DEPARTMENT OF THE AIR FORCE
AIR FORCE REAL PROPERTY AGENCY

OCT 23 2003

MEMORANDUM FOR SEE DISTRIBUTION LIST

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

SUBJECT: Final Interim Remedial Action Report for Pumphouse 5

1. The enclosed subject report is provided for your information and is the culmination of field work performed by PEER Consultants in conjunction with the previously submitted draft report provided by FPM Group, Inc. under contract number F41624-95-D8003-0010, at the former Griffiss AFB. All comments previously received from your office have been incorporated in the document.

2. Questions that you may have pertaining to the document provided may be directed to Mark Rabe of my environmental staff at the above address or (315) 330-2275.

for MICHAEL F. MCDERMOTT
BRAC Environmental Coordinator

Enc.
Final Interim Remedial Action
Report for Pumphouse 5

DISTRIBUTION

Ms. Heather Bishop
New York State Department of
Environmental Conservation
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
625 Broadway
Albany, NY 12233 (2 copies)

Mr. Douglas Pocze
USEPA - Region II
Federal Facilities Section
290 Broadway, 18th Floor
New York, NY 10007-1866 (2 copies)

New York State Department of
Environmental Conservation
207 Genesee Street
Utica, NY 13501-2885
Attn: Mr. Neal Carrier (1 copy)

AFRPA/DA - Griffiss
153 Brooks Road
Rome, NY 13441-4105
Attn: Mark Rabe (4 copies)

Pumphouse 5
Spill Number: 8903144
(AOC ST-37)
Former Griffiss Air Force Base
Rome, New York

FINAL INTERIM REMEDIAL ACTION REPORT FOR PUMPHOUSE 5

Contract No. F41624-94-D-8067-0008/
F41624-95-D-8003-0010

Revision 2.0
October 2003

FPM group

INTERIM REMEDIAL ACTION REPORT

FOR

PUMPHOUSE 5

Spill Number: 8903144

(AOC ST-37)

AT THE FORMER GRIFFISS AFB, NEW YORK

Prepared for:

AFCEE/AFRPA

Prepared by:
PEER Consultants, P.C.
12300 Twinbrook Parkway, Suite 410
Rockville, MD 20852
Contract No. F41624-94-D-8067-008

Revised by:
FPM Group, Ltd.
153 Brooks Rd.
Rome, NY 13441
Contract No. F41624-95-D-8003-0010

Final
October 2003

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
bgs	below ground surface
CGI	combustible gas indicator
COC	chain-of-custody
EPA	Environmental Protection Agency
E&E	Ecology & Environment
ft	feet
MDL	Method detection limit
MS/MSD	matrix spike/matrix spike duplicate
N/A	not acceptable
N/D	non detect
NYSDEC	New York State Department of Environmental Conservation
OWS	oil/water separator
PID	photoionization detector
ppb	parts per billion
ppm	parts per million
ppmv	parts per million by volume
PQLs	practical quantitation limits
QAPP	Quality Assurance Project Plan
QC	quality control
RI	remedial investigation
RSCO	Recommended Soil Cleanup Objectives
SAP	Sampling and Analysis Plan
SVOC	semi-volitile organic compound
STARS	Spill Technology and Remediation Series
TAGM	Technical and Administrative Guidance Memorandum
UST	underground storage tank
VOC	volatile organic compound
WSA	weapons storage area

DATA QUALIFIERS

Description of data qualifiers used during laboratory data validation:

B	The analyte was found in an associated blank, as well as in the sample.
F	The analyte was positively identified, but the associated numerical value is below the Reporting Limit (RL).
J	The analyte was positively identified, the quantitation is an estimation.
M	A matrix effect was present.
R	The data is unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.
U	Analyte was not detected. The associated numerical value is at or below the method detection limit.

1 INTRODUCTION

This report summarizes interim remedial actions completed at the Pumphouse 5 Site at the former Griffiss Air Force Base. This work was conducted during three periods: between August-December 1999, August-November 2001, and August 2002. Tasks completed at the site were conducted under Air Force Center for Environmental Excellence Contract F41624-94-D-8067, Delivery Order 0008 and F41624-95-D-8003, Delivery Order 10.

1.1 Site Description and History

Pumphouse 5 was constructed in the late 1950's at the southwest corner of Apron 1 on Griffiss Air Force Base. The site location is presented in Figure 1.1. The pumphouse served as a fuel storage and transfer station for aircraft refueling operations. Fueling operations at Pumphouse 5 were discontinued in July 1993 and the building and associated underground storage tanks (USTs) were removed in 1997. Four 50,000-gallon USTs containing JP-4 jet fuel and one 2,000-gallon waste fuel UST were previously located at the site. Figure 1-2 shows the pre-remediation layout of the site.

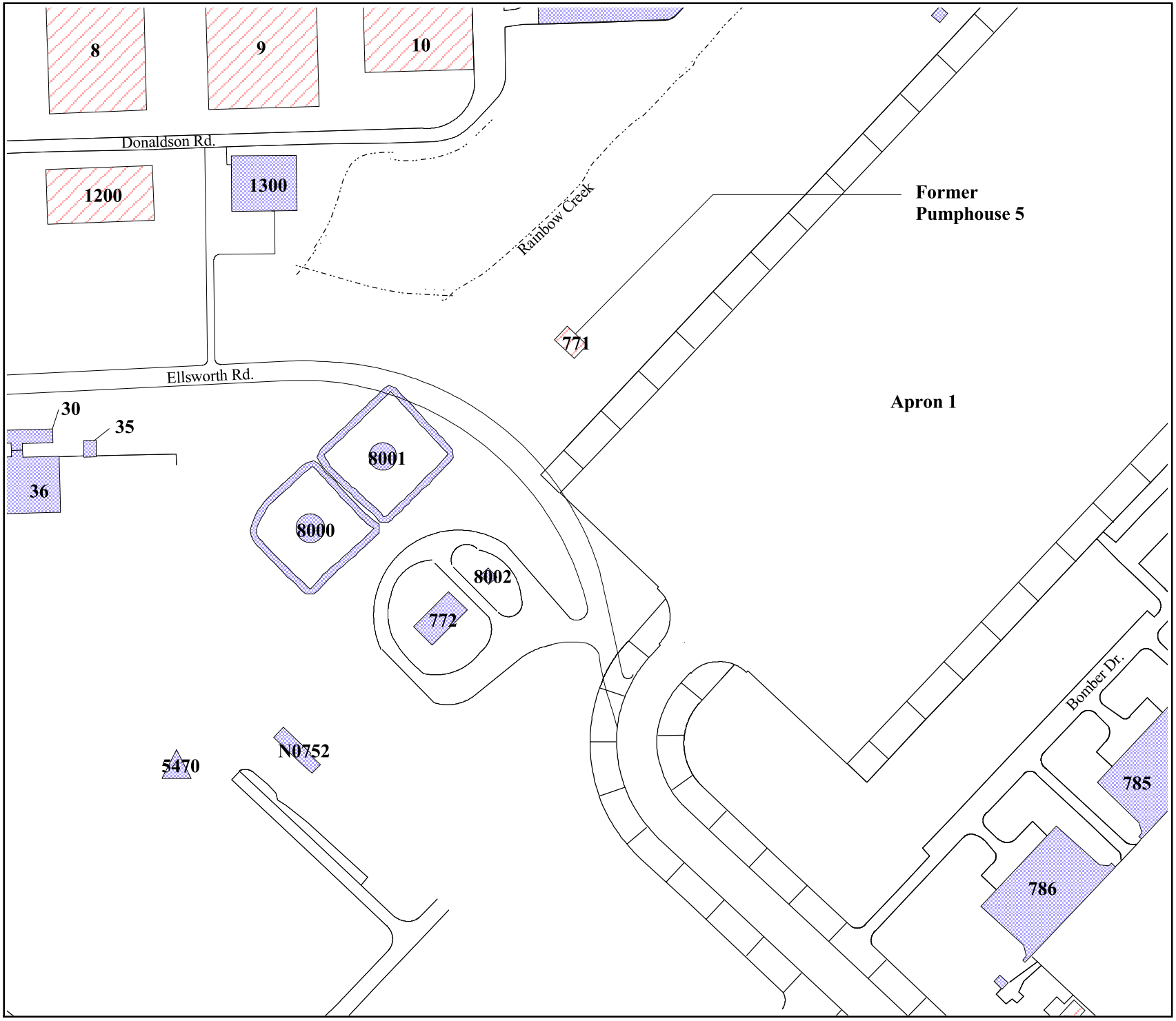
The ground surface at the site is grass covered, and gently slopes downward from Apron 1 to Rainbow Creek, which is located approximately 200 feet northwest of the former building and tank area.

Historically, records indicate that several spills had occurred in the vicinity of the pumphouse. One open spill number, 890314 is currently on-file with the New York State Department of Environmental Conservation (NYSDEC). Pumphouse 5 was identified as a source removal area of concern (AOC) in the 1990 Federal Facility Agreement (FFA) for Griffiss AFB.

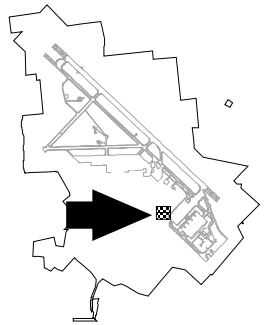
1.2 Site Geology and Hydrology

The subsurface at the Pumphouse 5 site consists of silty, fine to medium grained sand with intermittent zones of gravel and clay. The vadose and saturated zones are dominated by these sands, which tend to become coarser with depth in the vicinity of the former pumphouse. The sands transform from fine-to medium-grained sand, to medium-to-coarse sand near the water table. Fine to medium gravels appear interspersed in the vadose zone and saturated soils throughout the site. Layers of hard material presumably compacted or cemented silts and/or gravels were encountered near the water table northwest and southeast of the pumphouse (Parsons ES, 1996). Subsurface data derived from a review of borehole logs completed for the site indicated several intervals of clay near the groundwater surface. This shallow clay is reported to be up to seven feet thick, but due to its limited areal extent, it is not suspected of creating confining conditions in the shallow aquifer.

Historical data indicates groundwater at the site tends to flow in a general northwesterly direction towards Rainbow Creek, and counter to the regional southwesterly ground water pattern throughout the base. However, quarterly groundwater elevation data suggested that the flow in the vicinity of Pumphouse 5 was north, northwest, northeast or east, depending on the season (Law, 1994b).



N



Pumphouse 5
Site Location Map

Road/Airfield

Stream

Existing Building

Demolished Building

60 0 60 120 Feet

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

Figure 1.1
Pumphouse 5
Site Location Map

FPM group

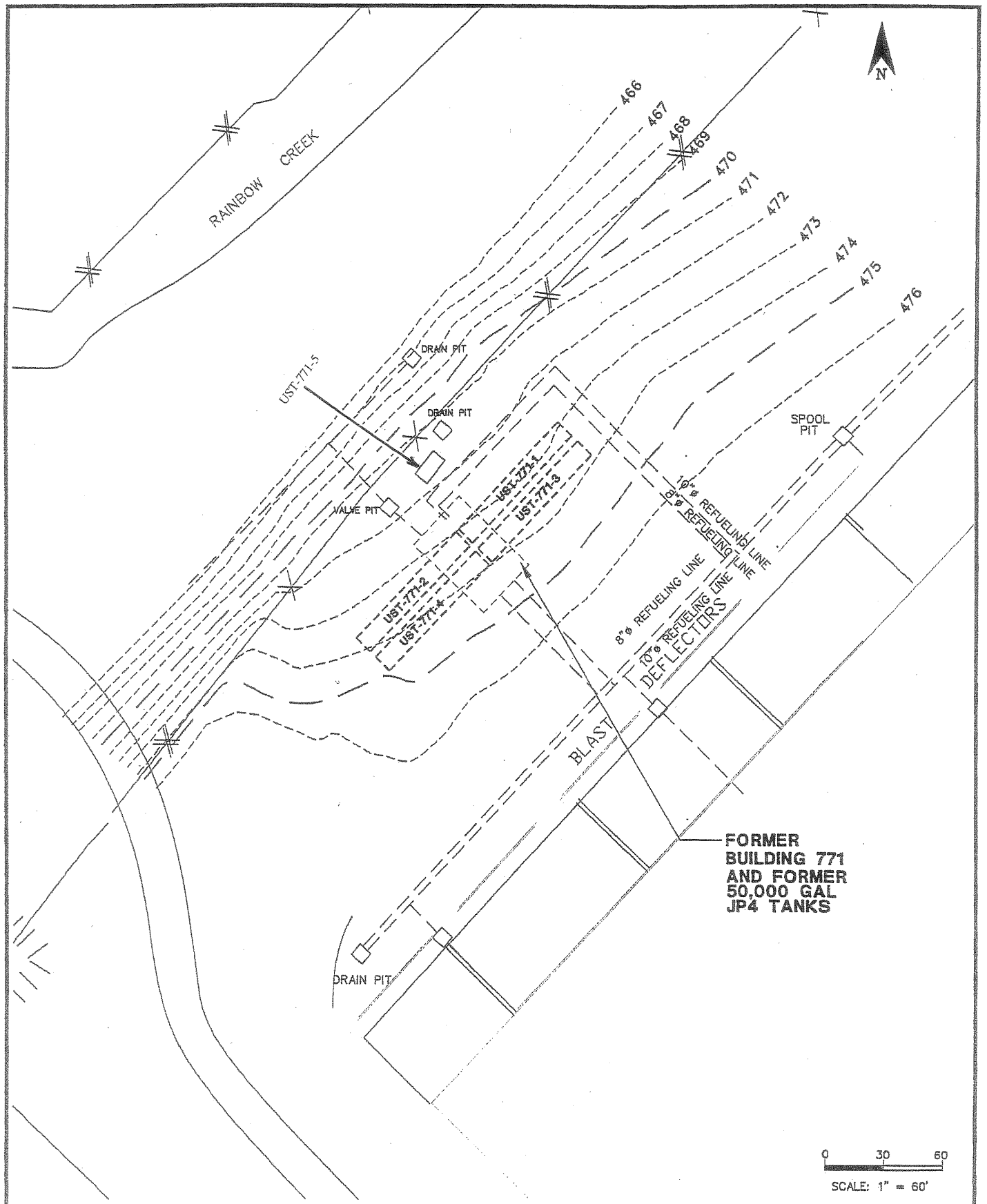


FIGURE 1.2

NO.	REVISION	BY	DATE

		DATE
PROJECT NUMBER:	1701-03	
SCALE:	1" = 60'	
DESIGNED BY:	MB	7/02
DRAWN BY:	HFP	7/02
CHECKED BY:	MB	7/02
FILENAME:	1703H8	
Plot Date:		

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-9700
www.peercpc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

LAYOUT OF
PUMPHOUSE 5

Depth to groundwater was generally reported as between 14 to 19 feet below ground surface at the site, and as shallow as 0.6 feet in adjacent areas (Parsons ES, 1996). Surface and storm water in the vicinity of Pumphouse 5 flows towards Rainbow Creek. The creek originates in the central portion of the Base and receives surface water run-off from the base parking lots and roadways. Rainbow Creek ultimately discharges to Six Mile creek, a tributary to the Mohawk River.

1.3 Previous Investigations and Remedial Actions

The following is a summary of the investigative and remedial activities previously conducted at Pumphouse 5:

- In March 1989, in response to NYSDEC spill number 8903144, a soil gas survey was conducted by Tracer Research Corporation (TRC) for UNC Geotech. Ninety soil gas samples were collected and analyzed for benzene, toluene, ethyl benzene and xylenes (BTEX) and total petroleum hydrocarbons. Results from this survey indicated that total petroleum hydrocarbons and fuel-related contamination were evident at the site.

- In June 1989, to supplement the data from the soil gas survey, three monitoring wells (771MW-1, -2, and -3) were installed. Mobile light nonaqueous-phase liquid (LNAPL) was observed in monitoring wells 771MW-1 and 771MW-3; however, the LNAPL levels were unavailable.

- In October and November 1991, TRC conducted leak detection soil gas surveys near the four 50,000-gallon USTs and the 21,000-foot main hydrant system piping along Parking Apron 1. No leaks associated with the underground facilities were found.

- In late November 1991, TRC performed additional soil gas surveys at the site. The soil gas survey confirmed the suspected areas of contamination identified earlier by UNC Geotech. Free product (LNAPL) thickness was measured in monitoring wells 771MW-1 and 771MW-3 at 2.04 feet and 4.85 feet, respectively.

- In December 1991, six additional monitoring wells (771MW-4 through 771MW-9) were installed at the site. Free product was observed in monitoring wells 771MW-4 and 771MW-7 with a respective thickness of 0.01 foot and 5.80 feet.

- As part of the Base-Wide Quarterly Sampling Project at Griffiss AFB, Law Environmental sampled wells 771MW-2, -4, -5, -6, -7, -8, and -9 on four occasions, from the fourth quarter of 1992 through the third quarter of 1993. The groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), total glycols, total metals, and cyanide. The primary groundwater contaminants were BTEX. The May 1992 measured product thickness in monitoring wells 771MW-1, -3, -4 and -7 were 0.25 foot, 4.10 feet, 0.00 foot, and 3.06 feet, respectively.

- In February 1993, a flexible axial peristaltic (FAP) pump petroleum-skimming system was installed to recover free product from wells 771MW-1, -3, -4, and -7. The system was in operation for approximately 6 months. After 6 months of operation, the FAP, in conjunction with weekly hand bailing, had removed between 25 and 50 gallons of free product. In April

1993, after base personnel discovered a layer of fuel in a 4 ft. by 4 ft. valve pit during FAP monitoring, approximately 300-gallons of groundwater and fuel were pumped from the valve pit southwest of well 771MW-7.

- In June 1994, a leak detection system indicated a release in the vicinity of the 2000 gallon waste fuel tank at Pumphouse 5. The tank and piping were excavated during the first week of July in 1994. It was determined that the piping joint between the pumphouse and the tank had been compromised and was the cause of the leak. The piping was subsequently removed and the building floor drain was sealed. The 2000 gallon tank was rendered inoperable and left in place to be excavated at a later date (ABSCOPE, 1997).

- Law (1995a, b) conducted an engineering evaluation/cost analysis (EE/CA) for demolition of the pumphouse, removal of the USTs and associated piping, recovery of free product from the groundwater surface and remediation of contaminated soil around Pumphouse 5. The EE/CA recommended excavation of contaminated soils and installation of a free product recovery system to recover LNAPL at the site. The study also identified excavation and disposal as the preferred option for contaminated soil remediation.

- In 1995, Parsons Engineering Science (Parsons, 1996) conducted a treatability study at Pumphouse 5 to evaluate the use of intrinsic remediation with long-term monitoring (LTM) as a remedial option for dissolved BTEX contamination in the shallow groundwater. Since both the mobile and residual LNAPL were present in the soil and at the water table, the study also focused on the impact of LNAPL and dissolved BTEX on the shallow groundwater and on Rainbow Creek. Water and sediment samples collected from the creek showed the presence of BTEX indicating that the dissolved BTEX contaminant plume in the groundwater had reached the creek. Benzene concentrations in Rainbow Creek were found at levels up to 4.5 µg/L. The study utilized the Bioplume II numerical model to estimate the rate and direction of dissolved BTEX movement through the shallow groundwater (Parsons, 1996). Results indicated that dissolved BTEX contamination present in groundwater posed no significant threat to human health or the environment in its present, and predicted future concentration and distribution. However, the migration of the contaminated groundwater into Rainbow Creek could potentially exceed NYSDEC's Water Quality Standards in the creek.

- In 1995, as part of the remedial investigation of the Coal Storage Yard Area of Concern, surface water and sediment samples from Rainbow Creek were analyzed. A number of contaminants were found at concentrations above applicable criteria in both the surface water and sediment. The contaminants included benzene, naphthalene, PAHs, pesticides, PCBs, metals and glycols (Law, 1996).

- In 1996, a free product recovery pilot test was conducted at the Pumphouse 5 Site (Battelle, 1995, 1997). The objective of the testing was to develop procedures for evaluating the potential of bioslurping technology in recovering free-phase LNAPL present at petroleum-contaminated sites. The initial soil gas profiles displayed oxygen- deficient, carbon dioxide-rich and high total volatile hydrocarbon vapor conditions across the vadose zone at the site. These conditions indicated that natural biodegradation of residual petroleum hydrocarbon has occurred but is limited by oxygen availability. The bioslurping testing results concluded that liquid phase recovery was not sustainable by either gravity-driven or vacuum-driven LNAPL free product recovery techniques. The results also suggested that bioventing is feasible for the

site.

In May 1997, ABSCOPE Environmental, Inc. demolished Pumphouse 5 and removed the associated USTs. A total of 17,000 cubic yards of contaminated soil was excavated and removed. Removal of soil was halted when the groundwater table was reached. Prior to the excavation, an apparent thickness of up to 7 feet of free product was observed in the monitoring wells at the Pumphouse 5 Site. However, during the excavation no free product was discovered or removed. Soils were highly contaminated. The excavated pit was backfilled with clean fill. Residual contamination, however, still existed in the subsurface soils. Investigation and characterization of subsurface soil contamination was planned for the site. Figure 1.3 shows the extent of the excavated area during tank removal activities. During excavation, six of the nine existing monitoring wells were destroyed. Three new monitoring wells were installed within the excavated area after the site was backfilled.

- In 1997, as part of the Coal Storage Yard Area of Concern remedial action, a one-foot layer of sediment was removed from the Rainbow Creek streambed. After the sediment was removed, confirmatory samples were taken. A sediment mat and a one-foot layer of gravel were installed to restore the site. In addition, seep samples were collected along the creek's bank. Two of the four seep samples collected detected estimated concentrations of PCBs of 2.0 and 4.0 µg/L.

- In 1998, as part of the Supplemental Investigation of Areas of Concern, two surface water samples were collected from the outfalls of two storm sewers at the headwaters of Rainbow Creek and one surface water sample was collected from Rainbow Creek. The samples were analyzed for pesticides and PCBs. No pesticides or PCBs were detected in the samples from the storm sewers. Several pesticides were detected in the surface water sample from Rainbow Creek; however, no PCBs were detected (Ecology & Environment, 1998)

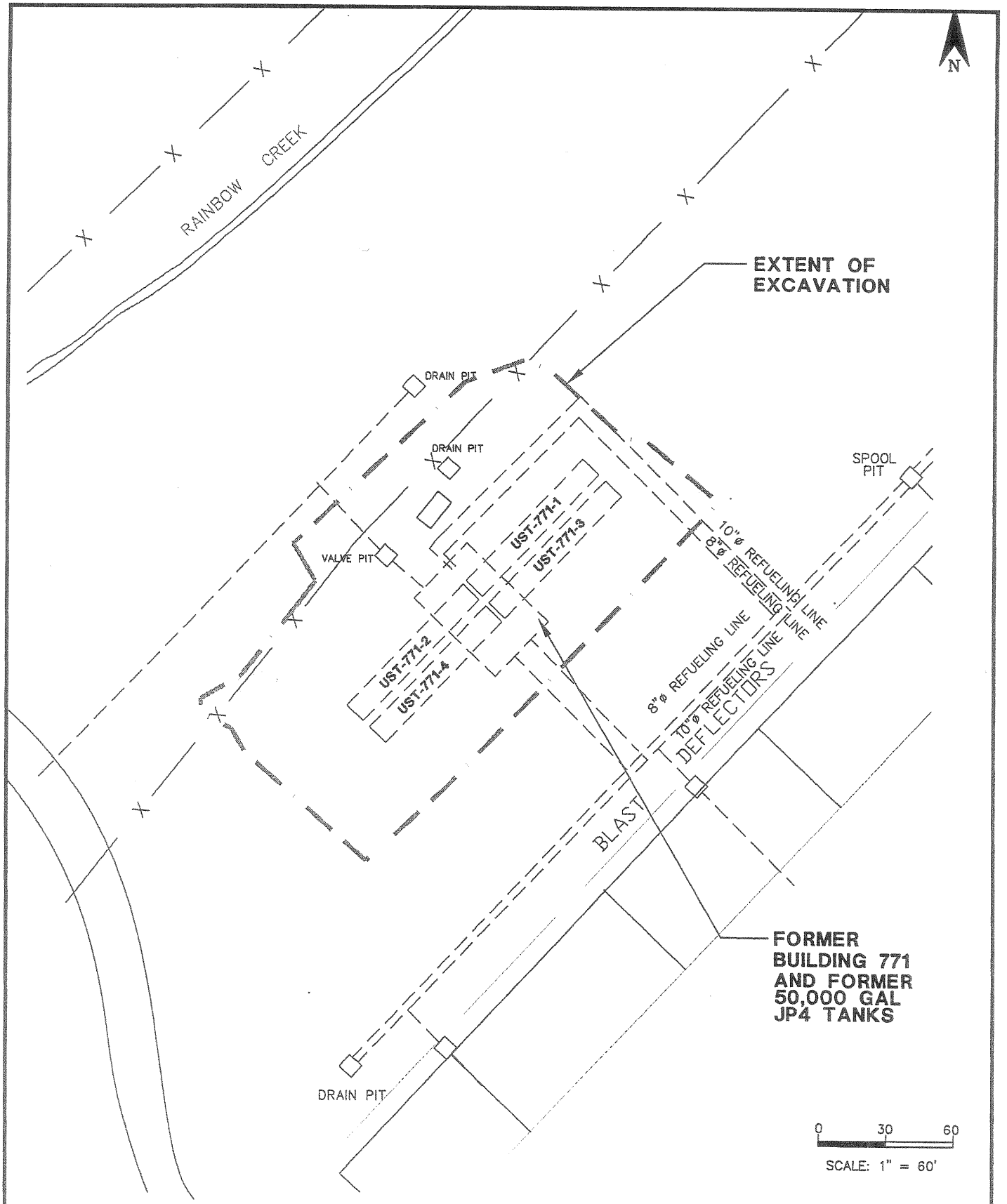


FIGURE 1.3

NO.	REVISION	BY	DATE

		DATE
PROJECT NUMBER:	1701-03	
SCALE:	1" = 60'	
DESIGNED BY:	MB	7/02
DRAWN BY:	HFP	7/02
CHECKED BY:	MB	7/02
FILENAME:	1703H8	
Plot Date:		

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-9700
www.peerepc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

EXTENT OF UST REMOVAL EXCAVATION 1997

2 SITE INVESTIGATION RESULTS

Following the removal of Pumphouse 5 and associated USTs in 1997, PEER completed site characterization to determine the extent of petroleum impacted soil and groundwater at the site. Results of the site investigation were submitted to AFCEE in the document, *Site Characterization Report for the Pumphouse 5 Site, April, 1998 (PEER, 1998).*

2.1 Extent of Soil Contamination

To delineate the residual soil contamination at the Pumphouse 5 site, PEER collected soil samples from 69 locations using Geoprobe techniques. One hundred twenty samples were collected between August 5, 1997 and September 25, 1997. Of the 69 geoprobe locations, 33 had no exceedances of NYSDEC Spill Technology and Remediation Series (STARS) Guidance Values for VOCs or SVOCs, while 36 locations had one or more exceedances of STARS guidelines. Soils where contamination exceeded STARS guidance values were generally found in the north and central areas of the site.

The analytical results indicated that VOCs were the dominant contaminants found in soils at the site and benzene was considered the most significant contaminant. Figure 2.1 shows the areal extent of benzene impacted soil at the site.

2.2 Extent of Groundwater and Surface Water Contamination

To evaluate the extent of groundwater and surface water contamination at the Pumphouse 5 site, 15 samples were collected between April 7 and April 14, 1998, including nine groundwater and six surface water samples.

2.2.1 Groundwater

PEER collected groundwater samples from nine on-site monitoring wells, 771MW1B, 771MW2B, 771MW3B, 771MW4B, 771MW5B, 771MW6B 771MW1A, 771MW2A and 771MW3A (destroyed in 1999 and 2001). The locations of the monitoring wells are shown in Figure 2.2.

Analytical results from the nine groundwater samples indicated that 771MW3B, 771MW4B, 771MW1A and 771MW3A each were found to have at least nine VOC contaminants at concentrations exceeding the NYSDEC groundwater standards with 771MW4B having the highest concentrations. Additionally, naphthalene was found at concentrations exceeding the groundwater standards at 771MW1A and 771MW4B. Free product was also found in 771MW4B with an apparent thickness of 0.6 inch. No contaminants were detected in the Pumphouse 5 upgradient well, 771MW5B.

Groundwater elevation contours are shown in Figure 2.3.

