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SITE SS-017
BUILDING 2774
SOIL OPERABLE UNIT

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
March 2002

G3140D

SITE SS-017
BUILDING 2774
SOIL OPERABLE UNIT

RECORD OF DECISION

PLATTSBURGH AIR FORCE BASE
PLATTSBURGH, NEW YORK

UNITED STATES DEPARTMENT OF THE AIR FORCE
INSTALLATION RESTORATION PROGRAM

Prepared by:

URS GROUP, INC.

FINAL

MARCH 2002

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DECLARATION FOR THE RECORD OF DECISION

Site Name and Location

Plattsburgh Air Force Base
Site SS-017, Building 2774, Soil Operable Unit
Plattsburgh, Clinton County, New York
EPA ID # NY4571924774

Statement of Basis and Purpose

This Record of Decision (ROD) presents the selected remedy for the soil operable unit at site SS-017 at 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 the site, a copy of which is located at the Information Repository at the Feinberg 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

Site SS-017 (Building 2779) is located in the industrial area of the base, east of the flightline ramp. The site, which includes the immediate areas surrounding Building 2774 and 2753, is paved except for a few grassy medians. Building 2774 supported aircraft engine maintenance activities from 1956 to base closure. Building 2753 served as an aircraft maintenance machine shop.

The SS-017 site has been divided into two components or operable units (OUs) to facilitate remedial activities. The first OU, the Soil OU, focuses on soil contaminated by past spills at the site. This ROD addresses the Soil OU. The second OU, the FT-002/Industrial Area Groundwater OU (Groundwater OU), addresses contaminated groundwater at site FT-002, at site SS-017, and at several other sites situated in the base's industrial corridor that formerly supported aircraft maintenance and operations. A separate ROD will be issued for the Groundwater OU.

Initial investigations at site SS-017 began in 1985; investigations were focused on a concrete pad, located near the southeast corner of Building 2774, which was used as a drum storage pad and waste accumulation area. High levels of dichlorobenzene isomers and fuel-related compounds were detected in the soil surrounding the pad. Investigations were expanded to the area between Building 2774 and Building 2753. Chlorinated hydrocarbons and fuel-related compounds were detected in this area, but at lower concentrations than the contamination found in the immediate vicinity of the concrete pad. Contamination also was detected in groundwater. An Interim Remedial Measure (IRM) was executed in 1992, during which the concrete pad and approximately 200 cubic yards of contaminated soil surrounding the pad were removed and disposed of. Subsequent investigations were implemented to evaluate the area surrounding both buildings. In February 1997, a second removal action was initiated to address soil contamination remaining following the IRM. Systems installed and operated for the removal action included soil vapor extraction (SVE), bioventing, and biosparging. Progress sampling indicates that soil contamination has been reduced to a level below that which is of concern to human health and the environment.

The actions undertaken at SS-017 to date have resulted in the reduction of soil contamination to levels that do not pose a threat to human health or to groundwater resources from leaching of runoff through contaminated soils. Therefore, the USAF has determined that the principal threats at SS-017 have been eliminated; hence, no further action is necessary to protect public health, welfare, or the environment.

Description of the Remedy

Site SS-017 is one of several sites (or operable units) administered under the Plattsburgh AFB Installation Restoration Program (IRP). RODs have previously been signed for thirteen

operable units at the base, and additional RODs are planned for other sites at the base. It is intended that the selected remedy be the final action for the site SS-017 Soil OU.

The IRM implemented in 1992 and the second removal action undertaken from 1997 to 2002 are considered to have been successful in eliminating the principal threats for the SS-017 Soil OU. Soil sampling and analysis conducted to assess the progress of the removal action indicate that soil contamination has been reduced to levels considered protective of human health and groundwater resources. Therefore, no further action will be undertaken and no restriction on reuse of the site through institutional controls will be imposed for the SS-017 Soil OU.

Statutory Determinations

The selected remedy for the SS-017 Soil OU is protective of human health and the environment, complies with federal and state Applicable or Relevant and Appropriate Requirements, and is cost effective. In reducing soil contaminant levels at the site during two removal actions, resource recovery technologies and treatment technologies were utilized that permanently and significantly reduced the toxicity, mobility, and volume of site contaminants. A five-year review will not be required for this remedy according to Section 121(c) of CERCLA because no hazardous substances, pollutants, or contaminants are remaining at the site at levels that would not allow for unlimited use and unrestricted exposure.

Albert F. Lowas Jr April 4, 2002

Signature ALBERT F. LOWAS, JR.

Director, Air Force Base Conversion Agency

July 5 2002

for Signature JANE M. KENNY

USEPA, Regional Administrator

DECISION SUMMARY

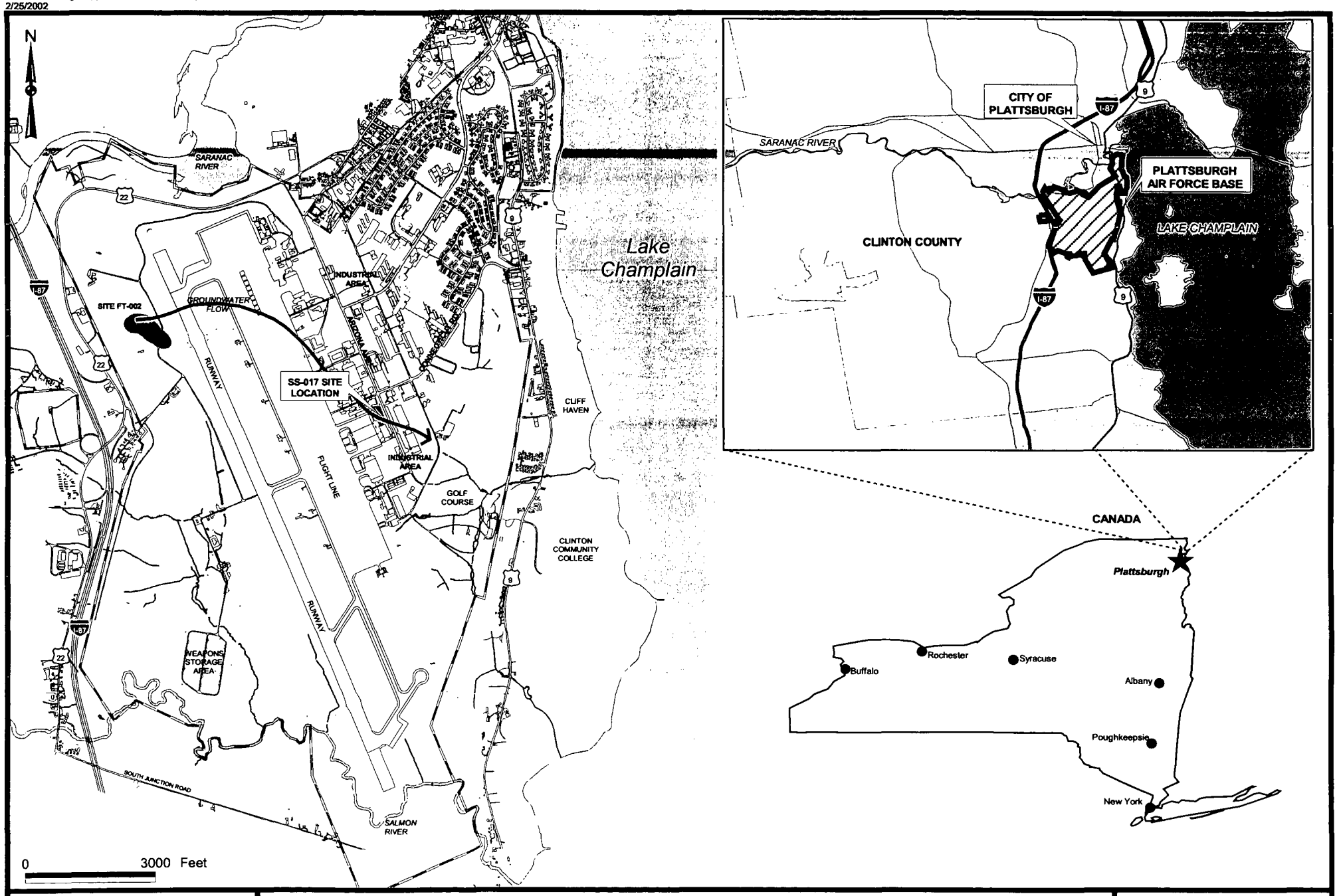
1.0 SITE NAME, LOCATION, AND DESCRIPTION

Plattsburgh AFB, located in Clinton County in northeastern New York State, is bordered on the north by the City of Plattsburgh, the south by the Salmon River, on the west by Interstate 87, and on the east by Lake Champlain. The base is approximately 26 miles south of the Canadian border and 167 miles north of Albany. 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 (BRAC) Act of 1993, and its reuse is being administered by the Plattsburgh Airbase Redevelopment Corporation (PARC). As part of the USAF's Installation Restoration Program (IRP), Plattsburgh AFB has initiated activities to identify, evaluate, and restore 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 on November 21, 1989. Cleanup is being funded by the USAF.

Site SS-017 (Building 2774) is located in the industrial area of the base, east of the flightline ramp, west of Arizona Avenue, and south of Connecticut Road (Figure 1). The site, which includes the immediate areas surrounding Building 2774 and 2753, is paved except for a few grassy medians (Figure 2). Potential sources of contamination at the site are accidental spills, especially those potentially associated with transfer of drums and waste material to and from the former drum pad (which served as a waste accumulation area) situated near the southeast corner of Building 2774. Carbon remover solvent, PD-680 cleaning solvent (mineral spirits), engine oil, and hydraulic fluid were accumulated at the pad, which supported the aircraft engine maintenance activities ongoing in Building 2774 from 1956 to base closure. Building 2753 served as an aircraft maintenance machine shop during that period. These two buildings are currently being leased, and are being utilized for aircraft research and commerce.

