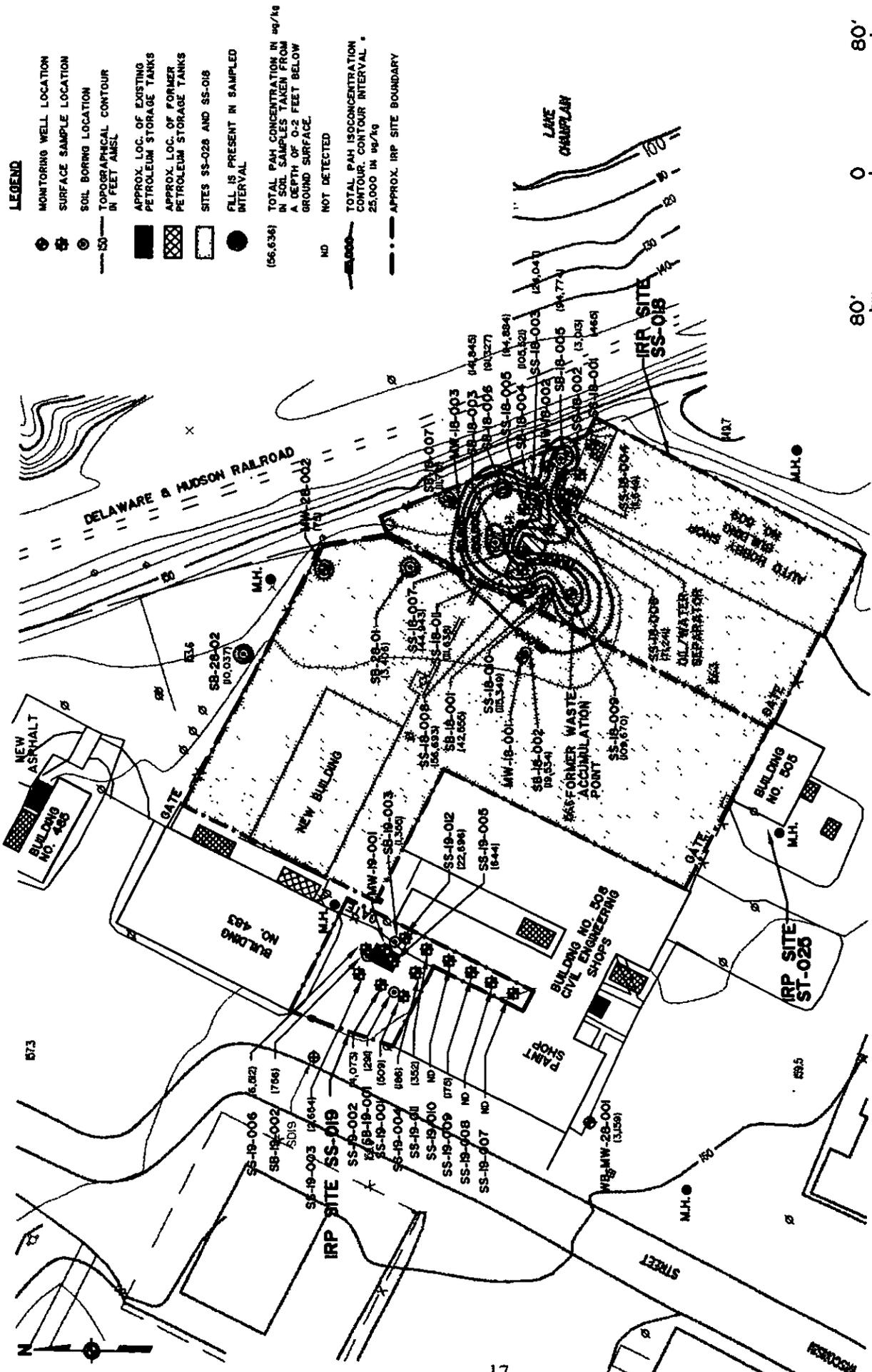
TABLE 1
SS-018 SUMMARY OF CHEMICALS DETECTED IN SURFACE SOIL ABOVE TBCs

Chemical	TBC Value*	Maximum Detected Value
SVOCs		
Benzo(a)anthracene	224.00 µg/kg	11,677.00 µg/kg
Chrysene	400.00 µg/kg	10,191.00 µg/kg
Benzo(b)fluoranthene	1,100.00 µg/kg	9,979.00 µg/kg
Benzo(k)fluoranthene	1,100.00 µg/kg	8,403.00 µg/kg
Benzo(a)pyrene	61.00 µg/kg	9,873.00 µg/kg
Indeno (1,2,3-cd)pyrene	3,200.00 µg/kg	4,762.00 µg/kg
Dibenz(a,h)anthracene	14.00 µg/kg	1,100.00 µg/kg
Metals		
Arsenic	7.50 mg/kg	44.00 mg/kg
Beryllium	0.74 mg/kg	2.00 mg/kg
Calcium	30,200.00 mg/kg	207,006.00 mg/kg
Lead	79.40 mg/kg	493.00 mg/kg
Magnesium	3,340.00 mg/kg	12,845.00 mg/kg
Potassium	929.00 mg/kg	1,815.00 mg/kg
Sodium	520.00 mg/kg	1,943.00 mg/kg
Zinc	63.40 mg/kg	206.00 mg/kg

* From NYSDEC TAGM HWR-94-4046 (January 1994) or Site Background (URS 1996)

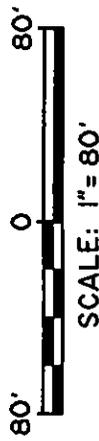
µg/kg microgram per kilogram

mg/kg milligram per kilogram



LEGEND

- MONITORING WELL LOCATION
- ⊕ SURFACE SAMPLE LOCATION
- ⊙ SOIL BORING LOCATION
- TOPOGRAPHICAL CONTOUR IN FEET AMSL
- ▨ APPROX. LOC. OF EXISTING PETROLEUM STORAGE TANKS
- ▩ APPROX. LOC. OF FORMER PETROLEUM STORAGE TANKS
- SITES SS-028 AND SS-018
- FILL IS PRESENT IN SAMPLED INTERVAL
- (56,636) TOTAL PAH CONCENTRATION IN $\mu\text{g}/\text{kg}$ IN SOIL SAMPLES TAKEN FROM A DEPTH OF 0-2 FEET BELOW GROUND SURFACE.
- ND NOT DETECTED
- TOTAL PAH ISOCONCENTRATION CONTOUR, CONTOUR INTERVAL * 25,000 IN $\mu\text{g}/\text{kg}$
- APPROX. IRP SITE BOUNDARY



TOTAL PAH CONCENTRATIONS IN SOIL, 0-2 FT. DEPTH

FIGURE 5

TABLE 2
SS-018 SUMMARY OF CHEMICALS DETECTED IN SUBSURFACE SOIL ABOVE
TBCs

Chemical	TBC Value*	Maximum Detected Value
SVOCs		
Benzo(a)anthracene	224.00 µg/kg	13,100.00 µg/kg
Chrysene	400.00 µg/kg	13,100.00 µg/kg
Benzo(b)fluoranthene	1,100.00 µg/kg	11,715.00 µg/kg
Benzo(k)fluoranthene	1,100.00 µg/kg	8,624.00 µg/kg
Benzo(a)pyrene	61.00 µg/kg	10,262.00 µg/kg
Indeno(1,2,3-cd)pyrene	3,200.00 µg/kg	6,223.00 µg/kg
Dibenz(a,h)anthracene	14.00 µg/kg	2,620.00 µg/kg
Metals		
Cadmium	1.30 mg/kg	3.00 mg/kg
Calcium	30,200.00 mg/kg	99,778.00 mg/kg
Chromium	19.50 mg/kg	37.00 mg/kg
Copper	44.10 mg/kg	48.00 mg/kg
Lead	79.40 mg/kg	831.00 mg/kg
Magnesium	3,340.00 mg/kg	7,412.00 mg/kg
Manganese	474.00 mg/kg	1,381.00 mg/kg
Nickel	13.00 mg/kg	27.00 mg/kg
Zinc	63.40 mg/kg	344.00 mg/kg

* From NYSDEC TAGM HWR-94-4046 (January 1994) or Site Background (URS 1996)

µg/kg microgram per kilogram

mg/kg milligram per kilogram

5.3 SS-028 Surface and Subsurface Soil

A summary of chemicals detected in soil at site SS-028 at concentrations exceeding TBCs is presented in Table 3. The majority of soil samples taken at the site were located below the surface or were located below existing pavement. Contaminants detected in samples taken in unpaved surface soil fell within the range of concentrations detected in subsurface soil. During the SI, eight discrete and one composite soil sample were taken and analyzed for a full range of parameters. Results were found to be generally similar to sampling results from SS-018; PAHs and metals were the only contaminants detected above TBCs. Because VOCs were detected in groundwater during the SI, 50 soil samples from 27 borings were collected during the RI in an attempt to identify and delineate any contaminant sources present in site soils. Eight VOCs were detected in the samples: tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE), benzene, toluene, xylenes, methylene chloride, and acetone. Only one VOC, PCE at a concentration of 1,900 micrograms per kilogram ($\mu\text{g}/\text{kg}$) at boring G-17, was detected at a concentration exceeding TBCs. Since boring G-17 (shown in Figure 6) was situated immediately upgradient from where the groundwater contamination was detected, the area was suspected as a probable source for the observed groundwater contamination. The USAF determined that a removal action should be undertaken to mitigate this source of chlorinated hydrocarbon contamination.