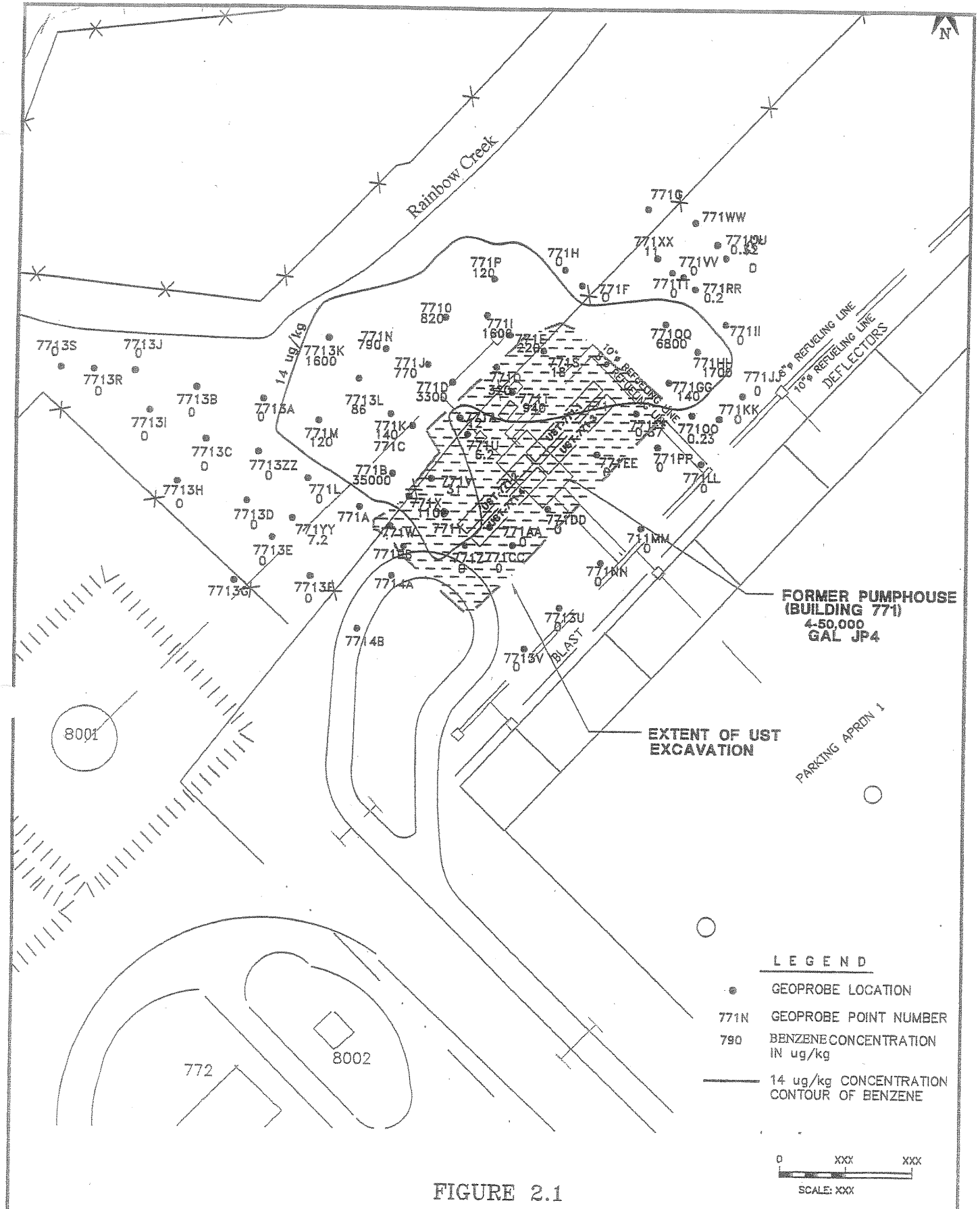


FIGURE 2.1

NO.	REVISION	BY	DATE

		DATE
PROJECT NUMBER:	1701-03	
SCALE:	1" = 100'	
DESIGNED BY:	MB	7/02
DRAWN BY:	HFP	7/02
CHECKED BY:	MB	7/02
FILENAME:	PH5A3	
Plot Date:		

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-0700
Est. 1978
www.peercpc.com

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

ESTIMATED AREAL EXTENT OF BENZENE SOIL CONTAMINATION

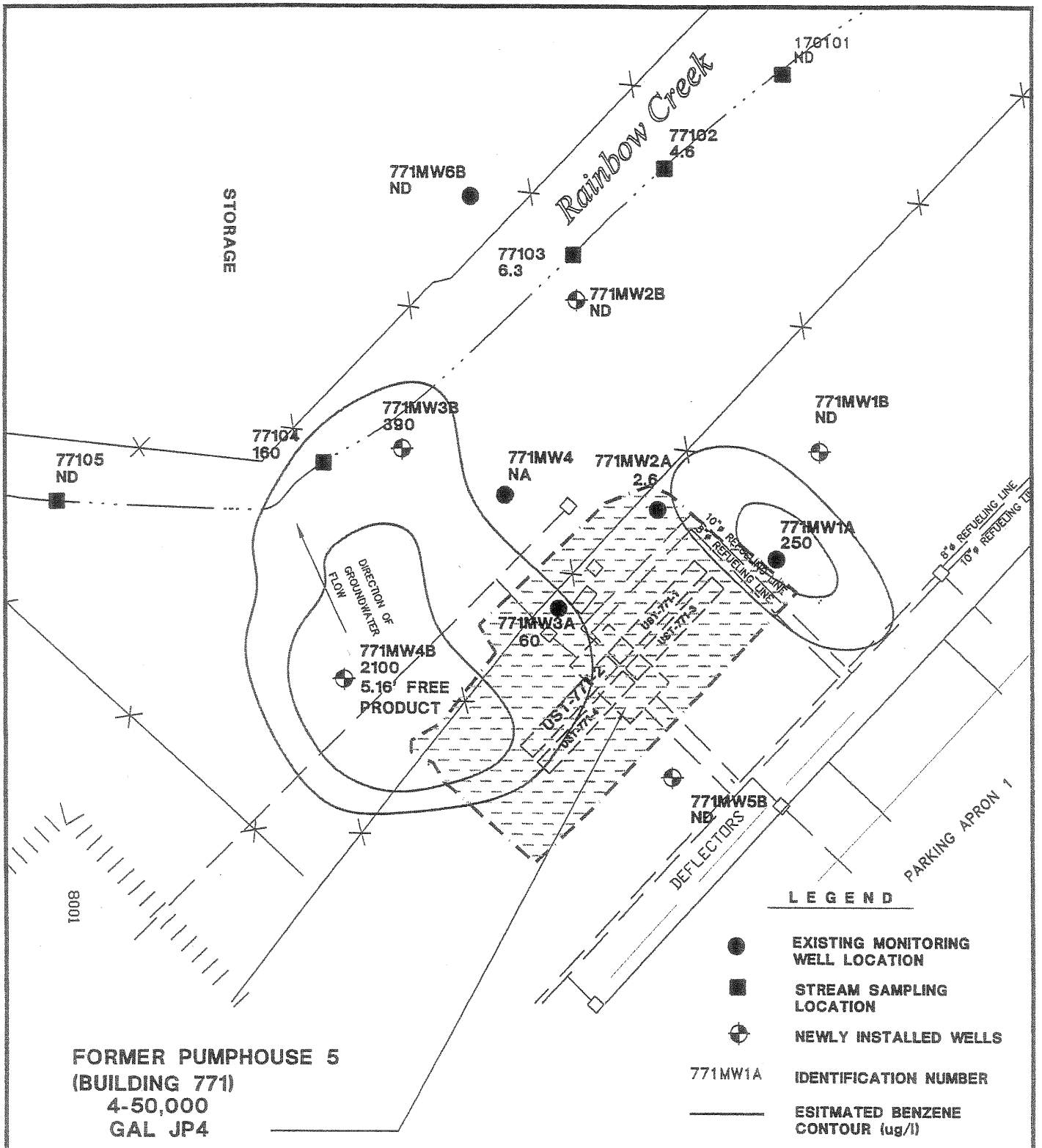


FIGURE 2.2

NO.	REVISION	BY	DATE

PROJECT NUMBER:	1701-03
SCALE:	1" = 100'
DESIGNED BY:	MB
DRAWN BY:	HFP
CHECKED BY:	MB
FILENAME:	PH5A4
Plot Date:	7/02

DATE: 7/02, 7/02, 7/02

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-9700
www.peerepc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

BENZENE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER

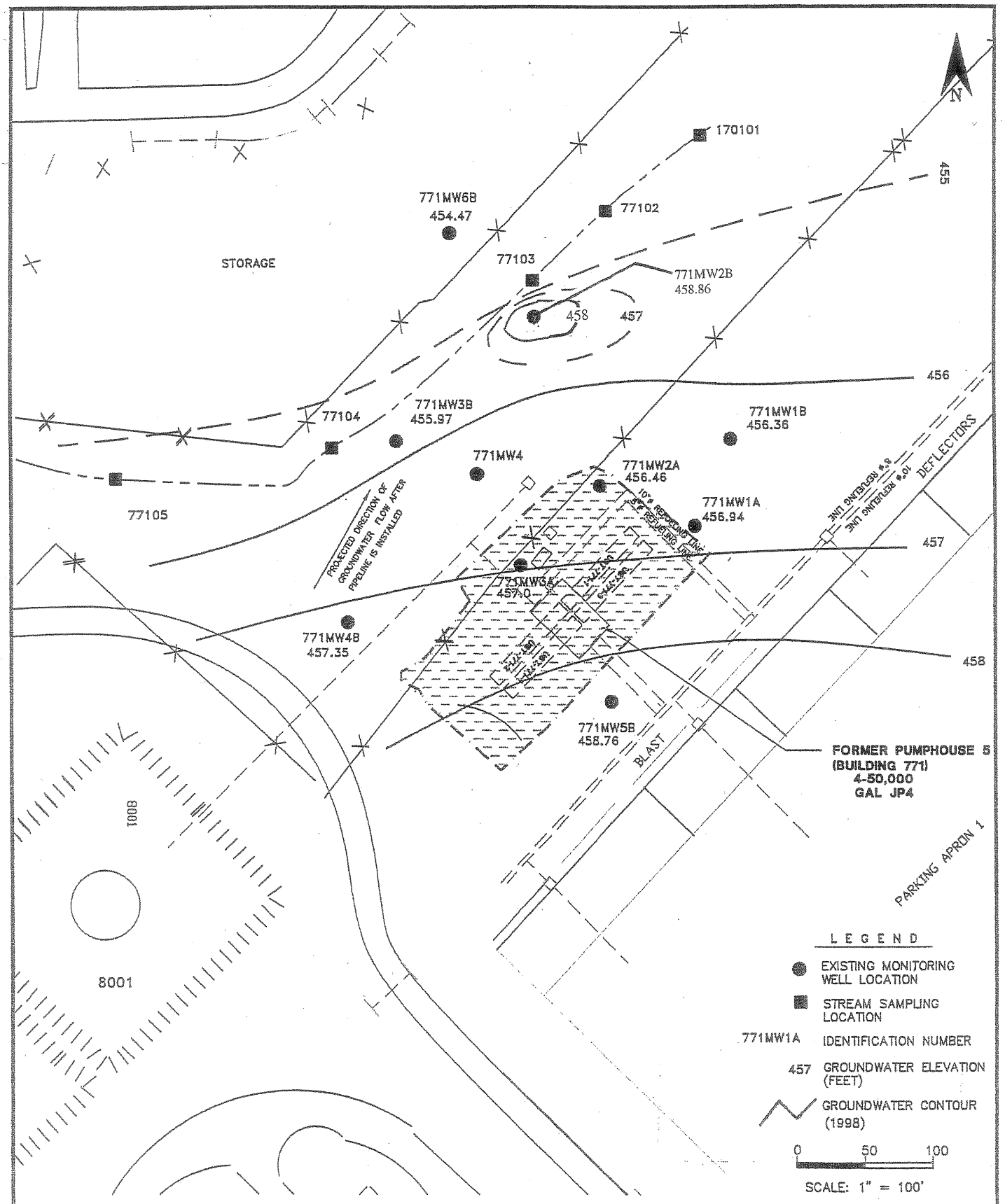


FIGURE 2.3

NO.	REVISION	BY	DATE

PROJECT NUMBER:	1701-03
SCALE:	1" = 100'
DESIGNED BY:	MB 7/02
DRAWN BY:	HFP 7/02
CHECKED BY:	MB 7/02
FILENAME:	PH5A5
Plot Date:	7/02

DATE

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-9700
www.peercpc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

PUMPHOUSE 5 GROUNDWATER ELEVATION MAP

2.2.2 Surface Water

Surface water samples were collected at six locations in Rainbow Creek in April 1998. Five samples were collected at or near locations where ground water seepage into Rainbow Creek had been observed. One of the five seep samples was at a location upstream of the Pumphouse 5 site and four were downstream. Additionally, a surface water sample was collected in the middle of the creek downstream of the site, approximately 75ft downstream of sample location 170101. The locations of the surface water sampling points (except for the latter collection point) are shown in Figure 2.2. Analytical results from the surface water samples indicated that contamination was found in the three seep samples collected in the vicinity of the site and the one downgradient stream sample. Benzene concentrations ranged from 5 µg/L in the stream sample to 160 µg/L in the seep sample directly downgradient to former monitoring well 771MW4B. No PCBs were detected during the surface water sampling event conducted at Rainbow Creek in April, 1998. Results of the groundwater and surface water investigation indicated that VOCs and naphthalene were the predominant contaminants at the site.

3 INTERIM REMEDIAL ACTIONS: 1999 AND 2001

Remedial actions proposed for the Pumphouse 5 site by PEER consisted of source removal by excavation and ex-situ bio-treatment of contaminated soils. The scope of work was summarized in the *Final Work Plan for Interim Remedial Actions at the Former Pumphouse 5 Site, (March 1999).*

3.1 Source Removal

3.1.1 Soil Excavation

Excavation of contaminated soil at Pumphouse 5 Site was initiated on August 10, 1999. Work zones and traffic patterns were established at the site to facilitate excavation and transport of soil to the Apron 1 Land Farm Operation. A number of precautions were taken to ensure that contaminated soil was not released to Rainbow Creek. About 1,000 linear feet (LF) of slit fence was installed along Rainbow Creek for erosion control. A holding basin was constructed adjacent to the creek. This basin would allow the creek flow to be diverted around the Pumphouse 5 Site if conditions indicated that was necessary. A pump was installed to pump water from the basin to a point past the Pumphouse 5 site.

Areas identified as contaminated during the site characterization were staked out and surficial layers of sod and soil were removed and stockpiled. Removal and stockpiling of soil was guided by screening the soil with a photoionization detector (PID). Based on the PID readings, soil was segregated into "suspect" PID readings less than 25 parts per million (ppm) and "apparently contaminated" (PID readings 25 ppm and greater). The apparently contaminated soil was transported directly to the Apron 1 Landfarm. The suspect soil was stockpiled in an area on Apron 1 adjacent to the site for subsequent sampling and characterization.

Excavation proceeded based on field screening. When field screening indicated that all of the contaminated soil in an area had been removed, soil samples were collected and analyzed for NYSDEC STARS specified analytes. Excavation of contaminated soil proceeded horizontally until STARS guidelines were met, and vertically until STARS guidelines were met, or the water table was encountered. Excavation started on the east side of the site, and proceeded north then south towards Ellsworth Road.

Between August 16, 1999 and December 15, 1999, approximately 36,293 cubic yards of contaminated soil was excavated and transported to the Apron 1 Landfarm. Another 14,754 cubic yards of clean soil was excavated and stockpiled at the edge of Apron 1 for future use. On December 15, 1999, remedial activities were temporarily suspended for the winter and the site was secured. The determination was made that more contaminated soil was present at the Pumphouse 5 Site than initially estimated. Contract modifications were required to account for the additional contaminated soil. Work continued to be suspended through 2000 to complete the contracts.

Remedial activities resumed in July 2001 by first clearing the site of overgrown grass. Work zones, access roads and ramps were reestablished to facilitate excavation and transportation of soil. Access road construction required the use of 607 cubic yards of gravel and 36 cubic yards of crusher run. Several test holes were excavated and field screened to redefine the boundary of the contaminated soil. Once remediation resumed, an additional 4,182 cubic yards of contaminated soil was excavated

and transported to the Apron 1 Landfarm. A combined total of 40,475 cubic yards of petroleum impacted soil was removed from Pumphouse 5 Site. The soil was placed in 15 biocells at the Apron 1 Landfarm. Figure 3.1 shows the horizontal extent of the excavated area.

3.1.2 Stockpile Sampling

Soil samples were periodically collected from stockpiles designated "suspect" for laboratory analysis. The samples were collected in pre-cleaned, labeled sample containers, placed in a cooler with ice, and submitted to the Severn-Trent Laboratories, Inc. (STL) mobile laboratory for analysis for the STARS recommended list of volatiles (EPA Test Method 8021) and semivolatiles (EPA Test Method 8270). Analytical results were compared to STARS guidance values. Stockpiles found to be contaminated above the STARS guidelines were transported to the bio-treatment cells on the Apron 1 Landfarm. Stockpiles found to have contaminant levels below STARS Guidelines remained in place on the edge of the Apron 1 for use as backfill. Analytical data tables summarizing the results of stockpiled soil sampling are included as Appendix A.

3.1.3 Confirmation Soil Sampling

A total of 46 confirmation samples were collected from the sidewalls and bottom of the excavation. Samples were collected in October 1999, August 2001 and September 2001. The samples were collected according to STARS Sampling Guidelines and Protocols Manual (September 1992). The samples were collected using decontaminated stainless-steel spoons and placed in pre-cleaned, labeled sample containers, entered on a chain-of-custody and placed in a cooler with ice. The samples were delivered to the STL Laboratories for VOC and SVOC analysis. Four of the confirmation samples had exceedances of STARS SVOCs: Sample locations B11, B7, B8, and S3. The four sample locations were overexcavated and the areas were resampled. The results of the resampling confirmed that soil contaminant levels were below STARS Guidelines. Figure 3.1 shows extent of the excavation and the sample locations. Analytical data tables summarizing the results of confirmation soil sampling are included as Appendix B.

3.1.4 Site Restoration

Restoration of Pumphouse 5 Site began in October 2001. Once analytical results confirmed that the contaminated soil had been successfully removed, 732.06 tons of cobbles and 110 tons of clean concrete rubble were placed in the excavation up to the top of the water table. This was to ensure proper compaction of backfilled soil. A total of 25,364 cubic yards of bioremediated soil was used to backfill the excavation, along with clean stockpiled soil. The soil was compacted in 2-foot to 4-foot lifts and graded to ensure positive drainage at the site.

Two 10-inch plugs were installed on an abandoned section of a 10-inch water main, which traversed the site. The plugs were installed adjacent to two hydrants and shut-off valves. Final Figure 3.1

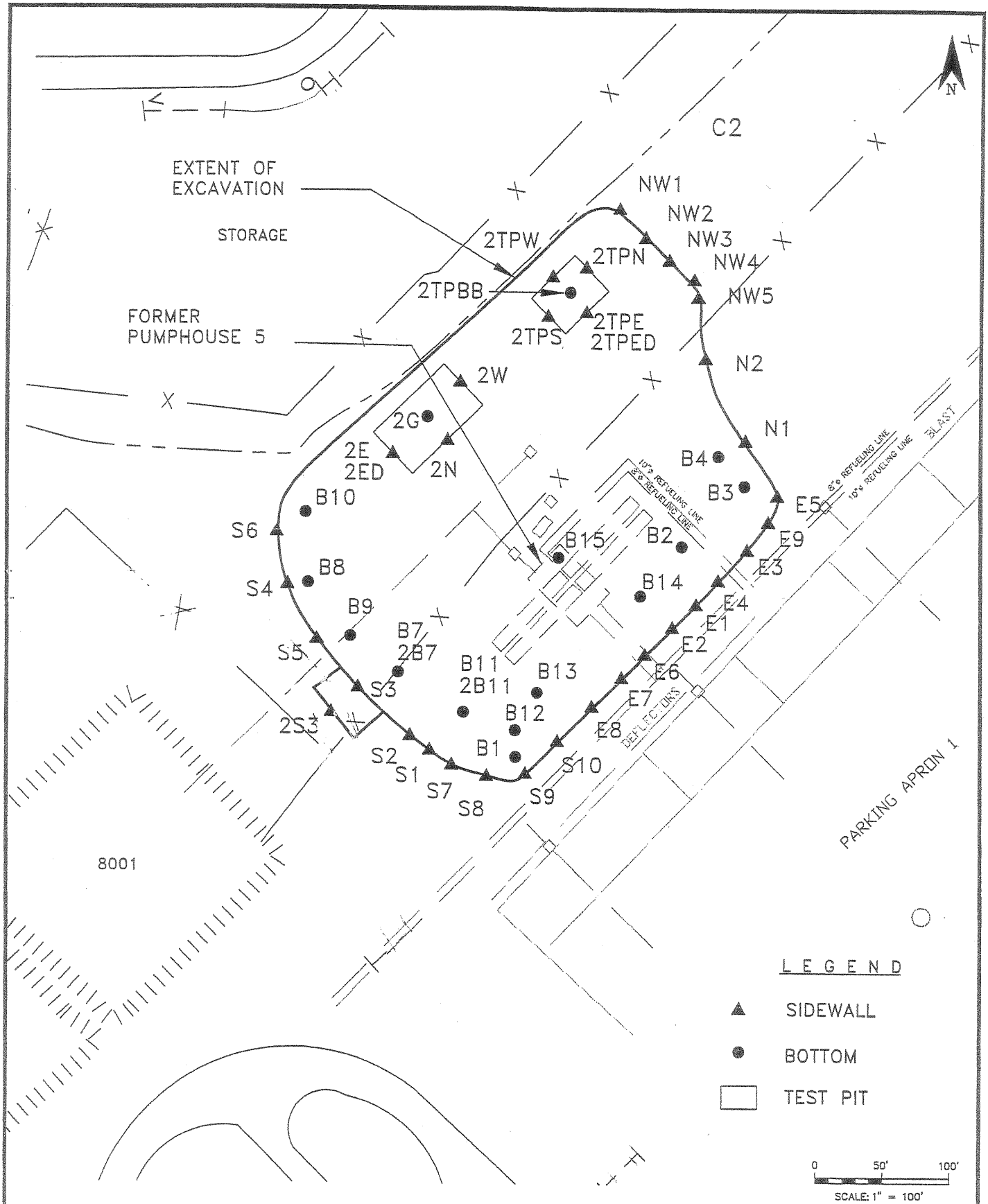


FIGURE 3.1

NO.	REVISION	BY	DATE

PROJECT NUMBER:	1701-01
SCALE:	1" = 100'
DESIGNED BY:	MB
DRAWN BY:	HFP
CHECKED BY:	MB
FILENAME:	PH5A9
Plot Date:	

DATE: 7/02, 7/02, 7/02

PEER Consultants, P.C.
Est. 1978
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-9700
www.peercpc.com

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

EXTENT OF SOIL EXCAVATION
PUMPHOUSE 5

restoration of the site was completed in November 2001. Topsoil was spread, compacted, graded and then seeded. Photodocumentation is included as Appendix C.

3.2 Surface Water Sampling

Surface water samples (seep samples) were collected from Rainbow Creek at several intervals during the site remediation process to ensure that contamination was not being released to Rainbow Creek during the soil removal. Surface water samples were analyzed for the STARS recommended list of VOCs and SVOCs. Baseline samples that were collected in April 1999, prior to the excavation, were also analyzed for PCBs and TAL metals. Surface water samples were also analyzed for PCB compounds upon completion of site restoration in November 2001. Surface water sample point locations are shown in Figure 3.2. A summary of results from the surface water sampling is as follows:

April 12, 1999: Five surface water samples designated GSW77101 through GSW77105 were collected from points upstream, downstream and "midline" to the site. These surface water sampling point locations are shown in Figure 2.2. Concentrations of one volatile compound –benzene- exceeded the NYSDEC guidance value in three of five samples, and ranged between 3.0 and 5.9 parts per billion (ppb). No concentrations of semi-volatile target analytes exceeded guidance values. PCB concentrations were reported as "Non-detect" (ND). Concentrations of manganese and sodium slightly exceeded guidance values in three of five samples.

April 28, 1999: Seven surface water samples designated GSW77121 through GSW77127 were collected from points upstream, downstream and "midline" to the site (Locations are not shown in Figure 3.2). Locations are Concentrations of VOCs, specifically benzene, xylenes, and 1, 2, 4-trimethylbenzene, exceeded NYSDEC guidance concentrations in four of seven samples. Concentrations of benzene that exceeded the guidance values ranged between 2.7 and 34 ppb. No concentrations of SVOC target analytes exceeded guidance values. PCB concentrations were reported as "Non-detect."

August 31, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOC, specifically, benzene and xylenes, slightly exceeded NYSDEC guidance concentrations in two of three samples. No concentrations of SVOC target analytes exceeded guidance values.

September 16, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of one VOC - benzene - exceeded guidance concentrations in two of three samples. No concentrations of SVOC target analytes exceeded guidance values.

September 23, 1999: Three surface water samples designated GSWPH5RC1 through

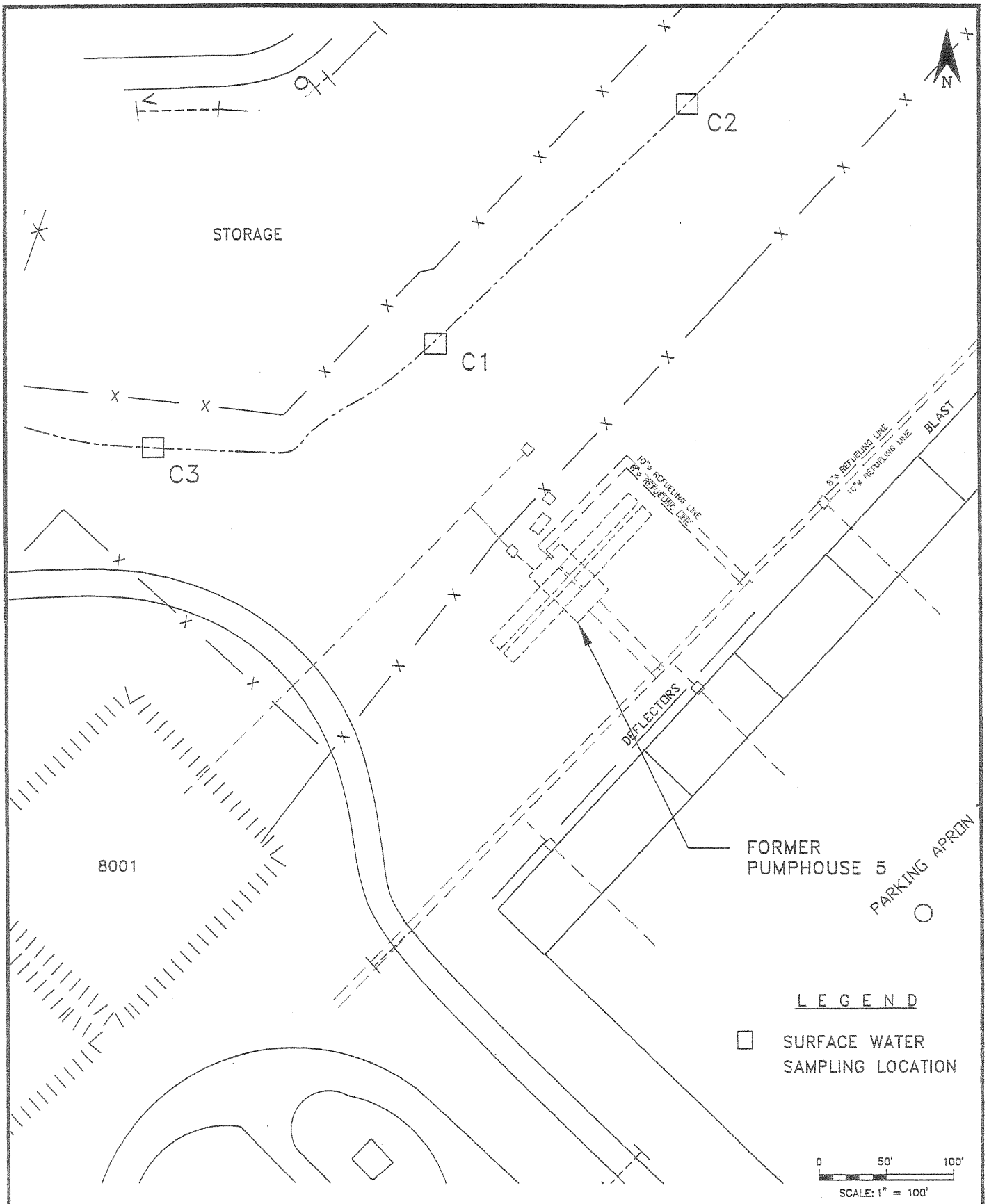


FIGURE 3.2

NO.	REVISION	BY	DATE

		DATE
PROJECT NUMBER:	1701-01	
SCALE:	1" = 100'	
DESIGNED BY:	MB	7/02
DRAWN BY:	HFP	7/02
CHECKED BY:	MB	7/02
FILENAME:	PH5A6	
Plot Date:		

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 416
Rockville, Maryland 20852
(301) 816-0790
www.peercpc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

SURFACE WATER SAMPLING LOCATIONS
PUMPHOUSE 5

GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of one VOC - benzene - exceeded guidance concentrations in two of three samples. No concentrations of semi-volatile target analytes exceeded guidance values.

October 7, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOC, specifically benzene and ethylbenzene exceeded guidance concentrations in two of three samples. No concentrations of SVOC target analytes exceeded guidance values.

October 14, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of one VOC - benzene - exceeded guidance concentrations in two of three samples. No concentrations of SVOC target analytes exceeded guidance values.

November 3, 1999: Three surface water samples de9signated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. No concentrations of VOC or SVOC target analytes exceeded guidance values.

November 10, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOCs, specifically, benzene, ethylbenzene, xylenes, and 1, 2, 4-trimethylbenzene, exceeded guidance concentrations in each of the three samples. No concentrations of SVOC target analytes exceeded guidance values.

November 18, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOCs, specifically, benzene, ethylbenzene, xylenes, 1, 2, 4-trimethylbenzene, and 1, 3, 5-trimethylbenzene, exceeded guidance concentrations in two of the three samples. A concentration of 11 µg/L naphthalene was also reported at sampling point GSWPH5SP8C1.

December 2, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOCs, specifically, benzene, ethylbenzene, xylenes, isopropylbenzene, n-probylbenzene, 1, 2, 4-trimethylbenzene, 1, 3, 5-trimethylbenzene, and n-butylbenzene, exceeded guidance concentrations in each of the three samples. A concentration of 13 µg/L naphthalene was also reported at sampling point GSWPH5SP8C1.

December 9, 1999: Three surface water samples designated GSWPH5RC1 through GSWPH5RC3 were collected from points upstream (C3), downstream (C2) and "midline" (C1) to the excavation. Concentrations of VOCs, specifically, benzene, ethylbenzene, xylenes, n-probylbenzene, 1, 2, 4-trimethylbenzene, and 1, 3, 5-trimethylbenzene, exceeded guidance concentrations in two of the three samples. No concentrations of SVOC target analytes exceeded guidance values. Samples were not collected for PCB or TAL metals analysis.

August 21, 2001: Six surface water samples were collected, at locations similar to those in Figure 2.2 (plus on additional location downgradient of sample location 170101). Concentrations of

one VOC – toluene - exceeded the guidance concentrations in one of six samples. No concentrations of SVOC target analytes exceeded guidance values.

November 15, 2001: Six surface water samples were collected, at location similar to those sampled in August 2001. No concentrations of VOC or SVOC target analytes exceeded guidance values. Samples were collected for PCB analysis and results indicated a concentration of 2.8 R µg/L Arochlor 1260 at GSWPH5SS1, located downstream of the Pumphouse 5 site, but the value has an R data qualifier which means the data is unusable due to deficiencies in the Lab's ability to analyze the sample and meet QC criteria.

Laboratory analytical results, chain of custody forms, and tables summarizing the results of surface water sampling are included as Appendix D.

3.3 Groundwater Sampling

During the soil removal, eight of the ten existing monitoring wells associated with the Pumphouse 5 site were destroyed. 771MW5B, an upgradient well and 771MW6B, located west of Rainbow Creek remain at the site. Six replacement monitoring wells were installed upon completion of site restoration.

