Quality Control Summary Report for the 2002 Addendum Site Investigation of Area of Concern 9 at the Former Griffiss Air Force Base

Former Griffiss Air Force Base Rome, New York

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List of Acronyms

AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AFFF	Aqueous Film Forming Foam
AOC	Area of Concern
ASC	Analytical Services Center
CLP	Contract Laboratory Program
COC	chain-of-custody
/D	duplicate
E & E	Ecology and Environment, Inc.
ERDC	United States Army Engineer Research and Development Center
ERPMIS	Environmental Resource Program Information Management System
FSP	Field Sampling Plan
GAFB	Griffiss Air Force Base
GP	Geoprobe location
GW	groundwater sample
IDW	investigation derived waste
J	estimated result
Law	Law Environmental, Inc.
LCS	laboratory control sample
LIMS	Laboratory Information Management System
mg/L	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
OVA	organic vapor analyzer
ppb	parts per billion

List of Acronyms (Cont.)

PQL	practical quantitation limit
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
QCP	Quality Control Plan
QCSR	Quality Control Summary Report
RPD	relative percent difference
/S	split
SD	sediment sample
SI	Supplemental Investigation
SOP	Standard Operating Procedure
SS	subsurface soil sample
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TP	test pit
TPH	total petroleum hydrocarbons
U	non-detect result
UJ	estimated non-detect result
USACE	Unite States Army Corps of Engineers
USEPA	Environmental Protection Agency
VOC	volatile organic compound
WAD	Work Authorization Directive
WSA	Weapons Storage Area
µg/L	micrograms per liter

Purpose of Document

The purpose of this Supplemental Investigation (SI) additional sampling, at Area of Concern (AOC) 9: Weapons Storage area (WSA) Landfill located at the former Griffiss Air Force Base is to define the source area of the chlorobenzene contamination detected at in the groundwater during the previous SI, to determine if petroleum hydrocarbon contamination is present in the areas where sheens were observed during test pit excavations, and to determine if the Aqueous Film Forming Foam (AFFF) lagoon is a source of contamination.

This quality control summary report (QCSR) presents the results of the analytical program and provides an opportunity to review the completeness and quality of the data collected. The purpose of this QCSR is to:

- Summarize sample collection, handling, and analytical procedures for the sampling investigation conducted at each site;
- Identify any deviations from the proposed sampling and analysis procedures;
- Present the analytical results for the field samples collected; and
- Discuss the results of the data quality evaluation associated with the sampling events.

Evaluation of any contaminants detected will be provided in a separate data summary report.

1 Introduction

Ecology and Environment, Inc. (E & E), under contract to the United States Army Corps of Engineers (USACE), Kansas City District, Contract DACW41-99-D-9005, Task Order 0001, Work Authorization Directive (WAD) 09, conducted additional site investigation activities at AOC 9, at the former Griffiss Air Force Base (GAFB) in Rome, New York. This QCSR summarizes sampling results at Area of Concern 9.

2 Data Collection, Data Management, and Quality Control Procedures

2.1 Sample Collection Procedures

The field investigation consisted of the collection of environmental samples in accordance with the June 2002 Final 2002 Addendum to the March 1997 Work Plan for Site Investigations of Areas of Concern (E & E 2002) (see Appendix A). There were no variances in field methodologies or deviations from planned activities that occurred during the investigation. Field Adjustment Forms are sent to all parties that received the work plan. Daily Activity Summary reports were prepared by E & E and submitted to USACE and Air Force Base Conversion Agency (AFBCA) (see Appendix B). All field activities were carried out in accordance with the approved Quality Control Plan (QCP). An E & E QC inspector visited the site once during the field activities. The field inspection form is included in Appendix F under system audits.

Methodologies used for field notebooks; sample labeling, packaging, and custody; equipment decontamination; collection of investigation-derived waste (IDW); and site survey were performed in accordance with the above referenced June 2002 Field Sampling Plan (FSP), and the March 1997 Work Plan for Site Investigations of Areas of Concern (E & E 1997) and documents referenced therein.

2.2 Field QA/QC Sample Requirements

Quality assurance/quality control (QA/QC) samples were collected on a site-wide basis according to the criteria established in Section 10 of Law Engineering and Environmental Services, Inc. (Law) Quality Assurance Project Plan (QAPP) (Law 1993), except as modified in E & E's QAPP addendum (E & E 1997 and 2002).

In summary, these field QA/QC sample requirements are as follows:

- Field QC duplicates collected at a frequency of 10% of the number of field samples collected;

- Field QA split samples collected from the same sample points as the QC duplicate samples, at a frequency of 10% of the number of field samples collected;

- Rinsates at a frequency of 10% of the number of field samples collected were required for samples collected with non-dedicated equipment. There were no rinsates planned for this program in the FSP because the only non dedicated equipment was the backhoe bucket which did not come into contact with the actual sample.

- Matrix spike/matrix spike duplicates (MS/MSDs) for laboratory QC collected at a frequency of 20% of the samples collected;

- No ambient condition blanks were collected; and

- One trip blank was submitted for each shipment containing water samples requiring volatile organic analysis.

- A water sample (drill water) was also collected from the water tanks carrying/storing the water used for decontaminating drilling equipment.

2.3 Contracted Analytical Laboratories

E & E's Analytical Services Center (ASC) in Lancaster, New York provided the laboratory analyses. QA split samples were sent to the United States Army Engineer Research and Development Center (ERDC) Quality Assurance Laboratory in Omaha, Nebraska, for analysis.

2.4 Sample Handling and Custody Procedures

Field samples were collected, preserved, and transported to the appropriate laboratory according to the procedures described in the FSP. Deviations from these sample handling and custody procedures are reported under the appropriate sampling area in Section 3 of this document.

All chain-of-custody (COC) documentation associated with the collection of samples for this investigation are included in Appendix C.

2.5 Equipment Calibration and Maintenance

Calibration procedures for the field and laboratory instruments are presented in Sections 8.1 and 8.2 of Law's QAPP (Law 1993), except as modified by E & E's FSP and QAPP. Deviations from these calibration and maintenance procedures are reported under the appropriate sampling area in Section 3 of this document.

2.6 Quality Assurance Objectives

Data uses and QA objectives were determined by E & E and are included in E & E's FSP (E & E 2002).

2.7 Procedures for Data Quality Evaluation

Data quality evaluations focus on deviations from expected QC activities, problems encountered, and the acceptability of the methodologies used. Sample integrity is based on information provided on the cooler receipt form, the COC documents, statements in the laboratory case narratives, and field notebooks. The evaluation of the analytical data with respect to project- and method-specific quality objectives was performed using the results of laboratory method blank analyses, laboratory control samples (LCS), MS/MSD analyses, and surrogate recoveries, where applicable. Field duplicate data were used to evaluate the accuracy and precision of the analytical results and field sample collection methods.

The ASC prepares one data package per laboratory work order. Data validation memoranda are generated for all laboratory work orders and describe the data qualifications in detail. These memoranda contain all the details of the data quality review. Copies of all the data validation memoranda is provided in Appendix D. The key factors in the data quality review and validation procedures are highlighted for each sampling area in Section 3.

The sections that follow present the evaluation procedures used for laboratory and field QC samples.

2.7.1 Laboratory Data Quality Evaluation

The procedures used by E & E to evaluate and validate analytical data are described in Section 9.2.1 of Law's QAPP (Law 1993), except as modified by E & E's QAPP in the FSP. Data evaluation acceptance limits associated with this project are presented in Appendices L, K and M of Law's QAPP (Law 1993) as modified by E & E's QAPP addendum (E & E 2000). A senior chemist performed all data quality evaluation and qualification of the data summary tables. The data were qualified using the following documents as the basis:

- United States Environmental Protection Agency (USEPA) Contract Laboratory Program *National Functional Guidelines for Organic Data Review* (USEPA 1999); and

- USEPA Contract Laboratory Program *National Functional Guidelines for Inorganic Data Review* (USEPA 1994).

Data associated with laboratory and field QC samples that meet all acceptance limits were not qualified and are considered usable as reported. Data associated with laboratory and field QC samples that exceeded some of the acceptance limits or had other analytical problems are qualified as described in Section 3.

2.7.2 Field Data Quality Evaluation

QA and QC samples were collected to assess the quality of the field sampling activities. These QA/QC field samples include duplicates, splits, and rinsate blanks. The evaluation of these samples was based on completeness of data, results of rinsate blank analysis, and relative percent differences (RPDs) of field duplicate results. The evaluation criteria (RPD categories) used for field duplicates can be found in Section 4.3.1 of Law's QAPP (Law 1993).

To facilitate the comparison of the original field, QC duplicate, and QA split sample data, all samples from a common sample point were assigned the same client ID number. The QC duplicate samples were assigned a suffix of "/D," and QA split samples were assigned a suffix of "/S."

2.8 Data Management

ASC laboratory data collection, data reduction, and data handling procedures are presented in the ASC's standard operating procedures (SOPs) and Laboratory QA Manual (E & E 2002a).

The laboratory stores analytical results in both electronic and hard copy formats. Hard copy data packs for each laboratory work order are validated, and qualifiers are recorded on the data pack. Validation memoranda documenting the analytical procedures and results of the data evaluation are created for all laboratory work orders. Validation memoranda and data packages associated with this investigation were sent to the USACE chemist after each validation of all data packages was completed.

All analytical results are managed electronically using the E & E's Laboratory Information Management System (LIMS). Analytical

results are generally read directly off of the instruments. The data are transmitted electronically and checked as part of the data validation process. Validation qualifiers are added to the appropriate samples in the database. Analytical results are electronically transferred to a final database used to generate data summary reports.

Results for surrogate parameters are reported with the standard analytical results on the "Complete Analytical Data" tables. Other laboratory QC results, including MS/MSDs and laboratory method blanks, are reported on separate tables.

Analytical data associated with the investigation will be provided electronically to the Air Force Center for Environmental Excellence (AFCEE) in the required format for inclusion in the Environmental Resources Program Information Management System (ERPIMS). ASC will provide data to E & E in compliance with the latest version of ERPTools/Lab and E & E will subsequently provide data to AFCEE in compliance with the latest version of the ERPIMS Data Loading Handbook. ERPTools/Lab and /PC incorporate a number of automatic error checking routines to identify duplicate record sets; incorrect date/time/number formats; invalid codes; failure to complete key required data fields essential for file integrity; and field, record, and submission level validation (AFCEE 1997).

2.9 Location of Data

A complete set of the analytical results are contained in the summary tables presented in Section 3 of this report. The QCSR (two copies) is forwarded to Mr. Phil Rosewicz of the USACE Kansas City District. The original data packages were forwarded to Ms. Daksha Dalal of the USACE, Kansas City District. Duplicate data packages are kept in the ASC. An electronic copy of the data is kept in the ERPIMS database at Brooks Air Force Base, Texas and in a project-specific database maintained by E & E.

3 AOC 9 Sampling, Analysis, and Quality Control Results

This section describes the proposed sampling for AOC 9 and any deviations from the work plan or the QAPP, and includes a description of the data quality review on a sampling area-specific basis. Tabulations of the quality controlled analytical results are also included in this section. The appendices report supportive information, such as tables describing the proposed work (Appendix A), field quality control reports (Appendix B), COC documentation (Appendix C), validation memoranda (Appendix D), lab case narratives (Appendix E), and Systems Audit documentation (Appendix F). The data in the appendices are sorted in chronological order of the sampling events.

The samples collected at AOC 9 are summarized on Table 3-1 Sample Listing.

3.1 Proposed Sample Collection and Analytical Requirements

The objectives of this study are to more clearly define the source area of the chlorobenzene contamination detected in the groundwater during the spring 2000 SI, to determine if petroleum hydrocarbon contamination is present in the areas where sheens were observed during the test pit excavations, and to determine if the AFFF lagoon is a source of contamination. According to the FSP, sampling activities were to include:

- Five Geoprobe groundwater borings were to be installed at each of 11 locations for a total of 55 borings. Groundwater-screening samples were to be collected at each boring location. The Geoprobe groundwater samples were to be collected in three phases. Phase I was to consist of 25 groundwater samples (five locations) and the results were to be used to determine the locations of the 15 Phase II samples (three locations). The Phase I and II groundwater screening samples were to be analyzed for Low Level select list volatile organic compounds (VOCs) using Method SW 8260B with a 24-hour turnaround schedule. The results of the Phase I and II samples were then to be used to determine the locations of the remaining 15 Phase

III samples (three locations). The Phase III samples were to be analyzed for the same Low Level select list VOCs using Method SW 8260B with a standard turnaround schedule (28 days).

- Two Geoprobe soil borings were to be installed one in the up-gradient portion of the chlorobenzene source area and one on the downgradient edge of the AFFF lagoon. Three subsurface soil samples were to be collected from each of the borings. And analyzed for Target Compound List (TCL) VOCs by Method SW 8260B, TCL semivolatile organic compounds (SVOCs) by Method SW 8270C, TCL pesticides/ polychlorinated biphenyls (PCBs) by Methods SW 8081A/8082, Target Analyte List (TAL) metals/mercury by Methods SW 6010B/7470A/7471A, and percent solids by Method ASTM_D2216.

- Two discrete depth-specific sediment samples were to be collected directly from within the AFFF lagoon and analyzed for TCL VOCs by Method SW 8260B, TCL SVOCs by Method SW 8270C, TCL pesticides/PCBs by Methods SW 8081A/8082, TAL metals/mercury by Methods SW 6010B/7471A, and percent solids by Method ASTM_D2216.

- Five test pits were to be excavated immediately adjacent to 2000 SI test pit locations where sheens were observed. Groundwater samples were to be collected at each test pit location from the top of the water table and analyzed for TCL VOCs by Method SW 8260B, TCL by Method SVOCs SW 8270C, TCL pesticides/ PCBs by Methods SW 8081A/8082, total petroleum hydrocarbons (TPH) as diesel and TPH as gasoline using Method 8015B Mod.

- One subsurface soil sample was also to be collected from one of the five new test pits. The subsurface soil sample location and depth will be determined in the field based on organic vapor analyzer (OVA) screening results and/or visual observation of potential contamination (i.e., soil staining). The subsurface soil sample was to be analyzed for TCL VOCs by Method SW 8260B, TCL SVOCs by Method SW 8270C, TCL pesticides/PCBs by Methods SW 8081A/8082, TAL metals/mercury, by Methods SW 6010B/7471A, TPH as diesel and TPH as gasoline using Method 8015B Mod, and percent solids using Method ASTM_D2216.

- Seven trip blanks were to be prepared and analyzed for Low Level select list VOCs using Method SW 8260B.

3.1.2 Sampling and Analysis Performed

Fifty-six Geoprobe groundwater borings were installed and sampled from July 15, 2002 through July 24, 2002. Duplicate and split samples were collected from six samples and extra volumes were obtained for MS/MSD analysis from three samples. Two Geoprobe soil borings were installed and six subsurface soil samples were collected. Duplicate and split samples were collected at one sample location and extra volume for MS/MSD analysis was obtained from another sample location. Two sediment samples were collected. Extra volume for MS/MSD analysis and duplicate and split samples were collected from one sample. Five test pits were excavated and one subsurface soil and five water samples were collected. Duplicate and split samples were collected at one water and one soil sample location and extra volumes were obtained for MS/MSD analysis at one water and one soil sample location. Eight trip blanks and a drill water sample were also collected for analysis.

Table 3-1 lists the samples collected, as well as the sampling dates, sample depths, and analyses associated with the samples. (This table is a post-sampling update of the FSP table presented in Appendix A.)

- Two Geoprobe groundwater borings were eliminated from the original FSP, but three Geoprobe groundwater locations were added. There were no charges to the proposed soil Geoprobe boring, test pit, and sediment samples. There was one trip blank added. There were no changes to the proposed sample analyses required for any of the samples. All sample deviations have are noted on Table 3-1.

- A drill water sample was also collected from the water tanks carrying/storing the water used for decontaminating non-sampling Geoprobe equipment. The sample was collected because the drillers were using a new water source. The sample should have been collected directly from the source and not the tank.

3.1.3 Deviations From Sample Handling and Custody Procedures

No deviations occurred to the proposed sample handling and sample custody procedures.

3.1.4 Data Quality Evaluation

The data quality was evaluated based on sample integrity, holding times, method blank results, LCS results, MS/MSD recoveries, surrogate recoveries, and duplicate precision as outlined in Section 2.7 of this document. The correlation between original samples collected at the site and the associated field and laboratory QA/QC samples used to confirm and qualify the original samples are reported in Table 3-2.

All of the data collected from the site are reported in laboratory work orders as follows:

Work Order	Lab
0207098	ASC
0207099	ASC
0207112	ASC
0207127	ASC
0207148	ASC
0207158	ASC
0207173	ASC
0207135	ASC
0207149	ASC
0207192	ASC

Detailed descriptions of the data quality review are reported by lab work order in the Data Validation Memoranda provided in Appendix D.

Based on QC criteria, all data collected and analyzed from the site are usable. Data qualification for the samples from the site is discussed by method in the following sections.

3.1.4.1 Test Pit and Geoprobe Groundwater Samples Method SW8260B - Low Level Select List VOCs

Trace levels of acetone and methylene chloride were detected in some blanks. The findings indicate that low-level acetone results below the PQL for all samples are likely due to background levels in the field and laboratory. Acetone present in the samples at levels 5 times the blank are flagged "U" as non-detect, but all low level acetone results should be considered as potentially due to background. There is no impact on data usability because the groundwater screening value for is 50 ppb acetone and no methylene chloride was detected in the samples.

Acetone, Trichlorofluoromethane, 2-Hexanone, 2-Butanone, 4-Methyl-2-pentanone, and Vinyl acetate slightly exceeded the laboratory control limits of 80 -120% in the LCS. The recoveries were generally within the method limits of 70-130%. These compounds were not detected in the associated samples except for low level acetone in which one samples was flagged "J" as estimated. The compounds are not of concern at the site. All other LCS recoveries were acceptable and therefore, there is no impact on data usability. The LCS were not reanalyzed because of the samples were 24 hour screening samples for rush analysis. There is no impact on the usability of the data for this purpose.

Several field duplicates pairs had relatively high difference between the positive results in the screening samples. The associated positive results are flagged "J" as estimated. The higher level of variability is expected in the geoprobe groundwater samples because the wells are not purged. Since the results are used to choose new locations for geoprobe and provide an overall contour of the plume, the higher variability in the results should not impact the overall usability of the data.

3.1.4.2 Subsurface Soil and Sediment Samples

Method SW8260B - TCL VOCs

Trace level of acetone was detected in the method blank for the sediments. The findings indicate that low-level acetone results for all samples are likely due to background levels in the field and laboratory. Acetone present in the samples at levels 5 times the blank are flagged "U" as non-detect, but all low level acetone results should be considered as potentially due to background. There is no impact on data usability because the soil screening value for is 200 ppb acetone.

Acetone and Carbon tetrachloride slightly exceeded the laboratory control limits of 75 -125% in the LCS. The recoveries were within the method limits of 70-130%. These compounds were not detected in the associated samples except for low-level acetone, which was already flagged "U" as non-detect. Therefore, there is no impact on the usability of the data.

Method SW8270B - TCL SVOCs

All samples were analyzed within the project-specified holding time except for the re-extraction of sample AOC9-TP04/D for SVOCs five days beyond the method holding time of 14 days due to QC problems with the original analysis. All non-detect results are qualified "UJ" as estimated. There is no overall impact on data usability because the sample was a field duplicate. The field dupli-

cate results show good precision for all target compounds except low-level acetone that is likely due to background.

The MS/MSD recoveries were below 10% for several reactive compounds including Hexachlorocyclopentadiene and 3,3´-Dichlorobenzidine. The LCS recoveries were acceptable indicating no analytical concerns. The results indicate a significant matrix effect that appears to be attributable to the high levels of humic acids in the samples. Therefore, the PQLs for these compounds in samples with high levels of benzoic acid are flagged "UR" as non-detected. The compounds are not compounds of concern at the site and therefore the overall usability of the data are not affected. There are no analytical clean-up procedures that would improve the recovery of these compounds. The laboratory is reviewing corrective actions to increase the spiking levels of the compounds to improve recovery.

Method SW8081A - TCL Pesticides

Trace level of endrin aldehyde was detected in the method blank for the test pit soils. The findings indicate that low-level results for all samples are likely due to background levels in the field and laboratory. Endrin aldehyde present in one sample at 5 times the blank was flagged "U" as non-detect. There is no impact on data usability because there is no soil screening value this compound and there were no pesticides found at levels of concern in the samples.

Aldrin and dieldrin were flagged "J" as estimated in one of the test pit groundwater samples. The MS/MSD for the sample had low recoveries probably because of the difficulty measuring the recovery on top of high sample amounts. The impact on data usability is minor because the levels present already exceed the screening values.

Method SW610B/7470A/7471A - TAL Metals/Mercury

The sample results for antimony for several samples were flagged "U" as non-detect due to the blank levels. All values were below the PQL and were elevated to the PQL. The above qualifications will not impact data usability because the levels are not over the severe effect level screening criteria.

Manganese results were "J" flagged in the sediment samples due to slightly low MS recoveries and potential matrix effects. The sample results were near the screening value and could potentially impact the data comparison. Since one of the sediment values exceed the limits the conclusion at the site would not be impacted. Man-

ganese is known to present at naturally elevated levels in the soils at the site.

Lead results are flagged "J" as estimated in the sediments because the high variability in the field duplicates. Since the highest value is below the screening value there is no impact on data usability.

Other Laboratory Methods

No problems were encountered with sample analyses for this method that required data qualification.

3.1.5 Analytical Results Tables

The complete analytical results for the groundwater from test pits, Geoprobe groundwater, the AFFF sediment, the subsurface soil samples, the drilling water and trip blanks are presented in Tables 3-3 to 3-8. Positive analytical result summaries the groundwater from test pits, Geoprobe groundwater, the AFFF sediment, and the subsurface soil samples are presented in Tables 3-9 to 3-12 respectively. Positive results for the field duplicates and project-specific MS/MSD samples that were outside QC limits are included in the Data Validation Memorandum in Appendix D on Tables 7 and 4, respectively. Method blank results and the impact of all blanks on the sample data are summarized on Table 2 of the Data Validation Memorandum in Appendix D. All the samples results qualified as part of the data review process are summarized on Table 3-13.

3.1.6 Data Completeness and Representativeness

3.1.6.1 Analytical Method Problems

No problems were noted with the analytical methods used for the samples collected.

3.1.6.2 Needed QA/QC Change

No QA/QC changes were noted for the analytical methods used for samples collected at site.

3.1.7 Summary and Conclusions

Data points were rejected for the 8 hexachloropentadiene and 3,3'Dichlorobenzidine non-detect results in sediment and soil samples collected at the site. A completeness goal of over 99.9% was achieved for analytical level III data. The analytical data meet specified QC criteria, with no any exceptions or qualifications. The data points that were qualified as estimated should be considered useable for the purposes of this project. A total of 5714 data points are associated with the site. Sample results qualified as part of the data review process are summarized on Table 3-13. Any

other samples results that are flagged "J" as estimated are due to reported results below the PQL but above the detection limit.

Table 3-1 Sample Listing, AOC 9 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, NY

									ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	WP	Stat	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C TPH as diesel and as gasoline 8015D Mod.	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A	
AOC 9	07/15/02	FieldQC-TB9-GW1	ASC	DI Water	-	Y	T	TBI	X							
	07/16/02	FieldQC-TB9-GW2	ASC	DI Water	-	Y	T	TBI	X							
	07/17/02	FieldQC-TB9-GW3	ASC	DI Water	-	Y	T	TBI	X							
	07/18/02	FieldQC-TB9-GW4	ASC	DI Water	-	Y	T	TBI	X							
	07/19/02	FieldQC-TB9-GW5	ASC	DI Water	-	Y	T	TBI	X							
	07/22/02	FieldQC-TB9-GW6	ASC	DI Water	-	Y	T	TBI	X							
	07/23/02	FieldQC-TB9-GW7	ASC	DI Water	-	Y	T	TBI	X							
	07/24/02	FieldQC-TB9-GW8	ASC	DI Water	-	N	T	TBI	X							
	07/12/02	FieldQC-TB9-GW1/S	ERDC	DI Water	-	Y	T	TBI	X							
	07/17/02	FieldQC-TB9-GW2/S	ERDC	DI Water	-	Y	T	TBI	X							
	07/18/02	FieldQC-TB9-GW3/S	ERDC	DI Water	-	Y	T	TBI	X							
	07/19/02	FieldQC-TB9-GW4/S	ERDC	DI Water	-	Y	T	TBI	X							
	07/22/02	FieldQC-TB9-GW5/S	ERDC	DI Water	-	Y	T	TBI	X							
	07/23/02	FieldQC-TB9-GW6/S	ERDC	DI Water	-	Y	T	TBI	X							
		FieldQC-TB9-GW7/S	ERDC	DI Water	-	Y	S	TBI	X							
	07/17/02	AOC9-GP44S1	ASC	Groundwater	12.3 - 14.3	Y	T	NI	X							
	07/17/02	AOC9-GP44S2	ASC	Groundwater	15.9 - 17.9	Y	T	NI	X							
	07/17/02	AOC9-GP44I	ASC	Groundwater	19.3 - 21.3	Y	T	NI	X							
	07/17/02	AOC9-GP44I/D	ASC	Groundwater	19.3 - 21.3	Y	T	FDI	X							
	07/17/02	AOC9-GP44I/S	ERDC	Groundwater	19.3 - 21.3	Y	T	FRI	X							
	07/17/02	AOC9-GP44D1	ASC	Groundwater	22.4 - 24.4	Y	T	NI	X							
	07/15/02	AOC9-GP44D2	ASC	Groundwater	28.0 - 30.0	Y	T	NI	X							
	07/17/02	AOC9-GP45S1	ASC	Groundwater	10.1 - 12.1	Y	T	NI	X							
	07/17/02	AOC9-GP45S2	ASC	Groundwater	13.1 - 15.1	Y	T	NI	X							
	07/17/02	AOC9-GP45I	ASC	Groundwater	16.2 - 18.2	Y	T	NI	X							
	07/17/02	AOC9-GP45I (extra volume)	ASC	Groundwater (MS/MSD)	16.2 - 18.2	Y	T	MSI	X							
	07/17/02	AOC9-GP45D1	ASC	Groundwater	19.5 - 20.5	Y	T	NI	X							
	07/16/02	AOC9-GP45D2	ASC	Groundwater	23.0 - 25.0	Y	T	NI	X							

Table 3-1 Sample Listing, AOC 9 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, NY

Location	Date	Sample Number	Lab	Matrix	Depth	WP	Stat	Type	ANALYSES							
									Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A	
	07/17/02	AOC9-GP46S1	ASC	Groundwater	9.4 - 11.4	Y	T	NI	X							
	07/17/02	AOC9-GP46S2	ASC	Groundwater	12.5 - 14.5	Y	T	NI	X							
	07/17/02	AOC9-GP46I	ASC	Groundwater	15.6 - 17.6	Y	T	NI	X							
	07/17/02	AOC9-GP46I/D	ASC	Groundwater	15.6 - 17.6	Y	T	FDI	X							
	07/17/02	AOC9-GP46I/S	ERDC	Groundwater	15.6 - 17.6	Y	T	FRI	X							
	07/17/02	AOC9-GP46D1	ASC	Groundwater	18.8 - 20.8	Y	T	NI	X							
	07/16/02	AOC9-GP46D2	ASC	Groundwater	22.5 - 24.5	Y	T	NI	X							
	07/16/02	AOC9-GP47S1	ASC	Groundwater	7.5 - 9.5	Y	T	NI	X							
	07/16/02	AOC9-GP47S2	ASC	Groundwater	11.0 - 13.0	Y	T	NI	X							
	07/16/02	AOC9-GP47I	ASC	Groundwater	14.0 - 16.0	Y	T	NI	X							
	07/16/02	AOC9-GP47D1	ASC	Groundwater	18.0 - 20.0	Y	T	NI	X							
	07/16/02	AOC9-GP47D2	ASC	Groundwater	21.2 - 23.2	Y	T	NI	X							
	07/18/02	AOC9-GP48S1	ASC	Groundwater	9.4 - 11.4	Y	T	NI	X							
	07/18/02	AOC9-GP48S2	ASC	Groundwater	12.5 - 14.5	Y	T	NI	X							
	07/18/02	AOC9-GP48I	ASC	Groundwater	15.8 - 17.8	Y	T	NI	X							
	07/18/02	AOC9-GP48I/D	ASC	Groundwater	15.8 - 17.8	Y	T	FDI	X							
	07/18/02	AOC9-GP48I/S	ERDC	Groundwater	15.8 - 17.8	Y	T	FRI	X							
	07/18/02	AOC9-GP48D1	ASC	Groundwater	19.3 - 21.3	Y	T	NI	X							
	07/16/02	AOC9-GP48D2	ASC	Groundwater	22.8 - 24.8	Y	T	NI	X							
	07/19/02	AOC9-GP49S1	ASC	Groundwater	10.7 - 12.7	Y	T	NI	X							
	07/19/02	AOC9-GP49S2	ASC	Groundwater	13.4 - 15.4	Y	T	NI	X							
	07/18/02	AOC9-GP49I	ASC	Groundwater	16.5 - 18.5	Y	T	NI	X							
	07/18/02	AOC9-GP49I (extra volume)	ASC	Groundwater (MS/MSD)	16.5 - 18.5	Y	T	MSI	X							
	07/18/02	AOC9-GP49D1	ASC	Groundwater	19.6 - 21.6	Y	T	NI	X							
	07/19/02	AOC9-GP49D2	ASC	Groundwater	23.2 - 25.2	Y	T	NI	X							
	07/19/02	AOC9-GP50S1	ASC	Groundwater	11.8 - 13.8	Y	T	NI	X							
	07/19/02	AOC9-GP50S2	ASC	Groundwater	14.5 - 16.5	Y	T	NI	X							
	07/19/02	AOC9-GP50I	ASC	Groundwater	17.6 - 19.6	Y	T	NI	X							
	07/19/02	AOC9-GP50I/D	ASC	Groundwater	17.6 - 19.6	Y	T	FDI	X							
	07/19/02	AOC9-GP50I/S	ERDC	Groundwater	17.6 - 19.6	Y	T	FRI	X							
	07/19/02	AOC9-GP50D1	ASC	Groundwater	20.6 - 22.6	Y	T	NI	X							
	07/19/02	AOC9-GP50D2	ASC	Groundwater	23.5 - 25.5	Y	T	NI	X							

Table 3-1 Sample Listing, AOC 9 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, NY

									ANALYSES						
Location	Date	Sample Number	Lab	Matrix	Depth	WP	Stat	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	07/22/02	AOC9-GP51S1	ASC	Groundwater	10.9 - 12.9	Y	T	NI	X						
	07/22/02	AOC9-GP51S2	ASC	Groundwater	14.0 - 16.0	Y	T	NI	X						
	07/22/02	AOC9-GP51I	ASC	Groundwater	16.9 - 18.9	Y	T	NI	X						
	07/22/02	AOC9-GP51D1	ASC	Groundwater	20.2 - 22.2	Y	T	NI	X						
	07/19/02	AOC9-GP51D2	ASC	Groundwater	23.0 - 25.0	Y	T	NI	X						
	07/23/02	AOC9-GP52S1	ASC	Groundwater	12,5 - 14.5	Y	T	NI	X						
	07/23/02	AOC9-GP52S2	ASC	Groundwater	15.4 - 17.4	Y	T	NI	X						
	07/22/02	AOC9-GP52I	ASC	Groundwater	18.4 - 20.4	Y	T	NI	X						
	07/22/02	AOC9-GP52I/D	ASC	Groundwater	18.4 - 20.4	Y	T	FDI	X						
	07/22/02	AOC9-GP52I/S	ERDC	Groundwater	18.4 - 20.4	Y	T	FRI	X						
	07/22/02	AOC9-GP52D1	ASC	Groundwater	21.4 - 23.4	Y	T	NI	X						
	07/22/02	AOC9-GP52D2	ASC	Groundwater	24.4 - 26.4	Y	T	NI	X						
	07/24/02	AOC9-GP53S1	ASC	Groundwater	12.0 - 14.0	Y	T	NI	X						
		AOC9-GP53S2	ASC	Groundwater	14.0 - 16.0	Y	S	NI	X						
	07/24/02	AOC9-GP53I	ASC	Groundwater	14.7 - 16.7	Y	T	NI	X						
	07/24/02	AOC9-GP53I (extra volume)	ASC	Groundwater (MS/MSD)	14.7 - 16.7	Y	T	MSI	X						
	07/23/02	AOC9-GP53D1	ASC	Groundwater	17.6 - 19.6	Y	T	NI	X						
	07/23/02	AOC9-GP53D2	ASC	Groundwater	19.9 - 21.9	Y	T	NI	X						
	07/23/02	AOC9-GP54S1	ASC	Groundwater	13.4 - 15.4	Y	T	NI	X						
		AOC9-GP54S2	ASC	Groundwater	14.0 - 16.0	Y	S	NI	X						
	07/23/02	AOC9-GP54I	ASC	Groundwater	15.2 - 17.2	Y	T	NI	X						
	07/23/02	AOC9-GP54I/D	ASC	Groundwater	15.2 - 17.2	Y	T	FDI	X						
	07/23/02	AOC9-GP54I/S	ERDC	Groundwater	15.2 - 17.2	Y	T	FRI	X						
	07/23/02	AOC9-GP54D1	ASC	Groundwater	17.1 - 19.1	Y	T	NI	X						
	07/23/02	AOC9-GP54D2	ASC	Groundwater	18.25 - 20.25	Y	T	NI	X						
	07/23/02	AOC9-GP55I	ASC	Groundwater	16.6 - 18.6	N	T	NI	X						
	07/24/02	AOC9-GP56I	ASC	Groundwater	17.2 - 19.2	N	T	NI	X						
	07/24/02	AOC9-GP57I	ASC	Groundwater	20.4 - 22.4	N	T	NI	X						

Table 3-1 Sample Listing, AOC 9 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, NY

									ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	WP	Stat	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C	TPH as Diesel and as Gasoline 8015D Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	07/19/02	AOC9-GW-TP01	ASC	Groundwater	Top of Water table	Y	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-TP03	ASC	Groundwater	Top of Water table	Y	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-TP03 (extra volume)	ASC	Groundwater (MS/MSD)	Top of Water table	Y	T	MSI		X	X	X	X			X
	07/19/02	AOC9-GW-TP04	ASC	Groundwater	Top of Water table	Y	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-TP04/S	ASC	Groundwater	Top of Water table	N	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-TP06	ASC	Groundwater	Top of Water table	Y	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-DTP04	ASC	Groundwater	Top of Water table	Y	T	NI		X	X	X	X			X
	07/19/02	AOC9-GW-DTP04/D	ASC	Groundwater	Top of Water table	Y	T	FDI		X	X	X	X			X
	07/19/02	AOC9-GW-DTP04/S	ERDC	Groundwater	Top of Water table	Y	T	FRI		X	X	X	X			X
	07/19/02	AOC9-TP04	ASC	Subsurface soil		Y	T	NI		X	X	X	X	X	X	X
	07/19/02	AOC9-TP04 (extra volume)	ASC	Subsurface soil (MS/MSD)		Y	T	MSI		X	X	X	X	X	X	X
	07/19/02	AOC9-TP04/D	ASC	subsurface soil		Y	T	FDI		X	X	X	X	X	X	X
	07/19/02	AOC9-TP04/S	ERDC	Subsurface soil		Y	T	FRI		X	X	X	X	X	X	X
	07/24/02	AOC9-SS01 (4-6)	ASC	Subsurface soil	4.0 - 6.0	Y	T	NI		X	X		X	X	X	X
	07/24/02	AOC9-SS01 (11.5-16)	ASC	Subsurface soil	11.5 - 16.0	Y	T	NI		X	X		X	X	X	X
	07/24/02	AOC9-SS01 (11.5-16)/D	ASC	Subsurface soil	11.5 - 16.0	Y	T	FDI		X	X		X	X	X	X
	07/24/02	AOC9-SS01 (11.5-16)/S	ERDC	Subsurface soil	11.5 - 16.0	Y	T	FRI		X	X		X	X	X	X
	07/24/02	AOC9-SS01 (20-24)	ASC	Subsurface soil	20 - 24	Y	T	NI		X	X		X	X	X	X
	07/24/02	AOC9-SS01 (20-24) (extra volume)	ASC	Subsurface soil (MS/MSD)	20 - 24	Y	T	MSI		X	X		X	X	X	X
	07/24/02	AOC9-SS02 (2-4)	ASC	Subsurface soil (MS/MSD)	2.0 - 4.0	Y	T	NI		X						
	07/24/02	AOC9-SS02 (6-8)	ASC	Subsurface soil (MS/MSD)	6.0 - 8.0	Y	T	NI		X						
	07/24/02	AOC9-SS02 (10-10.5)	ASC	Subsurface soil (MS/MSD)	10 - 10.5	Y	T	NI		X						
	07/15/02	AFFF-SD01	ASC	Sediment	0.0 - 0.5	Y	T	NI		X	X		X	X	X	X
	07/15/02	AFFF-SD01 (extra volume)	ASC	Sediment (MS/MSD)	0.0 - 0.5	Y	T	MSI		X	X		X	X	X	X
	07/15/02	AFFF-SD01/D	ASC	Sediment	0.0 - 0.5	Y	T	FDI		X	X		X	X	X	X
	07/15/02	AFFF-SD01/S	ERDC	Sediment	0.0 - 0.5	Y	T	FRI		X	X		X	X	X	X
	07/15/02	AFFF-SD02	ASC	Sediment	0.5 - 2.0	Y	T	NI		X	X		X	X	X	X
	07/18/02	AOC9-DW01	ASC	Drill Water	-	N	T	NI	X	X	X	X	X	X		X

Table 3-1 Sample Listing, AOC 9 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, NY

Location	Date	Sample Number	Lab	Matrix	Depth	WP	Stat	Type	ANALYSES						
									Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C TPH as diesel and as gasoline ranges Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A

Key:

AFFF = Aqueous Film Forming Foam
AOC9 = Area of Concern 9.
ASC = E & E's Analytical Services Center.
ASTM = American Society for Testing and Materials.
BGS = Below ground surface.
D1 = Deep Geoprobe groundwater sample (20 to 22 feet BGS).
D2 = Deepest Geoprobe groundwater sample (23 to 25 feet BGS).
/D = Duplicate sample.
Depth = Depth interval at which sample will be collected.
DI = Deionized.
ERDC = U.S. Army Engineer Research and Development Center Quality Assurance Laborato
FD = Field duplicate.
FR = Field split/replicate.
GP = Geoprobe.
GW = Groundwater sample
I = Intermediate Geoprobe sample.
MS/MSD = Matrix spike/matrix spike duplicate.
N = Original sample.
PCB = Polychlorinated biphenyls.
QC = Quality control sample.
S1 = Shallowest Geoprobe groundwater sample (11 to 13 feet BGS).
S2 = Shallow Geoprobe groundwater sample (14 to 16 feet BGS).
/S = Split sample.
SD = Sediment.
SI = Supplemental Investigation
SS = Subsurface soil sample.
Stat = Status (O= Open, T= Taken, S= Skipped).
SVOCs = Semivolatile organic compounds.
TAL = Target analyte list.
TB = Trip blank sample.
TCL = Target Compound List.
TP = Test pit.
VOCs = Volatile organic compound.
WP = Sample in work plan (Y= yes, N= no).

Table 3-2
Association Between Field and QA/QC Samples from AOC 9 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Sample Date	Sample ID	ID Corrections	Field Blanks	MS/MSD	Field Duplicates	Field Splits
7/15/02	AFFF-SD01	None		MS/MSD	AFFF-SD01/D	AFFF-SD01/S
7/15/02	AFFF-SD02	None				
7/15/02	AOC9-GP44D2	None	FIELDQC-TB9-GW1			
7/15/02	Field QC-TB9-GW1	FIELDQC-TB9-GW1	Trip Blank			
7/15/02	PCI20-NS06	None				
7/15/02	PCI20-NS06/D	None				
7/15/02	PCI20-NS07	None				
7/15/02	PCI20-NS08	None		MS/MSD		
7/16/02	AOC9-GP45D2	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP46D2	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP47D1	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP47D2	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP47I	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP47S1	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP47S2	None	FIELDQC-TB9-GW2			
7/16/02	AOC9-GP48D2	None	FIELDQC-TB9-GW2			
7/16/02	FIELD QC-TB9-GW2	FIELDQC-TB9-GW2				
7/17/02	AOC9-GP44D1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP44I	None	FIELDQC-TB9-GW3		AOC9-GP44I/D	AOC9-GP44I/S
7/17/02	AOC9-GP44S1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP44S2	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP45D1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP45I	None	FIELDQC-TB9-GW3	MS/MSD		
7/17/02	AOC9-GP45S1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP45S2	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP46D1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP46I	None	FIELDQC-TB9-GW3		AOC9-GP46I/D	AOC9-GP46I/S
7/17/02	AOC9-GP46S1	None	FIELDQC-TB9-GW3			
7/17/02	AOC9-GP46S2	None	FIELDQC-TB9-GW3			
7/18/02	AOC9-DW01	None	FIELDQC-TB9-GW4			
7/18/02	AOC9-GP48D1	None	FIELDQC-TB9-GW4			
7/18/02	AOC9-GP48I	None	FIELDQC-TB9-GW4		AOC9-GP48I/D	AOC9-GP48I/S
7/18/02	AOC9-GP48S1	None	FIELDQC-TB9-GW4			
7/18/02	AOC9-GP48S2	None	FIELDQC-TB9-GW4			

Table 3-2
Association Between Field and QA/QC Samples from AOC 9 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Sample Date	Sample ID	ID Corrections	Field Blanks	MS/MSD	Field Duplicates	Field Splits
7/18/02	AOC9-GP49D1	None	FIELDQC-TB9-GW4			
7/18/02	AOC9-GP49I	None	FIELDQC-TB9-GW4	MS/MSD		
7/19/02	AOC9-DTP04	AOC9-GW-DTP04	FIELDQC-TB9-GW5		AOC9-GW-DTP04/D	AOC9-GW-DTP04/S
7/19/02	AOC9-GP49D2	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP49S1	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP49S2	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP50D1	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP50D2	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP50I	None	FIELDQC-TB9-GW5		AOC9-GP50I/D	AOC9-GP50I/S
7/19/02	AOC9-GP50S1	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP50S2	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GP51D2	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GW-TP01	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-GW-TP03	None	FIELDQC-TB9-GW5	MS/MSD		
7/19/02	AOC9-GW-TP04	None	FIELDQC-TB9-GW5			
7/19/02	AOC9-TP04	None		MS/MSD	AOC9-TP04/D	
7/19/02	AOC9-TP06	AOC9-GW-TP06	FIELDQC-TB9-GW5			
7/22/02	AOC9-GP51D1	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP51I	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP51S1	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP51S2	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP52D1	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP52D2	None	Field QC-TB9-GW6			
7/22/02	AOC9-GP52I	None	Field QC-TB9-GW6		AOC9-GP52I/D	AOC9-GP52I/S
7/23/02	AOC9-GP52S1	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP52S2	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP53D1	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP53D2	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP54D1	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP54D2	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP54I	None	FIELDQC-TB9-GW7		AOC9-GP54I/D	AOC9-GP54I/S
7/23/02	AOC9-GP54S1	None	FIELDQC-TB9-GW7			
7/23/02	AOC9-GP55I	None	FIELDQC-TB9-GW7			

Table 3-2
Association Between Field and QA/QC Samples from AOC 9 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Sample Date	Sample ID	ID Corrections	Field Blanks	MS/MSD	Field Duplicates	Field Splits
7/24/02	AOC9-GP53I	None	FIELDQC-TB9-GW8	MS/MSD		
7/24/02	AOC9-GP53S1	None	FIELDQC-TB9-GW8			
7/24/02	AOC9-GP56I	None	FIELDQC-TB9-GW8			
7/24/02	AOC9-GP57I	None	FIELDQC-TB9-GW8			
7/24/02	AOC9-SS01(11.5-16)	None			AOC9-SS01(11.5-16)/D	AOC9-SS01(11.5-16)/S
7/24/02	AOC9-SS01(20-24)	None		MS/MSD		
7/24/02	AOC9-SS01(4-6)	None				
7/24/02	AOC9-SS02(10-10.5)	None				
7/24/02	AOC9-SS02(2-4)	None				
7/24/02	AOC9-SS02(6-8)	None				

Key:

AOC = Area of Concern.
ASC = E & E's Analytical Services Center.
B775 = Building 775.
B817 = Building 817.
Br = Bedrock well.
/D = Duplicate.
HP = Hydropunch sample.
LF6 = Landfill 6.
MEE = Methane, ethane, ethene.
MW = Monitoring well.
MS/MSD = Matrix spike/matrix spike duplicate.
QA = Quality assurance.
QC = Quality control.
RB = Rinsate blank.
/S = Split.
SB = Soil boring.
SO = Soil sample.
TB = Trip blank.
WSA = Weapons Storage Area.