5.4 SS-028 Removal Action

The removal was conducted in two stages: an initial excavation of 99 cubic yards (in-place volume) occurred on December 21, 1998, and an additional 13 cubic yards were removed on 30 December 1998. Field screening using a photoionization detector was used to determine the limits of the excavation (shown in Figure 7), which was initiated at the location of boring G-17. Soil contaminated above action levels (TAGM HWR-94-4046) were excavated over a total area of about 1,169 square feet to depths of between 2.5 and 4 feet. Laboratory confirmation sampling was used to verify the limits of the excavation. In the first set of confirmation samples conducted following the initial excavation, PCE (up to 20,000 $\mu\text{g}/\text{kg}$) and DCE (650 $\mu\text{g}/\text{kg}$) were detected above action levels. This prompted the additional excavation of soil on 30 December. Five side wall and four bottom confirmatory samples with VOC results below action levels were used to

TABLE 3
SS-028 SUMMARY OF CHEMICALS DETECTED IN SOIL ABOVE TBCs

Chemical	TBC Value*	Maximum Detected Value
VOCs		
Tetrachloroethene	1,400.00 µg/kg	1,900.00 µg/kg**
SVOCs		
Benzo(a)anthracene	224.00 µg/kg	10,000.00 µg/kg
Chrysene	400.00 µg/kg	7,600.00 µg/kg
Benzo(b)fluoranthene	1,100.00 µg/kg	9,700.00 µg/kg
Benzo(k)fluoranthene	1,100.00 µg/kg	3,800.00 µg/kg
Benzo(a)pyrene	61.00 µg/kg	6,400.00 µg/kg
Indeno (1,2,3-cd)pyrene	3200 µg/kg	4100.00 µg/kg
Metals		
Calcium	30,200.00 mg/kg	52,200.00 mg/kg
Chromium	19.50 mg/kg	24.10 mg/kg
Lead	79.40 mg/kg	90.60 mg/kg
Magnesium	3,340.00 mg/kg	4,590.00 mg/kg
Mercury	0.10 mg/kg	0.18 mg/kg
Zinc	63.40 mg/kg	219.00 mg/kg

* From NYSDEC TAGM HWR-94-4046 (January 1994) or Site Background (URS 1996).

µg/kg microgram per kilogram

mg/kg milligram per kilogram

** Detected in a sample taken prior to the removal action. The soil at the location of this sample has been subsequently removed.

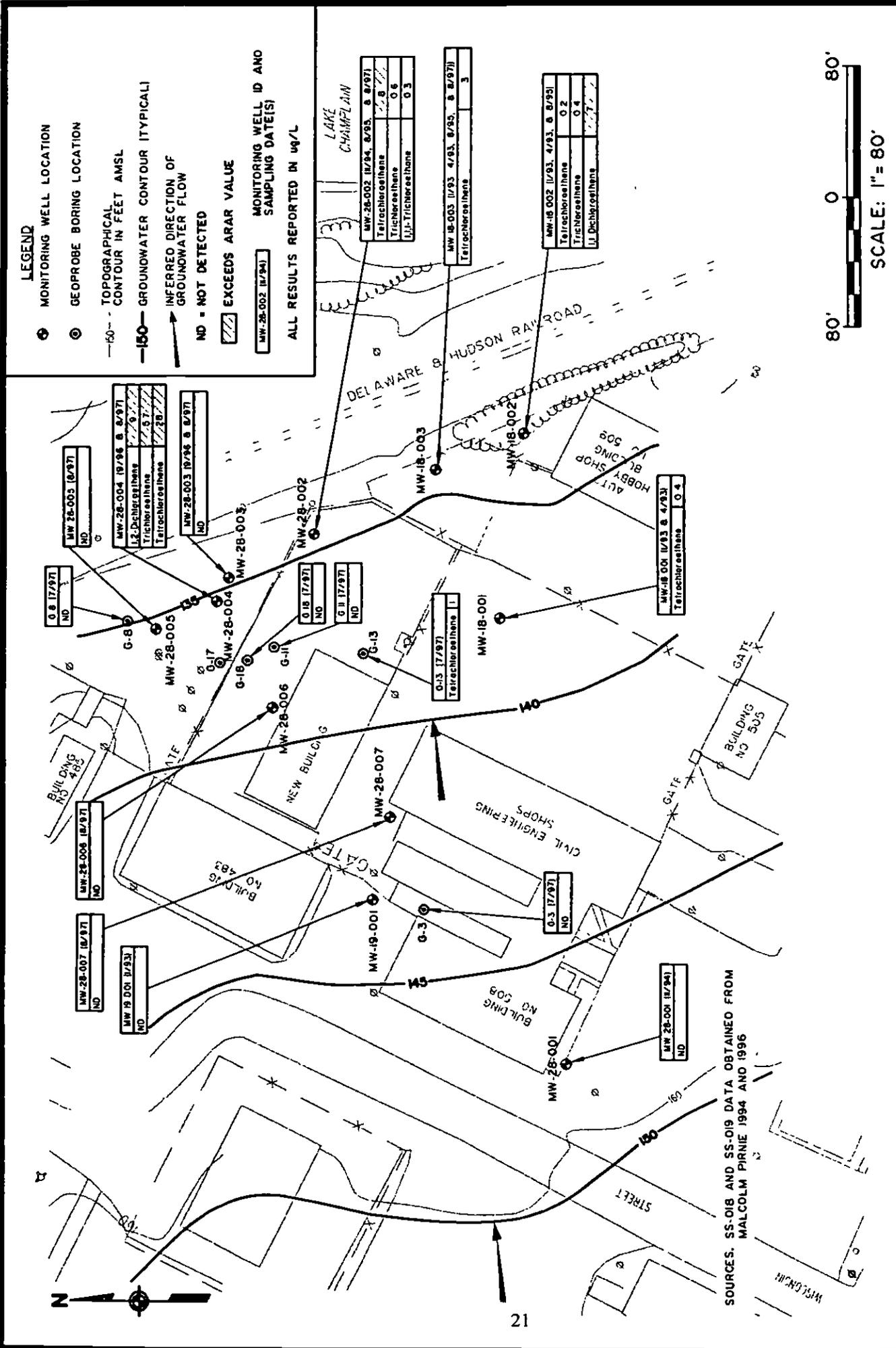
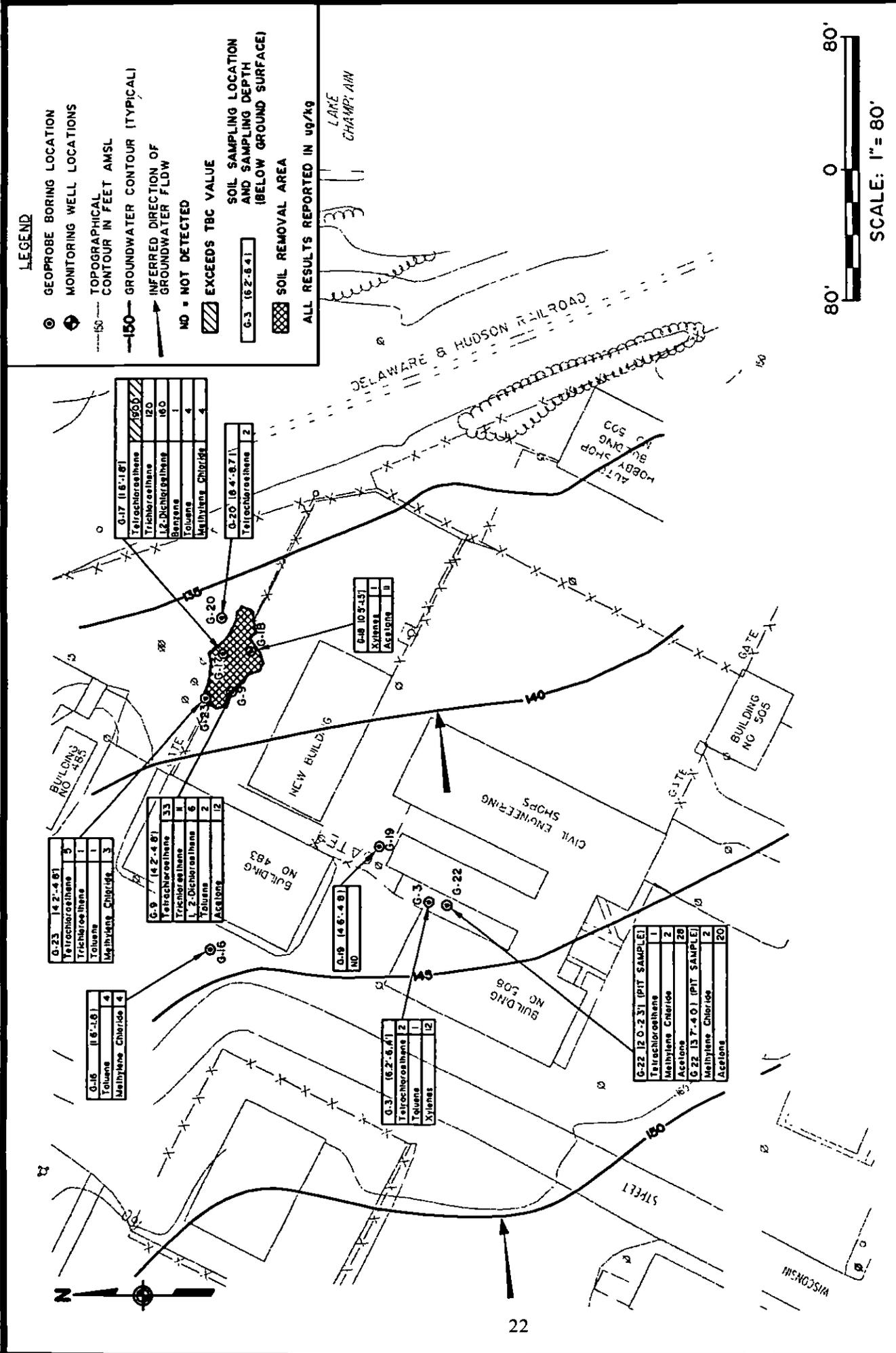