3.3.1 Monitoring Well Installation

Between November 6 and November 8, 2001, six monitoring wells, 771MW-7, 771MW-8, 771MW-9, 771MW-10, 771MW-11, and 771MW-12 were installed at the Pumphouse 5 Site by Parratt-Wolf, Inc., under the supervision of a PEER geologist. The monitoring wells were installed to total depths ranging between approximately 13 to 24 feet below ground surface (bgs), and were completed approximately 18 inches above grade. A 2-inch diameter split spoon sampler was utilized for sample collection at 2-foot intervals to determine the depth of the water table for screen placement. Geologic logs describing lithologic features encountered during installation and specific monitoring well construction details are contained in Appendix E. Replacement monitoring well locations are presented in Figure 3.3.

Monitoring wells 771MW-7, 771MW-8, 771MW-9, 771MW-10, 771MW-11, and 771MW-12 were installed using the hollow stem auger method. The casing is constructed of 2-inch diameter ASTM Schedule 40 PVC with a 10-foot, 0.010-inch slotted screen interval. The borehole annuli of the monitoring wells were backfilled with clean silica sand to approximately 2.0 feet above the screened interval. A 2.0-foot layer of bentonite was placed above the sand pack to provide an impervious seal. The monitoring wells were developed by overpumping to remove any fine-grained material and to ensure a good hydraulic contact with the aquifer. All soil cuttings were transported to the Apron 1 Landfarm for treatment. All water generated during installation and development was transported to a holding tank at Apron 1 and subsequently disposed of off-site at a NYSDEC-approved facility. Table 1 summarizes the well construction details.

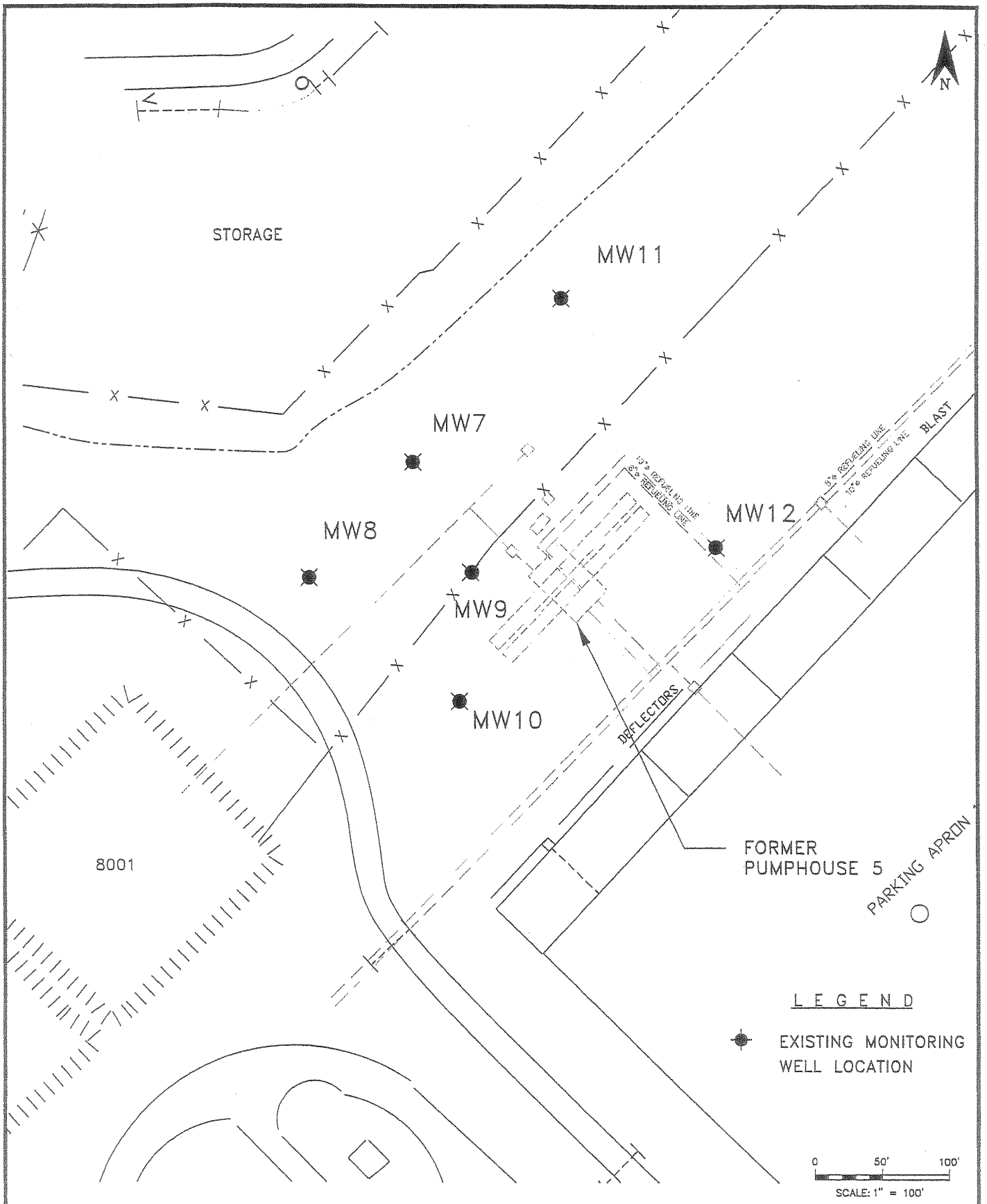


FIGURE 3.3

NO.	REVISION	BY	DATE

PROJECT NUMBER:	1701-01	DATE
SCALE:	1" = 100'	
DESIGNED BY:	MB	7/02
DRAWN BY:	HFP	7/02
CHECKED BY:	MB	7/02
FILENAME:	1703A1	
Plot Date:		

PEER Consultants, P.C.
12300 Twinbrook Parkway
Suite 410
Rockville, Maryland 20852
(301) 816-8700
www.peercpc.com
Est. 1978

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)
GRIFFISS AIR FORCE BASE - NEW YORK

MONITORING WELL LOCATION 3-2001
PUMPHOUSE 5

Table 1
Monitoring Well Construction Information
Pumphouse 5 Site
November 6 – 8, 2001

Monitoring Well	Date of Installation	Total Depth (ft. bgs)	Diameter (inches)	Screened Interval (ft. bgs)	Screen size (inch)	Well Elevation (ft. msl)
771MW-7	11/06/01	13	2	3 – 13	0.010	461.69
771MW-8	11/06/01	16	2	6 – 16	0.010	464.42
771MW-9	11/06/01	18	2	8 – 18	0.010	466.38
771MW-10	11/08/01	18	2	8 – 18	0.010	468.38
771MW-11	11/07/01	14	2	4 – 14	0.010	461.40
771MW-12	11/17/01	24	2	14 – 24	0.010	473.04

Notes
ft. = feet
bgs = below ground surface
msl = mean sea level

3.3.2 Groundwater Analysis Results

Groundwater samples were collected from monitoring wells 771MW-7, 771MW-8, 771MW-9, 771MW-10, 771MW-11, and 771MW-12 on November 14 and November 15, 2001. Prior to sampling, each monitoring well was purged with a peristaltic pump of three to five times the well volume to ensure that the ground water samples were representative of actual aquifer conditions. Temperature, pH and conductivity were measured during purging to confirm stabilization. Groundwater samples were collected with a dedicated disposable bailer from each well and decanted into the appropriate sample container (depending on the analysis to be performed), avoiding turbulence and aeration of the sample as much as possible. The sample containers were sealed and immediately stored on ice and submitted to STL Laboratories for analysis for the STARS VOC (EPA Test Method 8021) and SVOC (EPA Test Method 8270) target analytes.

Groundwater analytical results indicated concentrations of only one VOC: benzene at 3.4 ppb in monitoring well 771MW-11, which exceeds the NYSDEC guidance concentration. All concentrations of SVOC target analytes were reported as not detected. Analytical data tables summarizing the results of groundwater sampling are included as Appendix D.

4 GROUNDWATER AND SURFACE WATER SAMPLING EVENT - 2002

4.1 Surface water Sampling

Surface water samples were collected in August 2002 from Rainbow Creek as follow-up testing to November 2001. The locations were selected based on the previous sampling locations, as shown in Figure 4.1. Samples were collected at six locations on August 22 and 28, 2002. Due to low yield of the groundwater seeps into Rainbow Creek a direct sample could not be collected, therefore surface water samples were collected at the nearest point to the apparent seeps in Rainbow Creek. The surface water samples were analyzed for the STARS recommended list of VOCs, SVOCs, PCBs and lead (total and dissolved). Samples were tested on-site for pH, conductivity, temperature, turbidity, dissolved oxygen, and oxidation-reduction potential. Field sampling forms are provided in Appendix F. Laboratory results are summarized below and provided in Appendix G:

- Surface water sampling reported no detections for SVOCs.

- One VOC, p-isopropyltoluene, was detected at 0.69 µg/L at 771SW-4, which is below the NYS Surface Water Standard of 5 µg/L.

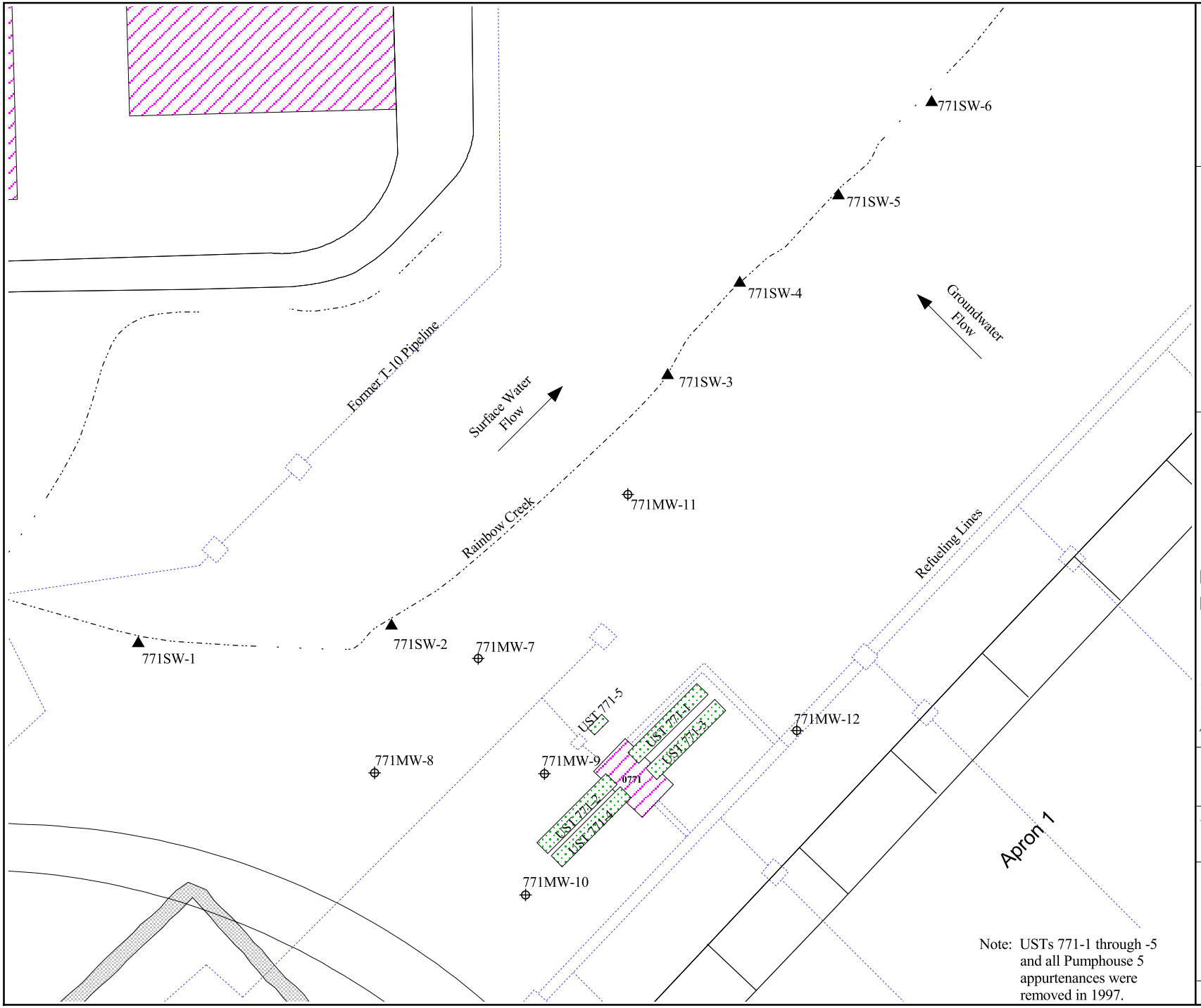
- PCB-1260 was also detected at one surface water sampling location: 771SW-5 at 0.49 F µg/L (the F data qualifier means the analyte was positively identified, but the associated numerical value is below the RL). This sampling location corresponds to location 170101 sampled during November 2001, which also indicated a PCB detection (2.8 R µg/L,), the concentration reported an R data qualifier which indicates that the data is unusable due to deficiencies in the laboratory's ability to analyze the sample and meet QC criteria. The most recent concentration slightly exceeds the NYS Surface Water Standard (0.09 µg/L).

  The PCB contamination is believed to have originated from the Coal Storage Yard (Building 35) and the DRMO which are upgradient from Rainbow Creek where initial soil samples indicated PCB levels exceeding Site Specific Clean-up Goals. Following the excavation of the DRMO (area closest to Rainbow Creek), confirmatory samples reported no PCBs exceeding site specific clean-up goals of 10 ppm for subsurface soils and 1 ppm for surface soils (IT Corporation, 1997).

- Total Lead was detected at two surface water sampling locations, 771SW-4 and 771SW–5, at levels of 25.0 F µg/L and 11.2 µg/L, respectively, for the total analysis (F indicates the analyte for 771SW-4 was positively identified, but the associated numerical value is below the RL). These concentrations are below the NYS Surface Water standard for lead of 50 µg/L. The dissolved lead analysis reported no detections.

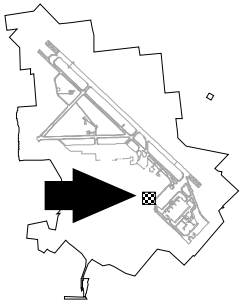
4.2 Groundwater Sampling

Groundwater samples were collected from monitoring wells 771MW-7, -8, -9, -10, -11, and -12, on August 22, 2002. Monitoring well locations are shown in Figure 4.1. Prior to sampling, three to five well volumes were purged from each monitoring well using a disposable bailer. The groundwater samples were analyzed for the STARS recommended list of VOCs, SVOCs and PCBs. On-site testing of sample pH, conductivity, turbidity, dissolved oxygen, and oxidation-reduction potential was performed during purging. Field sampling forms are provided in Appendix F.



Note: USTs 771-1 through -5 and all Pumphouse 5 appurtenances were removed in 1997.

N



Legend

- Groundwater Sampling Location
- Surface Water Sampling Location
- Demolished Building
- UST (removed)
- Former Lateral Control/ Drain Pit
- Fuel Pipeline
- Stream
- Road/Airfield

30 0 30 60 Feet

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

Figure 4.1
Pumphouse 5
2002 Groundwater and Surface Water Sampling Locations

Validated laboratory results are summarized below and are provided in Appendix G:

- One VOC, benzene was detected at 0.27 F µg/L in 771MW-11 (F indicates the analyte was positively identified, but the associated numerical value is below the RL).
- SVOCs reported no dectections.
- PCBs reported no detections.

5 SUMMARY

- An interim remedial action for source removal has been completed at the Pumphouse 5 Site. Remaining contaminated soil was excavated, removed, and transported for ex-situ bio-treatment. These tasks were completed by PEER between August-December 1999 and August-November 2001.

- Excavation of contaminated soil proceeded horizontally until NYSDEC STARS Guidelines were met, and vertically until STARS Guidelines were met, or the water table was encountered. Approximately 40,475 cubic yards of petroleum impacted soil was removed from the site and transported to the Apron 1 Landfarm for treatment. Soil analysis results indicate that all soil contaminated at levels above STARS Guidelines has been removed from the Pumphouse 5 Site.

- Surface water samples (seep samples) were collected from Rainbow Creek before, during, and after the remedial actions. Analytical results indicated that intermittently concentrations of STARS target analytes were present that exceeded guidance values. Samples were collected for PCB analysis in November 2001 following the completion of the remedial actions and indicated a concentration of 2.8 R µg/L PCB-1260 in one of six samples. Samples were again collected in August 2002. One detection of PCB-1260 was recorded at 771SW-5 at 0.49 F µg/L, which exceeds the NYS Ground Water Standard of 0.09 µg/L. PCBs had not been detected during previous sampling events (i.e., the 1998 Supplemental Investigation, and the baseline Surface water sampling event conducted in April 1999). However, PCBs were identified in Rainbow Creek seep samples collected during the Coal Storage Yard AOC remedial action in 1997. There were no VOC, SVOC, or metal detections that exceeded the NYS Surface Water Standards.

- During the interim remedial action, 8 of the 10 existing monitoring wells associated with the Pumphouse 5 site were destroyed. Replacement monitoring wells were installed upon completion of site restoration. Between November 6 and November 8, 2001, six monitoring wells, 771MW-7, -8, -9, -10, -11, and -12 were installed at the Pumphouse 5 Site by Parratt-Wolf, Inc., under the supervision of a PEER geologist.

- Groundwater samples were collected from the newly installed monitoring wells on November 14 and November 15, 2001, and on August 22, 2002. In the November 2001 sampling, groundwater analytical results indicated concentrations of one volatile compound - benzene - in monitoring well 771MW-11 that slightly exceeded the NYSDEC guidance concentration. All concentrations of semi-volatile target analytes were reported as ND. For the August 2002 sampling, there were no VOC, SVOC, or PCB results that exceeded the NYS Groundwater Standards.

6 RECOMMENDATIONS

Closure of NYSDEC Spill # 8903144 will be recommended following 4 consecutive quarterly clean sampling rounds beginning August 2002. Landfarm/biopile confirmatory sampling of the remaining 50,000 cy of contaminated soils will also have to meet applicable criteria before spill closure can be recommended, approximately 30,000 cy is presently undergoing remediation while approximately 20,000 cy has already been remediated and re-used on-site.

7 REFERENCES

E & E, 1998, *Final Supplemental Investigations of Areas of Concern*, Ecology & Environment, Inc., July, 1998

IT, 1997, Final *Closeout Report Interim Remedial Action for DRMO Area*, May 1997.

IT, 1997, *Memorandum on Waste Characterization and Rainbow Creek Seep Sample Results, International Technology Corporation*, September, 1997.

IT, 1998, *Closeout Report for the Coal Yard Storage Area, International Technology Corporation*, July, 1998.

Law. 1995a, *Final Report: Building 771 (Pumphouse 5) Engineering Evaluation/Cost analysis Report, Griffiss Air Force Base, New York*, Law Environmental, Inc. Government Service Division, January 1995.

Law, 1996, *Remedial Investigation, Coal Storage Yard Area of Concern,* Law Environmental, Inc. Government Service Division, December 1996

Parsons, 1996, Draft, *Treatability Study in Support of Intrinsic Remediation for Pumphouse 5, Griffiss Air Force Base, New York*, Parsons Engineering, February, 1996.

PEER, 1998, *Site Characterization Report for the Pumphouse 5 site*, April, 1998.

APPENDIX A

Laboratory Analytical Results Summary Tables

Stockpiled Soil Sampling

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), August 25, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP1		GCSPH5SP2		GCSPH5SP3		GCSPH5SP4				
Benzene	14	2	N/D		N/D		N/D		N/D				
Ethylbenzene	100	2	N/D		N/D		N/D		N/D				
Toluene	100	2	N/D		N/D		N/D		N/D				
o-Xylene	100	2	N/D		N/D		N/D		N/D				
m-Xylene	100	2	0.32	F	0.41	F	N/D		0.45	F			
p-Xylene	100	2	0.32	F	0.41	F	N/D		0.45	F			
Xylenes, totals	100	2	0.32	F	0.41	F	N/D		0.45	F			
Isopropylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M			
n-Propylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M			
p-Isopropyl toluene	100	1	N/D	M	N/D	M	N/D	M	N/D	M			
1,2,4-Trimethylbenzene	100	1	0.22	M	0.76	M	N/D	M	0.52	M			
1,3,5-Trimethylbenzene	100	1	N/D	M	0.23	M	N/D	M	N/D	M			
n-Butylbenzene	100	1	N/D	M	0.25	M	N/D	M	N/D	M			
sec-Butylbenzene	100	1	N/D	M	0.26	M	N/D	M	N/D	M			
t-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M			
Methyl t-Butyl Ether (MTBE)	100	1	N/D		N/D		N/D		N/D				

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), August 25, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP1	GCSPH5SP2	GCSPH5SP3	GCSPH5SP4			
Anthracene	1,000	330	100 F	N/D	N/D	N/D			
Fluorene	1,000	330	N/D	N/D	N/D	N/D			
Phenanthrene	1,000	330	460	69 F	N/D	N/D			
Pyrene	1,000	330	450	N/D	N/D	N/D			
Acenaphthene	400	330	46 F	N/D	N/D	N/D			
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D			
Fluoranthene	1,000	330	520	140 F	N/D	N/D			
Benzo(b)fluoranthene	0.04	330	280 F	120 F	N/D	N/D			
Benzo(k)fluoranthene	0.04	330	180 F	N/D	N/D	N/D			
Chrysene	0.04	330	520	140 F	N/D	N/D			
Benzo(a)pyrene	0.04	330	210 F	60 F	N/D	N/D			
Benzo(g,h,i)perylene	0.04	330	130 F	40 F	N/D	N/D			
Indeno(1,2,3-c,d)pyrene	0.04	330	120 F	35 F	N/D	N/D			
Dibenz(a,h)anthracene	1,000	330	59 F	N/D	N/D	N/D			
Naphthalene	200	330	N/D	N/D	N/D	N/D			

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), August 30, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP5		GCSPH5SP6		GCSPH5SP7		GCSPH5SP8		GCSPH5SP8D			
Benzene	14	2	N/D		N/D		N/D		N/D		N/D			
Ethylbenzene	100	2	N/D	M	0.64	M	N/D	M	N/D	M	N/D	M		
Toluene	100	2	N/D		N/D		N/D		N/D		N/D			
o-Xylene	100	2	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
m-Xylene	100	2	N/D	M	1.2	M	N/D	M	N/D	M	N/D	M		
p-Xylene	100	2	N/D		1.2	1F	N/D		N/D		N/D			
Xylenes, totals	100	2	N/D	M	1.2	M	N/D	M	N/D	M	N/D	M		
Isopropylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
n-Propylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
p-Isopropyl toluene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
1,2,4-Trimethylbenzene	100	1	N/D	M	1.1	M	0.39	M	0.24	M	N/D	M		
1,3,5-Trimethylbenzene	100	1	N/D	M	0.24	F	N/D	M	N/D	M	N/D	M		
n-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
sec-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
t-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M		
Methyl tert-Butyl Ether (MTBE)	100	1	N/D		N/D		N/D		N/D		N/D			

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), August 30, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP5	GCSPH5SP6	GCSPH5SP7	GCSPH5SP8	GCSPH5SP8D		
Anthracene	1,000	330	110 F	N/D	N/D	N/D	N/D		
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Phenanthrene	1,000	330	140 F	N/D	N/D	N/D	N/D		
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D		
Benzo(a)anthracene	0.04	330	150 F	N/D	N/D	N/D	N/D		
Fluoranthene	1,000	330	150 F	N/D	N/D	N/D	N/D		
Benzo(b)fluoranthene	0.04	330	140 F	N/D	N/D	N/D	N/D		
Benzo(k)fluoranthene	0.04	330	200 F	N/D	N/D	N/D	N/D		
Chrysene	0.04	330	140 F	N/D	N/D	N/D	N/D		
Benzo(a)pyrene	0.04	330	140 F	N/D	N/D	N/D	N/D		
Benzo(g,h,i)perylene	0.04	330	170 F	N/D	N/D	N/D	N/D		
Indeno(1,2,3-c,d)pyrene	0.04	330	160 F	N/D	N/D	N/D	N/D		
Dibenz(a,h)anthracene	1,000	330	140 F	N/D	N/D	N/D	N/D		
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D		

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, -- = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 15, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP9		GCSPH5SP10		GCSPH5SP10D					
Benzene	14	2	N/D	M	N/D	M	N/D	M				
Ethylbenzene	100	2	N/D	M	N/D	M	N/D	M				
Toluene	100	2	N/D	M	N/D	M	N/D	M				
o-Xylene	100	2	N/D	M	N/D	M	N/D	M				
m-Xylene	100	2	N/D	M	N/D	M	N/D	M				
p-Xylene	100	2	N/D		N/D		N/D					
Xylenes, totals	100	2	N/D	M	N/D	M	N/D	M				
Isopropylbenzene	100	1	N/D	M	N/D	M	N/D	M				
n-Propylbenzene	100	1	N/D	M	N/D	M	N/D	M				
p-Isopropyl toluene	100	1	N/D	M	N/D	M	N/D	M				
1,2,4-Trimethylbenzene	100	1	N/D	M	N/D	M	N/D	M				
1,3,5-Trimethylbenzene	100	1	N/D	M	N/D	M	N/D	M				
n-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M				
sec-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M				
t-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M				
Methyl tert-Butyl Ether (MTBE)	100	1	N/D		N/D		N/D					

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 15, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP9		GCSPH5SP10		GCSPH5SP10D					
Anthracene	1,000	330	N/D		N/D		N/D					
Fluorene	1,000	330	N/D		N/D		N/D					
Phenanthrene	1,000	330	N/D	M	N/D	M	N/D	M				
Pyrene	1,000	330	N/D	M	N/D	M	N/D	M				
Acenaphthene	400	330	N/D		N/D		N/D					
Benzo(a)anthracene	0.04	330	N/D	M	N/D	M	N/D	M				
Fluoranthene	1,000	330	N/D	M	N/D	M	N/D	M				
Benzo(b)fluoranthene	0.04	330	N/D		N/D		N/D					
Benzo(k)fluoranthene	0.04	330	N/D		N/D		N/D					
Chrysene	0.04	330	N/D	M	N/D	M	N/D	M				
Benzo(a)pyrene	0.04	330	N/D	M	N/D	M	N/D	M				
Benzo(g,h,i)perylene	0.04	330	N/D		N/D		N/D					
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D		N/D		N/D					
Dibenz(a,h)anthracene	1,000	330	N/D		N/D		N/D					
Naphthalene	200	330	N/D		N/D		N/D					

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 28, 1999
Volatile Compounds, Page 1 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GGPH5SP11	GGPH5SP12	GGPH5SP13	GGPH5SP14	GGPH5SP15	GGPH5SP16	GGPH5SP16D
Benzene	14	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Ethylbenzene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Toluene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
o-Xylene	100	2	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
m-Xylene	100	2	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Xylenes, totals	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
p-Isopropyl toluene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1,2,4-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
n-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 28, 1999
Volatile Compounds, Page 2 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP17		GCSPH5SP18									
Benzene	14	2	N/D		N/D									
Ethylbenzene	100	2	N/D		N/D									
Toluene	100	2	N/D		N/D									
o-Xylene	100	2	N/D	M	N/D	M								
m-Xylene	100	2	N/D	M	N/D	M								
p-Xylene	100	2	N/D		N/D									
Xylenes, totals	100	2	N/D		N/D									
Isopropylbenzene	100	1	N/D	M	N/D	M								
n-Propylbenzene	100	1	N/D	M	N/D	M								
p-Isopropyl toluene	100	1	N/D	M	N/D	M								
1,2,4-Trimethylbenzene	100	1	N/D	M	N/D	M								
1,3,5-Trimethylbenzene	100	1	N/D	M	N/D	M								
n-Butylbenzene	100	1	N/D	M	N/D	M								
sec-Butylbenzene	100	1	N/D	M	N/D	M								
t-Butylbenzene	100	1	N/D	M	N/D	M								
Methyl tert-Butyl Ether (MTBE)	100	1	N/D		N/D									

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 28, 1999
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP11	GCSH5SP12	GCSPH5SP13	GCSPH5SP14	GGPH5SP15	GGPH5SP16	GGPH5SP16D
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(k)fluoranthene	0.04	330	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D	N/D	N/D	N/D M
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), September 28, 1999
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP17	GCSPH5SP18					
Anthracene	1,000	330	N/D	N/D					
Fluorene	1,000	330	N/D	N/D					
Phenanthrene	1,000	330	N/D	N/D					
Pyrene	1,000	330	N/D	N/D					
Acenaphthene	400	330	N/D	N/D					
Benzo(a)anthracene	0.04	330	N/D	N/D					
Fluoranthene	1,000	330	N/D	N/D					
Benzo(b)fluoranthene	0.04	330	N/D	N/D					
Benzo(k)fluoranthene	0.04	330	N/D M	N/D M					
Chrysene	0.04	330	N/D	N/D					
Benzo(a)pyrene	0.04	330	N/D	N/D					
Benzo(g,h,i)perylene	0.04	330	N/D	N/D					
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D					
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M					
Naphthalene	200	330	N/D	N/D					