Table 3-3
Summary of Complete Analytical Results for Groundwater Samples from Test Pits, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
SVOCs by Method 8270C (µg/L)								
SW8270C	1,2,4-Trichlorobenzene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	1,2-Dichlorobenzene	µg/L	10.0 U	10.0 U	10.0 U	23.9	10.0 U	10.0 U
SW8270C	1,3-Dichlorobenzene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	1,4-Dichlorobenzene	µg/L	10.0 U	10.0 U	10.0 U	21.4	10.0 U	10.0 U
SW8270C	2,4,5-Trichlorophenol	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	2,4,6-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2,4-Dimethylphenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2,4-Dinitrophenol	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	2,4-Dinitrotoluene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2,6-Dinitrotoluene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2-Chloronaphthalene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2-Methylnaphthalene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2-Methylphenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2-Nitroaniline	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	2-Nitrophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	3,3'-Dichlorobenzidine	µg/L	20.0 U	20.0 U	20.0 U	20.0 UR	20.0 U	20.0 U
SW8270C	3-Nitroaniline	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	4,6-Dinitro-2-methylphenol	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	4-Bromophenyl phenyl ether	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	4-Chloro-3-methylphenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	4-Chloroaniline	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	4-Chlorophenyl phenyl ether	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	4-Methylphenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	4-Nitroaniline	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	4-Nitrophenol	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	Acenaphthene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Acenaphthylene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Anthracene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Benz(a)anthracene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Benzo(a)pyrene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Benzo(b)fluoranthene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Benzo(g,h,i)perylene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Benzo(k)fluoranthene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

Source: Ecology and Environment, Inc. 2002

Table 3-3
Summary of Complete Analytical Results for Groundwater Samples from Test Pits, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
SW8270C	Benzoic acid	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	Benzyl alcohol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Bis(2-chloroethoxy)methane	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Bis(2-chloroethyl)ether	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Bis(2-chloroisopropyl)ether	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Bis(2-ethylhexyl)phthalate	µg/L	7.76 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Butyl benzyl phthalate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Carbazole	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Chrysene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Dibenz(a,h)anthracene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Dibenzofuran	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Diethyl phthalate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Dimethyl phthalate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Di-n-butyl phthalate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Di-n-octyl phthalate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Fluoranthene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Fluorene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Hexachlorobenzene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Hexachlorobutadiene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Hexachlorocyclopentadiene	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	Hexachloroethane	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Indeno(1,2,3-cd)pyrene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Isophorone	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Naphthalene	µg/L	10.0 U	10.0 U	10.0 U	4.35 J	10.0 U	10.0 U
SW8270C	Nitrobenzene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	N-Nitrosodimethylamine	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	N-Nitrosodi-n-propylamine	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	N-Nitrosodiphenylamine	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Pentachlorophenol	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
SW8270C	Phenanthrene	µg/L	10.0 U	10.0 U	10.0 U	3.72 J	10.0 U	10.0 U
SW8270C	Phenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	Pyrene	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8270C	2,4,6-Tribromophenol	µg/L	82 %	77 %	82 %	92 %	77 %	66 %
SW8270C	2-Fluorobiphenyl	µg/L	70 %	61 %	66 %	80 %	70 %	57 %
SW8270C	2-Fluorophenol	µg/L	73 %	62 %	75 %	87 %	69 %	58 %
SW8270C	Nitrobenzene-d5	µg/L	87 %	74 %	84 %	100 %	87 %	64 %

Table 3-3
Summary of Complete Analytical Results for Groundwater Samples from Test Pits, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
SW8270C	Phenol-d5	µg/L	106 %	90 %	107 %	130 %	102 %	85 %
SW8270C	Terphenyl-d14	µg/L	45 %	46 %	33 %	46 %	56 %	54 %
PCBs by Method 8082 (µg/L)								
SW8082	Aroclor 1016	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Aroclor 1221	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8082	Aroclor 1232	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Aroclor 1242	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Aroclor 1248	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Aroclor 1254	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Aroclor 1260	µg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
SW8082	Decachlorobiphenyl	µg/L	67 %	69 %	84 %	58 %	58 %	82 %
SW8082	Tetrachloro-m-xylene	µg/L	66 %	64 %	92 %	60 %	64 %	75 %
Pesticides by Method 8081A (µg/L)								
SW8081A	4,4'-DDD	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	4,4'-DDE	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	4,4'-DDT	µg/L	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U
SW8081A	Aldrin	µg/L	0.0500 U	0.0500 U	0.0500 U	0.573 J	0.0500 U	0.0500 U
SW8081A	alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	alpha-Chlordane	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	beta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	delta-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	Dieldrin	µg/L	0.0500 U	0.0500 U	0.0500 U	0.327 J	0.0500 U	0.0500 U
SW8081A	Endosulfan I	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	Endosulfan II	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	Endosulfan sulfate	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	Endrin	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	Endrin aldehyde	µg/L	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U
SW8081A	Endrin ketone	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	gamma-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	gamma-Chlordane	µg/L	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
SW8081A	Heptachlor	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	Heptachlor epoxide	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
SW8081A	Methoxychlor	µg/L	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U	0.150 U
SW8081A	Toxaphene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8081A	Decachlorobiphenyl	µg/L	75 %	66 %	81 %	55 %	56 %	78 %
SW8081A	Tetrachloro-m-xylene	µg/L	71 %	62 %	82 %	56 %	61 %	70 %

Source: Ecology and Environment, Inc. 2002

Table 3-3
Summary of Complete Analytical Results for Groundwater Samples from Test Pits, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
SW8015B	Diesel Range Organics	mg/L	0.100 U	0.100 U	0.100 U	0.260	0.100 U	0.100 U
SW8015B	Gasoline Range Organics	mg/L	0.100 U	0.100 U	0.100 U	0.123	0.100 U	0.100 U
SW8015B	1,2-Dichlorobenzene	mg/L	99 %	103 %	98 %	118 %	97 %	100 %
SW8015B	o-Terphenyl	mg/L	91 %	103 %	102 %	96 %	103 %	108 %
TPH by Method 8015B (mg/L)								
SW8015B	Diesel Range Organics	mg/L	0.100 U	0.100 U	0.100 U	0.260	0.100 U	0.100 U
SW8015B	Gasoline Range Organics	mg/L	0.100 U	0.100 U	0.100 U	0.123	0.100 U	0.100 U
SW8015B	1,2-Dichlorobenzene	mg/L	99 %	103 %	98 %	118 %	97 %	100 %
SW8015B	o-Terphenyl	mg/L	91 %	103 %	102 %	96 %	103 %	108 %
VOC by Method 8260B (µg/L)								
SW8260B	1,1,1-Trichloroethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,1-Dichloroethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,1-Dichloroethene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	16.8	5.00 U	5.00 U
SW8260B	1,2-Dichloroethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,2-Dichloropropane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	17.3	5.00 U	5.00 U
SW8260B	2-Butanone	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	2-Chloroethyl vinyl ether	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	2-Hexanone	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	4-Methyl-2-pentanone	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	Acetone	µg/L	10.0 U	10.0 U	10.0 U	3.49 J	5.43 J	10.0 U
SW8260B	Benzene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Bromodichloromethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Bromoform	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Bromomethane	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Chlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	101	5.00 U	5.00 U
SW8260B	Chloroethane	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	Chloroform	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Chloromethane	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

Table 3-3
Summary of Complete Analytical Results for Groundwater Samples from Test Pits, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
SW8260B	cis-1,2-Dichloroethene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	cis-1,3-Dichloropropene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Dibromochloromethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Ethylbenzene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	m,p-Xylene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Methylene chloride	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	o-Xylene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Styrene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Tetrachloroethene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Toluene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	trans-1,2-Dichloroethene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Trichloroethene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Trichlorofluoromethane	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Vinyl acetate	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	Vinyl chloride	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
SW8260B	Xylenes, Total	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	100 %	100 %	98 %	99 %	100 %	100 %
SW8260B	4-Bromofluorobenzene	µg/L	104 %	104 %	104 %	101 %	103 %	103 %
SW8260B	Dibromofluoromethane	µg/L	102 %	103 %	102 %	102 %	100 %	101 %
SW8260B	Toluene-d8	µg/L	97 %	99 %	99 %	97 %	97 %	96 %

Note:
% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:
J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from quality control limits.
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.
PCBs = Polychlorinated Biphenyls.
SVOC's = Semivolatile Organic Compounds.
TPH = Total petroleum hydrocarbons (Diesel and gasoline organics).
U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.
UR = The PQL for this analyte is not usable. The actual PQL should be higher, but that level cannot be determined.
VOC's = Volatile Organic Compounds.

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP44D1 07/17/02	AOC9-GP44D2 07/15/02	AOC9-GP44I 07/17/02	AOC9-GP44I/D 07/17/02	AOC9-GP44S1 07/17/02	AOC9-GP44S2 07/17/02	AOC9-GP45D1 07/17/02	AOC9-GP45D2 07/16/02	AOC9-GP45I 07/17/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,1,2-Trichloroethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,1-Dichloroethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,1-Dichloroethene	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,2-Dichlorobenzene	µg/L	153	11.3	44.5 J	513 J	12.1	31.6 J	18.2 J	3.97	22.4 J
SW8260B	1,2-Dichloroethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,2-Dichloroethene, Total	µg/L	26.2 J	10.8	40.0 U	71.2	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,2-Dichloropropane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	1,3-Dichlorobenzene	µg/L	6.64 J	1.00 U	3.92 J	40.0 U	1.36 J	7.32 J	2.84 J	0.339 J	2.78 J
SW8260B	1,4-Dichlorobenzene	µg/L	109	1.66	91.2 J	151 J	35.1	111	70.4	7.31	67.8
SW8260B	2-Butanone	µg/L	200 U	0.945 J	200 U	200 U	50.0 U	200 U	200 U	5.00 U	125 U
SW8260B	2-Hexanone	µg/L	200 U	5.00 U	200 U	200 U	50.0 U	200 U	200 U	5.00 U	125 U
SW8260B	4-Methyl-2-pentanone	µg/L	200 U	5.00 U	200 U	200 U	50.0 U	200 U	200 U	5.00 U	125 U
SW8260B	Acetone	µg/L	200 U	94.5 U	200 U	200 U	50.0 U	200 U	200 U	24.5	125 U
SW8260B	Benzene	µg/L	5.36 J	2.46	40.0 U	12.6 J	10.0 U	4.20 J	40.0 U	0.156 J	25.0 U
SW8260B	Bromodichloromethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Bromoform	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Bromomethane	µg/L	80.0 U	2.00 U	80.0 U	80.0 U	20.0 U	80.0 U	80.0 U	2.00 U	50.0 U
SW8260B	Carbon disulfide	µg/L	200 U	5.00 U	200 U	200 U	50.0 U	200 U	200 U	5.00 U	125 U
SW8260B	Carbon tetrachloride	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Chlorobenzene	µg/L	1630	52.0	996 J	1610 J	315	2150	902	45.2	689
SW8260B	Chloroethane	µg/L	80.0 U	2.00 U	80.0 U	80.0 U	20.0 U	80.0 U	80.0 U	2.00 U	50.0 U
SW8260B	Chloroform	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Chloromethane	µg/L	80.0 U	2.00 U	80.0 U	80.0 U	20.0 U	80.0 U	80.0 U	2.00 U	50.0 U
SW8260B	cis-1,2-Dichloroethene	µg/L	25.8 J	10.7	40.0 U	70.0	10.0 U	40.0 U	40.0 U	0.136 J	25.0 U
SW8260B	cis-1,3-Dichloropropene	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Dibromochloromethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Ethylbenzene	µg/L	34.7 J	0.317 J	32.3 J	21.9 J	7.31 J	59.6	40.0 U	0.118 J	25.0 U
SW8260B	m,p-Xylene	µg/L	104	0.880 J	100	73.0	3.80 J	197	40.0 U	1.00 U	25.0 U
SW8260B	Methylene chloride	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	o-Xylene	µg/L	8.08 J	0.104 J	3.92 J	3.24 J	3.91 J	19.7 J	40.0 U	1.00 U	25.0 U
SW8260B	Styrene	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Tetrachloroethene	µg/L	40.0 U	0.235 J	40.0 U	5.24 J	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U

Sources: Ecology and Environment, Inc., 2002

OTHER DIRECT CHARGES (ESTIMATED) (2)
OPTION YEAR THREE: JANUARY - DECEMBER 2006

TITLE	NAME OF UNIT	UNIT PRICE
REPRO/GRAPHICS	SEE ATTACHED SCHEDULE	SEE ATTACHED SCHEDULE
TELEPHONE	SEE ATTACHED SCHEDULE	SEE ATTACHED SCHEDULE
MAIL	SEE ATTACHED SCHEDULE	SEE ATTACHED SCHEDULE
SUBCONTRACTS	SEE ATTACHED SCHEDULE	SEE ATTACHED SCHEDULE
FIELD EQUIPMENT:		
ORGANIC VAPOR DETECTOR	PER DAY	$ 100.00
PARTICULATE DETECTOR	PER DAY	$ 65.00
IONIZING RADIATION DETECTOR	PER DAY	$ 20.00
COMBUSTIBLE GAS DETECTOR	PER DAY	$ 50.00
OXYGEN DETECTOR	PER DAY	$ 50.00
XRAY REFRACTION SPECTROMETER	PER DAY	$ 500.00
LAPTOP COMPUTER	PER DAY	$ 17.00
PH/EC/TEMP. METER	PER DAY	$ 30.00
WATER LEVEL INDICATOR & SOUDER	PER DAY	$ 40.00
HAND AUGER	PER DAY	$ 7.00
PROF. GRADE DIFF. CORRECTED GPS	PER DAY	$ 110.00
SOIL PH METER	PER DAY	$ 30.00
DIGITAL CAMERA	PER DAY	$ 8.00

(2) NOTE: ALL ODC COSTS WILL BE INVOICED AT ACTUAL COSTS PLUS 10% MARKUP.

BLM/FS - DENVER

ECOLOGY AND ENVIRONMENT, INC.
OPTION YEAR THREE: JANUARY - DECEMBER 2006
ODC's Supporting Schedule

REPRO/GRAPHICS	NAME OF UNIT	UNIT PRICE
Plotter Graphics Output	Per graphic	$ 15.
Black/White Copying	Per page	$ 0.
Color Copying/Printing	Per page	$ 1.
Report Production	Per report	$ 50.
Computer Time	Per Day	$ 17.
TELEPHONE		
*Telephone/Communications	As needed	TBD
MAIL		
Mail/Shipping	As needed	TBD

SUBCONTRACTORS (3)		
LABOR CATEGORY	**COMPANY**	**RATE**
NRDA SPECIALIST	STRATUS CONSULTING, INC.	$ 194.2
ALBQ INVESTINGATION PROJ MGR	DBS&A	$ 126.7
ALBQ REMEDIATION PROJ MGR	DBS&A	$ 85.5

(3) NOTE: ADDITIONAL SUBCONTRACTOR CATEGORIES/RATES MAY BE ADDED AS REQUIRED BY INDIVIDUAL TASKS. ALL ODC COSTS WILL BE INVOICED AT ACTUAL COSTS PLUS 10% MARKUP.

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP44D1 07/17/02	AOC9-GP44D2 07/15/02	AOC9-GP44I 07/17/02	AOC9-GP44I/D 07/17/02	AOC9-GP44S1 07/17/02	AOC9-GP44S2 07/17/02	AOC9-GP45D1 07/17/02	AOC9-GP45D2 07/16/02	AOC9-GP45I 07/17/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	4.00 J	0.466 J	3.40 J	40.0 U	10.0 U	3.92 J	40.0 U	0.145 J	25.0 U
SW8260B	trans-1,2-Dichloroethene	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	trans-1,3-Dichloropropene	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Trichloroethene	µg/L	40.0 U	1.18	4.60 J	10.3 J	1.04 J	40.0 U	40.0 U	0.347 J	25.0 U
SW8260B	Trichlorofluoromethane	µg/L	40.0 U	1.00 U	40.0 U	40.0 U	10.0 U	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Vinyl acetate	µg/L	200 U	5.00 U	200 U	200 U	50.0 U	200 U	200 U	5.00 U	125 U
SW8260B	Vinyl chloride	µg/L	6.32 J	1.36	11.5 J	13.1 J	5.35 J	40.0 U	40.0 U	1.00 U	25.0 U
SW8260B	Xylenes, Total	µg/L	113	0.990 J	105	76.9	7.68 J	218	40.0 U	1.00 U	25.0 U
SW8260B	1,2-Dichloroethane-d4	µg/L	94 %	95 %	94 %	95 %	95 %	96 %	97 %	95 %	96 %
SW8260B	4-Bromofluorobenzene	µg/L	99 %	97 %	96 %	97 %	99 %	98 %	105 %	97 %	103 %
SW8260B	Dibromofluoromethane	µg/L	94 %	96 %	95 %	96 %	94 %	95 %	96 %	96 %	95 %
SW8260B	Toluene-d8	µg/L	93 %	95 %	95 %	94 %	94 %	95 %	92 %	95 %	94 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP45S1 07/17/02	AOC9-GP45S2 07/17/02	AOC9-GP46D1 07/17/02	AOC9-GP46D2 07/16/02	AOC9-GP46I 07/17/02	AOC9-GP46I/D 07/17/02	AOC9-GP46S1 07/17/02	AOC9-GP46S2 07/17/02	AOC9-GP47D1 07/16/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	2.48	6.76	15.3	1.44 J	7.65 J	17.6 J	1.01	5.46 J	2.90
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	0.255 J	1.07	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	0.277 J	20.0 U	0.174 J
SW8260B	1,4-Dichlorobenzene	µg/L	15.0	46.2	42.8	1.06 J	21.4	49.8	3.91	29.3	3.51
SW8260B	2-Butanone	µg/L	5.00 U	5.00 U	50.0 U	10.0 U	50.0 U	50.0 U	5.00 U	100 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	5.00 U	50.0 U	10.0 U	50.0 U	50.0 U	5.00 U	100 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	5.00 U	50.0 U	10.0 U	50.0 U	50.0 U	5.00 U	100 U	5.00 U
SW8260B	Acetone	µg/L	5.00 U	5.00 U	50.0 U	94.6	50.0 U	50.0 U	5.00 U	100 U	23.4
SW8260B	Benzene	µg/L	0.238 J	1.18	10.0 U	2.00 U	1.12 J	1.99 J	1.00 U	20.0 U	1.00 U
SW8260B	Bromodichloromethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	2.00 U	20.0 U	4.00 U	20.0 U	20.0 U	2.00 U	40.0 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	50.0 U	10.0 U	50.0 U	50.0 U	5.00 U	100 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Chlorobenzene	µg/L	118	664	409	4.48	309 J	394 J	40.8	431	25.4
SW8260B	Chloroethane	µg/L	2.00 U	2.00 U	20.0 U	4.00 U	20.0 U	20.0 U	2.00 U	40.0 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	2.00 U	20.0 U	4.00 U	20.0 U	20.0 U	2.00 U	40.0 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	0.259 J	1.09	10.0 U	2.00 U	10.0 U	10.0 U	0.0970 J	20.0 U	0.0900 J
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Ethylbenzene	µg/L	0.0790 J	0.706 J	0.840 J	2.00 U	10.0 U	1.52 J	1.00 U	20.0 U	1.00 U
SW8260B	m,p-Xylene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Methylene chloride	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Styrene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	0.294 J	0.175 J	10.0 U	2.00 U	10.0 U	10.0 U	0.808 J	20.0 U	1.00 U

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP45S1 07/17/02	AOC9-GP45S2 07/17/02	AOC9-GP46D1 07/17/02	AOC9-GP46D2 07/16/02	AOC9-GP46I 07/17/02	AOC9-GP46I/D 07/17/02	AOC9-GP46S1 07/17/02	AOC9-GP46S2 07/17/02	AOC9-GP47D1 07/16/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	1.00 U	0.0860 J	10.0 U	2.00 U	10.0 U	0.670 J	1.00 U	20.0 U	0.108 J
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Trichloroethene	µg/L	0.797 J	0.601 J	1.30 J	0.448 J	1.65 J	1.36 J	2.23	20.0 U	0.861 J
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	5.00 U	50.0 U	10.0 U	50.0 U	50.0 U	5.00 U	100 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	Xylenes, Total	µg/L	1.00 U	1.00 U	10.0 U	2.00 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	99 %	97 %	96 %	97 %	102 %	99 %	96 %	94 %	97 %
SW8260B	4-Bromofluorobenzene	µg/L	107 %	118 %	106 %	104 %	106 %	105 %	106 %	104 %	101 %
SW8260B	Dibromofluoromethane	µg/L	108 %	106 %	104 %	97 %	106 %	106 %	103 %	102 %	96 %
SW8260B	Toluene-d8	µg/L	109 %	116 %	107 %	94 %	107 %	108 %	108 %	106 %	94 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP47D2 07/16/02	AOC9-GP47I 07/16/02	AOC9-GP47S1 07/16/02	AOC9-GP47S2 07/16/02	AOC9-GP48D1 07/18/02	AOC9-GP48D2 07/16/02	AOC9-GP48I 07/18/02	AOC9-GP48I/D 07/18/02	AOC9-GP48S1 07/18/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	1.00 U	65.4	2.07 J	8.74 J	14.0	10.9	11.2	11.5	0.228 J
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	0.229 J	50.0 U	5.00 U	20.0 U	0.638 J	0.604 J	0.549 J	0.539 J	1.00 U
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U	50.0 U	0.465 J	1.54 J	0.980 J	0.518 J	0.715 J	0.748 J	1.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	1.00 U	82.4	12.0	41.5	14.9	7.49	10.4	11.1	0.194 J
SW8260B	2-Butanone	µg/L	5.00 U	250 U	25.0 U	100 U	5.00 U	1.53 J	5.00 U	5.00 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	250 U	25.0 U	100 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	250 U	25.0 U	100 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Acetone	µg/L	10.9	352	60.9	285	5.00 U	5.20	5.00 U	5.00 U	5.00 U
SW8260B	Benzene	µg/L	1.00 U	50.0 U	5.00 U	3.06 J	1.23	0.980 J	1.04	1.02	1.00 U
SW8260B	Bromodichloromethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	100 U	10.0 U	40.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	250 U	25.0 U	100 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chlorobenzene	µg/L	0.458 J	1350	98.9	475	42.7	13.4	30.6	32.1	1.00 U
SW8260B	Chloroethane	µg/L	2.00 U	100 U	10.0 U	40.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	0.110 J	0.0760 J	1.00 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	100 U	10.0 U	40.0 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	0.226 J	50.0 U	5.00 U	20.0 U	0.648 J	0.594 J	0.557 J	0.548 J	0.159 J
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Ethylbenzene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	m,p-Xylene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Methylene chloride	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Styrene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	0.121 J	1.00 U	1.00 U	1.00 U	0.224 J

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP47D2 07/16/02	AOC9-GP47I 07/16/02	AOC9-GP47S1 07/16/02	AOC9-GP47S2 07/16/02	AOC9-GP48D1 07/18/02	AOC9-GP48D2 07/16/02	AOC9-GP48I 07/18/02	AOC9-GP48I/D 07/18/02	AOC9-GP48S1 07/18/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	0.334 J	0.349 J	0.194 J	0.189 J	1.00 U
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Trichloroethene	µg/L	1.00 U	50.0 U	0.950 J	20.0 U	0.411 J	0.233 J	0.152 J	0.166 J	0.702 J
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	250 U	25.0 U	100 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	0.188 J	1.00 U	1.00 U	1.00 U
SW8260B	Xylenes, Total	µg/L	1.00 U	50.0 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	97 %	96 %	97 %	98 %	98 %	94 %	99 %	96 %	97 %
SW8260B	4-Bromofluorobenzene	µg/L	106 %	104 %	102 %	103 %	105 %	100 %	106 %	107 %	105 %
SW8260B	Dibromofluoromethane	µg/L	96 %	97 %	98 %	96 %	107 %	94 %	107 %	104 %	105 %
SW8260B	Toluene-d8	µg/L	94 %	94 %	94 %	93 %	107 %	94 %	108 %	108 %	108 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP48S2 07/18/02	AOC9-GP49D1 07/18/02	AOC9-GP49D2 07/19/02	AOC9-GP49I 07/18/02	AOC9-GP49S1 07/19/02	AOC9-GP49S2 07/19/02	AOC9-GP50D1 07/19/02	AOC9-GP50D2 07/19/02	AOC9-GP50I 07/19/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	4.12	0.163 J	0.0720 J	0.493 J	0.233 J	1.00 U	0.444 J	0.204 J	0.117 J
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	0.498 J	1.39	0.300 J	2.20	0.315 J	1.00 U	3.21	1.94	1.48
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	0.270 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	3.43	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	2-Butanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Acetone	µg/L	5.00 U	5.00 U	11.3	5.00 U	5.00 U	5.00 U	5.00 U	9.24	5.00 U
SW8260B	Benzene	µg/L	0.480 J	0.115 J	0.123 J	0.118 J	0.116 J	1.00 U	0.318 J	0.156 J	1.00 U
SW8260B	Bromodichloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chlorobenzene	µg/L	8.54	0.163 J	1.00 U	0.555 J	1.00 U	1.00 U	0.631 J	0.623 J	1.00 U
SW8260B	Chloroethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	0.0830 J	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	0.506 J	1.41	0.305 J	2.24	0.320 J	1.00 U	3.26	1.97	1.50
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Ethylbenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	m,p-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Methylene chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Styrene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	0.113 J	15.4	11.4	12.6	9.65	6.21	11.3	7.70	12.2

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP48S2 07/18/02	AOC9-GP49D1 07/18/02	AOC9-GP49D2 07/19/02	AOC9-GP49I 07/18/02	AOC9-GP49S1 07/19/02	AOC9-GP49S2 07/19/02	AOC9-GP50D1 07/19/02	AOC9-GP50D2 07/19/02	AOC9-GP50I 07/19/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	1.00 U	0.0800 J	0.141 J	0.0980 J	0.0930 J	0.0880 J	1.00 U	1.00 U	1.00 U
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Trichloroethene	µg/L	0.393 J	5.37	4.55	5.41	8.83	7.35	6.12	8.64	7.42
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Xylenes, Total	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	97 %	95 %	94 %	92 %	96 %	95 %	92 %	92 %	93 %
SW8260B	4-Bromofluorobenzene	µg/L	105 %	107 %	107 %	105 %	106 %	107 %	108 %	110 %	106 %
SW8260B	Dibromofluoromethane	µg/L	105 %	102 %	104 %	101 %	103 %	103 %	101 %	101 %	101 %
SW8260B	Toluene-d8	µg/L	107 %	107 %	107 %	108 %	107 %	108 %	110 %	108 %	109 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP50I/D 07/19/02	AOC9-GP50S1 07/19/02	AOC9-GP50S2 07/19/02	AOC9-GP51D1 07/22/02	AOC9-GP51D2 07/19/02	AOC9-GP51I 07/22/02	AOC9-GP51S1 07/22/02	AOC9-GP51S2 07/22/02	AOC9-GP52D1 07/22/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	0.105 J	1.00 U	0.164 J	12.8 J	8.77 J	17.5 J	1.02 J	5.20 J	14.4
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	1.52	1.00 U	2.44	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.49
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	2.08 J	10.0 U	2.60 J	0.244 J	1.24 J	2.58
SW8260B	1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	59.3	29.3	72.5	6.53	32.6	61.6
SW8260B	2-Butanone	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	Acetone	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	Benzene	µg/L	1.00 U	1.00 U	0.107 J	20.0 U	1.27 J	40.0 U	2.00 U	10.0 U	1.73
SW8260B	Bromodichloromethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	2.00 U	2.00 U	40.0 U	20.0 U	80.0 U	4.00 U	20.0 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Chlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	717	316	881	63.1	371	776
SW8260B	Chloroethane	µg/L	2.00 U	2.00 U	2.00 U	40.0 U	20.0 U	80.0 U	4.00 U	20.0 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	2.00 U	2.00 U	40.0 U	20.0 U	80.0 U	4.00 U	20.0 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	1.54	1.00 U	2.48	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.47
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Ethylbenzene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	0.930 J	2.43
SW8260B	m,p-Xylene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	0.268 J
SW8260B	Methylene chloride	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	0.296 J
SW8260B	Styrene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	11.7	4.67	9.63	20.0 U	10.0 U	40.0 U	0.528 J	10.0 U	0.228 J

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP50I/D 07/19/02	AOC9-GP50S1 07/19/02	AOC9-GP50S2 07/19/02	AOC9-GP51D1 07/22/02	AOC9-GP51D2 07/19/02	AOC9-GP51I 07/22/02	AOC9-GP51S1 07/22/02	AOC9-GP51S2 07/22/02	AOC9-GP52D1 07/22/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	0.606 J
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Trichloroethene	µg/L	6.76	8.38	8.41	20.0 U	10.0 U	40.0 U	1.21 J	1.04 J	0.615 J
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	5.00 U	5.00 U	100 U	50.0 U	200 U	10.0 U	50.0 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	0.813 J
SW8260B	Xylenes, Total	µg/L	1.00 U	1.00 U	1.00 U	20.0 U	10.0 U	40.0 U	2.00 U	10.0 U	0.561 J
SW8260B	1,2-Dichloroethane-d4	µg/L	95 %	94 %	90 %	94 %	90 %	96 %	95 %	95 %	94 %
SW8260B	4-Bromofluorobenzene	µg/L	106 %	106 %	106 %	108 %	107 %	106 %	104 %	105 %	99 %
SW8260B	Dibromofluoromethane	µg/L	104 %	103 %	99 %	95 %	99 %	97 %	95 %	95 %	94 %
SW8260B	Toluene-d8	µg/L	109 %	110 %	108 %	94 %	110 %	95 %	94 %	95 %	106 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP52D2 07/22/02	AOC9-GP52I 07/22/02	AOC9-GP52I/D 07/22/02	AOC9-GP52S1 07/23/02	AOC9-GP52S2 07/23/02	AOC9-GP53D1 07/23/02	AOC9-GP53D2 07/24/02	AOC9-GP53I 07/24/02	AOC9-GP53S1 07/23/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	1,1,1-Trichloroethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	0.920 J	10.5	11.1	1.25 J	1.40 J	6.23	7.64	2.43	0.775 J
SW8260B	1,2-Dichloroethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	5.00 U	1.43	1.51	2.50 U	5.00 U	0.714 J	0.382 J	1.00	0.674 J
SW8260B	1,2-Dichloropropane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	5.00 U	2.22	2.26	0.380 J	0.360 J	0.332 J	0.582 J	0.176 J	1.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	7.14	47.1	49.3	8.12	8.99	8.99	13.6	3.04	0.576 J
SW8260B	2-Butanone	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	4.22 J	10.0 U	5.00 U	5.00 U
SW8260B	2-Hexanone	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	10.0 U	10.0 U	5.00 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	10.0 U	10.0 U	5.00 U	5.00 U
SW8260B	Acetone	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	14.0	10.0 U	5.00 U	5.00 U
SW8260B	Benzene	µg/L	5.00 U	1.43	1.51	2.50 U	5.00 U	1.64 J	2.73	0.157 J	1.00 U
SW8260B	Bromodichloromethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Bromoform	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Bromomethane	µg/L	10.0 U	2.00 U	2.00 U	5.00 U	10.0 U	4.00 U	4.00 U	2.00 U	2.00 U
SW8260B	Carbon disulfide	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	10.0 U	10.0 U	5.00 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Chlorobenzene	µg/L	86.3	796	781	60.6	113	47.5	65.8	6.57	2.71
SW8260B	Chloroethane	µg/L	10.0 U	2.00 U	2.00 U	5.00 U	10.0 U	4.00 U	4.00 U	2.00 U	2.00 U
SW8260B	Chloroform	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Chloromethane	µg/L	10.0 U	2.00 U	2.00 U	5.00 U	10.0 U	4.00 U	4.00 U	2.00 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	5.00 U	1.41	1.48	2.50 U	5.00 U	0.702 J	0.376 J	1.02	0.685 J
SW8260B	cis-1,3-Dichloropropene	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Ethylbenzene	µg/L	5.00 U	2.25	2.51	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	m,p-Xylene	µg/L	5.00 U	0.275 J	0.295 J	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Methylene chloride	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	o-Xylene	µg/L	5.00 U	0.272 J	0.286 J	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Styrene	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	0.390 J	0.247 J	0.252 J	0.235 J	5.00 U	2.00 U	2.00 U	0.0870 J	0.139 J

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP52D2 07/22/02	AOC9-GP52I 07/22/02	AOC9-GP52I/D 07/22/02	AOC9-GP52S1 07/23/02	AOC9-GP52S2 07/23/02	AOC9-GP53D1 07/23/02	AOC9-GP53D2 07/24/02	AOC9-GP53I 07/24/02	AOC9-GP53S1 07/23/02
Low Level VOCs by Method 8260B (µg/L)											
SW8260B	Toluene	µg/L	5.00 U	0.798 J	0.823 J	2.50 U	5.00 U	0.328 J	0.170 J	1.00 U	1.00 U
SW8260B	trans-1,2-Dichloroethene	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Trichloroethene	µg/L	0.780 J	0.729 J	0.753 J	0.420 J	0.635 J	0.214 J	2.00 U	0.846 J	0.615 J
SW8260B	Trichlorofluoromethane	µg/L	5.00 U	1.00 U	1.00 U	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	Vinyl acetate	µg/L	25.0 U	5.00 U	5.00 U	12.5 U	25.0 U	10.0 U	10.0 U	5.00 U	5.00 U
SW8260B	Vinyl chloride	µg/L	5.00 U	0.946 J	0.978 J	2.50 U	5.00 U	0.470 J	0.504 J	1.00 U	1.00 U
SW8260B	Xylenes, Total	µg/L	5.00 U	0.544 J	0.578 J	2.50 U	5.00 U	2.00 U	2.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	95 %	93 %	93 %	96 %	93 %	94 %	94 %	95 %	93 %
SW8260B	4-Bromofluorobenzene	µg/L	106 %	98 %	98 %	107 %	107 %	104 %	103 %	106 %	106 %
SW8260B	Dibromofluoromethane	µg/L	96 %	94 %	91 %	95 %	94 %	94 %	93 %	102 %	99 %
SW8260B	Toluene-d8	µg/L	94 %	105 %	106 %	94 %	95 %	95 %	94 %	108 %	107 %

Source: Ecology and Environment, Inc. 2002

Table 3-4

Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP54D1 07/23/02	AOC9-GP54D2 07/23/02	AOC9-GP54I 07/23/02	AOC9-GP54I/D 07/23/02	AOC9-GP54S1 07/23/02	AOC9-GP55I 07/24/02	AOC9-GP56I 07/24/02	AOC9-GP57I 01/00/00
Low Level VOCs by Method 8260B (µg/L)										
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.92 J	1.15
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.188 J
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.195 J
SW8260B	1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	14.4	0.665 J
SW8260B	2-Butanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U
SW8260B	Acetone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	3.27 J	25.0 U	5.00 U
SW8260B	Benzene	µg/L	1.00 U	0.187 J	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.549 J
SW8260B	Bromodichloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	0.201 J
SW8260B	Carbon tetrachloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Chlorobenzene	µg/L	0.181 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	161	25.0
SW8260B	Chloroethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	0.0730 J	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	10.0 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	1.00 U	0.108 J	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.191 J
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Ethylbenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	m,p-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Methylene chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Styrene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Tetrachloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-GP54D1 07/23/02	AOC9-GP54D2 07/23/02	AOC9-GP54I 07/23/02	AOC9-GP54I/D 07/23/02	AOC9-GP54S1 07/23/02	AOC9-GP55I 07/24/02	AOC9-GP56I 07/24/02	AOC9-GP57I 01/00/00
Low Level VOCs by Method 8260B (µg/L)										
SW8260B	Toluene	µg/L	1.00 U	0.0780 J	1.00 U	1.00 U	1.00 U	0.104 J	5.00 U	0.149 J
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Trichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	Xylenes, Total	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	93 %	94 %	95 %	96 %	96 %	95 %	92 %	96 %
SW8260B	4-Bromofluorobenzene	µg/L	111 %	105 %	111 %	111 %	114 %	113 %	109 %	106 %
SW8260B	Dibromofluoromethane	µg/L	95 %	100 %	95 %	97 %	96 %	95 %	99 %	101 %
SW8260B	Toluene-d8	µg/L	93 %	107 %	95 %	95 %	94 %	94 %	107 %	107 %

Source: Ecology and Environment, Inc. 2002

Table 3-4
Summary of Complete Analytical Results for Groundwater Samples from Temporary Geoprobe Wells, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

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Note:

% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:

J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from quality control limits.

JB = Estimated value that may be bias high due to laboratory or field background contamination.

µg/L = Micrograms per liter.

NA = Not analyzed or reported.

U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.

UR = The PQL for this analyte is not usable. The actual PQL should be higher, but that level cannot be determined.

VOCs = Volatile Organic Compounds.

Table 3-5
Summary of Complete Analytical Results for Sediment Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AFFF-SD01 07/15/02	AFFF-SD01/D 07/15/02	AFFF-SD02 07/15/02
SVOCs by Method 8270C (µg/Kg)					
SW8270C	1,2,4-Trichlorobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	1,2-Dichlorobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	1,3-Dichlorobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	1,4-Dichlorobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	2,4,5-Trichlorophenol	µg/Kg	1180 U	1040 U	967 U
SW8270C	2,4,6-Trichlorophenol	µg/Kg	467 U	414 U	384 U
SW8270C	2,4-Dichlorophenol	µg/Kg	467 U	414 U	384 U
SW8270C	2,4-Dimethylphenol	µg/Kg	467 U	414 U	384 U
SW8270C	2,4-Dinitrophenol	µg/Kg	467 U	414 U	384 U
SW8270C	2,4-Dinitrotoluene	µg/Kg	467 U	414 U	384 U
SW8270C	2,6-Dinitrotoluene	µg/Kg	467 U	414 U	384 U
SW8270C	2-Chloronaphthalene	µg/Kg	467 U	414 U	384 U
SW8270C	2-Chlorophenol	µg/Kg	467 U	414 U	384 U
SW8270C	2-Methylnaphthalene	µg/Kg	467 U	414 U	384 U
SW8270C	2-Methylphenol	µg/Kg	467 U	414 U	384 U
SW8270C	2-Nitroaniline	µg/Kg	1180 U	1040 U	967 U
SW8270C	2-Nitrophenol	µg/Kg	467 U	414 U	384 U
SW8270C	3,3'-Dichlorobenzidine	µg/Kg	935 UR	827 UR	769 U
SW8270C	3-Nitroaniline	µg/Kg	1180 U	1040 U	967 U
SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1180 U	1040 U	967 U
SW8270C	4-Bromophenyl phenyl ether	µg/Kg	467 U	414 U	384 U
SW8270C	4-Chloro-3-methylphenol	µg/Kg	467 U	414 U	384 U
SW8270C	4-Chloroaniline	µg/Kg	467 U	414 U	384 U
SW8270C	4-Chlorophenyl phenyl ether	µg/Kg	467 U	414 U	384 U
SW8270C	4-Methylphenol	µg/Kg	467 U	414 U	384 U
SW8270C	4-Nitroaniline	µg/Kg	1180 U	1040 U	967 U
SW8270C	4-Nitrophenol	µg/Kg	1180 U	1040 U	967 U
SW8270C	Acenaphthene	µg/Kg	467 U	414 U	384 U
SW8270C	Acenaphthylene	µg/Kg	467 U	414 U	384 U
SW8270C	Anthracene	µg/Kg	467 U	414 U	384 U
SW8270C	Benz(a)anthracene	µg/Kg	467 U	414 U	384 U
SW8270C	Benzo(a)pyrene	µg/Kg	467 U	414 U	384 U
SW8270C	Benzo(b)fluoranthene	µg/Kg	467 U	414 U	384 U
SW8270C	Benzo(g,h,i)perylene	µg/Kg	467 U	414 U	384 U
SW8270C	Benzo(k)fluoranthene	µg/Kg	467 U	414 U	384 U
SW8270C	Benzoic acid	µg/Kg	1180 U	1040 U	967 U
SW8270C	Benzyl alcohol	µg/Kg	467 U	414 U	384 U
SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	467 U	414 U	384 U
SW8270C	Bis(2-chloroethyl)ether	µg/Kg	467 U	414 U	384 U
SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	467 U	414 U	384 U
SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	467 U	414 U	384 U
SW8270C	Butyl benzyl phthalate	µg/Kg	467 U	414 U	384 U
SW8270C	Carbazole	µg/Kg	467 U	414 U	384 U
SW8270C	Chrysene	µg/Kg	467 U	414 U	384 U
SW8270C	Dibenz(a,h)anthracene	µg/Kg	467 U	414 U	384 U
SW8270C	Dibenzofuran	µg/Kg	467 U	414 U	384 U
SW8270C	Diethyl phthalate	µg/Kg	467 U	414 U	384 U
SW8270C	Dimethyl phthalate	µg/Kg	467 U	414 U	384 U

Table 3-5
Summary of Complete Analytical Results for Sediment Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AFFF-SD01 07/15/02	AFFF-SD01/D 07/15/02	AFFF-SD02 07/15/02
SW8270C	Di-n-butyl phthalate	µg/Kg	467 U	414 U	384 U
SW8270C	Di-n-octyl phthalate	µg/Kg	467 U	414 U	384 U
SW8270C	Fluoranthene	µg/Kg	467 U	414 U	384 U
SW8270C	Fluorene	µg/Kg	467 U	414 U	384 U
SW8270C	Hexachlorobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	Hexachlorobutadiene	µg/Kg	467 U	414 U	384 U
SW8270C	Hexachlorocyclopentadiene	µg/Kg	1180 UR	1040 UR	967 U
SW8270C	Hexachloroethane	µg/Kg	467 U	414 U	384 U
SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	467 U	414 U	384 U
SW8270C	Isophorone	µg/Kg	467 U	414 U	384 U
SW8270C	Naphthalene	µg/Kg	467 U	414 U	384 U
SW8270C	Nitrobenzene	µg/Kg	467 U	414 U	384 U
SW8270C	N-Nitrosodimethylamine	µg/Kg	467 U	414 U	384 U
SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	467 U	414 U	384 U
SW8270C	N-Nitrosodiphenylamine	µg/Kg	467 U	414 U	384 U
SW8270C	Pentachlorophenol	µg/Kg	1180 U	1040 U	967 U
SW8270C	Phenanthrene	µg/Kg	467 U	414 U	384 U
SW8270C	Phenol	µg/Kg	467 U	414 U	384 U
SW8270C	Pyrene	µg/Kg	467 U	414 U	44.7 J
SW8270C	2,4,6-Tribromophenol	µg/Kg	111 %	97 %	94 %
SW8270C	2-Fluorobiphenyl	µg/Kg	70 %	74 %	71 %
SW8270C	2-Fluorophenol	µg/Kg	83 %	79 %	77 %
SW8270C	Nitrobenzene-d5	µg/Kg	78 %	71 %	70 %
SW8270C	Phenol-d5	µg/Kg	112 %	111 %	109 %
SW8270C	Terphenyl-d14	µg/Kg	78 %	106 %	102 %
PCBs by Method 8082 (µg/Kg)					
SW8082	Aroclor 1016	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Aroclor 1221	µg/Kg	59.9 U	52.5 U	44.2 U
SW8082	Aroclor 1232	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Aroclor 1242	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Aroclor 1248	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Aroclor 1254	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Aroclor 1260	µg/Kg	29.9 U	26.2 U	22.1 U
SW8082	Decachlorobiphenyl	µg/Kg	101 %	101 %	99 %
SW8082	Tetrachloro-m-xylene	µg/Kg	85 %	85 %	86 %
Pesticides by Method 8081A (µg/Kg)					
SW8081A	4,4'-DDD	µg/Kg	1.14 J	0.801 J	3.32 U
SW8081A	4,4'-DDE	µg/Kg	4.49 U	3.93 U	3.32 U
SW8081A	4,4'-DDT	µg/Kg	0.743 J	5.25 U	4.42 U
SW8081A	Aldrin	µg/Kg	5.99 U	5.25 U	4.42 U
SW8081A	alpha-BHC	µg/Kg	4.49 U	3.93 U	3.32 U
SW8081A	alpha-Chlordane	µg/Kg	1.50 U	1.31 U	1.11 U
SW8081A	beta-BHC	µg/Kg	5.99 U	5.25 U	4.42 U
SW8081A	delta-BHC	µg/Kg	2.99 U	2.62 U	2.21 U
SW8081A	Dieldrin	µg/Kg	7.48 U	6.56 U	5.53 U
SW8081A	Endosulfan I	µg/Kg	7.48 U	6.56 U	5.53 U
SW8081A	Endosulfan II	µg/Kg	4.49 U	3.93 U	3.32 U
SW8081A	Endosulfan sulfate	µg/Kg	8.98 U	7.87 U	6.64 U
SW8081A	Endrin	µg/Kg	5.99 U	5.25 U	4.42 U
SW8081A	Endrin aldehyde	µg/Kg	15.0 U	13.1 U	11.1 U

Table 3-5
Summary of Complete Analytical Results for Sediment Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AFFF-SD01 07/15/02	AFFF-SD01/D 07/15/02	AFFF-SD02 07/15/02
SW8081A	Endrin ketone	µg/Kg	4.49 U	3.93 U	3.32 U
SW8081A	gamma-BHC	µg/Kg	2.99 U	2.62 U	2.21 U
SW8081A	gamma-Chlordane	µg/Kg	2.99 U	2.62 U	2.21 U
SW8081A	Heptachlor	µg/Kg	0.805 J	0.960 J	3.32 U
SW8081A	Heptachlor epoxide	µg/Kg	7.48 U	6.56 U	5.53 U
SW8081A	Methoxychlor	µg/Kg	59.9 U	52.5 U	44.2 U
SW8081A	Toxaphene	µg/Kg	150 U	131 U	111 U
SW8081A	Decachlorobiphenyl	µg/Kg	100 %	100 %	100 %
SW8081A	Tetrachloro-m-xylene	µg/Kg	96 %	99 %	92 %
VOCs by Method 8260B (µg/Kg)					
SW8260B	1,1,1-Trichloroethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,1,2-Trichloroethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,1-Dichloroethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,1-Dichloroethene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,2-Dichlorobenzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,2-Dichloroethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,2-Dichloroethene, Total	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,2-Dichloropropane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,3-Dichlorobenzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,4-Dichlorobenzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	2-Butanone	µg/Kg	7.01 J	6.53 J	4.17 J
SW8260B	2-Chloroethyl vinyl ether	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	2-Hexanone	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	4-Methyl-2-pentanone	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	Acetone	µg/Kg	47.0 U	43.2 U	37.7 U
SW8260B	Benzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Bromodichloromethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Bromoform	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Bromomethane	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	Carbon disulfide	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Carbon tetrachloride	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Chlorobenzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Chloroethane	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	Chloroform	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Chloromethane	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	cis-1,2-Dichloroethene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	cis-1,3-Dichloropropene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Dibromochloromethane	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Ethylbenzene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	m,p-Xylene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Methylene chloride	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	o-Xylene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Styrene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Tetrachloroethene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Toluene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	trans-1,2-Dichloroethene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	trans-1,3-Dichloropropene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Trichloroethene	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	Trichlorofluoromethane	µg/Kg	7.92 U	7.04 U	6.43 U

Table 3-5
Summary of Complete Analytical Results for Sediment Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AFFF-SD01 07/15/02	AFFF-SD01/D 07/15/02	AFFF-SD02 07/15/02
SW8260B	Vinyl acetate	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	Vinyl chloride	µg/Kg	15.8 U	14.1 U	12.9 U
SW8260B	Xylenes, Total	µg/Kg	7.92 U	7.04 U	6.43 U
SW8260B	1,2-Dichloroethane-d4	µg/Kg	105 %	108 %	109 %
SW8260B	4-Bromofluorobenzene	µg/Kg	113 %	108 %	98 %
SW8260B	Dibromofluoromethane	µg/Kg	103 %	107 %	110 %
SW8260B	Toluene-d8	µg/Kg	97 %	102 %	106 %
Metals/Mercury by Method 6010B/7471A (mg/Kg)					
SW6010B	Aluminum	mg/Kg	9580	6320	6760
SW6010B	Antimony	mg/Kg	3.23 U	2.66 U	2.51 J
SW6010B	Arsenic	mg/Kg	2.00 J	2.65 J	2.51 J
SW6010B	Barium	mg/Kg	43.9	26.8	24.5
SW6010B	Beryllium	mg/Kg	0.720 J	1.33 U	2.15 U
SW6010B	Cadmium	mg/Kg	6.46 U	5.32 U	8.59 U
SW6010B	Calcium	mg/Kg	2600	4060	2570
SW6010B	Chromium	mg/Kg	12.6	8.05	8.32 J
SW6010B	Cobalt	mg/Kg	6.98	4.54 J	4.48 J
SW6010B	Copper	mg/Kg	20.1	13.4	18.4
SW6010B	Iron	mg/Kg	17500	17400	14600
SW6010B	Lead	mg/Kg	16.2 J	6.86 J	8.16
SW6010B	Magnesium	mg/Kg	3350	2150	2770
SW6010B	Manganese	mg/Kg	390 J	377 J	477 J
SW7471A	Mercury	mg/Kg	0.0808 U	0.0705 U	0.0624 U
SW6010B	Nickel	mg/Kg	13.3	8.09	9.89
SW6010B	Potassium	mg/Kg	1100	769	737
SW6010B	Selenium	mg/Kg	8.08 U	6.65 U	4.30 U
SW6010B	Silver	mg/Kg	6.46 U	5.32 U	8.59 U
SW6010B	Sodium	mg/Kg	36.2 J	57.8 J	52.3 J
SW6010B	Thallium	mg/Kg	12.9 U	10.6 U	17.2 U
SW6010B	Vanadium	mg/Kg	13.4	8.46	7.67 J
SW6010B	Zinc	mg/Kg	54.3	33.7	46.0
Percent Moisture (wt%)					
ASTM_D2216	Percent Moisture	wt%	38.1	29.1	22.4

Note:
% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:
J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from quality control limits.
µg/Kg = Micrograms per kilogram.
mg/Kg = Milligrams per kilogram.
NA = Not analyzed or reported.
PCBs = Polychlorinated Biphenyls.
SVOCs = Semivolatile Organic Compounds.
U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.
UR = The PQL for this analyte is not usable. The actual PQL should be higher, but that level cannot be determined.
VOCs = Volatile Organic Compounds.