The primary area of past spills occurred in the vicinity of the concrete drum pad, located near the southeast corner of Building 2774. High levels of dichlorobenzene isomers and fuel-related compounds were detected in the soil surrounding the pad. Chlorinated hydrocarbons and fuel-related compounds also were detected in the area between Building 2774 and Building 2753,

J:\0100013.10\gis\Applications\sitelocation.apr SS-017 SITE LOCATION
2/25/2002



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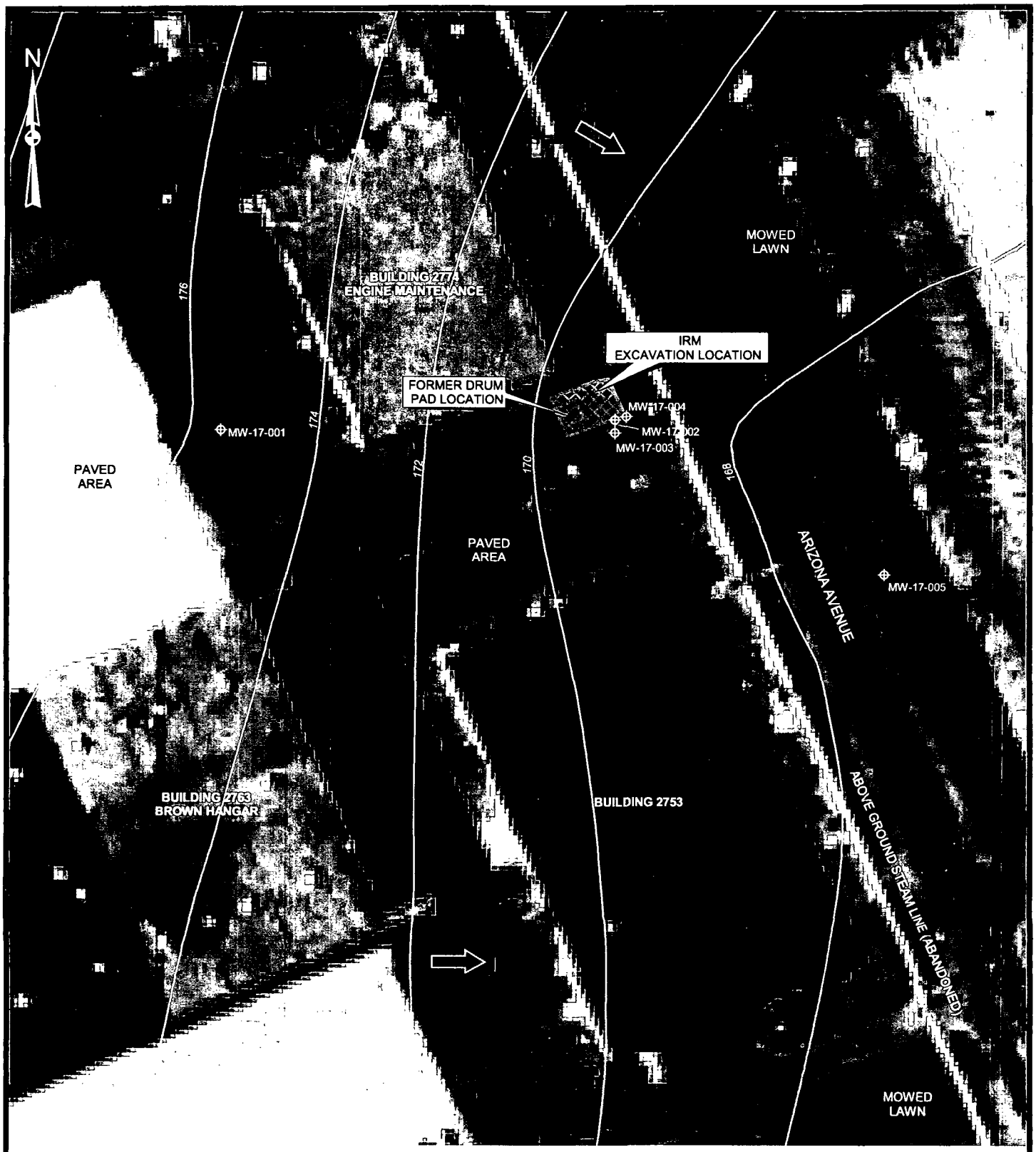
BUILDING 2774 (SS-017)
SITE LOCATION MAP

FIGURE 1



Legend

- Monitoring Well
- 170 Groundwater Elevation Contour (9/2/99)
- Groundwater Flow Direction

100 0 100 Feet

URS

PLATTSBURGH AIR FORCE BASE - SS-017
SITE FEATURES

FIGURE 2

J:\0100013.10\gis\Applications\Ss-017.apr SITE FEATURES
10/22/2001

but at lower concentrations than the contamination found in the immediate vicinity of the concrete pad.

Groundwater at the site, which lies about 4 to 8 feet below the ground surface within an unconfined sand aquifer, flows to the southeast toward the Golf Course drainage system (Figure 1). A silty clay confining layer forms the base of the aquifer in the vicinity of site SS-017 at about 25 feet below the ground surface. The site lies on a flow path from the upgradient FT-002 site (Figure 1).

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

Prior to base closure in 1995, the buildings at site SS-017 (2774 and 2753) were used to support aircraft engine maintenance activities. Soil contamination at the site occurred during the handling of cleaning solvents and petroleum products around the concrete drum pad at Building 2774 and between the two buildings. Investigation and remedial activities that have been undertaken to address this contamination to date are listed below. These activities are described in greater detail in Section 5.0.

Timeframe	Activity	Description
1985	Basewide Records Search (Radian 1985)	Research of potential spills
1985	Soil Sampling by NYSDEC	Two soil samples collected
1985-86	Soil Sampling by Plattsburgh AFB	74 soil samples collected
1987	Site Inspection (E.C. Jordan 1989)	Collection of soil, soil gas, & groundwater
1992	Interim Remedial Measure	200 CY of soil removed
1992.	Remedial Investigation (MPI 1996)	Collection of groundwater and risk evaluation
1996	Supplemental Delineation (OHM 1997)	Extensive soil gas and soil sampling
1996-present	Removal Action (Parsons/OHM 1996)	SVE, bioventing, & biosparging soil
1999-2000	Additional Groundwater Sampling (URS 2001a)	Sampling of groundwater
2001	Supplemental Evaluation and FS (URS 2001b)	Data consolidated and risk evaluated
2001	Removal Action Progress Soil Sampling (URS 2001c)	Extensive soil sampling

3.0 COMMUNITY PARTICIPATION

The Air Force has kept the community informed regarding progress at site SS-017 during quarterly Restoration Advisory Board (RAB) meetings open to the public. This board consists of the BRAC Cleanup Team (BCT) members (key representatives from the USAF, USEPA, and NYSDEC) and representatives from municipalities, community organizations, and associations including community members with environmental/engineering expertise. The RAB, which was chartered in 1995, serves as an open forum for the community to become familiar with the restoration activities ongoing at Plattsburgh AFB and to provide input to the BCT.

The SE/FS (URS 2001b), removal action progress report (URS 2001c), the Proposed Plan (URS 2002), and other site related documents in the SS-017 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 at the Plattsburgh campus of the State University of New York. The notice of availability of these documents was published in the *Press Republican* on January 22, 2002. In addition, a 30-day public comment period was held from January 22 to February 20, 2002 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, a public meeting was held on February 4, 2002 at the Old Court House, Second Floor Meeting Room, 133 Margaret Street, Plattsburgh, NY. 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, a formal public meeting was held to accept comments about the No Further Action remedial alternative considered for the SS-017 site. The public did not offer any comments on the remedial alternative for site SS-017. A copy of the meeting transcript was added to the Administrative Record and Information Repository. This transcript is included as Appendix A of this ROD. A Responsiveness Summary is included as Appendix B.

4.0 SCOPE AND ROLE OF OPERABLE UNIT

Site SS-017 is one of several sites (or operable units) administered under the Plattsburgh AFB IRP. RODs have previously been signed for thirteen operable units at the base, and additional RODs are planned for other sites. The SS-017 site has been divided into two OUs. The Soil OU is the subject of this ROD. The Soil OU includes contamination at the SS-017 site in soil in the unsaturated zone. It is intended that the proposed action presented in this ROD be the final action for the SS-017 Soil OU. Two removal actions conducted at Site SS-017 resulted in the remediation of contaminated soil that constituted the principal threat waste at the site.

Site SS-017 lies downgradient from groundwater contamination originating from site FT-002 (see Figure 1). Groundwater contamination in the vicinity of SS-017 is currently being evaluated together with other sites in the industrial area downgradient from site FT-002 as part of the Fire Training Area (FT-002)/Industrial Area Groundwater OU. A ROD for this OU, which includes groundwater located beneath site SS-017, is currently under review.

5.0 SITE CHARACTERISTICS

Based on site history, the contaminants of concern at SS-017 are related to cleaning solvents and petroleum products. Accidental spills of these materials reportedly occurred when raw materials were being transferred to buckets and when waste drums were being filled. Initial investigations were centered near the 15 foot by 15 foot concrete drum pad at Building 2774, but later investigations were implemented to evaluate the area around Buildings 2774 and 2753. Past investigations and activities at the site and the current soil contamination detected on site are summarized below.

5.1 Preliminary Investigations

A basewide records search, completed in 1985, indicated that releases of contaminants had occurred at SS-017 (Radian 1985). To verify the findings, the NYSDEC and Plattsburgh AFB conducted preliminary investigations at the site. In April 1985, the NYSDEC collected two surface soil samples adjacent to the concrete pad (Parsons/OHM 1996). The agency reported that the samples contained elevated levels of volatile organic compounds (VOCs), most notably total dichlorobenzene (DCB) at a maximum concentration of 9,800 mg/kg. Based on these results, Plattsburgh AFB performed two additional soil sampling events near the pad—in October 1985 and November 1986. A total of 74 soil samples were collected at 35 locations to a depth of 3 feet below ground surface. DCB and fuel related hydrocarbons were detected in several of the samples.

5.2 Site Inspection

In 1987, a Site Inspection was conducted at the site which included a soil gas survey, drilling and sampling of 4 soil borings, and installing and sampling 1 upgradient and 2 downgradient monitoring wells (E.C. Jordan 1989). Soil contaminants were detected to a depth of 4 feet below ground surface near the pad. Groundwater sampled from the two downgradient monitoring wells contained low levels of VOCs and semi-volatile organic compounds (SVOCs).