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), October 14, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP19	GCSPH5SP20	GCSPH5SP21	GCSPH5SP22	GCSPH5SP23	GCSPH5SP24	
Benzene	14	2	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	
Ethylbenzene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Toluene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
m-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Xylenes, totals	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
p-Isopropyl toluene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
1,2,4-Trimethylbenzene	100	1	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
n-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
Methyl tert-Butyl Ether (MTBE)	100	1	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), October 14, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP19	GCSPH5SP20	GCSPH5SP21	GCSPH5SP22	GCSPH5SP23	GCSPH5SP24	
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	
Phenanthrene	1,000	330	14 F	67 F	200 F	N/D	300 F	53 F	
Pyrene	1,000	330	N/D	58 F	230 F	N/D	260 F	52 F	
Acenaphthene	400	330	N/D	N/D	N/D	N/D	52 F	N/D	
Benzo(a)anthracene	0.04	330	N/D	N/D	150 F	N/D	120 F	N/D	
Fluoranthene	1,000	330	N/D	73 F	300 F	N/D	360	68 F	
Benzo(b)fluoranthene	0.04	330	N/D	N/D	200 F	N/D	180 F	N/D	
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	
Chrysene	0.04	330	N/D	N/D	150 F	N/D	150 F	N/D	
Benzo(a)pyrene	0.04	330	N/D	N/D	120 F	N/D	100 F	N/D	
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	79 F	N/D	66 F	N/D	
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	66 F	N/D	61 F	N/D	
Dibenz(a,h)anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), October 26, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP25	GCSPH5SP26	GCSPH5SP27	GCSPH5SP28	GCSPH5SP29	GCSPH5SP30	
Benzene	14	2	N/D	N/D	N/D	N/D	N/D	N/D	
Ethylbenzene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Toluene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
m-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Xylenes, totals	100	2	N/D	N/D	N/D	N/D	N/D	N/D	
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
p-Isopropyl toluene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
1,2,4-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
n-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	
Methyl t-Butyl Ether (MTBE)	1000	1	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), October 26, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP25	GCSPH5SP26	GCSPH5SP27	GCSPH5SP28	GCSPH5SP29	GCSPH5SP30	
Anthracene	1,000	330	N/D	N/D	62 F	N/D	N/D	N/D	
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	
Phenanthrene	1,000	330	N/D	18 F	210 F	N/D	130 F	N/D	
Pyrene	1,000	330	N/D	N/D	180 F	N/D	180 F	N/D	
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D	N/D	
Benzo(a)anthracene	0.04	330	N/D	N/D	110 F	N/D	120 F	N/D	
Fluoranthene	1,000	330	N/D	N/D	200 F	N/D	210 F	N/D	
Benzo(b)fluoranthene	0.04	330	N/D	N/D	120 F	N/D	140 F	N/D	
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	
Chrysene	0.04	330	N/D	N/D	97 F	N/D	100 F	N/D	
Benzo(a)pyrene	0.04	330	N/D	N/D	73 F	N/D	77 F	N/D	
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	47 F	N/D	48 F	N/D	
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	42 F	N/D	44 F	N/D	
Dibenz(a,h)anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), November 17, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP31	GCSPH5SP32	GCSPH5SP33	GCSPH5SP34			
Benzene	14	2	N/D	N/D	N/D	N/D			
Ethylbenzene	100	2	N/D M	N/D M	N/D M	N/D M			
Toluene	100	2	N/D M	N/D M	N/D M	N/D M			
o-Xylene	100	2	N/D	N/D	N/D	N/D			
m-Xylene	100	2	N/D M	N/D M	N/D M	N/D M			
p-Xylene	100	2	N/D	N/D	N/D	N/D			
Xylenes, totals	100	2	N/D M	N/D M	N/D M	N/D M			
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D			
n-Propylbenzene	100	1	N/D M	N/D M	N/D M	N/D M			
p-Isopropyl toluene	100	1	N/D M	N/D M	N/D M	N/D M			
1,2,4-Trimethylbenzene	100	1	N/D M	N/D M	N/D M	N/D M			
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D			
n-Butylbenzene	100	1	N/D M	N/D M	N/D M	N/D M			
sec-Butylbenzene	100	1	N/D M	N/D M	N/D M	N/D M			
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D			
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D			

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Stockpiled Soil Sampling
Analytical Results (ppb), November 17, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5SP31	GCSPH5SP32	GCSPH5SP33	GCSPH5SP34			
Anthracene	1,000	330	N/D	N/D	N/D	N/D			
Fluorene	1,000	330	N/D	N/D	N/D	N/D			
Phenanthrene	1,000	330	N/D	14 F	N/D	N/D			
Pyrene	1,000	330	N/D	N/D	N/D	N/D			
Acenaphthene	400	330	N/D	N/D	N/D	N/D			
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D			
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D			
Benzo(b)fluoranthene	0.04	330	N/D	N/D	N/D	N/D			
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D			
Chrysene	0.04	330	N/D	N/D	N/D	N/D			
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D			
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D			
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D			
Dibenz(a,h)anthracene	1,000	330	N/D	N/D	N/D	N/D			
Naphthalene	200	330	N/D	N/D	N/D	N/D			

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

APPENDIX B

Laboratory Analytical Results Summary Tables

Excavation/Confirmation Soil Sampling

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), August 27 & 28, 2001
Volatile Compounds, Page 1 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B1	GCSPH5B2	GCSPH5B3	GCSPH5B4	GCSPH5B5	GCSPH5E1	GCSPH5E2
Benzene	14	2	N/D	1.1 F	N/D	N/D	N/D	N/D	N/D
Ethylbenzene	100	2	N/D M	1.5 M	N/D M	N/D M	N/D M	N/D M	N/D M
Toluene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	5.8
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
m-Xylene	100	2	21 M	11 M	N/D M	N/D M	N/D M	N/D M	N/D M
p-Xylene	100	2	21 J	11 J	N/D M	N/D M	N/D M	N/D M	N/D M
Xylenes (totals)	100	2	21 M	11 M	N/D	N/D	N/D	N/D	N/D
Isopropylbenzene	100	1	N/D	2.0	N/D	N/D	N/D	N/D	N/D
n-Propylbenzene	100	1	8.6	4.5	N/D	N/D	N/D	N/D	N/D
p-Isopropyl toluene	100	1	18	1.4	N/D	N/D	N/D	N/D	N/D
1,2,4-Trimethylbenzene	100	1	42 M	14 M	N/D M	N/D M	N/D M	N/D M	N/D M
1,3,5-Trimethylbenzene	100	1	27 M	3.0 M	N/D M	N/D M	N/D M	N/D M	N/D M
n-Butylbenzene	100	1	20	2.3	N/D	N/D	N/D	N/D	N/D
sec-Butylbenzene	100	1	N/D	3.2	N/D	N/D	N/D	N/D	N/D
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Methyl tert-Butyl Ether (MTBE)	100	1	N/D M	N/D M	N/D M	N/D	N/D M	N/D M	N/D M

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), August 27 & 28, 2001
Volatile Compounds, Page 2 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5E3	GCSPH5E4	GCSPH5E5	GCSPH5N1	GCSPH5N2		
Benzene	14	2	0.55	N/D	N/D	N/D	N/D		
Ethylbenzene	100	2	N/D M	N/D M	N/D M	N/D M	N/D M		
Toluene	100	2	N/D	N/D	2.5	N/D	N/D		
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D		
m-Xylene	100	2	N/D M	N/D M	N/D M	N/D M	N/D M		
p-Xylene	100	2	N/D M	N/D M	N/D M	N/D M	N/D M		
Xylenes (totals)	100	2	N/D	N/D	N/D	N/D	N/D		
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	0.85 F		
p-Isopropyl toluene	100	1	N/D M	N/D M	N/D M	N/D M	N/D M		
1,2,4-Trimethylbenzene	100	1	N/D M	N/D M	N/D M	N/D M	N/D M		
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
n-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
t-Butylbenzene	1000	1	N/D	N/D	N/D	N/D	N/D		
Methyl tert-Butyl Ether (MTBE)	100	1	N/D M	N/D M	N/D M	N/D	N/D M		

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), August 27 & 28, 1999
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B1	GCSPH5B2	GCSPH5B3	GCSPH5B4	GCSPH5B5	GCSPH5E1	GCSPH5E2
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), August 27 & 28, 1999
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5E3	GCSPH5E4	GCPH5E5	GCSPH5N1	GCSPH5N2		
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Phenanthrene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D		
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Benzo(b)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M	N/D M		
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D		

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 5, 2001
Volatile Compounds, Page 1 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B6	GCSPH5B7	GCSPH5B8	GCSPH5B9	GCSPH5B10	GCSPH5E6	GCSPH5E7
Benzene	14	2	35	12	0.53 F	N/D	N/D	N/D	N/D
Ethylbenzene	100	2	9.0	0.35 F	1.3 F	0.87 F	N/D	N/D	N/D
Toluene	100	2	N/D	N/D	0.17 F	N/D	N/D	N/D	N/D
o-Xylene	100	2	4.1	N/D	0.57 F	0.42 F	N/D	N/D	N/D
m-Xylene	100	2	120 J	2.0 J	5.1 J	2.2 J	N/D	N/D	N/D
p-Xylene	100	2	120 J	2.0 J	5.1 J	2.2 J	N/D	N/D	N/D
Xylenes (totals)	100	2	130	2.0	5.7	2.6	N/D	N/D	N/D
Isopropylbenzene	100	1	5.9	N/D	N/D	N/D	N/D	N/D	N/D
n-Propylbenzene	100	1	5.1 M	N/D M	0.58 M	0.31 M	N/D M	N/D M	N/D M
p-Isopropyl toluene	100	1	8.4 M	N/D M	1.3 M	0.50 M	1.9 M	N/D M	N/D M
1,2,4-Trimethylbenzene	100	1	26 M	0.52 M	2.8 M	2.2 M	0.29 M	N/D M	N/D M
1,3,5-Trimethylbenzene	100	1	18 M	0.46 M	1.5 M	0.95 M	N/D M	N/D M	N/D M
n-Butylbenzene	100	1	6.5 M	0.52 M	1.4 M	0.77 M	2.9 M	N/D M	N/D M
sec-Butylbenzene	100	1	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
t-Butylbenzene	100	1	N/D M	N/D M	N/D M	1.5 M	N/D M	N/D M	N/D M
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 5, 2001
Volatile Compounds, Page 2 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5E8	GCSPH5S1	GCSPH5S2	GCSPH5S3	GCSPH5S4	GCSPH5S5	GCSPH5S6
Benzene	14	2	N/D	1800	N/D	N/D	N/D	N/D	N/D
Ethylbenzene	100	2	N/D	9400	N/D	N/D	N/D	N/D	0.24 F
Toluene	100	2	N/D	440	N/D	N/D	N/D	N/D	N/D
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
m-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	0.41 F	0.93 F
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	0.41 F	09.3 F
Xylenes (totals)	100	2	N/D	160000	N/D	N/D	N/D	0.41 F	0.93 F
Isopropylbenzene	100	1	N/D	12000	N/D	N/D	N/D	N/D	N/D
n-Propylbenzene	100	1	N/D M	25000 M	N/D M	N/D M	N/D M	N/D M	N/D M
p-Isopropyl toluene	100	1	N/D M	22000 M	N/D M	N/D M	N/D M	N/D M	N/D M
1,2,4-Trimethylbenzene	100	1	N/D M	83000 M	N/D M	N/D M	N/D M	N/D M	0.45 M
1,3,5-Trimethylbenzene	100	1	N/D M	46000 M	N/D M	N/D M	N/D M	N/D M	N/D M
n-Butylbenzene	100	1	N/D M	22000 M	N/D M	N/D M	N/D M	N/D M	N/D M
sec-Butylbenzene	100	1	N/D	42000 M	N/D M	N/D M	N/D M	N/D M	N/D M
t-Butylbenzene	100	1	N/D	6200 M	N/D M	N/D M	N/D M	N/D M	N/D M
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 5, 2001
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B6	GCSPH5B7	GCSPH5B8	GCSPH5B9	GCSPH5B10	GCSPH5E6	GCSPH5E7
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	N/D	N/D	N/D	N/D	200 F	N/D	260 F
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	180 F	N/D	N/D
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.04	330	N/D	75 F	N/D	N/D	320 F	N/D	390
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	130 F
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	120 F
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 5, 2001
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5E8	GCSPH5S1	GCPH5S2	GCSPH5S3	GCSPH5S4	GCSPH5S5	GCSPH5S6
Anthracene	1,000	330	N/D	140 F	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	N/D	230 F	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	N/D	750	N/D	N/D	N/D	N/D	N/D
Pyrene	1,000	330	N/D	800	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	N/D	200 F	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	N/D	380	N/D	N/D	N/D	N/D	N/D
Fluoranthene	1,000	330	N/D	770	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.04	330	N/D	470	N/D	N/D	130 F	N/D	N/D
Benzo(k)fluoranthene	0.04	330	N/D	260 F	N/D	N/D	N/D	N/D	N/D
Chrysene	0.04	330	N/D	500	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.04	330	N/D	310 F	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	N/D	280 F	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	240 F	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	1,000	330	N/D M	180 M	N/D M	N/D M	N/D M	N/D M	N/D M
Naphthalene	200	330	N/D	3800	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 13, 2001
Volatile Compounds, Page 1 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52S7	GCSPH52S7D	GCSPH5S8	GCSPH5S9	GCSPH5S10	GCSPH5B11	GCSPH5B12
Benzene	14	2	N/D	N/D	N/D	0.55	N/D	N/D	1.0 F
Ethylbenzene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Toluene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	N/D
m-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	7.6 J
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D	N/D	7.6 J
Xylenes (totals)	100	2	N/D	N/D	N/D	N/D	N/D	N/D	7.6
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	2.2
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	0.98 F
p-Isopropyl toluene	100	1	N/D	N/D	N/D	0.61 F	N/D	0.39 F	N/D
1,2,4-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	2.2
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	0.64 F
n-Butylbenzene	100	1	N/D	N/D	N/D	0.34 F	N/D	0.65 F	0.99 F
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	2.6
t-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D	N/D	0.56 F
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 13, 2001
Volatile Compounds, Page 2 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52B13						
Benzene	14	2	3.2						
Ethylbenzene	100	2	0.90 F						
Toluene	100	2	N/D						
o-Xylene	100	2	N/D						
m-Xylene	100	2	91 J						
p-Xylene	100	2	91 J						
Xylenes (totals)	100	2	91						
Isopropylbenzene	100	1	25						
n-Propylbenzene	100	1	14						
p-Isopropyl toluene	100	1	6.9						
1,2,4-Trimethylbenzene	100	1	54						
1,3,5-Trimethylbenzene	100	1	19						
n-Butylbenzene	100	1	6.3						
sec-Butylbenzene	100	1	11						
t-Butylbenzene	100	1	N/D						
Methyl tert-Butyl Ether (MTBE)	100	1	N/D						

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 13, 2001
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52S3	GCSPH52S7	GCSPH52S7D	GCSPH5S8	GCSPH5S9	GCSPH5S10	GCSPH5B7
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Pyrene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	1,000	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.04	330	N/D	79 F	N/D	N/D	N/D	N/D	N/D
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 13, 2001
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52B8	GCSPH52B11	GCPH5B12	GCSPH5B13			
Anthracene	1,000	330	N/D	N/D	N/D	N/D			
Fluorene	1,000	330	N/D	N/D	N/D	N/D			
Phenanthrene	1,000	330	N/D	350	N/D	N/D			
Pyrene	1,000	330	N/D	430	N/D	N/D			
Acenaphthene	400	330	N/D	N/D	N/D	N/D			
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D			
Fluoranthene	1,000	330	N/D	510	N/D	N/D			
Benzo(b)fluoranthene	0.04	330	N/D	350	N/D	N/D			
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D			
Chrysene	0.04	330	N/D	N/D	N/D	N/D			
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D			
Benzo(g,h,i)perylene	0.04	330	N/D	120 F	N/D	N/D			
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	110 F	N/D	N/D			
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M			
Naphthalene	200	330	N/D	N/D	N/D	N/D			

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 26, 2001
Volatile Compounds, Page 1 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B15		GCSPH5B16		GCSPH52TPB		GCSPH52TPN		GCSPH52TPS		GCSPH52TPW		GCSPH52TPE	
Benzene	14	2	N/D		N/D		N/D		N/D		N/D		N/D		N/D	
Ethylbenzene	100	2	N/D		N/D		N/D		N/D		N/D		N/D		N/D	
Toluene	100	2	N/D		N/D		N/D		N/D		N/D		N/D		N/D	
o-Xylene	100	2	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
m-Xylene	100	2	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
p-Xylene	100	2	N/D		N/D		N/D		N/D		N/D		N/D		N/D	
Xylenes (totals)	100	2	N/D		N/D		N/D		N/D		N/D		N/D		N/D	
Isopropylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
n-Propylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
p-Isopropyl toluene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
1,2,4-Trimethylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
1,3,5-Trimethylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
n-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
sec-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
t-Butylbenzene	100	1	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M
Methyl tert-Butyl Ether (MTBE)	100	1	N/D		N/D		N/D		N/D		N/D		N/D		N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 26, 2001
Volatile Compounds, Page 2 of 2

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52TPED							
Benzene	14	2	N/D							
Ethylbenzene	100	2	N/D							
Toluene	100	2	N/D							
o-Xylene	100	2	N/D	M						
m-Xylene	100	2	N/D	M						
p-Xylene	100	2	N/D							
Xylenes (totals)	100	2	N/D							
Isopropylbenzene	100	1	N/D	M						
n-Propylbenzene	100	1	N/D	M						
p-Isopropyl toluene	100	1	N/D	M						
1,2,4-Trimethylbenzene	100	1	N/D	M						
1,3,5-Trimethylbenzene	100	1	N/D	M						
n-Butylbenzene	100	1	N/D	M						
sec-Butylbenzene	100	1	N/D	M						
t-Butylbenzene	1000	1	N/D	M						
Methyl tert-Butyl Ether (MTBE)	100	1	N/D							

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 26, 2001
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5B15	GCSPH5B16	GCSPH52TPB	GCSPH52TPN	GCSPH52TPS	GCSPH52TPW	GCSPH52TPE
Anthracene	1,000	330	150 F	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	1,000	330	120 F	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	1,000	330	160 M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Pyrene	1,000	330	180 F	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	400	330	88 F	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.04	330	150 F	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	1,000	330	120 M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Benzo(b)fluoranthene	0.04	330	140 M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Benzo(k)fluoranthene	0.04	330	150 M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Chrysene	0.04	330	130 M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Benzo(a)pyrene	0.04	330	130 F	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.04	330	100 F	N/D	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	1,000	330	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), September 26, 2001
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH52TPED						
Anthracene	1,000	330	N/D						
Fluorene	1,000	330	N/D						
Phenanthrene	1,000	330	N/D M						
Pyrene	1,000	330	N/D						
Acenaphthene	400	330	N/D						
Benzo(a)anthracene	0.04	330	N/D						
Fluoranthene	1,000	330	N/D M						
Benzo(b)fluoranthene	0.04	330	N/D M						
Benzo(k)fluoranthene	0.04	330	N/D M						
Chrysene	0.04	330	N/D M						
Benzo(a)pyrene	0.04	330	N/D						
Benzo(g,h,i)perylene	0.04	330	N/D						
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D						
Dibenz(a,h)anthracene	1,000	330	N/D M						
Naphthalene	200	330	N/D						

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), October 26, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5NW1	GCSPH5NW2	GCSPH5NW3	GCSPH5NW4	GCSPH5NW5		
Benzene	14	2	N/D	N/D	N/D	N/D	N/D		
Ethylbenzene	100	2	N/D	N/D	N/D	N/D	N/D		
Toluene	100	2	N/D	N/D	N/D	N/D	N/D		
o-Xylene	100	2	N/D	N/D	N/D	N/D	N/D		
m-Xylene	100	2	N/D	N/D	N/D	N/D	N/D		
p-Xylene	100	2	N/D	N/D	N/D	N/D	N/D		
Xylenes (totals)	100	2	N/D	N/D	N/D	N/D	N/D		
Isopropylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
n-Propylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
p-Isopropyl toluene	100	1	N/D	N/D	N/D	N/D	N/D		
1,2,4-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
1,3,5-Trimethylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
n-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
sec-Butylbenzene	100	1	N/D	N/D	N/D	N/D	N/D		
t-Butylbenzene	1000	1	N/D	N/D	N/D	N/D	N/D		
Methyl tert-Butyl Ether (MTBE)	100	1	N/D	N/D	N/D	N/D	N/D		

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Confirmation Soil Sampling
Analytical Results (ppb), October 26, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GCSPH5NW2	GCSPH5NW2	GCSPH5NW3	GCSPH5NW4	GCSPH5NW5		
Anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Fluorene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Phenanthrene	1,000	330	20 F	49 F	N/D	N/D	N/D		
Pyrene	1,000	330	N/D	58 F	N/D	N/D	N/D		
Acenaphthene	400	330	N/D	N/D	N/D	N/D	N/D		
Benzo(a)anthracene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Fluoranthene	1,000	330	N/D	78 F	N/D	N/D	N/D		
Benzo(b)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(k)fluoranthene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Chrysene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(a)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Benzo(g,h,i)perylene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Indeno(1,2,3-c,d)pyrene	0.04	330	N/D	N/D	N/D	N/D	N/D		
Dibenz(a,h)anthracene	1,000	330	N/D	N/D	N/D	N/D	N/D		
Naphthalene	200	330	N/D	N/D	N/D	N/D	N/D		

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

APPENDIX C

Photo Documentation

Pumphouse 5 Site -1999
Initial Excavation

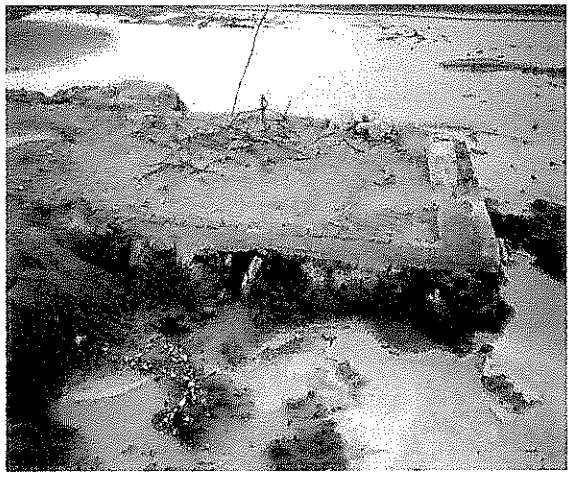
Pumphouse 5 Site

Excavation -1999

Pumphouse 5 Site

Excavation -1999

Pumphouse 5 Site - 1999
Tank Pad Removal



Pumphouse 5 Site - 1999
Tank Pad Removal

Pumphouse 5 Site - 1999
Tank Pad Removal

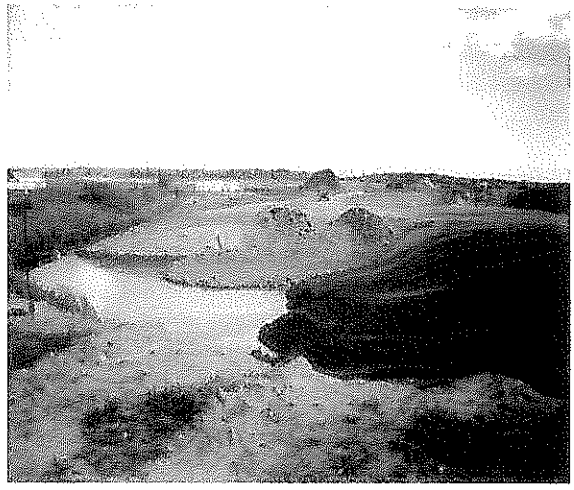
Rainbow Creek

(prior to excavation)

Rainbow Creek

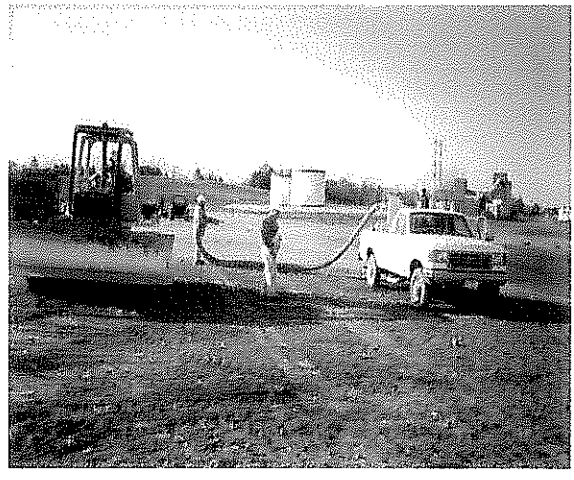
(west-northwest of Pumphouse 5 site)

Pumphouse 5 Site
Backfilling Site
2001



Pumphouse 5 Site
Replacement Well
Installation
2001

Pumphouse 5 Site
Site Restoration - 2001
Re-Seeding



APPENDIX D

Laboratory Analytical Results Summary Tables

Surface Water and Groundwater Sampling

April 12, 1999 through November 15, 2001

Pumphouse #5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 12, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77101	GSWS77102	GSWS77103	GSWS77104	GSWS77104D	GSWS71105	
Benzene	0.7	1.0	5.9	5.2	30	N/D	N/D	N/D	
Ethylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
Toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
o-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	
m-Xylene	5	2.0	0.77 F	0.55 F	N/D	N/D	N/D	N/D	
p-Xylene	5	2.0	0.77 F	0.55 F	N/D	N/D	N/D	N/D	
Xylenes (totals)	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	
Isopropylbenzene	5	1.0	N/D	N/D	0.45 F	N/D	N/D	N/D	
n-Propylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
1,2,4-Trimethylbenzene	5	1.0	0.44 F	N/D	N/D	N/D	N/D	N/D	
1,3,5-Trimethylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
n-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
sec-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
t-Butylbenzene	50	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
Methyl tert-Butyl Ether (MTBE)	10	1.0	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse 5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 12, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77101	GSWS77102	GSWS77103	GSWS77104	GSWS77104D	GSWS77105	
Anthracene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	
Fluorene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	
Phenanthrene	50	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Pyrene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	
Acenaphthene	20	8.0	600 F	N/D	N/D	N/D	N/D	N/D	
Benzo(a)anthracene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Fluoranthene	50	9.0	N/D	N/D	N/D	N/D	N/D	N/D	
Benzo(b)fluoranthene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Benzo(k)fluoranthene	0.002	10.0	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	
Chrysene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Benzo(a)pyrene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Benzo(g,h,i)perylene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Indeno(1,2,3-c,d)pyrene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Dibenz(a,h)anthracene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	
Naphthalene	50	10.0	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse # 5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 12, 1999
TCL Pesticides/PCB's Compounds, Page 1 of 1

TCL Pesticides/PCBs 8080A (STARS List)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77101	GSWS77102	GSWS77103	GSWS77104	GSWS77104D	GSWS77105	
PCB-1016 (AROCHLOR 1016)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1221 (AROCHLOR 1221)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1232 (AROCHLOR 1232)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1242 (AROCHLOR 1242)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1248 (AROCHLOR 1248)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1254 (AROCHLOR 1254)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	
PCB-1260 (AROCHLOR 1260)	0.01	1	N/D R	N/D R	N/D R	N/D R	N/D R	N/D R	

(1) NY State Groundwater Standards
(2) Represents the Practical Quantitation Limit for SW8080A.
N/D = Non-detect, - = No value reported

Pumphouse #5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppm), April 12, 1999
Metals, Page 1 of 1

Metals, SW6010/7471	Guidance Values (1)	Practical Quantitation Limit for Soil (2)	GSWS77101	GSWS77102	GSWS77103	GSWS77104	GSWS77104D	GSWS77105	
Aluminum	100[b]	0.5	0.17 F	0.17 F	0.12 F	0.15 F	0.10 F	0.12 F	
Antimony	0.003[b]	0.4	N/D	N/D	N/D	N/D	N/D	N/D	
Arsenic	0.025[b]	0.6	N/D	N/D	N/D	N/D	N/D	N/D	
Barium	1.0[b]	0.02	0.28	0.30	0.17	0.14	0.13	0.13	
Beryllium	0.003[b]	0.003	N/D	N/D	N/D	N/D	N/D	N/D	
Cadmium	0.01[b]	0.04	N/D	N/D	N/D	N/D	N/D	N/D	
Calcium	N/A[c]	0.100	112	116	110	74.8	66.4	67.7	
Chromium	0.05[b]	0.07	N/D	N/D	N/D	N/D	N/D	N/D	
Cobalt	N/A[c]	0.07	N/D	N/D	N/D	N/D	N/D	N/D	
Copper	0.2[b]	0.06	0.010 F	N/D	N/D	0.0034 J	N/D J	0.0041 F	
Iron	0.3[b]	0.07	1.2 J	3.4 J	3.6 J	0.33 J	0.34 J	0.23 J	
Lead	0.025[b]	0.5	N/D	N/D	N/D	N/D	N/D	N/D	
Magnesium	N/A[c]	0.3	13.5	14.2	13.4	10	9.9	9.6	
Manganese	0.3[b]	0.2	0.93	1.1	1.1	0.15 J	0.18 J	0.12	
Mercury (3)	0.002[b]	0.001	N/D	N/D	N/D	N/D	N/D	N/D	
Molybdenum	N/A[c]	0.08	N/D	N/D	N/D	N/D	N/D	N/D	
Nickel	0.1[a]	0.15	N/D	N/D	N/D	N/D	N/D	N/D	
Potassium	N/A[c]	2.0	1.8 F	1.9 F	1.8 F	1.6 F	1.5 F	1.5 F	
Selenium	0.01[b]	0.8	N/D	N/D	N/D	N/D	N/D	N/D	
Silver	0.05[b]	0.07	N/D	N/D	N/D	N/D	N/D	N/D	
Sodium	20[b]	0.3	27.3	28.5	35.7	18.1	18.1	17.9	
Thallium	0.002[a]	0.4	N/D	N/D	N/D	N/D	N/D	N/D	
Vanadium	N/A[c]	0.08	0.014 F	0.017 F	0.016 F	0.0031 F	0.0027 F	0.0023 F	
Zinc	0.3[b]	0.02	0.11 J	0.12 J	0.047 J	0.14 J	0.019 F	0.019 F	

(1) Guidance Value selected is the most stringent of Federal, NY State Groundwater Standards. The superscripts are defined as follows:
- (a) Federal Maximum Contamination Level (MCL)
- (b) State Groundwater Standards.
- (c) No Federal or State requirements currently exist

(2) AFCEE Model QAPP, Version 1.1 method specific Practical Quantitation Limit (PQL). When the Guidance Value is below the PQL, achieving the Quantitation Limit is considered acceptable for meeting the Guidance Value.

(3) Analyzed using Method SW7471.

N/D = Not detected or below PQL, - = No value reported.