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling,
Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID:	AOC9-SS01(11_5-16)	AOC9-SS01(11_5-16)/D	AOC9-SS01(20-24)	AOC9-SS01(4-6)	AOC9-SS02(10-10_5)	AOC9-SS02(2-4)	AOC9-SS02(6-8)	AOC9-TP04	AOC9-TP04/D
		Date:	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/19/02	07/19/02
SVOCs by Method 8270C (µg/Kg)											
SW8270C	1,2,4-Trichlorobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	1,2-Dichlorobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	1,3-Dichlorobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	1,4-Dichlorobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,4,5-Trichlorophenol	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	2,4,6-Trichlorophenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,4-Dichlorophenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,4-Dimethylphenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,4-Dinitrophenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,4-Dinitrotoluene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2,6-Dinitrotoluene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2-Chloronaphthalene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2-Chlorophenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2-Methylnaphthalene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2-Methylphenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	2-Nitroaniline	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	2-Nitrophenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	3,3'-Dichlorobenzidine	µg/Kg	693 U	684 U	768 U	726 U	NS	NS	NS	769 UR	761 UR
SW8270C	3-Nitroaniline	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	4-Bromophenyl phenyl ether	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	4-Chloro-3-methylphenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	4-Chloroaniline	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	4-Chlorophenyl phenyl ether	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	4-Methylphenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	4-Nitroaniline	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	4-Nitrophenol	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	Acenaphthene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Acenaphthylene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Anthracene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Benz(a)anthracene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Benzo(a)pyrene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Benzo(b)fluoranthene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ

Source: Ecology and Environment, Inc. 2002

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-SS01(11_5-16) 07/24/02	AOC9-SS01(11_5-16)/D 07/24/02	AOC9-SS01(20-24) 07/24/02	AOC9-SS01(4-6) 07/24/02	AOC9-SS02(10-10_5) 07/24/02	AOC9-SS02(2-4) 07/24/02	AOC9-SS02(6-8) 07/24/02	AOC9-TP04 07/19/02	AOC9-TP04/D 07/19/02
SW8270C	Benzo(g,h,i)perylene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Benzo(k)fluoranthene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Benzoic acid	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	Benzyl alcohol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Bis(2-chloroethyl)ether	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Butyl benzyl phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Carbazole	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Chrysene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Dibenz(a,h)anthracene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Dibenzofuran	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Diethyl phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Dimethyl phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Di-n-butyl phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Di-n-octyl phthalate	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Fluoranthene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Fluorene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Hexachlorobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Hexachlorobutadiene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Hexachlorocyclopentadiene	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 UR	957 UR
SW8270C	Hexachloroethane	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Isophorone	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Naphthalene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Nitrobenzene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	N-Nitrosodimethylamine	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	N-Nitrosodiphenylamine	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Pentachlorophenol	µg/Kg	871 U	860 U	965 U	914 U	NS	NS	NS	967 U	957 UJ
SW8270C	Phenanthrene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Phenol	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ
SW8270C	Pyrene	µg/Kg	346 U	342 U	384 U	363 U	NS	NS	NS	385 U	381 UJ

Source: Ecology and Environment, Inc. 2002

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID:	AOC9-SS01(11_5-16)	AOC9-SS01(11_5-16)/D	AOC9-SS01(20-24)	AOC9-SS01(4-6)	AOC9-SS02(10-10_5)	AOC9-SS02(2-4)	AOC9-SS02(6-8)	AOC9-TP04	AOC9-TP04/D
		Date:	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/19/02	07/19/02
SW8270C	2,4,6-Tribromophenol	µg/Kg	70 %	66 %	120 %	80 %	NS	NS	NS	65 %	90 %
SW8270C	2-Fluorobiphenyl	µg/Kg	71 %	68 %	77 %	69 %	NS	NS	NS	76 %	77 %
SW8270C	2-Fluorophenol	µg/Kg	82 %	74 %	162 %	84 %	NS	NS	NS	84 %	85 %
SW8270C	Nitrobenzene-d5	µg/Kg	87 %	82 %	115 %	85 %	NS	NS	NS	83 %	80 %
SW8270C	Phenol-d5	µg/Kg	119 %	108 %	259 %	117 %	NS	NS	NS	110 %	100 %
SW8270C	Terphenyl-d14	µg/Kg	59 %	59 %	71 %	58 %	NS	NS	NS	87 %	70 %
PCBs by Method 8082 (µg/Kg)											
SW8082	Aroclor 1016	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Aroclor 1221	µg/Kg	39.8 U	43.4 U	45.2 U	45.9 U	NS	NS	NS	47.7 U	46.3 U
SW8082	Aroclor 1232	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Aroclor 1242	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Aroclor 1248	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Aroclor 1254	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Aroclor 1260	µg/Kg	19.9 U	21.7 U	22.6 U	23.0 U	NS	NS	NS	23.8 U	23.1 U
SW8082	Decachlorobiphenyl	µg/Kg	87 %	85 %	46 %	83 %	NS	NS	NS	159 %	109 %
SW8082	Tetrachloro-m-xylene	µg/Kg	115 %	112 %	52 %	101 %	NS	NS	NS	100 %	100 %
Pesticides by Method 8081A (µg/Kg)											
SW8081A	4,4'-DDD	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	4,4'-DDE	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	4,4'-DDT	µg/Kg	3.98 U	4.34 U	4.52 U	4.59 U	NS	NS	NS	1.47 J	4.63 U
SW8081A	Aldrin	µg/Kg	3.98 U	4.34 U	4.52 U	4.59 U	NS	NS	NS	4.77 U	4.63 U
SW8081A	alpha-BHC	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	alpha-Chlordane	µg/Kg	0.995 U	1.09 U	1.13 U	1.15 U	NS	NS	NS	1.19 U	1.16 U
SW8081A	beta-BHC	µg/Kg	3.98 U	4.34 U	4.52 U	4.59 U	NS	NS	NS	4.77 U	4.63 U
SW8081A	delta-BHC	µg/Kg	1.99 U	2.17 U	2.26 U	2.30 U	NS	NS	NS	2.38 U	2.31 U
SW8081A	Dieldrin	µg/Kg	4.97 U	5.43 U	5.66 U	5.74 U	NS	NS	NS	5.96 U	5.78 U
SW8081A	Endosulfan I	µg/Kg	4.97 U	5.43 U	5.66 U	5.74 U	NS	NS	NS	5.96 U	5.78 U
SW8081A	Endosulfan II	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	Endosulfan sulfate	µg/Kg	5.97 U	6.51 U	6.79 U	6.89 U	NS	NS	NS	7.15 U	6.94 U
SW8081A	Endrin	µg/Kg	3.98 U	4.34 U	4.52 U	4.59 U	NS	NS	NS	4.77 U	4.63 U
SW8081A	Endrin aldehyde	µg/Kg	9.95 U	10.9 U	11.3 U	11.5 U	NS	NS	NS	11.9 U	11.6 U
SW8081A	Endrin ketone	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	gamma-BHC	µg/Kg	1.99 U	2.17 U	2.26 U	2.30 U	NS	NS	NS	2.38 U	2.31 U
SW8081A	gamma-Chlordane	µg/Kg	1.99 U	2.17 U	2.26 U	2.30 U	NS	NS	NS	2.38 U	2.31 U

Source: Ecology and Environment, Inc. 2002

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-SS01(11_5-16) 07/24/02	AOC9-SS01(11_5-16)/D 07/24/02	AOC9-SS01(20-24) 07/24/02	AOC9-SS01(4-6) 07/24/02	AOC9-SS02(10-10_5) 07/24/02	AOC9-SS02(2-4) 07/24/02	AOC9-SS02(6-8) 07/24/02	AOC9-TP04 07/19/02	AOC9-TP04/D 07/19/02
SW8081A	Heptachlor	µg/Kg	2.98 U	3.26 U	3.39 U	3.45 U	NS	NS	NS	3.58 U	3.47 U
SW8081A	Heptachlor epoxide	µg/Kg	4.97 U	5.43 U	5.66 U	5.74 U	NS	NS	NS	5.96 U	5.78 U
SW8081A	Methoxychlor	µg/Kg	39.8 U	43.4 U	45.2 U	45.9 U	NS	NS	NS	47.7 U	46.3 U
SW8081A	Toxaphene	µg/Kg	99.5 U	109 U	113 U	115 U	NS	NS	NS	119 U	116 U
SW8081A	Decachlorobiphenyl	µg/Kg	101 %	100 %	102 %	97 %	NS	NS	NS	148 %	106 %
SW8081A	Tetrachloro-m-xylene	µg/Kg	98 %	99 %	97 %	92 %	NS	NS	NS	84 %	85 %
TPH by Method 8015B (mg/Kg)											
SW8015B	Diesel Range Organics	mg/Kg	NS	NS	NS	NS	NS	NS	NS	13.9	14.3
SW8015B	Gasoline Range Organics	mg/Kg	NS	NS	NS	NS	NS	NS	NS	8.55 U	8.62 U
SW8015B	1,2-Dichlorobenzene	mg/Kg	NS	NS	NS	NS	NS	NS	NS	76 %	77 %
SW8015B	o-Terphenyl	mg/Kg	NS	NS	NS	NS	NS	NS	NS	96 %	82 %
VOCs by Method 8260B (µg/Kg)											
SW8260B	1,1,1-Trichloroethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,1,2-Trichloroethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,1-Dichloroethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,1-Dichloroethene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,2-Dichlorobenzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,2-Dichloroethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,2-Dichloroethene, Total	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,2-Dichloropropane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,3-Dichlorobenzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,4-Dichlorobenzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	2-Butanone	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	3.07 J	11.8 U
SW8260B	2-Chloroethyl vinyl ether	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	2-Hexanone	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	4-Methyl-2-pentanone	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	Acetone	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	6.19 J	40.3 J	5.07 J
SW8260B	Benzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Bromodichloromethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Bromoform	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Bromomethane	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	Carbon disulfide	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Carbon tetrachloride	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling,
Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-SS01(11_5-16) 07/24/02	AOC9-SS01(11_5-16)/D 07/24/02	AOC9-SS01(20-24) 07/24/02	AOC9-SS01(4-6) 07/24/02	AOC9-SS02(10-10_5) 07/24/02	AOC9-SS02(2-4) 07/24/02	AOC9-SS02(6-8) 07/24/02	AOC9-TP04 07/19/02	AOC9-TP04/D 07/19/02
SW8260B	Chlorobenzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Chloroethane	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	Chloroform	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Chloromethane	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	cis-1,2-Dichloroethene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	cis-1,3-Dichloropropene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Dibromochloromethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Ethylbenzene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	m,p-Xylene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Methylene chloride	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	o-Xylene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Styrene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Tetrachloroethene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	1.51 J	5.71 U	5.88 U
SW8260B	Toluene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	trans-1,2-Dichloroethene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	trans-1,3-Dichloropropene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Trichloroethene	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	1.66 J	5.71 U	5.88 U
SW8260B	Trichlorofluoromethane	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	Vinyl acetate	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	Vinyl chloride	µg/Kg	11.3 U	11.3 U	12.2 U	11.7 U	10.3 U	10.2 U	10.6 U	11.4 U	11.8 U
SW8260B	Xylenes, Total	µg/Kg	5.65 U	5.64 U	6.09 U	5.83 U	5.13 U	5.10 U	5.30 U	5.71 U	5.88 U
SW8260B	1,2-Dichloroethane-d4	µg/Kg	99 %	99 %	98 %	101 %	103 %	101 %	101 %	105 %	107 %
SW8260B	4-Bromofluorobenzene	µg/Kg	104 %	105 %	107 %	114 %	102 %	105 %	111 %	102 %	110 %
SW8260B	Dibromofluoromethane	µg/Kg	100 %	101 %	100 %	100 %	102 %	102 %	102 %	112 %	112 %
SW8260B	Toluene-d8	µg/Kg	104 %	103 %	104 %	108 %	103 %	104 %	105 %	113 %	114 %

Source: Ecology and Environment, Inc. 2002

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling,
Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	AOC9-SS01(11_5-16) 07/24/02	AOC9-SS01(11_5-16)/D 07/24/02	AOC9-SS01(20-24) 07/24/02	AOC9-SS01(4-6) 07/24/02	AOC9-SS02(10-10_5) 07/24/02	AOC9-SS02(2-4) 07/24/02	AOC9-SS02(6-8) 07/24/02	AOC9-TP04 07/19/02	AOC9-TP04/D 07/19/02
Metals/Mercury by Method 6010B/7471A (mg/Kg)											
SW6010B	Aluminum	mg/Kg	5080	4920	4660	11700	NS	NS	NS	7230	7650
SW6010B	Antimony	mg/Kg	4.94 J	4.24 J	2.35 J	4.07 J	NS	NS	NS	0.899 J	0.749 J
SW6010B	Arsenic	mg/Kg	13.6 U	3.35 J	1.48 J	12.5 U	NS	NS	NS	0.722 J	1.33 J
SW6010B	Barium	mg/Kg	18.8	17.9	12.9	50.1	NS	NS	NS	28.8	26.2
SW6010B	Beryllium	mg/Kg	2.73 U	2.49 U	1.23 U	2.50 U	NS	NS	NS	0.298 J	0.264 J
SW6010B	Cadmium	mg/Kg	10.9 U	9.97 U	4.91 U	10.0 U	NS	NS	NS	2.42 U	2.14 U
SW6010B	Calcium	mg/Kg	29100	27400	25000	3800	NS	NS	NS	1320	1330
SW6010B	Chromium	mg/Kg	6.83 J	6.55 J	5.80	13.0	NS	NS	NS	6.18	6.57
SW6010B	Cobalt	mg/Kg	3.84 J	3.67 J	3.05 J	7.73 J	NS	NS	NS	2.34 J	2.52
SW6010B	Copper	mg/Kg	18.9	16.5	13.2	28.2	NS	NS	NS	6.79	9.38
SW6010B	Iron	mg/Kg	13300	12300	11300	26900	NS	NS	NS	10300	11400
SW6010B	Lead	mg/Kg	4.40 J	3.66 J	3.16	13.8	NS	NS	NS	8.72	7.73
SW6010B	Magnesium	mg/Kg	2790	2780	2570	4410	NS	NS	NS	932	1380
SW6010B	Manganese	mg/Kg	545 J	522 J	300 J	1410 J	NS	NS	NS	182 J	251 J
SW7471A	Mercury	mg/Kg	0.0369 U	0.0386 U	0.0417 U	0.0154 J	NS	NS	NS	0.0439	0.0368 J
SW6010B	Nickel	mg/Kg	9.41 J	7.73 J	6.76	15.5	NS	NS	NS	3.38	4.46
SW6010B	Potassium	mg/Kg	1010	816	809	920	NS	NS	NS	268	271
SW6010B	Selenium	mg/Kg	27.3 U	24.9 U	12.3 U	25.0 U	NS	NS	NS	6.05 U	5.36 U
SW6010B	Silver	mg/Kg	10.9 UJ	9.97 UJ	4.91 UJ	10.0 UJ	NS	NS	NS	2.42 UJ	2.14 UJ
SW6010B	Sodium	mg/Kg	135 J	69.5 J	51.5 J	102 J	NS	NS	NS	27.0 J	19.5 J
SW6010B	Thallium	mg/Kg	5.66 J	4.70 J	2.49 J	4.45 J	NS	NS	NS	0.871 J	0.975 J
SW6010B	Vanadium	mg/Kg	5.63 J	4.97 J	5.30	15.2	NS	NS	NS	12.8	13.8
SW6010B	Zinc	mg/Kg	56.6	34.7	27.2	65.1	NS	NS	NS	26.3	24.4
Percent Moisture (wt%)											
ASTM_D2216	Percent Moisture	wt%	13.6	12.0	18.5	15.3	6.23	3.20	6.01	17.3	18.2

Source: Ecology and Environment, Inc. 2002

Table 3-6
Summary of Complete Analytical Results for Soil Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID:	AOC9-SS01(11_5-16)	AOC9-SS01(11_5-16)/D	AOC9-SS01(20-24)	AOC9-SS01(4-6)	AOC9-SS02(10-10_5)	AOC9-SS02(2-4)	AOC9-SS02(6-8)	AOC9-TP04	AOC9-TP04/D
		Date:	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/24/02	07/19/02	07/19/02

Note:
% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:
J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from quality control limits.
JB = Estimated value that may be bias high due to laboratory or field background contamination.
µg/Kg = Micrograms per kilogram.
mg/Kg = Milligrams per kilogram.
NA = Not analyzed or reported.
PCBs = Polychlorinated Biphenyls.
SVOCs = Semivolatile Organic Compounds.
TPH = Total petroleum hydrocarbons (Diesel and gasoline organics).
U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.
UR = The PQL for this analyte is not usable. The actual PQL should be higher, but that level cannot be determined.
VOCs = Volatile Organic Compounds.

Table 3-7
Summary of Complete Analytical Results for the Drilling Water Sample, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-DW01 07/18/02
SVOCs by Method 8270C (µg/L)			
SW8270C	1,2,4-Trichlorobenzene	µg/L	10.0 U
SW8270C	1,2-Dichlorobenzene	µg/L	10.0 U
SW8270C	1,3-Dichlorobenzene	µg/L	10.0 U
SW8270C	1,4-Dichlorobenzene	µg/L	10.0 U
SW8270C	2,4,5-Trichlorophenol	µg/L	25.0 U
SW8270C	2,4,6-Trichlorophenol	µg/L	10.0 U
SW8270C	2,4-Dichlorophenol	µg/L	10.0 U
SW8270C	2,4-Dimethylphenol	µg/L	10.0 U
SW8270C	2,4-Dinitrophenol	µg/L	25.0 U
SW8270C	2,4-Dinitrotoluene	µg/L	10.0 U
SW8270C	2,6-Dinitrotoluene	µg/L	10.0 U
SW8270C	2-Chloronaphthalene	µg/L	10.0 U
SW8270C	2-Chlorophenol	µg/L	10.0 U
SW8270C	2-Methylnaphthalene	µg/L	10.0 U
SW8270C	2-Methylphenol	µg/L	10.0 U
SW8270C	2-Nitroaniline	µg/L	25.0 U
SW8270C	2-Nitrophenol	µg/L	10.0 U
SW8270C	3,3´-Dichlorobenzidine	µg/L	20.0 U
SW8270C	3-Nitroaniline	µg/L	25.0 U
SW8270C	4,6-Dinitro-2-methylphenol	µg/L	25.0 U
SW8270C	4-Bromophenyl phenyl ether	µg/L	10.0 U
SW8270C	4-Chloro-3-methylphenol	µg/L	10.0 U
SW8270C	4-Chloroaniline	µg/L	10.0 U
SW8270C	4-Chlorophenyl phenyl ether	µg/L	10.0 U
SW8270C	4-Methylphenol	µg/L	10.0 U
SW8270C	4-Nitroaniline	µg/L	25.0 U
SW8270C	4-Nitrophenol	µg/L	25.0 U
SW8270C	Acenaphthene	µg/L	10.0 U
SW8270C	Acenaphthylene	µg/L	10.0 U
SW8270C	Anthracene	µg/L	10.0 U
SW8270C	Benz(a)anthracene	µg/L	10.0 U
SW8270C	Benzo(a)pyrene	µg/L	10.0 U
SW8270C	Benzo(b)fluoranthene	µg/L	10.0 U
SW8270C	Benzo(g,h,i)perylene	µg/L	10.0 U
SW8270C	Benzo(k)fluoranthene	µg/L	10.0 U
SW8270C	Benzoic acid	µg/L	25.0 U
SW8270C	Benzyl alcohol	µg/L	10.0 U
SW8270C	Bis(2-chloroethoxy)methane	µg/L	10.0 U
SW8270C	Bis(2-chloroethyl)ether	µg/L	10.0 U
SW8270C	Bis(2-chloroisopropyl)ether	µg/L	10.0 U
SW8270C	Bis(2-ethylhexyl)phthalate	µg/L	10.0 U
SW8270C	Butyl benzyl phthalate	µg/L	10.0 U
SW8270C	Carbazole	µg/L	10.0 U
SW8270C	Chrysene	µg/L	10.0 U
SW8270C	Dibenz(a,h)anthracene	µg/L	10.0 U
SW8270C	Dibenzofuran	µg/L	10.0 U
SW8270C	Diethyl phthalate	µg/L	10.0 U
SW8270C	Dimethyl phthalate	µg/L	10.0 U
SW8270C	Di-n-butyl phthalate	µg/L	10.0 U
SW8270C	Di-n-octyl phthalate	µg/L	10.0 U
SW8270C	Fluoranthene	µg/L	10.0 U

Table 3-7
Summary of Complete Analytical Results for the Drilling Water Sample, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-DW01 07/18/02
SW8270C	Fluorene	µg/L	10.0 U
SW8270C	Hexachlorobenzene	µg/L	10.0 U
SW8270C	Hexachlorobutadiene	µg/L	10.0 U
SW8270C	Hexachlorocyclopentadiene	µg/L	25.0 U
SW8270C	Hexachloroethane	µg/L	10.0 U
SW8270C	Indeno(1,2,3-cd)pyrene	µg/L	10.0 U
SW8270C	Isophorone	µg/L	10.0 U
SW8270C	Naphthalene	µg/L	10.0 U
SW8270C	Nitrobenzene	µg/L	10.0 U
SW8270C	N-Nitrosodimethylamine	µg/L	10.0 U
SW8270C	N-Nitrosodi-n-propylamine	µg/L	10.0 U
SW8270C	N-Nitrosodiphenylamine	µg/L	10.0 U
SW8270C	Pentachlorophenol	µg/L	25.0 U
SW8270C	Phenanthrene	µg/L	10.0 U
SW8270C	Phenol	µg/L	10.0 U
SW8270C	Pyrene	µg/L	10.0 U
SW8270C	2,4,6-Tribromophenol	µg/L	73 %
SW8270C	2-Fluorobiphenyl	µg/L	63 %
SW8270C	2-Fluorophenol	µg/L	63 %
SW8270C	Nitrobenzene-d5	µg/L	75 %
SW8270C	Phenol-d5	µg/L	96 %
SW8270C	Terphenyl-d14	µg/L	65 %
PCBs by Method 8082 (µg/L)			
SW8082	Aroclor 1016	µg/L	0.500 U
SW8082	Aroclor 1221	µg/L	1.00 U
SW8082	Aroclor 1232	µg/L	0.500 U
SW8082	Aroclor 1242	µg/L	0.500 U
SW8082	Aroclor 1248	µg/L	0.500 U
SW8082	Aroclor 1254	µg/L	0.500 U
SW8082	Aroclor 1260	µg/L	0.500 U
SW8082	Decachlorobiphenyl	µg/L	68 %
SW8082	Tetrachloro-m-xylene	µg/L	59 %
Pesticides by Method 8081A (µg/L)			
SW8081A	4,4´-DDD	µg/L	0.100 U
SW8081A	4,4´-DDE	µg/L	0.0500 U
SW8081A	4,4´-DDT	µg/L	0.150 U
SW8081A	Aldrin	µg/L	0.0500 U
SW8081A	alpha-BHC	µg/L	0.0817
SW8081A	alpha-Chlordane	µg/L	0.0500 U
SW8081A	beta-BHC	µg/L	0.0500 U
SW8081A	delta-BHC	µg/L	0.100 U
SW8081A	Dieldrin	µg/L	0.0500 U
SW8081A	Endosulfan I	µg/L	0.0500 U
SW8081A	Endosulfan II	µg/L	0.100 U
SW8081A	Endosulfan sulfate	µg/L	0.100 U
SW8081A	Endrin	µg/L	0.0500 U
SW8081A	Endrin aldehyde	µg/L	0.150 U
SW8081A	Endrin ketone	µg/L	0.100 U
SW8081A	gamma-BHC	µg/L	0.0500 U
SW8081A	gamma-Chlordane	µg/L	0.100 U
SW8081A	Heptachlor	µg/L	0.0500 U

Table 3-7
Summary of Complete Analytical Results for the Drilling Water Sample, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-DW01 07/18/02
SW8081A	Heptachlor epoxide	µg/L	0.0500 U
SW8081A	Methoxychlor	µg/L	0.150 U
SW8081A	Toxaphene	µg/L	1.00 U
SW8081A	Decachlorobiphenyl	µg/L	76 %
SW8081A	Tetrachloro-m-xylene	µg/L	64 %
TPH by Method 8015B (mg/L)			
SW8015B	Diesel Range Organics	mg/L	0.363
SW8015B	Gasoline Range Organics	mg/L	0.100 U
SW8015B	1,2-Dichlorobenzene	mg/L	93 %
SW8015B	o-Terphenyl	mg/L	103 %
VOC by Method 8260B (µg/L)			
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	1.00 U
SW8260B	1,2-Dichloroethane	µg/L	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	1.00 U
SW8260B	1,2-Dichloropropane	µg/L	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	1.00 U
SW8260B	2-Butanone	µg/L	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U
SW8260B	Acetone	µg/L	5.00 U
SW8260B	Benzene	µg/L	0.100 J
SW8260B	Bromodichloromethane	µg/L	2.70
SW8260B	Bromoform	µg/L	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U
SW8260B	Chlorobenzene	µg/L	1.00 U
SW8260B	Chloroethane	µg/L	2.00 U
SW8260B	Chloroform	µg/L	44.0
SW8260B	Chloromethane	µg/L	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	1.00 U
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U
SW8260B	Dibromochloromethane	µg/L	0.117 J
SW8260B	Ethylbenzene	µg/L	0.0710 J
SW8260B	m,p-Xylene	µg/L	0.397 J
SW8260B	Methylene chloride	µg/L	1.00 U
SW8260B	o-Xylene	µg/L	0.189 J
SW8260B	Styrene	µg/L	1.00 U
SW8260B	Tetrachloroethene	µg/L	1.00 U
SW8260B	Toluene	µg/L	0.464 J
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U
SW8260B	Trichloroethene	µg/L	1.00 U
SW8260B	Trichlorofluoromethane	µg/L	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U

Table 3-7
Summary of Complete Analytical Results for the Drilling Water Sample, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: Date:	AOC9-DW01 07/18/02
SW8260B	Vinyl chloride	µg/L	1.00 U
SW8260B	Xylenes, Total	µg/L	0.586 J
SW8260B	1,2-Dichloroethane-d4	µg/L	93 %
SW8260B	4-Bromofluorobenzene	µg/L	107 %
SW8260B	Dibromofluoromethane	µg/L	103 %
SW8260B	Toluene-d8	µg/L	109 %
Metals/Mercury by Method 6010B/7470A (µg/L)			
SW6010B	Aluminum	µg/L	200 U
SW6010B	Antimony	µg/L	10.0 U
SW6010B	Arsenic	µg/L	25.0 U
SW6010B	Barium	µg/L	14.9 J
SW6010B	Beryllium	µg/L	5.00 U
SW6010B	Cadmium	µg/L	5.00 U
SW6010B	Calcium	µg/L	12800
SW6010B	Chromium	µg/L	10.0 U
SW6010B	Cobalt	µg/L	20.0 U
SW6010B	Copper	µg/L	38.6
SW6010B	Iron	µg/L	3430
SW6010B	Lead	µg/L	5.00 U
SW6010B	Magnesium	µg/L	3540
SW6010B	Manganese	µg/L	54.6
SW7470A	Mercury	µg/L	0.400 U
SW6010B	Nickel	µg/L	20.0 U
SW6010B	Potassium	µg/L	452 J
SW6010B	Selenium	µg/L	20.0 U
SW6010B	Silver	µg/L	10.0 U
SW6010B	Sodium	µg/L	4650
SW6010B	Thallium	µg/L	20.0 U
SW6010B	Vanadium	µg/L	20.0 U
SW6010B	Zinc	µg/L	196

Note:
% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:
J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.
NA = Not analyzed or reported.
PCBs = Polychlorinated Biphenyls.
SVOCs = Semivolatile Organic Compounds.
TPH = Total petroleum hydrocarbons (Diesel and gasoline organics)
U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.
VOCs = Volatile Organic Compounds.

Table 3-8
Summary of Complete Analytical Results for Trip Blank Water Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	FIELDQC-TB9-GW1 07/15/02	FIELDQC-TB9-GW2 07/16/02	FIELDQC-TB9-GW3 07/17/02	FIELDQC-TB9-GW4 07/18/02	FIELDQC-TB9-GW5 07/19/02	FIELDQC-TB9-GW6 07/22/02	FIELDQC-TB9-GW7 07/23/02	FIELDQC-TB9-GW8 07/24/02
Low Level VOCs by Method 8260B (µg/L)										
SW8260B	1,1,1-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2,2-Tetrachloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1,2-Trichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,1-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethene, Total	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloropropane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	2-Butanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	2-Hexanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	4-Methyl-2-pentanone	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Acetone	µg/L	32.8	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Benzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromodichloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromoform	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Bromomethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Carbon disulfide	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Carbon tetrachloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chloroethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	Chloroform	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Chloromethane	µg/L	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
SW8260B	cis-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	cis-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Dibromochloromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Ethylbenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	m,p-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Methylene chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	o-Xylene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Styrene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Source: Ecology and Environment, Inc. 2002

Table 3-8
Summary of Complete Analytical Results for Trip Blank Water Samples, Year 2002 SI Additional Sampling, Former Griffiss Air Force Base, Rome, New York

Method	Analyte	Sample ID: / Date:	FIELDQC-TB9-GW1 07/15/02	FIELDQC-TB9-GW2 07/16/02	FIELDQC-TB9-GW3 07/17/02	FIELDQC-TB9-GW4 07/18/02	FIELDQC-TB9-GW5 07/19/02	FIELDQC-TB9-GW6 07/22/02	FIELDQC-TB9-GW7 07/23/02	FIELDQC-TB9-GW8 07/24/02
SW8260B	Tetrachloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Toluene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	trans-1,2-Dichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	trans-1,3-Dichloropropene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Trichloroethene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Trichlorofluoromethane	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Vinyl acetate	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
SW8260B	Vinyl chloride	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	Xylenes, Total	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SW8260B	1,2-Dichloroethane-d4	µg/L	96 %	97 %	96 %	92 %	96 %	95 %	97 %	93 %
SW8260B	4-Bromofluorobenzene	µg/L	108 %	106 %	107 %	105 %	106 %	114 %	114 %	106 %
SW8260B	Dibromofluoromethane	µg/L	95 %	96 %	95 %	102 %	103 %	95 %	97 %	100 %
SW8260B	Toluene-d8	µg/L	94 %	94 %	94 %	109 %	109 %	96 %	95 %	106 %

Note:
% REC = Units of %REC indicate that the compound is a surrogate spike.

Key:
J = Estimated value. The reported value is below the quantitation limit or estimated due to variance from quality control limits.
µg/L = Micrograms per liter.
U = Analyte was not detected or not present above background levels. The reported value is the quantitation limit or value elevated due to background.
VOCs = Volatile Organic Compounds.

Table 3-9
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Samples from Test Pits,
Former Griffiss Air Force Base, Rome, New York

Analyte	Most Stringent Criteria	Sample ID: Date:	AOC9-GW-DTP04 07/19/02	AOC9-GW-DTP04/D 07/19/02	AOC9-GW-TP01 07/19/02	AOC9-GW-TP03 07/19/02	AOC9-GW-TP04 07/19/02	AOC9-GW-TP06 07/19/02
VOC by Method 8260B (µg/L)								
1,2-Dichlorobenzene	3		5.00 U	5.00 U	5.00 U	16.8	5.00 U	5.00 U
1,4-Dichlorobenzene	3		5.00 U	5.00 U	5.00 U	17.3	5.00 U	5.00 U
Acetone	50		10.0 U	10.0 U	10.0 U	3.49 J	5.43 J	10.0 U
Chlorobenzene	5		5.00 U	5.00 U	5.00 U	101	5.00 U	5.00 U
SVOCs by Method 8270C (µg/L)								
1,2-Dichlorobenzene	3		10.0 U	10.0 U	10.0 U	23.9	10.0 U	10.0 U
1,4-Dichlorobenzene	3		10.0 U	10.0 U	10.0 U	21.4	10.0 U	10.0 U
Bis(2-ethylhexyl)phthalate	5		7.76 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Naphthalene	10		10.0 U	10.0 U	10.0 U	4.35 J	10.0 U	10.0 U
Phenanthrene	50		10.0 U	10.0 U	10.0 U	3.72 J	10.0 U	10.0 U
PCBs by Method 8082 (µg/L)			No PCBs were detected.					
Pesticides by Method 8081A (µg/L)								
Aldrin	ND		0.0500 U	0.0500 U	0.0500 U	0.573 J	0.0500 U	0.0500 U
Dieldrin	0.004		0.0500 U	0.0500 U	0.0500 U	0.327 J	0.0500 U	0.0500 U
TPH-Diesel Range Organics by Method 8015B (mg/L)								
Diesel Range Organics	NA		0.100 U	0.100 U	0.100 U	0.260	0.100 U	0.100 U
Gasoline Range Organics	NA		0.100 U	0.100 U	0.100 U	0.123	0.100 U	0.100 U
TPH-Gasoline Range Organics by Method 8015B (mg/L)								
Diesel Range Organics	NA		0.100 U	0.100 U	0.100 U	0.260	0.100 U	0.100 U
Gasoline Range Organics	NA		0.100 U	0.100 U	0.100 U	0.123	0.100 U	0.100 U

Note: Shaded results exceed the most stringent screening criterion. For a full list of screening criteria see Appendix G.

Key:

AOC 9 = Area of Concern 9.
/D = Duplicate sample.
J = Estimated value.
mg/L = Milligrams per liter.
NA = No criteria available.
ND = Not detected.
PCBs = Polychlorinated biphenyls.
SVOC = Semivolatile organic compound.
TP = Test pit.
TPH = Total petroleum hydrocarbons.
U = Not detected (practical quantitation limit listed).
VOC = Volatile organic compound.
µg/L = Micrograms per liter.

Source: Ecology and Environment, Inc. 2002

Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte / Analyte	Sample ID: / Date: / Depth (ft)	AOC9-GP44S1 07/17/02 12.3-14.3	AOC9-GP44S2 07/17/02 15.9-17.9	AOC9-GP44I 07/17/02 19.3-21.3	AOC9-GP44I/D 07/17/02 19.3-21.3	AOC9-GP44D1 07/17/02 22.4-24.4	AOC9-GP44D2 07/15/02 28.0-30.0	AOC9-GP45S1 07/17/02 10.1-12.1	AOC9-GP45S2 07/17/02 13.1-15.1
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		12.1	31.6 J	44.5 J	513 J	153	11.3	2.48	6.76
1,2-Dichloroethene, Total		10.0 U	40.0 U	40.0 U	71.2	26.2 J	10.8	0.255 J	1.07
1,3-Dichlorobenzene		1.36 J	7.32 J	3.92 J	40.0 U	6.64 J	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene		35.1	111	91.2 J	151 J	109	1.66	15.0	46.2
2-Butanone		50.0 U	200 U	200 U	200 U	200 U	0.945 J	5.00 U	5.00 U
Acetone		50.0 U	200 U	200 U	200 U	200 U	94.5 U	5.00 U	5.00 U
Benzene		10.0 U	4.20 J	40.0 U	12.6 J	5.36 J	2.46	0.238 J	1.18
Carbon disulfide		50.0 U	200 U	200 U	200 U	200 U	5.00 U	5.00 U	5.00 U
Chlorobenzene		315	2150	996 J	1610 J	1630	52.0	118	664
Chloroform		10.0 U	40.0 U	40.0 U	40.0 U	40.0 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		10.0 U	40.0 U	40.0 U	70.0	25.8 J	10.7	0.259 J	1.09
Ethylbenzene		7.31 J	59.6	32.3 J	21.9 J	34.7 J	0.317 J	0.0790 J	0.706 J
m,p-Xylene		3.80 J	197	100	73.0	104	0.880 J	1.00 U	1.00 U
o-Xylene		3.91 J	19.7 J	3.92 J	3.24 J	8.08 J	0.104 J	1.00 U	1.00 U
Tetrachloroethene		10.0 U	40.0 U	40.0 U	5.24 J	40.0 U	0.235 J	0.294 J	0.175 J
Toluene		10.0 U	3.92 J	3.40 J	40.0 U	4.00 J	0.466 J	1.00 U	0.0860 J
Trichloroethene		1.04 J	40.0 U	4.60 J	10.3 J	40.0 U	1.18	0.797 J	0.601 J
Vinyl chloride		5.35 J	40.0 U	11.5 J	13.1 J	6.32 J	1.36	1.00 U	1.00 U
Xylenes, Total		7.68 J	218	105	76.9	113	0.990 J	1.00 U	1.00 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

D = Deep Geoprobe location.

ft = Feet.

GP = Geoprobe location.

I = Intermediate Geoprobe location.

J = Estimated value.

U = Non detected (quantitation limit listed).

S = Shallow Geoprobe location.

µg/L = Micrograms per liter.

Source: Ecology and Environment, Inc. 2002

Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte	Sample ID:	AOC9-GP45I	AOC9-GP45D1	AOC9-GP45D2	AOC9-GP46S1	AOC9-GP46S2	AOC9-GP46I	AOC9-GP46I/D	AOC9-GP46D1
Analyte	Date:	07/17/02	07/17/02	07/16/02	07/17/02	07/17/02	07/17/02	07/17/02	07/17/02
Analyte	Depth (ft)	16.2-18.2	19.5-20.5	23.0-25.0	9.4-11.4	12.5-14.5	15.6-17.6	15.6-17.6	18.8-20.8
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		22.4 J	18.2 J	3.97	1.01	5.46 J	7.65 J	17.6 J	15.3
1,2-Dichloroethene, Total		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U
1,3-Dichlorobenzene		2.78 J	2.84 J	0.339 J	0.277 J	20.0 U	10.0 U	10.0 U	10.0 U
1,4-Dichlorobenzene		67.8	70.4	7.31	3.91	29.3	21.4	49.8	42.8
2-Butanone		125 U	200 U	5.00 U	5.00 U	100 U	50.0 U	50.0 U	50.0 U
Acetone		125 U	200 U	24.5	5.00 U	100 U	50.0 U	50.0 U	50.0 U
Benzene		25.0 U	40.0 U	0.156 J	1.00 U	20.0 U	1.12 J	1.99 J	10.0 U
Carbon disulfide		125 U	200 U	5.00 U	5.00 U	100 U	50.0 U	50.0 U	50.0 U
Chlorobenzene		689	902	45.2	40.8	431	309 J	394 J	409
Chloroform		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U
cis-1,2-Dichloroethene		25.0 U	40.0 U	0.136 J	0.0970 J	20.0 U	10.0 U	10.0 U	10.0 U
Ethylbenzene		25.0 U	40.0 U	0.118 J	1.00 U	20.0 U	10.0 U	1.52 J	0.840 J
m,p-Xylene		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U
o-Xylene		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U
Tetrachloroethene		25.0 U	40.0 U	1.00 U	0.808 J	20.0 U	10.0 U	10.0 U	10.0 U
Toluene		25.0 U	40.0 U	0.145 J	1.00 U	20.0 U	10.0 U	0.670 J	10.0 U
Trichloroethene		25.0 U	40.0 U	0.347 J	2.23	20.0 U	1.65 J	1.36 J	1.30 J
Vinyl chloride		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U
Xylenes, Total		25.0 U	40.0 U	1.00 U	1.00 U	20.0 U	10.0 U	10.0 U	10.0 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

D = Deep Geoprobe location.

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J = Estimated value.

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S = Shallow Geoprobe location.

µg/L = Micrograms per liter.

Source: Ecology and Environment, Inc. 2002

Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte	Sample ID:	AOC9-GP46D2	AOC9-GP47S1	AOC9-GP47S2	AOC9-GP47I	AOC9-GP47D1	AOC9-GP47D2	AOC9-GP48S1	AOC9-GP48S2
	Date:	07/16/02	07/16/02	07/16/02	07/16/02	07/16/02	07/16/02	07/18/02	07/18/02
Analyte	Depth (ft)	22.5-24.5	7.5-9.5	11.0-13.0	14.0-16.0	18.0-20.0	21.2-23.2	9.4-11.4	12.5-14.5
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		1.44 J	2.07 J	8.74 J	65.4	2.90	1.00 U	0.228 J	4.12
1,2-Dichloroethene, Total		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	0.229 J	1.00 U	0.498 J
1,3-Dichlorobenzene		2.00 U	0.465 J	1.54 J	50.0 U	0.174 J	1.00 U	1.00 U	0.270 J
1,4-Dichlorobenzene		1.06 J	12.0	41.5	82.4	3.51	1.00 U	0.194 J	3.43
2-Butanone		10.0 U	25.0 U	100 U	250 U	5.00 U	5.00 U	5.00 U	5.00 U
Acetone		94.6	60.9	285	352	23.4	10.9	5.00 U	5.00 U
Benzene		2.00 U	5.00 U	3.06 J	50.0 U	1.00 U	1.00 U	1.00 U	0.480 J
Carbon disulfide		10.0 U	25.0 U	100 U	250 U	5.00 U	5.00 U	5.00 U	5.00 U
Chlorobenzene		4.48	98.9	475	1350	25.4	0.458 J	1.00 U	8.54
Chloroform		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		2.00 U	5.00 U	20.0 U	50.0 U	0.0900 J	0.226 J	0.159 J	0.506 J
Ethylbenzene		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U
o-Xylene		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	0.224 J	0.113 J
Toluene		2.00 U	5.00 U	20.0 U	50.0 U	0.108 J	1.00 U	1.00 U	1.00 U
Trichloroethene		0.448 J	0.950 J	20.0 U	50.0 U	0.861 J	1.00 U	0.702 J	0.393 J
Vinyl chloride		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes, Total		2.00 U	5.00 U	20.0 U	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

D = Deep Geoprobe location.

ft = Feet.

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I = Intermediate Geoprobe location.

J = Estimated value.

U = Non detected (quantitation limit listed).

S = Shallow Geoprobe location.

µg/L = Micrograms per liter.

Source: Ecology and Environment, Inc. 2002

Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte	Sample ID:	AOC9-GP48I	AOC9-GP48I/D	AOC9-GP48D1	AOC9-GP48D2	AOC9-GP49S1	AOC9-GP49S2	AOC9-GP49I	AOC9-GP49D1
Analyte	Date:	07/18/02	07/18/02	07/18/02	07/16/02	07/19/02	07/19/02	07/18/02	07/18/02
Analyte	Depth (ft)	15.8-17.8	15.8-17.8	19.3-21.3	22.8-24.8	10.7-12.7	13.4-15.4	16.5-18.5	19.6-21.6
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		11.2	11.5	14.0	10.9	0.233 J	1.00 U	0.493 J	0.163 J
1,2-Dichloroethene, Total		0.549 J	0.539 J	0.638 J	0.604 J	0.315 J	1.00 U	2.20	1.39
1,3-Dichlorobenzene		0.715 J	0.748 J	0.980 J	0.518 J	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene		10.4	11.1	14.9	7.49	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone		5.00 U	5.00 U	5.00 U	1.53 J	5.00 U	5.00 U	5.00 U	5.00 U
Acetone		5.00 U	5.00 U	5.00 U	5.20	5.00 U	5.00 U	5.00 U	5.00 U
Benzene		1.04	1.02	1.23	0.980 J	0.116 J	1.00 U	0.118 J	0.115 J
Carbon disulfide		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Chlorobenzene		30.6	32.1	42.7	13.4	1.00 U	1.00 U	0.555 J	0.163 J
Chloroform		0.0760 J	1.00 U	1.00 U	0.110 J	0.0830 J	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		0.557 J	0.548 J	0.648 J	0.594 J	0.320 J	1.00 U	2.24	1.41
Ethylbenzene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
o-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene		1.00 U	1.00 U	0.121 J	1.00 U	9.65	6.21	12.6	15.4
Toluene		0.194 J	0.189 J	0.334 J	0.349 J	0.0930 J	0.0880 J	0.0980 J	0.0800 J
Trichloroethene		0.152 J	0.166 J	0.411 J	0.233 J	8.83	7.35	5.41	5.37
Vinyl chloride		1.00 U	1.00 U	1.00 U	0.188 J	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes, Total		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

D = Deep Geoprobe location.

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I = Intermediate Geoprobe location.

J = Estimated value.

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S = Shallow Geoprobe location.

µg/L = Micrograms per liter.

Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte / Analyte	Sample ID: / Date: / Depth (ft)	AOC9-GP49D2 07/19/02 23.2-25.2	AOC9-GP50S1 07/19/02 11.8-13.8	AOC9-GP50S2 07/19/02 14.5-16.5	AOC9-GP50I 07/19/02 17.6-19.6	AOC9-GP50I/D 07/19/02 17.6-19.6	AOC9-GP50D1 07/19/02 20.6-22.6	AOC9-GP50D2 07/19/02 23.5-25.5	AOC9-GP51S1 07/22/02 10.9-12.9
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		0.0720 J	1.00 U	0.164 J	0.117 J	0.105 J	0.444 J	0.204 J	1.02 J
1,2-Dichloroethene, Total		0.300 J	1.00 U	2.44	1.48	1.52	3.21	1.94	2.00 U
1,3-Dichlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.244 J
1,4-Dichlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	6.53
2-Butanone		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10.0 U
Acetone		11.3	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	9.24	10.0 U
Benzene		0.123 J	1.00 U	0.107 J	1.00 U	1.00 U	0.318 J	0.156 J	2.00 U
Carbon disulfide		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10.0 U
Chlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.631 J	0.623 J	63.1
Chloroform		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
cis-1,2-Dichloroethene		0.305 J	1.00 U	2.48	1.50	1.54	3.26	1.97	2.00 U
Ethylbenzene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
m,p-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
o-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
Tetrachloroethene		11.4	4.67	9.63	12.2	11.7	11.3	7.70	0.528 J
Toluene		0.141 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
Trichloroethene		4.55	8.38	8.41	7.42	6.76	6.12	8.64	1.21 J
Vinyl chloride		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U
Xylenes, Total		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U

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AOC9 = Area of Concern 9.

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Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte	Sample ID: / Date: / Depth (ft)	AOC9-GP51S2 07/22/02 14.0-16.0	AOC9-GP51I 07/22/02 16.9-18.9	AOC9-GP51D1 07/22/02 20.2-22.2	AOC9-GP51D2 07/19/02 23.0-25.0	AOC9-GP52S1 07/23/02 12.5-14.5	AOC9-GP52S2 07/23/02 15.4-17.4	AOC9-GP52I 07/22/02 18.4-20.4	AOC9-GP52I/D 07/22/02 18.4-20.4
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		5.20 J	17.5 J	12.8 J	8.77 J	1.25 J	1.40 J	10.5	11.1
1,2-Dichloroethene, Total		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	1.43	1.51
1,3-Dichlorobenzene		1.24 J	2.60 J	2.08 J	10.0 U	0.380 J	0.360 J	2.22	2.26
1,4-Dichlorobenzene		32.6	72.5	59.3	29.3	8.12	8.99	47.1	49.3
2-Butanone		50.0 U	200 U	100 U	50.0 U	12.5 U	25.0 U	5.00 U	5.00 U
Acetone		50.0 U	200 U	100 U	50.0 U	12.5 U	25.0 U	5.00 U	5.00 U
Benzene		10.0 U	40.0 U	20.0 U	1.27 J	2.50 U	5.00 U	1.43	1.51
Carbon disulfide		50.0 U	200 U	100 U	50.0 U	12.5 U	25.0 U	5.00 U	5.00 U
Chlorobenzene		371	881	717	316	60.6	113	796	781
Chloroform		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	1.41	1.48
Ethylbenzene		0.930 J	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	2.25	2.51
m,p-Xylene		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	0.275 J	0.295 J
o-Xylene		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	0.272 J	0.286 J
Tetrachloroethene		10.0 U	40.0 U	20.0 U	10.0 U	0.235 J	5.00 U	0.247 J	0.252 J
Toluene		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	0.798 J	0.823 J
Trichloroethene		1.04 J	40.0 U	20.0 U	10.0 U	0.420 J	0.635 J	0.729 J	0.753 J
Vinyl chloride		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	0.946 J	0.978 J
Xylenes, Total		10.0 U	40.0 U	20.0 U	10.0 U	2.50 U	5.00 U	0.544 J	0.578 J

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Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells,
Former Griffiss Air Force Base, Rome, New York

Analyte / Analyte	Sample ID: / Date: / Depth (ft)	AOC9-GP52D1 07/22/02 21.4-23.4	AOC9-GP52D2 07/22/02 24.4-26.4	AOC9-GP53S1 07/24/02 12.0-14.0	AOC9-GP53I 07/24/02 14.7-16.7	AOC9-GP53D1 07/23/02 17.6-19.6	AOC9-GP53D2 07/23/02 19.9-21.9	AOC9-GP54S1 07/23/02 13.4-15.4	AOC9-GP54I 07/23/02 15.2-17.2
VOCs, Low Level by Method 8260B (µg/L)									
1,2-Dichlorobenzene		14.4	0.920 J	0.775 J	2.43	6.23	7.64	1.00 U	1.00 U
1,2-Dichloroethene, Total		1.49	5.00 U	0.674 J	1.00	0.714 J	0.382 J	1.00 U	1.00 U
1,3-Dichlorobenzene		2.58	5.00 U	1.00 U	0.176 J	0.332 J	0.582 J	1.00 U	1.00 U
1,4-Dichlorobenzene		61.6	7.14	0.576 J	3.04	8.99	13.6	1.00 U	1.00 U
2-Butanone		5.00 U	25.0 U	5.00 U	5.00 U	4.22 J	10.0 U	5.00 U	5.00 U
Acetone		5.00 U	25.0 U	5.00 U	5.00 U	14.0	10.0 U	5.00 U	5.00 U
Benzene		1.73	5.00 U	1.00 U	0.157 J	1.64 J	2.73	1.00 U	1.00 U
Carbon disulfide		5.00 U	25.0 U	5.00 U	5.00 U	10.0 U	10.0 U	5.00 U	5.00 U
Chlorobenzene		776	86.3	2.71	6.57	47.5	65.8	1.00 U	1.00 U
Chloroform		1.00 U	5.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		1.47	5.00 U	0.685 J	1.02	0.702 J	0.376 J	1.00 U	1.00 U
Ethylbenzene		2.43	5.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U
m,p-Xylene		0.268 J	5.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U
o-Xylene		0.296 J	5.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U
Tetrachloroethene		0.228 J	0.390 J	0.139 J	0.0870 J	2.00 U	2.00 U	1.00 U	1.00 U
Toluene		0.606 J	5.00 U	1.00 U	1.00 U	0.328 J	0.170 J	1.00 U	1.00 U
Trichloroethene		0.615 J	0.780 J	0.615 J	0.846 J	0.214 J	2.00 U	1.00 U	1.00 U
Vinyl chloride		0.813 J	5.00 U	1.00 U	1.00 U	0.470 J	0.504 J	1.00 U	1.00 U
Xylenes, Total		0.561 J	5.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

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Table 3-10
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Groundwater Screening Samples from Temporary Geoprobe Wells, Former Griffiss Air Force Base, Rome, New York

Analyte / Analyte	Sample ID: / Date: / Depth (ft)	AOC9-GP54I/D 07/23/02 15.2-17.2	AOC9-GP54D1 07/23/02 17.1-19.1	AOC9-GP54D2 07/23/02 18.25-20.25	AOC9-GP55I 07/23/02 16.6-18.6	AOC9-GP56I 07/24/02 17.2-19.2	AOC9-GP57I 07/24/02 20.4-22.4
VOCs, Low Level by Method 8260B (µg/L)							
1,2-Dichlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	2.92 J	1.15
1,2-Dichloroethene, Total		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.188 J
1,3-Dichlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	0.195 J
1,4-Dichlorobenzene		1.00 U	1.00 U	1.00 U	1.00 U	14.4	0.665 J
2-Butanone		5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	5.00 U
Acetone		5.00 U	5.00 U	5.00 U	3.27 J	25.0 U	5.00 U
Benzene		1.00 U	1.00 U	0.187 J	1.00 U	5.00 U	0.549 J
Carbon disulfide		5.00 U	5.00 U	5.00 U	5.00 U	25.0 U	0.201 J
Chlorobenzene		1.00 U	0.181 J	1.00 U	1.00 U	161	25.0
Chloroform		1.00 U	1.00 U	0.0730 J	1.00 U	5.00 U	1.00 U
cis-1,2-Dichloroethene		1.00 U	1.00 U	0.108 J	1.00 U	5.00 U	0.191 J
Ethylbenzene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
m,p-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
o-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
Tetrachloroethene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
Toluene		1.00 U	1.00 U	0.0780 J	0.104 J	5.00 U	0.149 J
Trichloroethene		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
Vinyl chloride		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U
Xylenes, Total		1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U

Key:

AOC9 = Area of Concern 9.