5.3 Interim Remedial Measure

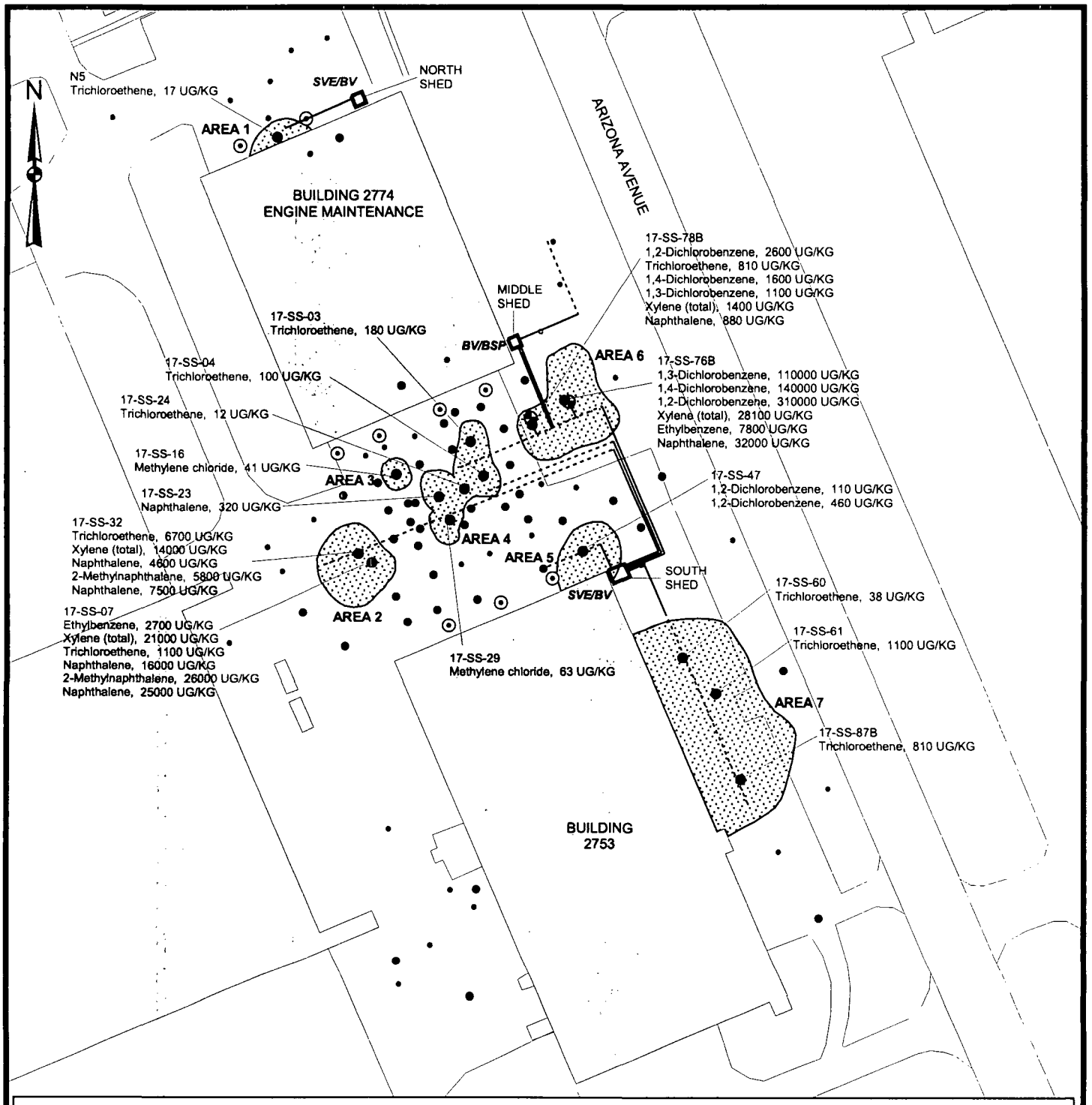
In June 1992, the USAF initiated an IRM to remediate the contaminated soil near the concrete pad. To delineate the extent of the contamination, soil samples were collected from a rectangular grid set up over the vicinity of the pad. In the fall of 1992, the pad was removed. Approximately 200 cubic yards of soil were also removed from around the pad in an area 45 feet long by 30 feet wide to a depth of 4 feet (Figure 2). It is likely that the excavation extended to the top of the water table. The material was disposed of off base by incineration.

5.4 Remedial Investigation

In December 1992, USAF installed two additional monitoring wells (MW-17-004 and MW-17-005) at the site as shown on Figure 2. The 5 wells at SS-017 were sampled in January/February 1993 and April 1993 as part of the Remedial Investigation (RI) performed by Malcolm Pirnie, Inc. (MPI 1996). The samples were analyzed for VOCs, SVOCs, pesticides/PCBs, and metals. The results indicated significant concentrations of VOCs and SVOCs in the samples from monitoring well MW-17-004. A number of Hydro-Punch™ groundwater screening samples were also collected at the site. No additional soil sampling was performed during the RI. The RI did, however, recommend further delineation of site contamination. An evaluation of risk posed to human health given industrial reuse conditions was also performed.

5.5 Supplemental Delineation Investigation

In 1996, Parsons Engineering Services and OHM Remediation Services conducted Supplemental Delineation Investigation (SDI) at SS-017 (OHM 1997) in response to the RI recommendations. The objective of the investigation was to obtain a more complete understanding of the nature and extent of soil contamination at the site. The extensive program of soil gas and subsurface soil sampling consisted of 159 soil gas sample locations screened for VOCs, O_2, CO_2, and CH_4, 116 soil gas sample locations analyzed by field gas chromatograph for VOCs, and Geoprobe™ soil sampling and analysis at 96 locations for VOCs and SVOCs. Soil sample locations are shown on Figure 3. Seven (7) areas of soil contamination were identified when the results were compared to NYSDEC soil cleanup objectives (NYSDEC 1994).



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PRE-REMOVAL ACTION
AREAS OF SOIL CONTAMINATION IDENTIFIED
FROM 1996 SUPPLEMENTAL DELINEATION

FIGURE 3

J:\0100013.10\gis\Applications\Ss-017.apr (1996) COC EXCEEDING CRITERIA
1/18/2002

5.6 Removal Action

A second remediation effort was initiated in 1996 to address the 7 areas of soil contamination identified in the Supplemental Delineation Investigation. An Action Memorandum (Parsons/OHM 1996) was prepared that recommended the installation of SVE and bioventing/ biosparging systems to clean up the soil at the site. Soil cleanup criteria were established for 7 indicator parameters based on levels established by the NYSDEC for the protection of groundwater quality (NYSDEC 1994). The systems were installed as recommended in 1997 and operation and monitoring of the systems are ongoing. Operation of the systems will be discontinued upon finalization of the No Further Action decision contained in this SS-017 Soil OU ROD, as cleanup levels have been achieved.

5.7 Additional Groundwater Sampling

The SS-017 monitoring wells were sampled on three occasions subsequent to the completion of the RI. The first round of sampling occurred in September 1996 as part of the *Fire Training Area (FT-002) and Industrial Area Groundwater Remedial Investigation/Feasibility Study* (URS 2001d). The second round of sampling occurred in July 1999 (about 18 months after the Removal Action was initiated) during an investigation of groundwater quality in the vicinity of Building 2612 (URS 2001a). The third round of sampling occurred in November 2000 in response to regulatory agency comments. The first and second round samples were only analyzed for VOCs. The third round samples were only analyzed for SVOCs. For the July 1999 sampling event, all of the VOC detections were less than their respective New York State groundwater standards. The only SVOC detected in November 2000 sampling was bis(2-Ethylhexyl)phthalate. Because the site SS-017 lies downgradient from the FT-002 site in the industrial area, groundwater at SS-017 is included in the Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit.

5.8 Supplemental Evaluation and Feasibility Study

In 2000-2001, the USAF prepared a Supplemental Evaluation/Feasibility Study (SE/FS) for site SS-017 (URS 2001b). This document consolidated the data collected under the various studies conducted at the site since 1986, reevaluated potential risks to human health given a

residential exposure scenario, evaluated monitoring data from the ongoing removal action, established a remedial action objective, and evaluated several remedial alternatives for remediation of the remaining soil contamination at SS017. The SE/FS recommended an alternative that essentially suggested continuation of the ongoing removal action until remediation goals were met.

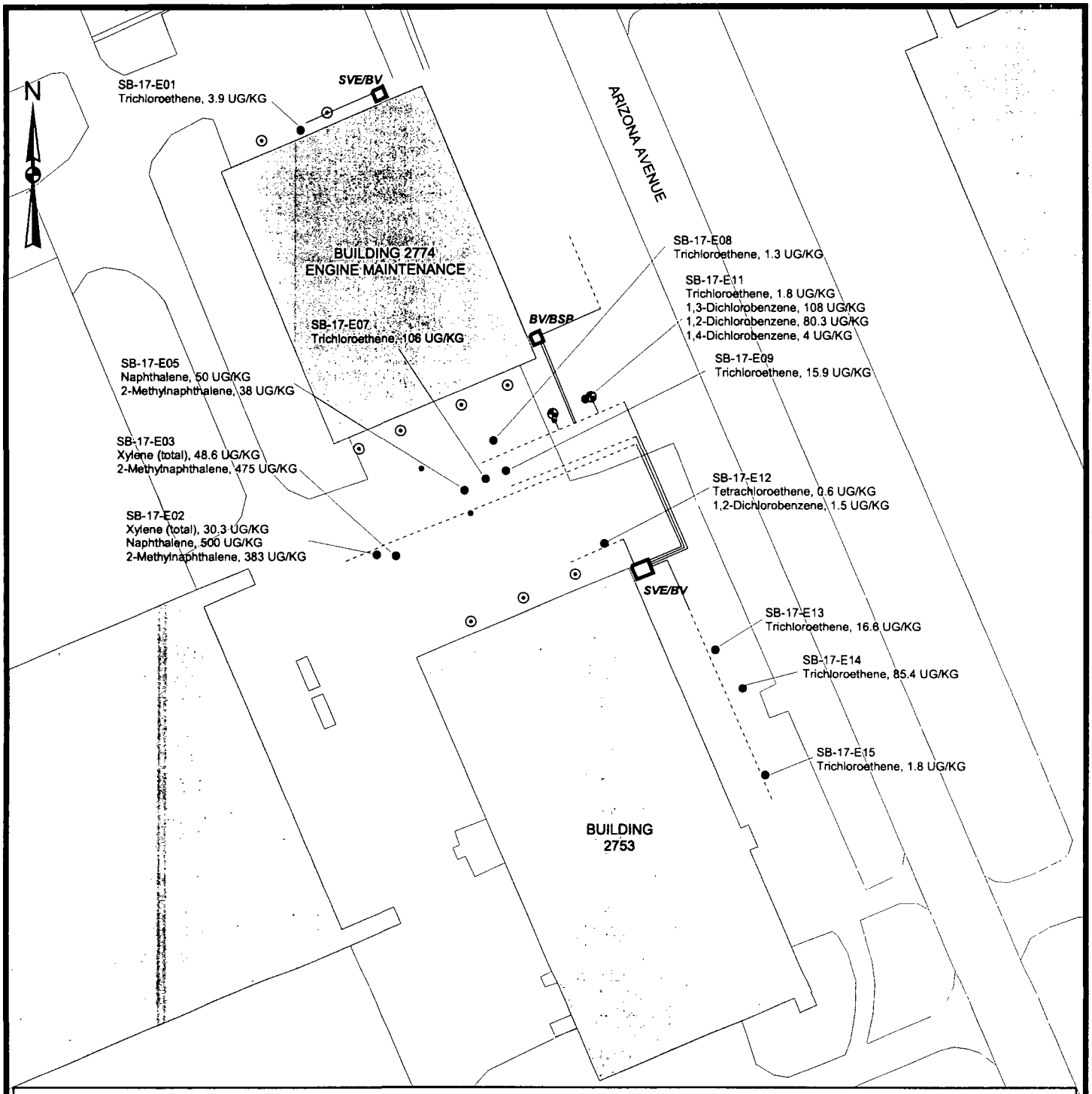
5.9 2001 Removal Action Progress Report

Because 5 years of removal action operation had occurred since the last comprehensive soil-boring event at SS-017, the USAF, in consultation with the NYSDEC and USEPA, decided that a current evaluation of removal action progress was warranted prior to moving forward with the recommendation of the SE/FS. Fifteen soil borings were advanced at the site in August 2001. Borings and sample depths were selected to directly compare contaminant levels to pre-removal action conditions. The results, presented in a removal action progress report (URS 2001c), showed substantial reduction of contaminant levels compared to pre-removal action levels. The report concluded that, because levels of soil contamination at SS-017 do not pose a risk to human health or to groundwater resources (see Section 5, Table 1 and Section 7, Table 2), no further remedial action is warranted at the site.