Pumphouse #5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 28, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77127	GSWS77126	GSWS77121	GSWS77122	GSWS77123	GSWS77124	GSWS77125
Benzene	0.7	1.0	N/D M	N/D M	2.7 M	11 M	5.8 M	34 M	N/D M
Ethylbenzene	5	1.0	N/D	N/D	N/D	0.31 F	N/D	1.9	N/D
Toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
o-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
m-Xylene	5	2.0	N/D	N/D	N/D	1.3 F	N/D	5.2 J	N/D
p-Xylene	5	2.0	N/D	N/D	N/D	1.3 F	N/D	5.2 J	N/D
Xylenes (totals)	5	2.0	N/D	N/D	N/D	1.3 F	N/D	5.2	N/D
Isopropylbenzene	5	1.0	N/D	N/D	N/D	N/D	0.73 F	2.6	N/D
n-Propylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	3.6	N/D
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1,2,4-Trimethylbenzene	5	1.0	N/D M	N/D M	N/D M	1.3 M	N/D M	16 M	N/D M
1,3,5-Trimethylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
n-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	2.4 B	N/D
sec-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	1.4 B	N/D
t-Butylbenzene	50	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Methyl tert-Butyl Ether (MTBE)	10	1.0	N/D	N/D	0.72 F	2.4	2.3	11	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 28, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77127	GSWS77126	GSWS77121	GSWS77122	GSWS771123	GSWS77124	GSWS77125
Anthracene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	50	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Pyrene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	20	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	50	9.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(k)fluoranthene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Chrysene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	0.002	10.0	N/D	N/D	0.5 F	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	0.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Naphthalene	50	10.0	N/D	N/D	N/D	0.8 F	N/D	4	N/D

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse # 5 Rainbow Creek Surface Water Seep Sampling
Analytical Results (ppb), April 28, 1999
TCL Pesticides/PCB's Compounds, Page 1 of 1

TCL Pesticides/PCBs 8080A (STARS List)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWS77127	GSWS77126	GSWS77121	GSWS77122	GSWS77123	GSWS77124	GSWS77125
PCB-1016 (AROCHLOR 1016)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
PCB-1221 (AROCHLOR 1221)	0.01	1	N/D J	N/D J	N/D J	N/D J	N/D J	N/D J	N/D J
PCB-1232 (AROCHLOR 1232)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
PCB-1242 (AROCHLOR 1242)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
PCB-1248 (AROCHLOR 1248)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
PCB-1254 (AROCHLOR 1254)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D
PCB-1260 (AROCHLOR 1260)	0.01	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D

(1) NY State Groundwater Standards
(2) Represents the Practical Quantitation Limit for SW8080A.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), August 21, 2001
Volatile Organic Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWPH5SS1	GSWPH5SS2	GSWPH5SS3	GSWPH5SS4	GSWPH5SS5	GSWPH5SS6	
Benzene	0.7	1.0	N/D	N/D	N/D	N/D	1.3	0.54 F	
Ethylbenzene	5	1.0	N/D	N/D	0.28 F	0.31 F	N/D	N/D	
Toluene	5	1.0	6.3	5.0	1.6	0.52 F	0.29 F	N/D	
o-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	
m-Xylene	5	2.0	N/D	N/D	0.94 IF	0.73 IF	N/D	N/D	
p-Xylene	5	2.0	N/D	N/D	0.94 F	0.73 F	N/D	N/D	
Xylenes (totals)	5	2.0	N/D	N/D	0.94 F	0.73 F	N/D	0.38 F	
Isopropylbenzene	5	1.0	N/D	N/D	N/D	0.28 F	0.35 F	N/D	
n-Propylbenzene	5	1.0	N/D	N/D	N/D	0.51 F	0.46 F	0.21 F	
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
1,2,4-Trimethylbenzene	5	1.0	N/D	N/D	0.78 F	1.7	0.20 F	0.33 F	
1,3,5-Trimethylbenzene	5	1.0	N/D M	N/D M	0.29 M	0.34 M	N/D M	N/D M	
n-Butylbenzene	5	1.0	N/D	N/D	N/D	0.64 F	1.2	0.41 F	
sec-Butylbenzene	5	1.0	N/D	N/D	N/D	0.56 F	2.0	0.69 F	
t-Butylbenzene	50	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
Methyl tert-Butyl Ether (MTBE)	10	1.0	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), August 21, 2001
Semi-Volatile Organic Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWPH5SS1		GSWPH5SS2		GSWPH5SS3		GSWPH5SS4		GSWPH5SS5	GSWPH5SS6	
Anthracene	50	8.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Fluorene	50	8.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Phenanthrene	50	10.0	2	F	2	F	N/D	J	N/D	J	N/D	N/D	
Pyrene	50	8.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Acenaphthene	20	8.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Benzo(a)anthracene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Fluoranthene	50	9.0	2	F	2	F	N/D	J	N/D	J	N/D	N/D	
Benzo(b)fluoranthene	0.002	10.0	2	F	2	F	2	F	N/D	J	N/D	N/D	
Benzo(k)fluoranthene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Chrysene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Benzo(a)pyrene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Benzo(g,h,i)perylene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Indeno(1,2,3-c,d)pyrene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Dibenz(a,h)anthracene	0.002	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	
Naphthalene	50	10.0	N/D	J	N/D	J	N/D	J	N/D	J	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), August 31, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R C1		GSWPH5RC2		GSWPH5RC3					
Benzene	0.7	1.0	3.5	M	2.5	M	N/D	M				
Ethylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
Toluene	5	1.0	N/D		N/D		N/D					
o-Xylene	5	2.0	N/D	M	N/D	M	N/D	M				
m-Xylene	5	2.0	N/D	M	1.5	M	N/D	M				
p-Xylene	5	2.0	N/D		15	F	N/D					
Xylenes (total)	5	2.0	N/D		15	M	N/D	M				
Isopropylbenzene	5	1.0	N/D	M	0.28	M	N/D	M				
n-Propylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
p-Isopropyl toluene	5	1.0	N/D	M	N/D	M	N/D	M				
1,2,4-Trimethylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
1,3,5-Trimethylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
n-Butylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
Sec-Butylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
t-Butylbenzene	5	1.0	N/D	M	N/D	M	N/D	M				
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	M	N/D	M	N/D	M				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), August 31, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R C1	GSWPH5RC2	GSWPH5RC3				
Anthracene	50	8.0	N/D	N/D	N/D				
Fluorene	50	8.0	N/D	N/D	N/D				
Phenanthrene	50	10.0	N/D	1 F	N/D				
Pyrene	50	8.0	ND.	N/D	ND.				
Acenaphthene	20	8.0	N/D	0.7 F	N/D				
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D				
Fluoranthene	50	9.0	N/D	N/D	N/D				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	2 F	N/D				
Chrysene	.002	10.0	N/D	N/D	N/D				
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D				
Benzo(g,h,i)perylene	.002	10.0	N/D	1 F	N/D				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D				
Dibenz(a,h)anthracene	50	10.0	N/D	0.8 F	N/D				
Naphthalene	10	1.0	N/D	N/D	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), September 16, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R 2C1	GSWPH5R2C2	GSWPH5R2C3				
Benzene	0.7	1.0	8.5	1.5	N/D				
Ethylbenzene	5	1.0	N/D	N/D	N/D				
Toluene	5	1.0	N/D	N/D	N/D				
o-Xylene	5	2.0	N/D	N/D	N/D				
m-Xylene	5	2.0	N/D	N/D	N/D				
p-Xylene	5	2.0	N/D	N/D	N/D				
Xylenes,total	5	2.0	N/D	N/D	N/D				
Isopropylbenzene	5	1.0	0.69 F	0.81 F	N/D				
n-Propylbenzene	5	1.0	N/D	N/D	N/D				
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D				
1,2,4-Trimethylbenzene	5	1.0	1.0 R	N/D J	N/D J				
1,3,5-Trimethylbenzene	5	1.0	N/D J	N/D J	N/D J				
n-Butylbenzene	5	1.0	N/D	N/D	N/D				
Sec-Butylbenzene	5	1.0	N/D	N/D	N/D				
t-Butylbenzene	5	1.0	N/D	N/D	N/D				
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D M	N/D M	N/D M				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), September 16, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R2C1		GSWPH5R2C2		GSWPH5R2C3					
Anthracene	50	8.0	N/D	M	N/D	M	2	M				
Fluorene	50	8.0	N/D	M	N/D	M	N/D	M				
Phenanthrene	50	10.0	N/D		N/D		3	B				
Pyrene	50	8.0	N/D		N/D		N/D					
Acenaphthene	20	8.0	N/D		N/D		N/D					
Benzo(a)anthracene	.002	10.0	N/D		N/D		2	F				
Fluoranthene	50	9.0	N/D		N/D		N/D					
Benzo(b)fluoranthene	.002	10.0	4	M	N/D	M	N/D					
Benzo(k)fluoranthene	.002	10.0	N/D		5	F	3	F				
Chrysene	.002	10.0	N/D		N/D		3	F				
Benzo(a)pyrene	.002	10.0	N/D		N/D		N/D					
Benzo(g,h,i)perylene	.002	10.0	2	F	2	F	2	F				
Indeno(1,2,3-c,d)pyrene	.002	10.0	2	F	2	F	2	F				
Dibenz(a,h)anthracene	50	10.0	2	F	2	F	2	F				
Naphthalene	10	1.0	N/D		N/D		N/D					

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), September 23, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R3C1	GSWPH5R3C2	GSWPH5RC3				
Benzene	0.7	1.0	9.8	2.8	0.87 F				
Ethylbenzene	5	1.0	3.4	0.64 F	N/D				
Toluene	5	1.0	N/D	N/D	N/D				
o-Xylene	5	2.0	N/D	N/D	N/D				
m-Xylene	5	2.0	3.2 J	0.53 F	N/D				
p-Xylene	5	2.0	3.2 J	0.53 F	N/D				
Xylenes (total)	5	2.0	3.2	N/D	N/D				
Isopropylbenzene	5	1.0	1.0	N/D	N/D				
n-Propylbenzene	5	1.0	1.3	N/D	N/D				
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D				
1,2,4-Trimethylbenzene	5	1.0	3.2 R	0.86 R	N/D J				
1,3,5-Trimethylbenzene	5	1.0	N/D J	N/D J	N/D J				
n-Butylbenzene	5	1.0	0.53 F	N/D	N/D				
Sec-Butylbenzene	5	1.0	0.59 F	N/D	N/D				
t-Butylbenzene	5	1.0	N/D	N/D	N/D				
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D M	N/D M	N/D M				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), September 23, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R3C1	GSWPH5R3C2	GSWPH5RC3				
Anthracene	50	8.0	N/D	N/D	N/D				
Fluorene	50	8.0	N/D	N/D	N/D				
Phenanthrene	50	10.0	N/D	N/D	N/D				
Pyrene	50	8.0	N/D	N/D	N/D				
Acenaphthene	20	8.0	N/D	N/D	N/D				
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D				
Fluoranthene	50	9.0	N/D	N/D	N/D				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	4 F	N/D				
Chrysene	.002	10.0	N/D	N/D	N/D				
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D				
Benzo(g,h,i)perylene	.002	10.0	N/D	2 F	N/D				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	2 F	N/D				
Dibenz(a,h)anthracene	50	10.0	N/D	2 F	N/D				
Naphthalene	10	1.0	N/D	N/D	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), October 7, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R4C1	GSWPH5R4C1D	GSWPH5R4C2	GSWPH5R4C3			
Benzene	0.7	1.0	7.3	6.6	5.8	0.95 F			
Ethylbenzene	5	1.0	6.2	5.6	2.6	0.33 F			
Toluene	5	1.0	N/D	N/D	N/D	N/D			
o-Xylene	5	2.0	N/D	N/D	N/D	N/D			
m-Xylene	5	2.0	4.3 J	4.0 J	2.2 J	N/D			
p-Xylene	5	2.0	4.3 J	4.0 J	2.2 J	N/D			
Xylenes (total)	5	2.0	4.3	4.0	2.2	N/D			
Isopropylbenzene	5	1.0	1.5	1.3	0.78 F	N/D			
n-Propylbenzene	5	1.0	2.4	2.1	0.98 F	N/D			
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	N/D			
1,2,4-Trimethylbenzene	5	1.0	4.3	4.2	2.3	0.24 F			
1,3,5-Trimethylbenzene	5	1.0	N/D	N/D	N/D	N/D			
n-Butylbenzene	5	1.0	N/D	N/D	0.43 F	N/D			
Sec-Butylbenzene	5	1.0	0.81 F	0.70 F	N/D	N/D			
t-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D			
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D M	N/D M	N/D M	N/D M			

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), October 7, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R4C1	GSWPH5R4C1D	GSWPH5R4C2	GSWPH5R4C3			
Anthracene	50	8.0	N/D	N/D	N/D	N/D			
Fluorene	50	8.0	N/D	N/D	N/D	N/D			
Phenanthrene	50	10.0	N/D	N/D	N/D	N/D			
Pyrene	50	8.0	N/D	N/D	N/D	N/D			
Acenaphthene	20	8.0	N/D	N/D	N/D	N/D			
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D	N/D			
Fluoranthene	50	9.0	N/D M	N/D M	N/D M	N/D M			
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D	N/D			
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D	N/D			
Chrysene	.002	10.0	N/D	N/D	N/D	N/D			
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D	N/D			
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D	N/D			
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D	N/D			
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	N/D	N/D			
Naphthalene	10	1.0	3	3	N/D	N/D			

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), October 14, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R5C1		GSWPH5R5C2		GSWPH5R5C3					
Benzene	0.7	1.0	0.96	M	5.1	M	2.1	M				
Ethylbenzene	5	1.0	1.2		3.6		1.3					
Toluene	5	1.0	0.39	F	N/D		N/D					
o-Xylene	5	2.0	N/D		N/D		N/D					
m-Xylene	5	2.0	1.3	F	2.9	J	1.0	F				
p-Xylene	5	2.0	1.3	F	2.9	J	1.0	F				
Xylenes (total)	5	2.0	1.3	F	2.9		1.0	F				
Isopropylbenzene	5	1.0	0.29	F	0.91	F	0.30	F				
n-Propylbenzene	5	1.0	0.91	F	1.7		0.91	F				
p-Isopropyl toluene	5	1.0	1.2		N/D		N/D					
1,2,4-Trimethylbenzene	5	1.0	0.98	M	3.1		1.0					
1,3,5-Trimethylbenzene	5	1.0	0.74	F	N/D		N/D					
n-Butylbenzene	5	1.0	0.95	F	1.2		0.82	F				
Sec-Butylbenzene	5	1.0	0.82	F	0.55	F	0.22	F				
t-Butylbenzene	5	1.0	N/D		N/D		N/D					
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	M	N/D	M	N/D	M				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), October 14, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R5C1	GSWPH5R5C2	GSWPH5R5C3				
Anthracene	50	8.0	N/D	N/D	N/D				
Fluorene	50	8.0	N/D	N/D	N/D				
Phenanthrene	50	10.0	N/D	N/D	N/D				
Pyrene	50	8.0	ND	ND	ND				
Acenaphthene	20	8.0	N/D	N/D	N/D				
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D				
Fluoranthene	50	9.0	N/D	N/D	N/D				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D				
Chrysene	.002	10.0	N/D	N/D	N/D				
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D				
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D				
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	N/D				
Naphthalene	10	1.0	0.8 F	2	0.7 F				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 3, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R6C1	GSWPH5R6C2	GSWPH5R6C3				
Benzene	0.7	1.0	0.28 F	N/D	N/D				
Ethylbenzene	5	1.0	0.57 F	0.26 F	N/D				
Toluene	5	1.0	N/D	N/D	N/D				
o-Xylene	5	2.0	N/D	0.21 F	N/D				
m-Xylene	5	2.0	N/D	1.0 F	N/D				
p-Xylene	5	2.0	N/D	1.0 F	N/D				
Xylenes (total)	5	2.0	N/D	1.0 F	N/D				
Isopropylbenzene	5	1.0	N/D	N/D	N/D				
n-Propylbenzene	5	1.0	N/D	N/D	N/D				
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D				
1,2,4-Trimethylbenzene	5	1.0	N/D	0.26 F	N/D				
1,3,5-Trimethylbenzene	5	1.0	N/D	N/D	N/D				
n-Butylbenzene	5	1.0	N/D	N/D	N/D				
Sec-Butylbenzene	5	1.0	N/D	N/D	N/D				
t-Butylbenzene	5	1.0	N/D	N/D	N/D				
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	N/D	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 3, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R6C1	GSWPH5R6C2	GSWPH5R6C3				
Anthracene	50	8.0	N/D	N/D	2	F			
Fluorene	50	8.0	N/D	N/D	0.8	F			
Phenanthrene	50	10.0	N/D	N/D	2	F			
Pyrene	50	8.0	ND.	N/D	2	F			
Acenaphthene	20	8.0	N/D	N/D	N/D				
Benzo(a)anthracene	.002	10.0	N/D	N/D	2	F			
Fluoranthene	50	9.0	N/D	N/D	2	F			
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	3	F			
Chrysene	.002	10.0	N/D	N/D	2	F			
Benzo(a)pyrene	.002	10.0	N/D	N/D	1	F			
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	2	F			
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	2	F			
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	2	F			
Naphthalene	10	1.0	N/D	N/D	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 10, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R7C1		GSWPH5R7C2		GSWPH5R7C3					
Benzene	0.7	1.0	4.3		3.1		1.6					
Ethylbenzene	5	1.0	18		7.0		2.5					
Toluene	5	1.0	N/D		N/D		N/D					
o-Xylene	5	2.0	0.51	F	0.77	F	0.38	F				
m-Xylene	5	2.0	23	J	12	J	5.2	J				
p-Xylene	5	2.0	23	J	12	J	5.2	J				
Xylenes (total)	5	2.0	24		13		5.6					
Isopropylbenzene	5	1.0	2.9		1.3		0.46	F				
n-Propylbenzene	5	1.0	4.8		1.7		0.48	F				
p-Isopropyl toluene	5	1.0	0.60	F	0.32	F	N/D					
1,2,4-Trimethylbenzene	5	1.0	31		14		5.3					
1,3,5-Trimethylbenzene	5	1.0	3.8		2.6		1.1					
n-Butylbenzene	5	1.0	2.9	M	1.2	M	0.42	M				
Sec-Butylbenzene	5	1.0	1.7		0.72	F	0.23	F				
t-Butylbenzene	5	1.0	N/D		N/D		N/D					
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	M	N/D	M	N/D	M				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 10, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R7C1	GSWPH5R7C2	GSWPH5R7C3				
Anthracene	50	8.0	N/D	1 F	3 F				
Fluorene	50	8.0	N/D	N/D	1 F				
Phenanthrene	50	10.0	N/D	0.9 F	3 F				
Pyrene	50	8.0	N/D	1 F	4 F				
Acenaphthene	20	8.0	N/D	N/D	N/D				
Benzo(a)anthracene	.002	10.0	N/D	1 F	4 F				
Fluoranthene	50	9.0	N/D	1 F	3 F				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	3 F				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	3 F				
Chrysene	.002	10.0	N/D	N/D	3 F				
Benzo(a)pyrene	.002	10.0	N/D	1 F	3 F				
Benzo(g,h,i)perylene	.002	10.0	N/D	1 F	3 F				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	1 F	3 F				
Dibenz(a,h)anthracene	50	10.0	N/D	1 F	3 F				
Naphthalene	10	1.0	4	4	2				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 18, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R8C1		GSWPH5R8C2		GSWPH5R8C3					
Benzene	0.7	1.0	6.1		5.2		1.0					
Ethylbenzene	5	1.0	16		9.7		1.8					
Toluene	5	1.0	0.23	F	0.26	F	N/D					
o-Xylene	5	2.0	0.85	F	1.4	F	0.32	F				
m-Xylene	5	2.0	26	J	19	J	3.7	J				
p-Xylene	5	2.0	26	J	19	J	3.7	J				
Xylenes, totals	5	2.0	26		20		4.1					
Isopropylbenzene	5	1.0	3.0		2.0		0.48	F				
n-Propylbenzene	5	1.0	5.0		2.3		0.52	F				
p-Isopropyl toluene	5	1.0	0.92	F	0.59	F	N/D					
1,2,4-Trimethylbenzene	5	1.0	26		15		3.2					
1,3,5-Trimethylbenzene	5	1.0	5.6		4.3		1.0					
n-Butylbenzene	5	1.0	2.5		1.2		0.27	F				
sec-Butylbenzene	5	1.0	2.8		1.7		N/D					
t-Butylbenzene	5	1.0	N/D		N/D		N/D					
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	M	N/D	M	N/D	M				

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 18, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R8C1	GSWPH5R8C2	GSWPH5R8C3				
Anthracene	50	8.0	N/D	N/D	N/D				
Fluorene	50	8.0	N/D	N/D	1	F			
Phenanthrene	50	10.0	N/D	N/D	0.8	F			
Pyrene	50	8.0	N/D	N/D	N/D				
Acenaphthene	20	8.0	N/D	N/D	1	F			
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D				
Fluoranthene	50	9.0	N/D	N/D	N/D				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D				
Chrysene	.002	10.0	N/D	N/D	N/D				
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D				
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D				
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	N/D				
Naphthalene	10	1.0	11	3	0.8				

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), December 2, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R9C1	GSWPH5R9C2	GSWPH5R9C3	GSWPH5R93CD			
Benzene	0.7	1.0	10	3.9	1.2	1.3			
Ethylbenzene	5	1.0	34	N/D	N/D	N/D			
Toluene	5	1.0	N/D	0.25 F	3.5	3.6			
o-Xylene	5	2.0	2.1	1.5 F	0.49 F	0.50 F			
m-Xylene	5	2.0	58 J	24 J	5.9 J	5.9 J			
p-Xylene	5	2.0	58 J	24 J	5.9 J	5.9 J			
Xylenes (total)	5	2.0	60	25	6.4	6.4			
Isopropylbenzene	5	1.0	6.5	2.9	0.75 F	0.75 F			
n-Propylbenzene	5	1.0	13	5.2	0.93 F	0.89 F			
p-Isopropyl toluene	5	1.0	1.3	0.71 F	N/D	N/D			
1,2,4-Trimethylbenzene	5	1.0	65	26	6.5	6.3			
1,3,5-Trimethylbenzene	5	1.0	13	6.6	1.6	1.5			
n-Butylbenzene	5	1.0	6.8	3.5	0.55 F	0.61 F			
Sec-Butylbenzene	5	1.0	3.8	1.9	0.42 F	0.40 F			
t-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D			
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D M	N/D M	N/D M	N/D M			

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), December 2, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R9C1	GSWPH5R9C2	GSWPH5R9C3	GSWPH5R93CD			
Anthracene	50	8.0	N/D	N/D	N/D J	3 F			
Fluorene	50	8.0	N/D	N/D	N/D	N/D			
Phenanthrene	50	10.0	N/D	N/D	N/D J	3 F			
Pyrene	50	8.0	N/D	N/D	N/D J	3 F			
Acenaphthene	20	8.0	N/D	N/D	N/D	N/D			
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D J	3 F			
Fluoranthene	50	9.0	N/D	N/D	N/D J	3 F			
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D J	6 F			
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D	N/D			
Chrysene	.002	10.0	N/D	N/D	N/D J	4 F			
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D J	3 F			
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D J	2 F			
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D J	2 F			
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	N/D J	2 F			
Naphthalene	10	1.0	13	5	1 F	1 F			

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), December 9, 1999
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R10C1	GSWPH5R10C2	GSWPH5R10C3				
Benzene	0.7	1.0	5.8	5.3	0.95 F				
Ethylbenzene	5	1.0	24	14	2.8				
Toluene	5	1.0	N/D	N/D	N/D				
o-Xylene	5	2.0	0.92 F	1.6 F	0.35 F				
m-Xylene	5	2.0	29 1	20 1	3.9 1				
p-Xylene	5	2.0	29 1	20 1	3.9 1				
Xylenes (total)	5	2.0	30	22	4.3				
Isopropylbenzene	5	1.0	3.8	2.4	0.52 F				
n-Propylbenzene	5	1.0	7.3	4.7	0.62 F				
p-Isopropyl toluene	5	1.0	0.70 F	0.60 F	N/D				
1,2,4-Trimethylbenzene	5	1.0	48	28	5.2				
1,3,5-Trimethylbenzene	5	1.0	6.7	6.1	1.0				
n-Butylbenzene	5	1.0	3.6	2.9	0.35 F				
Sec-Butylbenzene	5	1.0	2.0	1.6	0.25 F				
t-Butylbenzene	5	1.0	N/D	N/D	N/D				
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	N/D	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), December 9, 1999
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GSWPH5R10C1	GSWPH5R10C2	GSWPH5R10C3				
Anthracene	50	8.0	N/D	N/D	N/D				
Fluorene	50	8.0	N/D	N/D	N/D				
Phenanthrene	50	10.0	N/D	N/D	N/D				
Pyrene	50	8.0	N/D	N/D	N/D				
Acenaphthene	20	8.0	N/D	N/D	N/D				
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D				
Fluoranthene	50	9.0	N/D	N/D	N/D				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D				
Chrysene	.002	10.0	N/D	N/D	N/D				
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D				
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D				
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	N/D				
Naphthalene	10	1.0	5	6	N/D				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 15, 2001
Volatile Organic Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWPH5SS1	GSWPH5SS2	GSWPH5SS3	GSWPH5SS4	GSWPH5SS5	GSWPH5SS6	
Benzene	0.7	1.0	N/D	N/D	0.25 F	0.34 F	1.0	0.20 F	
Ethylbenzene	5	1.0	N/D	N/D	4.2	1.1	0.7 F	0.35 F	
Toluene	5	1.0	N/D	2.1	1.1	N/D	N/D	N/D	
o-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	
m-Xylene	5	2.0	N/D	N/D	3.5 J	2.0 J	1.3 F	0.63 F	
p-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	
Xylenes (totals)	5	2.0	N/D	N/D	3.5	2.0	1.3 F	0.63 F	
Isopropylbenzene	5	1.0	N/D	N/D	0.60 F	0.90 F	0.38 F	0.21 F	
n-Propylbenzene	5	1.0	N/D	N/D	0.94 F	3.0	0.90 F	0.47 F	
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	0.51 F	N/D	N/D	
1,2,4-Trimethylbenzene	5	1.0	N/D	0.27	1.0	12	4.0	2.0	
1,3,5-Trimethylbenzene	5	1.0	N/D	0.24	0.48 F	3.2	0.89 F	0.52 F	
n-Butylbenzene	5	1.0	N/D	0.87	2.1	4.8	2.8	1.5	
sec-Butylbenzene	5	1.0	N/D	N/D	1.2	2.0	1.6	0.67 F	
t-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	
Methyl tert-Butyl Ether (MTBE)	50	1.0	N/D	N/D	N/D	N/D	N/D	N/D	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse #5 Surface Water Sampling
Analytical Results (ppb), November 15, 2001
Semi-Volatile Organic Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWPH5SS1		GSWPH5SS2		GSWPH5SS3		GSWPH5SS4		GSWPH5SS5		GSWPH5SS6		
Anthracene	50	8.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Fluorene	50	8.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Phenanthrene	50	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Pyrene	50	8.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Acenaphthene	20	8.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Benzo(a)anthracene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Fluoranthene	50	9.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Benzo(b)fluoranthene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Benzo(k)fluoranthene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Chrysene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Benzo(a)pyrene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Benzo(g,h,i)perylene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Indeno(1,2,3-c,d)pyrene	0.002	10.0	N/D	J	N/D		N/D		N/D		N/D		N/D		
Dibenz(a,h)anthracene	50	10.0	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	N/D	M	
Naphthalene	10	1.0	N/D		N/D		1700		1.1		0.78	F	0.45	F	

(1) STARS Guidance Value: TCLP Alternative Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

Pumphouse # 5 Surface Water Sampling
Analytical Results (ppb), November 15, 2001
PCB's Compounds, Page 1 of 1

PCBs 8080A	Guidance Values (1)	Practical Quantitation Limits for Soil (2)	GSWPH5SS1		GSWPH5SS2	GSWPH5SS3	GSWPH5SS4	GSWPH5SS5	GSWPH5SS6		
PCB-1016 (AROCHLOR 1016)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1221 (AROCHLOR 1221)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1232 (AROCHLOR 1232)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1242 (AROCHLOR 1242)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1248 (AROCHLOR 1248)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1254 (AROCHLOR 1254)	0.01	1	N/D	R	N/D	N/D	N/D	N/D	N/D	R	
PCB-1260 (AROCHLOR 1260)	0.01	1	2.8	R	N/D	N/D	N/D	N/D	N/D	R	

(1) NY State Groundwater Standards
(2) Represents the Practical Quantitation Limit for SW8080A.
N/D = Non-detect, - = No value reported

771 Monitoring Well Groundwater Sampling
Analytical Results (ppb), November 15, 2001
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GGW771-MW11	GGW771-MW9	GGW771-MW10	GGW771-MW12	GGW771-MW5B	GGW771-MW5BD	GGWLF6MW
Benzene	0.7	1.0	3.4	0.63 F	0.67 F	N/D	N/D	N/D	N/D
Ethylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Toluene	5	1.0	1.2	0.47 F	0.28 F	0.71 F	N/D	N/D	N/D
o-Xylene	5	2.0	0.42 F	0.52 F	N/D	0.40 F	N/D	N/D	N/D
m-Xylene	5	2.0	1.1 1F	0.72 F	N/D	0.49 1F	N/D	N/D	N/D
p-Xylene	5	2.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Xylenes, totals	5	2.0	1.5 F	1.2 F	N/D	0.90 F	N/D	N/D	N/D
Isopropylbenzene	5	1.0	0.49 F	0.26 F	N/D	N/D	N/D	N/D	N/D
n-Propylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
p-Isopropyl toluene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1,2,4-Trimethylbenzene	5	1.0	0.63 F	0.83 F	0.24 F	N/D	N/D	N/D	N/D
1,3,5-Trimethylbenzene	5	1.0	0.22 F	0.22 F	0.24 F	0.25 F	N/D	N/D	N/D
n-Butylbenzene	5	1.0	N/D	0.42 F	0.30 F	N/D	N/D	N/D	N/D
Sec-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
t-Butylbenzene	5	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
tert-Butyl Methyl Ether (MTBE)	50	1.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Naphthalene	10	1.0	0.74 F	0.71 F	N/D	N/D	N/D	N/D	N/D

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

771 Monitoring Well Groundwater Sampling
Analytical Results (ppb), November 15, 2001
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8021 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GGW771-MW7	GGW771-MW8					
Benzene	0.7	1.0	N/D	N/D					
Ethylbenzene	5	1.0	N/D	N/D					
Toluene	5	1.0	N/D	0.30 F					
o-Xylene	5	2.0	0.44 F	N/D					
m-Xylene	5	2.0	0.40 1F	N/D					
p-Xylene	5	2.0	N/D	N/D					
Xylenes, totals	5	2.0	0.84 F	N/D					
Isopropylbenzene	5	1.0	N/D	N/D					
n-Propylbenzene	5	1.0	N/D	N/D					
p-Isopropyl toluene	5	1.0	N/D	N/D					
1,2,4-Trimethylbenzene	5	1.0	0.31 F	N/D					
1,3,5-Trimethylbenzene	5	1.0	0.40 F	N/D					
n-Butylbenzene	5	1.0	2.4	N/D					
Sec-Butylbenzene	5	1.0	.88 F	N/D					
t-Butylbenzene	5	1.0	N/D	N/D					
tert-Butyl Methyl Ether (MTBE)	50	1.0	N/D	N/D					
Naphthalene	10	1.0	0.87 F	N/D					

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

771 Monitoring Well Groundwater Sampling
Analytical Results (ppb), November 15, 2001
Semi-Volatile Compounds, Page 1 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GGW771-MW11	GGW771-MW9	GGW771-MW10	GGW771-MW12	GGW771-MW5B	GGW771-MW5BD	GGWLF6MW
Anthracene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluorene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Phenanthrene	50	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Pyrene	50	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Acenaphthene	20	8.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)anthracene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Fluoranthene	50	9.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Chrysene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(a)pyrene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Dibenz(a,h)anthracene	50	10.0	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M	N/D M

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

771 Monitoring Well Groundwater Sampling
Analytical Results (ppb), November 15, 2001
Semi-Volatile Compounds, Page 2 of 2

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	GGW771-MW7	GGW771-MW8					
Anthracene	50	8.0	N/D	N/D	R				
Fluorene	50	8.0	N/D	N/D	R				
Phenanthrene	50	10.0	N/D	N/D	R				
Pyrene	50	8.0	N/D	N/D	R				
Acenaphthene	20	8.0	N/D	N/D	R				
Benzo(a)anthracene	.002	10.0	N/D	N/D	R				
Fluoranthene	50	9.0	N/D	N/D	R				
Benzo(b)fluoranthene	.002	10.0	N/D	N/D	R				
Benzo(k)fluoranthene	.002	10.0	N/D	N/D	R				
Chrysene	.002	10.0	N/D	N/D	R				
Benzo(a)pyrene	.002	10.0	N/D	N/D	R				
Benzo(g,h,i)perylene	.002	10.0	N/D	N/D	R				
Indeno(1,2,3-c,d)pyrene	.002	10.0	N/D	N/D	R				
Dibenz(a,h)anthracene	50	10.0	N/D	N/D	R				

(1) STARS Guidance Value: TCLP Extraction Guidance Value
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
N/D = Non-detect, - = No value reported

APPENDIX E

Lithologic/Well Construction Logs

PEER Consultants, P.C.
Rockville, MD 20852

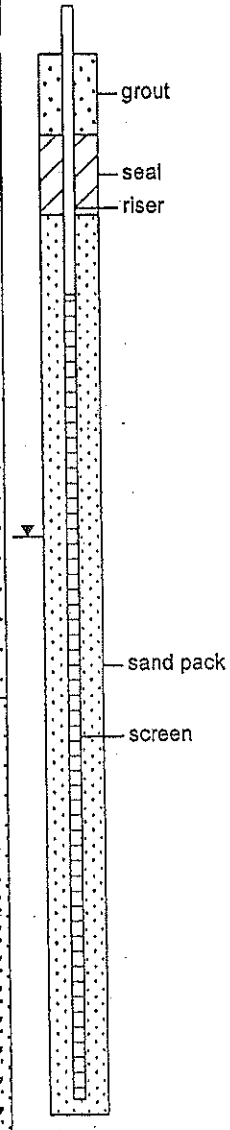
LOG OF BORING 771MW-7

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/06/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown silty SAND, medium to fine grained.	
8		Brown gravelly SAND, fine to medium grained.	
16			

well1: 771MW-7



Construction Information

NOTES
Material: Shedule 40 PVC
Diameter: 2- Inch
Screen Slot: 0.010- Inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 0 and 8' below ground surface during boring installation to determine the approximate depth of the water table.