FIGURE 6

MAXIMUM CHLORINATED HYDROCARBON COMPOUND DETECTIONS IN GROUNDWATER



MAXIMUM VOLATILE ORGANIC COMPOUND DETECTIONS IN GEOPROBE SOIL SAMPLES (JULY 1997)

verify the limits of the excavation. The excavated soil, which weighed approximately 158 tons, was transported to New Hampshire where it was treated by thermal desorption and properly disposed of. The USAF submitted an Informal Technical Information Report (ITIR) (URS 1999b) that described the removal action activities through January 1999. Based upon regulatory comments to the ITIR, additional confirmatory samples were taken (two bottom and one side wall) in May 1999. These additional samples also contained VOCs below action levels. In June 1999, with USEPA and NYSDEC approval of the USAF response to regulatory comments to the ITIR, the excavation was backfilled with clean soil and restored. The completed action was documented in a closure report submitted to USEPA and NYSDEC in October 1999 (URS 1999c).

5.5 SS-018 and SS-028 Groundwater

Groundwater at sites SS-018 and SS-028 has been investigated by several groundwater sampling events conducted from 1993 through 1999. Sampling was undertaken during the SS-018 RI (January 1993 and April 1993), the SS-028 SI (November 1994), the August 1995 groundwater sampling event, the SS-028 RI (July – August 1997), and during interim and supplemental events (October 1996 and April – May 1999). A summary of chemicals detected above ARARs in these events is given in Table 4. Chemicals detected above ARARs include metals and VOCs. In general, metals concentrations were higher in upgradient wells (MW-18-001, MW-19-001, and MW-28-001) than in downgradient wells. Therefore, the SS-018 and SS-028 sites do not appear to be sources of metals contamination to groundwater. Since the metals other than sodium and antimony fell within the expected range of background groundwater concentrations (URS 1996), an upgradient source for elevated metals concentrations is not suspected.

Occasional detections of chloroform above ARARs (maximum concentration 49 µg/L) may be attributable to potable water and are not of concern (chloroform has been documented to be present in the base water supply as is common in many municipal chlorinated water supplies and fire hydrant blow down tests, and water line leaks were documented at the time of sampling). Benzene and 1,1-dichloroethene were detected at site SS-018 (MW-18-002) in 1993 at concentrations above regulatory standards, however, these detections were not repeated in the

TABLE 4
SS-018/SS-028 SUMMARY OF CHEMICALS DETECTED IN GROUNDWATER ABOVE
ARARs

Chemical	ARAR Value**	Maximum Detected Value
VOCs		
Benzene	1.00 µg/L	2.00 µg/L
1,1-Dichloroethene	5.00 µg/L	7.00 µg/L
1,2-Dichloroethene (Total)	5.00 µg/L	9.00 µg/L
Trichloroethene	5.00 µg/L	5.70 µg/L
Tetrachloroethene	5.00 µg/L	28.00 µg/L
Chloroform	7.00 µg/L	49.00 µg/L
MTBE	50.00 µg/L	430.00 µg/L
Metals		
Aluminum	200.00 µg/L	14,800.00 µg/L
Manganese	300.00 µg/L	385.00 µg/L
Sodium	20,000.00 µg/L	384,000.00 µg/L
Antimony	3.00 µg/L	29.60 µg/L
Iron	300.00 µg/L	35,600.00 µg/L

** NYSDEC T.O.G.S. 1.1.1 (NYSDEC 1998), Title 6 NYCRR, Part 703, and USEPA Drinking Water Standards, Title 40 CFR, Part 141.

µg/L microgram per liter

1995 sampling event. The absence of these compounds in the later sampling event may be due to the decommissioning and removal of USTs in the immediate vicinity of the Auto Hobby Shop.

PCE and/or its degradation products DCE and TCE were detected in groundwater from five monitoring wells and at one boring location where groundwater was collected using a Geoprobe. Detections of these compounds, which are known as chlorinated hydrocarbons, are shown in Figure 6. The highest detected concentration of PCE in groundwater, 28 micrograms per liter $\mu\text{g/L}$ in MW-28-004, occurred downgradient of the highest detected PCE concentration in soil during the RI (1,900 $\mu\text{g/kg}$ at boring G-17). A removal action was undertaken in December 1998 to remove PCE-contaminated soil in the vicinity of boring G-17 (up to 20,000 mg/kg of PCE was detected in the removed soils). The removal action is described in Section 5.4 of this Record of Decision. VOCs, including PCE, were not detected at two downgradient groundwater seeps that were sampled within approximately 100 feet of the Lake Champlain shoreline. Therefore, it does not appear that SS-028 is impacting Lake Champlain at this time. In addition, the soil removal action undertaken in the area of G-17 likely removed the major source of chlorinated hydrocarbons in groundwater; consequently, concentrations of these compounds should decrease in groundwater as a result.

Methyl tert-butyl ether (MTBE) was detected at five monitoring well locations with the highest concentration (430 $\mu\text{g/L}$) occurring at MW-28-007. Concentrations of this compound appear to decrease in a downgradient direction. MTBE is an additive to unleaded fuel. This contamination appears to originate upgradient from sites SS-018 and SS-028, and MTBE is not considered a site related contaminant. The upgradient source for MTBE, which lies off site, currently is being investigated through the NYSDEC Region V, Division of Environmental Remediation, Bureau of Spill Prevention and Response.

6.0 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCES USES

PARC is responsible for maintaining the base property, marketing and controlling base reuse, leasing and managing property, and developing base facilities, as necessary, to promote advantageous reuse. According to the base Comprehensive Reuse Plan (PARC 1995), the planned reuse at sites SS-018 and SS-028 will be commercial, with a strip of land nearest Lake Champlain designated for recreational use. The base land use plans developed by PARC were

incorporated into the Environmental Impact Statement (Tetra Tech 1995) and currently are being incorporated into the City of Plattsburgh Master Plan. Currently, groundwater in the upper sand aquifer at the site is not being utilized as a resource; a public water supply is available. However, New York State considers all "Class GA" waters (groundwater) in the State as having the potential for use as a future potable resource.

A programmatic agreement is currently in negotiation between the USAF and the New York State Office of Historic Preservation that will address protective covenants for Building 508 and 509 and surrounding property in accordance with Section 106 of the National Historic Preservation Act. This agreement will regulate alterations to the onsite structures, which are not suitable for residential use.

The selected remedy described by this ROD limits the reuse of the sites to nonresidential and prohibits the installation of wells for use of the groundwater resources. All other types of uses will be unrestricted. The remedy does not impact the planned future use of the site since a municipal water supply is available and residential reuse was not anticipated. It is expected that, with time, groundwater contamination will attenuate to be within regulatory standards. At that time, the prohibition on the installation of wells for groundwater use may be rescinded, given appropriate regulatory approval.

7.0 SUMMARY OF SITE RISKS

During the RIs for SS-018 and SS-028, baseline health risk assessments were conducted to estimate the current and future risk at the sites if no remedial action was to be taken. Possible human health and ecological risks were evaluated.

7.1 Human Health Risk Assessment

Five steps are followed in assessing site-related human health risks. *Hazard Identification* – determines the chemicals of concern at the site based on toxicity, frequency of occurrence, and concentration. *Exposure Assessment* – estimates the magnitude of actual and/or potential human exposures, and the pathways (e.g., dermal contact with soil) by which humans potentially are exposed. *Toxicity Assessment* – determines adverse health effects associated with

chemical exposures and the relationship between magnitude of exposure (dose) and severity of adverse effects (response). *Risk Characterization* – summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks. *Uncertainty Analysis* – qualifies the quantitative results of the risk assessment based upon the uncertainty associated with the assumptions made in the analysis. Generally, assumptions made in the assessment process are conservative and yield a reasonable overestimation, rather than an underestimation, of risk.

The human HRA follows federal guidelines to estimate the potential carcinogenic (i.e., cancer-causing) and adverse noncarcinogenic health effects due to potential exposure to site contaminants of concern from assumed exposure scenarios and pathways. These guidelines consider an excess upper bound lifetime cancer risk to an individual to be acceptable if it is calculated to be less than one-in-one million (10^{-6}), and risks in the range of one-in-ten thousand (10^{-4}) to one-in-one million are evaluated on a case-by-case basis. The guidance also specifies a maximum health hazard index (which reflects noncarcinogenic effects for a human receptor) less than or equal to 1.0. The Hazard Index (HI) is a representation of risk based on a quotient or ratio of chronic daily intake to a reference (safe) dose. An HI greater than 1.0 indicates a potential of adverse noncarcinogenic health effects.

7.1.1 SS-018 HRA

Potential risks posed to human health for Site SS-018 were assessed given the current use scenario at the time of the assessment and a hypothetical reuse of the area (Malcolm Pirnie 1996). During the assessment, the base was still serving as an active Air Force Base. Current risks were assessed for civilian landscape workers and trespassers. Potential future risks were evaluated given construction, regrading, and redevelopment of the site for industrial use. The calculated risks are given in Table 5. Cancer risks for all scenarios evaluated fell within or below the range of risk that may be considered acceptable on a case-by-case basis (i.e., 1×10^{-4} to 1×10^{-6} excess cancer risk) by current USEPA guidelines. Similarly, the noncancer HI for all scenarios evaluated were below the acceptable USEPA specified HI of 1.

TABLE 5
SS-018 SUMMARY OF HAZARD INDICES AND CANCER RISKS

EXPOSURE POPULATION AND PATHWAY	HAZARD INDEX	CANCER RISK
<i>CURRENT SCENARIO</i>		
CIVILIAN LANDSCAPE WORKER		
Ingestion of Surface Soil	2×10^{-2}	1×10^{-5}
TOTAL PATHWAY HAZARD INDEX/CANCER RISK:	2×10^{-2}	1×10^{-5}
TRESPASSERS		
Ingestion of Surface Soil	2×10^{-2}	1×10^{-6}
TOTAL PATHWAY HAZARD INDEX/CANCER RISK:	2×10^{-2}	1×10^{-6}
<i>FUTURE SCENARIO</i>		
SITE WORKER		
Ingestion of Subsurface Soil	5×10^{-3}	9×10^{-6}
TOTAL PATHWAY HAZARD INDEX/CANCER RISK:	5×10^{-3}	9×10^{-6}
CONSTRUCTION/UTILITY MAINTENANCE WORKER		
Ingestion of Soil	3×10^{-2}	8×10^{-7}
Inhalation of Respirable Particulates from Subsurface Soil	1×10^{-2}	2×10^{-7}
TOTAL PATHWAY HAZARD INDEX/CANCER RISK:	5×10^{-2}	9×10^{-7}

7.1.2 SS-028/SS-018 HRA

Because sites SS-028 and SS-018 are adjacent to each other and appear to be impacted by the same level, type, and pattern of contamination, the HRA in the SS-028 RI was based on the combination of analytical results sampled at the two sites. This HRA is considered to be more accurate than the HRA developed solely for SS-018, since the assessment evaluates a combination of risk posed by sites, uses more up to date toxicological data, and updates the projected reuse of the sites. Contaminants of concern for the combined database for surface soil, subsurface soil, and groundwater are presented in Table 6.

Pathways evaluated for human exposure under a future use scenario include incidental ingestion of and dermal contact with excavated soil (all depths) by construction workers, and surface soil (from a 0- to 2-foot depth) by future commercial workers upon site redevelopment and recreational users along a proposed bike/walk path. Construction workers could be exposed via inhalation of dust during construction activities, so this pathway was also evaluated. In addition, ingestion of onsite groundwater by future commercial workers was assumed and evaluated. This was a conservative assumption, since a municipal water supply is already available. An evaluation of risks posed under present conditions at the site was not completed because there is currently little potential for human contact with contaminated media. Most of the area is paved, preventing exposure to soil and a municipal water supply is currently available. Currently, only the paved area is in use as a storage area.

A residential exposure scenario was not evaluated in the assessment because redevelopment for residential reuse is highly unlikely for the following reasons.

- Land use plans (PARC 1995), which currently are being incorporated into the Town of Plattsburgh Master Plan, do not designate this area for residential use.
- Alteration of historically significant buildings, such as the Auto Hobby Shop, will be limited in coordination with the New York State Office of Historic Preservation, the Auto Hobby Shop is currently a warehouse with only three personnel doors and nine garage doors and is not suited for residential use without major alteration

TABLE 6
SS-018/SS-028 HRA CHEMICALS OF POTENTIAL CONCERN

Chemical	Chemical of Concern		
	Surface Soil	Soil	Groundwater
2-Hexanone		X	
Acetone	X	X	X
Benzene	X	X	X
Bromodichloromethane			X
Chlorobenzene			X
Chloroform	X	X	X
Dibromochloromethane		X	
Ethylbenzene	X	X	
Methyl ethyl ketone (2-Butanone)		X	
Methyl isobutyl ketone		X	
Methylene chloride	X	X	
Tetrachloroethene (PCE)	X	X	X
Toluene	X	X	X
Total 1,2-dichloroethene	X	X	X
Total xylenes	X	X	
1,1-Trichloroethane			X
Trichloroethene (TCE)	X	X	X
2,4-Dimethylphenol	X	X	
2-Methylnaphthalene	X	X	
4-Methylphenol (p-cresol)	X	X	
Acenaphthene	X	X	
Acenaphthylene	X	X	
Anthracene	X	X	
Benzo(a)anthracene	X	X	
Benzo(a)pyrene	X	X	
Benzo(b)fluoranthene	X	X	
Benzo(g,h,i)perylene	X	X	
Benzo(k)fluoranthene	X	X	
Benzoic acid	X	X	
Benzyl butyl phthalate	X	X	
Carbazole	X	X	
Chrysene	X	X	
Di-n-butyl phthalate	X	X	
Dibenz(a,h)anthracene	X	X	
Dibenzofuran	X	X	
Diethyl phthalate	X	X	X
Fluoranthene	X	X	
Fluorene	X	X	
Indeno(1,2,3-c,d)pyrene	X	X	
Naphthalene	X	X	
Phenanthrene	X	X	

TABLE 6 (Continued)

Chemical	Chemical of Concern		
	Surface Soil	Soil	Groundwater
Pyrene	X	X	
bis-(2-ethylhexyl)phthalate	X	X	X
DDD	X	X	
DDE	X	X	
DDT	X	X	
Dieldrin	X	X	
Arsenic	X	X	X
Barium	X	X	
Beryllium	X	X	
Cadmium	X	X	X
Cobalt		X	
Copper	X	X	
Lead	X	X	
Manganese	X	X	
Zinc	X	X	
Antimony			X
Selenium			X

- An active railroad is located close by, devaluing this immediate area for residential use.

Calculated cancer risks and hazard indices are given in Table 7. For construction workers, the total cancer risk was estimated as 1×10^{-6} , which is at the lower end of the acceptable risk range to be evaluated on a case-by-case basis, established by current USEPA guidelines. The estimated cancer risk to commercial workers and recreational users were both 1×10^{-4} , which falls at the upper limit of the range considered acceptable by USEPA on a case-by-case basis. Noncancer hazard indices were estimated to be 0.05, 0.9, and 0.07 for construction workers, commercial workers, and recreational users, respectively. These results are below the acceptable USEPA-specified HI of 1.

7.2 Ecological Risk Assessment

In the SS-028 RI, risk posed to local ecological communities was assessed using the data gathered from both SS-028 and SS-018. A four-step process is utilized for assessing site-related ecological risks for a reasonable maximum exposure scenario: *Problem Formulation* – a qualitative evaluation of contaminant release, migration, and fate; identification of CPCs, ecological receptors, exposure pathways, and known ecological effects of the contaminants; and selection of endpoints for further study. *Exposure Assessment* – a quantitative evaluation of contaminant release, migration, and fate; characterization of exposure pathways and receptors; and measurement of the estimation of exposure point concentration. *Ecological Effects Assessment* – literature reviews, field studies, and toxicity tests, linking contaminant concentrations to effects on ecological receptors. *Risk Characterization* – a measurement of estimation of current adverse effects.