5.10 Soil Contamination

Soil contaminant concentrations detected in the 2001 Removal Action Soil Boring and Sampling Event (URS 2001c) were compared to NYSDEC Recommended Soil Cleanup Objectives (NYSDEC 1994). Detected contaminants of concern are shown on Figure 4. All chemicals were detected at levels less than one-fifth of the recommended cleanup objectives. The concentrations of chemicals of concern detected in soil at site SS-017 were significantly reduced by the IRM and removal action. The 1996 and 2001 soil contaminant levels are compared to each other and to NYSDEC Recommended Soil Cleanup Objectives on Table 1.

No site contaminants were detected above New York State groundwater ARARs in groundwater in the most recent sampling events at site SS-017; thus, it appears that residual contamination in soil is no longer significantly impacting groundwater quality at the site.



Legend

- No COCs Detected
- At Least One COC Detected
- Biosparging Well
- Passive Vent Well

SB-17-E02
Naphthalene, 500 UG/KG

Location ID — Compound Detected — Concentration — Units

Underground Extraction Well/Solid Section

Underground Extraction Well/Screened Section

SVE - Soil Vapor Extraction
BV - Bioventing
BSP - Biosparging

NOTE: No chemicals were detected above RSCOs.

100 0 100 Feet

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POST-REMOVAL ACTION
SOIL CONTAMINANTS OF CONCERN DETECTED
ON SITE (2001)

FIGURE 4

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TABLE 1

COMPARISON OF 1996 TO 2001 CONCENTRATIONS OF SOIL CONTAMINANTS OF CONCERN AT SITE SS-017

Chemical	RSCO*	Maximum Concentration µg/kg	
		1996	2001
1,2-Dichlorobenzene	7,900	310,000	80.3
1,3-Dichlorobenzene	1,600	110,000	108
1,4-Dichlorobenzene	8,500	140,000	4
Ethylbenzene	5,500	7,800	ND
Methylene Chloride	100	41	ND
Trichloroethene	700	6,700	106
Xylenes (total)	1,200	28,100	48.6
2-Methylnaphthalene	36,400	26,000	475
Naphthalene	13,000	32,000	500

ND = Not Detected

* Recommended Soil Cleanup Objectives (RSCO's) from NYSDEC Technical Administrative Guidance Memorandum (TAGM) 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels,* 1994.

For the protection of groundwater, soil cleanup objectives for contaminants of concern, as derived and detailed in NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046, are based on the theory of water/soil partitioning. This theory assumes that the contaminated soil and groundwater are in direct contact. However, TAGM Recommended Soil Cleanup Objectives (RSCO's) are developed for contaminated soil in the unsaturated zone, above the water table, and recognize that many mechanisms are at work that prevent all of the contamination that would leave the unsaturated zone soil from impacting groundwater. Nevertheless, the TAGM notes that caution should be exercised when using the RSCOs if the contaminated soil (though it may be in the unsaturated zone) is close to the groundwater table. Although groundwater at site SS-017 is relatively shallow, at 4 to 8 feet below grade, contaminant concentrations detected in the 2001 sampling of unsaturated zone soil are well below the RSCOs and are considered to be protective of groundwater.

6.0 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

PARC is responsible for maintaining base property, marketing and controlling base reuse, leasing and managing property, and developing base facilities, as necessary, to promote advantageous reuse. According to land use plans (PARC 1995), the identified use of SS-017 and its surrounding area will be industrial/aviation support. The base land use plans developed by PARC were incorporated into the Air Force's Environmental Impact Statement (Tetra Tech 1995). Currently, groundwater at the base is not being utilized as a resource.

The minor soil contamination remaining at site SS-017 does not pose a threat to human health or the environment given the expected reuse or any other reuse. Thus, this ROD does not specify any restriction on reuse at the site.

7.0 SITE RISKS

A four-step process is utilized for assessing site-related human health risks for a reasonable maximum exposure scenario: *Hazard Identification* – identifies the contaminants of concern at the site based on several factors such as toxicity, frequency of occurrence, and concentration. *Exposure Assessment* – estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways (e.g., ingesting contaminated well water) by which humans are potentially exposed. *Toxicity Assessment* – determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response). *Risk Characterization* – summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks.

The human health risk assessment (HRA) follows federal (USEPA) guidelines to estimate the potential carcinogenic (i.e., cancer-causing) and adverse non-carcinogenic 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}). 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 adverse noncarcinogenic effects for a human receptor) less than or equal to 1. The hazard index is a representation of risk, based on a quotient or ratio of chronic daily intake to a reference (safe) dose. A hazard index greater than 1 indicates a potential for adverse noncarcinogenic health effects.

An HRA was performed during the RI that evaluated potential human exposure to soil contamination under an industrial development scenario (MPI 1996). This HRA showed that there was no significant human health risk given an industrial setting. As part of the SE/FS (URS 2001b), the risk assessment was updated to incorporate sampling results from the Supplemental Delineation Investigation (OHM 1997) and to evaluate human health risk under a residential (more conservative) scenario. Three exposure pathways were assessed in the updated HRA to evaluate potential risk. These were:

- Ingestion of contaminated soil by a residential user
- Dermal contact and adsorption of contamination from soil by a residential user
- Inhalation of volatilized contaminants from soil into indoor air by a residential user

Calculated cancer and noncancer risks from the SE/FS are summarized on Table 2. The total exposure cancer risk is 2×10^{-5}. This risk falls within the range of cancer risks (10^{-4} to 10^{-6}) that can be considered acceptable by USEPA on a case-by-case basis. The total exposure hazard index is 0.002, which is well below USEPA's target threshold hazard index of 1. These risks indicate that there is not a significant threat to human health resulting from exposure to contaminated soils at site SS-017. Also note that the risks were evaluated using pre-removal action levels of contamination. The levels of contamination have been substantially reduced by the removal action. If the risks were recalculated, they would be significantly less than those calculated in the SE/FS.

TABLE 2
RISK CHARACTERIZATION SUMMARY

Receptor	Pathway	Cancer Risk	Hazard Index
Adult Resident	Dermal Contact	1E-05	0.0006
Child Resident	Dermal Contact	6E-06	0.0005
Adult Resident	Ingestion	1E-06	0.00006
Child Resident	Ingestion	2E-06	0.0003
Adult Resident	Inhalation	7E-10	0.000007
Child Resident	Inhalation	8E-10	0.00003
TOTAL ALL PATHWAYS AND RECEPTORS		**2E-05**	**0.002**

Note: The risks presented on this table are from the SE/FS (URS 2001b). These risks were evaluated using pre-removal action levels of contamination. If the risks were recalculated, they would be significantly less than those calculated in the SE/FS.

8.0 DESCRIPTION OF SELECTED REMEDY

An IRM (conducted in 1992) and a removal action (undertaken from 1997 to the present) at site SS-017 have resulted in the remediation of contaminated soil that constituted the principal threat waste at the site. As a result, no other alternatives were evaluated to reduce contaminant levels in soil at the site. No Further Action is the single and preferred alternative. This alternative includes the following elements:

1) No further action will be undertaken for the Soil OU at site SS-017.
2) No restriction on land use will be imposed through institutional controls for the Soil OU at site SS-017.

Operation of the removal systems currently in place at the site will be discontinued upon finalization of the No Further Action decision contained in this SS-017 Soil OU ROD, as cleanup levels have been achieved. A five-year review will not be required for this remedy according to Section 121(c) of CERCLA because no hazardous substances, pollutants, or contaminants are remaining in soil at the site at levels that would not allow for unlimited use and unrestricted exposure.

9.0 DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes between the preferred alternative presented in the Proposed Plan for the site SS-017 Soil OU and the selected remedy presented in this ROD.

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.

Alternative: Technology or action used to address contaminated media at a site.

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 environmental 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 weather a remedial alternative meets ARARs as part of the process for selecting a remedial alternative for a Superfund site.

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

Biosparging: A remedial technology in which air is pumped below the water table to promote volatilization and growth of contaminant consuming microorganisms.

Bioventing: A remedial technology in which air is pumped into the vadose zone to supply oxygen to contaminant consuming organisms. Oxygen is in demand for those organisms and providing a continuous supply aids their growth and accelerates the consumption/destruction of contaminants.

Carcinogenic: Chemicals, which when exposure occurs at a particular level, may product cancer.

Chlorinated Hydrocarbons: Organic compounds that contains chlorine such as trichloroethene (TCE) and dichloroethene (DCE). Also referred to as chlorinated compounds or chlorinated solvents.

COC: Contaminant of Concern.

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.

Feasibility Study (FS): A study that screens technologies that may be applied to remediate contamination, combines them into alternatives that are targeted to achieve remedial action objectives, and compare the alternatives based on objective criteria.

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 if found in an adequate quantity.

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 cleanup hazardous waste disposal and spill sites at Department of Defense facilities nationwide.
Interim Remedial Measure (IRM): An IRM is an immediate action to eliminate or mitigate a release or threatened release of hazardous wastes. An IRM can be carried out without extensive investigation.

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

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

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

New York State Registry of Inactive Hazardous Waste Sites: The state's compilation of all known hazardous waste sites, comprising nine volumes with site descriptions and locations. (Copies available for review in NYSDEC offices).

Noncarcinogenic: Chemicals that may produce adverse health effects that are not related to cancer.

NYSDEC: The New York State Department of Environmental Conservation.

Operable Unit (OU):. A separate and distinct remedial project that is part of a large, complex hazardous waste site. Each OU has its own ROD, RI/FS, design and construction.

PARC: Plattsburgh Airbase Redevelopment Corporation.

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.

RSCOs: Recommended Soil Cleanup Objectives. These are contaminant specific concentrations listed in NYSDEC guidance used to evaluate weather or not soil contamination detected at a site needs to be addressed by remedial action.

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

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

Remedial Investigation (RI): The Remedial Investigation determines the nature and extent and composition of contamination at a hazardous waste site, and is used to assess the types of remedial options that are developed in the Feasibility Study.

SARA: The Superfund Amendments and Reauthorization Act of 1986 amended the 1980 CERCLA environmental statues. The amendments re-authorized the federal Superfund which had expired in 1985 and established the preference for remedies that permanently reduces toxicity, volume or mobility of hazardous constituents.