C:\grifftank\closure\ph5-mw-7.bor

12-19-2

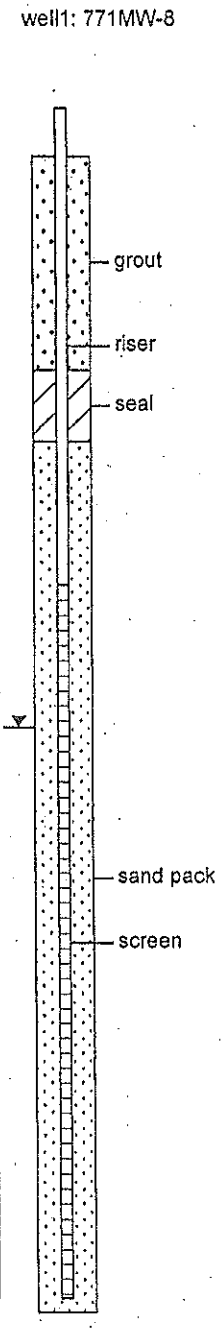
PEER Consultants, P.C.
Rockville, MD 20852

LOG OF BORING 771MW-8

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/06/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown silty SAND, medium to fine grained.	
8		Brown gravelly SAND, fine to medium grained.	
14		Greyish brown silty SAND.	
18			



Construction Information

NOTES
Material: Shedule 40 PVC
Diameter: 2- Inch
Screen Slot: 0.010- Inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 4 and 10' below ground surface during boring installation to determine the approximate depth of the water table.

C:\grifftankclosure\ph5-mw-8.bor

12-18-2L

PEER Consultants, P.C.
Rockville, MD 20852

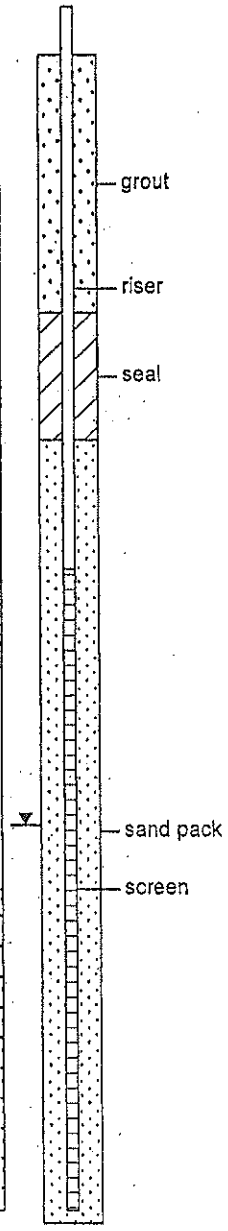
LOG OF BORING 771MW-9

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/06/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown silty SAND, medium to fine grained.	
12		Brown gravelly SAND, fine to medium grained.	
20			

well1: 771MW-9



Construction Information

NOTES
Material: Shedule 40 PVC
Diameter: 2- inch
Screen Slot: 0.010- inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 10 and 14' below ground surface during boring installation to determine the approximate depth of the water table.

C:\grafter\projects\pb5-mw-9.bor

12-18-2

PEER Consultants, P.C.
Rockville, MD 20852

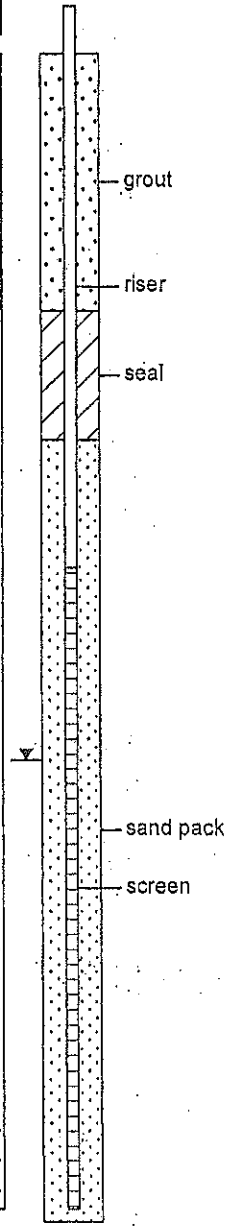
LOG OF BORING 771MW-10

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/08/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown to greyish silty SAND, medium to fine grained.	

well1: 771MW-10



Construction Information

NOTES
Material: Sheduie 40 PVC
Diameter: 2- inch
Screen Slot: 0.010- inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 10 and 14' below ground surface during boring installation to determine the approximate depth of the water table.

C:\grifftankclosure\tph5mw-10.bor

12-18-

PEER Consultants, P.C.
Rockville, MD 20852

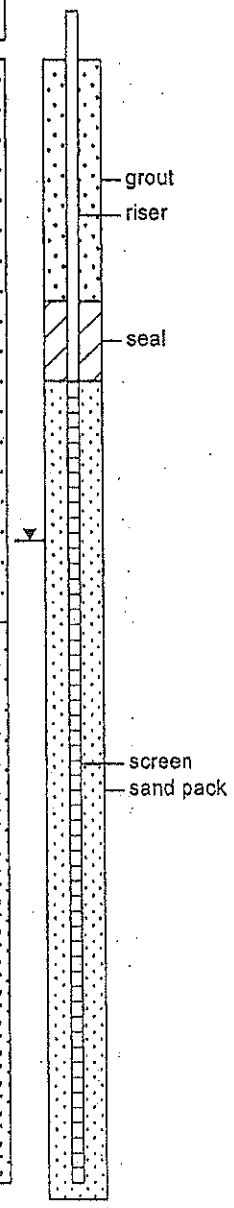
LOG OF BORING 771MW-11

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/07/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown silty SAND, medium to fine grained.	
6		Brown gravelly SAND, fine to medium grained.	
16			

well1: 771MW-11



Construction Information

NOTES
Material: Shedule 40 PVC
Diameter: 2- Inch
Screen Slot: 0.010- Inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 4 and 8' below ground surface during boring installation to determine the approximate depth of the water table.

C:\griffin\closure\ph5mw-11.bor

12-18-2

PEER Consultants, P.C.
Rockville, MD 20852

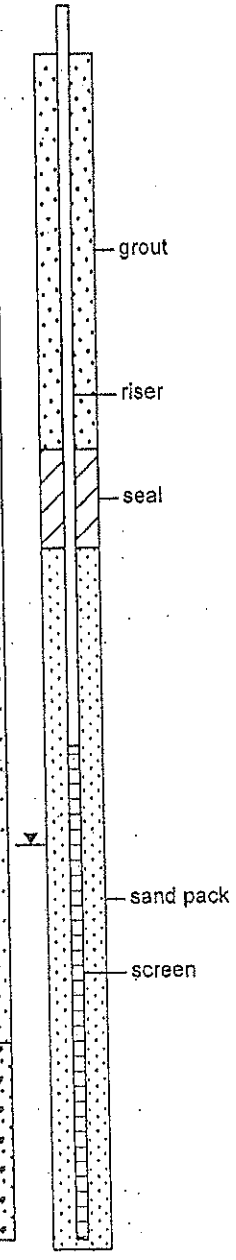
LOG OF BORING 771MW-12

Former Griffiss Air Force Base
Rome, NY

Delivery Order	: 1701-08	Rig	: CME-55
Location	: Former Griffiss AFB,Rome, NY	Drilling Method	: Hollow Stem Auger
Project Name	: Pumphouse 5	Geologist	: Jayne Pietrowski
Drilling Company	: Parratt-Wolff	Date	: 11/07/01
Driller	: Doug Thoma		

Depth in feet	Samples	DESCRIPTION	GRAPHIC
0		Light brown silty SAND, medium to fine grained.	
20		Brown gravelly SAND, fine to medium grained.	

well1: 771MW-12



Construction Information

NOTES
Material: Shedule 40 PVC
Diameter: 2- Inch
Screen Slot: 0.010- Inch
Auger: 6 1/4-inch inside diameter

Split spoon samples were collected between 10 and 16' below ground surface during boring installation to determine the approximate depth of the water table.

C:\grif\tankclosure\ph5mw-12.bor

12-18-2(

APPENDIX F

Field Sampling Forms

August 2002 Sampling Event

WELL PURGING & SAMPLING FORM

Project: 444-97-10 Sampled by: M66 / NVH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771MW1-0897 Well Diameter (**CASDIAM**): 2"

Date (**LOGDATE**): 8/22/02 Weather: 80° cloudy

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

Measured Well Depth (B) (**TOTDEPTH**) 15,03 ft.

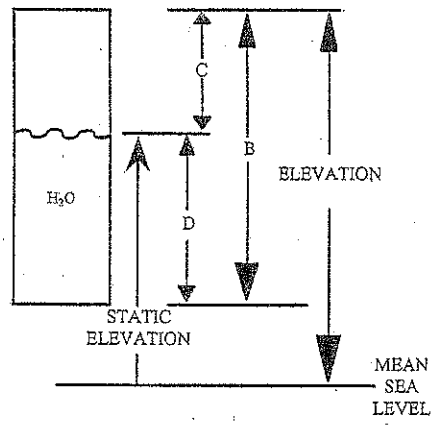
Measured Water Level Depth (C) (**STATDEP**) 7,09 ft.

Length of Static Water Column (D) = 15,03 (B) - 7,09 (C) = 7,94 (D) ft.

7,94
1
79 4
7940
1270 4

Casing Water Volume (E) = 0,16 (A) x 7,94 (D) = 1,27 gal

Total Purge Volume = 3,81 (gal)



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: clr silty, no odor / sheen good readings

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
10:32	1	7.03	991	18.36	>999	6.15	33
10:34	2	7.01	983	18.14	>999	5.64	30
10:39	3	6.99	1010	16.95	>999	5.49	19
10:40	4	6.96	1010	16.86	>999	5.00	10
10:41	5	6.95	1040	16.45	>999	5.08	4
10:42	6	6.95	1046	16.48	>999	4.79	0
10:43	sample taken						

WELL PURGING & SAMPLING FORM

Project: 444-97-98 Sampled by: M66 / NVH

Location and Site Code (SITENAME, SITEID): Building 771

Well No. (LOCID): 771MW-8 Well Diameter (CASDIAM): 2"

Date (LOGDATE): 8/22/02 Weather: 75° cloudy

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

Measured Well Depth (B) (TOTDEPTH) 17,97 ft.

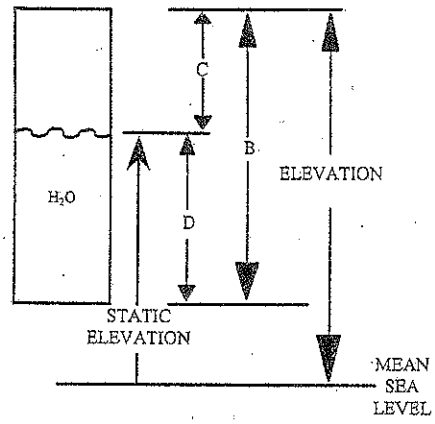
Measured Water Level Depth (C) (STATDEP) 9,45 ft.

Length of Static Water Column (D) = 17,97 (B) - 9,45 (C) = 8,52 (D) ft.

8,52
16
5112
8520
1363 2

Casing Water Volume (E) = 0,16 (A) x 8,52 (D) = 1,36 gal

Total Purge Volume = 4,08 (gal)



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: rust colour, changed to brown grey silty

FIELD MEASUREMENTS: good recharge

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
9:53	1	6,73	1380	16,18	7999	10,52	-125
9:55	2	6,76	1180	15,09	7999	7,13	-43
9:57	3	6,81	1030	14,05	7999	6,29	-44
9:59	4	6,85	898	13,50	7999	4,56	-42
10:01	5	6,86	834	13,37	7999	3,64	-42
10:03	6	6,86	864	13,46	7999	3,13	-45
10:05	Sample taken						

WELL PURGING & SAMPLING FORM

Project: 444-97-10 Sampled by: NVH /mGG

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771 MW-9 Well Diameter (**CASDIAM**): 2"

Date (**LOGDATE**): _____ Weather: 75° cloudy / sunny

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

Measured Well Depth (B) (**TOTDEPTH**) 20,21 ft.

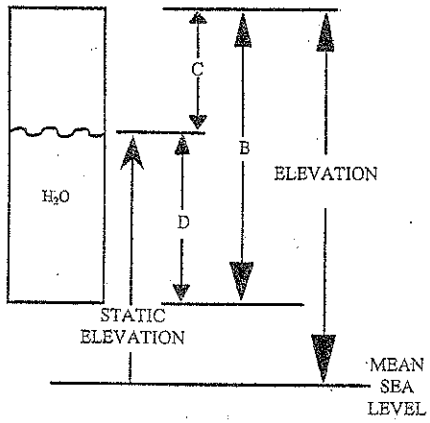
Measured Water Level Depth (C) (**STATDEP**) 11,58 ft.

Length of Static Water Column (D) = 20,21 (B) - 11,58 (C) = 8,63 (D) ft.

Casing Water Volume (E) = 0,16 (A) x 8,63 (D) = 1,38 gal

Total Purge Volume = 4,14 (gal)

8,63
16
>178
8620
13818



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: silty brown, grey poor recharge ; bailed dry

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
9.03	1	6.68	1280	14,90	7999	9,81	35
9:05	2	6,69	1290	14,22	7999	7.88	10
9:07	3	6,72	1290	13,29	7999	5,97	-7
9:10	4	6,73	1280	12,77	7999	5,21	-7
9:14	5	6,75	1260	12,81	7999	4,15	-4
	bailed dry						
9:25	sample taken						

WELL PURGING & SAMPLING FORM

Project: 444-97-10 Sampled by: M66 / NVH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771mw-10 Well Diameter (**CASDIAM**): 2"

Date (**LOGDATE**): 8/22/02 Weather: 25°

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

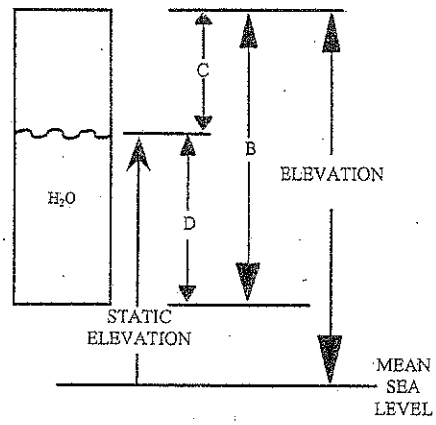
Measured Well Depth (B) (**TOTDEPTH**) 20,23 ft.

Measured Water Level Depth (C) (**STATDEP**) 12,18 ft.

Length of Static Water Column (D) = 20,23 (B) - 12,18 (C) = 8,05 (D) ft.

Casing Water Volume (E) = 0,16 (A) x 8,05 (D) = 1,28 gal

Total Purge Volume = 3,84 (gal)



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: red (iron) colour; after 4 gallons dark brown colour

FIELD MEASUREMENTS: fair recharge; colour cleared up after 5 gal. no odor / sheen.

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
8:22	1	6,22	1050	9543	7999	10.45	142
8:25	2	6,28	1010	14,60	7999	8.93	108
8:27	3	6,33	1010	13,45	7999	7.29	75
8:28	4	6,40	1010	12,71	7999	6,73	72
8:30	5	6,44	1010	12,13	844	5.56	79
bailed dry after 5.5 gal.							
8:45	sample taken						

WELL PURGING & SAMPLING FORM

Project: 444-97-10 Sampled by: MGG-NVH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771mw-11 Well Diameter (**CASDIAM**): 2"

Date (**LOGDATE**): 8/22/02 Weather: 80° cloudy

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

8.76
1.6
14.016
8.760
1.401 6

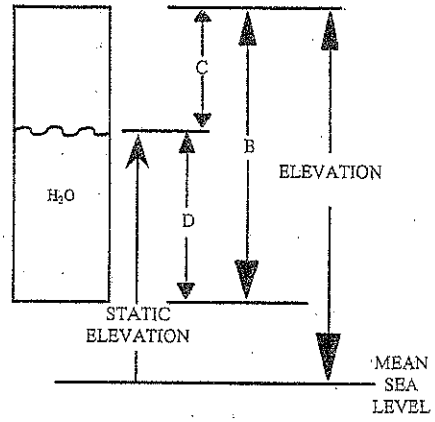
Measured Well Depth (B) (**TOTDEPTH**) 15.89 ft.

Measured Water Level Depth (C) (**STATDEP**) 7.13 ft.

Length of Static Water Column (D) = 15.89 (B) - 7.13 (C) = 8.76 (D) ft.

Casing Water Volume (E) = 0.16 (A) x 8.76 (D) = 1.40 gal

Total Purge Volume = 4.20 (gal)



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: silty no odor/sheen good recharge

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
11:15	1	7.37	972	17.08	7999	2.91	-37
11:17	2	7.12	928	16.73	7999	5.24	-67
11:18	3	7.02	924	15.89	7999	4.30	-80
11:20	4	6.99	901	15.38	7999	4.05	-91
11:22	5	6.97	893	15.40	7999	3.65	-97
11:30	Sample taken						
11:24	6	6.96	883	15.66	7999	3.66	-100

WELL PURGING & SAMPLING FORM

Project: 444-97-10 Sampled by: M66 | NW71

Location and Site Code (**SITENAME, SITEID**): _____

Well No. (**LOCID**): 771MW-12 Well Diameter (**CASDIAM**): 2"

Date (**LOGDATE**): 8/22/02 Weather: 80° cloudy

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

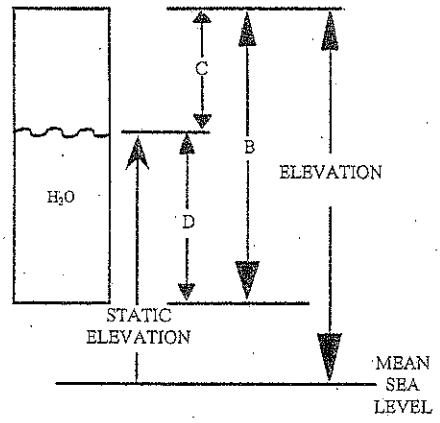
Measured Well Depth (B) (**TOTDEPTH**) 25.05 ft.

Measured Water Level Depth (C) (**STATDEP**) 18.19 ft.

Length of Static Water Column (D) = 25.05 (B) − 18.19 (C) = 6.96 (D) ft.

Casing Water Volume (E) = 0.16 (A) × 6.96 (D) = 1.12 gal

Total Purge Volume = 3.36 (gal)



Purge Date and Method: 8/22/02 bailer

Physical Appearance/Comments: silty brown-grey no odor/sheen

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
11:49	1	7.55	1680	13.78	>999	10.81	-73
11:50	2	7.18	990	13.17	>999	6.43	-88
11:51	3	7.06	944	12.40	>999	4.48	-93
11:52	4	7.04	888	12.20	>999	4.19	-95
11:54	5	7.02	851	12.13	>999	3.85	-97
	6						

WELL PURGING & SAMPLING FORM

Project: UUU-97-10 Sampled by: NVH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771 SW-1 Well Diameter (**CASDIAM**): ____

Date (**LOGDATE**): 8/28/02 Weather: 65° Sunny

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

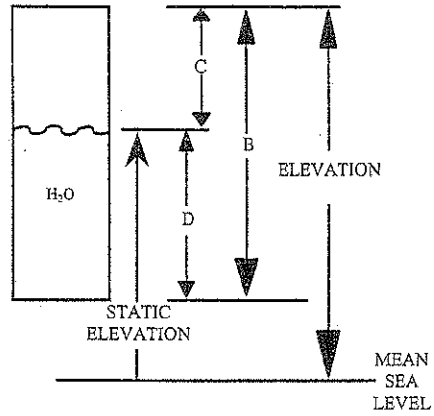
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: Surface water

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
11:15	0	6,38	950	18,72	6,5	13,16	110

WELL PURGING & SAMPLING FORM

Project: YAU-97-10 Sampled by: NVH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771SW-2 Well Diameter (**CASDIAM**): _____

Date (**LOGDATE**): 8/28/02 Weather: 65° sunny

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

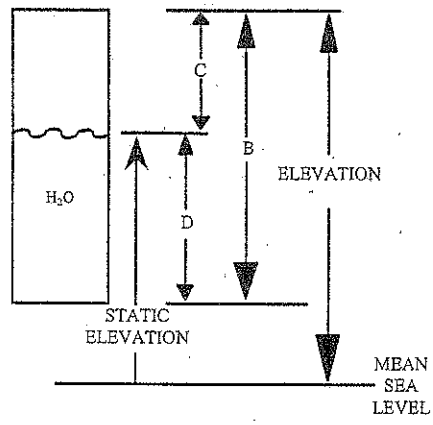
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: Surface water

Physical Appearance/Comments: Clear

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
1045	X	6.05	1010	18.00	80	13.75	188

WELL PURGING & SAMPLING FORM

Project: _____ Sampled by: _____

Location and Site Code (**SITENAME, SITEID**): _____

Well No. (**LOCID**): 7715W-2 Well Diameter (**CASDIAM**): _____

Date (**LOGDATE**): _____ Weather: _____

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

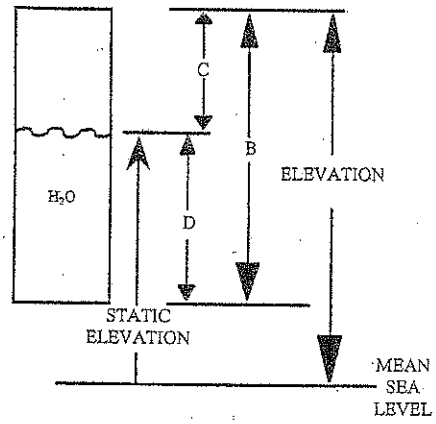
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: _____

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
16:20	NA	7.95	136	23.39	151	8.07	-6

WELL PURGING & SAMPLING FORM

Project: _____ Sampled by: _____

Location and Site Code (**SITENAME, SITEID**): _____

Well No. (**LOCID**): 721 BW-03 Well Diameter (**CASDIAM**): 4

Date (**LOGDATE**): _____ Weather: _____

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

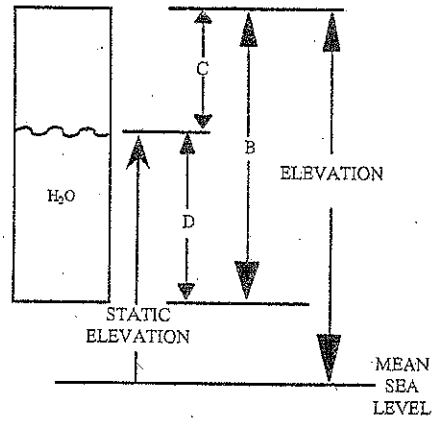
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: _____

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
15:30	4	7.18	852	20.70	141	7.61	-60

WELL PURGING & SAMPLING FORM

Project: _____ Sampled by: _____

Location and Site Code (**SITENAME, SITEID**): _____

Well No. (**LOCID**): 7215W-4 Well Diameter (**CASDIAM**): _____

Date (**LOGDATE**): _____ Weather: _____

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

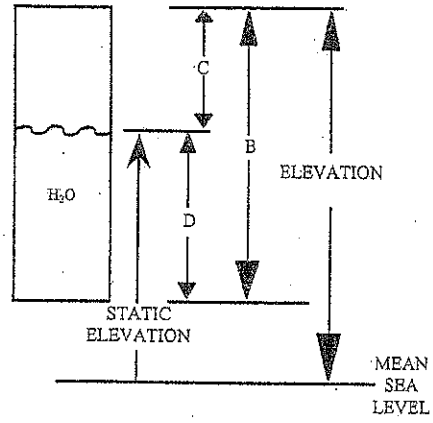
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: _____

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
1503	—	8.91	984	72.44	566	5.33	-68

WELL PURGING & SAMPLING FORM

Project: DO 10 Sampled by: MRB

Location and Site Code (**SITENAME, SITEID**): _____

Well No. (**LOCID**): 77/SW-5 Well Diameter (**CASDIAM**): 4

Date (**LOGDATE**): _____ Weather: 25° Dim

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

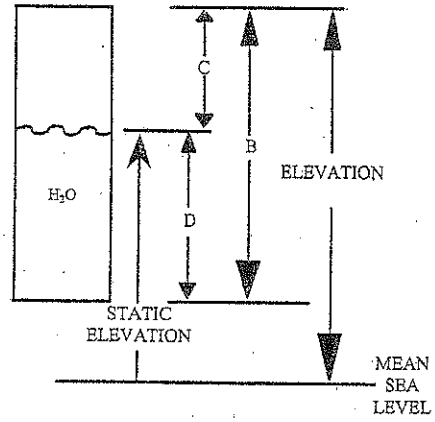
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: _____

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
14:46	→	7.70	303	22.3	>1000	6.84	-3.6

WELL PURGING & SAMPLING FORM

Project: UW- 97-10 Sampled by: NH

Location and Site Code (**SITENAME, SITEID**): Building 771

Well No. (**LOCID**): 771 SW-6 Well Diameter (**CASDIAM**): _____

Date (**LOGDATE**): 8/28/02 Weather: 65° Sunny

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0
Unit Casing Volume (A) (gal/ft.)	0.04	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0

PURGING INFORMATION:

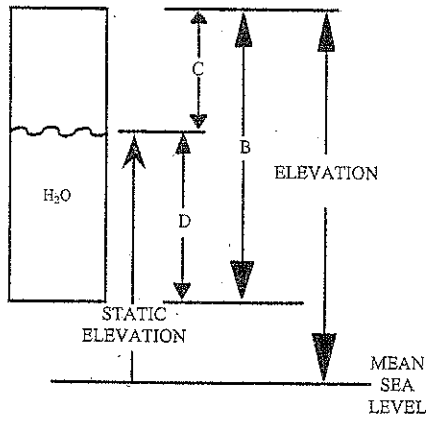
Measured Well Depth (B) (**TOTDEPTH**) _____ ft.

Measured Water Level Depth (C) (**STATDEP**) _____ ft.

Length of Static Water Column (D) = _____ (B) - _____ (C) = _____ (D) ft.