/D = Duplicate sample.

D = Deep Geoprobe location.

ft = Feet.

GP = Geoprobe location.

I = Intermediate Geoprobe location.

J = Estimated value.

U = Non detected (quantitation limit listed).

S = Shallow Geoprobe location.

µg/L = Micrograms per liter.

Table 3-11
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Sediment Samples,
Former Griffiss Air Force Base, Rome, New York

Analyte	Most Stringent Criteria	Sample ID: AFFF-SD01 Date: 07/15/02	AFFF-SD01/D 07/15/02	AFFF-SD02 07/15/02
VOCs by Method 8260B (µg/Kg)				
2-Butanone	NA	7.01 J	6.53 J	4.17 J
SVOCs by Method 8270C (µg/Kg)				
Pyrene	0.665	467 U	414 U	**44.7 J**
PCBs by Method 8082 (µg/Kg)				
Pesticides by Method 8081A (µg/Kg)				
4,4'-DDD	0.002	**1.14 J**	**0.801 J**	3.32 U
4,4'-DDT	0.001	**0.743 J**	5.25 U	4.42 U
Heptachlor	0.0127	**0.805 J**	**0.960 J**	3.32 U
Metals/Mercury, by Method 6010B/7471A (mg/Kg)				
Aluminum	NA	9580	6320	6760
Antimony	2	3.23 U	2.66 U	**2.51 J**
Arsenic	6	2.00 J	2.65 J	2.51 J
Barium	NA	43.9	26.8	24.5
Beryllium	NA	0.720 J	1.33 U	2.15 U
Calcium	NA	2600	4060	2570
Chromium	26	12.6	8.05	8.32 J
Cobalt	NA	6.98	4.54 J	4.48 J
Copper	16	**20.1**	13.4	**18.4**
Iron	20000	17500	17400	14600
Lead	31	16.2 J	6.86 J	8.16
Magnesium	NA	3350	2150	2770
Manganese	460	390 J	377 J	**477 J**
Nickel	16	13.3	8.09	9.89
Potassium	NA	1100	769	737
Sodium	NA	36.2 J	57.8 J	52.3 J
Vanadium	NA	13.4	8.46	7.67 J
Zinc	120	54.3	33.7	46.0

Note: Shaded results exceed the most stringent screening criterion. For a full list of screening criteria see Appendix G.

Key:

AFFF = Aqueous Film Forming Foam.
AOC 9 = Area of Concern 9.
/D = Duplicate sample.
J = Estimated value.
mg/Kg = Milligrams per kilogram.
NA = No criteria available.
PCBs = Polychlorinated biphenyls.
SD = Sediment sample.
SVOC = Semivolatile organic compound.
U = Not detected (practical quantitation limit listed).
VOC = Volatile organic compound
µg/Kg = Micrograms per kilogram.

Table 3-12
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Subsurface Soil Samples,
Former Griffiss Air Force Base, Rome, New York

Analyte	Most Stringent Criteria	Sample ID: SS01(11_5-16) Date: 07/24/02	AOC9-SS01(11_5-16)/D 07/24/02	AOC9-SS01(20-24) 07/24/02	AOC9-SS01(24-28) 07/24/02
VOCs by Method 8260B (µg/Kg)					
2-Butanone	300	11.3 U	11.3 U	12.2 U	11.7 U
Acetone	200	11.3 U	11.3 U	12.2 U	11.7 U
Tetrachloroethene	1400	5.65 U	5.64 U	6.09 U	5.83 U
Trichloroethene	700	5.65 U	5.64 U	6.09 U	5.83 U
SVOCs by Method 8270C (µg/Kg)	-	No SVOCs detected			
PCBs by Method 8082 (µg/Kg)	-	No PCBs detected			
Pesticides by Method 8081A (µg/Kg)					
4,4´-DDT	2100	3.98 U	4.34 U	4.52 U	4.59 U
Total Petroleum Hydrocarbons by Method 8015B (mg/L)		N/A	N/A	N/A	N/A
Metals/Mercury, by Method 6010B/7471A (mg/Kg)					
Aluminum	18306	5080	4920	4660	11700
Antimony	ND	**4.94 J**	**4.24 J**	**2.35 J**	**4.07 J**
Arsenic	7.5	13.6 U	3.35 J	1.48 J	12.5 U
Barium	300	18.8	17.9	12.9	50.1
Beryllium	0.16	2.73 U	2.49 U	1.23 U	2.50 U
Calcium	23821	**29100**	**27400**	**25000**	3800
Chromium	10	6.83 J	6.55 J	5.80	**13.0**
Cobalt	19	3.84 J	3.67 J	3.05 J	7.73 J
Copper	25	18.9	16.5	13.2	**28.2**
Iron	2000	**13300**	**12300**	**11300**	**26900**
Lead	36	4.40 J	3.66 J	3.16	13.8
Magnesium	7175	2790	2780	2570	4410
Manganese	2106	545 J	522 J	300 J	1410 J
Mercury	0.1	0.0369 U	0.0386 U	0.0417 U	0.0154 J
Nickel	13	9.41 J	7.73 J	6.76	**15.5**
Potassium	1993	1010	816	809	920
Sodium	259	135 J	69.5 J	51.5 J	102 J
Thallium	ND	**5.66 J**	**4.70 J**	**2.49 J**	**4.45 J**
Vanadium	36	5.63 J	4.97 J	5.30	15.2
Zinc	20	**56.6**	**34.7**	**27.2**	**65.1**

Notes: Shaded results exceed the most stringent screening criterion. For a full list of screening criteria see Appendix G.

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Key:

AOC 9 =Area of Concern 9.

/D =Duplicate sample.

J = Estimated value.

mg/Kg = Milligrams per kilogram.

N/A = Not analyzed for this parameter.

NA = No criteria available.

PCBs = Polychlorinated biphenyls.

SS = Soil sample.

SVOC = Semivolatile organic compound.

TP = Test pit sample.

U = Not detected (practical quantitation limit listed).

VOC = Volatile organic compound.

µg/Kg = Micrograms per kilogram.

Table 3-12
Year 2002 SI Additional Sampling, AOC 9
Analytical Data Summary of Positive Hits for Subsurface Soil Samples,
Former Griffiss Air Force Base, Rome, New York

Analyte	Most Stringent Criteria	Sample ID: AOC9-SS02(10-10_5) Date: 07/24/02	AOC9-SS02(2-4) 07/24/02	AOC9-SS02(6-8) 07/24/02	AOC9-TP04 07/19/02	AOC9-TP04/D 07/19/02
VOCs by Method 8260B (µg/Kg)						
2-Butanone	300	10.3 U	10.2 U	10.6 U	3.07 J	11.8 U
Acetone	200	10.3 U	10.2 U	6.19 J	40.3 J	5.07 J
Tetrachloroethene	1400	5.13 U	5.10 U	1.51 J	5.71 U	5.88 U
Trichloroethene	700	5.13 U	5.10 U	1.66 J	5.71 U	5.88 U
SVOCs by Method 8270C (µg/Kg)	-	N/A	N/A	N/A	None detected	
PCBs by Method 8082 (µg/Kg)	-	N/A	N/A	N/A	None detected	
Pesticides by Method 8081A (µg/Kg)						
4,4´-DDT	2100	N/A	N/A	N/A	1.47 J	4.63 U
Total Petroleum Hydrocarbons by Method 8015B (mg/L)		N/A	N/A	N/A	None detected	
Metals/Mercury, by Method 6010B/7471A (mg/Kg)						
Aluminum	18306	N/A	N/A	N/A	7230	7650
Antimony	ND	N/A	N/A	N/A	**0.899 J**	**0.749 J**
Arsenic	7.5	N/A	N/A	N/A	0.722 J	1.33 J
Barium	300	N/A	N/A	N/A	28.8	26.2
Beryllium	0.16	N/A	N/A	N/A	**0.298 J**	**0.264 J**
Calcium	23821	N/A	N/A	N/A	1320	1330
Chromium	10	N/A	N/A	N/A	6.18	6.57
Cobalt	19	N/A	N/A	N/A	2.34 J	2.52
Copper	25	N/A	N/A	N/A	6.79	9.38
Iron	2000	N/A	N/A	N/A	**10300**	**11400**
Lead	36	N/A	N/A	N/A	8.72	7.73
Magnesium	7175	N/A	N/A	N/A	932	1380
Manganese	2106	N/A	N/A	N/A	182 J	251 J
Mercury	0.1	N/A	N/A	N/A	0.0439	0.0368 J
Nickel	13	N/A	N/A	N/A	3.38	4.46
Potassium	1993	N/A	N/A	N/A	268	271
Sodium	259	N/A	N/A	N/A	27.0 J	19.5 J
Thallium	ND	N/A	N/A	N/A	**0.871 J**	**0.975 J**
Vanadium	36	N/A	N/A	N/A	12.8	13.8
Zinc	20	N/A	N/A	N/A	**26.3**	**24.4**

Notes: Shaded results exceed the most stringent screening criterion. For a full list of screening criteria see Appendix G.

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Key:

AOC 9 =Area of Concern 9.

/D =Duplicate sample.

J = Estimated value.

mg/Kg = Milligrams per kilogram.

N/A = Not analyzed for this parameter.

NA = No criteria available.

PCBs = Polychlorinated biphenyls.

SS = Soil sample.

SVOC = Semivolatile organic compound.

TP = Test pit sample.

U = Not detected (practical quantitation limit listed).

VOC = Volatile organic compound.

µg/Kg = Micrograms per kilogram.

Table 3-13
List of Sample Results Qualified, AOC 9 SI Additional Sampling,
Former Griffiss Air Force Base, Rome, New York

Lab Order	Method	Sample ID	Analyte	Result	Lab Qualifier	Validation Qualifier
207099	SW6010B	AFFF-SD01	Antimony	2.23	J	U
207099	SW6010B	AFFF-SD01	Lead	16.2		J
207099	SW6010B	AFFF-SD01	Manganese	390		J
207099	SW6010B	AFFF-SD01/D	Antimony	1.81	J	U
207099	SW6010B	AFFF-SD01/D	Lead	6.86		J
207099	SW6010B	AFFF-SD01/D	Manganese	377		J
207099	SW6010B	AFFF-SD02	Manganese	477		J
207099	SW8260B	AFFF-SD01	Acetone	47		U
207099	SW8260B	AFFF-SD01/D	Acetone	43.2		U
207099	SW8260B	AFFF-SD02	Acetone	37.7		U
207098	SW8260B	AOC9-GP44D2	Acetone	94.5		U
207127	SW8260B	AOC9-GP44I	1,2-Dichlorobenzene	44.5		J
207127	SW8260B	AOC9-GP44I	1,4-Dichlorobenzene	91.2		J
207127	SW8260B	AOC9-GP44I	Chlorobenzene	996		J
207127	SW8260B	AOC9-GP44I/D	1,2-Dichlorobenzene	513		J
207127	SW8260B	AOC9-GP44I/D	1,4-Dichlorobenzene	151		J
207127	SW8260B	AOC9-GP44I/D	Chlorobenzene	1610		J
207127	SW8260B	AOC9-GP46I	Chlorobenzene	309		J
207127	SW8260B	AOC9-GP46I/D	1,2-Dichlorobenzene	17.6		J
207127	SW8260B	AOC9-GP46I/D	Chlorobenzene	394		J
207099	SW8270C	AFFF-SD01	3,3'-Dichlorobenzidine	ND		UR
207099	SW8270C	AFFF-SD01	Hexachlorocyclopentadiene	ND		UR
207099	SW8270C	AFFF-SD01/D	3,3'-Dichlorobenzidine	ND		UR
207099	SW8270C	AFFF-SD01/D	Hexachlorocyclopentadiene	ND		UR
207192	SW6010B	AOC9-SS01(11.5-16)	Manganese	545		J
207192	SW6010B	AOC9-SS01(11.5-16)	Silver	ND		UJ
207192	SW6010B	AOC9-SS01(11.5-16)/D	Manganese	522		J
207192	SW6010B	AOC9-SS01(11.5-16)/D	Silver	ND		UJ
207192	SW6010B	AOC9-SS01(20-24)	Manganese	300		J
207192	SW6010B	AOC9-SS01(20-24)	Silver	ND		UJ
207192	SW6010B	AOC9-SS01(4-6)	Manganese	1410		J
207192	SW6010B	AOC9-SS01(4-6)	Silver	ND		UJ
207149	SW6010B	AOC9-TP04	Manganese	182		J
207149	SW6010B	AOC9-TP04	Silver	ND		UJ
207149	SW6010B	AOC9-TP04/D	Manganese	251		J
207149	SW6010B	AOC9-TP04/D	Silver	ND		UJ
207149	SW8081A	AOC9-GW-TP03	Aldrin	0.573		J
207149	SW8081A	AOC9-GW-TP03	Dieldrin	0.327		J
207149	SW8081A	AOC9-TP04	Endrin aldehyde	3.24	J	U
207149	SW8260B	AOC9-TP04	Acetone	40.3		J
207149	SW8270C	AOC9-GW-TP03	3,3'-Dichlorobenzidine	ND		UR
207149	SW8270C	AOC9-TP04	3,3'-Dichlorobenzidine	ND		UR
207149	SW8270C	AOC9-TP04	Hexachlorocyclopentadiene	ND		UR
207149	SW8270C	AOC9-TP04/D	1,2,4-Trichlorobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	1,2-Dichlorobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	1,3-Dichlorobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	1,4-Dichlorobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4,5-Trichlorophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4,6-Trichlorophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4-Dichlorophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4-Dimethylphenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4-Dinitrophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,4-Dinitrotoluene	ND		UJ
207149	SW8270C	AOC9-TP04/D	2,6-Dinitrotoluene	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Chloronaphthalene	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Chlorophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Methylnaphthalene	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Methylphenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Nitroaniline	ND		UJ
207149	SW8270C	AOC9-TP04/D	2-Nitrophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	3,3'-Dichlorobenzidine	ND		UR

Table 3-13
List of Sample Results Qualified, AOC 9 SI Additional Sampling,
Former Griffiss Air Force Base, Rome, New York

Lab Order	Method	Sample ID	Analyte	Result	Lab Qualifier	Validation Qualifier
207149	SW8270C	AOC9-TP04/D	3-Nitroaniline	ND		UJ
207149	SW8270C	AOC9-TP04/D	4,6-Dinitro-2-methylphenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Bromophenyl phenyl ether	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Chloro-3-methylphenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Chloroaniline	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Chlorophenyl phenyl ether	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Methylphenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Nitroaniline	ND		UJ
207149	SW8270C	AOC9-TP04/D	4-Nitrophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	Acenaphthene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Acenaphthylene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Anthracene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benz(a)anthracene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzo(a)pyrene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzo(b)fluoranthene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzo(g,h,i)perylene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzo(k)fluoranthene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzoic acid	ND		UJ
207149	SW8270C	AOC9-TP04/D	Benzyl alcohol	ND		UJ
207149	SW8270C	AOC9-TP04/D	Bis(2-chloroethoxy)methane	ND		UJ
207149	SW8270C	AOC9-TP04/D	Bis(2-chloroethyl)ether	ND		UJ
207149	SW8270C	AOC9-TP04/D	Bis(2-chloroisopropyl)ether	ND		UJ
207149	SW8270C	AOC9-TP04/D	Bis(2-ethylhexyl)phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Butyl benzyl phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Carbazole	ND		UJ
207149	SW8270C	AOC9-TP04/D	Chrysene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Dibenz(a,h)anthracene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Dibenzofuran	ND		UJ
207149	SW8270C	AOC9-TP04/D	Diethyl phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Dimethyl phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Di-n-butyl phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Di-n-octyl phthalate	ND		UJ
207149	SW8270C	AOC9-TP04/D	Fluoranthene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Fluorene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Hexachlorobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Hexachlorobutadiene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Hexachlorocyclopentadiene	ND		UR
207149	SW8270C	AOC9-TP04/D	Hexachloroethane	ND		UJ
207149	SW8270C	AOC9-TP04/D	Indeno(1,2,3-cd)pyrene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Isophorone	ND		UJ
207149	SW8270C	AOC9-TP04/D	Naphthalene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Nitrobenzene	ND		UJ
207149	SW8270C	AOC9-TP04/D	N-Nitrosodimethylamine	ND		UJ
207149	SW8270C	AOC9-TP04/D	N-Nitrosodi-n-propylamine	ND		UJ
207149	SW8270C	AOC9-TP04/D	N-Nitrosodiphenylamine	ND		UJ
207149	SW8270C	AOC9-TP04/D	Pentachlorophenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	Phenanthrene	ND		UJ
207149	SW8270C	AOC9-TP04/D	Phenol	ND		UJ
207149	SW8270C	AOC9-TP04/D	Pyrene	ND		UJ

Key:

AFFF = Aqueous Film Forming Foam
AOC9 = Area of Concern 9.
ASC = E & E's Analytical Services Center.
/D = Duplicate sample.
TP Test Pit
MW = Monitoring well.
TB = Trip blank.

4 System Audits

Internal audits of the laboratory are conducted at ASC on a schedule determined by the ASC QA Coordinator. For this project, the ASC QA Coordinator did not perform an internal audit of the project-specific requirements because the work was the same the previous project and no problems were identified in that audit. The ASC has undergone external audits from the following agencies over the past year:

Agency/Company	Audit Dates	Scope of Audit
California Department of Health Services	June 20, 2001	California ELAP (not NELAP)
The Environmental Company	June 27, 2001	AFCEE
Florida Department of Health	August 13-14, 2001	NELAP (extra parameters)
SAIC	August 29, 2001	Savannah Army Depot Activity
Jacobs	October 24-25, 2001	Project Chanute AFCEE
New York State Department of Health	February 12-14, 2002	NELAP (Wastewater, drinking water, solid and hazardous waste)
SAIC	May 1-3, 2002	Jacobs/Tooele
Wisconsin Department of Natural Resources	June 18-20, 2002	Wisconsin DNR certification
NUCOR	July 12, 2002	Consent Decree

One field inspection was performed during the field program. Richard Watt, as QA Inspector, performed all audits and inspections. The field inspection reports are included in Appendix F. None of the findings impact data usability or indicated non-compliance with USACE requirements.

5

Report Distribution and Review

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6

References

Air Force Center for Environmental Excellence (AFCEE), 1997, *Environmental Resources Program Information Management System Data Loading Handbook,* Version 4, Brooks Air Force Base, Texas.

Ecology and Environment Inc. (E & E), 2002, *Final 2002 Addendum to the March 1997 Work Plan for Site Investigations of Areas of Concern, Former Griffiss Air Force Base, Rome, New York,* Lancaster, New York

_____, 2002a, *Laboratory Quality Assurance Manual*, Analytical Services Center, Lancaster, New York

_____, 1999, *Quality Control Plan*, Griffiss AFB, Rome, NY, September 1999.

_____, 1997, *Final Work Plan for the Supplemental Investigations of Areas of Concern, Former Griffiss Air Force Base, Rome, New York.*

Law Engineering and Environmental Services, Inc. (Law Environmental), 1993, *Draft-Final Preliminary Report Remedial Investigation Planning Documents, Volume IIA Sampling and Analysis Plan, Quality and Assurance Project Plan,* Kennesaw, Georgia.

United States Environmental Protection Agency (EPA), 1999, *National Functional Guidelines for Organic Data Review,* EPA Contractor Laboratory Program (CLP) EPA-540/R-99-008, Washington, D.C.

_____, 1994, *National Functional Guidelines for Inorganic Data Review,* EPA Contractor Laboratory Program (CLP) 540/R-94/013, Washington, D.C.

A

Reference Data for Proposed Work

3.1.5 2002 SI Additional Sampling

The objectives of this study are to more clearly define the source area of the chlorobenzene contamination detected in the groundwater during the spring 2000 SI, to determine if petroleum hydrocarbon contamination is present in the areas where sheens were observed during the test pit excavations, and to determine if the AFFF lagoon is a source of contamination. To achieve this goal, 55 Geoprobe groundwater-screening samples are proposed to be collected in the area shown to contain the highest concentrations of chlorobenzene. Groundwater at all Geoprobe locations will be vertically profiled (11 Geoprobe locations with five samples each). Each vertically profiled Geoprobe location will be sampled at 2-foot intervals beginning at the top of bedrock and progressing upwards to the water table. A 1-foot unsampled zone will remain between each of the 2-foot Geoprobe sample intervals. The Geoprobe sampling points will be located north of Perimeter Road on a 60- by 90-foot grid. The grid will surround permanent monitoring well AOC9-MW08 (see Figure 3-1).

The Geoprobe samples will be collected in three phases. Phase I will consist of 25 groundwater samples (five locations) analyzed for a select list of volatile organic compounds (VOCs) with a 24-hour turnaround schedule. Four of the five locations will be placed 30 feet from existing well AOC9-MW08 (1-upgradient, 1-downgradient, and one to each side gradient location). The fifth Phase I location will be placed 60 feet upgradient from existing well AOC9-MW08.

Results from the Phase I samples will be used to determine the locations of the 15 Phase II samples (three locations). The 15 Phase II samples will also be analyzed for a select list of VOCs with a 24-hour turnaround schedule.

The results of both the Phase I and Phase II samples will then be used to determine the locations of the remaining 15 Phase III samples (three locations). The Phase III samples will be analyzed for the same select list of VOCs with a standard turnaround schedule (28 days).

Upon completion of the Geoprobe groundwater sampling, a Geoprobe soil boring (AOC9-SS02) will be installed in the upgradient portion of the area determined to be the chlorobenzene source area. Three Subsurface soil samples will be collected from the vadose zone (2 to 4, 6 to 8, and 10 to 12 feet BGS) in an attempt to determine whether residual contamination is present above the water table. These subsurface soil samples will be analyzed for TCL VOCs.

Five additional groundwater samples and one subsurface soil sample also will be collected to determine if petroleum hydrocarbon contamination is present in the areas where sheens were observed during the 2000 SI test pit excavations. To accomplish this five additional test pits will be excavated immediately adjacent to test pit excavations TP01, TP03, TP04, TP06, and DTP04, where sheens were observed during the 2000 SI test pit excavations (see Figure 3-1). Groundwater samples will be collected at each test pit location from the top of the water table and analyzed for TCL VOCs, SVOCs, pesticides/PCBs, TPH as diesel and TPH as gasoline. In addition, one subsurface soil sample will be collected from one of the five new test pits. The subsurface soil sample location and depth will be determined in the field based on OVA screening results and/or visual observation of potential contamination (i.e., soil staining). The subsurface soil sample will be analyzed for TCL VOCs, SVOCs, pesticides/PCBs, TAL metals, mercury, and percent solids.

In addition, at the request of the NYSDEC, a Geoprobe soil boring (AOC9-SS01) will be installed on the downgradient edge of the AFFF lagoon and two discrete depth-specific (0- to 0.5-foot, and 0.5- to 2-foot) sediment samples will be collected directly from within the AFFF lagoon. Subsurface soil samples will be collected from the vadose zone (4 to 6 feet below ground surface [BGS]), the top of the water table (11 to 13 feet BGS), and immediately above the top of bedrock (23 to 25 feet BGS). All subsurface soil and sediment samples will be analyzed for TCL VOCs, SVOCs, pesticides/PCBs, TAL metals, mercury, and percent solids.

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

							ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOC's SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
AOC 9	TBD	FieldQC-TB9-GW1	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW2	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW3	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW4	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW5	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW6	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW7	ASC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW1/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW2/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW3/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW4/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW5/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW6/S	ERDC	DI Water		TB1	X							
	TBD	FieldQC-TB9-GW7/S	ERDC	DI Water		TB1	X							
	TBD	AOC9-GP44S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP44S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP44I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP44I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP44I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP44D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP44D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP45S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP45S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP45I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP45I (extra volume)	ASC	Groundwater (MS/MSD)	17.0-19.0	MS1	X							
	TBD	AOC9-GP45D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP45D2	ASC	Groundwater	23.0-25.0	N1	X							

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

							ANALYSES								
Location	Date	Sample Number	Lab	Matrix	Depth	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	TBD	AOC9-GP46S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP46S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP46I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP46I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP46I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP46D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP46D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP47S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP47S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP47I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP47D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP47D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP48S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP48S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP48I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP48I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP48I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP48D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP48D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP49S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP49S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP49I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP49I (extra volume)	ASC	Groundwater (MS/MSD)	17.0-19.0	MS1	X							
	TBD	AOC9-GP49D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP49D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP50S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP50S2	ASC	Groundwater	14.0-16.0	N1	X							

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

							ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOC's SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TA - Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	TBD	AOC9-GP50I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP50I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP50I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP50D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP50D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP51S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP51S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP51I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP51D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP51D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP52S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP52S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP52I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP52I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP52I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP52D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP52D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP53S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP53S2	ASC	Groundwater	14.0-16.0	N1	X							
	TBD	AOC9-GP53I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP53I (extra volume)	ASC	Groundwater (MS/MSD)	17.0-19.0	MS1	X							
	TBD	AOC9-GP53D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP53D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-GP54S1	ASC	Groundwater	11.0-13.0	N1	X							
	TBD	AOC9-GP54S2	ASC	Groundwater	14.0-16.0	N1	X							

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

							ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOC's SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	TBD	AOC9-GP54I	ASC	Groundwater	17.0-19.0	N1	X							
	TBD	AOC9-GP54I/D	ASC	Groundwater	17.0-19.0	FD1	X							
	TBD	AOC9-GP54I/S	ERDC	Groundwater	17.0-19.0	FR1	X							
	TBD	AOC9-GP54D1	ASC	Groundwater	20.0-22.0	N1	X							
	TBD	AOC9-GP54D2	ASC	Groundwater	23.0-25.0	N1	X							
	TBD	AOC9-DW01	ASC	Drill Water		N1	X	X	X	X	X	X		X
	TBD	AOC9-GW-TP01	ASC	Groundwater	Top of Water table	N1		X	X	X	X			X
	TBD	AOC9-GW-TP03	ASC	Groundwater	Top of Water table	N1		X	X	X	X			X
	TBD	AOC9-GW-TP03 (extra volume)	ASC	Groundwater (MS/MSD)	Top of Water table	MS1		X	X	X	X			X
	TBD	AOC9-GW-TP04	ASC	Groundwater	Top of Water table	N1		X	X	X	X			X
	TBD	AOC9-GW-TP06	ASC	Groundwater	Top of Water table	N1		X	X	X	X			X
	TBD	AOC9-GW-DTP04	ASC	Groundwater	Top of Water table	N1		X	X	X	X			X
	TBD	AOC9-GW-DTP04/D	ASC	Groundwater	Top of Water table	FD1		X	X	X	X			X
	TBD	AOC9-GW-DTP04/S	ERDC	Groundwater	Top of Water table	FR1		X	X	X	X			X
	TBD	AOC9-TP0#	ASC	subsurface soil	TBD	N1		X	X	X	X	X	X	X
	TBD	AOC9-TP0# (extra volume)	ASC	subsurface soil (MS/MSD)	TBD	MS1		X	X	X	X	X	X	X
	TBD	AOC9-TP0#/D	ASC	subsurface soil	TBD	FD1		X	X	X	X	X	X	X
	TBD	AOC9-TP0#/S	ERDC	subsurface soil	TBD	FR1		X	X	X	X	X	X	X
	TBD	AOC9-SS01(4-6)	ASC	Subsurface soil	4.0-6.0	N1		X	X		X	X	X	X
	TBD	AOC9-SS01(11-13)	ASC	Subsurface soil	11.0-13.0	N1		X	X		X	X	X	X
	TBD	AOC9-SS01(11-13)/D	ASC	Subsurface soil	11.0-13.0	FD1		X	X		X	X	X	X
	TBD	AOC9-SS01(11-13)/S	ERDC	Subsurface soil	11.0-13.0	FR1		X	X		X	X	X	X

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

							ANALYSES							
Location	Date	Sample Number	Lab	Matrix	Depth	Type	Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOCs SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A
	TBD	AOC9-SS01(23-25)	ASC	Subsurface soil	23.0-25.0	N1		X	X		X	X	X	X
	TBD	AOC9-SS01(23-25) (extra volume)	ASC	Subsurface soil (MS/MSD)	23.0-25.0	MS1		X	X		X	X	X	X
	TBD	AOC9-SS02 (2-4)	ASC	Subsurface soil (MS/MSD)	2.0-4.0	N1		X						
	TBD	AOC9-SS02 (6-8)	ASC	Subsurface soil (MS/MSD)	6.0-8.0	N1		X						
	TBD	AOC9-SS02 (10-12)	ASC	Subsurface soil (MS/MSD)	10.0-12.0	N1		X						
	TBD	AFFF-SD01	ASC	Sediment	0.0-0.5	N1		X	X		X	X	X	X
	TBD	AFFF-SD01 (extra volume)	ASC	Sediment (MS/MSD)	0.0-0.5	MS1		X	X		X	X	X	X
	TBD	AFFF-SD0/D	ASC	Sediment	0.0-0.5	FD1		X	X		X	X	X	X
	TBD	AFFF-SD01/S	ERDC	Sediment	0.0-0.5	FR1		X	X		X	X	X	X
	TBD	AFFF-SD02	ASC	Sediment	0.5-2.0	N1		X	X		X	X	X	X

Key:

AOC = Area of Concern
ASC = E & E's Analytical Services Center
ASTM = American Society for Testing and Materials
D1 = Deep Geoprobe groundwater sample (20 to 22 feet BGS)
D2 = Deepest Geoprobe groundwater sample (23 to 25 feet BGS)
/D = duplicate
Depth = Depth interval at which sample will be collected
DI = Deionized
ERDC = U.S. Army Engineer Research and Development Center Quality Assurance Laboratory
FD = field duplicate
FR = field split/replicate
GP = Geoprobe
GW = groundwater sample
I = Intermediate Geoprobe sample
N = Original
PCB = polychlorinated biphenyls
QC = Quality control sample
S1 = Shallowest Geoprobe groundwater sample (11 to 13 feet BGS)
S2 = Shallow Geoprobe groundwater sample (14 to 16 feet BGS)
/S = split
SD = Sediment
SS = Subsurface soil sample
SVOCs = semivolatile organic compounds
TAL = Target analyte list
TB = Trip blank
TBD = to be determined
TCL = Target Compound List
TP = Test pit
VOCs = volatile organic compound

TABLE 3-1
AOC 9 2002 SI ADDITIONAL SAMPLING
SAMPLE LISTING
FORMER GRIFFISS AIR FORCE BASE

Location	Date	Sample Number	Lab	Matrix	Depth	Type	ANALYSES: Select List VOCs 8260B	TCL VOCs 8260B	TCL SVOC's SW8270C	TPH as diesel and as gasoline 8015B Mod	TCL PCBs SW8082	TAL Metals 6010B/7470A/7471A	% Solids ASTM_D2216	TCL Pesticides SW8081A

MS/MSD = matrix spike/matrix spike duplicate

= Sample number will match TP number chosen in the field for sampling

B Field Quality Control Reports

Daily Activity Summary

Date: Monday 7-15-02 | **Report No.:** 01

Project Name: GAFB WAD9 Field Program | **Weather:** 70°-86° Humid, Partly Cloudy

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
R. Meyers	12+	E+E			
B. Cervi	12+	E+E			
S. Reynolds	12+	E+E			
Phil Orsi	8) hours	Zebra			
Dominic Pino	8) on	Zebra			
Ethan Plank	8) site	Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA1000	AOC9	Began Geoprobe Survey
O2/EXP	↓	Collected GP44D2. Also collected
W.L. Indicator	↓	2 Sed. Samples from AFFF lagoon.
↓	PCI20	Collected 3-NS soil Samples for lead (Site Compete)
		* Also Completed Initial Decon. and set up for Drilling Project.

Daily Activity Summary

Date: Tuesday 7-16-02 | **Report No.:** 02

Project Name: GAFB WAD9 Field Program | **Weather:** 85°, Sunny, Breezy

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
B. Meyers	12	E&E			
B. Cervi	12	E&E			
S. R-S	12	E&E			
Phil Orsi	11	Zebra			
Dominic Pino	11	Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA 1000	AOC 9	GP Survey (8 points)
O2/Exp	↓	↓
W.L. Indicator		
Camera		
Cell Phone		

Daily Activity Summary

Date: 7-~~10~~-02 wed. **Report No.:** 03

Project Name: WADG Field Program **Weather:** 70°-85° Humid, Poss. T-storms

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
R. Meyers	12	E+E			
B. Lervi	12	E+E			
S. Reynolds	12	E+E			
C. Taber	12	E+E			
Phil Orsi	11	~~E+E~~ Zebra			
Dom. Pino	11	~~E+E~~ Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA1000	AOC 9/	Installed & Sampled 12 GP
O2/exp	GP Survey	points
W.L. Indicator		
	AOI 473	Completed Swipe/Sed. Sampling
	Sampling	

Daily Activity Summary

Date: 7-18-02 Thurs
Report No.: 04
Project Name: GAFB WAD 9
Weather: ~~Hot~~ 85-90° Very Humid, Mostly Sunny

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
B. Mayers	12	E&E			
B. Cerri	12	E&E			
S. Reynolds Smith	12	E&E			
C. Faber	12	E&E			
Dom. Pino	11	Zebra			
Phil Orsi	11	Zebra			
T. Ferraro	12	E&E			
R. Watt	12	E&E			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA 1000	AOC 9	GP Survey and
O2/Exp		Surveyed (GPS) in
W.L. Indic.	↓	Test Pit Locations
Camera		
Phone		

Daily Activity Summary

Date: Friday 7-19-02 | **Report No.:** 05

Project Name: GAFB WADG Field Program | **Weather:** Hot 85°-90° Humid, light winds

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
B. Meyers	12	Ecl			
B. Cerri	12	Ecl			
S. Reynolds Smith	12	Ecl			
C. Taber	12	Ecl			
Dom Pino	8	Zebra			
Phil Orsi	8	Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA 1000 (2)	AOC 9	GP Survey @ AOC 9
O2/Explosimeter (2)	GP/TP	Test Pit Excavations @ AOC 9
W.L. Indicator		
Measuring Tape		
Camera		

Daily Activity Summary

Date: 7-22-02	**Report No.:** 06
Project Name: GAFB WAD9 Field Program	**Weather:** 94°, Very Humid

Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
B. Meyers	12	E+E			
S. Reynolds Smith	12	E+E			
Dom Pino	8	Zebra			
Matt Ednie	8	Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA 1000	~~AOC9~~	GP Survey
O2/Explosimeter		- 7 points
W.L. Indicator		
Camera		
Measuring Tape		

Daily Activity Summary

Date: 7-23-02			**Report No.:** 07		
Project Name: GAFB WAD 9 Field Program			**Weather:** 70°, Sunny, less Humid		
Personnel	**Hrs.**	**Affiliation**	**Personnel**	**Hrs.**	**Affiliation**
B. Meyers	11	E+E			
S. Reynolds Smith	11	E+E			
Dom Pino	10	Zebra			
Matt Ednie	10	Zebra			

Summary of Activities

Equipment	AOC/Task	Activities Performed
TVA 1000	AOC 9	Con't AOC 9 GP Survey &
O2/EXP.		Performed 2nd Dye trace test
W.L. Indicator		@ OTH305
Camera		

Daily Activity Summary

Date: 7-24-02 & 7-25-02 **Report No.:** 08 & 09

Project Name: ~~GAFB~~ WAD 9 Field Program **Weather:** 70°, Sunny / 75° Nice

	Personnel	Hrs.	Affiliation	Personnel	Hrs.	Affiliation
7-24-02	B. Meyers	11	E&E			
	S. Reynolds Smith	11	E&E			
	Will Mualliga	8	Zebra			
	Tim Siciliano	8	Zebra			
7-25-02	B. Meyers	11	E&E			
	S. Reynolds Smith	11	E&E			
	Will Mualliga	6	Zebra			
	Tim Siciliano	6	Zebra			

Summary of Activities

	Equipment	AOC/Task	Activities Performed
7-24-02	TVA1000 O2/Expl W.L. Indicator Camera	AOC 9	• Completed GP Survey. • Installed/Sampled 2 Soil borings.
7-25-02	Same as above	AOC 9	• Collected a full Round of W.L.'s • Secured area & demobed.
		Building 211	Installed 4 to 5" concrete skb on floor of Pipe Vault.

C

Chain-of-Custody

CHAIN OF CUSTODY RECORD

ASC Analytical Services Center
4493 Walden Avenue, Lancaster, New York, 14086, Tel: 716/685-8080, Fax 716/685-0852
Where Scientific Excellence and Efficiency Meet

Cooler No: 1
Lab: ASC

PROJECT No: 0010021UH10026303
CLIENT: USACE - Kansas City
SITE NAME: Griffiss Air Force Base
PROJECT MANAGER: Bob Meyers
OFFICE No.:
FIELD TEAM LEADER: Bob Meyers
PHONE No.:
SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi

LOCATION: (Include State) Rome, NY

CONTAINER TYPE AND PRESERVATIVE: 40ml VOA

TURNAROUND TIME:
- 24-HOUR [X] RUSH
- 48-HOUR [ ] RUSH
- 1-WEEK [ ] RUSH
- STANDARD [ ]
- OTHER

REQUESTED ANALYSIS: Select List VOCs (8260B)

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/15/02	1030	FieldQC-TB9-GW1	TB		2 2	—	—	—	
7/15/02	1600	AOC9-GP44D2	GW		3 3	0	28	30	
		~~AOC9-GP45D2 XRD~~							

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:
Robert A. Meyer	7-15-02/1800	Rick A. Carver	7-15-02 9:30
Rick A. Carver	7-15-02 10:36	[signature]	7-15-02 10:36

Temperature Blank Info. Enclosed: (Yes) No
Ship Via: Courier Date: 7-15-02
BL/Airbill Number:

LAB PROJECT No.:
LAB PROJECT MANAGER:

(FOR LAB USE ONLY)
Date: Time:
Temperature: °C
Work Order No:

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: 1
Lab: ASC
Page: 1 of 2

PROJECT No: 001002UK100202
CLIENT: USACS-KS
LOCATION: (Include State) Rome NY
SITE NAME: Former Griffiss AFB
PROJECT MANAGER: Bob Meyers
OFFICE No.: 716-684-8060
FIELD TEAM LEADER: Brian Cervi
PHONE No.: Same
SAMPLERS: (PRINT) Bob Meyers, Brian Cervi, Stephanie Reynolds

CONTAINER TYPE AND PRESERVATIVE: 1-4oz Jar; 2-Wheaton; 1-8oz Jar; 1-8oz Jab

TURNAROUND TIME: 24-HOUR ☐ RUSH; 48-HOUR ☐; 1-WEEK ☐; STANDARD ☐; OTHER ____

REQUESTED ANALYSIS

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	TCL VOC's	Select List VOCs	TCL SVOC's	Pest/PCBs	TAL Metals	% Solids	Lead Only, % Solids	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7-15-02	1540	AFFF-SD01	SE		2	1		← 1 →								
7-15-02	1540	AFFF-SD01 ms/msD	SE	✓	4	2		← 2 →								
7-15-02	1540	AFFF-SD01/D	SE		2	1		← 1 →								
7-15-02	1555	AFFF-SD02	SE		2	1		← 1 →								
~~7-15-02~~																
7-15-02	1425	PCIZO-NS06	SO		1						1					
7-15-02	1440	PCIZO-NS07	SO		1						1					
7-15-02	1450	PCIZO-NS08	SO	✓	3						3					ms/msD
7-15-02	1425	PCIZO-NS06/D	SO		1						1					Dup.

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info.	LAB PROJECT No.:	LAB PROJECT MANAGER:
Robert Meyers	7/15/02 1800	Rich A. Cervi	7-15-02 6:30	Enclosed: (Yes) No		
Relinquished By: (Signature) Rich A. Cervi	Date/Time: 7/15/02 10:36	Received By: (Signature)	Date/Time: 7-15-02 10:36	Ship Via: Courier	Date: 7-15-02	(FOR LAB USE ONLY)
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:		Date: Time: Temperature: °C

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Lab: E&E ASC
Page: of

PROJECT No: 010021UK100203
CLIENT: USACOE - Kansas City
SITE NAME: GAFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.: cell 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi

CONTAINER TYPE AND PRESERVATIVE: 40ML
REQUESTED ANALYSIS: Selected VOCs 8260B

TURNAROUND TIME: 24-HOUR [X] RUSH; 48-HOUR [ ]; 1-WEEK [ ]; STANDARD [ ]; OTHER

NOTE!

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS		OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/16/02	0749	Field QC-TB9-GW2	TB		2	2	–	–	–	Expected Total VOC Concentrations
	0811	AOC9-GP45D2	GW		3	3	0	23	25	.1 ppm
	1010	AOC9-GP46D2	GW		3	3	0.3	22.5	24.5	.1 ppm
	1145	AOC9-GP47D2	GW		3	3	0	21.2 (23.2 MS/MSD)	23.2	.5 ppm
	1350	AOC9-GP47D1	GW		3	3	0	17.75 (MS/MSD)	19.95	.5 ppm
	1600	AOC9-GP47I	GW		3	3	0	14.02	16.02	1-2 ppm
	1625	AOC9-GP47S2	GW		3	3	0.1	11.02	13.02	1-2 ppm
	1650	AOC9-GP47S1	GW		3	3	0	7.50	9.50	1-2 ppm
						WG ← IRPIMS Code				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:	LAB PROJECT MANAGER:
Robert A Meyers	7/16/02	Rick A. Cervi	7/16/02 6:30			
Rick A. Cervi	7/16/02 10:33		7/16/02 1033	Ship Via: Independent Courier 7/16 Date:	(FOR LAB USE ONLY) Date: Time:	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number: NA	Temperature: °C Work Order No:	

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: ____
Lab: Gold ASC
Page: 1 of

PROJECT No: 001002UK1002103
CLIENT: US ACOE - Kansas City
LOCATION: (Include State) Rome, NY
SITE NAME: GAFB
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.: 310 - 2885 (cell)
SAMPLERS: (PRINT) B. Cervi, S. Reynolds-Smith

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA

TURNAROUND TIME: 24-HOUR, 48-HOUR, 1-WEEK, STANDARD, RUSH, OTHER

REQUESTED ANALYSIS: Select List VOCs 8260B

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS		OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/16/02	1805	AOC9-GP48D2	GW		3	3	0.2	22.8	24.8	0.1 to 0.2 ppm
7/17/02	0815	AOC9-GP48D1	GW		3	3	0.2	19.45	21.45	"
7/17/02	0900	Field QC-TB9-GW3	TB		2	2	—	—	—	0 ppm
	0845	AOC9-GP45I	GW	✓	3	3	0	16.2 → 16.2	18.2	1.0 to 1.5 ppm
	0910	AOC9-GP45S2	GW		3	3	0	13.05	15.05	0.1 to 0.2 ppm
	0925	AOC9-GP45S1	GW		3	3	0.2	10.06	12.06	"
	1105	AOC9-GP46D1	GW		3	3	0.2	18.8	20.8	"
	1145	AOC9-GP46I	GW		3	3	0.2	15.55	17.55	1.0 to 1.5 ppm
	1145	AOC9-GP46I/D	GW		3	3	0.2	15.55	17.55	"
	1212	AOC9-GP46S2	GW		3	3	0	12.45	14.45	0.1 to 0.2 ppm

Expected total VOC concentration ↓

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:	LAB PROJECT MANAGER:
S. Reynolds-Smith	7/17/02 1725	Sara Allen	7/17/02 1726			Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Handed Date: 7/17	(FOR LAB USE ONLY)	
			7/17/02 2306	Independent Courier Svc	Date: ____ Time: ____	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:	Temperature: ____ °C	

Distribution: White - Lab original Yellow - Field team leader/PI

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Lab: E&E HSC

PROJECT No: 001002UK100203

CLIENT: US ACOE

LOCATION: (Include State) Rome, NY

SITE NAME: GAFB

PROJECT MANAGER: Bob Meyers OFFICE No.: HQ

FIELD TEAM LEADER: Bob Meyers PHONE No.: 310-2885 (field cell)

SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA

REQUESTED ANALYSIS: Select List VOCs 8260

TURNAROUND TIME: 24-HOUR [X] R; 48-HOUR [ ] S; 1-WEEK [ ] H; STANDARD [ ]; OTHER

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS		OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS (expected Total VOC Concentration)
7/17/02	1250	AOC9-GP46S1	GW		3	3	0.2	9.41	11.41	0.1 to 0.2 ppm
	1500	AOC9-GP44D1	GW		3	3	—	22.41	24.41	"
	1542	AOC9-GP44I	GW		3	3	—	19.31	21.31	1.0 to 1.5 ppm
	1542	AOC9-GP44I/D	GW		3	3	—	19.31	21.31	"
	1610	AOC9-GP44S2	GW		3	3	—	15.9	17.9	0.1 to 0.2 ppm
	1633	AOC9-GP44S1	GW		3	3	—	12.25	14.25	"

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:	LAB PROJECT MANAGER:
S Reynolds Smith	7/17/02 1725	Sara Allen	7/17/02 1726			Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand del 7/17/02	(FOR LAB USE ONLY)	
		(Cer Only)	7/17/02 2306		Date: Time:	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:	Temperature: °C	
					Work Order No:	

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: 1
Lab: EEA ASC
Page: 1 of 2

PROJECT No: 001002UK100203
CLIENT: US ACOE
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: Robert Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: R. Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi, B. Meyers

CONTAINER TYPE AND PRESERVATIVE: 40 ML VOA; 40 ML VOA; 1 L amber; 40 ML VOA; 1 L amber; 1 L amber; 1 L poly HNO3

TURNAROUND TIME: 24-HOUR (RUSH) ☒ Except as noted; 48-HOUR ☐; 1-WEEK ☐; STANDARD ☐; OTHER

REQUESTED ANALYSIS: Select VOCs 8260B; TCL VOCs 8260B; TCL SVOCs 8270C; TPH as gasoline; TPH as diesel; TCL PCB/TCL Pesticides; TAL Metals; Total estimated VOCs

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	Select VOCs 8260B	TCL VOCs 8260B	TCL SVOCs 8270C	TPH as gasoline	TPH as diesel	TCL PCB/TCL Pesticides	TAL Metals	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/18/02	0912	AOC9-GP48D1	GW		3	3								2.6	19.3	21.3	1 ppm
	0830	Field QC-TB9-GW4	TB		2	2								—	—	—	—
	1015	AOC9-GP48I	GW		3	3								1.3	15.82	17.82	2 ppm
	1015	AOC9-GP48I/D	GW		3	3								1.3	15.82	17.82	2 ppm
	1125	AOC9-GP48S2	GW		3	3								Ø	12.53	14.53	1.5 ppm
	1155	AOC9-GP48S1	GW		3	3								0	9.41	11.41	1 ppm
		~~AOC9 GP49D2~~	GW		3	3											~~DUP~~
7/16/02	1505	AOC9-DW01	EB				3	2	3	1	2	1		—	—	—	Standard Turnaround

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info.	LAB PROJECT No.:	LAB PROJECT MANAGER:
Robert A Meyers	7-18-02/1600		7/18/02/1600	Enclosed: (Yes) No		Caryn Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand delivery	Date: 7-18-02	(FOR LAB USE ONLY)
	7/18/02 9:30		7/18/02 1135			Date: Time:
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Bl/Airbill Number: NA		Temperature: °C

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Cooler No: _____
Lab: ASC

PROJECT No: 0010024K100203
CLIENT: US ACOE - Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: R. Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Robert Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, B. Cerri

CONTAINER TYPE AND PRESERVATIVE: 40 mL VOA

TURNAROUND TIME:
- 24-HOUR [X] RUSH
- 48-HOUR [ ]
- 1-WEEK [ ]
- STANDARD [ ]
- OTHER _____

REQUESTED ANALYSIS: Select List VOCs

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/18/02	~~1525~~	~~AOC9-GP49D2~~	GW		3 3	0	22.52	24.52	MA
	~~1620~~	~~AOC9-GP49D1~~	GW		~~3~~ 3	0	19.55	21.55	MA
↓	1717	AOC9-GP49I	GW	✓	9 9	0.2	16.45	18.45	
7/18/02	1620	AOC9-GP49D1	GW		3 3	0	19.55	21.55	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: Yes / No	LAB PROJECT No.:	LAB PROJECT MANAGER:
S. Reynolds Smith	7/18/02 1746					Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Date:		
	7/18/02 9:30		7/19/02 0735			
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:	(FOR LAB USE ONLY) Date: Time: Temperature: °C Work Order No:	

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: ____
Lab: EEASC
Page: of

PROJECT No: 0010021K1004493
CLIENT: US ACOE Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: R. Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: R. Meyers.
PHONE No.: 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA

TURNAROUND TIME: 24-HOUR [X] RUSH; 48-HOUR [ ]; 1-WEEK [ ]; STANDARD [ ]; OTHER ____

REQUESTED ANALYSIS: Selected List VOCs 8260B

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/19/02	0730	Field QC-TB9-GW5	TB		2 2	–	–	–	
	0830	AOC9-GP49D2	GW		3 3	0.3	23.19	25.19	
	0920	AOC9-GP49S2	GW		3 3	0	13.44	15.44	
	0927	AOC9-GP49S1	GW		3 3	0	10.68	12.68	
	1005	AOC9-GP50D2	GW		3 3	0.7	23.54	25.54	
	1100	AOC9-GP50D1 (MW)	GW		3 3	0.7	20.55	22.55	
	1133	AOC9-GP50I	GW		3 3	2	17.64	19.64	
	1133	AOC9-GP50I/D	GW		3 3	2	17.64	19.64	
	1205	AOC9-GP50S2	GW		3 3	0.9	14.53	16.53	
	1230	AOC9-GP50S1	GW		3 3	2	11.78	13.78	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info.	LAB PROJECT No.:	LAB PROJECT MANAGER:
[signature]	1858 7/19/02	Denise Higley	1858 7/19/02	Enclosed: (Yes) No		
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand delivery	Date:	(FOR LAB USE ONLY)
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:		Date: ____ Time: ____

CHAIN OF CUSTODY RECORD

ASL Analytical Services Center

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Where Scientific Excellence and Efficiency Meet

Cooler No: ____
Lab: ASL
Page: ____ of ____

PROJECT No: 001002PK1002d3

CLIENT: US AFCEE Kansas City

SITE NAME: GAFB

LOCATION: (Include State) Rome, NY

PROJECT MANAGER: B. Meyers

OFFICE No.: HQ

FIELD TEAM LEADER: B. Meyers

PHONE No.: 310-2885

SAMPLERS: (PRINT) S. Reynolds Smith, B. Cervi

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA

TURNAROUND TIME:
- 24-HOUR ☒ RUSH
- 48-HOUR ☐
- 1-WEEK ☐
- STANDARD ☐
- OTHER ____

REQUESTED ANALYSIS: Select list VOCs 8260B

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/19/02	1337	AOC9-GP5D2	GW		3 3				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:	LAB PROJECT MANAGER:
[signature]	1858 7/19/02	Denise Giglio	1858 7/19/02			Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand Del 7/19/02 Date:	(FOR LAB USE ONLY)	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:	Date: ____ Time: ____ Temperature: ____ °C Work Order No: ____	

Distribution: White - Lab original Yellow - Field team leader/Project Manager

CHAIN OF CUSTODY RECORD

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Cooler No: 1
Lab: ASC

PROJECT No: 001002UK1002003
CLIENT: USACE-KC
SITE NAME: Griffiss WAD9- AOC9
LOCATION: (Include State) GAFB Rome, NY
PROJECT MANAGER: Bob Meyers
OFFICE No.: HO
FIELD TEAM LEADER: Bob Meyers
PHONE No.: 716-310-2885
SAMPLERS: (PRINT) Bob Meyers, Charley Taber

TURNAROUND TIME: 24-HOUR ☐ 48-HOUR ☐ 1-WEEK ☐ STANDARD ☒ (RUSH) OTHER

CONTAINER TYPE AND PRESERVATIVE / REQUESTED ANALYSIS

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	TCL VOCs	TPH as Gasoline	TPH as Diesel	TCL Pest/PCB	TAL Metals, % Solids	TCL SVOCs	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7-19-02	1328	AOC9-GW-TP01	WG		9	3	3	1	1	0	1				※ Note: all VOC bottles from Coolers 2, 3, and 4 are in cooler 1 with Trip blank
7-19-02	1400	AOC9-GW-TP03	WG	✓	9	3	3	1	1	0	1				
~~7-19-02~~	~~0815~~	~~[illegible] Field QC-TB9-GW~~	~~GTB~~		~~2~~	~~2~~	~~BM~~								
7-19-02	1202	AOC9-TP04	SO	✓	6	1	1	←	1	→	→				
7-19-02	1202	AOC9-TP04D	SO		3	1	1	←	1	→	→				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: Yes No	LAB PROJECT No.:	LAB PROJECT MANAGER:
[signature]	1850 7/19/02	Denise Figlus	18:58 7/19/02			Wojtowicz
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand delivery 7-19-02 Date:	(FOR LAB USE ONLY)	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Bl/Airbill Number: N/A	Date: Time: Temperature: °C	

CHAIN OF CUSTODY RECORD

ASC Analytical services center

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Cooler No: 4
Lab: ASC
Page: 1 of 1

PROJECT No: 001002UK10023
LOCATION: (Include State) GAFB Rome NY
CLIENT: USACE-KC
SITE NAME: Griffiss AOC9

CONTAINER TYPE AND PRESERVATIVE: 40mL Vial | 40mL Vial | 1L Amber | 80z Amber | 80z Amber

TURNAROUND TIME: 24-HOUR ☐ | 48-HOUR ☐ | 1-WEEK ☐ | STANDARD ☒ (RUSH) | OTHER

PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) Bob Meyers, Charley Taber

REQUESTED ANALYSIS

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	TCL VOC's	TPH as Gasoline	TPH as Diesel	TCL Pest./PCB	TAL Metals (ASM)	TCL 5 VOC's	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7-19-02	1400	AOC9-GW-TP03 ms/msd	WG	✓	9	3	3	1	1	/	1				MS/MSD
7-19-02	1210	AOC9-GW-TP04	WG		9	3	3	1	1	/	1				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: Yes No	LAB PROJECT No.:	LAB PROJECT MANAGER:
	7/19/02 1858	Denise Hyden	7/19/02 18:58			
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand delivery Date:	(FOR LAB USE ONLY)	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number: —	Date: Time: Temperature: °C Work Order No:	

Distribution: White - Lab original Yellow - Field team leader/Project Manager

F1260699.P65

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Cooler No: 3
Lab: ASC
Page: 1 of 1

PROJECT No: 001002UK100203
CLIENT: USACE-KC
SITE NAME: Griffiss AOC9
LOCATION: (Include State) GAFB Rome NY
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) Bob Meyers, Charley Taber

CONTAINER TYPE AND PRESERVATIVE: 40 ml VOA | 40 ml VOA | 1L Amber | 8 oz Amber | 8 oz Amber

TURNAROUND TIME: 24-HOUR | 48-HOUR | 1-WEEK | STANDARD (X) | OTHER

REQUESTED ANALYSIS

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	TCL VOC's	TPH as Gasoline	TPH as Diesel	TCL Pest/PCB	TCL SVOC	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7-19-02	0955	AOC9-TP06	WG		9	3	3	1	1	1				
~~7-19-02~~														

Relinquished By: (Signature) [signature] | Date/Time: 7/19/02 1858 | Received By: (Signature) Denise Bigler | Date/Time: 1858 7/19/02 | Temperature Blank Info. Enclosed: Yes No | LAB PROJECT No.: | LAB PROJECT MANAGER:

Relinquished By: (Signature) | Date/Time: | Received By: (Signature) | Date/Time: | Ship Via: Hand delivery | Date: 7-19-02 | (FOR LAB USE ONLY)

Relinquished By: (Signature) | Date/Time: | Received By: (Signature) | Date/Time: | BL/Airbill Number: | Date: ____ Time: ____ Temperature: ____ °C

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Cooler No: ____
Lab: ASC
Page: 1 of 1

PROJECT No: 001002WK1002203
CLIENT: USACE-KC
SITE NAME: Griffiss AOC9
LOCATION: (Include State) GAFB Rome NY
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.: 716/310-2885
SAMPLERS: (PRINT) Bob Meyers, Charley Taber

CONTAINER TYPE AND PRESERVATIVE: 40mL VOA; 40mL VOA; 1L Amber; 80z Amber; 80z Amber

TURNAROUND TIME: 24-HOUR ☐ RUSH; 48-HOUR ☐ RUSH; 1-WEEK ☐ RUSH; STANDARD ☒; OTHER ____

REQUESTED ANALYSIS

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	TCL VOCs	TPH as Gasoline	TPH as Diesel	TCL Pest/PCB	TCL SVOC	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7-19-02	1110	AOC9-DTP04	WG		9	3	3	1	1	1				
7-19-02	1110	AOC9-DTP04D	WG		9	3	3	1	1	1				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: Yes No	LAB PROJECT No.:	LAB PROJECT MANAGER:
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Hand delivery Date: 7-19-02		(FOR LAB USE ONLY) Date: ____ Time: ____ Temperature: ____ °C Work Order No: ____
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number: —		

Distribution: White - Lab original Yellow - Field team leader/Project Manager

F1260699.P65

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Cooler No: _____
Lab: ASC
Page: of

PROJECT No: 001002UK1B0203
CLIENT: US ACOE Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: Robert Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Robert Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, R. Meyers

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA

TURNAROUND TIME:
24-HOUR ☒ RUSH
48-HOUR ☐
1-WEEK ☐
STANDARD ☐
OTHER _____

REQUESTED ANALYSIS: Select List VOCs 8260B

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/22/02	0930	FieldQC-TB9-GW0	TB		2 2	~	~	~	
	1148	AOC9-GP51D1	GW		3 3	0.4	20.2	22.2	
	1210	AOC9-GP51I	GW		3 3	0.3	16.9	18.9	
	1250	AOC9-GP51S2	GW		3 3	1.5	14	16	
	1310	AOC9-GP51S1	GW		3 3	0.4	10.9	12.9	
	1530	AOC9-GP52D2	GW		3 3	0.5	24.4	26.4	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info.	LAB PROJECT No.:	LAB PROJECT MANAGER:
S. Reynolds Smith	7-22-02 16:18		7-22 4:20PM	Enclosed: Yes No		Boglin
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via:	Date: 7/22/02	(FOR LAB USE ONLY)
	8:45	Joseph Bitka	8/22/02 8:45	Independent Courier		Date: _____ Time: _____
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:		

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Cooler No:
Lab: ASC

PROJECT No.: 001 002UK 0 0203
CLIENT: US ACOE Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: Robert Meyers **OFFICE No.:**
FIELD TEAM LEADER: R. Meyers **PHONE No.:** 310-7885
SAMPLERS: (PRINT) R. Meyers, S. Reynolds Smith

TURNAROUND TIME: 24-HOUR [X] RUSH; 48-HOUR [ ]; 1-WEEK [ ]; STANDARD [ ]; OTHER

CONTAINER TYPE AND PRESERVATIVE: 40ml VOA
REQUESTED ANALYSIS: Select List VOCs 8260B

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	Select List VOCs 8260B	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/22/02	1625	AOC9-GP52D1	GW		3	3	0	21.35	23.35	
↓	1710	AOC9-GP52I	↓		↓	↓	0	18.35	20.35	
↓	1710	AOC9-GP52I/D	↓		↓	↓	0	18.35	20.35	
7/23/02	0830	AOC9-GP52 S2	↓		↓	↓	3	15.35	17.35	
↓	1000	AOC9-GP52 S1	↓		↓	↓	–	12.5	14.5	
↓	1055	AOC9-GP53D2	↓		↓	↓	7	19.85	21.85	
↓	1155	AOC9-GP53D1	↓		↓	↓	1	17.55	19.55	
↓	1405	AOC9-GP54D1	↓		↓	↓	0	17.1	19.1	
↓	1445	AOC9-GP54 I	↓		↓	↓	0	15.2	17.2	
↓	1615	Field QC-TB9-GW7	TB		2	2	–	–	–	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:		
S. Reynolds Smith	7/23/02 1630	Michael Meyers	7/23/2 435p	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:
M. Moore	7-23-2 7:46pm	[signature]	7/23/02 1946	Ship Via: Independent Courier Date: 7/23	LAB PROJECT MANAGER: B. Ggelin
				BL/Airbill Number:	(FOR LAB USE ONLY) Date: Time: Temperature: °C Work Order No:

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: 1
Lab: ASC

PROJECT No: 0010021410203
LOCATION: (Include State) Rome, NY
CLIENT: USACE Kansas City
SITE NAME: Griffiss AFB
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Robert Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) Robert Meyers S. Reynolds Smith

CONTAINER TYPE AND PRESERVATIVE: 4oz VOA

TURNAROUND TIME: 24-HOUR (RUSH) 7D; 48-HOUR; 1-WEEK; STANDARD; OTHER

REQUESTED ANALYSIS: Select VOCs 524.2

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/23/02	1445	AOC9-GP5HID	GW		3 3	0	15.2	7.2	
7/23/02	1510	AOC9-GP5HSI	GW		3 3	0	13.4	15.4	
7/23/02	1550	AOC9-GP55I	GW		3 3	0	16.6	18.6	

	Date/Time:		Date/Time:		
Relinquished By: (Signature) S. Reynolds Smith	7/23/02 1640	Received By: (Signature) W. Mannheim	7/23/02 1643	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:
Relinquished By: (Signature) W. Mannheim	7/23/02 1746	Received By: (Signature)	7/23/02 1746	Ship Via: Fed Indep. Courier Date: 7/23	LAB PROJECT MANAGER: Bogdan
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number:	(FOR LAB USE ONLY) Date: Time: Temperature: °C

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Cooler No: 1
Lab: ASC

PROJECT No: 001002UK1002C03
CLIENT: US ACE - Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: R. Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: R. Meyers
PHONE No.: 310-2885
SAMPLERS: (PRINT) S. Reynolds Smith, R. Meyers

CONTAINER TYPE AND PRESERVATIVE: 40ML VOA / 4 OZ JAR / 8 OZ JAR

TURNAROUND TIME: 24-HOUR [X] RUSH; 48-HOUR [ ]; 1-WEEK [ ]; STANDARD [ ]; OTHER

REQUESTED ANALYSIS: Select List VOCs 8260B; TCL VOCs; TCL SVOCs, TCL PCBs, TAL Metals; TCL Pest. + %Solids

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS											OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/23/02	1645	AOC9-GP54D2	GW		3	3										0	18.25	20.25	24-hour turnaround
7/24/02	0825	FieldQC-TB9-GW8	TB		2	2										1	—	—	
	0940	AOC9-GP53I	GW	✓	9	9										0	14.7	16.7	
	0959	AOC9-GP53S1	GW		3	3										0	~~14~~ 12	14	
	1100	AOC9-SS01(4-6)	SB		2		1	1								0.5	4	6	standard turn-around time
	1110	AOC9-SS01(11.5-16)	SB		2		1	1								1	11.5	16	
	~~1120~~ 1130	AOC9-SS01(11.5-16)D	SB		2		1	1								~~0.9~~ 1	11.5	16	
	1130	AOC9-SS01(20-24)	SB	✓	6		3	3								0.6	20	24	
	1330	AOC9-GP56I	GW		3	3										0.2	17.2	19.2	24 hr turnaround
	1440	AOC9-GP57I	GW		3	3										10	20.4	22.4	

Relinquished By: (Signature) S. Reynolds Smith	Date/Time: 7/24/02 1535	Received By: (Signature) R. Meyers	Date/Time: 7-24 340	Temperature Blank Info. Enclosed: (Yes) No	LAB PROJECT No.:
Relinquished By: (Signature) R. Meyers	Date/Time: 7/24/02 1822	Received By: (Signature) [illegible]	Date/Time: 7/24/02 1822	Ship Via: Fed Ex Date: ~~7/24/02~~ 7/25/02	LAB PROJECT MANAGER: Boglin
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	BL/Airbill Number: 549629560 3	(FOR LAB USE ONLY) Date: Time: Temperature: °C Work Order No:

Distribution: White - Lab original Yellow - Field team leader/Project Manager

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Cooler No: 1
Lab: ASC
Page: 2 of 2

PROJECT No: 001 002 UK1 0 0203
CLIENT: USACE - Kansas City
SITE NAME: Griffiss AFB
LOCATION: (Include State) Rome, NY
PROJECT MANAGER: Bob Meyers
OFFICE No.: HQ
FIELD TEAM LEADER: Bob Meyers
PHONE No.:
SAMPLERS: (PRINT) S. Reynolds Smith, Bob Meyers

CONTAINER TYPE AND PRESERVATIVE: 4 oz jar, 8 oz jar

TURNAROUND TIME:
24-HOUR ☐ RUSH
48-HOUR ☐
1-WEEK ☐
STANDARD ☒
OTHER ☐

REQUESTED ANALYSIS: TCL VOCs; TCL SVOCs; TCL PCBs/Pesticides; TAL Metals; TCL Pest. & PCBs

DATE	TIME	SAMPLE ID	MATRIX CODE	CHECK FOR MS/MSD	No. OF CONTAINERS	OVA/HNU READINGS (PPM)	BEGINNING DEPTH (FEET BGS)	ENDING DEPTH (FEET BGS)	REMARKS
7/24/02	1453	AOC9-SS02(2-4)	SB		1 1	0	2	4	Standard turnaround time
	1458	AOC9-SS02(6-8)			1 1	0	6	8	
	1504	AOC9-SS02(10-10.5)			1 1	0	10	10.5	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Temperature Blank Info. Enclosed: Yes / No	LAB PROJECT No.:	LAB PROJECT MANAGER:
S. Reynolds Smith	7/24/02 1535		7-24 3:40			Baglin
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Ship Via: Indep. Courier Fed Ex Date: 7/24/02	(FOR LAB USE ONLY)	
Bob Meyers	7-24 1822		7/24/02 1820		Date: Time:	
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Bl/Airbill Number:	Temperature: °C	

D

Validation Memoranda

DATA VALIDATION MEMORANDUM

DATE: August 8, 2002 (Updated October 2002)

TO: Robert Meyers, Project Manager,
Ecology and Environment, Inc. (E & E)

FROM: Marcia Meredith Galloway, QA Officer, Buffalo

SUBJ: 2002 Addendum Site Investigation of Area of Concern 9 and
USACE Contract DACW41-99-D-9005, Task Order 0001- WAD 9

Laboratory - Analytical Services Center (ASC) REF:

Project	Lab Work Order
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207135
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207149
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207192

DELIVERABLES

The laboratory reports are complete as stipulated in the master Quality Assurance Project Plan (QAPP) (E & E 2000) and the site-specific QAPP for the above referenced project and site. The data validation memo findings and the potential impacts on data usability will be presented in a Quality Control Summary Report (QCSR) submitted as a separate report.

SAMPLE INTEGRITY

Based on the information provided on the cooler receipt form, the samples arrived at the laboratory intact and properly preserved. Completed chain-of-custody (COC) documents are included in the laboratory report.

SAMPLE IDENTIFICATION

The field samples for this laboratory data packages and related laboratory identifications (IDs) are listed on the following Table 1. Samples identified as /D are field duplicates. Project-specific matrix spike/matrix spike duplicates (MS/MSD) designated in the field as extra volume by on the COC are noted with a "*" on Table 1. Any other samples noted as MS/MSD on Table 1 are provided as batch quality control (QC) MS/MSD. Samples identified with a matrix code of "RB" are rinsate blanks and samples identified with a matrix code of "TP" or "TS" are trip blanks. All tables are included at the end of this memo except for Table 1 Sample Listing.

Table 1 - List of Samples Reported

Sample ID	Sample Date	Matrix	Lab ID	Lab QC	MS MS	ID Corrections
AOC9-GP48D1	7/18/2002	Water	0207135-01			None
FIELDQC-TB9-GW4	7/18/2002	Water	0207135-02			None

Sample ID	Sample Date	Matrix	Lab ID	Lab QC	MS MS	ID Corrections
AOC9-GP48I	7/18/2002	Water	0207135-03			None
AOC9-GP48I/D	7/18/2002	Water	0207135-04			None
AOC9-GP48S2	7/18/2002	Water	0207135-05			None
AOC9-GP48S1	7/18/2002	Water	0207135-06			None
AOC9-GP49I	7/18/2002	Water	0207135-07	MS/MSD	*	None
AOC9-GP49D1	7/18/2002	Water	0207135-08			None
AOC9-DW01	7/18/2002	Water	0207135-09			None
AOC9-TP04	7/19/2002	Soil	0207149-01	MS/MSD	*	None
AOC9-TP04/D	7/19/2002	Soil	0207149-02	MS/MSD		None
AOC9-TP06	7/19/2002	Water	0207149-03			AOC9-GW-TP06
AOC9-GW-TP01	7/19/2002	Water	0207149-04			None
AOC9-GW-TP03	7/19/2002	Water	0207149-05	MS/MSD	*	None
AOC9-GW-TP04	7/19/2002	Water	0207149-06			None
AOC9-DTP04	7/19/2002	Water	0207149-07			AOC9-GW-DTP04
AOC9-DTP04/D	7/19/2002	Water	0207149-08			AOC9-GW-DTP04/D
AOC9-GP54D2	7/23/2002	Water	0207192-01			None
FIELDQC-TB9-GW8	7/24/2002	Water	0207192-02			None
AOC9-GP53I	7/24/2002	Water	0207192-03	MS/MSD	*	None
AOC9-GP53S1	7/24/2002	Water	0207192-04			None
AOC9-GP56I	7/24/2002	Water	0207192-05			None
AOC9-GP57I	7/24/2002	Water	0207192-06			None
AOC9-SS01(4-6)	7/24/2002	Soil	0207192-07			None
AOC9-SS01(11.5-16)	7/24/2002	Soil	0207192-08			None
AOC9-SS01(11.5-16)/D	7/24/2002	Soil	0207192-09			None
AOC9-SS01(20-24)	7/24/2002	Soil	0207192-10	MS/MSD	*	None
AOC9-SS02(2-4)	7/24/2002	Soil	0207192-11			None
AOC9-SS02(6-8)	7/24/2002	Soil	0207192-12			None
AOC9-SS02(10-10.5)	7/24/2002	Soil	0207192-13	MS/MSD		None

Work Orders	Matrix	Test Method	Number of Samples
0207149	Soil	SW6010B	2
0207149	Soil	SW7471A	2
0207149	Soil	SW8015B	2
0207149	Soil	SW8081A	2
0207149	Soil	SW8082	2
0207149	Soil	SW8260B	2
0207149	Soil	SW8270C	2
0207149	Soil	ASTM_D2216	2
0207192	Soil	SW8270C	4
0207192	Soil	SW6010B	4
0207192	Soil	SW7471A	4

Work Orders	Matrix	Test Method	Number of Samples
0207192	Soil	SW8081A	4
0207192	Soil	SW8082	4
0207192	Soil	ASTM_D2216	7
0207192	Soil	SW8260B	7
0207135	Water	SW6010B	1
0207135	Water	SW7470A	1
0207135	Water	SW8015B	1
0207135	Water	SW8081A	1
0207135	Water	SW8082	1
0207135	Water	SW8270C	1
0207192	Water	SW8260B	6
0207149	Water	SW8015B	6
0207149	Water	SW8081A	6
0207149	Water	SW8082	6
0207149	Water	SW8260B	6
0207149	Water	SW8270C	6
0207135	Water	SW8260B	9

Go to Tables List

Holding Times

All samples were analyzed within the project-specified holding time except for the re-extraction of sample AOC9-TP04/D for SVOCs five days beyond the method holding time of 14 days. All non-detect results are qualified "UJ" as estimated as indicated on Table 6.

LOW LEVEL VOLATILE ANALYSES (8260B)

Blank Summary
Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL .

Surrogates
The recoveries for surrogates; 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8 were within acceptable QC limits for all samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC except that there was not enough volume to analyze the MSD for AOC9-TP03 as the sample was analyzed twice due to instrument problems. The percent recovery and RPD values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10%. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The recoveries were slightly low for trichlorofluoromethane and vinyl acetate. The LCS recoveries also were slightly low for these compounds in some cases

indicating a potential analysis bias. No compounds were detected in the samples and recoveries were high enough to support detection of the compounds at the PQL. Therefore no data qualification is required.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5. Vinyl acetate, 2-butanone, and 4-methyl-2-pentanone (work order 0207192) recoveries were slightly low. These compounds were not detected in the associated samples and are not compounds of concern at the site. All other LCS recoveries were acceptable. The compound recoveries were greater than 50% and sufficient to support detection of the compounds at the PQL. Therefore no data qualification is required.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

Several of the quick turnaround screening samples were analyzed only once at the most appropriate dilutions to match the compound concentrations present. The sample PQLs for compounds not present in the sample will be elevated and may not be directly comparable to other compounds. Since the data are used for contouring this may have an impact on the usability of the results. The following samples were analyzed at a higher dilution.

Client Sample ID	Dilution Factor	Minimum PQL
AOC9-GP56I	5	10.0

VOLATILE ANALYSES (8260B)

Blank Summary
Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL.

Surrogates
The recoveries for surrogates; 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8 were within acceptable QC limits for all samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD were performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and relative percent difference (RPD) values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10%. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5. Acetone recoveries were high and trichlorofluoromethane (work order: 0207149) recoveries were low (work order: 0207149). Trichlorofluoromethane was not detected in the associated samples and is not a compound of concern at the site. Acetone was detected in one sample above the PQL and the result is flagged "J" as estimated. Acetone is

not a compound of concern at the site and the potential high bias is likely due to laboratory background. All other LCS recoveries were acceptable.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

SEMIVOLATILE ANALYSES (8270C)
Blank Summary
Laboratory method blanks were performed at the required frequency and no compounds were present above the PQL with the exception of bis(2-ethylhexyl)phthalate found at 51.86 µg/L in method blank MB-200202030 (laboratory work order 0207149) above the MDL but below the reporting limit as indicated on Table 2. The associated samples with positive results for the compounds are shown on Table 2A for method blanks. Sample results less than 10 times the blank levels are flagged "U" as non-detect for common laboratory contaminants. Sample results less than 5 times the blank levels are flagged "U" as non-detect for all other compounds.

Surrogates
The recoveries for surrogates 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, nitrobenzene-d5, phenol-d5, and terphenyl-d14 were within acceptable QC limits. No action is required for one surrogate recovery per fraction outside QC limits except as noted on Table 3. No action is required for one surrogate recovery per fraction outside QC limits.

Sample AOC9-SS01(20-24) had two surrogate recoveries high for acid phenols. The laboratory indicates the recoveries were high due to a large aldol condensation product peak and the sample was not re-extracted beyond holding times. No compounds were detected in the sample and no data qualification is required.

All surrogate recoveries for sample AOC9-TP04/D (laboratory work order 0207149) were low indicating an extraction problem. The sample was re-extracted five days beyond holding time and re-analyzed as indicated on Table 6. The re-extracted surrogate recoveries were acceptable and no target compounds were detected. The re-extracted sample results are reported and qualified as indicated on Table 6. Since the sample was a field duplicate and the original sample results are the same, there is limited impact on data usability.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and relative percent difference (RPD) values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10% except for two reactive compounds. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns. The results for two reactive compounds indicate a potential matrix effect that produced no recovery. The associated PQLs are flagged "UR" as rejected due to matrix effects. The compounds are not a concern at the site and there is no impact on data usability.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5 (high recoveries of benzo(g,h,i)perylene, indeno(1,2,3-cd)pyrene),

and dibenz(a,h)anthracene - laboratory work orders 0207135 and 0207149). Sporadic and marginal QC failures for multiple component methods do not indicate an analytical concern. The recoveries were high and the compounds were not detected in the samples, therefore no data qualification is required.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

GC VOLATILES GASOLINE RANGE ORGANICS (SW8015B Modified)

Blank Summary
Laboratory method blanks were performed at the required frequency and no compounds were present above the PQL.

Surrogates
The recoveries for surrogate 1,2-Dichlorobenzene were within acceptable QC limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial calibration and continuing calibration criteria were met.

DIESEL RANGE ORGANICS (SW8015B Modified)

Blank Summary
Laboratory method blanks were performed at the required frequency and no compounds were present above the PQL.

Surrogates
The recoveries for surrogate o-Terphenyl were within acceptable QC limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial calibration and continuing calibration criteria were met.

PESTICIDES (8081A)
Blank Summary
Laboratory method blanks were performed at the required frequency and no compounds were present above the PQL. Trace levels of endrin aldehyde were detected in the blank as indicated on Table 2. The associated samples with positive results for the compounds are shown on Table 2A for method blanks. Sample results less than 10 times the blank levels are flagged "U" as non-detect for common laboratory contaminants. Sample results less than 5 times the blank levels are flagged "U" as non-detect for all other compounds.

Surrogates
The recoveries for surrogates decachlorobiphenyl (DCB) and Tetrachloro-m-xylene (TCMX) were within acceptable QC limits for all samples except as noted on Table 3. The recovery of DCB was high in one sample, but the associated sample results were all non-detected or below the PQL and already flagged "J" as estimated.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits except as noted on Table 4 at the end of this memo. . Qualifiers were added as noted in Table 4 for aldrin and dieldrin. These compounds were the only compounds detected at high levels in the samples. The results are flagged "J" as estimated. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

PCBs (8082)
Blank Summary
Laboratory method blanks were performed at the required frequency and no target compounds were present at levels above or below the PQL.

Surrogates
The recoveries for surrogates DCB and TCMX were within acceptable QC limits except as noted on Table 3. For one sample batch, 200202088, the DCB recovery was slightly low in the method blank and one sample. The recovery in the LCS and other three samples was acceptable. No PCBs were detected in any of the samples. No data qualification is required unless the recovery is less 30%. The surrogate response is sufficient to support detection of PCBs at the PQL and there is no impact on data usability. For the one sample AOC9-TP04 the recovery was high, but no PCBs were detected in the samples and no data qualification is required.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

METALS (6010/7000)

Blank Summary
Laboratory method blanks were analyzed at the required frequency and had no target analytes detected above the laboratory PQL. Trace levels of selenium were found below the PQL as shown on Table 2. There were no associated samples with positive results and no data qualification required.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits except as noted on Table 4 at the end of this memo. Qualifiers were added as noted in Table 4. For low recoveries, both the results and quantitation limit are flagged "J" as estimated. For high recoveries, only the positive results are flagged "J" as estimated.

Laboratory Control Sample (LCS)
The LCSs were performed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial calibration and continuing calibration criteria were met.

FIELD DUPLICATE RESULTS

Field duplicates were analyzed as required in the QAPP. The samples are noted on Table 1 of this memo were field duplicates. The results will be summarized on a table in the QCSR. The field duplicate QC criteria are two times the laboratory duplicate QC criteria of 20% for water samples and 35% for soil samples (i.e., 40% for water samples and 70% for solid samples). The RPD ratings are listed as "Good" if the RPD is less than field duplicate QC criteria and as "Poor" if the RPD exceeded the field duplicate QC criteria.

Field duplicate results are summarized on Table 7 below. Four sets of duplicate samples were collected and overall the precision is very good. Field duplicate results with "Poor" are flagged "J" as estimated for one set of acetone results. TICs are already flagged as estimated and no additional data qualification is required.

Table 2 - List of Positive Results for Blank Samples

Method	Sample ID	Samp Type	Analyte	Result	Qual	Anal Type	Units	MDL	PQL
SW6010B	MB-200202148	MBLK	Selenium	0.7555	J	A	mg/Kg	0.5900	5.000
SW6010B	MB-200202148	MBLK	Selenium	0.7555	J	A	mg/Kg	0.5900	5.000
SW8081A	MB-200202040	MBLK	Endrin aldehyde	1.312	J	A	µg/Kg	0.9670	9.840
SW8270C	MB-200202029	MBLK	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	2-Pentanone, 4-hydroxy-4-methyl-	12.5	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	2-Propenoic acid, 2-(acetylamino)-	2.74	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	3-Hydroxy-3-methyl-2-butanone	14.2	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	Butane, 2-chloro-2-methyl-	11.4	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	Cyclopentene, tetrachloro-	2.4	NJ	T	µg/L	0	0
SW8270C	MB-200202029	MBLK	Unknown	2.14	J	T	µg/L	0	0
SW8270C	MB-200202030	MBLK	1,2-Bis(trimethylsilyl)benzene	82	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	1,3-Dioxolane, 2-(methoxymethyl)-2-pheny	191	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	2-Pentanone, 4-hydroxy-4-methyl- (5.639)	29600	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	2-Pentanone, 4-hydroxy-4-methyl- (7.143)	3270	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	2-Propanol, 1-bromo-, acetate	476	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	3-Hexanol	141	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	Benzoic acid, 2-benzyloxy-3-bromopropyl	84	NJ	T	µg/Kg	0	0
SW8270C	MB-200202030	MBLK	Bis(2-ethylhexyl)phthalate	51.86	J	A	µg/Kg	45.10	318.0
SW8270C	MB-200202105	MBLK	1,3-Dioxolane, 2-(methoxymethyl)-2-pheny	260	NJ	T	µg/Kg	0	0
SW8270C	MB-200202105	MBLK	2,8-Dimethyl-3-nitroindolizine	72.5	NJ	T	µg/Kg	0	0
SW8270C	MB-200202105	MBLK	2-Hexanone, 4-hydroxy-5-methyl-	547	NJ	T	µg/Kg	0	0
SW8270C	MB-200202105	MBLK	2-Pentanone, 4-hydroxy-4-methyl- (5.835)	30400	NJ	T	µg/Kg	0	0
SW8270C	MB-200202105	MBLK	2-Pentanone, 4-hydroxy-4-methyl- (7.268)	3700	NJ	T	µg/Kg	0	0
SW8270C	MB-200202105	MBLK	Dipropyleneglycol dibenzoate	93.1	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	1,3-Dioxolane, 2-(methoxymethyl)-2-pheny	181	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	2-Heptanone	5300	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	2-Hexanone, 4-hydroxy-5-methyl-	176	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	2-Pentanone, 4-hydroxy-4-methyl-	55100	NJ	T	µg/Kg	0	0

Method	Sample ID	Samp Type	Analyte	Result	Qual	Anal Type	Units	MDL	PQL
SW8270C	MB-200202237	MBLK	3-Hexanol, 4-ethyl-	203	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	3-Methyl-2-butyl acetate	571	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	Ethanone, 2-bromo-1,2-diphenyl-	105	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	Nonane, 3-methyl-5-propyl-	99.9	NJ	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	Unknown (23.648)	130	J	T	µg/Kg	0	0
SW8270C	MB-200202237	MBLK	Unknown (7.764)	81.4	J	T	µg/Kg	0	0

Table 2A - List of Samples Qualified for Method Blank Contamination

Method	Lab Blank	Matrix	Analyte	Blank Result	Result	Lab Qual	PQL	Affected Samples	Sample Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	33.8	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	20.7	NJ	0	AOC9-DW01	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	10.2	NJ	0	AOC9-GW-TP03	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	41.9	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	42	NJ	0	AOC9-GW-TP01	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	33.8	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	20.7	NJ	0	AOC9-DW01	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	10.2	NJ	0	AOC9-GW-TP03	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	41.9	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	1-Propene, 1,2,3-trichloro-, (Z)-	24.9	42	NJ	0	AOC9-GW-TP01	U Flag
SW8270C	MB-200202105	Soil	2-Hexanone, 4-hydroxy-5-methyl-	547	560	NJ	0	AOC9-SS01(11.5-16)	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	24.3	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	53.8	NJ	0	AOC9-GW-TP01	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	41	NJ	0	AOC9-GW-DTP04	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	41.5	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	26.9	NJ	0	AOC9-GW-DTP04/D	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	9.6	NJ	0	AOC9-DW01	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	26.9	NJ	0	AOC9-GW-DTP04/D	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	24.3	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	9.6	NJ	0	AOC9-DW01	U Flag

Method	Lab Blank	Matrix	Analyte	Blank Result	Result	Lab Qual	PQL	Affected Samples	Sample Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	41.5	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	53.8	NJ	0	AOC9-GW-TP01	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	9.86	NJ	0	AOC9-GW-TP03	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	9.86	NJ	0	AOC9-GW-TP03	U Flag
SW8270C	MB-200202029	Water	2-Pentanone, 4-hydroxy-4-methyl-	12.5	41	NJ	0	AOC9-GW-DTP04	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	4.33	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	17.5	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	3.68	NJ	0	AOC9-GW-DTP04	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	3.68	NJ	0	AOC9-GW-DTP04	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	4.33	NJ	0	AOC9-GW-TP04	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	17.5	NJ	0	AOC9-GW-TP06	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	7.67	NJ	0	AOC9-DW01	U Flag
SW8270C	MB-200202029	Water	Butane, 2-chloro-2-methyl-	11.4	7.67	NJ	0	AOC9-DW01	U Flag
SW8081A	MB-200202040	Soil	Endrin aldehyde	1.312	3.24	J	11.9	AOC9-TP04	U Flag
SW8270C	MB-200202029	Water	Unknown	2.14	3.21	J	0	AOC9-GW-TP01	U Flag
SW8270C	MB-200202029	Water	Unknown	2.14	3.21	J	0	AOC9-GW-TP01	U Flag

Table 2B - List of Samples Qualified for Field Blank Contamination
None.

Table 3 - List of Samples with Surrogates outside Control Limits

Method	Sample ID	Sample Type	Analyte	Rec.	Low Limit	High Limit	Dil Fac	Sample Qual.
SW8270C	AOC9-SS01(20-24)	SAMP	2-Fluorophenol	162	36	135	1	J Flag
SW8270C	AOC9-SS01(20-24)	SAMP	Phenol-d5	259	36	128	1	J Flag
SW8270C	AOC9-TP04/D	SAMP	2,4,6-Tribromophenol	10	32	130	1	Do not report
SW8270C	AOC9-TP04/D	SAMP	2-Fluorobiphenyl	16	27	123	1	Do not report
SW8270C	AOC9-TP04/D	SAMP	2-Fluorophenol	16	36	135	1	Do not report
SW8270C	AOC9-TP04/D	SAMP	Nitrobenzene-d5	14	25	122	1	Do not report
SW8270C	AOC9-TP04/D	SAMP	Phenol-d5	22	36	128	1	Do not report

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qual.
										Flagged
SW6010B	AOC9-TP04	MS	Iron	10300	1209	72	1	75	125	4X

Method	Sample ID	Sample Type	Analyte	RPD	RPD Limit	Sample Qual.
SW6010B	AOC9-SS01(20-24)	MSD	Aluminum	42.1	35	None
SW6010B	AOC9-SS01(20-24)	MSD	Iron	38.6	35	None
SW6010B	AOC9-TP04	MSD	Iron	38.1	35	None
SW8081A	AOC9-GW-TP03	MSD	Aldrin	40.5	20	None
SW8081A	AOC9-GW-TP03	MSD	Dieldrin	106.0	20	None
SW8081A	AOC9-TP04	MSD	Endrin aldehyde	46.0	35	None
SW8260B	AOC9-TP04	MSD	Acetone	37.8	35	None
SW8270C	AOC9-GW-TP03	MSD	1,2-Dichlorobenzene	23.2	20	None
SW8270C	AOC9-GW-TP03	MSD	1,4-Dichlorobenzene	25.2	20	None
SW8270C	AOC9-GW-TP03	MSD	3,3´-Dichlorobenzidine	200.0	20	None
SW8270C	AOC9-TP04	MSD	3,3´-Dichlorobenzidine	200.0	35	None
SW8270C	AOC9-TP04/D	MSD	3,3´-Dichlorobenzidine	200.0	35	None
SW8270C	AOC9-GW-TP03	MSD	4-Chloroaniline	97.1	20	None
SW8270C	AOC9-GW-TP03	MSD	Bis(2-ethylhexyl)phthalate	22.5	20	None
SW8270C	AOC9-GW-TP03	MSD	Hexachlorocyclopentadiene	37.7	20	None
SW8270C	AOC9-TP04	MSD	Hexachlorocyclopentadiene	45.3	35	None

Table 5 - List LCS Recoveries outside Control Limits

Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Affected Samples	Samp Qual
SW8260B	LCS-1465-20-1	2-Butanone	77	80	120	AOC9-GP56I, FIELDQC-TB9-GW8	Non-Detect
SW8260B	LCS-1465-20-1	4-Methyl-2-pentanone	79	80	120	AOC9-GP56I, FIELDQC-TB9-GW8	Non-Detect
SW8260B	LCS-1465-20-1	Vinyl acetate	63	80	120	AOC9-GP56I, FIELDQC-TB9-GW8	Non-Detect
SW8260B	LCS-1465-20-1	Vinyl acetate	63	80	120	FIELDQC-TB9-GW8	Non-Detect
SW8260B	LCS-1466-5-1	Acetone	147	80	120	AOC9-GW-DTP04, TP04/D, TP01, TP06	Non-Detect

Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Affected Samples	Samp Qual
SW8260B	LCS-1466-5-1	Acetone	147	80	120	AOC9-GW-TP03	Already J Flagged
SW8260B	LCS-1466-5-1	Acetone	147	80	120	AOC9-GW-TP04	J Flag
SW8260B	LCSD-1466-5-1	Trichlorofluoromethane	74	80	120	AOC9-GW-DTP04, TP04/D, TP01, TP03, TP06, TP04	Non-Detect
SW8270C	LCSA-200202029	Benzo(g,h,i)perylene	128	20	115	AOC9-DW01, AOC9-GW-DTP04, TP04/D, TP01, TP03, TP06, TP04	Non-Detect
SW8270C	LCSA-200202029	Dibenz(a,h)anthracene	127	20	115	AOC9-DW01, AOC9-GW-DTP04, TP04/D, TP01, TP03, TP06, TP04	Non-Detect
SW8270C	LCSA-200202029	Indeno(1,2,3-cd)pyrene	133	20	115	AOC9-DW01, AOC9-GW-DTP04, TP04/D, TP01, TP03, TP06, TP04	Non-Detect

Table 6 –Samples that were Reanalyzed

Sample ID	Lab ID	Method	Sample Type	Action
AOC9-TP04/D	0207149-02	SW8270C	SAMP	Do Not Report
AOC9-TP04/D	0207149-02	SW8270C	RE	Report, add UJ flags

Table 7 – Summary of Field Duplicate Results

WorkOrder	ClientSampID	Expr1	ProjectID	CollectionDate
0207135	AOC9-GP48I/D	AOC9-GP48*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/18/2002 10:15:00 AM
0207149	AOC9-GW-DTP04/D	AOC9-GW-DTP0*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/19/2002 11:10:00 AM
0207149	AOC9-TP04/D	AOC9-TP0*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/19/2002 12:02:00 PM
0207192	AOC9-SS01(11.5-16)/D	AOC9-SS01(11.5-16*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/24/2002 11:10:00 AM

Method	Analyte	Unit	PQL	Anal Type	AOC9-TP04	AOC9-TP04/D	RPD	RPD Rating	Samp Qual	AOC9-SS01 (11_5-16)	AOC9-SS01 (11_5-16)/D	RPD	RPD Rating	Samp Qual
ASTM_D2216	Percent Moisture	wt%	0.100	A	17.3	18.2	5.1%	Good	None	13.6	12	12.5%	Good	None
SW6010B	Aluminum	mg/Kg	99.7	A	7230	7650	5.6%	Good	None	5080	4920	3.2%	Good	None
SW6010B	Antimony	mg/Kg	5.46	A	0.899	0.749	18.2%	Good	None	4.94	4.24	15.3%	Good	None

Method	Sample ID	Sample Type	Analyte	Rec.	Low Limit	High Limit	Dil Fac	Sample Qual.
SW8270C	AOC9-TP04/D	SAMP	Terphenyl-d14	20	51	116	1	Do not report
SW8082	AOC9-SS01(20-24)	SAMP	Decachlorobiphenyl	46	52	115	1	None, all ND
SW8082	AOC9-TP04	SAMP	Decachlorobiphenyl	159	52	115	1	None, all ND
SW8082	MB-200202088	MBLK	Decachlorobiphenyl	43	52	115	1	None, all ND
SW8081A	AOC9-TP04	SAMP	Decachlorobiphenyl	148	39	135	1	Already J Flag

Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qual.
SW8270C	AOC9-GW-TP03	MS	3,3´-Dichlorobenzidine	<20.00	30	0	1	20	115	R Flag NDs
SW8270C	AOC9-GW-TP03	MSD	3,3´-Dichlorobenzidine	<20.00	30	0	1	20	115	R Flag NDs
SW8270C	AOC9-GW-TP03	MS	4-Chloroaniline	<10.00	30	18	1	20	115	None
SW8270C	AOC9-GW-TP03	MS	4-Nitrophenol	<25.00	30	116	1	10	115	None
SW8270C	AOC9-GW-TP03	MS	Benzoic acid	<25.00	30	135	1	20	115	None
SW8270C	AOC9-GW-TP03	MSD	Benzoic acid	<25.00	30	120	1	20	115	None
SW8270C	AOC9-GW-TP03	MS	Hexachlorocyclopentadiene	<25.00	30	17	1	20	115	None
SW8270C	AOC9-GW-TP03	MSD	Hexachlorocyclopentadiene	<25.00	30	12	1	20	115	None
SW8270C	AOC9-SS01(20-24)	MS	Benz(a)anthracene	<389.0	1178	117	1	44	116	None
SW8270C	AOC9-SS01(20-24)	MS	Chrysene	<389.0	1178	117	1	49	115	None
SW8270C	AOC9-TP04	MS	3,3´-Dichlorobenzidine	<760.0	1152	0	1	10	115	R Flag NDs
SW8270C	AOC9-TP04	MSD	3,3´-Dichlorobenzidine	<789.0	1195	0	1	10	115	R Flag NDs
SW8270C	AOC9-TP04	MSD	Benzo(b)fluoranthene	<394.0	1195	124	1	37	121	None
SW8270C	AOC9-TP04	MS	Indeno(1,2,3-cd)pyrene	<380.0	1152	29	1	33	130	None
SW8270C	AOC9-TP04	MSD	Indeno(1,2,3-cd)pyrene	<394.0	1195	30	1	33	130	None
SW8270C	AOC9-TP04/D	MS	3,3´-Dichlorobenzidine	<759.0	1150	0	1	10	115	R Flag NDs
SW8270C	AOC9-TP04/D	MSD	3,3´-Dichlorobenzidine	<769.0	1165	0	1	10	115	R Flag NDs
SW8270C	AOC9-TP04/D	MS	4-Nitroaniline	<955.0	1150	37	1	47	108	None
SW8270C	AOC9-TP04/D	MS	Hexachlorocyclopentadiene	<955.0	1150	6	1	10	115	R Flag NDs
SW8270C	AOC9-TP04/D	MSD	Hexachlorocyclopentadiene	<967.0	1165	6	1	10	115	R Flag NDs

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qual.
SW8260B	AOC9-GP49I	MS	Acetone	<5.00	10	157	1	70	130	None
SW8260B	AOC9-GW-TP03	MS	Trichlorofluoromethane	<5.000	50	62	1	70	130	None
SW8260B	AOC9-SS01(20-24)	MS	Vinyl acetate	<12.10	60.38	45	1	70	130	None
SW8260B	AOC9-SS01(20-24)	MSD	Vinyl acetate	<12.10	60.74	45	1	70	130	None
SW8260B	AOC9-TP04	MSD	Acetone	40.3	57.58	62	1	70	130	None
SW8260B	AOC9-TP04	MS	Vinyl acetate	<11.50	57.58	52	1	70	130	None
SW8260B	AOC9-TP04	MSD	Vinyl acetate	<11.50	57.58	46	1	70	130	None
SW8081A	AOC9-GW-TP03	MS	Aldrin	0.573	0.2	-85	1	22	168	J Flag
SW8081A	AOC9-GW-TP03	MSD	Aldrin	0.573	0.2	-129	1	22	168	J Flag
SW8081A	AOC9-GW-TP03	MS	Dieldrin	0.327	0.2	27	1	55	165	J Flag
SW8081A	AOC9-GW-TP03	MSD	Dieldrin	0.327	0.2	8	1	55	165	J Flag
SW8081A	AOC9-TP04	MS	Methoxychlor	<46.00	7.671	150	1	74	147	None
SW8081A	AOC9-TP04	MSD	Methoxychlor	<47.00	7.835	150	1	74	147	None
SW8015B	AOC9-TP04	MSD	Diesel Range Organics	13.9	39.68	51	1	60	130	None
SW6010B	AOC9-SS01(20-24)	MS	Aluminum	4660	122.7	157	2	75	125	4X
SW6010B	AOC9-SS01(20-24)	MSD	Aluminum	4660	122.7	240	2	75	125	4X
SW6010B	AOC9-SS01(20-24)	MS	Calcium	25000	1227	420	2	75	125	4X
SW6010B	AOC9-SS01(20-24)	MSD	Calcium	25000	1227	-3	2	75	125	4X
SW6010B	AOC9-SS01(20-24)	MS	Iron	11300	1227	52	2	75	125	4X
SW6010B	AOC9-SS01(20-24)	MS	Manganese	300	122.7	70	2	75	125	J Flag
SW6010B	AOC9-SS01(20-24)	MS	Potassium	809	1227	70	2	75	125	None
SW6010B	AOC9-SS01(20-24)	MSD	Potassium	809	1227	74	2	75	125	None
SW6010B	AOC9-SS01(20-24)	MS	Silver	<4.910	6.135	74	2	75	125	UJ Flag
SW6010B	AOC9-SS01(20-24)	MSD	Silver	<4.910	6.135	70	2	75	125	UJ Flag
SW6010B	AOC9-TP04	MS	Aluminum	7230	120.9	1718	1	75	125	4X
SW6010B	AOC9-TP04	MSD	Aluminum	7230	120.9	1783	1	75	125	4X
SW6010B	AOC9-TP04	MS	Antimony	0.899	120.9	58	1	75	125	Already J Flagged
SW6010B	AOC9-TP04	MSD	Antimony	0.899	120.9	64	1	75	125	Already J

Method	Analyte	Unit	PQL	Anal Type	AOC9-TP04	AOC9-TP04/D	RPD	RPD Rating	Samp Qual	AOC9-SS01 (11_5-16)	AOC9-SS01 (11_5-16)/D	RPD	RPD Rating	Samp Qual
SW6010B	Arsenic	mg/Kg	3.02	A	0.722	1.33	59.3%	Good	None	ND	3.35	NC		
SW6010B	Barium	mg/Kg	9.97	A	28.8	26.2	9.5%	Good	None	18.8	17.9	4.9%	Good	None
SW6010B	Beryllium	mg/Kg	2.73	A	0.298	0.264	12.1%	Good	None	ND	ND	NC		
SW6010B	Calcium	mg/Kg	819	A	1320	1330	0.8%	Good	None	29100	27400	6.0%	Good	None
SW6010B	Chromium	mg/Kg	9.97	A	6.18	6.57	6.1%	Good	None	6.83	6.55	4.2%	Good	None
SW6010B	Cobalt	mg/Kg	9.97	A	2.34	2.52	7.4%	Good	None	3.84	3.67	4.5%	Good	None
SW6010B	Copper	mg/Kg	9.97	A	6.79	9.38	32.0%	Good	None	18.9	16.5	13.6%	Good	None
SW6010B	Iron	mg/Kg	99.7	A	10300	11400	10.1%	Good	None	13300	12300	7.8%	Good	None
SW6010B	Lead	mg/Kg	5.46	A	8.72	7.73	12.0%	Good	None	4.4	3.66	18.4%	Good	None
SW6010B	Magnesium	mg/Kg	72.6	A	932	1380	38.8%	Good	None	2790	2780	0.4%	Good	None
SW6010B	Manganese	mg/Kg	9.97	A	182	251	31.9%	Good	None	545	522	4.3%	Good	None
SW6010B	Nickel	mg/Kg	9.97	A	3.38	4.46	27.6%	Good	None	9.41	7.73	19.6%	Good	None
SW6010B	Potassium	mg/Kg	546	A	268	271	1.1%	Good	None	1010	816	21.2%	Good	None
SW6010B	Sodium	mg/Kg	546	A	27	19.5	32.3%	Good	None	135	69.5	64.1%	Good	None
SW6010B	Thallium	mg/Kg	4.84	A	0.871	0.975	11.3%	Good	None	5.66	4.7	18.5%	Good	None
SW6010B	Vanadium	mg/Kg	9.97	A	12.8	13.8	7.5%	Good	None	5.63	4.97	12.5%	Good	None
SW6010B	Zinc	mg/Kg	6.05	A	26.3	24.4	7.5%	Good	None	56.6	34.7	48.0%	Good	None
SW7471A	Mercury	mg/Kg	0.0411	A	0.0439	0.0368	17.6%	Good	None	ND	ND	NC		
SW8015B	Diesel Range Organics	mg/Kg	9.96	A	13.9	14.3	2.8%	Good	None	NA	NA	NC		
SW8081A	4,4'-DDT	µg/Kg	4.77	A	1.47	ND	NC			ND	ND	NC		
SW8081A	Endrin aldehyde	µg/Kg	9.95	A	3.24	ND	NC			ND	ND	NC		
SW8260B	2-Butanone	µg/Kg	11.8	A	3.07	ND	NC			ND	ND	NC		
SW8260B	Acetone	µg/Kg	11.8	A	40.3	5.07	155.3%	Poor	J Flag	ND	ND	NC		
SW8270C	Diethyl phthalate	µg/Kg	385	A	ND	611	NC			ND	ND	NC		
SW8270C	(Z)14-Tricosenyl formate	µg/Kg	0	T	431	NA	NC			NA	NA	NC		
SW8270C	_BETA_-MAALIENE	µg/Kg	0	T	NA	440	NC			NA	NA	NC		
SW8270C	1,19-Eicosadiene	µg/Kg	0	T	293	NA	NC			NA	NA	NC		
SW8270C	1,3,5-Triazine-2,4-diamine, 6-chloro-N-	µg/Kg	0	T	NA	197	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-TP04	AOC9-TP04/D	RPD	RPD Rating	Samp Qual	AOC9-SS01 (11_5-16)	AOC9-SS01 (11_5-16)/D	RPD	RPD Rating	Samp Qual
	e													
SW8270C	11-Methylnonacosane	µg/Kg	0	T	NA	NA	NC			NA	97.6	NC		
SW8270C	16-Heptadecenal	µg/Kg	0	T	NA	277	NC			NA	NA	NC		
SW8270C	1-Cyclohexen, 1-cyano-4-isopropenyl-	µg/Kg	0	T	NA	94.4	NC			NA	NA	NC		
SW8270C	1-Docosene	µg/Kg	0	T	NA	750	NC			NA	NA	NC		
SW8270C	1-Eicosanol (24.147)	µg/Kg	0	T	NA	219	NC			NA	NA	NC		
SW8270C	1-Eicosanol (25.497)	µg/Kg	0	T	976	272	112.8%	Poor	J Flag	NA	NA	NC		
SW8270C	1-Eicosanol (26.919)	µg/Kg	0	T	937	NA	NC			NA	NA	NC		
SW8270C	1-Hexadecene (25.713)	µg/Kg	0	T	172	NA	NC			NA	NA	NC		
SW8270C	1-Hexadecene (25.95)	µg/Kg	0	T	130	NA	NC			NA	NA	NC		
SW8270C	1H-Naphtho(2,1-b)pyran, 4a,5,6,6a,7,8,9,	µg/Kg	0	T	NA	372	NC			NA	NA	NC		
SW8270C	2-Butanol, 3-methyl-, acetate	µg/Kg	0	T	488	158	102.2%	Poor	J Flag	NA	522	NC		
SW8270C	2-Hexanone, 4-hydroxy-5-methyl-	µg/Kg	0	T	NA	NA	NC			560	NA	NC		
SW8270C	2-Methyl-Z-4-tetradecene	µg/Kg	0	T	184	NA	NC			NA	NA	NC		
SW8270C	2-Nonadecanone	µg/Kg	0	T	744	205	113.6%	Poor	J Flag	NA	NA	NC		
SW8270C	2-Pentacosanone	µg/Kg	0	T	NA	330	NC			NA	NA	NC		
SW8270C	2-Pentanone, 4-hydroxy-4-methyl-	µg/Kg	0	T	28600	13500	71.7%	Poor	J Flag	31900	30100	5.8%	Good	None
SW8270C	2-Pentanone, 4-hydroxy-4-methyl-(6.527)	µg/Kg	0	T	NA	69000	NC			NA	NA	NC		
SW8270C	2-Pentanone, 4-hydroxy-4-methyl-	µg/Kg	0	T	NA	6380	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-TP04	AOC9-TP04/D	RPD	RPD Rating	Samp Qual	AOC9-SS01 (11_5-16)	AOC9-SS01 (11_5-16)/D	RPD	RPD Rating	Samp Qual
	(7.916)													
SW8270C	2-Propen-1-one, 1-(4-methoxyphenyl)-3-(2	µg/Kg	0	T	NA	196	NC			NA	NA	NC		
SW8270C	3,4-Dihydrocoumarin, 4,4,7,8-tetramethyl	µg/Kg	0	T	NA	596	NC			NA	NA	NC		
SW8270C	3-Eicosene, (E)-	µg/Kg	0	T	931	NA	NC			NA	NA	NC		
SW8270C	3-Ethyl-3-methylheptane	µg/Kg	0	T	210	NA	NC			NA	NA	NC		
SW8270C	4-Carbamoylbenzoic acid	µg/Kg	0	T	NA	151	NC			NA	NA	NC		
SW8270C	4-Penten-2-one, 4-methyl-	µg/Kg	0	T	NA	NA	NC			NA	3390	NC		
SW8270C	4-Thiazoleacetic acid, 2-(p-chlorophenyl	µg/Kg	0	T	NA	NA	NC			NA	122	NC		
SW8270C	5-Acetamido-4,7-dioxo-4,7-dihydrobenzofu	µg/Kg	0	T	143	NA	NC			NA	NA	NC		
SW8270C	5-Hexen-1-one, 1-(1H-imidazol-2-yl)-4,4-	µg/Kg	0	T	NA	149	NC			NA	NA	NC		
SW8270C	5-HYDROXY-2-METHYL-3-HEXANONE	µg/Kg	0	T	NA	836	NC			NA	NA	NC		
SW8270C	9-Borabicyclo(3_3_1)nonane, 9-hydroxy-	µg/Kg	0	T	NA	89.5	NC			NA	NA	NC		
SW8270C	Acetic acid, 1-methylethyl ester	µg/Kg	0	T	3110	1240	86.0%	Poor	J Flag	NA	NA	NC		
SW8270C	Androst-5-en-3-ol, 4,4-dimethyl-, (3_bet	µg/Kg	0	T	NA	219	NC			NA	NA	NC		
SW8270C	Bacteriochlorophyll-	µg/Kg	0	T	101	NA	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-TP04	AOC9-TP04/D	RPD	RPD Rating	Samp Qual	AOC9-SS01 (11_5-16)	AOC9-SS01 (11_5-16)/D	RPD	RPD Rating	Samp Qual
	c-stearyl													
SW8270C	Benzeneacetic acid	µg/Kg	0	T	NA	527	NC			NA	NA	NC		
SW8270C	Cyclohexadecane (24.494)	µg/Kg	0	T	NA	790	NC			NA	NA	NC		
SW8270C	Cyclohexadecane (24.658)	µg/Kg	0	T	NA	298	NC			NA	NA	NC		
SW8270C	Cyclohexadecane (24.831)	µg/Kg	0	T	NA	302	NC			NA	NA	NC		
SW8270C	Dotriacontane	µg/Kg	0	T	NA	257	NC			NA	NA	NC		
SW8270C	E-15-Heptadecenal	µg/Kg	0	T	NA	122	NC			NA	NA	NC		
SW8270C	Eicosane	µg/Kg	0	T	252	NA	NC			NA	NA	NC		
SW8270C	Germanicol	µg/Kg	0	T	237	NA	NC			NA	NA	NC		
SW8270C	Heptacosane	µg/Kg	0	T	93.7	NA	NC			NA	NA	NC		
SW8270C	Nonadecane, 2-methyl-	µg/Kg	0	T	116	NA	NC			NA	NA	NC		
SW8270C	Nonanoic acid, 9,9´-selenodi-	µg/Kg	0	T	NA	209	NC			NA	NA	NC		
SW8270C	Octacosane (28.537)	µg/Kg	0	T	336	NA	NC			NA	NA	NC		
SW8270C	Octadecanal	µg/Kg	0	T	89.9	NA	NC			NA	NA	NC		
SW8270C	Octadecane (24.933)	µg/Kg	0	T	NA	213	NC			NA	NA	NC		
SW8270C	Octadecane (25.444)	µg/Kg	0	T	NA	462	NC			NA	NA	NC		
SW8270C	Octadecane (26.68)	µg/Kg	0	T	NA	446	NC			NA	NA	NC		
SW8270C	S-(-)-2-Methylbutylamine	µg/Kg	0	T	NA	NA	NC			3580	NA	NC		
SW8270C	Undecane, 5,5-dimethyl-	µg/Kg	0	T	340	NA	NC			NA	NA	NC		
SW8270C	Unknown	µg/Kg	0	T	NA	164	NC			72.8	NA	NC		
SW8270C	Z-8-Hexadecene	µg/Kg	0	T	NA	242	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-GW-DTP04	AOC9-GW-DTP04/D	RPD	RPD Rating	Samp Qual	AOC9-GP48I	AOC9-GP48I/D	RPD	RPD Rating	Samp Qual
SW8015B	1,2-Dichlorobenzene	mg/L	0	S	0.09938	0.1031	3.7%	Good	None	NA	NA	NC		
SW8260B	1,2-Dichlorobenzene	µg/L	5.00	A	ND	ND	NC			11.2	11.5	2.6%	Good	None
SW8260B	1,2-Dichloroethene, Total	µg/L	5.00	A	ND	ND	NC			0.549	0.539	1.8%	Good	None
SW8260B	1,3-Dichlorobenzene	µg/L	5.00	A	ND	ND	NC			0.715	0.748	4.5%	Good	None
SW8260B	1,4-Dichlorobenzene	µg/L	5.00	A	ND	ND	NC			10.4	11.1	6.5%	Good	None
SW8260B	Benzene	µg/L	5.00	A	ND	ND	NC			1.04	1.02	1.9%	Good	None
SW8260B	Chlorobenzene	µg/L	5.00	A	ND	ND	NC			30.6	32.1	4.8%	Good	None
SW8260B	Chloroform	µg/L	5.00	A	ND	ND	NC			0.076	ND	NC		
SW8260B	cis-1,2-Dichloroethene	µg/L	5.00	A	ND	ND	NC			0.557	0.548	1.6%	Good	None
SW8260B	Tetrachloroethene	µg/L	5.00	A	ND	ND	NC			ND	ND	NC		
SW8260B	Toluene	µg/L	5.00	A	ND	ND	NC			0.194	0.189	2.6%	Good	None
SW8260B	Trichloroethene	µg/L	5.00	A	ND	ND	NC			0.152	0.166	8.8%	Good	None
SW8270C	1,2-Dichlorobenzene	µg/L	10.0	A	ND	ND	NC			NA	NA	NC		
SW8270C	1,3-Dichlorobenzene	µg/L	10.0	A	ND	ND	NC			NA	NA	NC		
SW8270C	1,4-Dichlorobenzene	µg/L	10.0	A	ND	ND	NC			NA	NA	NC		
SW8270C	Bis(2-ethylhexyl)phthalate	µg/L	10.0	A	7.76	ND	NC			NA	NA	NC		
SW8270C	1,5-Heptadiene, 3,6-dimethyl-	µg/L	0	T	NA	5.32	NC			NA	NA	NC		
SW8270C	1-Propanesulfonyl chloride, 3-chloro-	µg/L	0	T	NA	3.9	NC			NA	NA	NC		
SW8270C	1-Propene, 1,1,2,3-tetrachloro-	µg/L	0	T	NA	5.23	NC			NA	NA	NC		
SW8270C	1-Propene, 1,2,3-trichloro-, (Z)- (6.095)	µg/L	0	T	NA	4.56	NC			NA	NA	NC		
SW8270C	1-Propene, 1,2,3-trichloro-, (Z)- (6.103)	µg/L	0	T	5.23	NA	NC			NA	NA	NC		
SW8270C	1-Propene, 1,2,3-trichloro-, (Z)- (7.659)	µg/L	0	T	80.7	NA	NC			NA	NA	NC		
SW8270C	1-Propene, 1,2,3-	µg/L	0	T	NA	79.6	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-GW-DTP04	AOC9-GW-DTP04/D	RPD	RPD Rating	Samp Qual	AOC9-GP48I	AOC9-GP48I/D	RPD	RPD Rating	Samp Qual
	trichloro-, (Z)- (7.661)													
SW8270C	1-Propene, 2,3,3,3-tetrachloro-	µg/L	0	T	2.89	NA	NC			NA	NA	NC		
SW8270C	1-Propene, pentachloro-	µg/L	0	T	NA	2.5	NC			NA	NA	NC		
SW8270C	2,3-Butanediol, 2,3-dimethyl-	µg/L	0	T	NA	7.07	NC			NA	NA	NC		
SW8270C	2-Butenoic acid, 4-nitrophenyl ester, (E	µg/L	0	T	4.47	NA	NC			NA	NA	NC		
SW8270C	2-Cyclobuten-1-one, 4,4-dimethyl-3-(1-pi	µg/L	0	T	NA	5.1	NC			NA	NA	NC		
SW8270C	2-Pentanol, 2-methyl-	µg/L	0	T	5.39	NA	NC			NA	NA	NC		
SW8270C	2-Pentanone, 4-hydroxy-4-methyl-	µg/L	0	T	41	26.9	41.5%	Poor	J Flag	NA	NA	NC		
SW8270C	Benzenamine, 4-bromo-2-chloro-	µg/L	0	T	15.6	NA	NC			NA	NA	NC		
SW8270C	Benzenamine, 4-fluoro-3-(trifluoromethyl	µg/L	0	T	NA	3.45	NC			NA	NA	NC		
SW8270C	Benzonitrile, 4-methyl-	µg/L	0	T	2.52	NA	NC			NA	NA	NC		
SW8270C	Benzothiazole, 2-chloro-	µg/L	0	T	NA	18.7	NC			NA	NA	NC		
SW8270C	Butane, 2,2-dichloro-3-methyl-	µg/L	0	T	5.18	NA	NC			NA	NA	NC		
SW8270C	Butane, 2,2-dimethyl-	µg/L	0	T	43.1	44.8	3.9%	Good	None	NA	NA	NC		
SW8270C	Butane, 2-chloro-2-methyl-	µg/L	0	T	3.68	NA	NC			NA	NA	NC		
SW8270C	Ethane, 1,1,2,2-tetrachloro-	µg/L	0	T	3.57	NA	NC			NA	NA	NC		
SW8270C	Ethene, chloro-	µg/L	0	T	NA	4.27	NC			NA	NA	NC		
SW8270C	Formamidine, N´-(p-acetylphenyl)-N,N-dim	µg/L	0	T	4.66	NA	NC			NA	NA	NC		
SW8270C	Hexadecanoic acid, butyl ester	µg/L	0	T	2.26	NA	NC			NA	NA	NC		
SW8270C	Indole-1-carboxylic acid, 4-amino-, meth	µg/L	0	T	NA	5.13	NC			NA	NA	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-GW-DTP04	AOC9-GW-DTP04/D	RPD	RPD Rating	Samp Qual	AOC9-GP48I	AOC9-GP48I/D	RPD	RPD Rating	Samp Qual
SW8270C	m-Aminophenylacetylene	µg/L	0	T	NA	3.83	NC			NA	NA	NC		
SW8270C	METHYL-(1,1-DICHLOROETHYL)-KETONE	µg/L	0	T	NA	5.63	NC			NA	NA	NC		
SW8270C	Octadecanoic acid, butyl ester	µg/L	0	T	2.31	NA	NC			NA	NA	NC		

DATA VALIDATION MEMORANDUM

DATE: August 8, 2002 (Updated October 2002)

TO: Robert Meyers, Project Manager,
Ecology and Environment, Inc. (E & E)

FROM: Marcia Meredith Galloway, QA Officer, Buffalo

SUBJ: 2002 Addendum Site Investigation of Area of Concern 9 and
Year 2002 Expanded Site Investigation at the Former Griffiss Air Force Base
USACE Contract DACW41-99-D-9005, Task Order 0001- WAD 9

Laboratory - Analytical Services Center (ASC) REF:

Project	Lab Work Order
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207098
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207099
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207112
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207127
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207148
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207158
Griffiss AFB- WAD 09 AOC 9/PCI 20	0207173

DELIVERABLES

The laboratory reports are complete as stipulated in the master Quality Assurance Project Plan (QAPP) (E & E 2000) and the site-specific QAPP for the above referenced project and site. The data validation memo findings and the potential impacts on data usability will be presented in a Quality Control Summary Report (QCSR) submitted as a separate report.

SAMPLE INTEGRITY

Based on the information provided on the cooler receipt form, the samples arrived at the laboratory intact and properly preserved. Completed chain-of-custody (COC) documents are included in the laboratory report.

SAMPLE IDENTIFICATION

The field samples for this laboratory data packages and related laboratory identifications (IDs) are listed on the following Table 1. Samples identified as /D are field duplicates. Project-specific matrix spike/matrix spike duplicates (MS/MSD) designated in the field as extra volume by on the COC are noted with a "*" on Table 1. Any other samples noted as MS/MSD on Table 1 are provided as batch quality control (QC) MS/MSD. Samples identified with a matrix code of "RB" are rinsate blanks and samples identified with a matrix code of "TP" or "TS" are trip blanks. All tables are included at the end of this memo except for Table 1 Sample Listing.

Table 1 - List of Samples Reported

Sample ID	Sample Date	Matrix	Lab ID	Lab QC	MS/MSD	ID Corrections
Field QC-TB9-GW1	7/15/2002	Trip Blank	0207098-01			FIELDQC-TB9-GW1
AOC9-GP44D2	7/15/2002	Groundwater	0207098-02			None
AFFF-SD01	7/15/2002	Sediment	0207099-01	MS/MSD	*	None
AFFF-SD01/D	7/15/2002	Sediment	0207099-02			None
AFFF-SD02	7/15/2002	Sediment	0207099-03			None
PCI20-NS06	7/15/2002	Soil	0207099-04			None
PCI20-NS07	7/15/2002	Soil	0207099-05			None
PCI20-NS08	7/15/2002	Soil	0207099-06	MS/MSD	*	None
PCI20-NS06/D	7/15/2002	Soil	0207099-07			None
FIELD QC-TB9-GW2	7/16/2002	Water	0207112-01			FIELDQC-TB9-GW2
AOC9-GP45D2	7/16/2002	Water	0207112-02			None
AOC9-GP46D2	7/16/2002	Water	0207112-03			None
AOC9-GP47D2	7/16/2002	Water	0207112-04			None
AOC9-GP47D1	7/16/2002	Water	0207112-05			None
AOC9-GP47I	7/16/2002	Water	0207112-06			None
AOC9-GP47S2	7/16/2002	Water	0207112-07			None
AOC9-GP47S1	7/16/2002	Water	0207112-08			None
AOC9-GP48D2	7/16/2002	Water	0207127-01			None
AOC9-GP45D1	7/17/2002	Water	0207127-02			None
FIELDQC-TB9-GW3	7/17/2002	Water	0207127-03			None
AOC9-GP45I	7/17/2002	Water	0207127-04	MS/MSD	*	None
AOC9-GP45S2	7/17/2002	Water	0207127-05			None
AOC9-GP45S1	7/17/2002	Water	0207127-06			None
AOC9-GP46D1	7/17/2002	Water	0207127-07			None
AOC9-GP46I	7/17/2002	Water	0207127-08			None
AOC9-GP46I/D	7/17/2002	Water	0207127-09			None
AOC9-GP46S2	7/17/2002	Water	0207127-10			None
AOC9-GP46S1	7/17/2002	Water	0207127-11			None
AOC9-GP44D1	7/17/2002	Water	0207127-12			None
AOC9-GP44I	7/17/2002	Water	0207127-13			None
AOC9-GP44I/D	7/17/2002	Water	0207127-14			None
AOC9-GP44S2	7/17/2002	Water	0207127-15			None
AOC9-GP44S1	7/17/2002	Water	0207127-16			None
FIELDQC-TB9-GW5	7/19/2002	Water	0207148-01			None
AOC9-GP49D2	7/19/2002	Water	0207148-02			None
AOC9-GP49S2	7/19/2002	Water	0207148-03			None
AOC9-GP49S1	7/19/2002	Water	0207148-04			None
AOC9-GP50D2	7/19/2002	Water	0207148-05			None
AOC9-GP50D1	7/19/2002	Water	0207148-06			None

Sample ID	Sample Date	Matrix	Lab ID	Lab QC	MS/MSD	ID Corrections
AOC9-GP50I	7/19/2002	Water	0207148-07			None
AOC9-GP50I/D	7/19/2002	Water	0207148-08			None
AOC9-GP50S2	7/19/2002	Water	0207148-09			None
AOC9-GP50S1	7/19/2002	Water	0207148-10			None
AOC9-GP51D2	7/19/2002	Water	0207148-11			None
Field QC-TB9-GW6	7/22/2002	Water	0207158-01			FIELDQC-TB9-GW6
AOC9-GP51D1	7/22/2002	Water	0207158-02			None
AOC9-GP51I	7/22/2002	Water	0207158-03			None
AOC9-GP51S2	7/22/2002	Water	0207158-04			None
AOC9-GP51S1	7/22/2002	Water	0207158-05			None
AOC9-GP52D2	7/22/2002	Water	0207158-06			None
AOC9-GP52D1	7/22/2002	Water	0207173-01			None
AOC9-GP52I	7/22/2002	Water	0207173-02			None
AOC9-GP52I/D	7/22/2002	Water	0207173-03			None
AOC9-GP52S2	7/23/2002	Water	0207173-04			None
AOC9-GP52S1	7/23/2002	Water	0207173-05			None
AOC9-GP53D2	7/23/2002	Water	0207173-06			None
AOC9-GP53D1	7/23/2002	Water	0207173-07			None
AOC9-GP54D1	7/23/2002	Water	0207173-08			None
AOC9-GP54I	7/23/2002	Water	0207173-09			None
AOC9-GP54I/D	7/23/2002	Water	0207173-10			None
AOC9-GP54S1	7/23/2002	Water	0207173-11			None
AOC9-GP55I	7/23/2002	Water	0207173-12			None
FIELDQC-TB9-GW7	7/23/2002	Water	0207173-13			None

Work Orders	Matrix	Test Method	Number of Samples
0207098	Groundwater	SW8260B	1
0207099	Sediment	SW8270C	3
0207099	Sediment	ASTM_D2216	3
0207099	Sediment	SW6010B	3
0207099	Sediment	SW7471A	3
0207099	Sediment	SW8081A	3
0207099	Sediment	SW8082	3
0207099	Sediment	SW8260B	3
0207099	Soil	SW6010B	4
0207099	Soil	ASTM_D2216	4
0207098	Trip Blank	SW8260B	1
0207158	Water	SW8260B	6
0207112	Water	SW8260B	8
0207148	Water	SW8260B	11
0207173	Water	SW8260B	13
0207127	Water	SW8260B	16

Go to Tables List

Holding Times

All samples were analyzed within the project-specified holding time.

LOW LEVEL VOLATILE ANALYSES (8260B)

Blank Summary

Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL with the exception of acetone found 32.8 µg/L in trip blank FieldQC-TB9-GW1 (laboratory work order 0207098). Methylene chloride was detected in blank MB-1465-14-2 (laboratory work order 0207148) above the MDL but below the reporting limit as indicated on Table 2. Methylene chloride was not detected in the associated samples. Acetone was detected in the samples as shown on Table 2B for field blanks. Sample results less than 10 times the blank levels are flagged "U" as non-detect for common laboratory contaminants. Sample results less than 5 times the blank levels are flagged "U" as non-detect for all other compounds.

Surrogates

The recoveries for surrogates; 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8 were within acceptable QC limits for all samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and RPD values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10%. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)

The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5. Trichlorofluoromethane (work orders: 0207112 and 0207158) and acetone (work order 0207127) recoveries were high. 2-hexanone (work orders: 0207112, 0207158, 0207173) and 4-methyl-2-pentanone (work order 0207112) recoveries were low. These compounds were not detected in the associated samples and are not compounds of concern at the site. All other LCS recoveries were acceptable. Therefore no data qualification is required.

Calibration

The method calibration criteria for initial and continuing calibration were met for all samples. Several of the quick turnaround screening samples were analyzed only once at the most appropriate dilutions to match the compound concentrations present. The sample PQLs for compounds not present in the sample will be elevated and may not be directly comparable to

other compounds. Since the data are used for contouring this may have an impact on the usability of the results. The following samples were analyzed at a higher dilution.

Client Sample ID	Dilution Factor	Minimum PQL
AOC9-GP46D2	2	10.0
AOC9-GP47I	50	100
AOC9-GP47S1	5	10.0
AOC9-GP47S2	20	100
AOC9-GP44D1	40	200
AOC9-GP44I	40	200
AOC9-GP44I/D	40	200
AOC9-GP44S1	10	10.0
AOC9-GP44S2	100	100
AOC9-GP44S2	40	200
AOC9-GP45D1	40	200
AOC9-GP45I	25	125
AOC9-GP46D1	10	10.0
AOC9-GP46I	10	10.0
AOC9-GP46I/D	10	10.0
AOC9-GP46I/D	20	20.0
AOC9-GP46S2	20	100
AOC9-GP51D2	10	10.0
AOC9-GP51D1	20	100
AOC9-GP51I	40	200
AOC9-GP51S1	2	10.0
AOC9-GP51S2	10	10.0
AOC9-GP52D2	5	10.0
AOC9-GP52S1	2.5	12.5
AOC9-GP52S2	5	10.0
AOC9-GP53D1	2	10.0
AOC9-GP53D2	2	10.0

VOLATILE ANALYSES (8260B)

Blank Summary

Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL. Acetone was detected in method blank sample MB-1449-97-1 (laboratory work order 0207099). The associated samples with positive results for the compounds are shown on Table 2A. Sample results less than 10 times the blank levels are flagged "U" as non-detect for common laboratory contaminants. Sample results less than 5 times the blank levels are flagged "U" as non-detect for all other compounds.

Surrogates

The recoveries for surrogates; 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8 were within acceptable QC limits for all samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD were performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and relative percent difference (RPD) values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10%. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5. Acetone and carbon tetrachloride (work order: 0207099) and acetone (work order 0207127) recoveries were high. These compounds were not detected in the associated samples and are not compounds of concern at the site. All other LCS recoveries were acceptable. Therefore no data qualification is required.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

SEMIVOLATILE ANALYSES (8270C)

Blank Summary
Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL..

Surrogates
The recoveries for surrogates 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, nitrobenzene-d5, phenol-d5, and terphenyl-d14 were within acceptable QC limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and relative percent difference (RPD) values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10% except for two reactive compounds. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns. The results for two reactive compounds indicate a potential matrix effect that produced no recovery. The associated PQLs are flagged "UR" as rejected due to matrix effects. The compounds are not a concern at the site and there is no impact on data usability.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits except as noted on Table 5 (high recovery indeno(1,2,3-cd)pyrene). Sporadic and marginal QC failures for multiple component methods do not indicate an analytical concern. If recoveries are high and the compounds are not detected in the samples, then no data qualification is required.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

PESTICIDES (8081A)

Blank Summary
Laboratory method blanks and trip blanks were performed at the required frequency and no compounds were present above the PQL. .

Surrogates
The recoveries for surrogates decachlorobiphenyl (DCB) and Tetrachloro-m-xylene (TCMX) were within acceptable QC limits for all samples.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. The percent recovery and RPD values were within laboratory QC limits.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

PCBs (8082)

Blank Summary
Laboratory method blanks were performed at the required frequency and no target compounds were present at levels above or below the PQL.

Surrogates
The recoveries for surrogates DCB and TCMX were within acceptable QC limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. No additional batch QC was reported. The percent recovery and relative percent difference (RPD) values were within laboratory QC limits except as noted on Table 4. The recoveries were always above 10%. No data qualification is required on the MS/MSD outliers unless significant matrix effects are indicated. The LCS recoveries were acceptable indicating no analytical concerns.

Laboratory Control Sample (LCS)
The LCSs were analyzed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial and continuing calibration were met for all samples.

METALS (6010/7000)

Blank Summary
Laboratory method blanks were analyzed at the required frequency and had no target analytes detected above the laboratory PQL. Trace levels of antimony and iron were found below the PQL as shown on Table 2. The associated samples with positive results for the compounds are shown on Table 2A. Sample results less than 5 times the blank levels are qualified "U" as non-detect.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)
The MS/MSD was performed at the required frequency on samples indicated on the COC as project-specific QC. The percent recovery and RPD values were within laboratory QC limits except as noted on Table 4 at the end of this memo. Qualifiers were added as noted in Table 4. For low recoveries, both the results and quantitation limit are flagged "J" as estimated. For high recoveries, only the positive results are flagged "J" as estimated.

Laboratory Control Sample (LCS)
The LCSs were performed at the required frequency and all recoveries were within QC limits.

Calibration
The method calibration criteria for initial calibration and continuing calibration criteria were met.

FIELD DUPLICATE RESULTS

Field duplicates were analyzed as required in the QAPP. The samples are noted on Table 1 of this memo were field duplicates. The results will be summarized on a table in the QCSR. The field duplicate QC criteria are two times the laboratory duplicate QC criteria of 20% for water samples and 35% for soil samples (i.e., 40% for water samples and 70% for solid samples). The RPD ratings are listed as "Good" if the RPD is less than field duplicate QC criteria and as "Poor" if the RPD exceeded the field duplicate QC criteria.

Field duplicate results are summarized on Table 7 below. Seven sets of duplicate samples were collected and overall the precision is very good. Field duplicate results with "Poor" are flagged "J" as estimated for a few lead, chlorobenzene, 1,4-Dichlorobenzene and 1,2-Dichlorobenzene results.

Table 2 - List of Positive Results for Blank Samples

Method	Sample ID	Samp Type	Analyte	Result	Qual	Anal Type	Units	MDL	PQL
SW6010B	MB-200201986	MBLK	Antimony	0.4755	J	A	mg/Kg	0.4400	1.000
SW6010B	MB-200201986	MBLK	Iron	6.901	J	A	mg/Kg	3.200	20.00
SW8260B	MB-1449-97-1	MBLK	Acetone	6.692	J	A	µg/Kg	3.750	10.00
SW8260B	MB-1465-14-2	MBLK	Methylene chloride	0.1350	J	A	µg/L	0.09530	1.000
SW8260B	FIELDQC-TB9-GW1	SAMP	Acetone	32.8		A	µg/L	2.64	5.00

Table 2A - List of Samples Qualified for Method Blank Contamination

Method	Lab Blank	Matrix	Analyte	Blank Result	Result	Lab Qual	PQL	Affected Samples	Sample Flag
SW8260B	MB-1449-97-1	Sediment	Acetone	6.692	37.7	J	12.9	AFFF-SD02	U Flag
SW8260B	MB-1449-97-1	Sediment	Acetone	6.692	43.2	J	14.1	AFFF-SD01/D	U Flag
SW8260B	MB-1449-97-1	Sediment	Acetone	6.692	47.0	J	15.8	AFFF-SD01	U Flag
SW6010B	MB-200201986	Sediment	Antimony	0.4755	1.81	J	2.66	AFFF-SD01/D	U Flag
SW6010B	MB-200201986	Sediment	Antimony	0.4755	2.23	J	3.23	AFFF-SD01	U Flag
SW6010B	MB-200201986	Sediment	Antimony	0.4755	2.51	J	4.30	AFFF-SD02	Not Qualified
SW6010B	MB-200201986	Sediment	Iron	6.901	17400	J	53.2	AFFF-SD01/D	Not Qualified
SW6010B	MB-200201986	Sediment	Iron	6.901	14600	J	85.9	AFFF-SD02	Not Qualified
SW6010B	MB-200201986	Sediment	Iron	6.901	17500	J	64.6	AFFF-SD01	Not Qualified

Table 2B - List of Samples Qualified for Field Blank Contamination

Blank ID	Method	Matrix	Analyte	Blank Result	Result	PQL	Affected Samples	Sample Flag
Field QC-TB9-GW1	SW8260B	Groundwater	Acetone	32.8	94.5	10.0	AOC9-GP44D2	U Flag

Table 3 - List of Samples with Surrogates outside Control Limits
None.

Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qual.
SW8270C	AFFF-SD01	MS	3,3´-Dichlorobenzidine	<974	1480	0	1	10	115	R Flag NDs
SW8270C	AFFF-SD01	MSD	3,3´-Dichlorobenzidine	<1010	1540	0	1	10	115	R Flag NDs
SW8270C	AFFF-SD01	MS	Benzoic acid	<1230	1480	117	1	10	115	None
SW8270C	AFFF-SD01	MSD	Benzoic acid	<1280	1540	135	1	10	115	None
SW8270C	AFFF-SD01	MS	Hexachlorocyclopentadiene	<1230	1480	9	1	10	115	R Flag NDs
SW8270C	AFFF-SD01	MSD	Hexachlorocyclopentadiene	<1280	1540	0	1	10	115	R Flag NDs
SW8270C	AFFF-SD01	MS	Pentachlorophenol	<1230	1480	116	1	37	115	None
SW8270C	AFFF-SD01	MSD	Pentachlorophenol	<1280	1540	126	1	37	115	None
SW8260B	AFFF-SD01	MS	Vinyl acetate	<16.10	80.45	22	1	70	130	None
SW8260B	AFFF-SD01	MSD	Vinyl acetate	<15.90	79.66	29	1	70	130	None
SW8260B	AOC9-GP45I	MS	Acetone	<125.0	250	151	25	70	130	None
SW8260B	AOC9-GP45I	MSD	Acetone	<125.0	250	146	25	70	130	None
SW8260B	AOC9-GP45I	MS	Chlorobenzene	689	250	57	25	70	130	None
SW8260B	AOC9-GP45I	MSD	Chlorobenzene	689	250	154	25	70	130	None
SW8082	AFFF-SD01	MS	Aroclor 1016	<27.80	232.4	121	1	70	111	None
SW8082	AFFF-SD01	MSD	Aroclor 1016	<28.90	241.5	131	1	70	111	None
SW6010B	AFFF-SD01	MS	Aluminum	9580	161.6	-123	2	75	125	4X
SW6010B	AFFF-SD01	MSD	Aluminum	9580	161.6	-994	2	75	125	4X
SW6010B	AFFF-SD01	MS	Antimony	2.23	161.6	65	2	75	125	Already flagged U
SW6010B	AFFF-SD01	MS	Calcium	2600	1616	44	2	75	125	None
SW6010B	AFFF-SD01	MSD	Calcium	2600	1616	130	2	75	125	None
SW6010B	AFFF-SD01	MS	Iron	17500	161.6	-758	2	75	125	4X
SW6010B	AFFF-SD01	MSD	Iron	17500	161.6	-983	2	75	125	4X
SW6010B	AFFF-SD01	MS	Magnesium	3350	1616	65	2	75	125	None
SW6010B	AFFF-SD01	MSD	Magnesium	3350	1616	65	2	75	125	None
SW6010B	AFFF-SD01	MS	Manganese	390	161.6	47	2	75	125	J Flag
SW6010B	AFFF-SD01	MS	Potassium	1100	1616	64	2	75	125	None
SW6010B	AFFF-SD01	MSD	Potassium	1100	1616	62	2	75	125	None

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qual.
SW6010B	AFFF-SD01	MS	Silver	<6.460	8.078	67	2	75	125	None
SW6010B	AFFF-SD01	MSD	Silver	<6.460	8.078	74	2	75	125	None
SW6010B	PCI20-NS08	MS	Lead	521	111	133	2	75	125	4X

Method	Sample ID	Sample Type	Analyte	RPD	RPD Limit	Sample Qual.
SW6010B	AFFF-SD01	MSD	Aluminum	156.0	35	None
SW6010B	AFFF-SD01	MSD	Manganese	61.3	35	None
SW8260B	AOC9-GP45I	MSD	Chlorobenzene	91.3	30	None
SW8270C	AFFF-SD01	MSD	3,3'-Dichlorobenzidine	200	35	None
SW8270C	AFFF-SD01	MSD	Hexachlorocyclopentadiene	200	35	None

Table 5 - List LCS Recoveries outside Control Limits

Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Affected Samples	Samp Qual
SW8260B	LCS-1449-97-1	Acetone	127	75	125	AFFF-SD01, 1/D, 02	Already flagged as U
SW8260B	LCS-1449-97-1	Carbon tetrachloride	126	75	125	AFFF-SD01, 1/D, 02	Non-Detect
SW8260B	LCS-1458-82-1	Trichlorofluoromethane	129	80	120	AOC9-GP45D2, 46D2, 47D1, 47I, 47S1, 47S2, FIELD QC-TB9-GW2	Non-Detect
SW8260B	LCS-1458-83-4	2-Hexanone	68	80	120	AOC9-GP47D2	Non-Detect
SW8260B	LCS-1458-83-4	4-Methyl-2-pentanone	75	80	120	AOC9-GP47D2	Non-Detect
SW8260B	LCS-1458-85-1	Acetone	132	80	120	AOC9-GP44D1, S1	Non-Detect
SW8260B	LCS-1458-91-1	2-Hexanone	77	80	120	AOC9-GP51D1, 51I, 51S2, 52D2, TB9	Non-Detect
SW8260B	LCS-1458-91-1	Trichlorofluoromethane	123	80	120	AOC9-GP51D1, 51I, 51S2, 52D2, TB9-GW6	Non-Detect
SW8260B	LCS/LCSD-1458-93-1	2-Hexanone	78/79	80	120	AOC9-GP52D1, 52I, 52SW, 54I, TB9-GW7	Non-Detect
SW8260B	LCS-1458-94-1	2-Hexanone	73	80	120	AOC9-GP52S1, 53D1, 53D2, 54D1, 541/D, 54S1, 55I	Non-Detect
SW8270C	LCS-200201977	Indeno(1,2,3-cd)pyrene	151	33	130	AFFF-SD01, 1/D, 02	Non-Detect

Table 6 –Samples that were Reanalyzed

Sample ID	Lab ID	Method	Sample Type	Action
AOC9-GP45D2	0207112-02	SW8260B	SAMP	Report for non-extended data
AOC9-GP45D2	0207112-02	SW8260B	DL	Report for E flag data only, Acetone

Table 7 – Summary of Field Duplicate Results

WorkOrder	ClientSampID	Expr1	ProjectID	CollectionDate
0207099	AFFF-SD01/D	AFFF-SD0*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/15/2002 3:40:00 PM
0207099	PCI20-NS06/D	PCI20-NS0*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/15/2002 2:25:00 PM
0207127	AOC9-GP44I/D	AOC9-GP44*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/17/2002 3:42:00 PM
0207127	AOC9-GP46I/D	AOC9-GP46*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/17/2002 11:45:00 AM
0207148	AOC9-GP50I/D	AOC9-GP50*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/19/2002 11:33:00 AM
0207173	AOC9-GP52I/D	AOC9-GP52*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/22/2002 5:10:00 PM
0207173	AOC9-GP54I/D	AOC9-GP54*	Griffiss AFB- WAD 09 AOC 9/PCI 20	7/23/2002 2:45:00 PM

Method	Analyte	Unit	PQL	Anal Type	AOC9-GP54I	AOC9-GP54I/D	RPD	RPD Rating	Samp Qual	AOC9-GP52I	AOC9-GP52I/D	RPD	RPD Rating	Samp Qual
SW8260B	1,2-Dichlorobenzene	µg/L	40.0	A	ND	ND	NC			10.5	11.1	5.6%	Good	None
SW8260B	1,2-Dichloroethene, Total	µg/L	40.0	A	ND	ND	NC			1.43	1.51	5.4%	Good	None
SW8260B	1,3-Dichlorobenzene	µg/L	40.0	A	ND	ND	NC			2.22	2.26	1.8%	Good	None
SW8260B	1,4-Dichlorobenzene	µg/L	40.0	A	ND	ND	NC			47.1	49.3	4.6%	Good	None
SW8260B	Benzene	µg/L	40.0	A	ND	ND	NC			1.43	1.51	5.4%	Good	None
SW8260B	Chlorobenzene	µg/L	40.0	A	ND	ND	NC			796	781	1.9%	Good	None
SW8260B	cis-1,2-Dichloroethene	µg/L	40.0	A	ND	ND	NC			1.41	1.48	4.8%	Good	None
SW8260B	Ethylbenzene	µg/L	40.0	A	ND	ND	NC			2.25	2.51	10.9%	Good	None
SW8260B	m,p-Xylene	µg/L	40.0	A	ND	ND	NC			0.275	0.295	7.0%	Good	None
SW8260B	o-Xylene	µg/L	40.0	A	ND	ND	NC			0.272	0.286	5.0%	Good	None
SW8260B	Tetrachloroethene	µg/L	40.0	A	ND	ND	NC			0.247	0.252	2.0%	Good	None
SW8260B	Toluene	µg/L	40.0	A	ND	ND	NC			0.798	0.823	3.1%	Good	None
SW8260B	Trichloroethene	µg/L	40.0	A	ND	ND	NC			0.729	0.753	3.2%	Good	None

Method	Analyte	Unit	PQL	Anal Type	AOC9-GP54I	AOC9-GP54I/D	RPD	RPD Rating	Samp Qual	AOC9-GP52I	AOC9-GP52I/D	RPD	RPD Rating	Samp Qual
SW8260B	Vinyl chloride	µg/L	40.0	A	ND	ND	NC			0.946	0.978	3.3%	Good	None
SW8260B	Xylenes, Total	µg/L	40.0	A	ND	ND	NC			0.544	0.578	6.1%	Good	None

Method	Analyte	Unit	PQL	Anal Type	AOC9-GP50I	AOC9-GP50I/D	RPD	RPD Rating	Samp Qual	AOC9-GP46I	AOC9-GP46I/D	RPD	RPD Rating	Samp Qual
SW8260B	1,2-Dichlorobenzene	µg/L	40.0	A	0.117	0.105	10.8%	Good	None	7.65	17.6	78.8%	Poor	J Flag
SW8260B	1,2-Dichloroethene, Total	µg/L	40.0	A	1.48	1.52	2.7%	Good	None	ND	ND	NC		
SW8260B	1,3-Dichlorobenzene	µg/L	40.0	A	ND	ND	NC			ND	ND	NC		
SW8260B	1,4-Dichlorobenzene	µg/L	40.0	A	ND	ND	NC			21.4	49.8	79.8%	Poor	Already flagged J
SW8260B	Benzene	µg/L	40.0	A	ND	ND	NC			1.12	1.99	55.9%	Poor	Already flagged J
SW8260B	Chlorobenzene	µg/L	40.0	A	ND	ND	NC			309	394	24.2%	Good	None
SW8260B	cis-1,2-Dichloroethene	µg/L	40.0	A	1.5	1.54	2.6%	Good	None	ND	ND	NC		
SW8260B	Ethylbenzene	µg/L	40.0	A	ND	ND	NC			ND	1.52	NC		
SW8260B	m,p-Xylene	µg/L	40.0	A	ND	ND	NC			ND	ND	NC		
SW8260B	o-Xylene	µg/L	40.0	A	ND	ND	NC			ND	ND	NC		
SW8260B	Tetrachloroethene	µg/L	40.0	A	12.2	11.7	4.2%	Good	None	ND	ND	NC		
SW8260B	Toluene	µg/L	40.0	A	ND	ND	NC			ND	0.67	NC		
SW8260B	Trichloroethene	µg/L	40.0	A	7.42	6.76	9.3%	Good	None	1.65	1.36	19.3%	Good	None
SW8260B	Vinyl chloride	µg/L	40.0	A	ND	ND	NC			ND	ND	NC		
SW8260B	Xylenes, Total	µg/L	40.0	A	ND	ND	NC			ND	ND	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-GP44I	AOC9-GP44I/D	RPD	RPD Rating	Samp Qual
SW8260B	1,2-Dichlorobenzene	µg/L	40.0	A	44.5	513	168.1%	Poor	J Flag
SW8260B	1,2-Dichloroethene, Total	µg/L	40.0	A	ND	71.2	NC		
SW8260B	1,3-Dichlorobenzene	µg/L	40.0	A	3.92	ND	NC		
SW8260B	1,4-Dichlorobenzene	µg/L	40.0	A	91.2	151	49.4%	Poor	J Flag
SW8260B	Benzene	µg/L	40.0	A	ND	12.6	NC		

Method	Analyte	Unit	PQL	Anal Type	AOC9-GP44I	AOC9-GP44I/D	RPD	RPD Rating	Samp Qual
SW8260B	Chlorobenzene	µg/L	40.0	A	996	1610	47.1%	Poor	J Flag
SW8260B	cis-1,2-Dichloroethene	µg/L	40.0	A	ND	70	NC		
SW8260B	Ethylbenzene	µg/L	40.0	A	32.3	21.9	38.4%	Good	None
SW8260B	m,p-Xylene	µg/L	40.0	A	100	73	31.2%	Good	None
SW8260B	o-Xylene	µg/L	40.0	A	3.92	3.24	19.0%	Good	None
SW8260B	Tetrachloroethene	µg/L	40.0	A	ND	5.24	NC		
SW8260B	Toluene	µg/L	40.0	A	3.4	ND	NC		
SW8260B	Trichloroethene	µg/L	40.0	A	4.6	10.3	76.5%	Poor	J Flag, Already flagged
SW8260B	Vinyl chloride	µg/L	40.0	A	11.5	13.1	13.0%	Good	None
SW8260B	Xylenes, Total	µg/L	40.0	A	105	76.9	30.9%	Good	None

Method	Analyte	Unit	PQL	Anal Type	PCI20-NS06	PCI20-NS06/D	RPD	RPD Rating	Samp Qual	AFFF-SD01	AFFF-SD01/D	RPD	RPD Rating	Samp Qual
ASTM_D2216	Percent Moisture	wt%	0.100	A	18.3	20	8.9%	Good	None	38.1	29.1	26.8%	Good	None
SW6010B	Aluminum	mg/Kg	64.6	A	NA	NA	NC			9580	6320	41.0%	Good	None
SW6010B	Arsenic	mg/Kg	8.08	A	NA	NA	NC			2	2.65	28.0%	Good	None
SW6010B	Barium	mg/Kg	6.46	A	NA	NA	NC			43.9	26.8	48.4%	Good	None
SW6010B	Beryllium	mg/Kg	1.62	A	NA	NA	NC			0.72	ND	NC		
SW6010B	Calcium	mg/Kg	485	A	NA	NA	NC			2600	4060	43.8%	Good	None
SW6010B	Chromium	mg/Kg	6.46	A	NA	NA	NC			12.6	8.05	44.1%	Good	None
SW6010B	Cobalt	mg/Kg	6.46	A	NA	NA	NC			6.98	4.54	42.4%	Good	None
SW6010B	Copper	mg/Kg	6.46	A	NA	NA	NC			20.1	13.4	40.0%	Good	None
SW6010B	Iron	mg/Kg	64.6	A	NA	NA	NC			17500	17400	0.6%	Good	None
SW6010B	Lead	mg/Kg	6.01	A	183	202	9.9%	Good	None	16.2	6.86	81.0%	Poor	J Flag
SW6010B	Magnesium	mg/Kg	194	A	NA	NA	NC			3350	2150	43.6%	Good	None
SW6010B	Manganese	mg/Kg	6.46	A	NA	NA	NC			390	377	3.4%	Good	None
SW6010B	Nickel	mg/Kg	6.46	A	NA	NA	NC			13.3	8.09	48.7%	Good	None
SW6010B	Potassium	mg/Kg	323	A	NA	NA	NC			1100	769	35.4%	Good	None
SW6010B	Sodium	mg/Kg	323	A	NA	NA	NC			36.2	57.8	46.0%	Good	None
SW6010B	Vanadium	mg/Kg	6.46	A	NA	NA	NC			13.4	8.46	45.2%	Good	None

Method	Analyte	Unit	PQL	Anal Type	PCI20-NS06	PCI20-NS06/D	RPD	RPD Rating	Samp Qual	AFFF-SD01	AFFF-SD01/D	RPD	RPD Rating	Samp Qual
SW6010B	Zinc	mg/Kg	16.2	A	NA	NA	NC			54.3	33.7	46.8%	Good	None
SW8081A	4,4´-DDD	µg/Kg	4.49	A	NA	NA	NC			1.14	0.801	34.9%	Good	None
SW8081A	4,4´-DDT	µg/Kg	5.99	A	NA	NA	NC			0.743	ND	NC		
SW8081A	Heptachlor	µg/Kg	4.49	A	NA	NA	NC			0.805	0.96	17.6%	Good	None
SW8260B	2-Butanone	µg/Kg	15.8	A	NA	NA	NC			7.01	6.53	7.1%	Good	None

E

Laboratory Case Narratives

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

ACCREDITED IN ACCORDANCE WITH nelac

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207098**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 2 samples on Monday, July 15, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin

Tony Bogolin
Project Manager

Enclosures as note

report ends on page 4

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Lab Order:	0207098
Date Received:	7/15/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207098-01A	Field QC-TB9-GW1		7/15/2002 10:30:00 AM
0207098-02A	AOC9-GP44D2		7/15/2002 4:00:00 PM

Ecology and Environment, Inc. Analytical Services Center
Cooler Receipt Form

PACKAGE RECEIPT #: 10265 NUMBER OF COOLERS: 1 DATE RECEIVED: 7-15-02

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffiss AFB

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? YES NO NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client Other

   Ship as high hazard or dangerous goods YES NO NA

2. Did cooler(s) have custody seals? YES NO NA
3. Were custody seals unbroken and intact on receipt? YES NO* NA
4. Were custody seals dated and signed? YES NO NA
5. Sign here to acknowledge receipt of cooler (s): William H. Howard
6. Date cooler(s) opened: 7-15-02 C-O-C numbers: _____
7. Cooler(s) opened by (print): William H. Howard Signature: William H. Howard
8. Were the C-O-C forms received? YES NO* NA
9. Was the project identifiable from the C-O-C form? YES NO* NA
   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

~~AIRBILL #~~ Manifest	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
109125	3.5				

Thermometer # 129 Correction Factor +0.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? YES NO NA
   Type of material: ☐ Vermiculite ☐ Bubble Wrap ☐ Other
9. If required, was enough ice used? YES NO NA
   If YES, type of ice used: ☐ Wet ☐ Dry ☐ Blue ☐ Other
10. Was a temperature blank vial included inside cooler(s)? YES NO NA
    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.
11. Were all containers sealed in separate plastic bags? YES NO NA
12. Did all containers arrive unbroken and in good condition? YES NO* NA

Samples stored in W Cooler before Login Phase? YES NO
If yes, Signature In: _____ Date/Time: _____

Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): William H. Howard Signature: William H. Howard Date: 7-15-02

1. Were all container labels complete (e.g. date, time preserved)? YES NO* NA
2. Were all C-O-C forms filled out properly in ink and signed? YES NO* NA
3. Did the C-O-C form agree with containers received? YES NO* NA
4. Were the correct containers used for the tests requested? YES NO* NA
5. Were the correct preservatives listed on the sample labels? YES NO* NA
6. Was a sufficient sample volume sent for the tests requested? YES NO* NA
7. Were all volatile samples received without head space? YES NO* NA

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207098

CASE NARRATIVE

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
Acetone was detected in the trip blank at 32.8 ug/L. Bob Meyers was notified.

Sample AOC9-GP44D2 was initally analyzed undiluted with acetone and chlorobenzene above the upper calibration standard. The sample was reanalyzed at a two-fold dilution and the results merged and reported with the original analysis.

All aqueous volatile samples were determined to be at a pH of 7.

All samples were analyzed within hold time.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

All internal standard area responses were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207098
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207098-01A	Field QC-TB9-GW1	7/15/2002 10:30:00 AM	7/15/2002 10:36:00 PM	Trip Blank	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/16/2002
0207098-02A	AOC9-GP44D2	7/15/2002 4:00:00 PM		Groundwater	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/16/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

ACCREDITED IN ACCORDANCE WITH nelac

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

July 30, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207099**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 7 samples on Monday, July 15, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

CC:
Enclosures as note

This report ends on page 153

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207099
Date Received: 7/15/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207099-01A	AFFF-SD01		7/15/2002 3:40:00 PM
0207099-01B	AFFF-SD01		7/15/2002 3:40:00 PM
0207099-02A	AFFF-SD01/D		7/15/2002 3:40:00 PM
0207099-02B	AFFF-SD01/D		7/15/2002 3:40:00 PM
0207099-03A	AFFF-SD02		7/15/2002 3:55:00 PM
0207099-03B	AFFF-SD02		7/15/2002 3:55:00 PM
0207099-04A	PCI20-NS06		7/15/2002 2:25:00 PM
0207099-05A	PCI20-NS07		7/15/2002 2:40:00 PM
0207099-06A	PCI20-NS08		7/15/2002 2:50:00 PM
0207099-07A	PCI20-NS06/D		7/15/2002 2:25:00 PM

Ecology and Environment, Inc. Analytical Services Center
Cooler Receipt Form

PACKAGE RECEIPT #: 10265 NUMBER OF COOLERS: 1 DATE RECEIVED: 7-15-02

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffiss AFB

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? YES NO NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other)

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? (YES) NO NA

3. Were custody seals unbroken and intact on receipt? (YES) NO* NA

4. Were custody seals dated and signed? (YES) NO NA

5. Signature to acknowledge receipt of cooler (s): William H. Howard

6. Cooler(s) opened: 7-15-02 C-O-C numbers: _____

7. Cooler(s) opened by (print): William H. Howard Signature: William H. Howard

8. Were the C-O-C forms received? (YES) NO* NA

9. Was the project identifiable from the C-O-C form? (YES) NO* NA
   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

~~AIRBILL #~~ Manifest	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
109125	3.5				

Thermometer # 129 Correction Factor +0.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

1. Was enough packing material used in cooler(s)? (YES) NO NA
   Type of material: ☐ Vermiculite ☐ Bubble Wrap ☐ Other

2. If required, was enough ice used? (YES) NO NA
   If YES, type of ice used: (☐ Wet) ☐ Dry ☐ Blue ☐ Other

3. Was a temperature blank vial included inside cooler(s)? (YES) NO NA
   If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

4. Were all containers sealed in separate plastic bags? (YES) NO NA

5. Did all containers arrive unbroken and in good condition? (YES) NO* NA

6. Samples stored in W Cooler before Login Phase? YES (NO)
   If Yes: Signature In: _____ Date/Time: _____
   Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged In By (print): William H. Howard Signature: William H. Howard Date: 7-15-02

1. Were all container labels complete (e.g. date, time preserved)? (YES) NO* NA

2. Were all C-O-C forms filled out properly in ink and signed? (YES) NO* NA

3. Did the C-O-C form agree with containers received? (YES) NO* NA

4. Were the correct containers used for the tests requested? (YES) NO* NA

5. Were the correct preservatives listed on the sample labels? (YES) NO* NA

6. Was a sufficient sample volume sent for the tests requested? (YES) NO* NA

7. Were all volatile samples received without head space? YES NO* (NA)

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207099

CASE NARRATIVE

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used or the volatile analysis.

ample Analysis
ll samples were analyzed within hold time.

alibration and Tunes
ll initial and continuing calibrations were acceptable.

C
ll surrogate recoveries were within acceptable limits.

ll blank analyses were acceptable. Acetone was present in the soil method blank above the MDL and below e reporting limit.

ll matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AFFF-)01except for low recoveries of vinyl acetate.

l laboratory control sample (LCS) recoveries were acceptable except acetone and carbon tetrachloride coveries were 2% and 1% high, respectively.

l internal standard area responses were acceptable.

MS SEMIVOLATILES
RESTEK (Rtx-5ms) column, which is 30-m long, 0.25-mm wide, and has a 0.5-micron film thickness, was d for the semivolatile analyses. The column contains 5% diphenyl and 95% dimethylpolysiloxane.

nple Analysis
samples were extracted and analyzed within hold time.

ibration and Tunes
initial and continuing calibrations were acceptable.

surrogate recoveries were within acceptable limits.

blank analyses were acceptable.

matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AFFF-SD01

except two spike recoveries were low (3,3-Dichlorobenzidine, hexachlorocyclopentadiene) and two spike recoveries were high (benzoic acid, pentachlorophenol). The corresponding MSD had the same compounds out. The following compounds had high RPD values: 3,3'-Dichlorobenzidine, hexachlorocyclopentadiene.

All laboratory control sample (LCS) recoveries were acceptable except for a high indeno(1,2,3-cd)pyrene recovery.

All internal standard area responses were acceptable.

GC SEMIVOLATILES
PESTICIDE
The columns used for analysis were a CLPesticides (column 1) and a CLPesticides II (column 2), both 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

PCB
The column used for analysis was a CLPesticides, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

CLIENT:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Lab Order:	0207099

CASE NARRATIVE

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except for a high ecovery of Aroclor 1016 in both the MS and MSD of sample AFFF-SD01.

All laboratory control sample (LCS) recoveries were acceptable.

METALS
ample Analysis
ll samples were digested and analyzed within hold time.

ll soil samples were diluted two or five-fold due to poor internal standard response and/or interelemental terferences.

alibrations
alibration of the ICP utilizes a zero and one non-zero standard to determine the linear equation for uantitation. A low concentration standard (PQL) is analyzed at the reporting level.

ll initial and continuing calibrations were acceptable.

l calibration and preparation blank analyses were acceptable. Antimony and iron were present in the method nk above the MDL and below the reporting limit.

l matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AFFF-SD- except for aluminum,antimony, calcium, iron, magnesium, manganese, potassium and silver. Aluminum and n recoveries were affected by the elevated levels of these elements in the sample relative to the spike amount ded. RPDs were high for aluminum, calcium and manganese for the MS/MSD pair.

e matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample PCI20- 08 except for a high lead recovery in the MS. Lead recoveries were affected by the elevated level of this ment in the sample relative to the spike amount added.

laboratory control sample (LCS) recoveries were acceptable.

ial dilution %D values were out for aluminum, iron, potassium, magnesium and manganese for sample AFF- 01 and lead for sample PCI20-NS08.

RCURY
ple Analysis
samples were digested and analyzed within hold time.

brations
initial and continuing calibrations were acceptable.

CLIENT:	E and E Buffalo Office	**CASE NARRATIVE**
Project:	WAD 09 AOC 9/PCI 20	
Lab Order:	0207099	

QC
All calibration and preparation blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

GENERAL ANALYTICAL CHEMISTRY
Sample Analysis
All samples were analyzed within hold time.

QC
The matrix duplicate (MD) was acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207099
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207099-01A	AFFF-SD01	7/15/2002 3:40:00 PM	7/15/2002 10:36:00 PM	Sediment	Volatile Organic Compounds by Method 8260B			7/16/2002
0207099-01B					ACE Semivolatile Organics by Method 8270C		7/17/2002	7/20/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/25/2002
					Mercury Analysis in Soil by Method 7471A		7/18/2002	7/19/2002
					PCBs by Method 8082		7/16/2002	7/19/2002
					Percent Moisture			7/17/2002
					Pesticides by Method 8081A		7/16/2002	7/19/2002
0207099-02A	AFFF-SD01/D				Volatile Organic Compounds by Method 8260B			7/16/2002
0207099-02B					ACE Semivolatile Organics by Method 8270C		7/17/2002	7/25/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/26/2002
					Mercury Analysis in Soil by Method 7471A		7/18/2002	7/19/2002
					PCBs by Method 8082		7/16/2002	7/19/2002
					Percent Moisture			7/17/2002
					Pesticides by Method 8081A		7/16/2002	7/19/2002
0207099-03A	AFFF-SD02	7/15/2002 3:55:00 PM			Volatile Organic Compounds by Method 8260B			7/16/2002
0207099-03B					ACE Semivolatile Organics by Method 8270C		7/17/2002	7/25/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/26/2002
					Mercury Analysis in Soil by Method 7471A		7/18/2002	7/19/2002
					PCBs by Method 8082		7/16/2002	7/19/2002
					Percent Moisture			7/17/2002
					Pesticides by Method 8081A		7/16/2002	7/19/2002
0207099-04A	PCI20-NS06	7/15/2002 2:25:00 PM		Soil	Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/24/2002
					Percent Moisture			7/17/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.

Analytical Services Center

Lancaster, New York 14086

Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207099

Client: E and E Buffalo Office

Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207099-05A	PCI20-NS07	7/15/2002 2:40:00 PM	7/15/2002 10:36:00 PM	Soil	Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/24/2002
					Percent Moisture			7/17/2002
0207099-06A	PCI20-NS08	7/15/2002 2:50:00 PM			Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/24/2002
					Percent Moisture			7/17/2002
0207099-07A	PCI20-NS06/D	7/15/2002 2:25:00 PM			Griffiss Metals, TAL by ICP Method 6010B		7/18/2002	7/24/2002
					Percent Moisture			7/17/2002

10

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extracti*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Work Order: 0207099

Method References

GC Semivolatiles

PCBs by Method 8082	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Pesticides by Method 8081A	

GCMS Semivolatiles

ACE Semivolatile Organics by Method 8270C	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Volatiles

Volatile Organic Compounds by Method 8260B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Mercury

Mercury Analysis in Soil by Method 7471A	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Metals

Griffiss Metals, TAL by ICP Method 6010B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

WetChemistry

Client:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Work Order:	0207099

Method References

Percent Moisture	Annual Book of ASTM Standards. 1997. Volumes 11.01-11.04 (Water Methods, Atmospheric Analysis, Hazardous Substances). American Society for Testing and Materials.

Ecology and Environment, Inc.
Analytical Services Center
1493 Walden Avenue
Lancaster, New York 14086

ACCREDITED IN ACCORDANCE WITH nelac

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
68 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
PostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207112**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 8 samples on Tuesday, July 16, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Amy Bogolin
Project Manager

Enclosures as noted

This report ends on page 51

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207112
Date Received: 7/16/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207112-01A	FIELD QC-TB9-GW2		7/16/2002 7:49:00 AM
0207112-02A	AOC9-GP45D2		7/16/2002 8:46:00 AM
0207112-03A	AOC9-GP46D2		7/16/2002 10:10:00 AM
0207112-04A	AOC9-GP47D2		7/16/2002 11:45:00 AM
0207112-05A	AOC9-GP47D1		7/16/2002 1:50:00 PM
0207112-06A	AOC9-GP47I		7/16/2002 4:00:00 PM
0207112-07A	AOC9-GP47S2		7/16/2002 4:25:00 PM
0207112-08A	AOC9-GP47S1		7/16/2002 4:50:00 PM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10273 NUMBER OF COOLERS: 2 DATE RECEIVED: 7/16/02

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffis AFB

A. Preliminary Examination Phase

CIRCLE ONE

1 Did coolers come with airbill or packing slip? YES NO NA

Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client Other

Ship as high hazard or dangerous goods YES NO NA

2 Did cooler(s) have custody seals? YES NO NA

3 Were custody seals unbroken and intact on receipt? YES NO* NA

4 Were custody seals dated and signed? YES NO NA

5 Sign here to acknowledge receipt of cooler (s): Kevin Oakley

Date cooler(s) opened: 7/16/02 C-O-C numbers:

Cooler(s) opened by (print): Kevin Oakley Signature: Kevin Oakley

6 Were the C-O-C forms received? YES NO* NA

7 Was the project identifiable from the C-O-C form? YES NO* NA

If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
1 of 2	2.5	2 of 2	4.0		

Thermometer # 129 Correction Factor -1.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8 Was enough packing material used in cooler(s)? YES NO NA

Type of material: ☐ Vermiculite ☒ Bubble Wrap ☐ Other

9 If required, was enough ice used? YES NO NA

If YES, type of ice used: ☒ Wet ☐ Dry ☐ Blue ☐ Other

10 Was a temperature blank vial included inside cooler(s)? YES NO NA

If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11 Were all containers sealed in separate plastic bags? YES NO NA

12 Did all containers arrive unbroken and in good condition? YES NO* NA

Samples stored in W Cooler before Login Phase? YES NO

If Yes: Signature In: _____ Date/Time: _____

Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: Kevin Oakley Date: 7/16/02

13 Were all container labels complete (e.g. date, time preserved)? YES NO* NA

14 Were all C-O-C forms filled out properly in ink and signed? YES NO* NA

15 Did the C-O-C form agree with containers received? YES NO* NA

16 Were the correct containers used for the tests requested? YES NO* NA

17 Were the correct preservatives listed on the sample labels? YES NO* NA

18 Was a sufficient sample volume sent for the tests requested? YES NO* NA

19 Were all volatile samples received without head space? YES NO* NA

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207112

CASE NARRATIVE

Sample AOC9-GP47S2 on the chain-of-custody (COC) form was labelled as AOC9-GP46S2 on the container. The sample ID listed on the COC was used.

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
Results for acetone in sample AOC9-GP45D2 do not agree between the original and diluted analysis. Both runs were reported. A field contamination source is suspected.

Samples AOC9-GP46D2, AOC9-GP47I, AOC9-GP47S2, AOC9-GP47S1 were analyzed at secondary dilution based on the information provided from the field and intial screening analysis.

All aqueous volatile samples were determined to be at a pH of 7.

All samples were analyzed within hold time.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable except for a high trichlorofluoromethane recovery in LCS-1458-82-1 and low 2-hexanone and 4-methyl-2-pentanone recoveries in LCS-1458-83-4.

All internal standard area responses were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207112
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207112-01A	FIELD QC-TB9-GW2	7/16/2002 7:49:00 AM	7/16/2002 10:33:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/16/2002
0207112-02A	AOC9-GP45D2	7/16/2002 8:46:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002
0207112-03A	AOC9-GP46D2	7/16/2002 10:10:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/16/2002
0207112-04A	AOC9-GP47D2	7/16/2002 11:45:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002
0207112-05A	AOC9-GP47D1	7/16/2002 1:50:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002
0207112-06A	AOC9-GP47I	7/16/2002 4:00:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002
0207112-07A	AOC9-GP47S2	7/16/2002 4:25:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002
0207112-08A	AOC9-GP47S1	7/16/2002 4:50:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/17/2002

LIMS Version #: 3.1.4.4 - 7/31/2002 1:00:00 PM

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

ACCREDITED IN ACCORDANCE WITH nelac

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207127**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 16 samples on Wednesday, July 17, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

CC:
Enclosures as note

This report ends on page 100

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207127
Date Received: 7/17/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207127-01A	AOC9-GP48D2		7/16/2002 6:05:00 PM
0207127-02A	AOC9-GP45D1		7/17/2002 8:15:00 AM
0207127-03A	FIELDQC-TB9-GW3		7/17/2002 8:00:00 AM
0207127-04A	AOC9-GP45I		7/17/2002 8:45:00 AM
0207127-05A	AOC9-GP45S2		7/17/2002 9:10:00 AM
0207127-06A	AOC9-GP45S1		7/17/2002 9:25:00 AM
0207127-07A	AOC9-GP46D1		7/17/2002 11:05:00 AM
0207127-08A	AOC9-GP46I		7/17/2002 11:45:00 AM
0207127-09A	AOC9-GP46I/D		7/17/2002 11:45:00 AM
0207127-10A	AOC9-GP46S2		7/17/2002 12:12:00 PM
0207127-11A	AOC9-GP46S1		7/17/2002 12:50:00 PM
0207127-12A	AOC9-GP44D1		7/17/2002 3:00:00 PM
0207127-13A	AOC9-GP44I		7/17/2002 3:42:00 PM
0207127-14A	AOC9-GP44I/D		7/17/2002 3:42:00 PM
0207127-15A	AOC9-GP44S2		7/17/2002 4:10:00 PM
0207127-16A	AOC9-GP44S1		7/17/2002 4:33:00 PM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10785 NUMBER OF COOLERS: 2 DATE RECEIVED: 7/17/02

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffis

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? _____ YES (NO) NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) E+E

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? _____ (YES) NO NA

3. Were custody seals unbroken and intact on receipt? _____ (YES) NO* NA

4. Were custody seals dated and signed? _____ (YES) NO NA

5. Sign here to acknowledge receipt of cooler (s): _____ Kevin Oakley

   Date cooler(s) opened: 7/17/02 C-O-C numbers: _____

   Cooler(s) opened by (print): Kevin Oakley Signature: Kevin Oakley

6. Were the C-O-C forms received? _____ (YES) NO* NA

7. Was the project identifiable from the C-O-C form? _____ (YES) NO* NA

   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
1 of 2	4.5	2 of 2	4.0		

Thermometer # 129 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? _____ (YES) NO NA

   Type of material: ☐ Vermiculite ☐ Bubble Wrap ☒ Other

9. If required, was enough ice used? _____ (YES) NO NA

   If YES, type of ice used: ☒ Wet ☐ Dry ☐ Blue ☐ Other

10. Was a temperature blank vial included inside cooler(s)? _____ (YES) NO NA

    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? _____ (YES) NO NA

12. Did all containers arrive unbroken and in good condition? _____ (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? YES (NO)

    If Yes, Signature In: _____ Date/Time: _____

    Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: Kevin Oakley Date: 7/17/02

14. Were all container labels complete (e.g. date, time preserved)? _____ (YES) NO* NA

    Were all C-O-C forms filled out properly in ink and signed? _____ (YES) NO* NA

    Did the C-O-C form agree with containers received? _____ (YES) NO* NA

15. Were the correct containers used for the tests requested? _____ (YES) NO* NA

16. Were the correct preservatives listed on the sample labels? _____ (YES) NO* NA

17. Was a sufficient sample volume sent for the tests requested? _____ (YES) NO* NA

20. Were all volatile samples received without head space? _____ YES (NO*) NA KD

Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207127

CASE NARRATIVE

The following vials were received with headspace:

AOC9-GP48D2	3 of 3 vials
AOC9-GP46I/D	3 of 3 vials
AOC9-GP45D1	3 of 3 vials
AOC9-GP46D1	1 of 3 vials
AOC9-GP46I	3 of 3 vials
AOC9-GP44D1	2 of 3 vials
AOC9-GP44I	3 of 3 vials
AOC9-GP44I/D	3 of 3 vials
AOC9-GP44S2	2 of 3 vials

s the samples were rush screening analysis, the analysis proceeded with the discrepancies noted.

CMS VOLATILES
DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used r the volatile analysis.

mple Analysis
l aqueous volatile samples were determined to be at a pH of 7.

l samples were analyzed within hold time.

mples AOC9-GP45D1, AOC9-GP45I, AOC9-GP46D1, AOC9-GP46I, AOC9-GP46I/D, AOC9-GP46S2,)C9-GP44D1, AOC9-GP44I, AOC9-GP44I/D and AOC9-GP44S2 were analyzed at secondary dilutions based the information provided from the field and intial screening analysis. In some cases, the results of two runs re merged and reported together.

mples AOC9-GP45S2 and AOC9-GP45S1 were initally analyzed undiluted with chlorobenzene above the er calibration standard. The samples were reanalyzed at a dilution and the results merged and reported with original analysis.

ibration and Tunes
initial and continuing calibrations were acceptable.

surrogate recoveries were within acceptable limits.

blank analyses were acceptable.

CLIENT:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Lab Order:	0207127

CASE NARRATIVE

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AOC9-GP45I except for acetone and chlorobenzene. The RPD was high for chlorobenzene for the MS/MSD pair.

All laboratory control sample (LCS) recoveries were acceptable except for a high acetone recovery in LCS-1458-85-1.

All internal standard area responses were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207127
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207127-01A	AOC9-GP48D2	7/16/2002 6:05:00 PM	7/17/2002 11:06:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-02A	AOC9-GP45D1	7/17/2002 8:15:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-03A	FIELDQC-TB9-GW3	7/17/2002 8:00:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-04A	AOC9-GP45I	7/17/2002 8:45:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-05A	AOC9-GP45S2	7/17/2002 9:10:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-06A	AOC9-GP45S1	7/17/2002 9:25:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-07A	AOC9-GP46D1	7/17/2002 11:05:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-08A	AOC9-GP46I	7/17/2002 11:45:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-09A	AOC9-GP46I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-10A	AOC9-GP46S2	7/17/2002 12:12:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-11A	AOC9-GP46S1	7/17/2002 12:50:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-12A	AOC9-GP44D1	7/17/2002 3:00:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-13A	AOC9-GP44I	7/17/2002 3:42:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-14A	AOC9-GP44I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-15A	AOC9-GP44S2	7/17/2002 4:10:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002
0207127-16A	AOC9-GP44S1	7/17/2002 4:33:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/18/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207148**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 11 samples on Friday, July 19, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

CC:
Enclosures as note

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207148
Date Received: 7/19/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207148-01A	FIELDQC-TB9-GW5		7/19/2002 7:30:00 AM
0207148-02A	AOC9-GP49D2		7/19/2002 8:30:00 AM
0207148-03A	AOC9-GP49S2		7/19/2002 9:20:00 AM
0207148-04A	AOC9-GP49S1		7/19/2002 9:27:00 AM
0207148-05A	AOC9-GP50D2		7/19/2002 10:05:00 AM
0207148-06A	AOC9-GP50D1		7/19/2002 11:00:00 AM
0207148-07A	AOC9-GP50I		7/19/2002 11:33:00 AM
0207148-08A	AOC9-GP50I/D		7/19/2002 11:33:00 AM
0207148-09A	AOC9-GP50S2		7/19/2002 12:05:00 PM
0207148-10A	AOC9-GP50S1		7/19/2002 12:30:00 PM
0207148-11A	AOC9-GP51D2		7/19/2002 1:37:00 PM

...ology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10300 NUMBER OF COOLERS: 4 DATE RECEIVED: 7/19

E & E PROJECT #: ______ PROJECT OR SITE NAME: Griffis

A. Preliminary Examination Phase

CIRCLE

1. Did coolers come with airbill or packing slip? YES (NO)

Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) E&E

Ship as high hazard or dangerous goods YES (NO)

2. Did cooler(s) have custody seals? (YES) NO

3. Were custody seals unbroken and intact on receipt? (YES) NO*

4. Were custody seals dated and signed? (YES) NO

5. Sign here to acknowledge receipt of cooler (s): ______

Date cooler(s) opened: 7/20/02 C-O-C numbers: ______

Cooler(s) opened by (print): Kevin Oakley Signature: [signature]

6. Were the C-O-C forms received? (YES) NO* N

7. Was the project identifiable from the C-O-C form? (YES) NO* N

If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
1 of 4	2.5	2 of 4	3.0	4 of 4	3.5
		3 of 4	3.0		

Thermometer = 129 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? (YES) NO NA

Type of material: ☐ Vermiculite ☒ Bubble Wrap ☐ Other

9. If required, was enough ice used? (YES) NO NA

If YES, type of ice used. ☒ Wet ☐ Dry ☐ Blue ☐ Other

10. Was a temperature blank vial included inside cooler(s)? (YES) NO NA

If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? YES (NO) NA

12. Did all containers arrive unbroken and in good condition? (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? (YES) NO

If yes Signature In: ______ Date/Time: 7/19/02 1900

Signature Out: [signature] Date/Time: 7/20/02 0800

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: [signature] Date: 7/20/02

14. Were all container labels complete (e.g. date, time preserved)? (YES) NO* NA

15. Were all C-O-C forms filled out properly in ink and signed? (YES) NO* NA

16. Did the C-O-C form agree with containers received? (YES) NO* NA

17. Were the correct containers used for the tests requested? (YES) NO* NA

18. Were the correct preservatives listed on the sample labels? (YES) NO* NA

19. Was a sufficient sample volume sent for the tests requested? (YES) NO* NA

20. Were all volatile samples received without head space? (YES) NO* NA

* Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207148

CASE NARRATIVE

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
All aqueous volatile samples were determined to be at a pH of 7.

All samples were analyzed within hold time.

Sample AOC9-GP51D2 was analyzed at a secondary dilution based on the information provided from the field and intial screening analysis.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable. Methylene chloride was present in the method blank above the MDL and below the reporting limit.

All laboratory control sample (LCS) recoveries were acceptable.

All internal standard area responses were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.

Analytical Services Center

Lancaster, New York 14086

Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207148

Client: E and E Buffalo Office

Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207148-01A	FIELDQC-TB9-GW5	7/19/2002 7:30:00 AM	7/19/2002 6:58:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-02A	AOC9-GP49D2	7/19/2002 8:30:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-03A	AOC9-GP49S2	7/19/2002 9:20:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-04A	AOC9-GP49S1	7/19/2002 9:27:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-05A	AOC9-GP50D2	7/19/2002 10:05:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207148-06A	AOC9-GP50D1	7/19/2002 11:00:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-07A	AOC9-GP50I	7/19/2002 11:33:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207148-08A	AOC9-GP50I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-09A	AOC9-GP50S2	7/19/2002 12:05:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-10A	AOC9-GP50S1	7/19/2002 12:30:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002
0207148-11A	AOC9-GP51D2	7/19/2002 1:37:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/20/2002

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207158**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 6 samples on Monday, July 22, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

closures as note

report ends on page 39

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Resu

NYS ELAP ID#: 10

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207158
Date Received: 7/22/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207158-01A	Field QC-TB9-GW6		7/22/2002 9:30:00 AM
0207158-02A	AOC9-GP51D1		7/22/2002 11:48:00 AM
0207158-03A	AOC9-GP51I		7/22/2002 12:10:00 PM
0207158-04A	AOC9-GP51S2		7/22/2002 12:50:00 PM
0207158-05A	AOC9-GP51S1		7/22/2002 1:10:00 PM
0207158-06A	AOC9-GP52D2		7/22/2002 3:30:00 PM

...ology and Environment, Inc. Analytical Services Center
Cooler Receipt Form

PACKAGE RECEIPT #: 10306 NUMBER OF COOLERS: 7 DATE RECEIVED: 7-22-02

E & E PROJECT #: _____ PROJECT OR SITE NAME: _____

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? _____ (YES) NO NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) _____

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? _____ (YES) NO NA
3. Were custody seals unbroken and intact on receipt? _____ (YES) NO* NA
4. Were custody seals dated and signed? _____ (YES) NO NA
5. Sign here to acknowledge receipt of cooler (s): _____

   Date cooler(s) opened: 7-22-02 C-O-C numbers: _____

   Cooler(s) opened by (print): William H. Howard Signature: _____
6. Were the C-O-C forms received? _____ (YES) NO* NA
7. Was the project identifiable from the C-O-C form? _____ (YES) NO* NA
   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
108150	2.5				

Thermometer # 129 Correction Factor 0.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? _____ (YES) NO NA
   Type of material: Vermiculite Bubble Wrap (Other)
9. If required, was enough ice used? _____ (YES) NO NA
   If YES, type of ice used: (Wet) Dry Blue Other
10. Was a temperature blank vial included inside cooler(s)? _____ (YES) NO NA
    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.
11. Were all containers sealed in separate plastic bags? _____ (YES) NO NA
12. Did all containers arrive unbroken and in good condition? _____ (YES) NO* NA
13. Samples stored in W Cooler before Login Phase? YES (NO)
    If yes: Signature In: _____ Date/Time: _____

    Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): William H. Howard Signature: _____ Date: 7-22-02

14. Were all container labels complete (e.g. date, time preserved)? _____ (YES) NO* NA
15. Were all C-O-C forms filled out properly in ink and signed? _____ (YES) NO* NA
16. Did the C-O-C form agree with containers received? _____ (YES) NO* NA
17. Were the correct containers used for the tests requested? _____ (YES) NO* NA
18. Were the correct preservatives listed on the sample labels? _____ (YES) NO* NA
19. Was a sufficient sample volume sent for the tests requested? _____ (YES) NO* NA
20. Were all volatile samples received without head space? _____ YES (NO*) NA

Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207158

CASE NARRATIVE

All vials submitted for sample AOC9-GP51I and two of the three vials for sample AOC9-GP51D1 contained headspace.

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
All aqueous volatile samples were determined to be at a pH of 7.

All samples were analyzed within hold time.

Samples AOC9-GP51D1, AOC9-GP51I, AOC9-GP51S2, AOC9-GP51S1and AOC9-GP52D2 were analyzed at secondary dilutions based on the information provided from the field and initial screening analysis.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable except for a low 2-hexanone recovery and a high trichlorofluoromethane recovery.

All internal standard area responses were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207158
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207158-01A	Field QC-TB9-GW6	7/22/2002 9:30:00 AM	7/22/2002 8:45:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002
0207158-02A	AOC9-GP51D1	7/22/2002 11:48:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002
0207158-03A	AOC9-GP511	7/22/2002 12:10:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002
0207158-04A	AOC9-GP51S2	7/22/2002 12:50:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002
0207158-05A	AOC9-GP51S1	7/22/2002 1:10:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002
0207158-06A	AOC9-GP52D2	7/22/2002 3:30:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/23/2002

9

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 01, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207173**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 13 samples on Tuesday, July 23, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

CC:
Enclosures as note

This report ends on page 62

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207173
Date Received: 7/23/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207173-01A	AOC9-GP52D1		7/22/2002 4:25:00 PM
0207173-02A	AOC9-GP52I		7/22/2002 5:10:00 PM
0207173-03A	AOC9-GP52I/D		7/22/2002 5:10:00 PM
0207173-04A	AOC9-GP52S2		7/23/2002 8:30:00 AM
0207173-05A	AOC9-GP52S1		7/23/2002 10:00:00 AM
0207173-06A	AOC9-GP53D2		7/23/2002 10:55:00 AM
0207173-07A	AOC9-GP53D1		7/23/2002 11:55:00 AM
0207173-08A	AOC9-GP54D1		7/23/2002 2:05:00 PM
0207173-09A	AOC9-GP54I		7/23/2002 2:45:00 PM
0207173-10A	AOC9-GP54I/D		7/23/2002 2:45:00 PM
0207173-11A	AOC9-GP54S1		7/23/2002 3:10:00 PM
0207173-12A	AOC9-GP55I		7/23/2002 3:50:00 PM
0207173-13A	FIELDQC-TB9-GW7		7/23/2002 4:15:00 PM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10314 NUMBER OF COOLERS: 1 DATE RECEIVED: 7/23

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffis AFB

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? YES (NO) NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) Independent

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? (YES) NO NA

3. Were custody seals unbroken and intact on receipt? (YES) NO* NA

4. Were custody seals dated and signed? (YES) NO NA

5. Sign here to acknowledge receipt of cooler (s): Kevin Oakley

   Date cooler(s) opened: 7/23/02 C-O-C numbers: _____

   Cooler(s) opened by (print): Kevin Oakley Signature: Kevin Oakley

6. Were the C-O-C forms received? (YES) NO* NA

7. Was the project identifiable from the C-O-C form? (YES) NO* NA
   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
109436	4.0				

Thermometer # 181 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? (YES) NO NA
   Type of material: Vermiculite Bubble Wrap (Other)

9. If required, was enough ice used? (YES) NO NA
   If YES, type of ice used: (Wet) Dry Blue Other

10. Was a temperature blank vial included inside cooler(s)? (YES) NO NA
    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? (YES) NO NA

12. Did all containers arrive unbroken and in good condition? (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? YES (NO)
    If yes: Signature In: _____ Date/Time: _____
    Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: Kevin Oakley Date: 7/23/02

14. Were all container labels complete (e.g. date, time preserved)? (YES) NO* NA

15. Were all C-O-C forms filled out properly in ink and signed? (YES) NO* NA

16. Did the C-O-C form agree with containers received? (YES) NO* NA

17. Were the correct containers used for the tests requested? (YES) NO* NA

18. Were the correct preservatives listed on the sample labels? (YES) NO* NA

19. Was a sufficient sample volume sent for the tests requested? (YES) NO* NA

20. Were all volatile samples received without head space? YES (NO*) NA

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207173

CASE NARRATIVE

All vials submitted for samples AOC9-GP52I, AOC9-GP52I/D, AOC9-GP52S2, AOC9-GP53D1 and AOC9-GP54D1and two of the three vials for sample AOC9-GP52D1 contained headspace.

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used or the volatile analysis.

ample Analysis
ll aqueous volatile samples were determined to be at a pH of 7.

ll samples were analyzed within hold time.

mples AOC9-GP52S2, AOC9-GP52S1, AOC9-GP53D2, AOC9-GP53D1, were analyzed at secondary lutions based on the information provided from the field and initial screening analysis.

mples AOC9-GP52D1, AOC9-GP52I and AOC9-GP52I/D were initally analyzed undiluted with 1,4-chlorobenzene and/or chlorobenzene above the upper calibration standard. The samples were reanalyzed at a enty-fold dilution and the results merged and reported with the original analysis.

libration and Tunes
initial and continuing calibrations were acceptable.

surrogate recoveries were within acceptable limits.

blank analyses were acceptable.

laboratory control sample (LCS) recoveries were acceptable except for 2-hexanone which was low in LCS-3-93-1and it's duplicate and in LCS-1458-94-1.

nternal standard area responses were acceptable.

ify that this data package is in compliance with the terms and conditions of the contract, both technically or completeness, for other than the conditions detailed above. Release of the data contained in this opy data package has been authorized by the Laboratory Manager or the Manager's designee, as verified e following signature.

Bogolin
t Manager

Ecology and Environment, Inc.

Analytical Services Center

Lancaster, New York 14086

Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207173

Client: E and E Buffalo Office

Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207173-01A	AOC9-GP52D1	7/22/2002 4:25:00 PM	7/23/2002 7:46:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-02A	AOC9-GP52I	7/22/2002 5:10:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-03A	AOC9-GP52I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-04A	AOC9-GP52S2	7/23/2002 8:30:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-05A	AOC9-GP52S1	7/23/2002 10:00:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-06A	AOC9-GP53D2	7/23/2002 10:55:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-07A	AOC9-GP53D1	7/23/2002 11:55:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-08A	AOC9-GP54D1	7/23/2002 2:05:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-09A	AOC9-GP54I	7/23/2002 2:45:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-10A	AOC9-GP54I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-11A	AOC9-GP54S1	7/23/2002 3:10:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-12A	AOC9-GP55I	7/23/2002 3:50:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002
0207173-13A	FIELDQC-TB9-GW7	7/23/2002 4:15:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/24/2002

*Reflects Date of TCLP Extraction Completion. For Re-extracted samples (RE) unless the data differs from

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 06, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207135**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 9 samples on Thursday, July 18, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

Enclosures as noted

This report ends on page 151

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207135
Date Received: 7/18/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207135-01A	AOC9-GP48D1		7/18/2002 9:12:00 AM
0207135-02A	FIELDQC-TB9-GW4		7/18/2002 8:30:00 AM
0207135-03A	AOC9-GP48I		7/18/2002 10:15:00 AM
0207135-04A	AOC9-GP48I/D		7/18/2002 10:15:00 AM
0207135-05A	AOC9-GP48S2		7/18/2002 11:25:00 AM
0207135-06A	AOC9-GP48S1		7/18/2002 11:55:00 AM
0207135-07A	AOC9-GP49I		7/18/2002 5:17:00 PM
0207135-08A	AOC9-GP49D1		7/18/2002 4:20:00 PM
0207135-09A	AOC9-DW01		7/18/2002 3:05:00 PM
0207135-09B	AOC9-DW01		7/18/2002 3:05:00 PM
0207135-09C	AOC9-DW01		7/18/2002 3:05:00 PM
0207135-09D	AOC9-DW01		7/18/2002 3:05:00 PM
0207135-09E	AOC9-DW01		7/18/2002 3:05:00 PM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10289 NUMBER OF COOLERS: 2 DATE RECEIVED: 7/15/02

E & E PROJECT #: ______ PROJECT OR SITE NAME: Griffis

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? — YES (NO) NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) E+E

   Ship as high hazard or dangerous goods — YES (NO) NA

2. Did cooler(s) have custody seals? — (YES) NO NA

3. Were custody seals unbroken and intact on receipt? — (YES) NO* NA

4. Were custody seals dated and signed? — (YES) NO NA

5. Sign here to acknowledge receipt of cooler (s): [signature]

   Date cooler(s) opened: 7/18/02 C-O-C numbers: —

   Cooler(s) opened by (print): Kevin Oakley Signature: [signature]

6. Were the C-O-C forms received? — (YES) NO* NA

7. Was the project identifiable from the C-O-C form? — (YES) NO* NA

   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
1 of 2	3.0	2 of 2	4.0		

Thermometer = 129 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? — (YES) NO NA

   Type of material: ☐ Vermiculite ☒ Bubble Wrap ☐ Other

9. If required, was enough ice used? — (YES) NO NA

   If YES, type of ice used: ☒ Wet ☐ Dry ☐ Blue ☐ Other

10. Was a temperature blank vial included inside cooler(s)? — (YES) NO NA

    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? — YES (NO) NA

12. Did all containers arrive unbroken and in good condition? — (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? — YES (NO)

    If yes, Signature In: ______ Date/Time: ______

    Signature Out: ______ Date/Time: ______

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: [signature] Date: 7/18/02

14. Were all container labels complete (e.g. date, time preserved)? — (YES) NO* NA

15. Were all C-O-C forms filled out properly in ink and signed? — (YES) NO* NA

16. Did the C-O-C form agree with containers received? — (YES) NO* NA

17. Were the correct containers used for the tests requested? — (YES) NO* NA

18. Were the correct preservatives listed on the sample labels? — (YES) NO* NA

19. Was a sufficient sample volume sent for the tests requested? — (YES) NO* NA

20. Were all volatile samples received without head space? — (YES) NO* NA

* Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207135

CASE NARRATIVE

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
All aqueous volatile samples were determined to be at a pH of 7.

Sample AOC9-DW01 was analyzed as a low level screening volatile with the remainder of the samples rather than a routine 8260B. The compound list is the same. The reporting limits are lower, reflecting the 25-ml purge.

All samples were analyzed within hold time.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable fpr sample AOC9-GP49I except for acetone which was high at 157% in the MS.

All laboratory control sample (LCS) recoveries were acceptable.

All internal standard area responses were acceptable.

GCMS SEMIVOLATILES
A RESTEK (Rtx-5ms) column, which is 30 m, long, 0.25 mm wide, and has a 0.5 um film thickness was used for the semivolatile analyses. The column contains 5% diphenyl and 95% dimethylpolysiloxane.

Tentatively identified compounds (TIC's) have been generated directly from the GC/MS computer and have not undergone additional interpretation.

Sample Analysis
The sample was extracted and analyzed within hold time.

Calibration and Tunes
The initial and continuing calibrations were acceptable.

Benzoic acid was manually integrated in the continuing calibration analyzed on 8/3//02 due to its poor peak shape. No other manual integrations were required.

QC
All surrogate recoveries were within acceptable limits.

The water blank was acceptable.

All laboratory control sample (LCS) recoveries were acceptable except for high spike recoveries of benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. These compounds were not detected in the associated sample.

All internal standard area recoveries were within acceptable limits.

GC VOLATILES
GASOLINE RANGE ORGANICS
An RTX-502.2 column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

ample Analysis
ll samples were analyzed within hold time.

alibration
ll initial and continuing calibrations were acceptable.

anual integrations were not required.

C
l surrogate recoveries were within acceptable limits.

l blank analyses were acceptable.

l laboratory control sample (LCS) recoveries were acceptable.

SEMIVOLATILES
STICIDE
e columns used for analysis were a CLPesticides (column 1) and a CLPesticides II (column 2), both 30 meters g and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, l standards.

nple Analysis
samples were extracted and analyzed within hold time.

ibrations
initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable. The RPD was high for aldrin for the LCS/LCSD pair.

PCB
The column used for analysis was a CLPesticides II, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

DIESEL RANGE ORGANICS
The column used for analysis was an RTX-5, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable. The RPD was high for the LCS/LCSD pair.

METALS
Sample Analysis
All samples were digested and analyzed within hold time.

Calibrations
Calibration of the ICP utilizes a zero and one non-zero standard to determine the linear equation for quantitation. A low concentration standard (PQL) is analyzed at the reporting level.

All initial and continuing calibrations were acceptable.

QC
All calibration and preparation blank analyses were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

MERCURY
ample Analysis
ll samples were digested and analyzed within hold time.

alibrations
ll initial and continuing calibrations were acceptable.

C
ll calibration and preparation blank analyses were acceptable.

l laboratory control sample (LCS) recoveries were acceptable.

ertify that this data package is in compliance with the terms and conditions of the contract, both technically d for completeness, for other than the conditions detailed above. Release of the data contained in this rdcopy data package has been authorized by the Laboratory Manager or the Manager's designee, as verified the following signature.

ny Bogolin
ject Manager

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207135
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207135-01A	AOC9-GP48D1	7/18/2002 9:12:00 AM	7/18/2002 9:35:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-02A	FIELDQC-TB9-GW4	7/18/2002 8:30:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-03A	AOC9-GP48I	7/18/2002 10:15:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-04A	AOC9-GP48I/D				COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-05A	AOC9-GP48S2	7/18/2002 11:25:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-06A	AOC9-GP48S1	7/18/2002 11:55:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-07A	AOC9-GP49I	7/18/2002 5:17:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-08A	AOC9-GP49D1	7/18/2002 4:20:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-09A	AOC9-DW01	7/18/2002 3:05:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/19/2002
0207135-09B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207135-09C					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/3/2002
					PCBs by Method 8082		7/19/2002	7/23/2002
					Pesticides by Method 8081A		7/19/2002	7/26/2002
0207135-09D					TPH-Diesel Range Organics by Method 8015B		7/19/2002	7/24/2002
0207135-09E					Mercury Analysis in Water by Method 7470A		7/19/2002	7/24/2002
					Metals, TAL by ICP Method 6010B		7/19/2002	7/26/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which [illegible]*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Work Order: 0207135

Method References

GC Semivolatiles

PCBs by Method 8082	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Pesticides by Method 8081A	
TPH-Diesel Range Organics by Method 8015B	

GC Volatiles

TPH-Gasoline Range Organics by Method 8015B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes al. promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Semivolatiles

ACE Semivolatile Organics by Method 8270C	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Volatiles

COE Ft Worth VOCs, Low Level by GCMS Method 8260B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Mercury

Mercury Analysis in Water by Method 7470A	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Metals

Client:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Work Order:	0207135

Method References

Metals, TAL by ICP Method 6010B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 13, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
68 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
PostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207149**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 8 samples on Friday, July 19, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

This report is not to be reproduced, except in full, without the written approval of the laboratory.

Sincerely,

Tony Bogolin
Project Manager

Enclosures as note

report ends on page 391

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207149
Date Received: 7/19/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207149-01A	AOC9-TP04		7/19/2002 12:02:00 PM
0207149-01B	AOC9-TP04		7/19/2002 12:02:00 PM
0207149-02A	AOC9-TP04/D		7/19/2002 12:02:00 PM
0207149-02B	AOC9-TP04/D		7/19/2002 12:02:00 PM
0207149-02BRE	AOC9-TP04/D		7/19/2002 12:02:00 PM
0207149-03A	AOC9-TP06		7/19/2002 9:55:00 AM
0207149-03B	AOC9-TP06		7/19/2002 9:55:00 AM
0207149-03C	AOC9-TP06		7/19/2002 9:55:00 AM
0207149-03D	AOC9-TP06		7/19/2002 9:55:00 AM
0207149-04A	AOC9-GW-TP01		7/19/2002 1:28:00 PM
0207149-04B	AOC9-GW-TP01		7/19/2002 1:28:00 PM
0207149-04C	AOC9-GW-TP01		7/19/2002 1:28:00 PM
0207149-04D	AOC9-GW-TP01		7/19/2002 1:28:00 PM
0207149-05A	AOC9-GW-TP03		7/19/2002 2:00:00 PM
0207149-05B	AOC9-GW-TP03		7/19/2002 2:00:00 PM
0207149-05C	AOC9-GW-TP03		7/19/2002 2:00:00 PM
0207149-05D	AOC9-GW-TP03		7/19/2002 2:00:00 PM
0207149-06A	AOC9-GW-TP04		7/19/2002 12:10:00 PM
0207149-06B	AOC9-GW-TP04		7/19/2002 12:10:00 PM
0207149-06C	AOC9-GW-TP04		7/19/2002 12:10:00 PM
0207149-06D	AOC9-GW-TP04		7/19/2002 12:10:00 PM
0207149-07A	AOC9-DTP04		7/19/2002 11:10:00 AM
0207149-07B	AOC9-DTP04		7/19/2002 11:10:00 AM
0207149-07C	AOC9-DTP04		7/19/2002 11:10:00 AM
0207149-07D	AOC9-DTP04		7/19/2002 11:10:00 AM
0207149-08A	AOC9-DTP04/D		7/19/2002 11:10:00 AM
0207149-08B	AOC9-DTP04/D		7/19/2002 11:10:00 AM
0207149-08C	AOC9-DTP04/D		7/19/2002 11:10:00 AM
0207149-08D	AOC9-DTP04/D		7/19/2002 11:10:00 AM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10300 NUMBER OF COOLERS: 4 DATE RECEIVED: 7/19/02

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffis

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? _____ YES (NO) NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) E+E

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? _____ (YES) NO NA

3. Were custody seals unbroken and intact on receipt? _____ (YES) NO* NA

4. Were custody seals dated and signed? _____ (YES) NO NA

5. Sign here to acknowledge receipt of cooler (s): _____

   Date cooler(s) opened: 7/20/02 C-O-C numbers: _____

   Cooler(s) opened by (print): Kevin Oakley Signature: Kevin Oakley

6. Were the C-O-C forms received? _____ (YES) NO* NA

7. Was the project identifiable from the C-O-C form? _____ (YES) NO* NA
   IF YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be ≤4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
1 of 4	2.5	2 of 4	3.0	4 of 4	3.0
		3 of 4	3.0		

Thermometer # 129 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? _____ (YES) NO NA
   Type of material: ☐ Vermiculite ☒ Bubble Wrap ☐ Other

9. If required, was enough ice used? _____ (YES) NO NA
   IF YES, type of ice used: ☒ Wet ☐ Dry ☐ Blue ☐ Other

10. Was a temperature blank vial included inside cooler(s)? _____ (YES) NO NA
    IF YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? _____ YES (NO) NA

12. Did all containers arrive unbroken and in good condition? _____ (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? (YES) NO
    If Yes Signature In: _____ Date/Time: 7/19/02 1900
    Signature Out: Kevin Oakley Date/Time: 7/20/02 0800

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: Kevin Oakley Date: 7/20/02

14. Were all container labels complete (e.g. date, time preserved)? _____ (YES) NO* NA

15. Were all C-O-C forms filled out properly in ink and signed? _____ (YES) NO* NA

16. Did the C-O-C form agree with containers received? _____ (YES) NO* NA

17. Were the correct containers used for the tests requested? _____ (YES) NO* NA

18. Were the correct preservatives listed on the sample labels? _____ (YES) NO* NA

19. Was a sufficient sample volume sent for the tests requested? _____ (YES) NO* NA

20. Were all volatile samples received without head space? _____ (YES) NO* NA

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207149

CASE NARRATIVE

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
All aqueous volatile samples were determined to be at a pH of 7.

All samples were analyzed within hold time.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except trichlorofluoromethane was low in the water MS of sample AOC9-GW-TP03. There was not enough volume to analyze an MSD as the sample was analyzed twice due to instrument problems. Acetone and vinyl acetate were low in the soil MS/MSD of sample AOC9-TP04 with the resulting RPD high for acetone.

All laboratory control sample (LCS) recoveries were acceptable except acetone was high in the aqueous LCS-1466-5-1 and trichlorofluoromethane was low in the LCSD-1466-5-1.

All internal standard area responses were acceptable.

GCMS SEMIVOLATILES
A RESTEK (Rtx-5ms) column, which is 30-m long, 0.25-mm wide, and has a 0.5-micron film thickness, was used for the semivolatile analyses. The column contains 5% diphenyl and 95% dimethylpolysiloxane.

Sample Analysis
All samples were extracted and analyzed within hold time except for the reextraction of sample AOC9-TP04/D.

Calibration and Tunes
All initial and continuing calibrations were acceptable.

Manual integrations were required on some calibration verification standards because there was tailing on the Benzoic Acid peak and the computer did not properly integrate the tail.

QC
All surrogate recoveries were within acceptable limits except for sample AOC9-TP04/D which had all surrogate recoveries low. The sample was rextracted 14 days past hold time with acceptable results. Both the original and reextract data are reported.

All blank analyses were acceptable. Bis(2-ethylhexyl)phthalate was present in soil method blank MB-00202030 above the MDL and below the reporting limit.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AOC9-GW-P03 except for recoveries of 3,3'-dichlorobenzidine, 4-chloroaniline, 4-nitrophenol, benzoic acid and hexachlorocyclopentadiene. RPD values were high for 1,2-dichlorobenzene, 1,4-dichlorobenzene, 4-chloroaniline, bis(2-ethylhexyl)phthalate and hexachlorocyclopentadiene. All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AOC9-TP04 except for recoveries of 3,3'-dichlorobenzidine, benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene. The RPD value was high for hexachlorocyclopentadiene. All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AOC9-TP04/D except for recoveries of 3,3'-dichlorobenzidine, 4-nitroaniline and hexachlorocyclopentadiene.

All laboratory control sample (LCS) recoveries were acceptable except for high benzo(g,h,i)perylene, benz(a,h)anthracene and indeno(1,2,3-cd)pyrene recoveries in LCSA-200202029. For LCS-200202030 : the MDL was lowered for 3,3'-dichlorobenzidine in order to record a percent recovery.

All internal standard area responses were acceptable.

SEMIVOLATILES
PESTICIDE
The columns used for analysis were a CLPesticides (column 1) and a CLPesticides II (column 2), both 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

All surrogate recoveries were within acceptable limits except for a high recovery of the surrogate DCB in sample AOC9-TP04. Recovery was elevated due to sample matrix interferences.

All blank analyses were acceptable. Endrin aldehyde was present in soil method blank MB-200202040 above the MDL and below the reporting limit.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except for low

recoveries of aldrin and dieldrin in the MS/MSD of sample AOC9-GW-TP03, and a slightly high recovery of methoxychlor in the MS/MSD of sample AOC9-TP04. RPDs were high for aldrin and dieldrin in the MS/MSD of sample AOC9-GW-TP03. The RPD was high for endrin aldehyde in the MS/MSD of sample AOC9-TP04.

All laboratory control sample (LCS) recoveries were acceptable.

PCB
The column used for analysis was a CLPesticides II, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits except for a high recovery of the surrogate DCB in sample AOC9-TP04. Recovery was elevated due to sample matrix interferences.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

DIESEL RANGE ORGANICS
The column used for analysis was an RTX-5, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except for a low

recovery of diesel in the MSD of sample AOC9-TP04.

All laboratory control sample (LCS) recoveries were acceptable.

GC VOLATILES
GASOLINE RANGE ORGANICS
An RTX-502.2 column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

Sample Analysis
All samples were analyzed within hold time.

Calibration
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

METALS
Sample Analysis
All samples were digested and analyzed within hold time.

Calibrations
Calibration of the ICP utilizes a zero and one non-zero standard to determine the linear equation for quantitation. A low concentration standard (PQL) is analyzed at the reporting level.

All initial and continuing calibrations were acceptable.

Blanks
All calibration and preparation blank analyses were acceptable. Selenium was present in the soil method blank above the MDL and below the reporting limit.

The matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable for sample AOC9-TP04 except for recoveries of aluminum, antimony and iron. Aluminum and iron were present in the sample at levels greater than four times the spike amount added. The RPD was high for iron for the MS/MSD pair.

All laboratory control sample (LCS) recoveries were acceptable.

CLIENT:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Lab Order:	0207149

CASE NARRATIVE

All serial dilution %D values were acceptable for smaple AOC9-TP04 except for aluminum, calcium, iron, potassium, barium, manganese and magnesium.

MERCURY
Sample Analysis
All samples were digested and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

QC
All calibration and preparation blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

GENERAL ANALYTICAL CHEMISTRY
Sample Analysis
All samples were analyzed within hold time.

QC
All matrix duplicates (MD) were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Boglin
Project Manager

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207149
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207149-01A	AOC9-TP04	7/19/2002 12:02:00 PM	7/19/2002 6:58:00 PM	Soil	TPH-Gasoline Range Organics by Method 8015B			7/23/2002
					Volatile Organic Compounds by Method 8260B			7/24/2002
0207149-01B					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/5/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/24/2002	7/25/2002
					PCBs by Method 8082		7/23/2002	7/27/2002
					Percent Moisture			7/22/2002
					Pesticides by Method 8081A		7/23/2002	8/1/2002
					TPH-Diesel Range Organics by Method 8015B		7/23/2002	7/26/2002
0207149-02A	AOC9-TP04/D				TPH-Gasoline Range Organics by Method 8015B			7/23/2002
					Volatile Organic Compounds by Method 8260B			7/24/2002
0207149-02B					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/5/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/24/2002	7/25/2002
					PCBs by Method 8082		7/23/2002	7/27/2002
					Percent Moisture			7/22/2002
					Pesticides by Method 8081A		7/23/2002	8/1/2002
					TPH-Diesel Range Organics by Method 8015B		7/23/2002	7/26/2002
0207149-02BRE					ACE Semivolatile Organics by Method 8270C		8/7/2002	8/9/2002
0207149-03A	AOC9-TP06	7/19/2002 9:55:00 AM		Water	VOC by GCMS Method 8260B			7/23/2002
0207149-03B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-03C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002
0207149-03D					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/3/2002

LIMS Version #: 3.1.4.4 - 7/31/2002 1:00:00 PM

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.

Analytical Services Center

Lancaster, New York 14086

Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207149

Client: E and E Buffalo Office

Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207149-03D	AOC9-TP06	7/19/2002 9:55:00 AM	7/19/2002 6:58:00 PM	Water	PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/26/2002
0207149-04A	AOC9-GW-TP01	7/19/2002 1:28:00 PM			VOC by GCMS Method 8260B			7/23/2002
0207149-04B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-04C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002
0207149-04D					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/3/2002
					PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/26/2002
0207149-05A	AOC9-GW-TP03	7/19/2002 2:00:00 PM			VOC by GCMS Method 8260B			7/23/2002
0207149-05B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-05C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002
0207149-05D					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/3/2002
					PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/27/2002
0207149-06A	AOC9-GW-TP04	7/19/2002 12:10:00 PM			VOC by GCMS Method 8260B			7/23/2002
0207149-06B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-06C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002
0207149-06D					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/8/2002
					PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/27/2002
0207149-07A	AOC9-DTP04	7/19/2002 11:10:00 AM			VOC by GCMS Method 8260B			7/23/2002
0207149-07B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-07C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002

LIMS Version #: 3.1.4.4 - 7/31/2002 1:00:00 PM

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which [illegible]*

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207149
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207149-07D	AOC9-DTP04	7/19/2002 11:10:00 AM	7/19/2002 6:58:00 PM	Water	ACE Semivolatile Organics by Method 8270C		7/22/2002	8/8/2002
					PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/27/2002
0207149-08A	AOC9-DTP04/D				VOC by GCMS Method 8260B			7/23/2002
0207149-08B					TPH-Gasoline Range Organics by Method 8015B			7/22/2002
0207149-08C					TPH-Diesel Range Organics by Method 8015B		7/22/2002	7/24/2002
0207149-08D					ACE Semivolatile Organics by Method 8270C		7/22/2002	8/8/2002
					PCBs by Method 8082		7/22/2002	7/24/2002
					Pesticides by Method 8081A		7/22/2002	7/27/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Work Order: 0207149

Method References

GC Semivolatiles

PCBs by Method 8082	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Pesticides by Method 8081A	
TPH-Diesel Range Organics by Method 8015B	

GC Volatiles

TPH-Gasoline Range Organics by Method 8015B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Semivolatiles

ACE Semivolatile Organics by Method 8270C	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Volatiles

Client:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Work Order:	0207149

Method References

VOC by GCMS Method 8260B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Volatile Organic Compounds by Method 8260B	

Mercury

Mercury Analysis in Soil by Method 7471A	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Metals

Griffiss Metals, TAL by ICP Method 6010B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

WetChemistry

Percent Moisture	Annual Book of ASTM Standards. 1997. Volumes 11.01-11.04 (Water Methods, Atmospheric Analysis, Hazardous Substances). American Society for Testing and Materials.

Ecology and Environment, Inc.
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Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

August 09, 2002

Mr. Thomas Ferraro
E and E Buffalo Office
368 Pleasant View Dr.
Lancaster, NY 14086

RE: WAD 09 AOC 9/PCI 20
CostPoint ID: **001002.UK10.02.03.**

Work Order No.: **0207192**

Dear Mr. Thomas Ferraro,

Ecology and Environment, Inc. received 13 samples on Wednesday, July 24, 2002 for the analyses presented in the following report.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is $1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin
Project Manager

CC:
Enclosures as note

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207192
Date Received: 7/24/2002

Work Order Sample Summary

Lab Sample I	Client Sample ID	Alt. Client Id	Collection Date
0207192-01A	AOC9-GP54D2		7/23/2002 4:45:00 PM
0207192-02A	FIELDQC-TB9-GW8		7/24/2002 8:25:00 AM
0207192-03A	AOC9-GP53I		7/24/2002 9:40:00 AM
0207192-04A	AOC9-GP53S1		7/24/2002 9:59:00 AM
0207192-05A	AOC9-GP56I		7/24/2002 1:30:00 PM
0207192-06A	AOC9-GP57I		7/24/2002 2:40:00 PM
0207192-07A	AOC9-SS01(4-6)		7/24/2002 11:00:00 AM
0207192-07B	AOC9-SS01(4-6)		7/24/2002 11:00:00 AM
0207192-08A	AOC9-SS01(11.5-16)		7/24/2002 11:10:00 AM
0207192-08B	AOC9-SS01(11.5-16)		7/24/2002 11:10:00 AM
0207192-09A	AOC9-SS01(11.5-16)/D		7/24/2002 11:10:00 AM
0207192-09B	AOC9-SS01(11.5-16)/D		7/24/2002 11:10:00 AM
0207192-10A	AOC9-SS01(20-24)		7/24/2002 11:30:00 AM
0207192-10B	AOC9-SS01(20-24)		7/24/2002 11:30:00 AM
0207192-10BRE	AOC9-SS01(20-24)		7/24/2002 11:30:00 AM
0207192-11A	AOC9-SS02(2-4)		7/24/2002 2:53:00 PM
0207192-12A	AOC9-SS02(6-8)		7/24/2002 2:58:00 PM
0207192-13A	AOC9-SS02(10-10.5)		7/24/2002 3:04:00 PM

Ecology and Environment, Inc. Analytical Services Center

Cooler Receipt Form

PACKAGE RECEIPT #: 10324 NUMBER OF COOLERS: 1 DATE RECEIVED: 7/24/

E & E PROJECT #: _____ PROJECT OR SITE NAME: Griffis

A. Preliminary Examination Phase

CIRCLE ONE

1. Did coolers come with airbill or packing slip? _____ YES (NO) NA

   Enter carrier here and print airbill # below: *(Circle One)* FedEx Airborne Client (Other) Independent

   Ship as high hazard or dangerous goods YES (NO) NA

2. Did cooler(s) have custody seals? _____ (YES) NO NA

3. Were custody seals unbroken and intact on receipt? _____ (YES) NO* NA

4. Were custody seals dated and signed? _____ (YES) NO NA

5. Sign here to acknowledge receipt of cooler (s): Kevin Oakley

   Date cooler(s) opened: 7/24/02 C-O-C numbers: _____

   Cooler(s) opened by (print): Kevin Oakley Signature: Kevin Oakley

6. Were the C-O-C forms received? _____ (YES) NO* NA

7. Was the project identifiable from the C-O-C form? _____ (YES) NO* NA
   If YES, enter the project number and name in the heading above.

Please record Temperature Blank Vial or Cooler Temperature for Each Cooler, Range (2 - 6C)* NJDEP must be <4C

AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C	AIRBILL #	TEMP. °C
108749	4.0				

Thermometer # 129 Correction Factor +.5 * If No or Temperature Outside of Acceptable Range, prepare a PM Notification form.

B. Unpacking Phase

8. Was enough packing material used in cooler(s)? _____ (YES) NO NA
   Type of material: Vermiculite (Bubble Wrap) Other

9. If required, was enough ice used? _____ (YES) NO NA
   If YES, type of ice used: (Wet) Dry Blue Other

10. Was a temperature blank vial included inside cooler(s)? _____ (YES) NO NA
    If YES, indicate temperature blank vial temperature in table above. If NO, indicate cooler temperature in table above.

11. Were all containers sealed in separate plastic bags? _____ (YES) NO NA

12. Did all containers arrive unbroken and in good condition? _____ (YES) NO* NA

13. Samples stored in W Cooler before Login Phase? YES (NO)
    If yes: Signature In: _____ Date/Time: _____

    Signature Out: _____ Date/Time: _____

C. Login Phase

Samples Logged in By (print): Kevin Oakley Signature: Kevin Oakley Date: 7/24/02

14. Were all container labels complete (e.g. date, time preserved)? _____ (YES) NO* NA

15. Were all C-O-C forms filled out properly in ink and signed? _____ (YES) NO* NA

16. Did the C-O-C form agree with containers received? _____ YES (NO*) NA

17. Were the correct containers used for the tests requested? _____ (YES) NO* NA

18. Were the correct preservatives listed on the sample labels? _____ (YES) NO* NA

19. Was a sufficient sample volume sent for the tests requested? _____ (YES) NO* NA

20. Were all volatile samples received without head space? _____ (YES) NO* NA

*Prepare a PM Notification form.

Ecology and Environment, Inc.
Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Lab Order: 0207192

CASE NARRATIVE

The chain-of-custody (COC) form lists a sample as AOC9-GP57I. However, the containers are labelled AOC9-GP5702. The sample ID listed on the COC form was used.

GCMS VOLATILES
A DB 624 or equivalent column and a trap packed with OV-1, Tenax, silica gel and activated charcoal was used for the volatile analysis.

ample Analysis
ll aqueous volatile samples were determined to be at a pH of 7.

ll samples were analyzed within hold time.

ample AOC9-GP56I was analyzed at a five-fold dilution due to the level of chlorobenzene detected.

alibration and Tunes
ll initial and continuing calibrations were acceptable.

l surrogate recoveries were within acceptable limits.

l blank analyses were acceptable.

l matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except vinyl acetate s low in the MS/MSD of sample AOC9-SS01(20-24).

laboratory control sample (LCS) recoveries were acceptable except 2-butanone, 4-methyl-2-pentanone and yl acetate were low in the aqueous LCS-1465-20-1 used for the screening analysis.

internal standard area responses were acceptable.

MS SEMIVOLATILES
ESTEK (Rtx-5ms) column, which is 30-m long, 0.25-mm wide, and has a 0.5-micron film thickness, was d for the semivolatile analyses. The column contains 5% diphenyl and 95% dimethylpolysiloxane.

ple Analysis
samples were extracted and analyzed within hold time.

's (Tentatively Identified Compounds) are computer generated. No analyst interpretation was preformed.

bration and Tunes

All initial and continuing calibrations were acceptable.

A manual integration was required for benzoic acid in the continuing calibration standard analyzed on 8/03/02. The integration was needed due to the irregular peak shape.

QC
All surrogate recoveries were within acceptable limits except sample AOC9-SS01(20-24) had very high recoveries for phenol-d5 at 259% (128% limit) and 2-fluorophenol at 162% (135% limit). These surrogate recoveries were high due to the presence of a very large aldol condensation product peak. This large peak suppressed the response of the internal standard 1,4-dichlorobenzene-d4 which is used to calculate the two surrogates. The sample was not re-extracted as the re-extract would have been past the hold time for this sample. Also, no target compounds were detected in this sample and the surrogate recoveries were high, not low.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except the MS of sample AOC9-SS01(20-24) had high recoveries for benz(a)athracene at 117% (116% limit) and chrysene at 117% (115% limit).

All laboratory control sample (LCS) recoveries were acceptable.

All internal standard area responses were acceptable.

GC SEMIVOLATILES
PESTICIDE
The columns used for analysis were a CLPesticides (column 1) and a CLPesticides II (column 2), both 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

Sample Analysis
All samples were extracted and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

Manual integrations were not required.

QC
All surrogate recoveries were within acceptable limits.

All blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

CASE NARRATIVE

PCB
The column used for analysis was a CLPesticides II, 30 meters long and 0.53 mm in diameter, with a 1.0 um film thickness. A 1-ul injection was performed on all samples, QC, and standards.

ample Analysis
ll samples were extracted and analyzed within hold time.

alibrations
ll initial and continuing calibrations were acceptable.

anual integrations were not required.

C
ll surrogate recoveries were within acceptable limits except for a low recovery of the surrogate DCB in sample OC9-SS01(20-24) and the method blank.

l blank analyses were acceptable.

l matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

l laboratory control sample (LCS) recoveries were acceptable.

ETALS
nple Analysis
samples were digested and analyzed within hold time.

samples were analyzed at either a two-or five-fold dilution to remove interelemental interferences. orting limits have been adjusted accordingly.

ibrations
ibration of the ICP utilizes a zero and one non-zero standard to determine the linear equation for ntitation. A low concentration standard (PQL) is analyzed at the reporting level.

initial and continuing calibrations were acceptable.

calibration and preparation blank analyses were acceptable.

natrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable except aluminum, ium, iron, manganese, potassium and silver. The sample amount exceeded the spike amount added by ter than four times for aluminum, calcium and iron. Recoveries for manganese, potassium and silver were RPDs were high for aluminum and iron for the MS/MSD pair.

aboratory control sample (LCS) recoveries were acceptable.

erial dilution %D values were acceptable for sample AOC9-SS01(20-24) except for aluminum, calcium,

iron, potassium, manganese and magnesium.

MERCURY
Sample Analysis
All samples were digested and analyzed within hold time.

Calibrations
All initial and continuing calibrations were acceptable.

QC
All calibration and preparation blank analyses were acceptable.

All matrix spike/spike duplicate (MS/MSD) recoveries and RPD values were acceptable.

All laboratory control sample (LCS) recoveries were acceptable.

GENERAL ANALYTICAL CHEMISTRY
Sample Analysis
All samples were analyzed within hold time.

QC
All matrix duplicates (MD) were acceptable.

I certify that 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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Tony Bogolin
Project Manager

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207192
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207192-01A	AOC9-GP54D2	7/23/2002 4:45:00 PM	7/24/2002 6:22:00 PM	Water	COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-02A	FIELDQC-TB9-GW8	7/24/2002 8:25:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-03A	AOC9-GP53I	7/24/2002 9:40:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-04A	AOC9-GP53S1	7/24/2002 9:59:00 AM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-05A	AOC9-GP56I	7/24/2002 1:30:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-06A	AOC9-GP57I	7/24/2002 2:40:00 PM			COE Ft Worth VOCs, Low Level by GCMS Method 8260B			7/25/2002
0207192-07A	AOC9-SS01(4-6)	7/24/2002 11:00:00 AM		Soil	Volatile Organic Compounds by Method 8260B			7/25/2002
0207192-07B					ACE Semivolatile Organics by Method 8270C		7/26/2002	8/3/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/26/2002	7/31/2002
					PCBs by Method 8082		7/25/2002	7/30/2002
					Percent Moisture			7/25/2002
					Pesticides by Method 8081A		7/25/2002	8/1/2002
0207192-08A	AOC9-SS01(11.5-16)	7/24/2002 11:10:00 AM			Volatile Organic Compounds by Method 8260B			7/26/2002
0207192-08B					ACE Semivolatile Organics by Method 8270C		7/26/2002	8/3/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/26/2002	7/31/2002
					PCBs by Method 8082		7/25/2002	7/30/2002
					Percent Moisture			7/25/2002
					Pesticides by Method 8081A		7/25/2002	8/1/2002
0207192-09A	AOC9-SS01(11.5-16)/D				Volatile Organic Compounds by Method 8260B			7/26/2002

LIMS Version #: 3.1.4.4 - 7/31/2002 1:00:00 PM

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original sample unless the date differs from the original sample's TCLP extraction date which indicates TCLP extraction was also re-done.*

Ecology and Environment, Inc.

Analytical Services Center
Lancaster, New York 14086
Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

Lab Order: 0207192
Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Received Date	Matrix	Test Name	TCLP Date*	Prep Date	Analysis Date
0207192-09B	AOC9-SS01(11.5-16)/D	7/24/2002 11:10:00 AM	7/24/2002 6:22:00 PM	Soil	ACE Semivolatile Organics by Method 8270C		7/26/2002	8/3/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/26/2002	7/31/2002
					PCBs by Method 8082		7/25/2002	7/30/2002
					Percent Moisture			7/25/2002
					Pesticides by Method 8081A		7/25/2002	8/1/2002
0207192-10A	AOC9-SS01(20-24)	7/24/2002 11:30:00 AM			Volatile Organic Compounds by Method 8260B			7/25/2002
0207192-10B					ACE Semivolatile Organics by Method 8270C		7/26/2002	8/1/2002
					Griffiss Metals, TAL by ICP Method 6010B		7/31/2002	8/6/2002
					Mercury Analysis in Soil by Method 7471A		7/26/2002	7/31/2002
					PCBs by Method 8082		7/25/2002	7/30/2002
					Percent Moisture			7/25/2002
					Pesticides by Method 8081A		7/25/2002	8/1/2002
0207192-11A	AOC9-SS02(2-4)	7/24/2002 2:53:00 PM			Percent Moisture			7/31/2002
					Volatile Organic Compounds by Method 8260B			7/26/2002
0207192-12A	AOC9-SS02(6-8)	7/24/2002 2:58:00 PM			Percent Moisture			7/31/2002
					Volatile Organic Compounds by Method 8260B			7/26/2002
0207192-13A	AOC9-SS02(10-10.5)	7/24/2002 3:04:00 PM			Percent Moisture			7/31/2002
					Volatile Organic Compounds by Method 8260B			7/26/2002

**Reflects Date of TCLP Extraction Completion. For Re-extracted samples (*RE) reflects the TCLP Extraction from the original unless the date differs from*

Ecology and Environment, Inc.
Analytical Services Center
4493 Walden Avenue
Lancaster, New York 14086

Laboratory Results

NYS ELAP ID#: 10486
Phone: (716) 685-8080

Client: E and E Buffalo Office
Project: WAD 09 AOC 9/PCI 20
Work Order: 0207192

Method References

GC Semivolatiles

PCBs by Method 8082	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Pesticides by Method 8081A	

GCMS Semivolatiles

ACE Semivolatile Organics by Method 8270C	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

GCMS Volatiles

COE Ft Worth VOCs, Low Level by GCMS Method 8260B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
Volatile Organic Compounds by Method 8260B	

Mercury

Mercury Analysis in Soil by Method 7471A	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

Metals

Griffiss Metals, TAL by ICP Method 6010B	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. 3rd ed. 1986. Volumes.1A, 1B, 1C & Volume 2. (Includes all promulgated Updates). U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

WetChemistry

Client:	E and E Buffalo Office
Project:	WAD 09 AOC 9/PCI 20
Work Order:	0207192

Method References

Percent Moisture	Annual Book of ASTM Standards. 1997. Volumes 11.01-11.04 (Water Methods, Atmospheric Analysis, Hazardous Substances). American Society for Testing and Materials.

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Systems Audits

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FIELD LOGBOOK AUDIT FORM

Audit Date: 7/18/02	**Site Name:** GAFB -WAD 9
Auditor: Rick Watt	**Team Members:** R. Meyers, B. Cervi, S. Reynolds Smith
Quality Assurance Notice (QAN):	

Initial Information	Yes	No	NA	Comments
Site Name	✓			
Location	✓			
Client I.D.		✓		Client name not included Job number (with Contract code) included
Date of Work	✓			
Arrival/Departure Times	✓			
Proposed Daily Activities	✓			
On-going Weather	✓			
Team Members and Duties	✓			
Other Personnel and Affiliations	✓			
Other:				
HEALTH AND SAFETY				
Meeting Conducted	✓			
Personnel Attending	✓			
Levels of Protection for each Phase of Work	✓			
Safety Equipment	✓			
Equipment I.D. #		✓		Equipment types noted, not serial numbers.
Calibration		✓		Calibration not applicable. Instrument zeroed in clean air.
Background Readings	✓			Noted for AOI 473
On-site Reading	✓			For AOC 9, readings recorded on COC
Other:				
SAMPLE/DATA COLLECTION EQUIPMENT				
Types	✓			
Serial # (I.D. #)		✓		
Calibration		✓		See above
Background Readings	✓			Noted for AOI 473
On-site Readings/Locations	✓			For AOI 473, readings recorded in log. For AOC 9, readings recorded on COC.
Other:				

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FIELD LOGBOOK AUDIT FORM

	Yes	No	NA	Comments
DECONTAMINATION/DISPOSAL				
Solution Used	✓			Steam cleaning of Geoprobe equipment noted.
Procedures for Personnel		✓ PW	✓	Only process is glove removal; emergency decon in HASP
Procedures for Equipment	✓			Steam cleaning
Disposal Method for Wastes		✓		water discharged to ground but not noted.
Other:				
PHOTO DOCUMENTATION				
Camera		✓		
Lens			✓	
Serial #		✓		
Film Type/Roll #		✓		
Sequence #/Frame #	✓			
Photographer	✓			
Direction	✓			
Location/Subject	✓			
Date and Time	✓			
SITE ACTIVITY				
Conversation Interview with Site Representatives	✓			
Description of Site Management Practices			✓	
Descriptions of Wastes		✓		Only wastes were gloves & solids & decon water.
Pathways/targets			✓	
Reconnaissance Observations	✓			
Deviations from Approved Work Plan			✓	
Site Maps/Sketches	✓			
Field Calculations			✓	
Assumptions			✓	
Other:				

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FIELD LOGBOOK AUDIT FORM

	Yes	No	NA	Comments
SAMPLES				
Matrix and Numbers	✓			
Dates/Times Collected	✓			
Who Collected Sample	✓			
Locations	✓			
Depth	✓			
Composite/Grab	✓			
Physical Descriptions	✓			
Field Measurements	✓			
Sample I.D. #	✓			
Sampling Techniques		✓		Basic sampling procedures – no deviation from work plan
Preservation Techniques			✓	Pre preserved
Receipt for Samples Given	✓			Courier BOL; FedEx airbill
Portions Offered to Site Representative	✓			Splits to ERDC lab
Chain-of-custody (COC) Filled Out	✓			
Crosscheck of Sample Inventory vs. COC		✓		Observed – not noted in log
Other:				
GENERAL				
Each Page Signed and Dated by Team Leader	✓			Ongoing tables and that were not complete, not signed at time of audit
Entries Recorded by Anyone Else Initialed			✓	
Blank Pages/Spaces Voided	✓			
Corrections Made Properly	✓	✓		Some correct, some not initialed in one book.
Entries with 24-Hour Clock Time Notations	✓			
Other:				

Additional Comments

In general, very complete logs. Much sampling information that was not duplicated in log was on C-O-C forms.

Date 7/18/02

DAILY QUALITY CONTROL INSPECTION CHECKLIST FOR FIELD ACTIVITIES

HEALTH and SAFETY (H&S)	YES	NO	NA
Was the daily safety meeting held and documented?	☑	☐	☐
Were site contaminants of concern discussed in meeting?	☑	☐	☐
Were other H&S aspects discussed in meeting? Note below.	☑	☐	☐
Were exceptions, additions, or other changes in H&S procedures discussed?	☑	☐	☐

What level(s) of protection is required in HASP for today's work sites? A B C (D)

What level of personal protective equipment (PPE) is being worn by personnel at today's work sites? A B C (D)

COMMENTS Trip/fall in hummocky AOC-9 area and heat/humidity discussed. Use of respiratory protection during swipe sampling on a previous day noted (due to solvent used on swipes).

DAILY FIELD MEETING	YES	NO	NA
Was the daily meeting held by Field Team Leader and documented?	☑	☐	☐
Was the proposed scope of work discussed?	☑	☐	☐
Are work plan and subcontracts available for each field team to review if needed?	☑	☐	☐

COMMENTS Both logbooks reviewed contained daily objectives. Daily field activity report completed.

GEOPHYSICAL SURVEY	YES	NO	(NA)
Was equipment properly set-up?	☐	☐	☐
Was calibration of applicable equipment conducted?	☐	☐	☐
Were background readings established?	☐	☐	☐
Have potential sources of geophysical interference been identified?	☐	☐	☐
Was appropriate field documentation completed?	☐	☐	☐

COMMENTS Task not performed.

Date 7/18/02

NEAR-SURFACE SOIL SAMPLING	YES	NO	(NA)
Were the sample collection points located in accordance with the work plan?	☐	☐	☐
Was the sampling conducted in accordance with the work plan?	☐	☐	☐
Were the samples collected for the correct analyses?	☐	☐	☐
Was the appropriate field documentation completed?	☐	☐	☐
Was the sample handling, preservation, and shipping performed in accordance with the work plan?	☐	☐	☐

COMMENTS Task not performed.

DRILLING	YES	NO	NA
Have applicable drilling permits and utility clearances been obtained for this site?	☑	☐	☐
Was the exclusion zone and contaminant reduction zone established around the drill rig?	☐	☐	☑
Was the drilling and sampling equipment decontaminated prior to use in accordance with the work plan?	☑	☐	☐
Was the kill switch on the drill rig tested prior to drilling?	☐	☐	☑
Was the SSO present during drilling operations?	☑	☐	☐
Was the appropriate monitoring equipment used?	☑	☐	☐
Was the calibration of applicable equipment conducted?	☑	☐	☐
Were the instrument readings recorded?	☑	☐	☐
Were the geologic logs and proper documentation completed by the geologist?	☑	☐	☐
Were the soil samples field screened?	☐	☐	☑
Were the soil samples collected in accordance with the work plan?	☐	☐	☑
Was the collection of samples documented?	☐	☐	☑
Were the soil samples handled, cooled, and shipped in accordance with the work plan?	☐	☐	☑
Were drill cuttings field screened for contamination?	☐	☐	☑
If the cuttings required drumming, were the drums labeled and properly staged?	☐	☐	☑

Date 7/18/02

COMMENTS Rotary drilling not conducted, so much of above is not applicable. DPT rig (Mule) used to drive casing - no IDW generated / no cuttings brought to surface. Mule was moved location to location frequently.

MONITORING WELL INSTALLATION	YES	NO	NA
Was the total depth of the boring measured and recorded?	☑	☐	☐
Has water been added to the borehole during drilling or well installation?	☐	☑	☐
Was the PVC clean?	☑	☐	☐
Was the correct size and specification slotted screen and PVC riser placed into the well?	☑	☐	☐
Was the depth of the sandpack and bentonite seal measured during construction?	☐	☐	☑
Were the bentonite pellets allowed to hydrate?	☐	☐	☑
Was protective casing (above-ground or flush-mount type) installed?	☐	☐	☑
Was a permanent survey marker installed in the cement pad?	☐	☐	☑
Was a metal identification tag installed?	☐	☐	☑
Was the well locked upon completion?	☐	☐	☑
Was a water level monitoring reference point or notch established?	☐	☐	☑
Was a monitoring well construction diagram completed?	☐	☐	☑
Was the well construction completed in accordance with the work plan?	☑	☐	☐

COMMENTS Temporary groundwater sampling points installed. No permanent wells constructed.

WELL DEVELOPMENT	YES	NO	(NA)
Has an exclusion zone been properly set up around the well?	☐	☐	☐
Was the water level and total depth of the well measured?	☐	☐	☐
Were water quality parameters measured during development?	☐	☐	☐
In addition to standard volume removal, has additional volume been removed to compensate for water added during drilling (if any)?	☐	☐	☐
Was well development water screened and containerized (if necessary)?	☐	☐	☐
Was a record of the development parameters and volume of water removed kept?	☐	☐	☐
Was development completed in accordance with the work plan?	☐	☐	☐
Was a photograph taken of the final development water?	☐	☐	☐
Was calibration of applicable test equipment conducted?	☐	☐	☐

Date 7/18/02

COMMENTS Task not performed

GROUNDWATER SAMPLING AT PERMANENT MONITORING WELLS	YES	NO	(NA)
Was the well sampled a minimum of 14 days after grouting/ cementing (newly installed wells)?	☐	☐	☐
Was purge water screened and containerized (if necessary)?	☐	☐	☐
Were samples immediately placed inside a sample cooler with ice?	☐	☐	☐
Were the samples collected for the correct analyses?	☐	☐	☐
Were samples for dissolved metals (if any) field filtered?	☐	☐	☐
Was proper documentation completed for the samples collected?	☐	☐	☐
Were samples handled, preserved, and shipped in accordance with the work plan?	☐	☐	☐

COMMENTS Task not performed.

SURFACE WATER/SEDIMENT SAMPLING	YES	NO	(NA)
Were sample collection points located in accordance with the work plan?	☐	☐	☐
Were downstream samples collected before upstream?	☐	☐	☐
At each location, was the surface water sample collected prior to the sediment sample?	☐	☐	☐
Was proper documentation completed for the samples collected?	☐	☐	☐
Were field parameters measured and recorded for each surface water sample?	☐	☐	☐
Was the sampling conducted in accordance with the work plan?	☐	☐	☐
Were samples handled, preserved, and shipped in accordance with the work plan?	☐	☐	☐

COMMENTS Sediments for AOC-9 AFFF lagoon collected on a previous day.

Date 7/18/02

GROUNDWATER SCREENING SAMPLES AT TEMPORARY WELLS	YES	NO	NA
Has an exclusion zone been set up around the temporary well?	☑	☐	☐
Was purge water screened and containerized (if necessary)?	☐	☐	☑
Were water quality parameters measured and recorded during purging/sampling?	☐	☐	☑
Were turbidity of both the filtered and unfiltered metals samples measured and recorded?	☐	☐	☑
Were all samples handled, preserved and shipped in accordance with the work plan?	☑	☐	☐
Was proper documentation completed for the samples collected?	☑	☐	☐
Was the sampling conducted in accordance with the work plan?	☑	☐	☐

COMMENTS Grab samples collected with dedicated/disposable HDPE bailers. Exclusion zone consisted of "Caution" tape around cluster of sample points. Sample info recorded in log and immediately on chain-of-custody.

INVESTIGATION-DERIVED WASTE	YES	NO	(NA)
Were investigation-derived soils and groundwater field screened?	☐	☐	☐
Was any potentially contaminated soil or groundwater (as determined by field screening) drummed?	☐	☐	☐
Were all drums labeled and properly staged?	☐	☐	☐
Was handling of investigation-derived waste performed in accordance with the work plan?	☐	☐	☐

COMMENTS No sampling waste generated except solid waste such as gloves, used bailers, etc. This material was bagged for off-site disposal by E&E.

SOIL GAS SURVEY	YES	NO	(NA)
Was soil gas grid set up according to the work plan?	☐	☐	☐
Were the passive soil gas receptors labeled and installed according to the manufacturer's specifications?	☐	☐	☐
Were the passive soil gas receptors correctly removed, handled and shipped for analysis according to the manufacturer's instructions?	☐	☐	☐

COMMENTS Task not performed.

Date 7/18/02

TEST PITS	YES	NO	(NA)
Has an exclusion zone been properly set up at the test pit area?	☐	☐	☐
Have proper H&S concerns been addressed at the test pits?	☐	☐	☐
Was a fire extinguisher present on site?	☐	☐	☐
Were the subsurface conditions in the test pits properly described?	☐	☐	☐
Were the test pits properly photographed?	☐	☐	☐
Were the test pits properly backfilled and regraded?	☐	☐	☐

COMMENTS Task to be conducted 7/19/02.

Location Griffiss AFB, ADC-9 Date 7/18/02

QC Inspector Name Rick Watt

QC Inspector Signature R. L. M. Watt

General Description of Today's Scope of Work Field team (2 E&E) working with subcontractor (Zebra) to install temporary groundwater sampling points in clusters of five using Geoprobe rig. E&E then collected grab samples from each point for off-site analysis. FTL (R Meyers) assisted team, reviewed data, selected drilling locations, and packaged samples for shipment. All roles are well defined and team is very familiar with work plan and E&E SOPs. RMW

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FIELD AUDIT CHECKLIST 7/18/02

Project Name: GAFB WA09	Project Number: 001002.UK10
Location: Griffiss AFB, Rome, NY	
E & E Personnel: R. Meyers-FTL ; Brian Cervi ; Stephanie Reynolds Smith	

Presampling Procedures

1. Are routine/special sampling requirements discussed and documented in the logbook?
   Comments: No special requirements.. Routine samples noted at time of collection.

2. Are personnel assigned as:
   a. Sample custodian (name): S. Reynolds Smith
   b. Team leader (name): R. Meyers
   c. Sampler (name): B. Cervi
   d. H&S (name): S. Reynolds Smith

3. Does the team member responsible for the following activities known how to complete them:
   a. Sample documentation and inventory yes
   b. Decontamination procedures yes
   c. Photodocumentation yes
   d. Chain-of-custody yes
   e. Sample packaging and shipping yes
   f. Site generated wastes yes
   Comments:

4. Are past problems reviewed, discussed, and solutions identified and documented in the logbook?
   Comments: Noted during daily meeting and recorded on separate form.

5. Are site safety concerns covered during the meeting?
   Comments: yes. Noted on separate form.

Sampling Procedures and Documentation

1. Is a copy of the workplan/sampling plan available so the team members understand the procedures required for sampling and sample collection? Yes.
   Comments:

2. Do team members know what to do if procedures cannot be used as identified in the sampling plan? Yes.
   Comments: Contact field team leader to discuss

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FIELD AUDIT CHECKLIST 7/18/02

3. **Have changes in the sampling procedures been noted in the logbook?**
Comments: No deviation from procedures required. Where multiple attempts to Geoprobe at a given location occurred, this was noted.

4. **Does the team have the necessary equipment for collecting appropriate samples?**
Comments: Yes.

5. **Does the team record appropriate information at the time that the sample is collected? (i.e., sample interval, sample type, composite or grab sample, etc.)**
Comments: Yes. Noted in logbook and/or directly on chain-of-custody.

6. **Are sample jars kept clean during transfer of sample material?**
Comments: Yes. Kept in box/cooler before use; gloves worn during sampling.

7. **Are samples preserved as indicated in the sampling plan?** Yes.
Comments:

8. **Are there any visible signs of contamination evident on the sampling equipment?** No.
Comments:

Chain-of-Custody

1. **Are samples kept in a controlled area (i.e., in a locked location or with a team member) at all times?**
Comments: Yes. Bottles (unused) stored in locked office.

2. **Is all of the sample information (sample type, date, time, etc.) noted on the chain-of-custody?**
Comments: Yes. Form kept up to date as sampling progressed.

3. **Have all samplers signed the chain-of-custody form?** Yes.
Comments:

4. **Is the Federal Express air bill number listed on the chain-of-custody form?** Yes.
Comments:

5. **Has a separate team member been assigned to cross check the sample inventory and the chain-of-custody prior to shipment?** Yes. Performed by field team leader.
Comments:

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6. Is the cross check procedure noted in the logbook? No. But process was observed
Comments:

7. Are the sample numbers and Federal Express bill numbers listed in the sample log or the site logbook? No because C-O-C maintain on file at site with logbook.
Comments:

8. Were the labels, logbooks, and chain-of-custody form cross checked? Yes.
Comments:

Quality Control Samples

1. What QC samples are required (as per sampling plan)?
Comments: 1 dupe per 10 samples 1 MS/MSD per 20 samples
1 split per 10 (ERDC lab) 1 trip blank per cooler for VOCs only

2. What frequency must QC samples be collected?
See above.

3. Are trip blanks being used? Yes.
Comments:

4. Which laboratory provided trip blanks?
Premade by Analytical Services Center - discussion that day regarding contamination OF premade trip blanks with acetone.

5. Are appropriate materials used to generate QC samples? Yes.
Comments: Upon discovery of acetone-contaminated trip blanks, Field team used new bottles and deionized water for samples & QC.

Site Generated Wastes

1. What level of protective clothing is required? D

2. What equipment is available on site? TVA 1000 for organic vapors, gastech explosimeter, water level indicator.

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3. **Is the equipment calibrated daily and in accordance with appropriate procedures?**
Instrumentation calibrated before rental in shop. Gastech explosimeter zeroed in clean air.

4. **Are calibration data recorded in appropriate logbooks?**
Comments: Calibration not necessary. Zero air check not noted.

5. **Is data collected according to specific procedures and recorded in the site logbook?**
Comments: Readings recorded on chain-of-custody form for geoprobe waters. O_2 readings indoors during AOI 473 swipe sampling recorded (TVA readings too).

Sample Packaging and Shipping

1. **Describe sample packaging procedures.**
Jars taped, packaged with bubble wrap and iced (ice in Ziplocbags).

2. **Is packaging done at the end of the day, or as samples are collected?**
Samples labeled, sealed, & iced at time of collection. Bubble wrap and additional ice added just prior to shipment.

3. **Was an inventory conducted for chain-of-custody, logbook, and sample containers?** Yes.
Comments:

4. **Are samples packed on ice?** Yes.
Comments:

5. **Is the proper information being entered on the Federal Express form for billing purposes (i.e., project number and cost code)?** Yes.
Comments:

Personnel Management

1. **Is the team leader noting the time that each team member arrives and departs the site in the logbook?** Yes.
Comments:

2. **Do the weekly time reports reflect the on-site time only?** Yes.
Comments: Time cards reflect all billable time (including a portion of travel).

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Other Comments:

Experienced field team well versed in sampling procedures and related protocols. No gross discrepancies noted.

Field team was asked to add sample cross-check process to field logbook.

FIELD AUDITOR: Rick Watt	R L M Watt
FIELD TEAM LEADER: Bob Meyers	Robert A Meyers
DATE OF AUDIT: 7/18/02	