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

Site Inspection (SI): An investigation that determines the nature and composition of contamination at a hazardous waste site. Not as in-depth as a remedial investigation. Similar to a Site Investigation.

Solvents: Organic liquids used to dissolve grease and other oil-based materials. Many solvents are toxic at high concentrations.

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

SVE: Soil vapor extraction. A technology in which a vacuum is applied to a porous contaminated media to strip volatile chemicals adhering to the media as air flows through it.

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 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 cleanup the site or pay back the federal government for the cost of the remediation. Federal facilities are not eligible for Superfund monies.

To Be Considered (TBC): 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.

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

USEPA: United States Environmental Protection Agency

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

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APPENDIX A

TRANSCRIPT OF PUBLIC MEETING

1
2
3 PUBLIC MEETING BRIEFING
FOR
4 THE PROPOSED PLANS FOR SITES
FT-002, FIRE TRAINING AREA/INDUSTRIAL AREA
5 GROUNDWATER OPERABLE UNIT
AND
6 SS-0017, BUILDING 2774 SOIL OPERABLE UNIT
7
8
9 Taken on Monday, February 4, 2002
at 7:00 p.m. at the Old Courthouse
10 Plattsburgh, New York.

11
12
13
14 APPEARANCES:
15 MICHAEL SOREL, Chairman
BRUCE PRZYBYL, URS Greiner, Inc.
16 STEVEN GAGNIER, AFBCA
DAVID FARNSWORTH, AFBCA
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FEBRUARY 4, 2002; 7:00 P.M.

MR. SOREL: Okay. I'd like to begin the public meeting for the Proposed Plans for Sites FT-002, the Fire Training Area/Industrial Area Groundwater Operable Unit and SS-017, Building 2774 Soil Operable Unit.

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

Assisting me in tonight's presentation are Steve Gagnier and Dave Farnsworth with the Air Force Base Conversion Agency and Bruce Przybyl, the project manager for URS Greiner, Inc. We are here to provide answers to technical questions you may have about the remedial alternatives being considered by the Air Force.

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

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

As you can see, everything being said here tonight is being taken down word-for-word by a professional court reporter. The transcript will become part of the Administrative Record for the sites.

We would like everyone to complete the Sign-in sheet at the door. We will use the sheet to review our mailing list for the sites.

At the conclusion of the presentation, we will open the floor to comments and questions. We request that all questions be held to the end of the presentation for each site. If you have a prepared statement you may read it out loud or turn it in without reading it. In any case, your comments will become part of the record. We have comment cards at the front table for your use for written comments. If you turn in any written comments, please write your name and address on them.

If you later decide to make a comment you may send additional comments to us at this address. We will accept comments until February 20, 2002. I will show this address slide again at the end of the meeting.

The final point is that our primary purpose tonight is to listen to you. We want to hear your comments on any issue that you are concerned about, and we will try to answer any questions you may have. We want you to be satisfied that the actions we take will properly and fully address the problems at the site.

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

MR. PRZYBYL: Good evening. In this portion of the presentation we will discuss the Air Force's Preferred Alternative for the Soil Operable Unit at Site SS-017. In order to simplify and to accelerate the remediation, the decision-making at the sites has been divided into two Operable Units or two parts: The Operable Units are the Groundwater Operable Unit and the Soil Operable Unit. This presentation will focus on the Soil Operable Unit.

Site SS-017 is situated in the central portion of the base in the industrial corridor along Arizona Avenue near the intersection of Connecticut Road. The site lies downgradient from the FT-002 site; therefore, the groundwater Operable Units of Site SS-017 and FT-002 were lumped together with other sites potentially impacted by contaminated

1 groundwater from FT-002 and the industrial corridor
2 into one large operable unit. This large
3 groundwater operable unit will be discussed at the
4 next presentation.
5 This is FT-002 (unclear) 0017. Site SS-017 is
6 located primarily between Buildings 2774 here and
7 Building 2753, located here. 2774 was used for
8 engine maintenance and 2753 was a machine shop.
9 Contamination at the site is related to activities
10 at a concrete drum pad which served as a waste
11 accumulation point for Building 2774, that is
12 located here. Contamination was discovered in soil
13 near the pad in 1985. Site contaminants include
14 chlorobenzenes and other chlorinated hydrocarbons
15 such as trichloroethene. These compounds were used
16 as cleaning solvents. Fuel-related compounds such
17 as xylenes and naphthalene were also detected.
18 When investigation of the soil contamination was
19 expanded in the early 1990s, contamination was
20 detected over a wider area in between the two
21 buildings. Slide please.
22 Investigation at the site began in 1985 with a
23 record search which indicated a potential that
24 spills had occurred around the concrete drum pad.
25 That was confirmed through the collection of a few

1 soil samples around the pad. By 1987, a site
2 inspection was undertaken which included the
3 collection of subsurface samples and a collection of
4 groundwater from monitoring wells that were
5 installed. Chlorobenzenes and other chlorinated
6 hydrocarbons were detected in both soil and
7 groundwater. In June 1992, the United States Air
8 Force removed the pad and the contaminated soil
9 surrounding it. Slide please.
10 This is the area where the removal action
11 occurred. Removal action known as the IRM or
12 Interim Remedial Measure consisted of additional
13 sampling to delineate the contamination and the
14 excavation and removal of 200 cubic yards of
15 contaminated material was transported off base and
16 incinerated. Next slide, please.
17 Also in 1992, the Air Force initiated a remedial
18 investigation that consisted of additional well
19 installations, groundwater sampling and a risk
20 assessment. The investigation recommended a further
21 Delineation of soil contamination at the site.
22 Consequently, a supplemental delineation
23 investigation was undertaken in 1996. This
24 investigation looked at soil contamination at about
25 100 locations between and around Buildings 2774 and

2753. Seven areas of soil contamination were identified, and based on these results a second removal action was initiated to address the remaining soil contamination.

The areas of soil contamination are shown here in purple, these seven areas. Remedial systems were constructed to address these areas. Technologies employed include bioventing which is blowing air into the ground to promote biological activity that destroys contaminants; soil vapor extraction which is pulling air from the ground to strip contaminants from the soil and biosparging, pulling air below the water table to both strip volatile contamination and to promote biological activity. Blowers were connected to a series of underground piping to address each area. These are the blowers, south shed, north shed, and there was piping installed through each area where contamination was found. Next slide, please.

In the year 2000 a feasibility study was undertaken that assessed possible remedial courses of action at the site. The report consolidated existing data from the site assessed the progress of the second removal action and assessed risks posed to human health. The study recommended that the

existing remedial systems installed for the removal action continue to be run. Next slide, please.

A risk assessment was performed as part of the feasibility study that assessed potential health risks given a hypothetical residential reuse scenario. The assessment concluded that there are no significant risks posed to human health, given contact with the contaminated soils at the site. Next slide, please.

In 2001 another soil sampling event was undertaken to assess the progress of the second removal action. The system had been in operation for about four years at the time of the sampling. Samples were collected at locations that were found to be contaminated in the previous sampling events. Next slide, please.

This table is a comparison of contaminant concentrations before and after the second removal action was undertaken. As you can see, a substantial reduction in concentration has occurred as a result of this action. Concentrations are no longer considered to pose a threat to human health or groundwater resources at Site SS-017. Next slide, please.

Therefore, the Air Force is recommending that no

further action be taken at the site. Since there are no threats remaining at the site, no restrictions on reuse are necessary. Following the signing of the Record of Decision the systems currently operating at the site under the second removal action would be turned off and dismantled.

I'll turn it over to Mike Sorel for any questions.

MR. SOREL: Before we move on to the next site, I will open it up for any questions and if you do have any, please state your name for the record. No questions? Okay, Bruce.

MR. PRZYBYL: In this portion of the presentation we will discuss the Air Force's preferred alternative for the Fire Training Area and industrial area Groundwater Operable Unit. This operable unit is a combination of the groundwater operable units from several sites that are impacted by groundwater contamination from the Fire Training Area. The soil operable units for each of these sites are being handled separately from this comprehensive groundwater operable unit.

This graphic shows the location of the groundwater operable unit. It extends from the Fire Training Area to the west, also referred as Site

FT-002 all the way to the base boundary on the east, right across the base.

Primary source for groundwater contamination is the FT-002 site located here. Other sites whose groundwater operable units are combined with FT-002 within its operable unit includes Sites SD-041, Site SS-011, Site SS-017 SS-005, SS-006 and SS-004. These sites lie in the industrial corridor east of the flightline. Contaminant levels are highest in what is referred to as the plume core shown here in red. The core contains greater than one thousand parts per billion of chlorinated hydrocarbons.

Groundwater flows from the FT-002 site towards two drainage areas by three separate routes: Some water flows southeastward through the industrial corridor before emptying into the golf course drainage area. Follows this route right here and empties into the golf course drainage area. The streams in this area coalesce and flow into Lake Champlain.

Most of the contaminated groundwater from the FT-002 site flows to the drainage basin that lies between the runway and the flightline. The groundwater is discharged via a storm drainage system which empties into the drainage system that

1 flows through the Weapons Storage Area or WSA. It
2 follows these routes here, this drainage basin and
3 is captured by the storm drainage system and flows
4 to the Weapons Storage Area drainage system.
5 The streams of the WSA coalesce and flow to the
6 Salmon River at the base's southern boundary. A
7 small portion of the contaminated groundwater from
8 the FT-002 site flows around the basin between the
9 runway and the flightline and empties directly into
10 WSA streams, and that is this route here, a round
11 basin that flows toward the WSA.
12 The Air Force has been routinely monitoring
13 contaminant concentrations in the streams of both
14 the WSA and golf course drainage systems. Only very
15 low concentrations of contaminants, at
16 concentrations below the New York State criterion,
17 have been detected in the golf course stream, in
18 this area right here. Contaminant concentrations in
19 the WSA stream near the outfall of this storm drain
20 that drains the basin between the runway and
21 flightline do exceed New York State stream criteria
22 in this area right. However, concentrations of
23 these contaminants downstream are below New York
24 State criteria.
25 Some residents are using groundwater for

1 drinking southeast of the base. These residents are
2 shown here in red along Route 9. Contaminated
3 groundwater is not reaching these drinking water
4 wells. Next slide, please.
5 This is a profile of the geological materials
6 from west to east across the base. Contamination in
7 groundwater is present in an unconfined sand aquifer
8 underlain by a clay confined unit. This is the sand
9 and this is the clay. Groundwater does not flow
10 between the sand unit and the till and bedrock
11 aquifers that underlie the clay. Due to the low
12 conductivity of the clay groundwater flow is
13 retarded from moving into the lower units.
14 The Air Force has routinely been monitoring
15 groundwater and bedrock and sand along the eastern
16 base boundary. Contamination has not been detected
17 in the bedrock aquifer anywhere on base or in the
18 sand unit along the southeastern base boundary.
19 The Air Force has been monitoring groundwater
20 along the boundary here, and we have not detected
21 any contamination in sand or in bedrock, indicating
22 that these users of groundwater are not at risk.
23 The clay lies near the surface to the east of
24 the golf course, this area here. Water in the sand
25 unit flowing from the west enters the golf course

streams at this point. Next slide, please.

There are two basic groups of contamination that are of concern for this operable unit: Chlorinated hydrocarbons are of the greatest concern because they do not readily biodegrade in groundwater, are readily mobile in groundwater and are toxic. When conditions are right, usually in an anaerobic or oxygen-depleted situation, chlorinated hydrocarbons do degrade. Trichloroethene is transformed to dichloroethene and dichloroethene is transformed to vinyl chloride. Fuel-related compounds, also known as the BTEX compounds, are readily biodegraded under normal conditions in groundwater. As a result the BTEX contamination has not traveled east of the flightline. As you can see from this graphic, the chlorinated hydrocarbons have traveled the furthest from the FT-002 source. That is shown in bluish-green here.

A second significant area of chlorinated hydrocarbon contamination is present upgradient from Site SS-011 west of Idaho Avenue, in this area here. Other minor sources may be present at Sites SD-041 and Site SS-004. The contamination at SS-017 has been already remediated as we found out in the first presentation. Now the chlorine hydrocarbons

are expected to migrate further to the east toward the golf course drainage and along the small arm of contamination that goes around the basin between the runway and the flightline here. However, this contamination is not expected to travel beyond the drainage basins. In contrast, the BTEX contaminant plume from FT-002 is in a state of equilibrium. Bioorganisms are consuming the BTEX contamination as fast as it is propagating in groundwater. Therefore, the BTEX plume is limited to the area shown in red. The source of contamination at the FT-002 site is a subject of a separate operable unit. The FT-002 site is here.

The Record of Decision for FT-002 operable unit has already been signed and cleanup of this source is ongoing. The remedy implemented for the FT-002 Source OU will effectively cut off any further degradation of the aquifer for the FT-002 site.

Some of the key concepts that have been developed through various investigations into the geology of groundwater contamination are that contamination is migrating into the sand aquifer but was not present in the bedrock aquifer because of the clay layer situated in between the two aquifers. Contamination is entering the golf course drainage

1 system and all the contaminant levels are expected
2 to increase slightly in the future; concentrations
3 are not expected to exceed New York State surface
4 water criteria. Contamination is also entering the
5 WSA drainage system. Only a portion of the drainage
6 system contains concentrations of contaminants above
7 New York State criteria. And last, contamination is
8 not expected to migrate beyond base boundaries in
9 surface water or groundwater. Next slide.
10 Risks posed to human health and the environment
11 were assessed during investigations undertaken for
12 the groundwater water operable unit. There are no
13 risks to human health resulting from contamination
14 in groundwater except in the case of potable use of
15 the groundwater. Potable use of groundwater is not
16 currently occurring at the base since a municipal
17 water supply is available. Off-base potable users
18 along Route 9 are not and are not expected to be
19 affected by the contamination.
20 Risk posed to ecological receptors is present
21 only in a portion of the WSA stream near the outfall
22 of the storm drain draining the basin between the
23 runway and the flightline. In this small section of
24 stream a potential risk to fish species such as
25 trout is present. Next slide.

1 Based on the results of various investigations
2 of contaminated groundwater undertaken at the base,
3 a feasibility study was undertaken to evaluate
4 options to address the contamination. Now one term
5 that is repeatedly used here in these study
6 objectives is the term "ARAR". This stands for
7 applicable and/or relevant and appropriate
8 requirements. These are contaminant concentration
9 levels established by applicable New York State or
10 Federal law governing cleanup of contamination. The
11 objectives of the study were to develop alternatives
12 to prevent ingestion of groundwater containing
13 contaminants at concentrations above groundwater
14 ARARs; to restore impacted groundwater to ARARs; to
15 prevent migration of groundwater containing
16 contaminant concentrations above the ARARs beyond
17 the base boundaries; and to restore surface water
18 that has been impacted by contaminated groundwater
19 to New York State surface water ARARs.
20 Next, please.
21 This graphic shows remediation goals for the
22 groundwater operable unit. Remediation goals are
23 set at ARARs. The goals are based on the New York
24 State groundwater and surface water quality criteria
25 since they are the most stringent applicable

1 requirements for these compounds. They are lower
2 than the federal maximum contaminant levels. Next
3 slide, please.
4 The feasibility study combined various
5 technologies for cleanup of groundwater into 16
6 alternatives. The Alternatives are numbered 1
7 through 13. Alternative 4, 5 and 6 each have an A
8 and B alternative. We will quickly describe all 16
9 alternatives.
10 Alternative 1 is no action. Inclusion of this
11 alternative is required by USEPA Guidelines to serve
12 as a baseline for comparing other alternatives.
13 Alternative 2 is monitored natural attenuation.
14 In this alternative contaminants are allowed to be
15 reduced by natural processes over a long period of
16 time. The public is protected by the enplacement of
17 institutional controls. These are deed restrictions
18 that prohibit the installation of drinking water
19 wells. These controls are part of all the
20 alternatives, except for Alternative 1. In
21 addition, groundwater and surface water would be
22 closely monitored to insure that the contamination
23 is moving in an expected manner and attenuating in
24 the expected manner and no off-base migration is
25 occurring. Monitoring is also a component of all

alternatives except for Alternative 1. Next slide, please.

Alternatives 3 through 6 employ variations of three basic technologies: The first technology shown here is a collection or interceptor trench. This is a drain placed in an excavated trench filled with gravel. In this way, a large quantity of contaminated groundwater can be collected and controlled. The water is collected in a pipe at the bottom of the trench and transferred to another location where the discharge is controlled.

The second technology is air sparging. In air sparging, air is pumped into groundwater to volatilize the contamination. It can also be applied in a trench, by placing horizontal perforated pipes at the bottom of trenches and pumping air through the pipes. Air then bubbles up through the aquifer. Contaminants are volatilized as they pass by this air curtain. So air bubbles up through the trench, water flows across the trench and coming out from the trench water has undergone volitilization and is cleaner. Next slide, please.

The third technology is a permeable treatment wall, shown here. Again an excavated trench is used. A reactive media is backfilled into the

1 trench. As contaminated groundwater passes through
2 this media, it reacts with it and is cleaned up.
3 Clean water then passes out the backside of the
4 wall. Clean water flows through the trench where it
5 reacts with the reactive material, contaminants are
6 stripped from the material and clean water passes
7 out the backside of the trench.
8 For chlorinated hydrocarbons a patented
9 iron-based material is used; therefore, this
10 technology tends to be expensive. Next slide.
11 Alternative 3 includes institutional controls and
12 monitoring similar to all of the other alternatives
13 except for Alternative 1. In addition, a major
14 component is a large collection trench that would be
15 constructed between the runaway and the flightline.
16 Next slide, please.
17 This trench is shown here in blue. Because it
18 collects water from that plume core which is located
19 here, this trench would collect over 90 percent of
20 the contamination currently present in the aquifer.
21 Collected groundwater would be treated in a
22 treatment system constructed west of the runaway at
23 this location. Water would be collected here and
24 treated here. The clean water would then be
25 discharged into the WSA drainage system.

1 Because contaminated groundwater would no longer
2 be discharging from the storm drain located between
3 the runway and the flightline, contaminated portion
4 of the WSA stream would be immediately cleaned up
5 upon construction of this system.
6 WSA Alternative 4 has a collection trench east
7 of the flightline to the components of Alternative
8 3. This trench would collect groundwater that has
9 already escaped the influence of the trench between
10 the runway and the flightline and is heading toward
11 the industrial corridor. This trench is located
12 here. And will collect groundwater that is right
13 past this trench.
14 Alternative 3 which is this trench in blue;
15 Alternative 4(a) includes both the trench in blue
16 and the trench in green. Alternative 4(b) adds a
17 third collection trench along Idaho Avenue as this
18 trench shown in orange. The trench would collect
19 contaminated groundwater that is already in the
20 industrial corridor, looks like this. Next slide,
21 please.
22 The variations of Alternative 5 and 6 are
23 similar to Alternatives 4(a) and 4(b) except that
24 different technologies are used to address the
25 contaminated groundwater along the eastern edge of

1 the flightline. These technologies are air sparging
2 for Alternative 5(a) and 5(b) and a permeable
3 reaction barrier for Alternative 6(a) and 6(b).
4 Alternative 5(a) includes a collection trench
5 between the runway and the flightline, and includes
6 a biosparging wall along the eastern edge of the
7 flightline. Alternative 5(b) adds a collection
8 drain along Idaho Avenue. Alternative 6(a) includes
9 a collection drain between the runaway and the
10 flightline and a permeable reactive barrier wall at
11 the eastern end of the flightline and then
12 Alternative 6(b) adds a collection drain along Idaho
13 Avenue, line of treatment to the components of 5(b)
14 or 5(a), actually 6(a). Next slide, please.
15 Alternatives 7 and 8 utilize groundwater pumping
16 from wells and treatment of contaminated groundwater
17 as the primary remediation technology. The pumping
18 of groundwater for these alternatives will be
19 accomplished at the nose of a highly contaminated
20 plume core, effectively cutting off its further
21 migration. These wells would be located here and
22 the treated groundwater would be injected
23 downgradient of those wells.
24 Now Alternatives 7 and 8 differ in the time that
25 this system would be shut down. For Alternative 7,

1 the system would be run until ARARs were achieved.
2 For Alternative 8, the system would be shut down
3 when a substantial reduction in contaminant
4 concentration was achieved; then the groundwater
5 would be attenuated to ARARs by natural processes.
6 Alternative 9 employs a variation on
7 conventional pumping from wells and treatment by
8 pumping at an accelerated rate with reinjection of
9 the treated groundwater at a high rate. In this
10 way, clean water is recirculated in the aquifer,
11 washing the contamination from the aquifer. Next
12 please.
13 Pumping injection wells are located throughout
14 the contaminated plume. The pumping would continue
15 until the ARARs were achieved. Next slide, please.
16 Alternatives 10 and 11 also employ the
17 accelerated pump and treat technology that we just
18 described for Alternative 9. For these alternatives
19 the technology is only applied at a highly
20 contaminated plume core -- next slide -- located in
21 this area.
22 The two alternatives differ in the time that the
23 systems would be shut down. For Alternative 10 the
24 system would be run until ARARs were achieved. For
25 Alternative 11 the system would be shut down when a