Casing Water Volume (E) = _____ (A) x _____ (D) = _____ gal

Total Purge Volume = _____ (gal)



Purge Date and Method: Surface water

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Volume Removed (gal)	pH	EC (µS/cm)	Temp. (F or C)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)
1134	1	6.77	755	21.66	15.7	12.88	118

APPENDIX G

Laboratory Analytical Results Summary Tables

Surface Water and Groundwater Sampling

August 22, 2002

771 Surface Water Sampling
Analytical Results (µg/L), August 22 and 28, 2002
Semi-Volatile Organic Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list) (Date of Collection)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771SW0101AA (8-28-02)	771SW0201AA (8-28-02)	771SW0301AA (8-22-02)	771SW0401AA 8-22-02)	771SW0501AA (8-22-02)	771SW0601AA (8-28-02)	
Anthracene	50	10.0	U	U	U	U	U	U	
Fluorene	50	10.0	U	U	U	U	U	U	
Phenanthrene	50	10.0	U	U	U	U	U	U	
Pyrene	50	10.0	U	U	U	U	U	U	
Acenaphthene	20	10.0	U	U	U	U	U	U	
Benzo(a)anthracene	.002	10.0	U	U	U	U	U	U	
Fluoranthene	50	10.0	U	U	U	U	U	U	
Benzo(b)fluoranthene	.002	10.0	U	U	U	U	U	U	
Benzo(k)fluoranthene	.002	10.0	U	U	U	U	U	U	
Chrysene	.002	10.0	U	U	U	U	U	U	
Benzo(a)pyrene	.002	10.0	U	U	U	U	U	U	
Benzo(g,h,i)perylene	.002	10.0	U	U	U	U	U	U	
Indeno(1,2,3-c,d)pyrene	.002	10.0	U	U	U	U	U	U	
Dibenz(a,h)anthracene	50	10.0	U	U	U	U	U	U	

(1) STARS Guidance Value: TCLP Alternative Guidance Value.
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
U = Non-detect, - = No value reported.

771 Surface Water Sampling
Analytical Results (µg/L), August 22 and 28, 2002
TCL Pesticides/PCB's Compounds, Page 1 of 1

TCL Pesticides/PCBs 8082A (STARS List) (Date of Collection)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771SW0101AA (8-28-02)	771SW0201AA (8-28-02)	771SW0301AA (8-22-02)	771SW0401AA (8-22-02)	771SW0501AA (8-22-02)	771SW0601AA (8-28-02)	
PCB-1016 (AROCHLOR 1016)	0.09	0.500	UM	U	U	U	U	U	
PCB-1221 (AROCHLOR 1221)	0.09	0.500	U	U	U	U	U	U	
PCB-1232 (AROCHLOR 1232)	0.09	0.500	U	U	U	U	U	U	
PCB-1242 (AROCHLOR 1242)	0.09	0.500	U	U	U	U	U	U	
PCB-1248 (AROCHLOR 1248)	0.09	0.500	U	U	U	U	U	U	
PCB-1254 (AROCHLOR 1254)	0.09	0.500	U	U	U	U	U	U	
PCB-1260 (AROCHLOR 1260)	0.09	0.500	UM	U	U	U	0.49 F	U	

(1) NY State Groundwater Standards.
(2) Represents the Practical Quantitation Limit for SW8080A.
U = Non-detect, - = No value reported.
UM = non detect, but matrix present.
F = The Analyte was positively identified but the associated numerical value is below the RL.

771 Surface Water Sampling
Analytical Results (µg/L), August 22 and 28, 2002
Total/Dissolved Lead, Page 1 of 1

Total/Dissolved Lead 6010A (STARS List) (Date of Collection)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771SW0101AA (8-28-02)	771SW0201AA (8-28-02)	771SW0301AA (8-22-02)	771SW0401AA (8-22-02)	771SW0501AA (8-22-02)	771SW0601AA (8-28-02)	
Total Lead	50	60.0	U	U	U	25.0 F	11.2 F	U	
Dissolved Lead	50	60.0	U	U	U	U	U	U	

(1) NY State Groundwater Standards.
(2) Represents the Practical Quantitation Limit for SW6010A.
U = Non-detect, - = No value reported.
F = The analyte was positively identified but the associated numerical value is below the RL.

771 Monitoring Well Groundwater Sampling
Analytical Results (µg/L), August 22, 2002
Volatile Compounds, Page 1 of 1

Volatile Compounds, SW8260 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771M0707AA	771M0809AA	771M0912AA	771M0912AC	771M1012AA	771M1107AA	771M1218AA
Benzene	0.7	0.500	U	U	U	U	U	0.27 F	U
Ethylbenzene	5	0.500	U	U	U	U	U	U	U
Toluene	5	0.500	U	U	U	U	U	U	U
o-Xylene	5	0.500	U	U	U	U	U	U	U
m-Xylene	5	0.500	U	U	U	U	U	U	U
p-Xylene	5	0.500	U	U	U	U	U	U	U
Xylenes, totals	5	0.500	U	U	U	U	U	U	U
Isopropylbenzene	5	0.500	U	U	U	U	U	U	U
n-Propylbenzene	5	0.500	U	U	U	U	U	U	U
p-Isopropyl toluene	5	0.500	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	5	0.500	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	5	0.500	U	U	U	U	U	U	U
n-Butylbenzene	5	0.500	U	U	U	U	U	U	U
Sec-Butylbenzene	5	0.500	U	U	U	U	U	U	U
t-Butylbenzene	5	0.500	U	U	U	U	U	U	U
tert-Butyl Methyl Ether (MTBE)	50	0.500	U	U	U	U	U	U	U
Naphthalene	10	1.0	U	U	U	U	U	U	U

(1)NYSDEC Ground Water Guidance Values:
(2)Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
U= Non-detect, - = No value reported.

771 Monitoring Well Groundwater Sampling
Analytical Results (µg/L), August 22, 2002
Semi-Volatile Compounds, Page 1 of 1

Semi-Volatile Compounds, SW8270 (STARS list)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771M0707AA	771M0809AA	771M0912AA	771M0912AC	771M1012AA	771M1107AA	771M1218AA
Anthracene	50	10.0	U	U	U	U	U	U	U
Fluorene	50	10.0	U	U	U	U	U	U	U
Phenanthrene	50	10.0	U	U	U	U	U	U	U
Pyrene	50	10.0	U	U	U	U	U	U	U
Acenaphthene	20	10.0	U	U	U	U	U	U	U
Benzo(a)anthracene	.002	10.0	U	U	U	U	U	U	U
Fluoranthene	50	10.0	U	U	U	U	U	U	U
Benzo(b)fluoranthene	.002	10.0	U	U	U	U	U	U	U
Benzo(k)fluoranthene	.002	10.0	U	U	U	U	U	U	U
Chrysene	.002	10.0	U	U	U	U	U	U	U
Benzo(a)pyrene	.002	10.0	U	U	U	U	U	U	U
Benzo(g,h,i)perylene	.002	10.0	U	U	U	U	U	U	U
Indeno(1,2,3-c,d)pyrene	.002	10.0	U	U	U	U	U	U	U
Dibenz(a,h)anthracene	50	10.0	U	U	U	U	U	U	U

(1)NYSDEC Ground Water Guidance Values:
(2)Represents the STARS-Specified Practical Quantitation Limit for SW8270. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
U = Non-detect, - = No value reported

771 Surface Water Sampling
Analytical Results (µg/L), August 22 and 28, 2002
Volatile Organic Compounds, Page 1 of 1

Volatile Compounds, SW8260 (STARS list) (Date of Collection)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771SW0101AA (8-28-02)	771SW0201AA (8-28-02)	771SW0301AA (8-22-02)	771SW0401AA (8-22-02)	771SW0501AA (8-22-02)	771SW0601AA (8-28-02)	
Benzene	0.7	0.500	U	U	U	U	U	U	
Ethylbenzene	5	0.500	U	U	U	U	U	U	
Toluene	5	0.500	U	U	U	U	U	U	
o-Xylene	5	0.500	U	U	U	U	U	U	
m-Xylene	5	0.500	U	U	U	U	U	U	
p-Xylene	5	0.500	U	U	U	U	U	U	
Xylenes, totals	5	0.500	U	U	U	U	U	U	
Isopropylbenzene	5	0.500	U	U	U	U	U	U	
n-Propylbenzene	5	0.500	U	U	U	U	U	U	
p-Isopropyl toluene	5	0.500	U	U	U	0.69	U	U	
1,2,4-Trimethylbenzene	5	0.500	U	U	U	U	U	U	
1,3,5-Trimethylbenzene	5	0.500	U	U	U	U	U	U	
n-Butylbenzene	5	0.500	U	U	U	U	U	U	
sec-Butylbenzene	5	0.500	U	U	U	U	U	U	
t-Butylbenzene	5	0.500	U	U	U	U	U	U	
Methyl t-Butyl Ether (MTBE)	50	0.500	U	U	U	U	U	U	
Naphthalene	10	1.0	U	U	U	U	U	U	

(1) STARS Guidance Value: TCLP Alternative Guidance Value.
(2) Represents the STARS-Specified Practical Quantitation Limit for SW8021. When the Guidance Value or Standard is below the quantitation limit, achieving the quantitation limit is considered acceptable for meeting the Guidance Value or Standard.
U = Non-detect, - = No value reported.

771 Monitoring Well Groundwater Sampling
Analytical Results (µg/L), August 22, 2002
TCL Pesticides/PCB's Compounds, Page 1 of 1

TCL Pesticides/PCBs 8082A (STARS List)	Guidance Values (1)	Practical Quantitation Limits for Water (2)	771M0707AA	771M0809AA	771M0912AA	771M0912AC	771M1012AA	771M1107AA	771M1218AA
PCB-1016 (AROCHLOR 1016)	0.09	0.500	UM	U	U	U	U	U	U
PCB-1221 (AROCHLOR 1221)	0.09	0.500	U	U	U	U	U	U	U
PCB-1232 (AROCHLOR 1232)	0.09	0.500	U	U	U	U	U	U	U
PCB-1242 (AROCHLOR 1242)	0.09	0.500	U	U	U	U	U	U	U
PCB-1248 (AROCHLOR 1248)	0.09	0.500	U	U	U	U	U	U	U
PCB-1254 (AROCHLOR 1254)	0.09	0.500	U	U	U	U	U	U	U
PCB-1260 (AROCHLOR 1260)	0.09	0.500	UM	U	U	U	U	U	U

(1) NYSDEC Groundwater Guidance Values.
(2) Represents the Practical Quantitation Limit for SW8080A.
U = Non-detect, - = No value reported.
UM =.Non-detect, A matrix effect was present.

APPENDIX H

Validated Laboratory Data

Surface Water and Groundwater Sampling,

August 2002

FPM Group
Data Validation and Usability Report
FORMER GRIFFISS AIR FORCE BASE
Long-term Monitoring (LTM)
Groundwater Sampling
Contract No. F41624-95-D-8003
FPM Project No. 444-97-10

Data Package SDG No. A02-8630

Laboratory:	STL
Sample Report ID:	NY8A7867.5
Sample Matrix:	water
Number of Samples:	6
Analytical Protocol:	AFCEE QAPP, Version 3.0, with AFCEE-approved lab variances
Data Reviewer:	Connie van Hoesel
Sample Date:	August 28, 2002

LIST OF DATA VALIDATION SAMPLES

This validation report pertains to the following environmental samples and corresponding QC samples:

Sample ID	*Date*	*QC Samples*	*Date*
771SW0101AA	8/28/02	771SW0100AF: Ambient blank	8/28/02
771SW0201AA	8/28/02		
771SW0601AA	8/28/02	771SW0600AE: Equipment blank	8/28/02
		771SW0600AR: Trip blank	8/28/02

Notes:

Refer to attached chain-of-custody for detail sampling information and sample specific analyses requested, etc.
A, B – Primary environmental samples
E – Equipment blank
F – Field blank
All samples above were analyzed for VOCs, SVOCs, PCBs, and total and dissolved lead.

DELIVERABLES

The data deliverable report was per requirements and format of a full data deliverable EPA Contract Laboratory Protocol (CLP) and AFCEE QAPP format. The report consisted of the following major sections: lab attachment letter, case narrative, chain-of-custody, lab qualifier definitions, analytical results (sheet 2) based on analytical batch, calibration summaries, method blank summaries, laboratory control sample summaries, matrix spike/matrix spike duplicate

summaries, holding time forms, surrogate compound and internal standard recoveries, GC/MS chromatographs, mass spectrum and backup QA/QC.

ANALYTICAL METHODS

The analytical test methods and QA/QC requirements used for the groundwater sample analysis was per methods as specified in the AFCEE Quality Assurance Project Plan, Version 3.0, EPA CLP, and EPA SW846 requirements. The analytical methods employed included: Volatile Organic Compounds (VOC) by EPA method SW8260B, and Semivolatile Organic Compounds (SVOC) by EPA method SW8270C, PCBs by EPA Method SW8082, and Metals by EPA Method SW6010B.

VALIDATION GUIDANCE

The analytical work was performed by CompuChem in accordance with the Air Force Center for Environmental Excellence (AFCEE), Quality Assurance Project Plan (QAPP), Version 3.0, and EPA SW846. The data was validated according to the protocols and QC requirements of the respective analytical methods and of the QAPP Version 3.0. For data usability purposes all values were further evaluated, including positive and non-detect results that were qualified "R" (Rejected) according to QAPP. The data usability analysis was based on the reviewer's professional judgment and on an assessment of how this data would fare with respect to the U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for Organic (and Inorganic) Data Review (February 1994).

QA/QC CRITERIA

The following QA/QC criteria were reviewed:

- Method detection limits and reporting limits (MDL, RL)
- Holding times, sample preservation and storage
- MS tune performance
- Initial and Continuing calibration summaries
- Second source calibration verification summary
- Method blanks
- Ambient, equipment, and trip blanks (as applicable)
- Field duplicate results
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD)
- Internal standard areas counts and retention times
- Laboratory control samples (LCS)
- Results reported between MDL and RL (F-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)

- Case narrative and deliverables compliance

The items listed above were in compliance with AFCEE QAPP and USEPA criteria and protocols with exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

GENERAL NOTE:

MS/MSD

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices. Generally, these data alone cannot be used to evaluate the precision and accuracy of individual samples. A matrix spike and matrix spike duplicate analysis is an aliquot of sample spiked with known concentrations of all the analytes in the method. According to the AFCEE QAPP, the MS/MSD result is used to assess whether the sample matrix may bias the results. The AFCEE recommended frequency of analysis is one MS/MSD per 20 samples. Exceedances of either percent recovery (%Rec) of spike concentrations or relative percent difference (RPD) between the MS and MSD results, according to the QAPP require a "M" (matrix effect) qualifier for the specific analyte in all samples collected from the same site matrix as the parent. However, due to the varied nature of environmental samples, such as locations, depths, physical characteristics (dissolved and suspended solids, turbidity, pH, organic content, etc.), it is difficult to assign one set of MS/MSD sample analysis as truly representative of an entire site matrix. Therefore, based on the definition of this type of QA/QC sample, using professional judgment it is deemed inappropriate to qualify more than the actual parent sample due to a percent recovery or RPD exceedance. This approach is in accordance with the EPA National Functional guidelines, which states that the MS/MSD results are not used alone to qualify the entire data package, however, can be used in conjunction with other QC criteria to determine the need for some qualification of the data. Thus this data validation will take the following approach, for instances when specific analytes exceed QC limits in the MS/MSD analysis, results are qualified "M" in the parent sample only.

BLANKS

Blanks, including method, ambient, equipment and trip, which contained low levels of contaminants (between MDL and RL) were qualified by the laboratory as required by the QAPP with an "F" flag. The data review confirmed that these values were reportedly below the RLs and since no qualification of associated field samples are required for blanks less than the RL, no further action was taken.

SEMIVOLATILE ORGANIC COMPOUNDS (SVOC)

- The following table summarizes QC exceedances of the LCS analyses, the spike compounds, LCS recoveries, and spike QC limits. When an LCS analyte is outside the acceptance limit, corrective action shall be performed by the laboratory. If the corrective action is ineffective

in resolving the exceedance, then that analyte's results in all the associated samples (samples within the AFCEE analytical batch) are qualified. According to the QAPP, when the percent recovery (%Rec) is greater than the upper control limit, positive results are considered estimated flagged "J"; and non-detects do not require qualification. The associated sample results were qualified accordingly.

LCS ID *Spike Analytes*	*LCS* *%Rec*	*QC* *Limits*
SVOC		
A2B0839401		
Benzo(a)anthracene	111	56-100

- The following table summarizes QC exceedances of the matrix spike/matrix spike duplicate (MS/MSD) analysis for sample 771SW0601AS/AD. The spike analytes, MS recoveries, MSD recoveries, spike QC limits, and RPD between the MS and MSD are listed. The QC limit for the RPD for all the analytes is less than or equal to 20%. Thus as previously discussed in the general note section above, only these analytes in the parent sample 771SW0601AA are qualified with an "M" flag. A = acceptable result.

Spike *Compounds*	*MS* *%Rec*	*MSD* *%Rec*	*QC* *Limits*	*RPD* *%*
Benzo(a)anthracene	101	A	56-100	A

PCBs

- The following table summarizes QC exceedances of the matrix spike/matrix spike duplicate (MS/MSD) analysis for sample 771SW0601AS/AD. The spike analytes, MS recoveries, MSD recoveries, spike QC limits, and RPD between the MS and MSD are listed. The QC limit for the RPD for all the analytes is less than or equal to 20%. Thus as previously discussed in the general note section above, only these analytes in the parent sample 771SW0601AA are qualified with an "M" flag. A = acceptable result.

Spike *Compounds*	*MS* *%Rec*	*MSD* *%Rec*	*QC* *Limits*	*RPD* *%*
PCB-1260	47	A	50-122	69
PCB-1016	42	A	29-123	82

DATA USABILITY RESULTS

Based on the evaluation of all information in the analytical data groups, the results are highly usable with the data validation qualifiers as noted. Using the validation approach as presented above, the results are 100% usable with no rejected values.

AFCEE SUMMARY

All data are valid and usable with qualifications as noted in the data review.

Signed:_____ Dated:_____

ATTACHMENTS

- Chain-of-Custody
- Laboratory's Case Narrative
- Definition of AFCEE Data Validation Qualifiers
- Definition of USEPA Data Validation Qualifiers
- Qualified final data validation results on annotated Lab Sheet 2s

ATTACHMENTS

DATA VALIDATION QUALIFIERS (AFCEE)

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

J - The analyte was positively identified, the quantitation is an estimation.

F - The analyte was positively identified but the associated numerical value is below the RL.

R - The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.

B - The analyte was found in an associated blank, as well as in the sample.

M - A matrix effect was present.

S - To be applied to all field screening data.

T - Tentatively identified compound (using GC/MS).

DATA VALIDATION QUALIFIERS (USEPA)

Organics

U - The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

AFCEE
ORGANIC ANALYSES DATA PACKAGE

000009

Analytical Method: 8260-A98

AAB #: A2B08731

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771SW0100AF	A2863004
771SW0101AA	A2863002
771SW0201AA	A2863001
771SW0600AE	A2863005
771SW0600AR	A2863006
771SW0601AA	A2863003

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ for

Name: Susan L. Mazur

Date: 9/25/02

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0100AF Lab Sample ID: A2863004 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000011

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000012

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AE Lab Sample ID: A2863005 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000013

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AR Lab Sample ID: A2863006 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08731

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 9-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA PACKAGE

000034

Analytical Method: 8270-A98

AAB #: A2B08394

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771SW0101AA	A2863002
771SW0201AA	A2863001
771SW0600AE	A2863005
771SW0601AA	A2863003
771SW0601AA	A2863003MS
771SW0601AA	A2863003SD

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: Susan L. Mazur

Date: 9/25/02

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000037

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AE Lab Sample ID: A2863005 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0009 B

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	~~U~~ UM
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

4/5/02

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0009

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	8	10.0	170	
ANTHRACENE	6	10.0	200	
BENZO(a)ANTHRACENE	5	10.0	200	
BENZO(b)FLUORANTHENE	6	10.0	190	
BENZO(g,h,i)PERYLENE	9	10.0	190	
BENZO(k)FLUORANTHENE	5	10.0	190	
BENZO(a)PYRENE	5	10.0	190	
CHRYSENE	5	10.0	200	
DIBENZ(a,h)ANTHRACENE	8	10.0	190	
FLUORANTHENE	7	10.0	200	
FLUORENE	7	10.0	180	
INDENO(1,2,3-c,d)PYRENE	9	10.0	200	
PHENANTHRENE	5	10.0	200	
PYRENE	6	10.0	190	
NAPHTHALENE	8	10.0	140	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000010

Analytical Method: 8270-A98 AAB #: A2B08394

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 30-Aug-2002 Date Analyzed: 12-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	8	10.0	160	
ANTHRACENE	6	10.0	180	
BENZO(a)ANTHRACENE	5	10.0	190	
BENZO(b)FLUORANTHENE	6	10.0	170	
BENZO(g,h,i)PERYLENE	9	10.0	180	
BENZO(k)FLUORANTHENE	5	10.0	180	
BENZO(a)PYRENE	5	10.0	180	
CHRYSENE	5	10.0	190	
DIBENZ(a,h)ANTHRACENE	8	10.0	180	
FLUORANTHENE	7	10.0	180	
FLUORENE	7	10.0	170	
INDENO(1,2,3-c,d)PYRENE	9	10.0	180	
PHENANTHRENE	5	10.0	180	
PYRENE	6	10.0	180	
NAPHTHALENE	8	10.0	130	

Comments:

AFCEE
ORGANIC ANALYSES DATA PACKAGE

000062

Analytical Method: 8082-A98

AAB #: A2B08401

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771SW0101AA	A2863002
771SW0101AA	A2863002MS
771SW0101AA	A2863002SD
771SW0201AA	A2863001
771SW0600AE	A2863005
771SW0601AA	A2863003

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: Susan L. Mazur

Date: 9/25/96

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier	
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	~~M~~	LLM
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U	
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U	
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U	
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U	
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U	
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.058	~~M~~	LLM

cont
9/11/02

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.26	0.500	5.3	
PCB-1221 (AROCHLOR 1221)	0.44	0.500	0.44	U
PCB-1232 (AROCHLOR 1232)	0.91	0.500	0.91	U
PCB-1242 (AROCHLOR 1242)	0.45	0.500	0.45	U
PCB-1248 (AROCHLOR 1248)	0.26	0.500	0.26	U
PCB-1254 (AROCHLOR 1254)	0.20	0.500	0.20	U
PCB-1260 (AROCHLOR 1260)	0.14	0.500	5.9	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000015

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.26	0.500	12	
PCB-1221 (AROCHLOR 1221)	0.44	0.500	0.44	U
PCB-1232 (AROCHLOR 1232)	0.91	0.500	0.91	U
PCB-1242 (AROCHLOR 1242)	0.45	0.500	0.45	U
PCB-1248 (AROCHLOR 1248)	0.26	0.500	0.26	U
PCB-1254 (AROCHLOR 1254)	0.20	0.500	0.20	U
PCB-1260 (AROCHLOR 1260)	0.14	0.500	12	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000026

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.11	0.500	0.11	U
PCB-1221 (AROCHLOR 1221)	0.19	0.500	0.19	U
PCB-1232 (AROCHLOR 1232)	0.39	0.500	0.39	U
PCB-1242 (AROCHLOR 1242)	0.19	0.500	0.19	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.084	0.500	0.084	U
PCB-1260 (AROCHLOR 1260)	0.062	0.500	0.062	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AE Lab Sample ID: A2863005 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.11	0.500	0.11	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.38	0.500	0.38	U
PCB-1242 (AROCHLOR 1242)	0.19	0.500	0.19	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.083	0.500	0.083	U
PCB-1260 (AROCHLOR 1260)	0.061	0.500	0.061	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08401

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 3-Sep-2002 Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.37	0.500	0.37	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.058	U

Comments:

AFCEE
INORGANIC ANALYSES DATA PACKAGE

000110

Analytical Method: 6010-A98

AAB #: A2B08534

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & M

Field Sample ID	Lab Sample ID
771SW0101AA	A2863002
771SW0201AA	A2863001
771SW0201AA	A2863001MS
771SW0201AA	A2863001SD
771SW0600AE	A2863005
771SW0601AA	A2863003

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: for

Name: Susan L. Mazur

Date: 9/25/02

Title: Laboratory Director

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000111

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000112

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001MS Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	206	

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000113

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001SD Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	206	

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000114

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000115

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000116

Analytical Method: 6010-A98 AAB #: A2B08534

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AE Lab Sample ID: A2863005 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 5-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA PACKAGE

00012

Analytical Method: 6010-A98

AAB #: A2B09181

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & M

Field Sample ID	Lab Sample ID
771SW0101AA	A2863002
771SW0201AA	A2863001
771SW0600AE	A2863005
771SW0601AA	A2863003

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: Susan L. Mazur

Date: 9/25/92

Title: Laboratory Director

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000132

Analytical Method: 6010-A98 AAB #: A2B09181

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0201AA Lab Sample ID: A2863001 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 16-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000123

Analytical Method: 6010-A98 AAB #: A2B09181

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0101AA Lab Sample ID: A2863002 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 16-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000134

Analytical Method: 6010-A98 AAB #: A2B09181

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0601AA Lab Sample ID: A2863003 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 16-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000135

Analytical Method: 6010-A98 AAB #: A2B09181

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0600AE Lab Sample ID: A2B63005 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 29-Aug-2002 Date Extracted: _____ Date Analyzed: 16-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

FPM Group
Data Validation and Usability Report
FORMER GRIFFISS AIR FORCE BASE
Long-term Monitoring (LTM)
Groundwater Sampling
Contract No. F41624-95-D-8003
FPM Project No. 444-97-10

Data Package SDG No. A02-8476

Laboratory:	STL
Sample Report ID:	NY8A7867.5
Sample Matrix:	water
Number of Samples:	17
Analytical Protocol:	AFCEE QAPP, Version 3.0, with AFCEE approved lab variances
Data Reviewer:	Connie van Hoesel
Sample Date:	August 22, 2002

LIST OF DATA VALIDATION SAMPLES

This validation report pertains to the following environmental samples and corresponding QC samples:

Sample ID	*Date*	*QC Samples*	*Date*
771M0707AA	8/22/02	771M0707AS/AD: MS/MSD	8/22/02
771M0809AA	8/22/02		
771M0912AA	8/22/02	771M0912AC: Field duplicate	8/22/02
771M1012AA	8/22/02		
771M1107AA	8/22/02		
771M1218AA	8/22/02	771M1200AR: Trip blank	8/22/02
771SW0301AA	8/22/02	771SW0300AF: Ambient blank	8/22/02
		771SW0301AS/AD: MS/MSD	8/22/02
771SW0401AA	8/22/02	771SW0400AE: Equipment blank	8/22/02
771SW0501AA	8/22/02		

Notes:

Refer to attached chain-of-custody for detail sampling information and sample specific analyses requested, etc.
A, B – Primary environmental samples
E – Equipment blank
F – Field blank
C – Field duplicate
MS/MSD – Matrix spike/Matrix spike duplicate
All surface water (SW) samples above were analyzed for VOCs, SVOCs, PCBs, and total and dissolved lead.
All groundwater (M) samples above were analyzed for VOCs, SVOCs, and PCBs.

DELIVERABLES

The data deliverable report was per requirements and format of a full data deliverable EPA Contract Laboratory Protocol (CLP) and AFCEE QAPP format. The report consisted of the following major sections: lab attachment letter, case narrative, chain-of-custody, lab qualifier definitions, analytical results (sheet 2) based on analytical batch, calibration summaries, method blank summaries, laboratory control sample summaries, matrix spike/matrix spike duplicate summaries, holding time forms, surrogate compound and internal standard recoveries, GC/MS chromatographs, mass spectrum and backup QA/QC.

ANALYTICAL METHODS

The analytical test methods and QA/QC requirements used for the groundwater sample analysis was per methods as specified in the AFCEE Quality Assurance Project Plan, Version 3.0, EPA CLP, and EPA SW846 requirements. The analytical methods employed included: Volatile Organic Compounds (VOC) by EPA method SW8260B, and Semivolatile Organic Compounds (SVOC) by EPA method SW8270C, PCBs by EPA Method SW8082, and Metals by EPA Method SW6010B.

VALIDATION GUIDANCE

The analytical work was performed by CompuChem in accordance with the Air Force Center for Environmental Excellence (AFCEE), Quality Assurance Project Plan (QAPP), Version 3.0, and EPA SW846. The data was validated according to the protocols and QC requirements of the respective analytical methods and of the QAPP Version 3.0. For data usability purposes all values were further evaluated, including positive and non-detect results that were qualified "R" (Rejected) according to QAPP. The data usability analysis was based on the reviewer's professional judgment and on an assessment of how this data would fare with respect to the U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for Organic (and Inorganic) Data Review (February 1994).

QA/QC CRITERIA

The following QA/QC criteria were reviewed:

- Method detection limits and reporting limits (MDL, RL)
- Holding times, sample preservation and storage
- MS tune performance
- Initial and Continuing calibration summaries
- Second source calibration verification summary
- Method blanks
- Ambient, equipment, and trip blanks (as applicable)
- Field duplicate results
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD)

- Internal standard areas counts and retention times
- Laboratory control samples (LCS)
- Results reported between MDL and RL (F-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The items listed above were in compliance with AFCEE QAPP and USEPA criteria and protocols with exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

GENERAL NOTE:

MS/MSD

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices. Generally, these data alone cannot be used to evaluate the precision and accuracy of individual samples. A matrix spike and matrix spike duplicate analysis is an aliquot of sample spiked with known concentrations of all the analytes in the method. According to the AFCEE QAPP, the MS/MSD result is used to assess whether the sample matrix may bias the results. The AFCEE recommended frequency of analysis is one MS/MSD per 20 samples. Exceedances of either percent recovery (%Rec) of spike concentrations or relative percent difference (RPD) between the MS and MSD results, according to the QAPP require a "M" (matrix effect) qualifier for the specific analyte in all samples collected from the same site matrix as the parent. However, due to the varied nature of environmental samples, such as locations, depths, physical characteristics (dissolved and suspended solids, turbidity, pH, organic content, etc.), it is difficult to assign one set of MS/MSD sample analysis as truly representative of an entire site matrix. Therefore, based on the definition of this type of QA/QC sample, using professional judgment it is deemed inappropriate to qualify more than the actual parent sample due to a percent recovery or RPD exceedance. This approach is in accordance with the EPA National Functional guidelines, which states that the MS/MSD results are not used alone to qualify the entire data package, however, can be used in conjunction with other QC criteria to determine the need for some qualification of the data. Thus this data validation will take the following approach, for instances when specific analytes exceed QC limits in the MS/MSD analysis, results are qualified "M" in the parent sample only.

BLANKS

Blanks, including method, ambient, equipment and trip, which contained low levels of contaminants (between MDL and RL) were qualified by the laboratory as required by the QAPP with an "F" flag. The data review confirmed that these values were reportedly below the RLs

and since no qualification of associated field samples are required for blanks less than the RL, no further action was taken.