A screening level ecological risk assessment was performed to evaluate risk via two exposure pathways.

- 1) Direct contact by terrestrial wildlife with contaminated soil. The short-tailed shrew, muskrat, red fox, and crow were used as representative species in the assessment.

**TABLE 7
SUMMARY OF CANCER RISKS AND HAZARD INDICES FOR SS-018/SS-028 RISK ASSESSMENT**

EXPOSURE PATHWAY	FUTURE USE							
	CONSTRUCTION WORKER (ALL DEPTHS)		COMMERCIAL WORKER (DEPTH = <2 Feet)		RECREATIONAL USER (DEPTH = <2 Feet)			
	CANCER RISK	HAZARD INDEX SUBCHRONIC	CANCER RISK	HAZARD INDEX CHRONIC	CHILD	ADULT	CHILD	ADULT
Dermal Contact with Soil	1×10^{-6}	8×10^{-3}	6×10^{-5}	2×10^{-2}	3×10^{-5}	6×10^{-5}	3×10^{-2}	2×10^{-2}
Ingestion of Soil	4×10^{-7}	1×10^{-2}	6×10^{-6}	5×10^{-3}	5×10^{-6}	3×10^{-6}	2×10^{-2}	3×10^{-3}
Inhalation of Fugitive Dust	4×10^{-9}	3×10^{-2}	---	---	---	---	---	---
Ingestion of Groundwater	---	---	4×10^{-5}	9×10^{-1}	---	---	---	---
TOTAL EXPOSURE CANCER RISK	1×10^{-6}	---	1×10^{-4}	---	1×10^{-4}		---	---
TOTAL EXPOSURE HAZARD INDEX	---	5×10^{-2}	---	9×10^{-1}	---	---	---	7×10^{-2}

Notes

---- - Pathway not evaluated in the HRA

- 2) Contact by vegetative communities and Lake Champlain aquatic wildlife to site contaminants via the transport of the contaminants in groundwater seeps along the lakeshore.

Except for lead and DDT in soil, all of the chemicals that potentially could cause damage to ecological resources were determined to be at concentrations well below the thresholds established for toxicity to aquatic and terrestrial organisms. In addition, hazard quotients calculated for lead and DDT, given exposure by a range of terrestrial receptors, were less than the threshold limit of 1. Therefore, the assessment concluded that there is no significant risk to ecological resources posed by chemical releases at SS-028 and SS-018.

8.0 DESCRIPTION OF THE SELECTED REMEDIAL ALTERNATIVE

The selected remedy for sites SS-018 and SS-028 is institutional controls. These controls consist of deed and lease restrictions prohibiting residential development on the sites and restrictions of groundwater use. In addition, contaminant concentrations in groundwater will be monitored periodically until regulatory limits are achieved. There also will be five-year reviews of the selected remedy in accordance with Section 121(c) of CERCLA.

8.1 Basis

A removal action conducted from December 1998 through June 1999 at site SS-028 resulted in the removal of contaminated soil that constituted the principal threat wastes at the sites. As a result, no other alternatives were evaluated to reduce contaminated levels in soil or groundwater at the sites.

8.2 Identification of Remedy

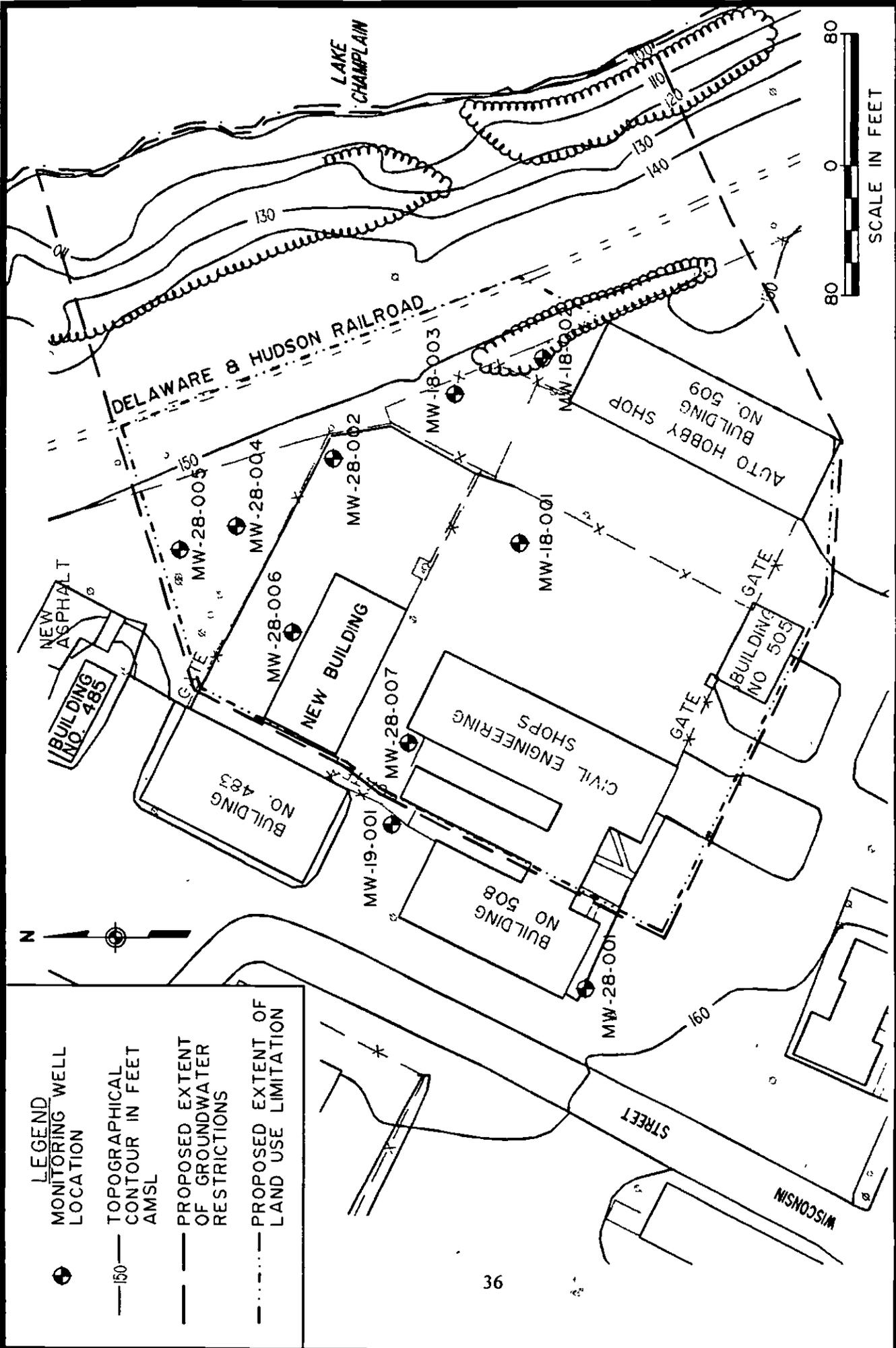
Because no evaluation of human health risk posed by site media was conducted for a residential development scenario and because contaminants are present in groundwater beneath the site at concentrations exceeding regulatory standards, the following actions are included in the remedy:

- Restriction on the development of the sites to facilities that support only nonresidential use
- Prohibition of the installation of any wells for drinking water or any other purposes which could result in the use of the underlying groundwater
- Prohibition of discharge of groundwater withdrawn during construction dewatering to the ground or surface water, without prior approval of the New York State Department of Environmental Conservation.
- Periodic monitoring of site groundwater and groundwater seeps for VOCs and MTBE until groundwater contaminant levels are below current regulatory standards
- Evaluation of the above institutional controls, which will be implemented through lease and deed restrictions, and review of groundwater monitoring data will be undertaken as part of five-year reviews of the remedy in accordance with Section 121(c) of CERCLA

The areas that will be subjected to institutional controls are shown in Figure 8. A monitoring plan will be developed following signing of the Record of Decision, in consultation with the USEPA and NYSDEC, that specifies groundwater sampling locations, frequencies, and parameters. The implementation of this remedy is expected to have annual O&M cost on the order of \$14,000.

9.0 STATUTORY DETERMINATIONS

The selected remedy for the SS-018 and SS-028 site is protective of human health and the environment, complies with federal and state Applicable or Relevant and Appropriate Requirements, and is cost effective. In achieving remediation goals during the removal action, resource recovery technologies and treatment technologies were utilized that permanently and significantly reduced the toxicity, mobility, and volume of volatile organic site contaminants.



LEGEND

- MONITORING WELL LOCATION
- 150 TOPOGRAPHICAL CONTOUR IN FEET AMSL
- PROPOSED EXTENT OF GROUNDWATER RESTRICTIONS
- - - - PROPOSED EXTENT OF LAND USE LIMITATION

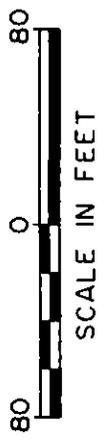


FIGURE 8

SS-018/SS-028 RECOMMENDED ALTERNATIVE EXTENT OF REUSE RESTRICTIONS

However, polycyclic aromatic hydrocarbon contamination in soil, largely located below pavement, will remain in place untreated. Groundwater contaminants will remain above regulatory standards until they are naturally dispersed with time. Because this remedy will result in contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted in accordance with Section 121(c) of CERCLA every five years after initiation of the remedial action to ensure that the remedy is protective of human health and the environment.

10.0 DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes between the preferred alternative presented in the Proposed Plan and the selected remedy presented in this Record of Decision.

GLOSSARY

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

Applicable or Relevant and Appropriate Requirements (ARARs) ARARs include any state or federal statute or regulation that pertains to protection of public health and the environment in addressing certain site conditions or using a particular remedial technology at a Superfund site. A state law to preserve wetland areas is an example of an ARAR. USEPA must consider whether a remedial alternative meets ARARs as part of the process for selecting a remedial alternative for a Superfund site.

Carcinogenic Compound: Chemical that may produce cancer.

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 abandoned or uncontrolled hazardous waste sites.

Ecological Receptors: Fauna or flora in a given area that could be affected by contaminants in surface soils, surface water, and/or sediment.

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

Groundwater Seep or Seepage Face. A point or layer where groundwater is expressed from soil to the surface where it eventually flows downhill to a surface water body or evaporates.

Inorganic Compounds: A class of naturally occurring compounds that includes metals, cyanide, nitrates, sulfates, chlorides, carbonate, bicarbonate, and other oxide complexes.

Installation Restoration Program (IRP): The U.S. 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 hazardous waste disposal and spill 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 the 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: The USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program.

Noncarcinogenic Compound: A chemical that may produce adverse health effects other than cancer.

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

Polynuclear Aromatic Hydrocarbons (PAHs) A chemical compound consisting of carbon and hydrogen and containing two or more fused benzene rings. They are a group of organic compounds found in motor oil, as a common component of creosotes, and as a byproduct of the incomplete burning of wood products. Many are carcinogenic.

Polychlorinated Biphenyl (PCB): A compound that formerly was used as a lubricant and transformer coolant.

Proposed Plan: A public document that solicits public input on a recommended remedial alternative to be used at a National Priorities List (NPL) 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 explains the remedial alternative to be used at a National Priorities List (NPL) 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. A long-term 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): The Remedial Investigation determines the nature, extent, and composition of contamination at a hazardous waste site and directs the types of remedial options that are developed in the Feasibility Study.

SPDES Permit: State Pollutant Discharge Elimination System is a permit issued by New York State to allow for the discharge of controlled chemicals to surface water bodies.

Semivolatile Organic Compound (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.

Superfund: The trust fund, created by CERCLA out of special taxes, used to investigate and clean up abandoned or uncontrolled hazardous waste sites. Out of this fund the USEPA either: (1) pays for site remediation when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work or (2) takes legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the remediation. Federal facilities are not eligible for Superfund monies.

Technical and Administrative Guidance Memorandum (TAGM): TAGM HWR-94-4046 issued by NYSDEC Division of Hazardous Waste Remediation (currently named the Division of Environmental Remediation) establishes chemical-specific soil cleanup objectives in the vadose zone. The document is entitled *Determination of Soil Cleanup Objectives and Cleanup Levels* (NYSDEC 1994).

Terrestrial Wildlife: Animals living on land (e.g., reptiles, small mammals, small birds, predatory mammals, predatory birds).

To Be Considered (TBCs): Federal and state policies, advisories, and other non-promulgated health and environment criteria, including numerical guidance values, that are not legally binding. TBCs are used for the protection of public health and the environment if no specific ARARs for a chemical or other site conditions exist, or if ARARs are not deemed sufficiently protective.

Volatile Organic Compounds (VOCs): Organic compounds that have a high propensity to volatilize or to change from a liquid to a gas form.

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APPENDIX A
TRANSCRIPT OF PUBLIC MEETING

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PLATTSBURGH AIR FORCE BASE
PLATTSBURGH, NEW YORK

SITE SS-010, HEAVY EQUIPMENT
MAINTENANCE FACILITY

SITE SS-018, AUTO HOBBY SHOP
AND

SITE SS-028, OPEN STORAGE AREA

P U B L I C H E A R I N G

As recorded on Thursday, July 13, 2000
at 7:00 p.m., at the Old Courthouse
133 Margaret Street, 2nd Floor,
Plattsburgh, New York.

APPEARANCES:

MICHAEL SOREL, CHAIRMAN
BRUCE PRZYBYL
JOSEPH SZOT
STEVEN GAGNIER

COURT REPORTERS ASSOCIATES
117 Bank Street
Burlington, Vermont

JULY 13, 2000

1
2
3 MR. SOREL: Okay. I'd like to begin
4 the public meeting for these Sites SS-010, the Heavy
5 Equipment Maintenance Facility and SS-018 and 028,
6 the Auto Hobby Shop and the Storage Area here.

7 I'm Mike Sorel, the BRAC Environmental
8 Coordinator working for the Air Force Base
9 Conversion Agency of Plattsburgh. I will be
10 presiding over this meeting, the main purpose of
11 which is to allow the public the opportunity to
12 comment on the Air Force's actions for these sites.

13 Assisting me tonight is Bruce Przybyl, the
14 project manager at Plattsburgh for URS Greiner,
15 Inc., Steve Gagnier and Dave Farnsworth with the Air
16 Force Base Conversion Agency, and Joe Szot with the
17 Air Force Center for Environmental Excellence. We
18 are here to provide answers to technical questions
19 you may have about the remedial alternatives being
20 considered by the Air Force.

21 Tonight's agenda will consist of a summary of
22 data gathered at the sites and a description of the
23 preferred remedial actions. After that, we will
24 move to the most important part of this meeting --
25 the part where you provide your comments on the

1 remedial actions.

2 First, however, I need to take care of several
3 administrative details.

4 As you can see, everything being said here is
5 being taken down word-for-word by a professional
6 court reporter. The transcript will become part of
7 the administrative record for these sites. We would
8 like everyone to complete the sign-in sheet at the
9 door. We'll use the sheet to review our mailing
10 list for the site. At the conclusion of the
11 presentation we will open the floor to comments and
12 questions. If you have a prepared statement, you
13 may read it out loud or turn it in without reading
14 it. In any case, your comments will become part of
15 the record. We have cards at the front table for
16 your use for written comments. If you turn in any
17 written comments, please write your name and address
18 on them.

19 If you later decide to make a comment you may
20 send additional comments to us at this address. We
21 will accept comments until July 18, 2000. I will
22 show the address slide again at the end of the
23 meeting.

24 The final point is that our primary purpose
25 tonight is to listen to you. We want to hear your

1 comments on any issues you are concerned about and ⁴
2 we'll try to answer any questions you may have. We
3 want you to be satisfied that the action we take
4 will properly and fully address the problems at the
5 Site.

6 Now I'd like to turn the meeting over to Bruce
7 Przybyl.

8 MR. PRZYBYL: Thank you, Mike. Good
9 evening. I'd like to talk to you today about the
10 Air Force's recommended alternatives for remedial
11 action for three Installation Restoration Program
12 Sites at the Plattsburgh Air Force Base. Site
13 SS-010, the Heavy Equipment Maintenance Facility;
14 Site SS-018, the Auto Hobby Shop, and Site SS-028,
15 which is an Open Storage Area.

16 This presentation will be divided into two
17 segments. In the first segment, we will discuss
18 Site SS-010, which is located in the industrial area
19 that supported flightline operations on the newer
20 portion of the base southwest of Route 9. We'll
21 have a question and answer period and proceed with
22 the discussion of Site SS-018 and Site SS-028 which
23 are located adjacent to one another on the older
24 portion of the base, northeast of Route 9. One
25 Combined Remedial Action is proposed for these two

1 sites. Discussion will then be open again to your
2 questions.

3 The Heavy Equipment Maintenance Facility
4 designated as Site SS-010, is located about 2000
5 feet east of the flightline and adjacent to Idaho
6 Avenue. Oil, fuels and solvents were accidentally
7 spilled at the facility which served as a vehicle
8 operational and maintenance shop.

9 This overhead summarizes the Air Force action at
10 the site. The Air Force initiated investigation of
11 the site with a site inspection in 1987. The
12 investigation represented additional sampling which
13 was undertaken between 1983 and 1985. The results
14 were presented in a remedial investigation report
15 which recommended that soil contaminated by spills
16 be further delineated and remediated. Following
17 further delineation in 1996, the public was informed
18 of the Air Force's intention to remove the
19 contaminated soil through an Action Memorandum and
20 Public Meeting. In 1996 and 1997, the contaminated
21 soil was removed. In 1999, additional investigation
22 of groundwater was undertaken to evaluate the impact
23 of the removal action on groundwater quality. The
24 Air Force's intention to remove contaminate at the
25 site was reviewed in a public meeting in 1996 and in

1 1998 contaminated soils were removed.

2 In 1999, additional investigation of groundwater
3 was undertaken on groundwater quality. The Air
4 Force in conjunction with the EPA and New York State
5 then developed a proposed plan for the site. The
6 recommended alternative is that no further action is
7 necessary. Following public review, an ROD will be
8 signed to formalize this alternative.

9 This overhead shows the site features. Initial
10 investigation was focussed on a waste accumulation
11 area northwest of Building 2540 where waste oils and
12 solvents were stored prior to disposal, right in
13 this area, and waste oils and solvents were stored
14 there prior to disposal. Additional investigation
15 revealed soil contamination extended to the east
16 side of Building 2540. These contaminated soil
17 areas are shown on this figure, Area One, Two and
18 Three. Groundwater flows toward the southeast in
19 that direction. During the RI in 1993, three
20 monitoring wells were installed relatively close to
21 the waste accumulation pad. These three wells in
22 this area right here, one, two and three. The
23 chlorinated solvents chloromethane and
24 1,2-dichloroethene and the fuel-related compounds
25 benzene and xylene were detected in these wells at

7
1 levels above New Your State groundwater standards.
2 Soil contamination detected on site at the immediate
3 area was suspected to be the source of this
4 contamination. Therefore, additional delineation of
5 contaminated soil was undertaken. Fuel-related
6 compounds and chlorinated solvents were found over a
7 much larger area than originally thought.

8 In 1996 and 1997, over 8,500 cubic yards of soil
9 was excavated from the three areas shown. The
10 average depth of excavation was between three and
11 four feet. Soil samples were taken from the
12 sidewalls of the excavation to evaluate all the
13 contaminated soil was removed. Most of the soils
14 were treated at a landfarm operation at the north
15 end of the flightline. Soils containing chlorinated
16 solvents were segregated and disposed of off base.

17 In 1999, five additional groundwater monitoring
18 wells were installed to evaluate the effect of the
19 removal action on groundwater quality. In two
20 sampling events, contamination was not found in the
21 on-site wells at concentrations above New York State
22 groundwater standards, which are considered
23 protective of human health. These wells are located
24 here downgradient from the area where soils were
25 removed. Therefore, the Air Force recommends that

1 no further action should be taken at Site SS-010 and
2 no restriction on reuse of the site is necessary.
3 This recommendation is appropriate because soil and
4 groundwater contamination is no longer present
5 on-site at levels that threaten human health.

6 Any questions?

7 MR. SOREL: No questions? Then we'll
8 move on to the next site.

9 MR. PRZYBYL: The Auto Hobby Shop,
10 designated as Site SS-018 and the Open Storage Area
11 designated as Site SS-028 are located between Lake
12 Champlain and Wisconsin Street on the Old Base
13 portion of Plattsburgh.

14 The Auto Hobby Shop, SS-018, is situated in
15 Building 509. Building 509 was built by the Army in
16 1926 and used as a parking garage. Prior to that
17 time, the Army used the area for coal storage.
18 After a large coal storage shed was destroyed by
19 fire sometime between 1903 and 1924, the area was
20 regraded, which may account for the coal pieces,
21 dust and cinders found in the fill in this area.
22 This is Site SS-028.

23 The Open Storage Area stands northward from
24 Building 508 and was used by the Air Force for
25 general storage of equipment and containerized

1 materials. Sites SS-018 and SS-028 have been
2 combined into one action because they lie adjacent
3 to one another and are affected by similar
4 environmental problems. Two other sites located
5 nearby include Site SS-019, a Civil Engineering
6 Paint Shop and SS-025, the Abandoned Underground
7 Storage Tank. This is Site SS-019 and this is
8 ST-025. Both these other two sites have been
9 previously investigated and have been closed for
10 further action or investigation by the Air Force.

11 This overhead summarizes Air Force action at the
12 two sites. The Air Force initiated investigation at
13 Site SS-018 with a records search and soil gas
14 survey in 1987. Subsequently, a remedial
15 investigation was performed in 1992 to 1996. At
16 Site SS-028, a preliminary assessment consisting of
17 a records search and site investigation was
18 conducted in 1992. Further investigation was
19 recommended. In 1994, a site investigation was
20 conducted at SS-028. In 1997, the Air Force, USEPA
21 and New York State decided to combine the two sites
22 into one path and a remedial investigation was
23 conducted which gathered additional data and
24 combined the data bases from both sites. The
25 assessment included assessment of human health

10
1 risk. This is SS-018, combines the two sites. In
2 the RI, an area of contaminated soil was identified
3 which was considered a source for the groundwater
4 contamination detected at the sites. Therefore, the
5 Air Force conducted a removal action to excavate and
6 remove this soil. In 1998, an action memorandum was
7 prepared detailing the planned removal action which
8 was presented to the public. The removal action was
9 executed between December, 1998 and June, 1999 and
10 the RI was then finalized. The Air Force has
11 prepared a proposed Plan to address the remaining
12 environmental issues at the site. The preferred
13 alternative includes institutional controls on
14 development and on the use of groundwater. The
15 alternative includes groundwater monitoring.

16 Following the public review, a Record of
17 Decision will be signed to finalize the alternative
18 that is ultimately selected.

19 The geology underlying the two sites consists of
20 sand and silty sand overlying relatively impermeable
21 clay and limestone bedrock. The topography slopes
22 steeply to the east toward Lake Champlain.
23 Groundwater flows eastward toward the Lake in the
24 sand aquifer. The clay outcrops along the steep
25 slope above the lake level, and groundwater

1 is expressed from a seepage face at that point.
2 Although contamination was detected in groundwater
3 at the site, no contamination was detected in water
4 samples taken from seeps along this seepage face on
5 the slope above Lake Champlain. Although
6 contamination was detected in groundwater at the
7 site, no contamination was detected in the seepage
8 face.

9 Samples taken during the various investigations
10 are shown on this overhead. Overall, close to 100
11 soil samples were taken and eleven groundwater
12 monitoring wells were installed and sampled in
13 multiple sampling events. Two groundwater seep
14 samples also were collected from above the
15 lakeshore. Those two sites (indicating).

16 Two types of contamination were identified in
17 soils at the sites. High levels of polycyclic
18 aromatic hydrocarbons or PAHs were detected in the
19 fill material in the eastern portion of the sites.
20 In that area (indicating). These compounds are
21 associated with the incomplete burning of fossil
22 fuels and may be related to the coal fire and
23 subsequent regrading prior to the construction of
24 the Air Base.

25 Chlorinated solvents, such as tetrachloroethene

1 and dichloroethene, also were detected in soil, with¹²
2 the highest concentrations along the northern fence
3 line at the location of Boring G-17. That is right
4 there (indicating). These chemicals are likely
5 present as a result of spills running off of the
6 paved surface of the open storage area onto the
7 adjacent soil. There is the paved area and this
8 area beyond the fence is the soil covering. The
9 highest concentrations of chlorinated solvents in
10 groundwater were detected immediately downgradient
11 from this area. And these wells here were
12 contaminated. This is where the groundwater
13 contamination was the highest. In contrast the PAH
14 compounds were not detected in groundwater as a
15 result of much lower solubilities.

16 However, the Compound MTBE, which is an additive to
17 gasoline, also was detected at the sites. However,
18 this compound is suspected to originate upgradient
19 and is not thought to be associated with the sites.

20 As a result of our analysis, the Air Force
21 decided to remove the soil containing high levels of
22 chlorinated solvents in order to address the source
23 of contaminated groundwater contamination. That is
24 this area here (indicating). About 150 tons of soil
25 was removed during the action. This photograph --

1 we probably have a better picture -- shows the open
2 excavation. The depth of the excavation ranges from
3 two and a half to four feet. Contaminated soil was
4 removed from the site and thermally desorbed in New
5 Hampshire.

6 Confirmatory soil samples were collected from
7 the side walls and the bottom to determine if all
8 the contaminated soils were removed from the area.
9 They are shown right here. When the final
10 excavation was completed, all confirmatory sample
11 results indicated that the compounds of concern were
12 below remediation goals and that the contaminated
13 soil had been removed.

14 The area was then filled with clean soil and
15 restored to its original condition as shown in that
16 photograph.

17 As part of the RI a risk assessment was
18 performed given the expected future use of the
19 sites. This expected use is a bike or walk path
20 along the site's eastern boundary and commercial use
21 of the rest of the area. The bike path is now under
22 construction. Calculations indicated that cancer
23 and non-cancer risks fell within acceptable levels,
24 the cancer risk series from one-tenth to minus four
25 is considered acceptable by USEPA on a case-by-case

1 basis. And as you can see our risk fell at or
2 within the acceptable levels for both cancer and
3 non-cancer risk. Most of the risk that was
4 calculated resulted from potential exposure to the
5 PAHs in the soil. Risk calculations based on a
6 residential reuse scenario were not performed,
7 although it is likely that the risk would be
8 slightly higher given residential reuse compared to
9 the planned commercial and recreational reuse. It
10 should be noted that because Building 508 and 509
11 are historic buildings and are not suited to
12 residential use, it is highly unlikely that
13 residential development would occur in the future.

14 The preferred alternative includes five elements:
15 Institutional restrictions will be imposed to limit
16 the site to non on-site residential reuse. This
17 restriction addresses any potential risk associated
18 with residential reuse, which was not evaluated in
19 the risk assessment.

20 In addition, restrictions will be imposed for
21 the use of the underlying groundwaters. These
22 restrictions are necessary because contaminants are
23 currently present in groundwater above the New York
24 State groundwater standards. Restrictions will be
25 lifted after the contaminants attenuate to below

1 standards over time. This is expected since the soil¹⁵
2 remedial action likely removed the major source of
3 groundwater contamination. In addition,
4 restrictions will be imposed to discharge of
5 groundwater without prior approval of New York
6 State. This is necessary to assure protection of
7 surface water resources while groundwater levels are
8 above standards.

9 The fourth element of the alternative is that
10 periodic monitoring of groundwater and seeps in
11 groundwater will be undertaken until the groundwater
12 standards are achieved. The data collected will be
13 used to evaluate the continued effectiveness of the
14 remedy in protecting human health.

15 The USEPA and Air Force will review the data
16 collected, at minimum, once every five years to
17 evaluate the continuing effectiveness of the
18 actions.

19 Are there any questions?

20 MR. SOREL: No questions? If you
21 should later decide to make additional comments on
22 the proposed action, please mail them to this
23 address by July 18th. Also I'd like to add that the
24 proposed plans are available for review at the
25 Information Repository located in the Special

1 Collections Section at SUNY Plattsburgh. That
2 concludes the meeting. Thank you for coming.

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(The hearing concluded at 7:20 p.m.)

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I, Carol A. Boone, Notary Public and Court Reporter, hereby certify that the foregoing pages, numbered 2 through 18 inclusive, are a true and accurate transcription to the best of my ability of a public hearing of REMOVAL ACTION AT SITE SS-010, SS-018, AND SS-028, in the matter of PLATTSBURGH AIR FORCE BASE, taken before me on the 13th day of July, 2000, at the Old Courthouse, 133 Margaret Street, 2nd Floor, Plattsburgh, New York.

I further certify that I am not related to counsel, counsel's law firm, nor any party to the case in this matter, nor do I have any interest in the outcome of the case.

Carol A. Boone
Carol A. Boone, Court Reporter

APPENDIX B
RESPONSIVENESS SUMMARY



DEPARTMENT OF THE AIR FORCE
AIR FORCE BASE CONVERSION AGENCY

July 24, 2000

MEMO FOR RECORD

SUBJECT: Responsiveness Summary: Public Comment Period for Remedial Action at SS-010, Heavy Equipment Maintenance Facility; SS-018, Auto Hobby Shop; and SS-028, Open Storage Area

A. OVERVIEW

Spill Site SS-010, the Heavy Equipment Maintenance Facility, is located about 2,000 feet east of the flightline and adjacent to Idaho Avenue. Oil, fuel, and solvents were accidentally spilled at the facility, which served as a vehicle operational and maintenance shop.

The Air Force initiated investigation of the site with a site inspection in 1987. The investigation recommended additional sampling, which was undertaken between 1993 and 1995. The results were presented in a remedial investigation report which recommended that soil contaminated by spills be further delineated and remediated. Following further delineation in 1996, the public was informed of the Air Force's intention to remove the contaminated soil through an Action Memorandum and Public Meeting. In 1996 and 1997, the contaminated soil was removed. In 1999 additional investigation of groundwater was undertaken to evaluate the impact of the removal action on groundwater quality. Based on the results, the Air Force concluded that soil and groundwater contamination at SS-010 was no longer present at levels that threaten human health.

The Air Force, in conjunction with the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC), then developed a Proposed Plan for the site. The Air Force's recommended alternative for SS-010 is that no further action is necessary, and that no restriction on reuse of the site is necessary.

Spill Site SS-018/028 is comprised of the Auto Hobby Shop (SS-018) and the Open Storage Area (SS-028). They are located between Lake Champlain and Wisconsin Street on the Old Base portion of the base. At various times in the past, the Auto Hobby Shop was used as a parking garage and for coal storage. A fire sometime between 1903 and 1924 destroyed a large coal storage shed. The Open Storage Area extends northward from Building 508 (B/508) and was used by the Air Force for general storage of

equipment and hazardous materials. Sites SS-018 and SS-028 have been combined into one action because they lie adjacent to one another and are affected by similar environmental problems.

The Air Force initiated investigation at Site SS-018 with a records search and soil gas survey in 1987. Subsequently, a Remedial Investigation (RI) was performed in 1992 to 1996. At Site SS-028, a preliminary assessment consisting of a records search and site inspection was conducted in 1992. Further investigation was recommended. In 1994, a site investigation was conducted at SS-028. In 1997, the Air Force, EPA, and NYSDEC decided to combine the two sites into one path. A Remedial Investigation was conducted to gather additional data. The assessment included evaluation of human health risk. In the RI, an area of contaminated soil was identified which was considered a source for the groundwater contamination detected at the sites. The Air Force conducted a Removal Action to excavate and remove this soil.

In 1998, an Action Memorandum was prepared detailing the planned Removal Action. After presentation to the public, the Removal Action was executed between December 1998 and June 1999. The RI was then finalized, and the Air Force prepared a Proposed Plan to address the remaining environmental issues at the site. The preferred alternative includes institutional controls on development and on the use of groundwater, as well as groundwater monitoring.

B. PUBLIC MEETING & PUBLIC COMMENT PERIOD

A Public Meeting was held on the remedial action for SS-010 and SS-018/028 on July 13, 2000, at 7:00 p.m. It was held at the Old Court House in the City of Plattsburgh, County of Clinton, NY. A prepared statement was read by Mr. Michael D. Sorel, PE, the Site Manager/Base Realignment and Closure (BRAC) Environmental Coordinator for the Air Force Base Conversion Agency (AFBCA). Mr. Bruce Przybyl of URS Greiner, Inc., detailed the proposed remedial actions for the audience. The floor was then opened to the public for questions and comments. Concluding the meeting was a statement by Mr. Sorel that additional comments could be sent to the Air Force. As advertised in the *Plattsburgh Press-Republican*, the public comment period ran from June 19, 2000 to July 18, 2000. The Public Meeting was recorded by Ms. Carol Boone, a court reporter of Court Reporters Associates, Burlington, Vermont.

C. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND AGENCY RESPONSES

No comments or questions were received by the Air Force regarding the Proposed Plans for Sites SS-010 or SS-018/SS-028 during the public comment period or at the public meeting.



MICHAEL D. SOREL, PE

Site Manager/

BRAC Environmental Coordinator

APPENDIX C
NYSDEC CONCURRENCE LETTER

New York State Department of Environmental Conservation
Division of Environmental Remediation, Rm. 260B
50 Wolf Road, Albany, New York 12233-7010
Phone: (518) 457-5861 • FAX: (518) 485-8404
Website: www.dec.state.ny.us

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John P. Cahill
Commissioner

SEP 28 2000

Mr. Richard L. Caspe
Director
Emergency & Remedial Response Division
U.S. Environmental Protection Agency
Floor 19 - #E38
290 Broadway
New York, NY 10007-1866

Dear Mr. Caspe:

RE: Record of Decision; SS-018 & SS-028
Plattsburgh Air Force Base - ID No. 510003

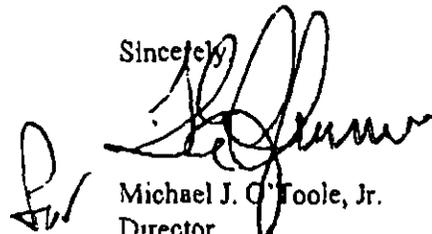
In response to the Draft-Final Record of Decision for SS-018 (Auto Hobby Shop) and SS-028 (Open Storage Area) submitted by the United States Air Force, I wish to concur with the remedial action plan as put forth in the document. The remedy for these contiguous sites will include:

- Restriction of site development to allow only facilities that support nonresidential use;
- Prohibition on the installation of any wells for the use of site groundwater;
- Periodic monitoring of site groundwater and groundwater seeps.

Please be advised that this concurrence is conditioned upon the United States Department of Defense taking the necessary steps to implement proper and effective deed restrictions as well as a deed restriction enforcement plan prior to the transfer of these properties to any party other than the Federal government.

I understand the adequacy of this remedy to protect human health and the environment will be reviewed at a minimum of once every five years in accordance with Section 121(c) of CERCLA.

Sincerely,



Michael J. C. Toole, Jr.
Director
Division of Environmental Remediation

c: G. Anders Carlson, NYSDOH
D. Steenberg, NYSDEC-Region 5
M. Sorci, USAF
R. Wing/R. Morse, USEPA-Region II

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