1 substantial reduction in contaminant concentrations
2 are achieved, then the groundwater would be
3 attenuated to ARARs by natural processes. Next
4 slide, please.
5 Alternative 12 employs conventional pump and
6 treat technology to contain the overall plume of
7 groundwater contamination, thereby preventing its
8 further migration into the industrial corridor.
9 Next slide, please.
10 Pumping and injection locations for this
11 alternative are shown here. Again, this system
12 would be run until ARARs were achieved. Next slide.
13 And the last alternative, Alternative 13. This
14 alternative is similar to Alternative 4 with a few
15 variations and additions. Similar to Alternative
16 4(a) this alternative includes collection trenches
17 between the runaway and the flightline and along the
18 eastern edge of the flightline. Along Idaho Avenue,
19 Alternative 13 specifies a permeable treatment
20 barrier. In addition, a permeable reactive wall
21 would be located, shown here in purple, along the
22 small arm of contamination that has made its way
23 around the basin between the runway and the
24 flightline. On this graphic the collection trenches
25 are shown in green here and in blue. The orange

1 line would be a permeable treatment wall and then
2 this small purple line would also be a permeable
3 treatment wall.
4 The last element of the alternative is a cluster
5 of pumping wells that would be located here at the
6 plume core area. These wells would pump the highly
7 contaminated groundwater that would be transported
8 into the treatment basin or treatment facility that
9 also treats the captured water from the collection
10 drain between the runway and the flightline. Next
11 slide, please.
12 Alternatives were evaluated against nine
13 criteria established by federal regulations to
14 assess remedial alternatives. The alternatives were
15 also compared to each other relative to these
16 criteria. These criteria are: The overall
17 protection of human health and the environment,
18 compliance with ARARs, long-term effectiveness of
19 the purposed remedy, reduction of toxicity, mobility
20 and volume of contamination, short-term
21 effectiveness, implementability, cost, state
22 acceptance and of course community acceptance. Next
23 slide, please.
24 Some of the important results of the evaluation
25 are listed on this graphic. Regarding the most

1 important criteria, protection of human health and
2 the environment, all alternatives except Alternative
3 1 are protective. This is a result of the
4 institutional controls that would be employed to
5 prevent human contact with the contaminated
6 groundwater which is included in all alternatives
7 except Alternative 1.
8 Regarding compliance with ARARs, all of the
9 alternatives would achieve ARARs over differing
10 periods of time. It should be noted, however, that
11 even the most aggressive of the technologies
12 existing to clean up groundwater contamination would
13 still take decades to achieve ARARs. The
14 alternatives also vary in the volume of
15 contamination that is destroyed over time and they
16 also vary in the cost.
17 Another important criterion is
18 implementability. Some of the alternatives specify
19 a number of pumping in the injection wells in the
20 flightline area. These wells would require frequent
21 routine maintenance. The maintenance activities
22 would require very active coordination with
23 flightline operations which would be somewhat
24 cumbersome. It is expected that the base reuse will
25 include extensive aircraft operations for the

foreseeable future. These types of alternatives are less implementable compared to the more passive systems such as collection trenches which require less maintenance, once constructed.

The effectiveness of the various alternatives was assessed by estimating the time it would take to achieve groundwater ARARs and quantifying the amount of contamination that each alternative would treat over time. By these measures, Alternative 9 is the most effective alternative. Alternatives 4(b) and 13 follow along the alternatives which are the most effective. Alternative 13 is in fact the second most effective. Nine is the best in terms of time to achieve ARARs and all other alternatives increase slightly. Alternative 13 is second best with 4(b), 5(b) and 6(b) in terms of the mass treated in the first ten years. Alternative 9 is the most effective, Alternative 13 is the second most effective, and then 3, 4(a) through 6(b) are the third most effective.

Of the alternatives that are the most effective, Alternative 9, however, is by far the most expensive. This alternative is also less implementable compared to Alternatives 13, 4, 5, and 6 because it would require frequent maintenance of

1 the wells in the area of flightline operations.
2 Alternatives 13 and 4(b) fall among the least
3 expensive of the alternatives. Alternative 13 is
4 the second most effective alternative and is
5 substantially less expensive than Alternative 9, if
6 we go back to where we started. Alternative 9 is a
7 little bit more effective in terms of time to
8 achieve ARARs and a little bit more effective in
9 terms of mass treated, and yet if you look at the
10 cost of these alternatives, Alternative 13 is more
11 than three times as expensive as Alternative 13
12 (sic), so based on the balance of the effectiveness
13 versus cost, the Air Force is recommending that
14 Alternative 13 be selected as the preferred
15 alternative for this operable unit. Next slide,
16 please.
17 Next we'll explain the preferred alternative
18 components in a little more detail. The
19 institutional controls for this alternative are deed
20 restrictions. These are prohibition of withdrawal
21 of groundwater for public use; control of discharge
22 groundwater withdrawn during construction;
23 prohibition of land use that interfere with remedial
24 operations. To the west of the flightline a
25 collection trench would be constructed between the

1 runway and the flightline. Pumping wells would also
2 be installed west of the flightline and a treatment
3 system would be constructed there to collect
4 groundwater water for these two systems. So
5 groundwater would be collected from the plume core
6 area by a collection drain located between the
7 flightline and the discharge to the treatment system
8 located west of the flightline and construction
9 walls would also be located in the plume core and
10 the water would be transported to the same treatment
11 system. It would be combined, treated and then
12 discharged according to New York State effluency
13 permit procedures. Next slide, please.
14 Another element of the preferred alternative is
15 a collection drain located along the eastern edge of
16 the flightline. That is located here. Groundwater
17 would be collected in a collection drain located on
18 the eastern edge of the flightline. Next, please.
19 Two permeable reactive walls or treatment walls
20 are specified under this alternative. One of the
21 walls would be located on the nose of a small arm of
22 contamination that has traveled around the basin
23 between the runway and the flightline. A second wall
24 would be constructed along Idaho Avenue. The
25 permeable reactive walls would be located along

1 Idaho Avenue and also here just upgradient from the
2 WSA drainage area.
3 Now there is a contingency specified for --
4 contingency would be specified for this treatment
5 wall in the Record of Decision. The backup
6 alternative for that would be a collection drain.
7 Now it's envisioned that in the design process the
8 pros and cons of each of these potential
9 technologies for application on Idaho Avenue would
10 be weighed and during the design process a decision
11 would be made and one of the alternatives or
12 technologies would be achieved for this treatment
13 line along Idaho Avenue. Next slide, please.
14 The alternative also includes groundwater and
15 surface water monitoring that will be used to
16 evaluate the effectiveness of the alternative
17 components with time and to insure that no off-base
18 migration is occurring.
19 The last element of the preferred alternative
20 would be five-year reviews. The effectiveness of
21 the remedy of the alternative achieving protection
22 of human health and the environment would be
23 reviewed according to USEPA Guidelines every five
24 years.
25 At this time I will turn it over to Mike Sorel

for questions and answers.

MR. SOREL: Thank you, Bruce.

At this time I'd like to open up the meeting to any comments or questions. Anybody?

MR. VON BARGEN: I have two questions. The first question would deal with the topic that we spoke of in the base RAB and that would be within the decision remedy plan the issue regarding the town's municipal workers that might find themselves working within the confines of the contaminated plume and has that been addressed in the selection of the remedy or anywhere for that matter?

MR. SOREL: Actually we have looked at that before, in fact we did a study on that. Bruce, I don't know if you can speak to that at all.

MR. PRZYBYL: Well, one of the recommended institutional controls talks about treating this groundwater that is collected during construction activities in this contaminated area, and the Air Force has made contingency for that treatment if it becomes necessary.

MR. VON BARGEN: Is that a separate component then outside by itself?

1 MR. SOREL: Outside by itself, right.
2 We have already contracted for the construction of a
3 portable treatment system that we can use in many
4 instances like that, but if your question was also
5 in regards to health and safety, I don't know if you
6 recall we actually did a study on that and we did
7 pass that out, I believe, at one of our RAB meetings
8 and if you need a copy of that --
9 MR. VON BARGEN: My second question
10 could be in regard to the five-year review. What
11 kind of a -- that apparently is a prototypical time
12 frame that is utilized in evaluating the success of
13 the remedies. Are there provisions in there that
14 shorten up that time frame based on your monitoring?
15 If you saw something prior to a five-year review
16 period would there be any process of information
17 flowing to the regulatory community? Would there be
18 an opportunity to look more carefully at the
19 information rather than have a five-year period?
20 MR. PRZYBYL: Well reports would be
21 generated at a greater frequency than five years.
22 The monitoring would be done annually or
23 semi-annually, twice per year, and reports would be
24 generated after each event so that the Air Force and
25 regulatory community could review these results as

1 they were generated. The five-year review pulls all
2 the information into a more formal way that is
3 specified under the CERCLA Regulations.
4 MR. GERAGHTY: Five years at a minimum
5 to get the results and we take a look at them and if
6 we see something we feel needs to be addressed we'll
7 raise it. And with regard to the institutional
8 controls we have had some sites already where we put
9 in institutional controls and we say, you know, we
10 don't want construction activities to interfere with
11 the monitoring of those wells, and if it needs to
12 happen, sewer line needs to go through there or
13 something, then we review those plans to see if we
14 think that the workers would be at any risks from
15 what we know to be in the groundwater. So there
16 are, you know, matters in place to make sure that
17 they get addressed, those kind of issues.
18 MR. SOREL: Dan, can you --
19 MR. GERAGHTY: I'm Dan Geraghty from
20 the New York State Department of Health.
21 MR. VON BARGEN: So in the
22 semi-annual or annual information at year three, if
23 you seem to be seeing something different than what
24 you would have expected, there would be some
25 conferring among the regulatory agencies and the Air

Force?

MR. SOREL: I think so. I think that the opportunity is always there to do that as we submit these documents. We are constantly submitting documents on a routine basis for landfills now, and correct me if I'm wrong, either of you, that I would expect that we would certainly discuss that if there was something that jumped out at you.

MR. GERAGHTY: We review those and nothing has come up at this site but at other sites now we have monitoring reports where, for instance, they have filters on residential wells and just last week I had called up the DEC because it appeared there was a breakthrough in one of those wells so we had the filter changed. And we get these reports and take a look at them and if there is anything irregular we have an opportunity to get something done about it.

MR. SOREL: Thank you. Any other comments, questions?

If you should later decide to make additional comments on the proposed actions, please mail them to this address by February 20, 2002. Also I'd like to add that the proposed plans are available at the

1 Information Repository located in Special
2 Collections of the Feinberg Library at SUNY
3 Plattsburgh.
4 That concludes this meeting. Thank you.
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6 (Meeting adjourned at ten minutes of eight.)
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1
2 C E R T I F I C A T E
3
4 I, Carol A. Boone, Notary Public and Court
5 Reporter, do hereby certify that the foregoing
6 pages, numbered 2 through 34, inclusive, are a true
7 and accurate transcription of my stenographic notes
8 of a PUBLIC MEETING BRIEFING FOR THE PROPOSED PLANS
9 FOR SITES FT-002, FIRE TRAINING AREA/INDUSTRIAL AREA
10 GROUNDWATER OPERABLE UNIT AND SS-017, BUILDING 2774,
11 SOIL OPERABLE UNIT, taken before me on February 4,
12 2002, as to which a transcript was duly ordered.
13
14 I further certify that I am not a relative
15 or employee of, nor do I have any interest in the
16 outcome of the matter.
17
18
19 Carol A. Boone
20 Carol A. Boone, Court Reporter
21
22
23
24
25

SIGN-IN SHEET

NAME	ORGANIZATION	PHONE NUMBER
Marian Wolosz	TN & Assoc. Inc.	566-8729
Steven McCabe	URS Corp.	716 684-5576
Carol Boone	Carol Boone Associates, Inc	802-862-4593
Bruce Przybyl	URS Corp.	518-566-7022
Dan Geraghty	NYSDOH	518-402-7890
James Quinn	NYSDEC	518-402-9453
Art Stump	NYSDOH	518-397-1243
Thilvon Bergen	NYSDOH	563-8125

APPENDIX B

RESPONSIVENESS SUMMARY

DEPARTMENT OF THE AIR FORCE
AIR FORCE BASE CONVERSION AGENCY

February 25, 2002

MEMO FOR RECORD

SUBJECT: Responsiveness Summary: Public Comment Period for the Proposed Plan for Remedial Action at Installation Restoration Program (IRP) Site SS-017, Building 2774 Soil Operable Unit, and the Fire Training Area (FT-002)/ Industrial Area Groundwater Operable Unit

A. OVERVIEW

Site SS-017 is situated in the central portion of the base's industrial corridor along Arizona Avenue, near the intersection of Connecticut Road. Site SS-017 is located primarily between Buildings 2774 and 2753. Building 2774 was used for engine maintenance and Building 2753 was a machine shop. Contamination at the site is related to activities at a concrete drum pad, which served as a waste accumulation point for Building 2774. Contamination was discovered in soil near the pad in 1985. Site contaminants include chlorinated hydrocarbons from cleaning solvents, and fuel-related compounds.

Investigation at the site began in 1985 with a records search, which indicated a potential that spills had occurred around the concrete drum pad. This was confirmed through the collection of a few soil samples around the pad. In 1987, a site inspection was undertaken which included the collection of subsurface samples and the collection of groundwater from monitoring wells that were installed. Chlorobenzenes and other chlorinated hydrocarbons were detected in both the soil and groundwater.

In June 1992, the Air Force removed the pad and contaminated soil surrounding it under the mechanism of an interim remedial measure (IRM). The IRM consisted of additional sampling to delineate the contamination and the excavation and removal of 200 cubic yards of contaminated soil. The material was transported off base and incinerated.

During the same year, the Air Force initiated a Remedial Investigation. The investigation recommended a further delineation of soil contamination at the site. Consequently, a Supplemental Delineation Investigation was undertaken in 1996 that investigated soil contamination at about 100 locations between and around Buildings 2774 and 2753. Based on these results, a second removal action was initiated to address the remaining soil contamination. Remedial systems were also constructed. The technologies employed include bioventing, soil vapor extraction, and biosparging.

In 2000, a feasibility study was undertaken that assessed possible remedial courses of action at the site. The report consolidated existing data from the site, assessed the progress of the second removal action, and assessed risks posed to human health. The study recommended that the existing remedial systems installed for the second removal action continue to be run. It also concluded that there are no significant risks posed to human health given contact with the contaminated soils at the site.

Another soil sampling effort was undertaken to assess the progress of the second removal action during the 2001 field season. The results showed that concentrations are no longer considered to pose a threat to human health or to groundwater resources.

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 the SS-017 Soil Operable Unit is that no further action is necessary, and that no restriction on reuse of the site is necessary. Following the signing of the Record of Decision (ROD), the systems currently operating under the second removal action would be turned off and dismantled.

The Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit is a combination of the groundwater operable units from several sites that are impacted by groundwater contamination from the Fire Training Area. It extends from the Fire Training Area site to the west (also referred to as site FT-002), to the base boundary on the east. The primary source for groundwater contamination is the FT-002 site. Other sites whose groundwater operable units are combined with FT-002 within this operable unit include sites SD-041, SS-011, SS-017, SS-005, SS-006, and SS-004. These sites lie in the industrial corridor east of the flightline. Contaminant levels are the highest in what is referred to as the plume core. It contains greater than 1,000 parts per billion of chlorinated hydrocarbons.

Some of the key concepts that have been developed through the various investigations into the geology and groundwater contamination are: 1) chlorinated hydrocarbon contamination is migrating in the sand aquifer but is not present in the bedrock aquifer, because of the clay layer situated in between the two aquifers; 2) contamination is entering the Golf Course drainage system. Although the contaminant levels are expected to increase slightly in the future, concentrations are not expected to exceed New York State surface water quality criteria; 3) contamination is also entering the WSA drainage system. Only a portion of the drainage system contains concentrations of contaminants above New York State criteria and 4) contamination is not expected to migrate beyond base boundaries in surface water or in groundwater.

The Air Force conducted health risk assessments for humans and the environment and found that there are no risks to human health resulting from contamination in the groundwater, except in the case of potable use of the groundwater. However, a municipal water supply is available on base, and off-base potable users are not expected to be

affected by the contamination. There is a potential risk to fish species, such as trout, in a portion of the WSA stream.

A feasibility study was undertaken to evaluate options to address the Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit. The study combined various technologies for cleanup of the groundwater into sixteen (16) alternatives. The alternatives were evaluated against nine (9) criteria established by federal regulations to assess remedial alternatives. They are: 1) overall protection of human health and the environment; 2) compliance with "Applicable and/or Relevant and Appropriate Requirements" (ARARs), which are contaminant concentration levels established by New York State or federal laws governing cleanup of contaminated groundwater; 3) long-term effectiveness and permanence; 4) reduction of toxicity, mobility, or volume; 5) short-term effectiveness; 6) implementability; 7) cost; 8) state acceptance and 9) community acceptance.

Because it provides the best balance between effectiveness and cost, the Air Force is recommending that Alternative 13 be selected as the remedy for the Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit. The components of the preferred alternative are: 1) institutional controls that would prohibit withdrawal of the groundwater for potable use, control the discharge of groundwater withdrawn during construction, and prohibit land use that interferes with remedial operations; 2) the construction of a collection trench between the runway and the flightline; 3) groundwater extraction wells; 4) a groundwater treatment system to treat water from the extraction wells and the runway collection trench, discharging to the WSA streams; 5) a collection trench installed east of the flightline; 6) a permeable treatment wall along Idaho Avenue with a contingency for a collection trench in lieu of the wall; 7) a permeable treatment wall at the WSA; 8) monitoring of the groundwater and the surface water and 9) five-year site reviews.

B. PUBLIC MEETING AND PUBLIC COMMENT PERIOD

A Public Meeting was held on the recommended alternatives for SS-017/Building 2774 Soil Operable Unit and the Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit on February 4, 2002, 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 detailed the proposed plans 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 January 22, 2002, to February 20, 2002. 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

Mr. Phil Von Bargen wanted to know if the Air Force had addressed, in the remedy or elsewhere, the issue regarding the (Town of Plattsburgh) municipal workers potentially being exposed to the contaminant plume while working in the area.

The Air Force responded that the issue was addressed in an earlier study conducted by the Air Force. Copies were handed out to Restoration Advisory Board (RAB) members and forwarded to the Town of Plattsburgh. The Air Force has made provisions to have groundwater collected during construction activities treated with a portable treatment system, as necessary.

Mr. Von Bargen asked if there were provisions in the review process to address anything out of the ordinary that might occur before the five-year assessment.

The Air Force clarified that the plume will be monitored once or twice a year, so there would be an opportunity to catch any increases in concentrations, or anything unexpected regarding site conditions. The five-year review is simply a more formalized presentation of the ongoing monitoring.

Mr. Dan Geraghty of the New York State Department of Health (NYSDOH) added that the state also receives copies of the monitoring results and can review construction plans in light of plume conditions.

Mr. Von Bargen wanted to be sure he understood that there is coordination between the Air Force and the regulatory agencies for the site.

The Air Force affirmed this statement. The current landfill monitoring was given as an example. The Air Force routinely forwards the documents to the state, and so far, no comments have been received to indicate that there are issues. The NYSDOH confirmed this. An instance was cited whereby the filters on an off-base residential water well indicated that there had been breakthrough. The New York State Department of Environmental Conservation (NYSDEC) was informed and had the filters changed.

No other questions were asked regarding the recommended alternatives for SS-017/Building 2774 Soil Operable Unit and the Fire Training Area (FT-002)/Industrial Area Groundwater Operable Unit. Additionally, there were no other comments from any members of the audience regarding the recommended alternative chosen for these sites.

From the time of the Public Meeting until the deadline of February 20, 2002, only one other comment was directed to AFBCA. Mr. Robert Booth, of Plattsburgh, NY, forwarded a letter to the Air Force on February 7, 2002. Mr. Booth stated that he is a member of the Plattsburgh AFB RAB. He commented that, in his opinion, the RAB has been thoroughly briefed on the Fire Training Area/FT-002(GW) Operable Unit (and all other projects), that there has been ample time for questions, answers, and discussions

between the RAB and the Air Force, that the Air Force has been responsive to the RAB's concerns, and that the Air Force's preferred alternative will adequately protect the community. He added that working in conjunction with the EPA and NYSDEC has further convinced him that the process has produced the best possible result. Mr. Booth ended his letter by stating that the projects are well done and should be implemented as recommended.

Subsequent to Mr. Booth's letter, no further questions or comments were received by the Air Force regarding this subject.

MICHAEL D. SOREL, PE
Site Manager/
BRAC Environmental Coordinator

ROBERT T. BOOTH
33 MORRISON AVE.
PLATTSBURGH, N. Y. 12901

February 7, 2002

Mr Michael D. Sorel
BRAC Environmental
Coordinator / Site Manager
22 US OVAL, STE 2200
Plattsburgh, N.Y. 12903

RECEIVED
FEB 11 2002
AFBCA/DA PBG

Dear Sir:

I regret that my scheduling error caused me to miss my planned opportunity to speak at the Public Hearing on February 4, 2002 as to sites SS-017 and FT-002.

For the record I am a senior Plattsburgh resident, active in public concerns and own real estate that adjoins the former Air Base. While I have many affiliations, I have served for a number of years as a pure citizen member of the RAB, as different from being an employee or official representative.

The RAB has been carefully and thoroughly informed and instructed, with spirited questioning and answers about each site. The patient investigations, technology and scientific analysis at each site have been carried to extreme limits, and with demonstrated ability to revise methods as needed. As technological information has been gained over time, it has been taken advantage of as work progressed.

Of several for each site, the preferred alternative put forth in the January 2002 brochure satisfies me that our community

Mike

will be well protected by the process that is recommended. Critics will disagree, but there is a reasonable time when the process has reached its limit. With oversight by the N.Y. State Conservation Department and the EPA, and more review by higher authority, I feel these projects are well done and should be moved on as recommended

Sincerely

Robert D Scotto

APPENDIX C

NYSDEC CONCURRENCE LETTER