VOLATILE ORGANIC COMPOUNDS (VOC)

- The following table summarizes samples that were diluted at the listed dilution factors due to high target compound concentrations or to bring particular compound concentrations into linear calibration range. The detection limits of the analytes are elevated accordingly.

SAMPLE ID	DILUTION FACTOR
771SW0501AA	2
771SW0400AE	2

SEMIVOLATILE ORGANIC COMPOUNDS (SVOC)

- The following table summarizes QC exceedances of the LCS analyses, the spike compounds, LCS recoveries, and spike QC limits. When an LCS analyte is outside the acceptance limit, corrective action shall be performed by the laboratory. If the corrective action is ineffective in resolving the exceedance, then that analyte's results in all the associated samples (samples within the AFCEE analytical batch) are qualified. According to the QAPP, when the percent recovery (%Rec) is greater than the upper control limit, positive results are considered estimated flagged "J"; and non-detects do not require qualification. The associated sample results were qualified accordingly.

LCS ID *Spike Analytes*	*LCS* *%Rec*	*QC* *Limits*
SVOC		
A2B0820401		
Benzo(a)anthracene	112	56-100
A2B0854701		
Benzo(a)anthracene	109	56-100
A2B0854702		
Benzo(a)anthracene	103	56-100

- The following table summarizes QC exceedances of the matrix spike/matrix spike duplicate (MS/MSD) analysis for sample 771SW0301AS/AD. The spike analytes, MS recoveries, MSD recoveries, spike QC limits, and RPD between the MS and MSD are listed. The QC limit for the RPD for all the analytes is less than or equal to 20%. Thus as previously discussed in the general note section above, only these analytes in the parent sample 771SW0301AA are qualified with an "M" flag. A = acceptable result.

Spike Compounds	*MS %Rec*	*MSD %Rec*	*QC Limits*	*RPD %*
Benzo(a)anthracene	103	A	56-100	A

- The following table summarizes samples that were diluted at the listed dilution factors due to high target compound concentrations or to bring particular compound concentrations into linear calibration range. The detection limits of the analytes are elevated accordingly.

SAMPLE ID	DILUTION FACTOR
771SW0501AA	5
771SW0401AA	5

- Laboratory performance on individual samples is established by means of spiking activities. All sample are spiked with surrogate compounds prior to analysis so that an evaluation of the results of these compounds can be used as indicators for the performance of the compounds of interest. The following table summarizes QC exceedances for samples which exhibited surrogate compound recovery deficiencies. A = acceptable result.

SAMPLE ID (QC Limits %R)	2-fluoro-phenol (20-120)	2-Fluoro-biphenyl (48-120)	Nitro-benzene-d5 (41-120)	Phenol-d5 (20-120)	2,4,6-Tribro-mophenol (42-124)	p-Terphe-nyl-d14 (51-135)
771SW0400AE	8	19	15	6	16	17
771M0912AA	A	A	A	A	A	46
771M1107AA	A	A	A	A	A	46

The sample ID, surrogate compound, percent recoveries, and QC limits are listed. As per the requirements of the QAPP, these samples with poor surrogate recoveries were reextracted and reanalyzed. However, the reextraction exceeded the 7-day holding time for the samples, and reextraction was performed at 13 days. Due to this excessive holding time, the reextraction results were rejected and the initial analysis results were used. As per the QAPP, for the results of the initial analysis, for samples with recoveries greater than the upper control limit for any surrogate, positive sample results are considered estimated and flagged "J." For samples with recoveries less than the lower control limit, positive results are flagged "J" and non-detect results are considered unusable and flagged "R." However, for data usability purposes, using professional judgment, the USEPA National Functional Guideline approach was applied. Specifically, for SVOC analysis, qualification of results is only recommended when two or more

surrogates of the same fraction (either acid or base/neutral fraction) are exceeded. Therefore, applying this approach, only samples with both 2-fluorophenol and phenol-d5 exceedances required qualification of results due to two acid fraction surrogates outside the QC limit, and only samples with both 2-fluorobiphenyl and nitrobenzene-d5 exceedances required qualification of results due to two base/neutral fraction surrogates outside the QC limit. Therefore, for associated analytes positive results were flagged "J" and non-detects were flagged "UJ."

PCBs

- The following table summarizes QC exceedances of the matrix spike/matrix spike duplicate (MS/MSD) analysis for sample 771M0707AS/AD. The spike analytes, MS recoveries, MSD recoveries, spike QC limits, and RPD between the MS and MSD are listed. The QC limit for the RPD for all the analytes is less than or equal to 20%. Thus as previously discussed in the general note section above, only these analytes in the parent sample 771M0707AA are qualified with an "M" flag. A = acceptable result.

Spike Compounds	*MS %Rec*	*MSD %Rec*	*QC Limits*	*RPD %*
PCB-1260	A	33	50-122	61
PCB-1016	A	A	29-123	52

DATA USABILITY RESULTS

Based on the evaluation of all information in the analytical data groups, the results are highly usable with the data validation qualifiers as noted. Using the validation approach as presented above, the results are 100% usable with no rejected values.

AFCEE SUMMARY

All data are valid and usable with qualifications as noted in the data review.

Signed: Connie Van Hoesen Dated: 11/5/02

ATTACHMENTS

- Chain-of-Custody
- Laboratory's Case Narrative
- Definition of AFCEE Data Validation Qualifiers
- Definition of USEPA Data Validation Qualifiers
- Qualified final data validation results on annotated Lab Sheet 2s

ATTACHMENTS

DATA VALIDATION QUALIFIERS (AFCEE)

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

J - The analyte was positively identified, the quantitation is an estimation.

F - The analyte was positively identified but the associated numerical value is below the RL.

R - The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.

B - The analyte was found in an associated blank, as well as in the sample.

M - A matrix effect was present.

S - To be applied to all field screening data.

T - Tentatively identified compound (using GC/MS).

DATA VALIDATION QUALIFIERS (USEPA)

Organics

U - The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

AFCEE
ORGANIC ANALYSES DATA PACKAGE

000011

Analytical Method: 8260-A98

AAB #: A2B08473

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771M0707AA	A2847604
771M0707AD	A2847604SD
771M0707AS	A2847604MS
771M0809AA	A2847603
771M0912AA	A2847602
771M0912AC	A2847602FD
771M1012AA	A2847601
771M1107AA	A2847605
771M1200AR	A2847612
771M1218AA	A2847606
771SW0300AF	A2847610
771SW0301AA	A2847609
771SW0301AD	A2847609SD
771SW0301AS	A2847609MS
771SW0400AE	A2847611
771SW0401AA	A2847608
771SW0501AA	A2847607

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

for Name: Susan L. Mazur

Date: 7/25/01

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AA Lab Sample ID: A2847604 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AS Lab Sample ID: A2847604MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	11	
n-BUTYLBENZENE	0.22	0.500	8.7	
SEC-BUTYLBENZENE	0.18	0.500	9.5	
t-BUTYLBENZENE	0.17	0.500	9.5	
ETHYLBENZENE	0.18	0.500	10	
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	9.6	
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	8.8	
n-PROPYLBENZENE	0.18	0.500	9.7	
TOLUENE	0.16	0.500	9.9	
1,2,4-TRIMETHYLBENZENE	0.18	0.500	9.7	
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	9.6	
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	20	
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	10	
NAPHTHALENE	0.21	1.0	9.4	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AD Lab Sample ID: A2847604SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	11	
n-BUTYLBENZENE	0.22	0.500	8.8	
SEC-BUTYLBENZENE	0.18	0.500	9.5	
t-BUTYLBENZENE	0.17	0.500	9.6	
ETHYLBENZENE	0.18	0.500	10	
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	9.7	
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	8.9	
n-PROPYLBENZENE	0.18	0.500	9.9	
TOLUENE	0.16	0.500	10	
1,2,4-TRIMETHYLBENZENE	0.18	0.500	9.8	
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	9.7	
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	20	
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	10	
NAPHTHALENE	0.21	1.0	10	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0809AA Lab Sample ID: A2847603 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AA Lab Sample ID: A2847602 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AC Lab Sample ID: A2847602FD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000018

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1012AA Lab Sample ID: A2847601 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000019

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1107AA Lab Sample ID: A2847605 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.27	F
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000920

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1200AR Lab Sample ID: A2847612 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000921

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1218AA Lab Sample ID: A2847606 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000023

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0300AF Lab Sample ID: A2847610 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AA Lab Sample ID: A2847609 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.16	U
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000024

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AS Lab Sample ID: A2847609MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	10	
n-BUTYLBENZENE	0.22	0.500	9.8	
SEC-BUTYLBENZENE	0.18	0.500	10	
t-BUTYLBENZENE	0.17	0.500	10	
ETHYLBENZENE	0.18	0.500	10	
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	9.9	
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	9.5	
n-PROPYLBENZENE	0.18	0.500	10	
TOLUENE	0.16	0.500	9.6	
1,2,4-TRIMETHYLBENZENE	0.18	0.500	10	
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	9.8	
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	20	
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	10	
NAPHTHALENE	0.21	1.0	11	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000025

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AD Lab Sample ID: A2847609SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	10	
n-BUTYLBENZENE	0.22	0.500	9.8	
SEC-BUTYLBENZENE	0.18	0.500	10	
t-BUTYLBENZENE	0.17	0.500	10	
ETHYLBENZENE	0.18	0.500	10	
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	9.8	
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	9.4	
n-PROPYLBENZENE	0.18	0.500	10	
TOLUENE	0.16	0.500	9.6	
1,2,4-TRIMETHYLBENZENE	0.18	0.500	10	
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	9.8	
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	20	
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	10	
NAPHTHALENE	0.21	1.0	11	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000026

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611 Matrix: WATER

% Solids: _____ Dilution: 2.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.30	0.500	0.30	U
n-BUTYLBENZENE	0.44	0.500	0.44	U
SEC-BUTYLBENZENE	0.36	0.500	0.36	U
t-BUTYLBENZENE	0.34	0.500	0.34	U
ETHYLBENZENE	0.36	0.500	0.36	U
ISOPROPYLBENZENE (CUMENE)	0.34	0.500	0.34	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.44	0.500	0.44	U
n-PROPYLBENZENE	0.36	0.500	0.36	U
TOLUENE	0.32	0.500	0.32	U
1,2,4-TRIMETHYLBENZENE	0.36	0.500	0.36	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.34	0.500	0.34	U
M,P-XYLENE(SUM OF ISOMERS)	0.70	0.500	0.70	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.34	0.500	0.34	U
NAPHTHALENE	0.42	1.0	0.42	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000027

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0401AA Lab Sample ID: A2847608 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.15	0.500	0.15	U
n-BUTYLBENZENE	0.22	0.500	0.22	U
SEC-BUTYLBENZENE	0.18	0.500	0.18	U
t-BUTYLBENZENE	0.17	0.500	0.17	U
ETHYLBENZENE	0.18	0.500	0.18	U
ISOPROPYLBENZENE (CUMENE)	0.17	0.500	0.17	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.22	0.500	0.22	U
n-PROPYLBENZENE	0.18	0.500	0.18	U
TOLUENE	0.16	0.500	0.69	
1,2,4-TRIMETHYLBENZENE	0.18	0.500	0.18	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.17	0.500	0.17	U
M,P-XYLENE(SUM OF ISOMERS)	0.35	0.500	0.35	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.17	0.500	0.17	U
NAPHTHALENE	0.21	1.0	0.21	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000028

Analytical Method: 8260-A98 AAB #: A2B08473

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0501AA Lab Sample ID: A2847607 Matrix: WATER

% Solids: _____ Dilution: 2.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
BENZENE	0.30	0.500	0.30	U
n-BUTYLBENZENE	0.44	0.500	0.44	U
SEC-BUTYLBENZENE	0.36	0.500	0.36	U
t-BUTYLBENZENE	0.34	0.500	0.34	U
ETHYLBENZENE	0.36	0.500	0.36	U
ISOPROPYLBENZENE (CUMENE)	0.34	0.500	0.34	U
P-CYMENE (p-ISOPROPYLTOLUENE)	0.44	0.500	0.44	U
n-PROPYLBENZENE	0.36	0.500	0.36	U
TOLUENE	0.32	0.500	0.32	U
1,2,4-TRIMETHYLBENZENE	0.36	0.500	0.36	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	0.34	0.500	0.34	U
M,P-XYLENE(SUM OF ISOMERS)	0.70	0.500	0.70	U
O-XYLENE (1,2-DIMETHYLBENZENE)	0.34	0.500	0.34	U
NAPHTHALENE	0.42	1.0	0.42	U

Comments:

AFCEE
ORGANIC ANALYSES DATA PACKAGE

Analytical Method: 8270-A98

AAB #: A2B08204

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771M0707AA	A2847604
771M0707AD	A2847604SD
771M0707AS	A2847604MS
771M0809AA	A2847603
771M0912AA	A2847602
771M0912AC	A2847602FD
771M1012AA	A2847601
771M1107AA	A2847605
771M1218AA	A2847606
771SW0301AA	A2847609
771SW0301AD	A2847609SD
771SW0301AS	A2847609MS
771SW0400AE	A2847611
771SW0401AA	A2847608
771SW0501AA	A2847607

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ for

Name: Susan L. Mazur

Date: 9/20/02

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA PACKAGE

Analytical Method: 8270-A98 AAB #: A2B08547

Lab Name: SIL Buffalo Contract #: _____

Base/Command: Griffiss Airforce Base Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771M0912AA	A2847602RE
771M1107AA	A2847605RE
771SW0400AE	A2847611RE

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Susan L. Mazur

Date: 9/25/98 Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AA Lab Sample ID: A2847604 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AD Lab Sample ID: A2847604SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	82	
ANTHRACENE	3	10.0	92	
BENZO(a)ANTHRACENE	2	10.0	95	
BENZO(b)FLUORANTHENE	3	10.0	100	
BENZO(g,h,i)PERYLENE	4	10.0	92	
BENZO(k)FLUORANTHENE	2	10.0	100	
BENZO(a)PYRENE	2	10.0	100	
CHRYSENE	3	10.0	96	
DIBENZ(a,h)ANTHRACENE	4	10.0	90	
FLUORANTHENE	4	10.0	94	
FLUORENE	4	10.0	90	
INDENO(1,2,3-c,d)PYRENE	5	10.0	92	
PHENANTHRENE	3	10.0	95	
PYRENE	3	10.0	100	
NAPHTHALENE	4	10.0	61	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AS Lab Sample ID: A2847604MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	84	
ANTHRACENE	3	10.0	93	
BENZO(a)ANTHRACENE	2	10.0	94	
BENZO(b)FLUORANTHENE	3	10.0	100	
BENZO(g,h,i)PERYLENE	4	10.0	92	
BENZO(k)FLUORANTHENE	2	10.0	100	
BENZO(a)PYRENE	2	10.0	100	
CHRYSENE	3	10.0	93	
DIBENZ(a,h)ANTHRACENE	4	10.0	93	
FLUORANTHENE	4	10.0	100	
FLUORENE	4	10.0	90	
INDENO(1,2,3-c,d)PYRENE	5	10.0	95	
PHENANTHRENE	3	10.0	96	
PYRENE	3	10.0	100	
NAPHTHALENE	4	10.0	67	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0809AA Lab Sample ID: A2847603 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AA Lab Sample ID: A2847602 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier	
ACENAPHTHENE	4	10.0	4	U	
ANTHRACENE	3	10.0	3	U	
BENZO(a)ANTHRACENE	2	10.0	2	~~U~~	U
BENZO(b)FLUORANTHENE	3	10.0	3	~~U~~ R	U
BENZO(g,h,i)PERYLENE	4	10.0	4	~~U~~ R	U
BENZO(k)FLUORANTHENE	2	10.0	2	U	
BENZO(a)PYRENE	2	10.0	2	U	
CHRYSENE	2	10.0	2	~~U~~	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	~~U~~ R	U
FLUORANTHENE	4	10.0	4	U	
FLUORENE	4	10.0	4	U	
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	~~U~~ R	U
PHENANTHRENE	3	10.0	3	U	
PYRENE	3	10.0	3	~~U~~	U
NAPHTHALENE	4	10.0	4	U	

Comments:

11/5/02

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AC Lab Sample ID: A2847602FD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1012AA Lab Sample ID: A2847601 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1107AA Lab Sample ID: A2847605 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier	
ACENAPHTHENE	4	10.0	4	U	
ANTHRACENE	3	10.0	3	U	
BENZO(a)ANTHRACENE	2	10.0	2	~~R~~	U
BENZO(b)FLUORANTHENE	3	10.0	3	~~U~~ ~~R~~	U
BENZO(g,h,i)PERYLENE	4	10.0	4	~~U~~ ~~R~~	U
BENZO(k)FLUORANTHENE	2	10.0	2	U	
BENZO(a)PYRENE	2	10.0	2	U	
CHRYSENE	3	10.0	3	~~R~~	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	~~U~~ ~~R~~	U
FLUORANTHENE	4	10.0	4	U	
FLUORENE	4	10.0	4	U	
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	~~U~~ ~~R~~	U
PHENANTHRENE	3	10.0	3	U	
PYRENE	3	10.0	3	~~R~~	U
NAPHTHALENE	4	10.0	4	U	

CAH 11/5/02

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1218AA Lab Sample ID: A2847606 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AA Lab Sample ID: A2847609 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

UM

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AD Lab Sample ID: A2847609SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	81	
ANTHRACENE	3	10.0	89	
BENZO(a)ANTHRACENE	2	10.0	94	
BENZO(b)FLUORANTHENE	3	10.0	99	
BENZO(g,h,i)PERYLENE	4	10.0	100	
BENZO(k)FLUORANTHENE	2	10.0	96	
BENZO(a)PYRENE	2	10.0	100	
CHRYSENE	3	10.0	94	
DIBENZ(a,h)ANTHRACENE	4	10.0	97	
FLUORANTHENE	4	10.0	88	
FLUORENE	4	10.0	87	
INDENO(1,2,3-c,d)PYRENE	4	10.0	98	
PHENANTHRENE	3	10.0	91	
PYRENE	3	10.0	100	
NAPHTHALENE	4	10.0	64	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AS Lab Sample ID: A2847609MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	86	
ANTHRACENE	3	10.0	93	
BENZO(a)ANTHRACENE	2	10.0	100	
BENZO(b)FLUORANTHENE	3	10.0	110	
BENZO(g,h,i)PERYLENE	4	10.0	100	
BENZO(k)FLUORANTHENE	2	10.0	100	
BENZO(a)PYRENE	2	10.0	110	
CHRYSENE	3	10.0	99	
DIBENZ(a,h)ANTHRACENE	4	10.0	100	
FLUORANTHENE	4	10.0	90	
FLUORENE	4	10.0	92	
INDENO(1,2,3-c,d)PYRENE	4	10.0	100	
PHENANTHRENE	3	10.0	94	
PYRENE	3	10.0	110	
NAPHTHALENE	4	10.0	74	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 3-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	~~R~~ UJ
ANTHRACENE	3	10.0	3	~~R~~
BENZO(a)ANTHRACENE	2	10.0	2	~~R~~
BENZO(b)FLUORANTHENE	3	10.0	3	~~R~~
BENZO(g,h,i)PERYLENE	4	10.0	4	~~R~~
BENZO(k)FLUORANTHENE	2	10.0	2	~~R~~
BENZO(a)PYRENE	2	10.0	2	~~R~~
CHRYSENE	3	10.0	3	~~R~~
DIBENZ(a,h)ANTHRACENE	4	10.0	4	~~R~~
FLUORANTHENE	4	10.0	4	~~R~~
FLUORENE	4	10.0	4	~~R~~
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	~~R~~
PHENANTHRENE	3	10.0	3	~~R~~
PYRENE	3	10.0	3	~~R~~
NAPHTHALENE	4	10.0	4	~~R~~

Comments:

CVA 9/11/502

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0401AA Lab Sample ID: A2847608 Matrix: WATER

% Solids: _____ Dilution: 5.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 3-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	20	10.0	20	U
ANTHRACENE	14	10.0	14	U
BENZO(a)ANTHRACENE	12	10.0	12	U
BENZO(b)FLUORANTHENE	14	10.0	14	U
BENZO(g,h,i)PERYLENE	21	10.0	21	U
BENZO(k)FLUORANTHENE	12	10.0	12	U
BENZO(a)PYRENE	12	10.0	12	U
CHRYSENE	13	10.0	13	U
DIBENZ(a,h)ANTHRACENE	18	10.0	18	U
FLUORANTHENE	18	10.0	18	U
FLUORENE	18	10.0	18	U
INDENO(1,2,3-c,d)PYRENE	22	10.0	22	U
PHENANTHRENE	13	10.0	13	U
PYRENE	13	10.0	13	U
NAPHTHALENE	19	10.0	19	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98 AAB #: A2B08204

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0501AA Lab Sample ID: A2847607 Matrix: WATER

% Solids: _____ Dilution: 5.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 3-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	21	10.0	21	U
ANTHRACENE	15	10.0	15	U
BENZO(a)ANTHRACENE	12	10.0	12	U
BENZO(b)FLUORANTHENE	15	10.0	15	U
BENZO(g,h,i)PERYLENE	22	10.0	22	U
BENZO(k)FLUORANTHENE	12	10.0	12	U
BENZO(a)PYRENE	12	10.0	12	U
CHRYSENE	13	10.0	13	U
DIBENZ(a,h)ANTHRACENE	19	10.0	19	U
FLUORANTHENE	18	10.0	18	U
FLUORENE	19	10.0	19	U
INDENO(1,2,3-c,d)PYRENE	23	10.0	23	U
PHENANTHRENE	14	10.0	14	U
PYRENE	14	10.0	14	U
NAPHTHALENE	19	10.0	19	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000070

Analytical Method: 8270-A98 AAB #: A2B08547

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AA Lab Sample ID: A2847602RE Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	5	10.0	5	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Exceeded Holding Time — use original results

Comments:

CWH 11/5/02

AFCEE FORM O-2

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0000.1

Analytical Method: 8270-A98 AAB #: A2B08547

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1107AA Lab Sample ID: A2847605RE Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Exceeded holding time — use original results

Comments:

11/5/02

AFCEE FORM O-2

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

00012

Analytical Method: 8270-A98 AAB #: A2B08547

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611RE Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 4-Sep-2002 Date Analyzed: 6-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
ACENAPHTHENE	4	10.0	4	U
ANTHRACENE	3	10.0	3	U
BENZO(a)ANTHRACENE	2	10.0	2	U
BENZO(b)FLUORANTHENE	3	10.0	3	U
BENZO(g,h,i)PERYLENE	4	10.0	4	U
BENZO(k)FLUORANTHENE	2	10.0	2	U
BENZO(a)PYRENE	2	10.0	2	U
CHRYSENE	3	10.0	3	U
DIBENZ(a,h)ANTHRACENE	4	10.0	4	U
FLUORANTHENE	4	10.0	4	U
FLUORENE	4	10.0	4	U
INDENO(1,2,3-c,d)PYRENE	4	10.0	4	U
PHENANTHRENE	3	10.0	3	U
PYRENE	3	10.0	3	U
NAPHTHALENE	4	10.0	4	U

Exceeded holding time — use original results

CBA 11/5/02

Comments:

_____

_____

_____

_____

AFCEE
ORGANIC ANALYSES DATA PACKAGE

Analytical Method: 8082-A98

AAB #: A2B08200

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & Molna

Field Sample ID	Lab Sample ID
771M0707AA	A2847604
771M0707AD	A2847604SD
771M0707AS	A2847604MS
771M0809AA	A2847603
771M0912AA	A2847602
771M0912AC	A2847602FD
771M1012AA	A2847601
771M1107AA	A2847605
771M1218AA	A2847606
771SW0301AA	A2847609
771SW0301AD	A2847609SD
771SW0301AS	A2847609MS
771SW0400AE	A2847611
771SW0401AA	A2847608
771SW0501AA	A2847607

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ for

Name: Susan L. Mazur

Date: 9/25/02

Title: Laboratory Director

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000116

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AA Lab Sample ID: A2847604 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	~~M~~ UM
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.058	~~M~~ UM

@ 04 CLA 11/5/02

Comments:

_____

_____

_____

_____

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AS Lab Sample ID: A2847604MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.11	0.500	4.7	
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.38	0.500	0.38	U
PCB-1242 (AROCHLOR 1242)	0.19	0.500	0.19	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.083	0.500	0.083	U
PCB-1260 (AROCHLOR 1260)	0.061	0.500	3.2	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000118

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0707AD Lab Sample ID: A2847604SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.11	0.500	2.8	
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.38	0.500	0.38	U
PCB-1242 (AROCHLOR 1242)	0.19	0.500	0.19	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.083	0.500	0.083	U
PCB-1260 (AROCHLOR 1260)	0.061	0.500	1.7	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000119

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0809AA Lab Sample ID: A2847603 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.058	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000120

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AA Lab Sample ID: A2847602 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.099	0.500	0.099	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.35	0.500	0.35	U
PCB-1242 (AROCHLOR 1242)	0.17	0.500	0.17	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.075	0.500	0.075	U
PCB-1260 (AROCHLOR 1260)	0.056	0.500	0.056	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M0912AC Lab Sample ID: A2847602FD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.35	0.500	0.35	U
PCB-1242 (AROCHLOR 1242)	0.17	0.500	0.17	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.076	0.500	0.076	U
PCB-1260 (AROCHLOR 1260)	0.056	0.500	0.056	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000122

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1012AA Lab Sample ID: A2847601 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 27-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.11	0.500	0.11	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.38	0.500	0.38	U
PCB-1242 (AROCHLOR 1242)	0.19	0.500	0.19	U
PCB-1248 (AROCHLOR 1248)	0.11	0.500	0.11	U
PCB-1254 (AROCHLOR 1254)	0.083	0.500	0.083	U
PCB-1260 (AROCHLOR 1260)	0.061	0.500	0.061	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1107AA Lab Sample ID: A2847605 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.078	0.500	0.078	U
PCB-1260 (AROCHLOR 1260)	0.057	0.500	0.057	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771M1218AA Lab Sample ID: A2847606 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.077	0.500	0.077	U
PCB-1260 (AROCHLOR 1260)	0.057	0.500	0.057	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AA Lab Sample ID: A2847609 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.058	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000126

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AS Lab Sample ID: A2847609MS Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.099	0.500	4.1	
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.35	0.500	0.35	U
PCB-1242 (AROCHLOR 1242)	0.17	0.500	0.17	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.075	0.500	0.075	U
PCB-1260 (AROCHLOR 1260)	0.055	0.500	3.5	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AD Lab Sample ID: A2847609SD Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.099	0.500	4.4	
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.35	0.500	0.35	U
PCB-1242 (AROCHLOR 1242)	0.17	0.500	0.17	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.075	0.500	0.075	U
PCB-1260 (AROCHLOR 1260)	0.055	0.500	3.5	

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.099	0.500	0.099	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.35	0.500	0.35	U
PCB-1242 (AROCHLOR 1242)	0.17	0.500	0.17	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.075	0.500	0.075	U
PCB-1260 (AROCHLOR 1260)	0.055	0.500	0.055	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0401AA Lab Sample ID: A2847608 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.17	0.500	0.17	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.077	0.500	0.077	U
PCB-1260 (AROCHLOR 1260)	0.057	0.500	0.057	U

Comments:

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8082-A98 AAB #: A2B08200

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0501AA Lab Sample ID: A2847607 Matrix: WATER

% Solids: _____ Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 27-Aug-2002 Date Analyzed: 28-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1016 (AROCHLOR 1016)	0.10	0.500	0.10	U
PCB-1221 (AROCHLOR 1221)	0.18	0.500	0.18	U
PCB-1232 (AROCHLOR 1232)	0.36	0.500	0.36	U
PCB-1242 (AROCHLOR 1242)	0.18	0.500	0.18	U
PCB-1248 (AROCHLOR 1248)	0.10	0.500	0.10	U
PCB-1254 (AROCHLOR 1254)	0.079	0.500	0.079	U
PCB-1260 (AROCHLOR 1260)	0.058	0.500	0.49	F

Comments:

AFCEE
INORGANIC ANALYSES DATA PACKAGE

0001 6

Analytical Method: 6010-A98

AAB #: A2B08294

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & M

Field Sample ID	Lab Sample ID
771SW0301AA	A2847609
771SW0301AD	A2847609SD
771SW0301AS	A2847609MS
771SW0400AE	A2847611
771SW0401AA	A2847608
771SW0501AA	A2847607

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: Susan L. Mazur

Date: 9/25/02

Title: Laboratory Director

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000157

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0501AA Lab Sample ID: A2847607 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	11.2	F

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0001: 8

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0401AA Lab Sample ID: A2847608 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	25.0	F

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0001 9

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AA Lab Sample ID: A2847609 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000160

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AS Lab Sample ID: A2847609MS Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	195	

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0001-1

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AD Lab Sample ID: A2847609SD Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	195	

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0001-2

Analytical Method: 6010-A98 AAB #: A2B08294

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: 28-Aug-2002 Date Analyzed: 30-Aug-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	4.0	60.0	4.0	U

Comments:

AFCEE
INORGANIC ANALYSES DATA PACKAGE

000127

Analytical Method: 6010-A98

AAB #: A2B09174

Lab Name: STL Buffalo

Contract #: _____

Base/Command: Griffiss Airforce Base

Prime Contractor: Fanning, Phillips & M

Field Sample ID	Lab Sample ID
771SW0301AA	A2847609
771SW0301AD	A2847609SD
771SW0301AS	A2847609MS
771SW0400AE	A2847611
771SW0401AA	A2847608
771SW0501AA	A2847607

Comments:

See Case Narrative

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ for

Name: Susan L. Mazur

Date: 9/25/96

Title: Laboratory Director

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

00013

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0501AA Lab Sample ID: A2847607 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000179

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0401AA Lab Sample ID: A2847608 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000150

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AA Lab Sample ID: A2847609 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000191

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AS Lab Sample ID: A2847609MS Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	208	

Comments:

_____

_____

_____

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000182

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0301AD Lab Sample ID: A2847609SD Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	206	

Comments:

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000187

Analytical Method: 6010-A98 AAB #: A2B09174

Lab Name: STL Buffalo Contract #: _____

Field Sample ID: 771SW0400AE Lab Sample ID: A2847611 Matrix: WATER

% Solids: 0.0 Dilution: 1.00

Date Received: 23-Aug-2002 Date Extracted: _____ Date Analyzed: 4-Sep-2002

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	MDL	PQL	Concentration	Qualifier
LEAD	2.5	60.0	2.5	U

Comments: