INTERNATIONAL TECHNOLOGY CORPORATION

Project No. 519070
October 1994

01190

Final

Baseline Monitoring Report

Ash Landfill Immediate Response
Seneca Army Depot
Romulus, New York

Contract No. DACW45-90-D9002
Delivery Order No. 93

Prepared for:
U.S. Army Corps of Engineers
Omaha District
215 N. 17th Street
Omaha, Nebraska 68102-4978

Prepared by:
IT Corporation
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(716) 271-6430

INTERNATIONAL TECHNOLOGY CORPORATION

TRANSMITTAL LETTER

IT Corporation
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October 21, 1994

Dear Sirs:

Please find enclosed the final version of the Baseline Monitoring Report. This document is submitted for the Ash Landfill Removal Action- Phase 1 project at the Seneca Army Depot, Romulus, New York under Contract No. DACW45-90-D-0002, Delivery Order No. 93. The Baseline Monitoring Report presents the results of the baseline monitoring program, including collection of on-site meteorological data, ambient, results of background sampling for VOCs, SVOCs, and particulate matter, and provides general comments based on observations from the baseline program.

Questions concerning this document can be addressed to Mr. Peter Coutts or Mr. Jeffrey Korb of IT Corporation at (716) 271-6430.

Respectfully,

IT CORPORATION

Jeffrey Korb
Air Technical Manager

for

Peter Coutts
Project Technical Manager

JK:PC:jk
Encl.

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Final
Baseline Monitoring Report

Seneca Army Depot
Romulus, New York

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Table of Contents

1.0 Introduction

This Baseline Monitoring Report outlines the baseline air monitoring program and presents the findings of the baseline sampling activities as implemented for the Ash Landfill remediation project. The Baseline Monitoring Program was performed by IT Corporation (IT) in support of the Work Plan and Scope of Services for the Rapid Response interim remedial measure (IRM) at the Seneca Army Depot in Romulus, New York. This Report has been prepared to provide a summary of the tasks completed by IT for the U.S. Army Corps of Engineers (USACE), Omaha District, so that it meets the requirements detailed in Delivery Order No. 93, under Rapid Response contract number DACW45-90-D-9002.

1.1 Site Location and History

The Seneca Army Depot facility is located in Romulus, New York near the eastern shore of Seneca Lake, where it was constructed in 1941. Prior to ownership by the Department of the Army, the site was used for farming. The Ash Landfill site encompasses approximately 130 acres of the 10,587 acre Seneca Army Depot, near the southwestern corner of the facility. The site consists of the abandoned landfill area, including the Ash Landfill and the Non-Combustible Landfill, a burned out incinerator building and stack, and a nearby cooling pond. Residences and farmland border the area on the western side and beyond that lies Seneca Lake. The SEDA railroad runs to the east of the site and SEDA has undeveloped land to the south. Cemetery Road bounds the area to the north.

The subject of this Rapid Response action is the "Bend-in-the-Road" Landfill located near the western boundary of the Seneca Army Depot. The Ash landfill was established to dispose of ash generated from burning of the facilities' trash from 1941 to the early 1960's. In 1974, an incinerator was built to treat the refuse from facility operations and the ash from the incinerator was also buried in the "Bend-in-the-Road" landfill area. A fire in May of 1979 destroyed the incinerator and the landfill was closed at the same time. Since that time, the landfill area has been capped with various layers of soils, but was never closed with an engineered cover or cap.

In addition to the burning pit and incinerator ash disposed of in the Ash Landfill, it is suspected that other types of facility refuse and domestic wastes have also been buried in the landfill. The amount and type of debris varies greatly, with household trash such as bottles and cans to construction-type debris.

1.2 Task Description

The baseline monitoring activities are part of the implementation of the first phase of the Ash Landfill IRM project, which includes perimeter air monitoring during site activities. Phase 2 activities will include dewatering activities, excavation of soil volumes, and treatment of the contaminated soil by low temperature thermal desorption (LTTD). The Baseline Monitoring Program results will be used to establish the technically appropriate locations for the perimeter air monitoring stations surrounding the Ash Landfill area during Phase 2 operations. In addition, this program will identify and quantify ambient background levels of air contaminants in the Ash Landfill area.

Section 2.0 of this Report describes the details of the implementation of the Baseline Monitoring Program including collection of on-site meteorological data and background air samples. The results of the baseline monitoring is presented in Section 3.0. Section 4.0 describes the quality assurance/ quality control (QA/QC) performed for the task. In Section 5.0, conclusions from the Baseline Monitoring Program are discussed.

2.0 Baseline Monitoring Program

The basic elements and requirements for the Baseline Monitoring Program are presented in the project's Air Monitoring Plan (AMP), submitted as part of the Ash Landfill project Work Plan, written by IT and approved by the USACE in September, 1994. The Baseline Monitoring Program consists of the collection of on-site meteorological data and ambient background air samples for a period of three (3) days prior to the start of on-site project activities. In the sections below, the set-up and implementation of the Baseline Monitoring Program is presented.

2.1 Objectives

The Baseline Monitoring Program was designed to collect localized ambient air data at the Ash Landfill project site. On-site meteorological data was collected to characterize local meteorological conditions prior to and during baseline monitoring activities. This information will be used to develop information to properly locate and site the perimeter air monitoring stations that will be in operation during Phase 2 of the project. Measurements of wind direction and wind speed are used to determine station locations, as outlined in USEPA guidance documentation, "Volume IV- Guidance for Ambient Air Monitoring at Superfund Sites (Revised)." In addition, localized meteorological data will provide important information for the evaluation of potential air dispersion in the area and for input for any air modeling programs utilized in support of the project.

Another objective of the baseline monitoring program is to collect background samples of ambient air conditions at the Ash Landfill site. Collection of ambient air samples will allow characterization and quantification of existing, ambient air concentrations of a wide range of possible air contaminants in the Ash Landfill area. With the results from these samples, the identification and concentration of chemicals in the air can be known and compared to air media results collected for Phase 2 activities.

2.2 On-Site Meteorological Station

The on-site meteorological (MET) station constructed for this project consists of a ten (10) meter retractable aluminum tower operated by a high-voltage marine battery. Specialized measurement sensors required by the AMP are attached to the MET tower. These sensors include:

- wind direction vane

- wind speed sensor/anemometer
- temperature gauge
- relative humidity sensor
- barometric pressure gauge, and
- precipitation gauge

All sensors meet the required performance criteria outlined in the AMP. The MET station sensors are connected to a datalogging computer that records measurements every 5 minutes and averages these readings over a hourly period. Downloading of meteorological data is available on demand. Julian date and standard time (EST) are kept continuously by the datalog system.

The MET station was located and sited according to USEPA siting criteria. As seen in Figure 2-1, the MET station is located away from obstructions that could influence wind measurements and is upwind from project work areas, as indicated from available prevalent wind direction data (see ES RI Report, October, 1993). Set-up and calibration of meteorological sensors was performed by IT on August 27-28, 1994. Data collection commenced on August 28, 1994 at 1000 hours.

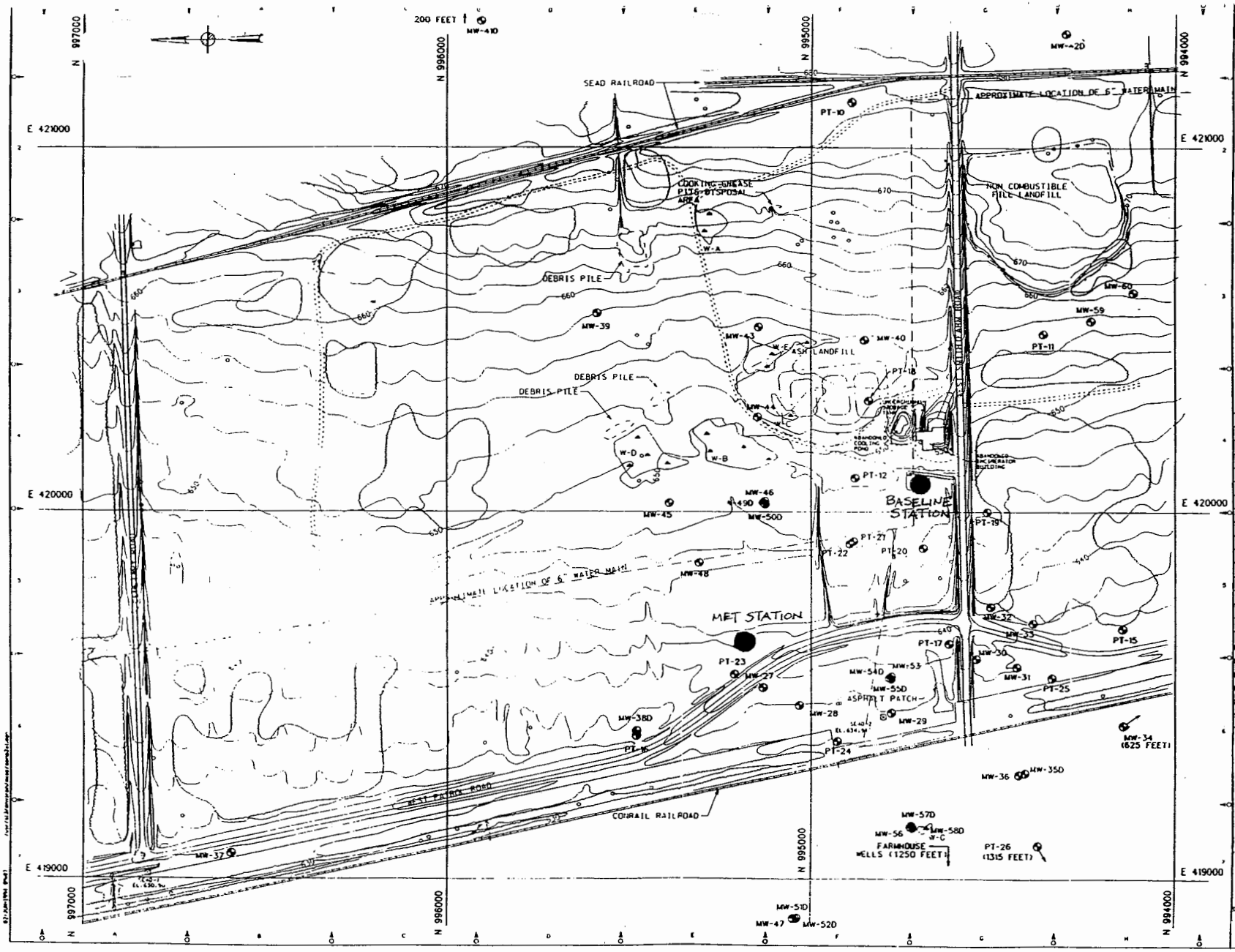
2.3 Ambient Baseline Monitoring

The ambient baseline monitoring station was established approximately 100 feet away from the abandoned incinerator building, as seen in Figure 2-1. The monitoring station housed the sampling equipment necessary to perform the sample collection outlined in the AMP as follows:

- TO-14 SUMMA®-passivated canister with flow regulator
- PM_{10} high volume sampler
- TO-13 sampler with PUF/XAD-2 resin cartridge

Monitoring equipment was placed on a scaffold, set-up, and calibrated according to USEPA method requirements and/or manufacturer's instructions. IT performed these activities on September 1-2, 1994. Sample collection commenced on September 2, 1994 at 1800 hours.

Sampling and analytical protocols for the ambient data collection followed appropriate USEPA reference methods and Compendium Methods, as listed above. PM_{10} samples and TO-13 samples were collected over 24 hour sampling periods. TO-14 VOC samples were collected over twelve hour sampling periods. Periodic direct, real-time monitoring with a photoionization



LEGEND:

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- FUEL OR UNDERGROUND STORAGE TANK
- SURVEY MONUMENT
- MONITORING WELL AND DESIGNATION

C		DRAFT-FINAL SUBMITTAL
B		PRELIMINARY PHASE II RI/FS
A		ISSUED WITH PRELIMINARY SITE CHARACTERIZATION REPORT
NO.	DATE	DESCRIPTION

DESIGNED BY K.E.BAKER
DRAWN BY G.A.MACLIN
CHECKED BY W.D.DUCHESNEAU
PROJECT MANAGER W.D.DUCHESNEAU
QUALITY ENGR. J.P.CHAPLICK
PROJECT ENGR. J.P.CHAPLICK
APPROVED BY W.D.PATTERSON

FIGURE 2-1
SITE PLAN

PREPARED FOR

SENECA army DEPOT
ROMULUS, NEW YORK

INTERNATIONAL TECHNOLOGY CORPORATION

SCALE 1" = 250'

detector and dust monitor was also performed while ambient samples were collected.

2.4 Baseline Monitoring Program Performance

Under the protocol outlined in the AMP, the Baseline Monitoring Program collected ambient background data for a period of three (3) days prior to the start of project site activities. The program was successfully completed over a period of seven (7) days. Collection of on-site meteorological data was initiated on August 28th and the MET station continues to collect localized measurements. Ambient air sampling was initiated on September 2, 1994 for a period of 24 hours. Sampling recommenced on September 6-7, 1994 with two consecutive 24 hour periods. All ambient air sample collection was performed according to appropriate method protocols.

One significant event occurred during baseline monitoring activities. During the last 24 hour sampling period, one of the TO-14 SUMMA® canisters failed to collect a sample. IT extended the program for an additional 12 hours to collect the last remaining TO-14 canister. Sampling for the baseline program was completed on September 8, 1994.

3.0 Baseline Monitoring Program Results

Results from the Baseline Monitoring Program are presented below. Both on-site meteorological data and sample analytical data were reviewed against criteria specified in the Air Monitoring Plan in order to verify the validity of the on-site measurements.

3.1 Meteorological Observation Summary

The on-site meteorological system collects localized measurements of wind speed, wind direction, relative humidity, barometric pressure, temperature, and precipitation levels. Meteorological parameter measurements collected prior to and during the air media sample collection showed no significant deviation from expected norms. The on-site MET station performed well and achieved project quality objectives stated in the AMP with greater than 90% retrieval.

Meteorological measurements include temperature readings ranging from a high of 80.10° F at 1300 hours on August 28, 1994 to a low of 41.26° F at 0400 hours on September 5th. Average temperature during the baseline monitoring period was 60.3° F. Precipitation for the period was negligible. For reference, Appendix A contains the on-site meteorological data that was collected and validated fro the baseline monitoring activities.

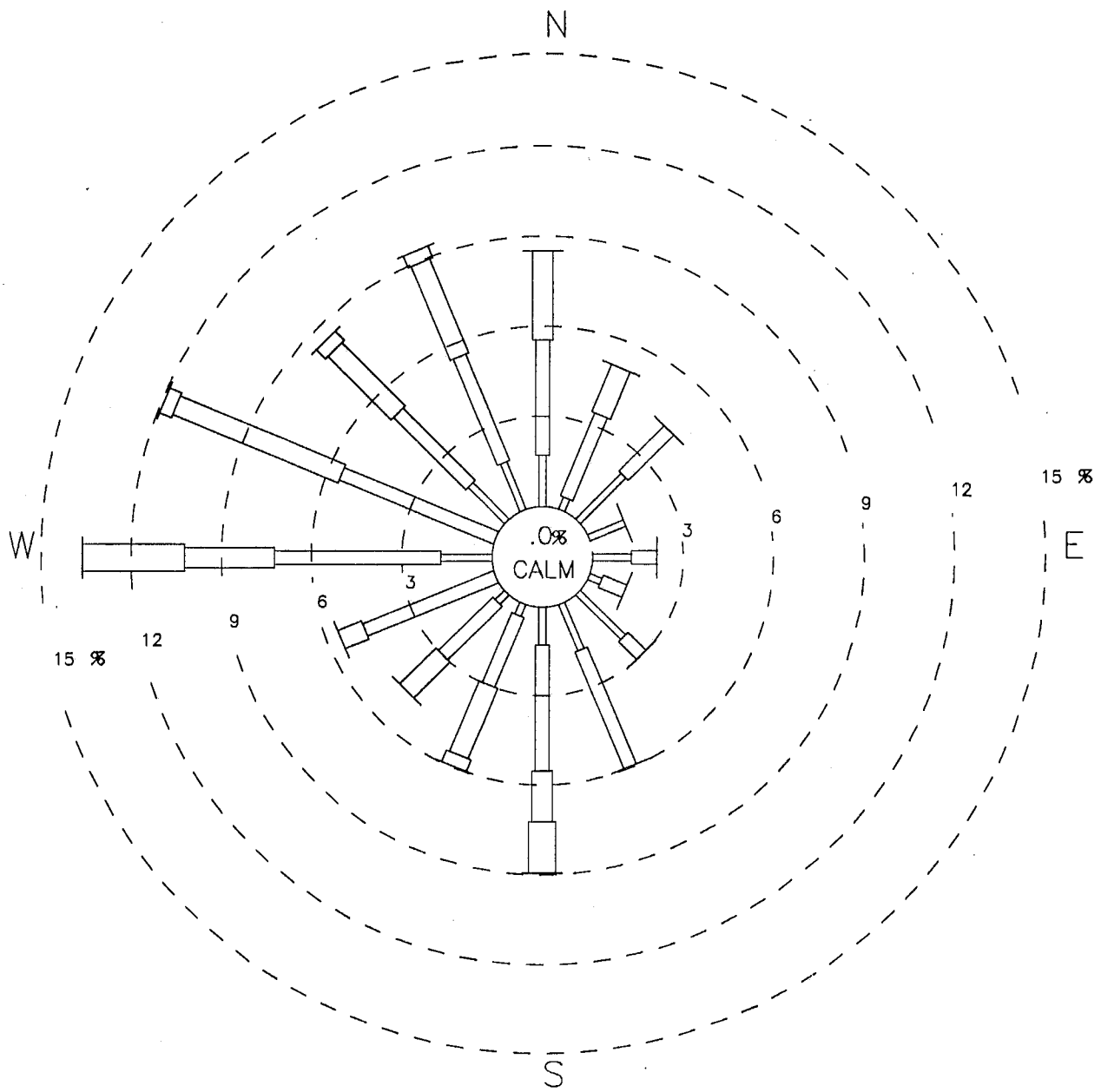
From the hourly wind direction and wind speed data, a composite windrose for the on-site MET station is presented in Figure 3-1. The windrose provides a representation of the local weather conditions for the period from August 28 through September 8, 1994. As can be seen from the figure, two major wind vectors, one from the north and one from the west, are discernable. Prevalent winds appear to derive primarily from the northwest quadrant.

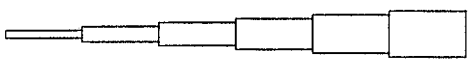
3.2 Ambient Analytical Data Summary

Analytical concentrations of the background air at the Ash Landfill area are presented in Table 3-1 through Table 3-3. With the exception of the failed TO-14 sample collection, all samples were collected successfully and within method-specified requirements. Data retrieval exceeded the program requirement of 90 percent. For reference, the Certificates of Analysis from the laboratory have been included as Appendix B to this Report.

Concentrations of particulate matter collected via the PM_{10} sampler ranged from 8.3 ug/m^3 to 19 ug/m^3 in the three samples, for an average respirable dust concentration of

FREQUENCY OF WIND SPEED AND WIND DIRECTION





1–3 (18 %) 4–6 (48 %) 7–10 (27 %) 11–16 (7 %) 17–21 (0 %) 22–99 (0 %)

WIND SPEED SCALE (KNOTS)

NOTE – WIND DIRECTION IS THE DIRECTION WIND IS BLOWING FROM

SENECA ARMY DEPOT
ASH LANDFILL AREA
ROMULUS, NEW YORK
IT PROJECT NO. 519070
AUG. 28– SEP. 8, 1994
BASELINE WINDROSE

15.36 ug/m^3. Real-time dust monitoring conducted periodically in a walk-through sampling of the Ash Landfill area indicated non-detectable levels for all measurements.

Baseline semi-volatile compound (SVOCs) monitoring with the TO-13 protocol revealed trace levels of several different compounds at the project site. Compounds with repeated levels in the baseline samples include:

- Phenol
- Benzyl alcohol
- 2-Nitrophenol
- Benzoic acid
- Naphthalene
- 2-Methylnaphthalene
- bis (2-ethylhexyl) phthalate

All of these compounds were indicated as present at the site, but most were present only in trace levels and at estimated concentrations (below method detection limits).

A full suite of volatile organic compounds (VOCs) were collected and analyzed by USEPA Compendium Method TO-14. Results indicated a wide range of VOCs present in the site background air levels. The twelve hour samples did not collect quantifiable concentrations of the expected chemicals of concern for this site: trichloroethylene (TCE), 1,2-dichloro-ethylene (DCE), and vinyl chloride (VC). Higher than expected levels of 1,1,1-trichloroethane and methlyene chloride are currently not explainable. Spikes of benzene, ethylbenzene, toluene, and xylenes were detected in one sample and are attributable to the presence of localized vehicular traffic emissions. Dichlorodifluoromethane (DCDFM) is a suspected sampling protocol contaminant.

Direct, real-time monitoring with a photoionization detector (PID) was performed on a periodic schedule while sampling was being conducted. No quantifiable readings were recorded with the PID during these screening activities.

Table 3

U.S. Army Corps of Engineers Omaha District
Seneca Army Depot, Romulus, N.Y.
Summary of PM 10 Results

Type	Date Collected	Sample ID #	Sample Duration	Total Particulate (ug/m3)
PM-10	9/2/94	AB8932	24 hr.	8.29
PM-10	9/7/94	AB9115	24 hr.	19.00
PM-10	9/8/94	AB9116	24 hr.	18.79
			AVERAGE	**15.36**

Table 3-__

U.S. Army Corps of Engineers Omaha District
Seneca Army Depot, Romulus, New York
Summary of TO-13 Semi-Volatile Results

Type	Date Collected	Sample ID #	Sample Duration	Compound(s) Detected	Result (ug)	Q	Flow Rate (m3)	SVOC Conc. (ug/m3)
SVOC	9/2/94	AB8935	24 hr.	1,4 Dichlorobenzene	1	J	0.177	5.650
				Benzoic Acid	7	J	0.177	39.548
				Naphthalene	7	J	0.177	39.548
				2-Methylnaphthalene	3	J	0.177	16.949
SVOC	9/2/94	AB8935D	24 hr.	1,4 Dichlorobenzene	3	J	0.177	16.949
				Benzoic Acid	0.027	J	0.177	0.153
				Naphthalene	0.027	J	0.177	0.153
				2-Methylnaphthalene	0.011	J	0.177	0.062
SVOC	9/7/94	AB9109	24 hr.	Phenol	2	J	0.167	11.976
				Benzyl Alcohol	2	J	0.167	11.976
				2-Nitrophenol	1	J	0.167	5.988
				Benzoic Acid	12	J	0.167	71.856
				Naphthalene	7	J	0.167	41.916
				2-Methylnaphthalene	3	J	0.167	17.964
				Bis(2-Ethylhexyl)Phthalate	23		0.167	137.725
SVOC	9/7/94	AB9109D	24 hr.	Phenol	0.009	J	0.167	0.054
				Benzyl Alcohol	0.01	J	0.167	0.060
				2-Nitrophenol	0.004	J	0.167	0.024
				Benzoic Acid	0.052	J	0.167	0.311
				Naphthalene	0.03	J	0.167	0.180
				2-Methylnaphthalene	0.013	J	0.167	0.078
				Bis(2-Ethylhexyl)Phthalate	0.096		0.167	0.575
SVOC	9/8/94	AB9110	24 hr.	Phenol	2	J	0.151	13.245
				Benzyl Alcohol	2	J	0.151	13.245
				Benzoic Acid	28	J	0.151	185.430
				Naphthalene	4	J	0.151	26.490
				2-Methylnaphthalene	2	J	0.151	13.245
				Bis(2-Ethylhexyl)Phthalate	2	J	0.151	13.245
SVOC	9/8/94	AB9110D	24 hr.	Phenol	0.008	J	0.151	0.053
				Benzyl Alcohol	0.008	J	0.151	0.053
				Benzoic Acid	0.125	J	0.151	0.828
				Naphthalene	0.017	J	0.151	0.113
				2-Methylnaphthalene	0.007	J	0.151	0.046

NOTES:

SVOC- Semi-volatile organic compound

Q- Analytical qualifier

J- Indicates an estimated value. Analytical result was less than specified detection limit.

Table
U.S. Army Corps of Engineers Omaha District
Seneca Army Depot, Romulus, New York
Summary of TO-14 Volatile Results

Type	Date Collected	Sample ID #	Sample Duration	Compound(s) Detected	VOC results in ppb (v/v)
VOC	9/2/94	AB8933	12 hr.	Dichlorodifluoromethane	0.55
				1,1,1-Trichloroethane	1.3
				Toluene	0.72
VOC	9/2/94	AB8934	12 hr.	Dichlorodifluoromethane	0.59
				1,1,1-Trichloroethane	1.3
VOC	9/2/94	AB8934DP	NA	Dichlorodifluoromethane	0.6
				1,1,1-Trichloroethane	1.3
VOC	9/7/94	AB9111	12 hr.	Dichlorodifluoromethane	0.54
				Methylene Chloride	260 E
				1,1,1-Trichloroethane	0.81
VOC	9/7/94	AB9113	12 hr.	Dichlorodifluoromethane	0.53
				1,1,1-Trichloroethane	2.3
VOC	9/8/94	AB9114	12 hr.	Dichlorodifluoromethane	0.83
				Trichlorofluoromethane	0.93
				Methylene Chloride	3.9
				1,1,1-Trichloroethane	1
				Benzene	0.88
				Toluene	42
				Ethylbenzene	0.69
				m/p-xylene	2
				O-xylene	1
				Styrene	0.83
VOC	9/8/94	AB9114DL	NA	Methylene Chloride	340
VOC	9/9/94	AB9425	12 hr.	Dichlorodifluoromethane	0.58
				Chloromethane	0.56
				Methylene Chloride	29

NOTES:

VOC- Volatile organic compound
"DP" or "DL"- Duplicate sample designation
NA- Not applicable

4.0 Quality Assurance/Quality Control (QA/QC)

The Baseline Monitoring Program, as part of the implementation of the Air Monitoring Plan for the Seneca Army Depot Ash Landfill IRM, is subject to the quality assurance and quality control guidelines presented in the AMP. Specific requirements are also listed in the particular sampling and analytical reference methods utilized for this portion of the project. A brief summary of the QA/QC program implemented for this task is presented below:

- Detailed sample collection and handling protocols
- Calibration of instrumentation and apparatus
- Sample analysis in association with specific QC activities, such as blank and duplicate analyses
- Data reduction, validation, and reporting
- Documentation of the sampling and analytical program, and
- Internal quality control.

Specific steps for this task were undertaken at the analytical laboratory, as method and instrument blanks, calibration checks, and duplicate sample analyses were completed for the sample sets. Raw data and the associated QA/QC results can be found in Appendix B.

5.0 Conclusions

Conclusions and technical information gathered from the performance of the Baseline Monitoring Program include:

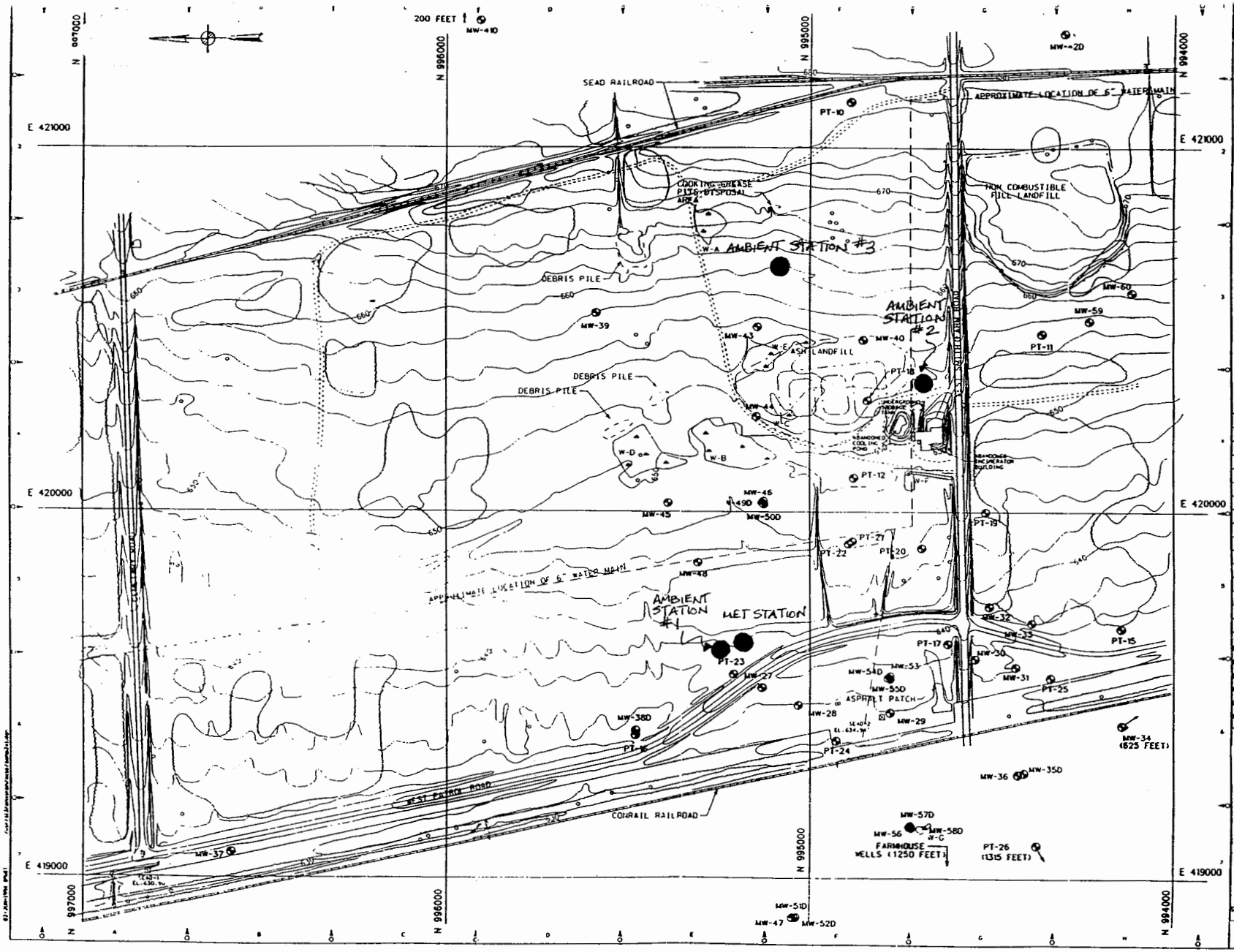
- Prevalent wind direction (and associated wind speed strength) appears to be from the north-west quadrant. Appropriate siting information for the set-up and location of the perimeter air monitoring stations as part of Phase 2 activities is available. Tentative siting locations of the perimeter air monitoring stations are presented in Figure 5-1.

- Precipitation levels at the project area are suspiciously low with zero to negligible readings for actual rainfall at the Ash Landfill area. Preventative maintenance should be performed as a corrective action to assist in determining whether the rain gauge is malfunctioning.

- Ambient particulate concentrations are well below project action levels for dusts; however, the ambient levels appear to be higher than expected for the type and condition of terrain currently present at the site. A combination of wind speed and wind direction may be causing slightly elevated levels by generating dust dispersion from neighboring farms or fields. This situation may cause difficulties during Phase 2 operations.

- Background levels of SVOCs can be considered to be within normal, expected range.

- While the TO-14 background testing failed to record any concentrations of TCE, DCE, or VC above detection limits, the ambient VOC results indicated background concentrations of 1,1,1-trichloroethane and methylene chloride, which are not expected compounds at the Ash Landfill area. Additional TO-14 quantification during Phase 2 may be beneficial to monitor the actual presence and quantity of these two compounds, as well to provide adequate protection against unwanted dispersion of vapor released from the discovery of free-phase VOC during Phase 2 excavation activities.



LEGEND

- ROAD
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- 650 — 2ND CONTOUR AND ELEVATION
- TREE
- W-B — WETLAND & DESIGNATION
- APPROXIMATE EXTENT OF FILL
- OUTLINE OF FORMER REFUSE PITS (IDENTIFIED FROM AERIAL PHOTO)
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- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- FUEL OR UNDERGROUND STORAGE TANK
- SURVEY MONUMENT
- PT-22 / MW-37 — MONITORING WELL AND DESIGNATION

NO.	DATE	DESCRIPTION
C		DRAFT FINAL RI REPORT
B		PRESENT PHASE II RI/FS
A		ISSUED WITH PRELIMINARY SITE CHARACTERIZATION REPORT

DESIGNED BY: R.E. BAKER
DRAWN BY: R.A. CALLEN
DESIGN SUPV.: R.A. CALLEN
PROJ. DESIG.: W.A. DUCHESNEAU
CHIEF ENGINEER: R.E. BAKER
DIR. OF ENVIR.: J.P. CHAPLICK
PROJECT MANAGER: W.A. DUCHESNEAU
CHECKED BY: J.P. CHAPLICK
QA/QC: W.D. PATTERSON

FIGURE 5-1
SITE PLAN

PREPARED FOR

SENECA army DEPOT
ROMULUS, NEW YORK

INTERNATIONAL TECHNOLOGY CORPORATION

SCALE 1" = 250'

Appendix A

On-Site Meteorological Data Summary

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
28	1000	240	16.16	183.6	10.53	73.6	91.7	0	29.16
28	1100	240	14.54	179.6	9.4	74	91	0	29.15
28	1200	240	16.07	178.1	10.07	79.1	79.6	0	29.12
28	1300	240	14.17	194	12.45	80.1	73.3	0	29.12
28	1400	240	10.76	215.3	12.72	79	71.8	0	29.13
28	1500	240	10.54	203.6	15.86	75.7	83.7	0	29.07
28	1600	240	10.74	219.7	13.96	75.3	82.6	0	29.07
28	1700	240	11.33	200.5	12.84	71.9	91	0	29.09
28	1800	240	11.97	175.6	12.26	70.6	100.3	0	29.06
28	1900	240	11.17	192.1	10.65	70.9	100.3	0	29.05
28	2000	240	9.44	240.9	30.4	70.9	98.1	0	29.08
28	2100	240	3.133	320.1	25.45	67.92	99.6	0	29.12
28	2200	240	6.042	290.1	14.85	67.37	94.9	0	29.13
28	2300	240	8.45	294.4	14.99	65.8	90.9	0	29.13
29	0	241	7.83	300.1	17.22	63.83	87.5	0	29.14
29	100	241	6.404	279.5	13.73	61.81	90.9	0	29.16
29	200	241	7.31	275.2	14.21	60.43	91.7	0	29.16
29	300	241	5.98	274.4	15.2	58.58	90.4	0	29.16
29	400	241	5.026	269.6	13.28	56.56	93.7	0	29.15
29	500	241	5.779	265.9	11.95	55.59	93.5	0	29.15
29	600	241	5.96	258.6	13.8	54.74	94.7	0	29.17
29	700	241	6.392	259.6	15.12	56.63	89	0	29.21
29	800	241	6.547	269.2	19.71	60.46	79.5	0	29.24
29	900	241	8.43	289.6	21.19	62.82	73.2	0	29.25
29	1000	241	9.29	303	20.59	65.17	67.98	0	29.27
29	1100	241	9.47	297.1	22.23	66.97	61.56	0	29.28
29	1200	241	10.55	293.6	18.72	68.48	55.19	0	29.28
29	1300	241	10.59	289.8	22.31	69.74	52.05	0	29.27
29	1400	241	8.9	294.2	23.86	68.96	54.1	0	29.27
29	1500	241	10.19	284	16.65	69.15	53.53	0	29.26
29	1600	241	9.28	266.6	15.73	70.2	54.02	0	29.26
29	1700	241	8.34	261	15.52	69.35	57.13	0	29.25
29	1800	241	6.864	257.4	14.2	67.42	63.52	0	29.26
29	1900	241	5.343	250.2	13.02	64.71	72.4	0	29.25
29	2000	241	3.487	245.8	14.89	61.16	84.6	0	29.24
29	2100	241	4.302	229	13.83	61.24	87.8	0	29.25
29	2200	241	5.783	268.1	14.65	61.82	84.1	0	29.26
29	2300	241	6.646	294.2	14.95	61.17	81.4	0	29.28
30	0	242	5.62	291.1	15.33	59.19	88	0	29.3
30	100	242	4.76	284.4	15.33	57.61	92	0	29.31
30	200	242	4.784	275.8	14.69	56.31	94.6	0	29.31
30	300	242	5.775	271.4	13.8	55.61	91.1	0	29.32

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
30	400	242	5.704	274.1	15.34	54.76	88.5	0	29.33
30	500	242	3.158	231	18.27	52.04	94.9	0	29.34
30	600	242	4.2	256.3	20.26	51.5	95.1	0	29.36
30	700	242	5.723	256.5	18.43	55.58	84.9	0	29.41
30	800	242	7.21	263	15.98	58.88	77.7	0	29.45
30	900	242	7.36	276.8	20.36	62.3	71.1	0	29.47
30	1000	242	7.65	296.7	22.48	65.41	64.76	0	29.48
30	1100	242	8.23	283.2	21.29	67.41	57.94	0	29.48
30	1200	242	7.96	281.8	25.02	69.4	50.73	0	29.48
30	1300	242	7.28	311	24.93	71	48.08	0	29.47
30	1400	242	8.93	309.7	20.46	71.5	42.16	0	29.46
30	1500	242	7.75	306.2	18.85	72.4	40.86	0	29.45
30	1600	242	6.308	296.9	23.97	72.2	42.24	0	29.45
30	1700	242	4.235	313.8	15.96	71.1	47.32	0	29.44
30	1800	242	2.348	337	10.16	67.56	66.68	0	29.42
30	1900	242	4.457	98.9	6.352	61.71	96.3	0	29.4
30	2000	242	4.08	117	11.17	58.8	97.1	0	29.38
30	2100	242	3.22	134	12.12	57.71	95	0	29.38
30	2200	242	4.469	160.8	11.79	59.91	89.2	0	29.38
30	2300	242	6.442	168.7	10.18	60.35	92.7	0	29.37
31	0	243	6.924	170.9	10.4	60.6	94.7	0	29.35
31	100	243	6.113	168.1	11.07	60.8	92.1	0	29.34
31	200	243	3.826	161.1	20.58	60.23	90.7	0	29.32
31	300	243	7.25	167.3	11.96	59.84	95.5	0	29.3
31	400	243	5.904	170.2	13.25	58.8	100.3	0	29.3
31	500	243	4.457	102.2	40.14	57.3	100.3	0	29.28
31	600	243	4.797	100.7	22.19	57.16	100.3	0	29.27
31	700	243	5.1	117.2	10.99	57.66	100.3	0	29.27
31	800	243	5.407	131.7	12.59	58.25	100.3	0	29.25
31	900	243	5.593	124.7	10.95	59.63	100.3	0	29.24
31	1000	243	10.34	175.9	10.64	62.85	100.3	0	29.24
31	1100	243	11.54	179.8	9.67	65.09	97.5	0	29.24
31	1200	243	9	174.2	12.84	67.88	91.7	0	29.24
31	1300	243	8.3	172.9	12.35	70.6	86	0	29.24
31	1400	243	7.86	182.2	10.09	69.98	91.2	0	29.24
31	1500	243	3.879	178.9	15.48	67.57	100.1	0	29.23
31	1600	243	2.151	84.4	32.66	67.46	100.3	0	29.22
31	1700	243	2.505	91.1	17.7	70.7	98	0	29.21
31	1800	243	3.069	103.9	13.5	71.3	97.2	0	29.21
31	1900	243	3.322	207.2	25.03	68.37	100.2	0	29.21
31	2000	243	5.448	281.4	23	67.18	100.3	0	29.22
31	2100	243	4.591	282.7	12.87	66.51	100.4	0	29.24

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
31	2200	243	3.031	308.4	25.64	64.63	100.3	0	29.23
31	2300	243	1.658	187.3	13.63	62.09	100.3	0	29.22
1	0	244	1.726	176.7	27.35	61.47	100.3	0	29.22
1	100	244	3.219	274.2	40.57	62.67	100.3	0	29.23
1	200	244	3.387	268.4	19.84	60.99	100.3	0	29.23
1	300	244	4.954	252.6	21.46	61.89	100.4	0	29.24
1	400	244	6.648	271.3	13.66	62.83	100.4	0	29.25
1	500	244	9.28	269	14.72	62.07	100.4	0	29.26
1	600	244	6.669	271.4	19.34	60.83	100.4	0	29.28
1	700	244	8.71	291.8	15.68	61.16	100.4	0	29.31
1	800	244	8.96	328.4	12.38	60.3	100.4	0	29.34
1	900	244	10.2	330.8	12.47	58.91	100.4	0	29.37
1	1000	244	10.41	336.6	12.13	59.52	100.4	0	29.4
1	1100	244	11.08	329.1	13.45	60.04	97.4	0	29.42
1	1200	244	11.51	306.4	14.53	61.67	88.5	0	29.45
1	1300	244	12.02	310.1	17.11	63.49	84.4	0	29.46
1	1400	244	11.62	326.9	17.07	64.96	79.3	0	29.47
1	1500	244	10.65	331.7	14.83	64.37	76.5	0	29.46
1	1600	244	9.42	325.6	15.77	65.02	71.8	0.03	29.46
1	1700	244	9.56	326.1	15.07	65.2	67.88	0	29.47
1	1800	244	6.95	337.3	11.41	62.27	73.3	0	29.47
1	1900	244	4.244	346.2	8.33	56.55	90.7	0	29.45
1	2000	244	3.953	8.13	9.12	51.87	100.2	0	29.45
1	2100	244	1.43	322.7	19.94	48.75	100.3	0	29.45
1	2200	244	1.709	259.2	25.79	48.31	100.3	0	29.46
1	2300	244	4.233	297.4	13.3	53.3	99.4	0	29.48
2	0	245	3.54	296.4	12.7	50.67	100.4	0	29.5
2	100	245	3.961	301.6	10.14	49.62	100.3	0	29.5
2	200	245	3.593	307.3	11.71	49.76	100.3	0	29.5
2	300	245	4.092	318.5	13.8	49.1	100.3	0	29.51
2	400	245	3.43	333.1	17.9	47.44	100.3	0	29.51
2	500	245	3.45	54.69	9.95	45.24	100.3	0	29.52
2	600	245	2.71	49.49	10.19	46.29	100.4	0	29.54
2	700	245	2.971	354.7	11.47	49.81	100.3	0	29.57
2	800	245	4.536	341.5	15.55	55.51	96.8	0	29.62
2	900	245	5.634	359.7	17.44	58.16	85.4	0	29.64
2	1000	245	3.929	26.81	50.19	63.24	63.73	0	29.67
2	1100	245	5.024	334.2	37.04	64.43	60.11	0	29.67
2	1200	245	6.329	318.7	25.38	64.32	57.6	0	29.66
2	1300	245	6.762	292	25.84	65.71	56.87	0	29.64
2	1400	245	8.62	8.76	22.08	66.32	57.91	0	29.64
2	1500	245	6.685	19.92	16.72	63.46	64.34	0	29.62

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
2	1600	245	6.517	319.6	18.75	64.27	59.8	0	29.61
2	1700	245	4.186	340.5	15.17	63.15	66.92	0	29.61
2	1800	245	5.645	347.1	20.13	62.28	70.4	0	29.61
2	1900	245	4.822	15.15	6.229	57.19	84.4	0	29.6
2	2000	245	3.407	64.34	8.97	48.97	99.7	0	29.58
2	2100	245	2.383	71.7	11.55	45.62	100.3	0	29.59
2	2200	245	2.957	72.2	7.33	44.31	100.3	0	29.59
2	2300	245	2.83	148.2	11.77	44.46	100.4	0	29.61
3	0	246	3.935	164.5	8.87	45.18	100.4	0	29.61
3	100	246	3.764	174.4	8.43	47.44	100.4	0	29.61
3	200	246	4.111	169.7	9.53	47.82	100.4	0	29.62
3	300	246	3.688	165.3	9.56	47.08	100.4	0	29.62
3	400	246	4.45	168.6	10.82	46.64	100.4	0	29.62
3	500	246	4.064	163.1	12.05	47.32	100.4	0	29.62
3	600	246	5.293	128	10.41	47.18	100.3	0	29.63
3	700	246	4.397	161.1	12.93	48.88	100.3	0	29.66
3	800	246	6.221	175.8	11.44	51.34	100.4	0	29.68
3	900	246	7.33	179.1	11.79	54.01	100.3	0	29.68
3	1000	246	5.824	191.5	23.58	59.15	87.7	0	29.72
3	1100	246	3.961	189.4	48.62	65.95	66.84	0	29.74
3	1200	246	4.851	155.7	38	68.7	56.99	0	29.73
3	1300	246	4.42	1.849	34.83	68.05	58	0	29.71
3	1400	246	4.77	39.21	35.82	68.97	51.32	0	29.7
3	1500	246	5.546	2.701	49.38	70.5	44.38	0	29.69
3	1600	246	9.15	8.38	15.68	67.76	57.73	0	29.68
3	1700	246	7.11	16.98	15.56	65.59	59.29	0	29.67
3	1800	246	5.544	2.52	11.85	64.93	65.65	0	29.66
3	1900	246	4.778	16.56	5.288	58.46	82.8	0	29.65
3	2000	246	5.686	34.27	5.67	53.15	98.2	0	29.64
3	2100	246	5.844	44.35	6.516	52.27	100.3	0	29.64
3	2200	246	4.411	47.84	7.02	50.69	100.3	0	29.64
3	2300	246	0.732	135.7	7.47	47	100.3	0	29.64
4	0	247	1.815	46.49	12.85	45.13	100.3	0	29.64
4	100	247	3.069	52.16	8.99	44.39	100.4	0	29.63
4	200	247	2.706	107.6	9.1	44.5	100.4	0	29.63
4	300	247	1.717	98.2	14.46	43.53	100.4	0	29.62
4	400	247	1.895	52.85	16.42	44.78	100.4	0	29.62
4	500	247	2.708	96	18.17	44.41	100.4	0	29.62
4	600	247	4.015	44.46	7.6	46.83	100.4	0	29.65
4	700	247	2.484	95.2	11.99	48.86	100.4	0	29.68
4	800	247	2.327	338.4	18.48	53.13	100.3	0	29.72
4	900	247	3.326	309.9	25.91	57.05	98	0	29.74

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
4	1000	247	4.316	350	40.49	61.97	85.7	0	29.75
4	1100	247	7.44	19.96	21.4	65.35	69.88	0	29.74
4	1200	247	7.49	18.51	23.14	67.22	65.11	0	29.73
4	1300	247	6.54	12.56	24.4	67.38	58.96	0	29.71
4	1400	247	8.79	359.1	18.68	67.67	57.18	0	29.7
4	1500	247	8.26	358.2	16.34	65.22	63.72	0	29.67
4	1600	247	10.52	12.86	12.44	67.05	59.28	0	29.66
4	1700	247	11.11	4.149	11.33	65.25	63.47	0	29.65
4	1800	247	8.91	1.876	9.68	62.16	68.48	0	29.64
4	1900	247	5.625	2.075	5.735	55.57	85.3	0	29.62
4	2000	247	3.344	10.88	11.11	49.67	98.5	0	29.6
4	2100	247	2.583	7.43	8.85	45.27	100.3	0	29.59
4	2200	247	2.322	24.3	14.57	44.6	100.3	0	29.58
4	2300	247	1.007	128.8	8.03	43.13	100.4	0	29.57
5	0	248	0.577	264.7	12.39	43.27	100.4	0	29.56
5	100	248	2.406	172.3	7	42.31	100.4	0	29.55
5	200	248	1.918	164.7	9.59	42.14	100.4	0	29.54
5	300	248	4.906	122	12.66	42.77	100.3	0	29.53
5	400	248	2.701	146.5	20.73	41.26	100.3	0	29.52
5	500	248	3.377	184.9	11.65	41.78	100.3	0	29.51
5	600	248	4.301	166.4	8.82	44.49	100.3	0	29.52
5	700	248	2.253	132.3	16.37	46.94	100.4	0	29.55
5	800	248	2.516	209.7	24.96	50.73	100.3	0	29.59
5	900	248	3.264	332.1	31.73	57.22	85.9	0	29.62
5	1000	248	3.94	14.86	48.12	61.91	74.7	0	29.63
5	1100	248	5.617	12.13	30.02	64.88	61.34	0	29.61
5	1200	248	5.21	347.9	55.19	67.97	49.1	0	29.58
5	1300	248	6.426	305.8	38.5	66.81	53.03	0	29.55
5	1400	248	7.18	312.3	36.9	68.1	50.16	0	29.52
5	1500	248	8.7	335.8	21.72	67.76	53.25	0	29.49
5	1600	248	8.67	346.4	14.9	65.19	60.82	0	29.48
5	1700	248	7.48	352.2	10.65	63.64	65.8	0	29.46
5	1800	248	6.362	339.3	10.8	63.45	64.47	0	29.45
5	1900	248	5.918	353.7	5.171	56.53	82.1	0	29.42
5	2000	248	5.521	3.177	4.846	51.8	93.8	0	29.39
5	2100	248	3.051	325.3	12.56	50.46	94.9	0	29.38
5	2200	248	1.112	8.14	10.21	45.31	100.3	0	29.36
5	2300	248	2.003	168.4	29.39	43.76	100.4	0	29.36
6	0	249	3.144	131.5	34.92	43.75	100.4	0	29.33
6	100	249	3.555	191	12.08	44.59	100.4	0	29.33
6	200	249	4.605	181.4	7.29	46.85	100.4	0	29.32
6	300	249	4.172	180.6	9.35	46.19	100.4	0	29.31

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY	08/28 to 09/08/94				
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
6	400	249	4.123	180.4	14.15	46.39	100.4	0	29.3
6	500	249	4.384	190.1	15.39	46.09	100.4	0	29.29
6	600	249	4.577	193.8	18.58	46.26	100.4	0	29.29
6	700	249	4.588	197	15.1	47.7	100.4	0	29.3
6	800	249	8.73	185.1	10.02	52.29	100.3	0	29.32
6	900	249	6.914	192.8	16.13	57.24	91.5	0	29.34
6	1000	249	4.252	191.7	34.93	63.64	72.9	0	29.37
6	1100	249	5.169	269.9	46.77	67.34	51.95	0	29.36
6	1200	249	5.474	297.1	41.37	67.42	50.93	0	29.33
6	1300	249	5.098	310.8	46.67	69.33	47.76	0	29.31
6	1400	249	6.293	330.1	33.96	70.7	45.17	0	29.31
6	1500	249	6.008	316.5	26.12	69.35	45.4	0	29.29
6	1600	249	8.11	282.6	18.06	69.37	41.52	0	29.27
6	1700	249	5.664	294	16.63	66.75	45.48	0	29.26
6	1800	249	5.64	283.4	14.21	64.98	53.02	0	29.25
6	1900	249	5.775	292.8	13.06	62.44	65.03	0	29.24
6	2000	249	4.148	337.1	12.86	57.86	93.8	0	29.24
6	2100	249	4.498	88	11.42	55.92	100.3	0	29.23
6	2200	249	4.685	130.2	10.46	55.81	100.3	0	29.22
6	2300	249	4.839	162.4	9.39	56.69	100.3	0	29.21
7	0	250	6.124	178.5	9.5	57.23	100.3	0	29.2
7	100	250	8.36	184.7	10.48	58.74	99.3	0	29.19
7	200	250	7.19	205.2	11.8	59.12	96.4	0	29.18
7	300	250	6.749	212	10.7	59.23	96.7	0	29.18
7	400	250	6.538	230.9	9.3	59.21	100.3	0	29.18
7	500	250	5.868	225.2	10.06	59.26	100.3	0	29.19
7	600	250	4.625	238.4	13.43	57.62	100.3	0	29.2
7	700	250	4.271	248.4	16.66	58.73	100.3	0	29.23
7	800	250	8.05	254	18.52	61.84	90.9	0	29.26
7	900	250	13.35	268.5	14.75	63.2	80.7	0	29.28
7	1000	250	11.94	272	16.57	64.4	78.3	0	29.29
7	1100	250	12.99	276.2	16.06	66.64	71.9	0	29.3
7	1200	250	12.74	276.5	17.86	67.22	69.09	0	29.31
7	1300	250	14.14	276.4	17.3	68.3	65.23	0	29.3
7	1400	250	15.08	270.9	16.16	69.53	61.05	0	29.31
7	1500	250	13.16	278.8	16.89	68.83	60.07	0	29.31
7	1600	250	11.66	279.7	17.71	68.31	60.78	0	29.31
7	1700	250	11.74	288.6	17.64	68.01	54.47	0	29.31
7	1800	250	9.81	275.3	16.32	66.5	57.2	0	29.32
7	1900	250	4.952	246.6	12.63	61.79	72.6	0	29.31
7	2000	250	4.507	228.6	12.34	58.16	85	0	29.31
7	2100	250	5.963	223.8	13.69	58.38	85.8	0	29.31

BASELINE MONITORING PROGRAM
SENECA ARMY DEPOT, ROMULUS, NEW YORK
ASH LANDFILL
ON-SITE METEOROLOGICAL DATA

Station: SENECA ARMY DEPOT ROMULUS				NY 08/28 to 09/08/94					
Day	Time	DATE	WS	WD	SIGMA	AT	RH	RN	BP
		JD	MPH	Deg	Deg	DegF	%	inch	inHg
7	2200	250	7.43	231.4	13.97	59.3	84.4	0	29.32
7	2300	250	6.166	219.3	14.13	58.3	88.7	0	29.32
8	0	251	7.22	232.9	15.15	59.59	83.9	0	29.33
8	100	251	4.431	256.3	20.55	57.05	96.6	0	29.35
8	200	251	7.5	188.6	13.38	55.75	100.3	0	29.32
8	300	251	8.45	198.2	12.09	56.81	100.3	0	29.33
8	400	251	11.25	201.2	13.14	57.45	100.3	0	29.33
8	500	251	10.61	202.5	12.08	58.26	99.6	0	29.32
8	600	251	7.58	192.1	11.39	57.27	100.3	0	29.33
8	700	251	9.23	201.8	11.76	58.5	100.3	0	29.35
8	800	251	9.6	213	12.71	61.86	94.8	0	29.37
8	900	251	9.59	235.1	14.55	66.88	82	0	29.38
8	1000	251	12.36	259	14.13	70.8	69.64	0	29.4
8	1100	251	15.08	262.1	13.85	72.6	64.87	0	29.39
8	1200	251	15.11	264.2	14.46	74.2	62.18	0	29.39
8	1300	251	14.08	261.2	13.89	75.4	59.99	0	29.38
8	1400	251	11.76	270.8	14.62	75.2	59.58	0	29.37
8	1500	251	8.83	319	21.66	74.1	63.9	0	29.36
8	1600	251	5.406	9.99	22.57	74.3	67.44	0	29.35
8	1700	251	10.44	7.07	18.37	63.53	92.9	0	29.35
8	1800	251	4.811	105.7	25.47	62.54	99.8	0	29.33
8	1900	251	2.52	139.6	20.52	60.92	100.3	0	29.33
8	2000	251	4.245	151.7	9.67	60.75	100.3	0	29.33
8	2100	251	5.337	171.1	13.3	61.11	100.4	0	29.33
8	2200	251	7.31	175	8.16	61.82	100.4	0	29.32
8	2300	251	8.7	177.1	8.31	62.04	98.9	0	29.31

Appendix B

Raw Analytical Data/ Certificates of Analysis

Quanterra Environmental Services

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

615 588-6401 Telephone
615 584-4315 Fax

IT Engineering Services
140 Allen's Creek Road
Suite 150
Rochester, NY 14618
Attn: Jeff Korb

September 15, 1994

Job Number: 1300

P.O. Number: 162254

This is the Certificate of Analysis for the following samples:

Client Project ID:	Seneca Army Depot
Date Received by Lab:	September 7, 1994
Number of Samples:	Four (4)
Sample Type:	Air

I. Introduction

Four samples arrived at Quanterra Environmental Services, Knoxville, Tennessee on September 7, 1994 for chemical analysis. The samples were collected on September 2, 1994 and were labeled as follows:

Client Sample ID	Lab Sample ID
9285484	AB8932
14A92076	AB8933
46A12437	AB8934
397C	AB8935

Reviewed and Approved:

Kenneth Mueller
Project Manager

RECEIVED
SEP 16 1994
ROCHESTER
EES

Quanterra Environmental Services

II. Analytical Results/Methodology

The analytical results for this report are presented by analytical test. The data will include sample identification information, the analytical results, and the appropriate detection limits.

The samples were analyzed for Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry; EPA Method TO-14.

The samples were analyzed for Polynuclear Aromatic Hydrocarbons by Gas Chromatography/Mass Spectrometry; EPA Method TO-13.

The samples were analyzed gravimetrically for Total Particulate; Method PM-10.

III. Quality Control

Immediately following the analytical data for the samples can be found the QA/QC information that pertains to these samples. The purpose of this information is to demonstrate that the data enclosed is scientifically valid and defensible. This QA/QC data is used to assess the laboratory's performance during the analysis of the samples it accompanies. All quantitations were performed within the calibrated range of the analytical instrument.

IV. Data Report Qualifiers

Following are descriptions of data report qualifiers which may have been used in this analytical report.

U - The analyte was not detected in the sample or extract. The value reported with the "U" is the detection limit for that compound in that sample.

VALUE - The result is a value equal to or greater than the detection limit for that compound.

J - Indicates an estimated value. This flag is used when mass spectral data indicates the presence of the compound, but the result is less than the specified detection limit.

D - This flag indicates that the compound was analyzed at a secondary dilution factor.

E - This flag indicates that the quantity of this compound detected in this sample is above the linear range of the instrument. Results are probably lower than actual.

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI3

Analysis Date: 09/08/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	ND	0.20
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl Chloride	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1-Dichloroethene	ND	0.20
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.20
75-09-2	Methylene Chloride	ND	0.30
75-34-3	1,1-Dichloroethane	ND	0.20
156-59-2	cis-1,2-Dichloroethene	ND	0.20
67-66-3	Chloroform	ND	0.20
71-55-6	1,1,1-Trichloroethane	ND	0.20
56-23-5	Carbon Tetrachloride	ND	0.20
71-43-2	Benzene	ND	0.20
107-06-2	1,2-Dichloroethane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
78-87-5	1,2-Dichloropropane	ND	0.20
10061-01-5	cis-1,3-Dichloropropene	ND	0.20
108-88-3	Toluene	ND	0.20
10061-02-6	trans-1,3-Dichloropropene	ND	0.20
79-00-5	1,1,2-Trichloroethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
106-93-4	1,2-Dibromoethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
IT5-30-5	m/p-Xylene	ND	0.20
95-47-6	o-Xylene	ND	0.20
100-42-5	Styrene	ND	0.20
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20
108-67-8	1,3,5-Trimethylbenzene	ND	0.20
95-63-6	1,2,4-Trimethylbenzene	ND	0.20
541-73-1	1,3-Dichlorobenzene	ND	0.20

Quanterra
Environmental Services

Client: SENECA
Workorder: 1300

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI3

Analysis Date: 09/08/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.20
95-50-1	1,2-Dichlorobenzene	ND	0.20
100-44-7	Benzyl Chloride	ND	0.20
120-82-1	1,2,4-Trichlorobenzene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	98
D8-Toluene	106
Bromofluorobenzene	93

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 14A92076

Lab Sample ID: AB8933

Analysis Date: 09/08/94

Dilution Factor: 2.68

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.55	0.54
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.54
74-87-3	Chloromethane	ND	0.54
75-01-4	Vinyl Chloride	ND	0.54
74-83-9	Bromomethane	ND	0.54
75-00-3	Chloroethane	ND	0.54
75-69-4	Trichlorofluoromethane	ND	0.54
75-35-4	1,1-Dichloroethene	ND	0.54
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.54
75-09-2	Methylene Chloride	ND	0.80
75-34-3	1,1-Dichloroethane	ND	0.54
156-59-2	cis-1,2-Dichloroethene	ND	0.54
67-66-3	Chloroform	ND	0.54
71-55-6	1,1,1-Trichloroethane	1.3	0.54
56-23-5	Carbon Tetrachloride	ND	0.54
71-43-2	Benzene	ND	0.54
107-06-2	1,2-Dichloroethane	ND	0.54
79-01-6	Trichloroethene	ND	0.54
78-87-5	1,2-Dichloropropane	ND	0.54
10061-01-5	cis-1,3-Dichloropropene	ND	0.54
108-88-3	Toluene	0.72	0.54
10061-02-6	trans-1,3-Dichloropropene	ND	0.54
79-00-5	1,1,2-Trichloroethane	ND	0.54
127-18-4	Tetrachloroethene	ND	0.54
106-93-4	1,2-Dibromoethane	ND	0.54
108-90-7	Chlorobenzene	ND	0.54
100-41-4	Ethylbenzene	ND	0.54
IT5-30-5	m/p-Xylene	ND	0.54
95-47-6	o-Xylene	ND	0.54
100-42-5	Styrene	ND	0.54
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.54
108-67-8	1,3,5-Trimethylbenzene	ND	0.54
95-63-6	1,2,4-Trimethylbenzene	ND	0.54
541-73-1	1,3-Dichlorobenzene	ND	0.54

Quanterra
Environmental Services

Client: SENECA
Workorder: 1300

TO-14 Volatile Organics

Client Sample ID: 14A92076

Lab Sample ID: AB8933

Analysis Date: 09/08/94

Dilution Factor: 2.68

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.54
95-50-1	1,2-Dichlorobenzene	ND	0.54
100-44-7	Benzyl Chloride	ND	0.54
120-82-1	1,2,4-Trichlorobenzene	ND	0.54
87-68-3	Hexachlorobutadiene	ND	0.54

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	97
D8-Toluene	109
Bromofluorobenzene	95

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934

Analysis Date: 09/09/94

Dilution Factor: 2.14

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.59	0.43
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.43
74-87-3	Chloromethane	ND	0.43
75-01-4	Vinyl Chloride	ND	0.43
74-83-9	Bromomethane	ND	0.43
75-00-3	Chloroethane	ND	0.43
75-69-4	Trichlorofluoromethane	ND	0.43
75-35-4	1,1-Dichloroethene	ND	0.43
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.43
75-09-2	Methylene Chloride	ND	0.64
75-34-3	1,1-Dichloroethane	ND	0.43
156-59-2	cis-1,2-Dichloroethene	ND	0.43
67-66-3	Chloroform	ND	0.43
71-55-6	1,1,1-Trichloroethane	1.3	0.43
56-23-5	Carbon Tetrachloride	ND	0.43
71-43-2	Benzene	ND	0.43
107-06-2	1,2-Dichloroethane	ND	0.43
79-01-6	Trichloroethene	ND	0.43
78-87-5	1,2-Dichloropropane	ND	0.43
10061-01-5	cis-1,3-Dichloropropene	ND	0.43
108-88-3	Toluene	ND	0.43
10061-02-6	trans-1,3-Dichloropropene	ND	0.43
79-00-5	1,1,2-Trichloroethane	ND	0.43
127-18-4	Tetrachloroethene	ND	0.43
106-93-4	1,2-Dibromoethane	ND	0.43
108-90-7	Chlorobenzene	ND	0.43
100-41-4	Ethylbenzene	ND	0.43
IT5-30-5	m/p-Xylene	ND	0.43
95-47-6	o-Xylene	ND	0.43
100-42-5	Styrene	ND	0.43
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.43
108-67-8	1,3,5-Trimethylbenzene	ND	0.43
95-63-6	1,2,4-Trimethylbenzene	ND	0.43
541-73-1	1,3-Dichlorobenzene	ND	0.43

Quanterra
Environmental Services

Client: SENECA
Workorder: 1300

TO-14 Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934

Analysis Date: 09/09/94

Dilution Factor: 2.14

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.43
95-50-1	1,2-Dichlorobenzene	ND	0.43
100-44-7	Benzyl Chloride	ND	0.43
120-82-1	1,2,4-Trichlorobenzene	ND	0.43
87-68-3	Hexachlorobutadiene	ND	0.43

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	82
D8-Toluene	81
Bromofluorobenzene	123

Client: SENECA
Workorder: 1300

Quanterra
Environmental Services

TO-14 Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934DP

Analysis Date: 09/09/94

Dilution Factor: 2.14

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.60	0.43
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.43
74-87-3	Chloromethane	ND	0.43
75-01-4	Vinyl Chloride	ND	0.43
74-83-9	Bromomethane	ND	0.43
75-00-3	Chloroethane	ND	0.43
75-69-4	Trichlorofluoromethane	ND	0.43
75-35-4	1,1-Dichloroethene	ND	0.43
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.43
75-09-2	Methylene Chloride	ND	0.64
75-34-3	1,1-Dichloroethane	ND	0.43
156-59-2	cis-1,2-Dichloroethene	ND	0.43
67-66-3	Chloroform	ND	0.43
71-55-6	1,1,1-Trichloroethane	1.3	0.43
56-23-5	Carbon Tetrachloride	ND	0.43
71-43-2	Benzene	ND	0.43
107-06-2	1,2-Dichloroethane	ND	0.43
79-01-6	Trichloroethene	ND	0.43
78-87-5	1,2-Dichloropropane	ND	0.43
10061-01-5	cis-1,3-Dichloropropene	ND	0.43
108-88-3	Toluene	ND	0.43
10061-02-6	trans-1,3-Dichloropropene	ND	0.43
79-00-5	1,1,2-Trichloroethane	ND	0.43
127-18-4	Tetrachloroethene	ND	0.43
106-93-4	1,2-Dibromoethane	ND	0.43
108-90-7	Chlorobenzene	ND	0.43
100-41-4	Ethylbenzene	ND	0.43
IT5-30-5	m/p-Xylene	ND	0.43
95-47-6	o-Xylene	ND	0.43
100-42-5	Styrene	ND	0.43
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.43
108-67-8	1,3,5-Trimethylbenzene	ND	0.43
95-63-6	1,2,4-Trimethylbenzene	ND	0.43
541-73-1	1,3-Dichlorobenzene	ND	0.43

Quanterra
Environmental Services

Client: SENECA
Workorder: 1300

TO-14 Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934DP

Analysis Date: 09/09/94

Dilution Factor: 2.14

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.43
95-50-1	1,2-Dichlorobenzene	ND	0.43
100-44-7	Benzyl Chloride	ND	0.43
120-82-1	1,2,4-Trichlorobenzene	ND	0.43
87-68-3	Hexachlorobutadiene	ND	0.43

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	80
D8-Toluene	114
Bromofluorobenzene	128

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

Duplicate Recovery of Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934 Analysis Date: 09/09/94

Duplicate Sample ID: AB8934DP Analysis Date: 09/09/94

Dilution Factor: 2.14 Units: ppb(V/V)

Compound	Sample Amount	Duplicate Amount	%RPD
Dichlorodifluoromethane	.586	.603	3
1,2-Dichlorotetrafluoroethane	ND	ND	NA
Chloromethane	ND	ND	NA
Vinyl Chloride	ND	ND	NA
Bromomethane	ND	ND	NA
Chloroethane	ND	ND	NA
Trichlorofluoromethane	ND	ND	NA
1,1-Dichloroethene	ND	ND	NA
1,1,2-Trichlorotrifluoroethane	ND	ND	NA
Methylene Chloride	ND	ND	NA
1,1-Dichloroethane	ND	ND	NA
cis-1,2-Dichloroethene	ND	ND	NA
Chloroform	ND	ND	NA
1,1,1-Trichloroethane	1.32	1.31	1
Carbon Tetrachloride	ND	ND	NA
Benzene	ND	ND	NA
1,2-Dichloroethane	ND	ND	NA
Trichloroethene	ND	ND	NA
1,2-Dichloropropane	ND	ND	NA
cis-1,3-Dichloropropene	ND	ND	NA
Toluene	ND	ND	NA
trans-1,3-Dichloropropene	ND	ND	NA
1,1,2-Trichloroethane	ND	ND	NA
Tetrachloroethene	ND	ND	NA
1,2-Dibromoethane	ND	ND	NA
Chlorobenzene	ND	ND	NA
Ethylbenzene	ND	ND	NA
m/p-Xylene	ND	ND	NA
o-Xylene	ND	ND	NA
Styrene	ND	ND	NA
1,1,2,2-Tetrachloroethane	ND	ND	NA
1,3,5-Trimethylbenzene	ND	ND	NA

J rument M

Quanterra
Environmental Services

Client: SENECA
Workorder: 1300

Duplicate Recovery of Volatile Organics

Client Sample ID: 46A12437

Lab Sample ID: AB8934 Analysis Date: 09/09/94

Duplicate Sample ID: AB8934DP Analysis Date: 09/09/94

Dilution Factor: 2.14 Units: ppb(V/V)

Compound	Sample Amount	Duplicate Amount	%RPD
1,2,4-Trimethylbenzene	ND	ND	NA
1,3-Dichlorobenzene	ND	ND	NA
1,4-Dichlorobenzene	ND	ND	NA
1,2-Dichlorobenzene	ND	ND	NA
Benzyl Chloride	ND	ND	NA
1,2,4-Trichlorobenzene	ND	ND	NA
Hexachlorobutadiene	ND	ND	NA

Surrogate Compound	Run % Recovery	Duplicate % Recovery
D4-1,2-Dichloroethane	82	80
D8-Toluene	81	114
Bromofluorobenzene	123	128

Instrument M

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: Method Blank
Lab Sample ID: AB9054
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
108-95-2	phenol	ND	10
111-44-4	bis(2-chloroethyl)ether	ND	10
95-57-8	2-chlorophenol	ND	10
541-73-1	1,3-dichlorobenzene	ND	10
106-46-7	1,4-dichlorobenzene	ND	10
100-51-6	benzyl alcohol	ND	10
95-50-1	1,2-dichlorobenzene	ND	10
95-48-7	2-methylphenol	ND	10
108-60-1	bis(2-chloroisopropyl)ether	ND	10
106-44-5	4-methylphenol	ND	10
621-64-7	n-nitroso-di-n-propylamine	ND	10
67-72-1	hexachloroethane	ND	10
98-95-3	nitrobenzene	ND	10
78-59-1	isophorone	ND	10
88-75-5	2-nitrophenol	ND	10
105-67-9	2,4-dimethylphenol	ND	10
65-85-0	benzoic acid	ND	50
111-91-1	bis(2-chloroethoxy)methane	ND	10
120-83-2	2,4-dichlorophenol	ND	10
120-82-1	1,2,4-trichlorobenzene	ND	10
91-20-3	naphthalene	ND	10
106-47-8	4-chloroaniline	ND	10
87-68-3	hexachlorobutadiene	ND	10
59-50-7	4-chloro-3-methylphenol	ND	10
91-57-6	2-methylnaphthalene	ND	10
77-47-4	hexachlorocyclopentadiene	ND	10
88-06-2	2,4,6-trichlorophenol	ND	10
95-95-4	2,4,5-trichlorophenol	ND	50
91-58-7	2-chloronaphthalene	ND	10
88-74-4	2-nitroaniline	ND	50
131-11-3	dimethylphthalate	ND	10
208-96-8	acenaphthylene	ND	10
606-20-2	2,6-dinitrotoluene	ND	10
86-74-8	carbazole	ND	10

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: Method Blank
Lab Sample ID: AB9054
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
99-09-2	3-nitroaniline	ND	50
83-32-9	acenaphthene	ND	10
51-28-5	2,4-dinitrophenol	ND	50
100-02-7	4-nitrophenol	ND	50
132-64-9	dibenzofuran	ND	10
121-14-2	2,4-dinitrotoluene	ND	10
84-66-2	diethylphthalate	ND	10
7005-72-3	4-chlorophenyl-phenylether	ND	10
86-73-7	fluorene	ND	10
100-01-6	4-nitroaniline	ND	50
534-52-1	4,6-dinitro-2-methylphenol	ND	50
86-30-6	n-nitrosodiphenylamine (1)	ND	10
101-55-3	4-bromophenyl-phenylether	ND	10
118-74-1	hexachlorobenzene	ND	10
87-86-5	pentachlorophenol	ND	50
85-01-8	phenanthrene	ND	10
120-12-7	anthracene	ND	10
84-74-2	di-n-butylphthalate	ND	10
206-44-0	fluoranthene	ND	10
129-00-0	pyrene	ND	10
85-68-7	butylbenzylphthalate	ND	10
91-94-1	3,3'-dichlorobenzidine	ND	20
56-55-3	benzo(a)anthracene	ND	10
218-01-9	chrysene	ND	10
117-81-7	bis(2-ethylhexyl)phthalate	ND	10
117-84-0	di-n-octylphthalate	ND	10
205-99-2	benzo(b)fluoranthene	ND	10
207-08-9	benzo(k)fluoranthene	ND	10
50-32-8	benzo(a)pyrene	ND	10
193-39-5	indeno(1,2,3-cd)pyrene	ND	10
53-70-3	dibenz(a,h)anthracene	ND	10
191-24-2	benzo(g,h,i)perylene	ND	10

1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: LCS
Lab Sample ID: AB9055
Extraction Date: 09/07/94
Analysis Date: 09/12/94

Compound	Spike Added (total µg)	Sample Conc. (total µg)	MS Conc. (total µg)	MS % Rec. (total µg)
phenol	75	0	49.4	66
2-chlorophenol	75	0	48.8	65
1,4-dichlorobenzene	50	0	30.8	62
n-nitroso-di-n-propylamine	50	0	33.7	67
1,2,4-trichlorobenzene	50	0	34.4	69
4-chloro-3-methylphenol	75	0	52.9	70
acenaphthene	50	0	35.3	71
4-nitrophenol	75	0	62.5	83
2,4-dinitrotoluene	50	0	38.8	78
pentachlorophenol	75	0	67.5	90
pyrene	50	0	34.1	68

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: 397C
Lab Sample ID: AB8935
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
108-95-2	phenol	ND	10
111-44-4	bis(2-chloroethyl)ether	ND	10
95-57-8	2-chlorophenol	ND	10
541-73-1	1,3-dichlorobenzene	ND	10
106-46-7	1,4-dichlorobenzene	1 J	10
100-51-6	benzyl alcohol	ND	10
95-50-1	1,2-dichlorobenzene	ND	10
95-48-7	2-methylphenol	ND	10
108-60-1	bis(2-chloroisopropyl)ether	ND	10
106-44-5	4-methylphenol	ND	10
621-64-7	n-nitroso-di-n-propylamine	ND	10
67-72-1	hexachloroethane	ND	10
98-95-3	nitrobenzene	ND	10
78-59-1	isophorone	ND	10
88-75-5	2-nitrophenol	ND	10
105-67-9	2,4-dimethylphenol	ND	10
65-85-0	benzoic acid	7 J	50
111-91-1	bis(2-chloroethoxy)methane	ND	10
120-83-2	2,4-dichlorophenol	ND	10
120-82-1	1,2,4-trichlorobenzene	ND	10
91-20-3	naphthalene	7 J	10
106-47-8	4-chloroaniline	ND	10
87-68-3	hexachlorobutadiene	ND	10
59-50-7	4-chloro-3-methylphenol	ND	10
91-57-6	2-methylnaphthalene	3 J	10
77-47-4	hexachlorocyclopentadiene	ND	10
88-06-2	2,4,6-trichlorophenol	ND	10
95-95-4	2,4,5-trichlorophenol	ND	50
91-58-7	2-chloronaphthalene	ND	10
88-74-4	2-nitroaniline	ND	50
131-11-3	dimethylphthalate	ND	10
208-96-8	acenaphthylene	ND	10
606-20-2	2,6-dinitrotoluene	ND	10
86-74-8	carbazole	ND	10

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: 397C
Lab Sample ID: AB8935
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
99-09-2	3-nitroaniline	ND	50
83-32-9	acenaphthene	ND	10
51-28-5	2,4-dinitrophenol	ND	50
100-02-7	4-nitrophenol	ND	50
132-64-9	dibenzofuran	ND	10
121-14-2	2,4-dinitrotoluene	ND	10
84-66-2	diethylphthalate	ND	10
7005-72-3	4-chlorophenyl-phenylether	ND	10
86-73-7	fluorene	ND	10
100-01-6	4-nitroaniline	ND	50
534-52-1	4,6-dinitro-2-methylphenol	ND	50
86-30-6	n-nitrosodiphenylamine (1)	ND	10
101-55-3	4-bromophenyl-phenylether	ND	10
118-74-1	hexachlorobenzene	ND	10
87-86-5	pentachlorophenol	ND	50
85-01-8	phenanthrene	ND	10
120-12-7	anthracene	ND	10
84-74-2	di-n-butylphthalate	ND	10
206-44-0	fluoranthene	ND	10
129-00-0	pyrene	ND	10
85-68-7	butylbenzylphthalate	ND	10
91-94-1	3,3'-dichlorobenzidine	ND	20
56-55-3	benzo(a)anthracene	ND	10
218-01-9	chrysene	ND	10
117-81-7	bis(2-ethylhexyl)phthalate	ND	10
117-84-0	di-n-octylphthalate	ND	10
205-99-2	benzo(b)fluoranthene	ND	10
207-08-9	benzo(k)fluoranthene	ND	10
50-32-8	benzo(a)pyrene	ND	10
193-39-5	indeno(1,2,3-cd)pyrene	ND	10
53-70-3	dibenz(a,h)anthracene	ND	10
191-24-2	benzo(g,h,i)perylene	ND	10

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: 397C
Lab Sample ID: AB8935
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result ($\mu g/m^3$)	Detection Limit
108-95-2	phenol	ND	0.04
111-44-4	bis(2-chloroethyl)ether	ND	0.04
95-57-8	2-chlorophenol	ND	0.04
541-73-1	1,3-dichlorobenzene	ND	0.04
106-46-7	1,4-dichlorobenzene	0.006 J	0.04
100-51-6	benzyl alcohol	ND	0.04
95-50-1	1,2-dichlorobenzene	ND	0.04
95-48-7	2-methylphenol	ND	0.04
108-60-1	bis(2-chloroisopropyl)ether	ND	0.04
106-44-5	4-methylphenol	ND	0.04
621-64-7	n-nitroso-di-n-propylamine	ND	0.04
67-72-1	hexachloroethane	ND	0.04
98-95-3	nitrobenzene	ND	0.04
78-59-1	isophorone	ND	0.04
88-75-5	2-nitrophenol	ND	0.04
105-67-9	2,4-dimethylphenol	ND	0.04
65-85-0	benzoic acid	0.027 J	0.199
111-91-1	bis(2-chloroethoxy)methane	ND	0.04
120-83-2	2,4-dichlorophenol	ND	0.04
120-82-1	1,2,4-trichlorobenzene	ND	0.04
91-20-3	naphthalene	0.027 J	0.04
106-47-8	4-chloroaniline	ND	0.04
87-68-3	hexachlorobutadiene	ND	0.04
59-50-7	4-chloro-3-methylphenol	ND	0.04
91-57-6	2-methylnaphthalene	0.011 J	0.04
77-47-4	hexachlorocyclopentadiene	ND	0.04
88-06-2	2,4,6-trichlorophenol	ND	0.04
95-95-4	2,4,5-trichlorophenol	ND	0.199
91-58-7	2-chloronaphthalene	ND	0.04
88-74-4	2-nitroaniline	ND	0.199
131-11-3	dimethylphthalate	ND	0.04
208-96-8	acenaphthylene	ND	0.04
606-20-2	2,6-dinitrotoluene	ND	0.04
86-74-8	carbazole	ND	0.04

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: 397C
Lab Sample ID: AB8935
Extraction Date: 09/07/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result ($\mu g/m^3$)	Detection Limit
99-09-2	3-nitroaniline	ND	0.199
83-32-9	acenaphthene	ND	0.04
51-28-5	2,4-dinitrophenol	ND	0.199
100-02-7	4-nitrophenol	ND	0.199
132-64-9	dibenzofuran	ND	0.04
121-14-2	2,4-dinitrotoluene	ND	0.04
84-66-2	diethylphthalate	ND	0.04
7005-72-3	4-chlorophenyl-phenylether	ND	0.04
86-73-7	fluorene	ND	0.04
100-01-6	4-nitroaniline	ND	0.199
534-52-1	4,6-dinitro-2-methylphenol	ND	0.199
86-30-6	n-nitrosodiphenylamine (1)	ND	0.04
101-55-3	4-bromophenyl-phenylether	ND	0.04
118-74-1	hexachlorobenzene	ND	0.04
87-86-5	pentachlorophenol	ND	0.199
85-01-8	phenanthrene	ND	0.04
120-12-7	anthracene	ND	0.04
84-74-2	di-n-butylphthalate	ND	0.04
206-44-0	fluoranthene	ND	0.04
129-00-0	pyrene	ND	0.04
85-68-7	butylbenzylphthalate	ND	0.04
91-94-1	3,3'-dichlorobenzidine	ND	0.199
56-55-3	benzo(a)anthracene	ND	0.04
218-01-9	chrysene	ND	0.04
117-81-7	bis(2-ethylhexyl)phthalate	ND	0.04
117-84-0	di-n-octylphthalate	ND	0.04
205-99-2	benzo(b)fluoranthene	ND	0.04
207-08-9	benzo(k)fluoranthene	ND	0.04
50-32-8	benzo(a)pyrene	ND	0.04
193-39-5	indeno(1,2,3-cd)pyrene	ND	0.04
53-70-3	dibenz(a,h)anthracene	ND	0.04
191-24-2	benzo(g,h,i)perylene	ND	0.04

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Client Sample ID	nitro-benzene-d5	2-fluoro-biphenyl	terphenyl	phenol-d6	2-fluoro-phenol	2,4,6-tribromo-phenol
Method Blank	60	61	82	52	58	67
LCS	66	66	80	56	60	78
397C	*	*	*	*	*	*

Note: QC limits not established.

* - Sample not spiked with surrogate standard.

Client: SENECA
Workorder: 1300

Quanterra Environmental Services

Total Particulate Analytical Results, $\mu g/m^3$

CLIENT SAMPLE ID	LAB SAMPLE ID	TOTAL PARTICULATE
9285484	AB8932	8.29

Total Particulate Accuracy

REFERENCE STANDARDS, g	ACTUAL VALUE, g
1.0000	0.9999
2.0000	1.9996
5.0000	4.9998

Total Particulate Precision

CLIENT SAMPLE ID	SAMPLE WEIGHT, g	CHECK WEIGHT, g	DIFFERENCE, mg
9285484	4.2167	4.2165	-0.2000

INTERNATIONAL TECHNOLOGY CORPORATION

COC NO. *0000465*

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

WO# 1300

Reference Document No. 09496

Page 1 of 1

Project Name/No.[1] SENECA ARMY DEPOT #519070

Sample Team Members[2] G. BYERS, D. HARRINGTON, J. KORB

Profit Center No.[3] 3513

Project Manager[4] JEFF KORB

Purchase Order No.[6] 162254

Required Report Date[11] 9/13/94

Samples Shipment Date[7] 9/6/94

Lab Destination[8] MIDDLEBROOK

Lab Contact[9] JACKIE WADDELL

Project Contact/Phone[12] J. KORB / 716-271-6430 / 716-271-0251 (fax)

Carrier/Waybill No.[13] FEDEX

Bill to:[5] IT CORP. 2790 MOSSIDE BLVD. MONROEVILLE, PA

Report to:[10] JEFF KORB IT CORP. 140 ALLENS CREEK RD. SUITE 150 ROCHESTER, NY 14618

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Preservative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
9285484	PM10 filter (paper)	1830 9-2-94	filter	1712.02 M^3	N/A	PM10 PARTICULATE	Rec'd intact at ambient Temperature	102 6297 517
14A92076	SUMMA CANISTER (SSteel)	1822 9-2-94	CANISTER	6L	N/A	TO-14 (EPA LIST)	with custody seals intact	263 8952 276
46A12437	SUMMA CANISTER (SSteel)	0620 9-2-94	CANISTER	6L	N/A	TO-14 (EPA LIST)	KAK 9/7/94	263 8951 917
397C	XAD-2 RESIN CARTRIDGE (glass)	1825 9-2-94	CARTRIDGE GLASS	250.95 M^3	N/A	TO-13 (SVOAs)	Rec'd at 13°C with custody seals intact	263 8953 186
NA	PUF FILTER	1825 9-2-94	QUARTZ FILTER	"	"	PARTICULATE	↓	

Special Instructions:[23]

Possible Hazard Identification:[24] Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required:[26] Normal ☐ Rush ☒ 5 day TAT

QC Level:[27] I. ☒ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) Jeffrey D. Korb IT CORP. - ROCH.	Date: 09-06-94 Time: 1730	1. Received by[28] (Signature/Affiliation) Kenneth A Klemm, QES-KN	Date: 09-07-94 Time: 09:00
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

Receipt Lots #
1588
1589
1590
1591

MCA 3/15/91

White: To accompany samples

Yellow: Field copy

See back of form for special instructions

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

615 588-6401 Telephone
615 584-4315 Fax

IT Engineering Services
140 Allen's Creek Road
Suite 150
Rochester, NY 14618
Attn: Jeff Korb

September 15, 1994

Job Number: 1317

P.O. Number: 162254

This is the Certificate of Analysis for the following samples:

Client Project ID:	Seneca Army Depot
Date Received by Lab:	September 9, 1994
Number of Samples:	Seven (7)
Sample Type:	Air

I. Introduction

Seven samples arrived at Quanterra Environmental Services, Knoxville, Tennessee on September 9, 1994 for chemical analysis. The samples were collected on September 7 & 8, 1994 and were labeled as follows:

Client Sample ID	Lab Sample ID
397C	AB9109
398A	AB9110
29A/12641	AB9111
37A/12734	AB9113
26A/11294	AB9114
9285486	AB9115
9285487	AB9116

Reviewed and Approved:

Kenneth Mueller
Project Manager

Quanterra Environmental Services

II. Analytical Results/Methodology

The analytical results for this report are presented by analytical test. The data will include sample identification information, the analytical results, and the appropriate detection limits.

The samples were analyzed for Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry; EPA Method TO-14.

The samples were analyzed for Polynuclear Aromatic Hydrocarbons by Gas Chromatography/Mass Spectrometry; EPA Method TO-13.

The samples were analyzed gravimetrically for Total Particulate; Method PM-10.

III. Quality Control

Immediately following the analytical data for the samples can be found the QA/QC information that pertains to these samples. The purpose of this information is to demonstrate that the data enclosed is scientifically valid and defensible. This QA/QC data is used to assess the laboratory's performance during the analysis of the samples it accompanies. All quantitations were performed within the calibrated range of the analytical instrument.

IV. Data Report Qualifiers

Following are descriptions of data report qualifiers which may have been used in this analytical report.

U - The analyte was not detected in the sample or extract. The value reported with the "U" is the detection limit for that compound in that sample.

VALUE - The result is a value equal to or greater than the detection limit for that compound.

J - Indicates an estimated value. This flag is used when mass spectral data indicates the presence of the compound, but the result is less than the specified detection limit.

D - This flag indicates that the compound was analyzed at a secondary dilution factor.

E - This flag indicates that the quantity of this compound detected in this sample is above the linear range of the instrument. Results are probably lower than actual.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI6

Analysis Date: 09/09/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	ND	0.20
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl Chloride	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1-Dichloroethene	ND	0.20
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.20
75-09-2	Methylene Chloride	ND	0.30
75-34-3	1,1-Dichloroethane	ND	0.20
156-59-2	cis-1,2-Dichloroethene	ND	0.20
67-66-3	Chloroform	ND	0.20
71-55-6	1,1,1-Trichloroethane	ND	0.20
56-23-5	Carbon Tetrachloride	ND	0.20
71-43-2	Benzene	ND	0.20
107-06-2	1,2-Dichloroethane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
78-87-5	1,2-Dichloropropane	ND	0.20
10061-01-5	cis-1,3-Dichloropropene	ND	0.20
108-88-3	Toluene	ND	0.20
10061-02-6	trans-1,3-Dichloropropene	ND	0.20
79-00-5	1,1,2-Trichloroethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
106-93-4	1,2-Dibromoethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
IT5-30-5	m/p-Xylene	ND	0.20
95-47-6	o-Xylene	ND	0.20
100-42-5	Styrene	ND	0.20
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20
108-67-8	1,3,5-Trimethylbenzene	ND	0.20
95-63-6	1,2,4-Trimethylbenzene	ND	0.20
541-73-1	1,3-Dichlorobenzene	ND	0.20

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI6

Analysis Date: 09/09/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.20
95-50-1	1,2-Dichlorobenzene	ND	0.20
100-44-7	Benzyl Chloride	ND	0.20
120-82-1	1,2,4-Trichlorobenzene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	100
D8-Toluene	102
Bromofluorobenzene	96

Client: SENECA
Workorder: 1317

Quanterra
Environmental Services

TO-14 Volatile Organics

Client Sample ID: 29A12641

Lab Sample ID: AB9111

Analysis Date: 09/09/94

Dilution Factor: 2.11

CAS #	Compound	Result ppb(V/V)		Detection Limit
75-71-8	Dichlorodifluoromethane	0.54		0.42
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.42
74-87-3	Chloromethane	ND		0.42
75-01-4	Vinyl Chloride	ND		0.42
74-83-9	Bromomethane	ND		0.42
75-00-3	Chloroethane	ND		0.42
75-69-4	Trichlorofluoromethane	ND		0.42
75-35-4	1,1-Dichloroethene	ND		0.42
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.42
75-09-2	Methylene Chloride	260	.E	0.63
75-34-3	1,1-Dichloroethane	ND		0.42
156-59-2	cis-1,2-Dichloroethene	ND		0.42
67-66-3	Chloroform	ND		0.42
71-55-6	1,1,1-Trichloroethane	0.81		0.42
56-23-5	Carbon Tetrachloride	ND		0.42
71-43-2	Benzene	ND		0.42
107-06-2	1,2-Dichloroethane	ND		0.42
79-01-6	Trichloroethene	ND		0.42
78-87-5	1,2-Dichloropropane	ND		0.42
10061-01-5	cis-1,3-Dichloropropene	ND		0.42
108-88-3	Toluene	ND		0.42
10061-02-6	trans-1,3-Dichloropropene	ND		0.42
79-00-5	1,1,2-Trichloroethane	ND		0.42
127-18-4	Tetrachloroethene	ND		0.42
106-93-4	1,2-Dibromoethane	ND		0.42
108-90-7	Chlorobenzene	ND		0.42
100-41-4	Ethylbenzene	ND		0.42
IT5-30-5	m/p-Xylene	ND		0.42
95-47-6	o-Xylene	ND		0.42
100-42-5	Styrene	ND		0.42
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.42
108-67-8	1,3,5-Trimethylbenzene	ND		0.42
95-63-6	1,2,4-Trimethylbenzene	ND		0.42
541-73-1	1,3-Dichlorobenzene	ND		0.42

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 29A12641

Lab Sample ID: AB9111

Analysis Date: 09/09/94

Dilution Factor: 2.11

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.42
95-50-1	1,2-Dichlorobenzene	ND	0.42
100-44-7	Benzyl Chloride	ND	0.42
120-82-1	1,2,4-Trichlorobenzene	ND	0.42
87-68-3	Hexachlorobutadiene	ND	0.42

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	97
D8-Toluene	103
Bromofluorobenzene	95

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 37A12734

Lab Sample ID: AB9113

Analysis Date: 09/09/94

Dilution Factor: 2.04

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.53	0.41
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.41
74-87-3	Chloromethane	ND	0.41
75-01-4	Vinyl Chloride	ND	0.41
74-83-9	Bromomethane	ND	0.41
75-00-3	Chloroethane	ND	0.41
75-69-4	Trichlorofluoromethane	ND	0.41
75-35-4	1,1-Dichloroethene	ND	0.41
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.41
75-09-2	Methylene Chloride	ND	0.61
75-34-3	1,1-Dichloroethane	ND	0.41
156-59-2	cis-1,2-Dichloroethene	ND	0.41
67-66-3	Chloroform	ND	0.41
71-55-6	1,1,1-Trichloroethane	2.3	0.41
56-23-5	Carbon Tetrachloride	ND	0.41
71-43-2	Benzene	ND	0.41
107-06-2	1,2-Dichloroethane	ND	0.41
79-01-6	Trichloroethene	ND	0.41
78-87-5	1,2-Dichloropropane	ND	0.41
10061-01-5	cis-1,3-Dichloropropene	ND	0.41
108-88-3	Toluene	ND	0.41
10061-02-6	trans-1,3-Dichloropropene	ND	0.41
79-00-5	1,1,2-Trichloroethane	ND	0.41
127-18-4	Tetrachloroethene	ND	0.41
106-93-4	1,2-Dibromoethane	ND	0.41
108-90-7	Chlorobenzene	ND	0.41
100-41-4	Ethylbenzene	ND	0.41
IT5-30-5	m/p-Xylene	ND	0.41
95-47-6	o-Xylene	ND	0.41
100-42-5	Styrene	ND	0.41
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.41
108-67-8	1,3,5-Trimethylbenzene	ND	0.41
95-63-6	1,2,4-Trimethylbenzene	ND	0.41
541-73-1	1,3-Dichlorobenzene	ND	0.41

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Client: SENECA
Workorder: 1317

TO-14 Volatile Organics

Client Sample ID: 37A12734

Lab Sample ID: AB9113

Analysis Date: 09/09/94

Dilution Factor: 2.04

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.41
95-50-1	1,2-Dichlorobenzene	ND	0.41
100-44-7	Benzyl Chloride	ND	0.41
120-82-1	1,2,4-Trichlorobenzene	ND	0.41
87-68-3	Hexachlorobutadiene	ND	0.41

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	98
D8-Toluene	103
Bromofluorobenzene	93

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 26A11294

Lab Sample ID: AB9114

Analysis Date: 09/09/94

Dilution Factor: 3.33

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.83	0.67
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.67
74-87-3	Chloromethane	ND	0.67
75-01-4	Vinyl Chloride	ND	0.67
74-83-9	Bromomethane	ND	0.67
75-00-3	Chloroethane	ND	0.67
75-69-4	Trichlorofluoromethane	0.93	0.67
75-35-4	1,1-Dichloroethene	ND	0.67
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.67
75-09-2	Methylene Chloride	3.9	1.0
75-34-3	1,1-Dichloroethane	ND	0.67
156-59-2	cis-1,2-Dichloroethene	ND	0.67
67-66-3	Chloroform	ND	0.67
71-55-6	1,1,1-Trichloroethane	1.0	0.67
56-23-5	Carbon Tetrachloride	ND	0.67
71-43-2	Benzene	0.88	0.67
107-06-2	1,2-Dichloroethane	ND	0.67
79-01-6	Trichloroethene	ND	0.67
78-87-5	1,2-Dichloropropane	ND	0.67
10061-01-5	cis-1,3-Dichloropropene	ND	0.67
108-88-3	Toluene	42	0.67
10061-02-6	trans-1,3-Dichloropropene	ND	0.67
79-00-5	1,1,2-Trichloroethane	ND	0.67
127-18-4	Tetrachloroethene	ND	0.67
106-93-4	1,2-Dibromoethane	ND	0.67
108-90-7	Chlorobenzene	ND	0.67
100-41-4	Ethylbenzene	0.69	0.67
IT5-30-5	m/p-Xylene	2.0	0.67
95-47-6	o-Xylene	1.0	0.67
100-42-5	Styrene	0.83	0.67
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.67
108-67-8	1,3,5-Trimethylbenzene	ND	0.67
95-63-6	1,2,4-Trimethylbenzene	ND	0.67
541-73-1	1,3-Dichlorobenzene	ND	0.67

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Client: SENECA
Workorder: 1317

TO-14 Volatile Organics

Client Sample ID: 26A11294

Lab Sample ID: AB9114

Analysis Date: 09/09/94

Dilution Factor: 3.33

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.67
95-50-1	1,2-Dichlorobenzene	ND	0.67
100-44-7	Benzyl Chloride	ND	0.67
120-82-1	1,2,4-Trichlorobenzene	ND	0.67
87-68-3	Hexachlorobutadiene	ND	0.67

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	96
D8-Toluene	103
Bromofluorobenzene	93

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI9

Analysis Date: 09/13/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	ND	0.20
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl Chloride	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1-Dichloroethene	ND	0.20
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.20
75-09-2	Methylene Chloride	ND	0.30
75-34-3	1,1-Dichloroethane	ND	0.20
156-59-2	cis-1,2-Dichloroethene	ND	0.20
67-66-3	Chloroform	ND	0.20
71-55-6	1,1,1-Trichloroethane	ND	0.20
56-23-5	Carbon Tetrachloride	ND	0.20
71-43-2	Benzene	ND	0.20
107-06-2	1,2-Dichloroethane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
78-87-5	1,2-Dichloropropane	ND	0.20
10061-01-5	cis-1,3-Dichloropropene	ND	0.20
108-88-3	Toluene	ND	0.20
10061-02-6	trans-1,3-Dichloropropene	ND	0.20
79-00-5	1,1,2-Trichloroethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
106-93-4	1,2-Dibromoethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
IT5-30-5	m/p-Xylene	ND	0.20
95-47-6	o-Xylene	ND	0.20
100-42-5	Styrene	ND	0.20
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20
108-67-8	1,3,5-Trimethylbenzene	ND	0.20
95-63-6	1,2,4-Trimethylbenzene	ND	0.20
541-73-1	1,3-Dichlorobenzene	ND	0.20

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKI9

Analysis Date: 09/13/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.20
95-50-1	1,2-Dichlorobenzene	ND	0.20
100-44-7	Benzyl Chloride	ND	0.20
120-82-1	1,2,4-Trichlorobenzene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	96
D8-Toluene	107
Bromofluorobenzene	96

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 29A12641

Lab Sample ID: AB9111DL

Analysis Date: 09/13/94

Dilution Factor: 10.55

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	ND	2.1
76-14-2	1,2-Dichlorotetrafluoroethane	ND	2.1
74-87-3	Chloromethane	ND	2.1
75-01-4	Vinyl Chloride	ND	2.1
74-83-9	Bromomethane	ND	2.1
75-00-3	Chloroethane	ND	2.1
75-69-4	Trichlorofluoromethane	ND	2.1
75-35-4	1,1-Dichloroethene	ND	2.1
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	2.1
75-09-2	Methylene Chloride	340	3.2
75-34-3	1,1-Dichloroethane	ND	2.1
156-59-2	cis-1,2-Dichloroethene	ND	2.1
67-66-3	Chloroform	ND	2.1
71-55-6	1,1,1-Trichloroethane	ND	2.1
56-23-5	Carbon Tetrachloride	ND	2.1
71-43-2	Benzene	ND	2.1
107-06-2	1,2-Dichloroethane	ND	2.1
79-01-6	Trichloroethene	ND	2.1
78-87-5	1,2-Dichloropropane	ND	2.1
10061-01-5	cis-1,3-Dichloropropene	ND	2.1
108-88-3	Toluene	ND	2.1
10061-02-6	trans-1,3-Dichloropropene	ND	2.1
79-00-5	1,1,2-Trichloroethane	ND	2.1
127-18-4	Tetrachloroethene	ND	2.1
106-93-4	1,2-Dibromoethane	ND	2.1
108-90-7	Chlorobenzene	ND	2.1
100-41-4	Ethylbenzene	ND	2.1
IT5-30-5	m/p-Xylene	ND	2.1
95-47-6	o-Xylene	ND	2.1
100-42-5	Styrene	ND	2.1
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1
108-67-8	1,3,5-Trimethylbenzene	ND	2.1
95-63-6	1,2,4-Trimethylbenzene	ND	2.1
541-73-1	1,3-Dichlorobenzene	ND	2.1

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Client: SENECA
Workorder: 1317

TO-14 Volatile Organics

Client Sample ID: 29A12641

Lab Sample ID: AB9111DL

Analysis Date: 09/13/94

Dilution Factor: 10.55

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	2.1
95-50-1	1,2-Dichlorobenzene	ND	2.1
100-44-7	Benzyl Chloride	ND	2.1
120-82-1	1,2,4-Trichlorobenzene	ND	2.1
87-68-3	Hexachlorobutadiene	ND	2.1

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	96
D8-Toluene	106
Bromofluorobenzene	96

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: Method Blank
Lab Sample ID: AB9268
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
108-95-2	phenol	ND	10
111-44-4	bis(2-chloroethyl)ether	ND	10
95-57-8	2-chlorophenol	ND	10
541-73-1	1,3-dichlorobenzene	ND	10
106-46-7	1,4-dichlorobenzene	ND	10
100-51-6	benzyl alcohol	ND	10
95-50-1	1,2-dichlorobenzene	ND	10
95-48-7	2-methylphenol	ND	10
108-60-1	bis(2-chloroisopropyl)ether	ND	10
106-44-5	4-methylphenol	ND	10
621-64-7	n-nitroso-di-n-propylamine	ND	10
67-72-1	hexachloroethane	ND	10
98-95-3	nitrobenzene	ND	10
78-59-1	isophorone	ND	10
88-75-5	2-nitrophenol	ND	10
105-67-9	2,4-dimethylphenol	ND	10
65-85-0	benzoic acid	ND	50
111-91-1	bis(2-chloroethoxy)methane	ND	10
120-83-2	2,4-dichlorophenol	ND	10
120-82-1	1,2,4-trichlorobenzene	ND	10
91-20-3	naphthalene	ND	10
106-47-8	4-chloroaniline	ND	10
87-68-3	hexachlorobutadiene	ND	10
59-50-7	4-chloro-3-methylphenol	ND	10
91-57-6	2-methylnaphthalene	ND	10
77-47-4	hexachlorocyclopentadiene	ND	10
88-06-2	2,4,6-trichlorophenol	ND	10
95-95-4	2,4,5-trichlorophenol	ND	50
91-58-7	2-chloronaphthalene	ND	10
88-74-4	2-nitroaniline	ND	50
131-11-3	dimethylphthalate	ND	10
208-96-8	acenaphthylene	ND	10
606-20-2	2,6-dinitrotoluene	ND	10
86-74-8	carbazole	ND	10

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: Method Blank
Lab Sample ID: AB9268
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
99-09-2	3-nitroaniline	ND	50
83-32-9	acenaphthene	ND	10
51-28-5	2,4-dinitrophenol	ND	50
100-02-7	4-nitrophenol	ND	50
132-64-9	dibenzofuran	ND	10
121-14-2	2,4-dinitrotoluene	ND	10
84-66-2	diethylphthalate	ND	10
7005-72-3	4-chlorophenyl-phenylether	ND	10
86-73-7	fluorene	ND	10
100-01-6	4-nitroaniline	ND	50
534-52-1	4,6-dinitro-2-methylphenol	ND	50
86-30-6	n-nitrosodiphenylamine (1)	ND	10
101-55-3	4-bromophenyl-phenylether	ND	10
118-74-1	hexachlorobenzene	ND	10
87-86-5	pentachlorophenol	ND	50
85-01-8	phenanthrene	ND	10
120-12-7	anthracene	ND	10
84-74-2	di-n-butylphthalate	ND	10
206-44-0	fluoranthene	ND	10
129-00-0	pyrene	ND	10
85-68-7	butylbenzylphthalate	ND	10
91-94-1	3,3'-dichlorobenzidine	ND	20
56-55-3	benzo(a)anthracene	ND	10
218-01-9	chrysene	ND	10
117-81-7	bis(2-ethylhexyl)phthalate	ND	10
117-84-0	di-n-octylphthalate	ND	10
205-99-2	benzo(b)fluoranthene	ND	10
207-08-9	benzo(k)fluoranthene	ND	10
50-32-8	benzo(a)pyrene	ND	10
193-39-5	indeno(1,2,3-cd)pyrene	ND	10
53-70-3	dibenz(a,h)anthracene	ND	10
191-24-2	benzo(g,h,i)perylene	ND	10

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: LCS
Lab Sample ID: AB9269
Extraction Date: 09/09/94
Analysis Date: 09/12/94

Compound	Spike Added (total µg)	Sample Conc. (total µg)	LCS Conc. (total µg)	LCS % Rec. (total µg)
phenol	75	0	69.8	93
2-chlorophenol	75	0	61.4	82
1,4-dichlorobenzene	50	0	36.1	72
n-nitroso-di-n-propylamine	50	0	26.6	53
1,2,4-trichlorobenzene	50	0	43.7	87
4-chloro-3-methylphenol	75	0	81.6	109
acenaphthene	50	0	45.9	92
4-nitrophenol	75	0	71.7	96
2,4-dinitrotoluene	50	0	45.6	91
pentachlorophenol	75	0	69.7	93
pyrene	50	0	37.2	74

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: ~~397C~~
Lab Sample ID: AB9109
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
108-95-2	phenol	2 J	10
111-44-4	bis(2-chloroethyl)ether	ND	10
95-57-8	2-chlorophenol	ND	10
541-73-1	1,3-dichlorobenzene	ND	10
106-46-7	1,4-dichlorobenzene	ND	10
100-51-6	benzyl alcohol	2 J	10
95-50-1	1,2-dichlorobenzene	ND	10
95-48-7	2-methylphenol	ND	10
108-60-1	bis(2-chloroisopropyl)ether	ND	10
106-44-5	4-methylphenol	ND	10
621-64-7	n-nitroso-di-n-propylamine	ND	10
67-72-1	hexachloroethane	ND	10
98-95-3	nitrobenzene	ND	10
78-59-1	isophorone	ND	10
88-75-5	2-nitrophenol	1 J	10
105-67-9	2,4-dimethylphenol	ND	10
65-85-0	benzoic acid	12 J	50
111-91-1	bis(2-chloroethoxy)methane	ND	10
120-83-2	2,4-dichlorophenol	ND	10
120-82-1	1,2,4-trichlorobenzene	ND	10
91-20-3	naphthalene	7 J	10
106-47-8	4-chloroaniline	ND	10
87-68-3	hexachlorobutadiene	ND	10
59-50-7	4-chloro-3-methylphenol	ND	10
91-57-6	2-methylnaphthalene	3 J	10
77-47-4	hexachlorocyclopentadiene	ND	10
88-06-2	2,4,6-trichlorophenol	ND	10
95-95-4	2,4,5-trichlorophenol	ND	50
91-58-7	2-chloronaphthalene	ND	10
88-74-4	2-nitroaniline	ND	50
131-11-3	dimethylphthalate	ND	10
208-96-8	acenaphthylene	ND	10
606-20-2	2,6-dinitrotoluene	ND	10
86-74-8	carbazole	ND	10

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: ~~397C~~
Lab Sample ID: AB9109
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
99-09-2	3-nitroaniline	ND	50
83-32-9	acenaphthene	ND	10
51-28-5	2,4-dinitrophenol	ND	50
100-02-7	4-nitrophenol	ND	50
132-64-9	dibenzofuran	ND	10
121-14-2	2,4-dinitrotoluene	ND	10
84-66-2	diethylphthalate	ND	10
7005-72-3	4-chlorophenyl-phenylether	ND	10
86-73-7	fluorene	ND	10
100-01-6	4-nitroaniline	ND	50
534-52-1	4,6-dinitro-2-methylphenol	ND	50
86-30-6	n-nitrosodiphenylamine (1)	ND	10
101-55-3	4-bromophenyl-phenylether	ND	10
118-74-1	hexachlorobenzene	ND	10
87-86-5	pentachlorophenol	ND	50
85-01-8	phenanthrene	ND	10
120-12-7	anthracene	ND	10
84-74-2	di-n-butylphthalate	ND	10
206-44-0	fluoranthene	ND	10
129-00-0	pyrene	ND	10
85-68-7	butylbenzylphthalate	ND	10
91-94-1	3,3'-dichlorobenzidine	ND	20
56-55-3	benzo(a)anthracene	ND	10
218-01-9	chrysene	ND	10
117-81-7	bis(2-ethylhexyl)phthalate	23	10
117-84-0	di-n-octylphthalate	ND	10
205-99-2	benzo(b)fluoranthene	ND	10
207-08-9	benzo(k)fluoranthene	ND	10
50-32-8	benzo(a)pyrene	ND	10
193-39-5	indeno(1,2,3-cd)pyrene	ND	10
53-70-3	dibenz(a,h)anthracene	ND	10
191-24-2	benzo(g,h,i)perylene	ND	10

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: ~~397C~~ e
Lab Sample ID: AB9109
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result ($\mu g/m^3$)	Detection Limit
108-95-2	phenol	0.009 J	0.042
111-44-4	bis(2-chloroethyl)ether	ND	0.042
95-57-8	2-chlorophenol	ND	0.042
541-73-1	1,3-dichlorobenzene	ND	0.042
106-46-7	1,4-dichlorobenzene	ND	0.042
100-51-6	benzyl alcohol	0.010 J	0.042
95-50-1	1,2-dichlorobenzene	ND	0.042
95-48-7	2-methylphenol	ND	0.042
108-60-1	bis(2-chloroisopropyl)ether	ND	0.042
106-44-5	4-methylphenol	ND	0.042
621-64-7	n-nitroso-di-n-propylamine	ND	0.042
67-72-1	hexachloroethane	ND	0.042
98-95-3	nitrobenzene	ND	0.042
78-59-1	isophorone	ND	0.042
88-75-5	2-nitrophenol	0.004 J	0.042
105-67-9	2,4-dimethylphenol	ND	0.042
65-85-0	benzoic acid	0.052 J	0.208
111-91-1	bis(2-chloroethoxy)methane	ND	0.042
120-83-2	2,4-dichlorophenol	ND	0.042
120-82-1	1,2,4-trichlorobenzene	ND	0.042
91-20-3	naphthalene	0.030 J	0.042
106-47-8	4-chloroaniline	ND	0.042
87-68-3	hexachlorobutadiene	ND	0.042
59-50-7	4-chloro-3-methylphenol	ND	0.042
91-57-6	2-methylnaphthalene	0.013 J	0.042
77-47-4	hexachlorocyclopentadiene	ND	0.042
88-06-2	2,4,6-trichlorophenol	ND	0.042
95-95-4	2,4,5-trichlorophenol	ND	0.208
91-58-7	2-chloronaphthalene	ND	0.042
88-74-4	2-nitroaniline	ND	0.208
131-11-3	dimethylphthalate	ND	0.042
208-96-8	acenaphthylene	ND	0.042
606-20-2	2,6-dinitrotoluene	ND	0.042
86-74-8	carbazole	ND	0.042

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: ~~397C~~
Lab Sample ID: AB9109
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result ($\mu g/m^3$)	Detection Limit
99-09-2	3-nitroaniline	ND	0.208
83-32-9	acenaphthene	ND	0.042
51-28-5	2,4-dinitrophenol	ND	0.208
100-02-7	4-nitrophenol	ND	0.208
132-64-9	dibenzofuran	ND	0.042
121-14-2	2,4-dinitrotoluene	ND	0.042
84-66-2	diethylphthalate	ND	0.042
7005-72-3	4-chlorophenyl-phenylether	ND	0.042
86-73-7	fluorene	ND	0.042
100-01-6	4-nitroaniline	ND	0.208
534-52-1	4,6-dinitro-2-methylphenol	ND	0.208
86-30-6	n-nitrosodiphenylamine (1)	ND	0.042
101-55-3	4-bromophenyl-phenylether	ND	0.042
118-74-1	hexachlorobenzene	ND	0.042
87-86-5	pentachlorophenol	ND	0.208
85-01-8	phenanthrene	ND	0.042
120-12-7	anthracene	ND	0.042
84-74-2	di-n-butylphthalate	ND	0.042
206-44-0	fluoranthene	ND	0.042
129-00-0	pyrene	ND	0.042
85-68-7	butylbenzylphthalate	ND	0.042
91-94-1	3,3'-dichlorobenzidine	ND	0.083
56-55-3	benzo(a)anthracene	ND	0.042
218-01-9	chrysene	ND	0.042
117-81-7	bis(2-ethylhexyl)phthalate	0.096	0.042
117-84-0	di-n-octylphthalate	ND	0.042
205-99-2	benzo(b)fluoranthene	ND	0.042
207-08-9	benzo(k)fluoranthene	ND	0.042
50-32-8	benzo(a)pyrene	ND	0.042
193-39-5	indeno(1,2,3-cd)pyrene	ND	0.042
53-70-3	dibenz(a,h)anthracene	ND	0.042
191-24-2	benzo(g,h,i)perylene	ND	0.042

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: 398A
Lab Sample ID: AB9110
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
108-95-2	phenol	2 J	10
111-44-4	bis(2-chloroethyl)ether	ND	10
95-57-8	2-chlorophenol	ND	10
541-73-1	1,3-dichlorobenzene	ND	10
106-46-7	1,4-dichlorobenzene	ND	10
100-51-6	benzyl alcohol	2 J	10
95-50-1	1,2-dichlorobenzene	ND	10
95-48-7	2-methylphenol	ND	10
108-60-1	bis(2-chloroisopropyl)ether	ND	10
106-44-5	4-methylphenol	ND	10
621-64-7	n-nitroso-di-n-propylamine	ND	10
67-72-1	hexachloroethane	ND	10
98-95-3	nitrobenzene	ND	10
78-59-1	isophorone	ND	10
88-75-5	2-nitrophenol	ND	10
105-67-9	2,4-dimethylphenol	ND	10
65-85-0	benzoic acid	28 J	50
111-91-1	bis(2-chloroethoxy)methane	ND	10
120-83-2	2,4-dichlorophenol	ND	10
120-82-1	1,2,4-trichlorobenzene	ND	10
91-20-3	naphthalene	4 J	10
106-47-8	4-chloroaniline	ND	10
87-68-3	hexachlorobutadiene	ND	10
59-50-7	4-chloro-3-methylphenol	ND	10
91-57-6	2-methylnaphthalene	2 J	10
77-47-4	hexachlorocyclopentadiene	ND	10
88-06-2	2,4,6-trichlorophenol	ND	10
95-95-4	2,4,5-trichlorophenol	ND	50
91-58-7	2-chloronaphthalene	ND	10
88-74-4	2-nitroaniline	ND	50
131-11-3	dimethylphthalate	ND	10
208-96-8	acenaphthylene	ND	10
606-20-2	2,6-dinitrotoluene	ND	10
86-74-8	carbazole	ND	10

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics (Continued)
Client Sample ID: 398A
Lab Sample ID: AB9110
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result (total µg)	Detection Limit
99-09-2	3-nitroaniline	ND	50
83-32-9	acenaphthene	ND	10
51-28-5	2,4-dinitrophenol	ND	50
100-02-7	4-nitrophenol	ND	50
132-64-9	dibenzofuran	ND	10
121-14-2	2,4-dinitrotoluene	ND	10
84-66-2	diethylphthalate	ND	10
7005-72-3	4-chlorophenyl-phenylether	ND	10
86-73-7	fluorene	ND	10
100-01-6	4-nitroaniline	ND	50
534-52-1	4,6-dinitro-2-methylphenol	ND	50
86-30-6	n-nitrosodiphenylamine (1)	ND	10
101-55-3	4-bromophenyl-phenylether	ND	10
118-74-1	hexachlorobenzene	ND	10
87-86-5	pentachlorophenol	ND	50
85-01-8	phenanthrene	ND	10
120-12-7	anthracene	ND	10
84-74-2	di-n-butylphthalate	ND	10
206-44-0	fluoranthene	ND	10
129-00-0	pyrene	ND	10
85-68-7	butylbenzylphthalate	ND	10
91-94-1	3,3'-dichlorobenzidine	ND	20
56-55-3	benzo(a)anthracene	ND	10
218-01-9	chrysene	ND	10
117-81-7	bis(2-ethylhexyl)phthalate	2 J	10
117-84-0	di-n-octylphthalate	ND	10
205-99-2	benzo(b)fluoranthene	ND	10
207-08-9	benzo(k)fluoranthene	ND	10
50-32-8	benzo(a)pyrene	ND	10
193-39-5	indeno(1,2,3-cd)pyrene	ND	10
53-70-3	dibenz(a,h)anthracene	ND	10
191-24-2	benzo(g,h,i)perylene	ND	10

(1) - Cannot be separated from diphenylamine.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

TO-13 Semivolatile Organics
Client Sample ID: 398A
Lab Sample ID: AB9110
Extraction Date: 09/09/94
Analysis Date: 09/12/94
Dilution Factor: 1.0

CAS#	Compound	Result ($\mu g/m^3$)	Detection Limit
108-95-2	phenol	0.008 J	0.045
111-44-4	bis(2-chloroethyl)ether	ND	0.045
95-57-8	2-chlorophenol	ND	0.045
541-73-1	1,3-dichlorobenzene	ND	0.045
106-46-7	1,4-dichlorobenzene	ND	0.045
100-51-6	benzyl alcohol	0.008 J	0.045
95-50-1	1,2-dichlorobenzene	ND	0.045
95-48-7	2-methylphenol	ND	0.045
108-60-1	bis(2-chloroisopropyl)ether	ND	0.045
106-44-5	4-methylphenol	ND	0.045
621-64-7	n-nitroso-di-n-propylamine	ND	0.045
67-72-1	hexachloroethane	ND	0.045
98-95-3	nitrobenzene	ND	0.045
78-59-1	isophorone	ND	0.045
88-75-5	2-nitrophenol	ND	0.045
105-67-9	2,4-dimethylphenol	ND	0.045
65-85-0	benzoic acid	0.125 J	0.227
111-91-1	bis(2-chloroethoxy)methane	ND	0.045
120-83-2	2,4-dichlorophenol	ND	0.045
120-82-1	1,2,4-trichlorobenzene	ND	0.045
91-20-3	naphthalene	0.017 J	0.045
106-47-8	4-chloroaniline	ND	0.045
87-68-3	hexachlorobutadiene	ND	0.045
59-50-7	4-chloro-3-methylphenol	ND	0.045
91-57-6	2-methylnaphthalene	0.007 J	0.045
77-47-4	hexachlorocyclopentadiene	ND	0.045
88-06-2	2,4,6-trichlorophenol	ND	0.045
95-95-4	2,4,5-trichlorophenol	ND	0.227
91-58-7	2-chloronaphthalene	ND	0.045
88-74-4	2-nitroaniline	ND	0.227
131-11-3	dimethylphthalate	ND	0.045
208-96-8	acenaphthylene	ND	0.045
606-20-2	2,6-dinitrotoluene	ND	0.045
86-74-8	carbazole	ND	0.045

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Client Sample ID	nitro-benzene-d5	2-fluoro-biphenyl	terphenyl-d14	phenol-d6	2-fluoro-phenol	2,4,6-tribromo-phenol
Method Blank	67	85	84	64	69	70
LCS	85	90	93	80	68	88
397C	*	*	*	*	*	*
398A	*	*	*	*	*	*

Note: QC limits not established.

* - Sample not spiked with surrogate standard.

Client: SENECA
Workorder: 1317

Quanterra Environmental Services

Total Particulate Analytical Results, $\mu g/m^3$

CLIENT SAMPLE ID	LAB SAMPLE ID	TOTAL PARTICULATE
9285486	AB9115	19.00
9285487	AB9116	18.79

Total Particulate Accuracy

REFERENCE STANDARDS, g	ACTUAL VALUE, g
1.0000	0.9999
2.0000	1.9996
5.0000	4.9998

Total Particulate Precision

CLIENT SAMPLE ID	SAMPLE WEIGHT, g	CHECK WEIGHT, g	DIFFERENCE, mg
9285486	4.2137	4.2128	-0.9000

COC NO. *0000481*

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

WO # 1317

Reference Document No. 422825

Page 1 of 2

INTERNATIONAL TECHNOLOGY CORPORATION

Project Name/No.[1] Seneca Army Depot #579070

Sample Team Members[2] D. Harrington, S. Akeman

Profit Center No.[3] 3513

Project Manager[4] Jeff Korb

Purchase Order No.[6] 162254

Required Report Date[11] 9-16-94

Samples Shipment Date[7] 9-8-94

Lab Destination[8] Middle Brook

Lab Contact[9] Jackie Waddell

Project Contact/Phone[12] J. Korb / 716-271-6430 / 716-271-6251 (Fax)

Carrier/Waybill No.[13] Fed Ex

Bill to:[5] I T Corp
2790 Mosside Blvd
Monroeville, PA

Report to:[10] Jeff Korb
I T Corp
140 Allens Creek Rd Suite 15C
Rochester, NY 14618

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Preservative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
397C	XAD-2 Resin Cartridge (Glass)	18:15 9-7-94	Cartridge Glass	139.87 m³	N/A	TO-13 (SVOAs)	Rec'd at 2°C KMC 9-9-94 with seals intact	119 2488 421 1609
Na	PUF Filter	18:15 9-7-94	Quartz Filter	"	"	Particulate	↓	↓
29A/12641	SUMMA Canister (SSTEEL)	7:30 9-7-94	Canister	~Ambient	N/A	TO 14 (EPA List)	Rec'd at Ambient temp. with seals intact	263 9553 664 1610
204/93161	Summa Canister (SSteel)	18:35 9-7-94	Canister	29." Hg	NA	TO 14 (EPA-List)	DO NOT analyze — VOID per JeffK 9/19/94	102 6899 115 1611
37A/12734	Summa Canister (SSteel)	6:40 9-8-94	Canister	~Ambient	N/A	TO 14 (EPA List)		102 6899 167 1612
XAD/ 11:29 DMH	Summa Canister (SSteel)	15:45 9-8-94	Canister	14 in Hg	N/A	TO-14 (EPA List)		102 6899 142 1613
928/5486	PM10 Filter (Paper)	18:05 9-7-94	Filter	1678 m³	N/A	PM10 Particulate		119 2488 263 1614
398A	XAD-2 Resin Cartridge (Glass)	18:20 9-8-94	Cartridge Glass	220.48 m³	NA	TO-13 (SVOAs)	Rec'd at 2°C with seals intact	119 2488 421 1609

Special Instructions:[23] Sample @ Ambient : 29A/12641 and 37A/12641 :

Possible Hazard Identification:[24] Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☒ Archive [mos.]

Turnaround Time Required:[26] Normal ☐ Rush ☒ 5 DAY TAT

QC Level:[27] I ☒ II ☐ III ☐ Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) Don Harrington IT Corp	Date: 9-8-94 Time: 20:40	1. Received by[28] (Signature/Affiliation) Kerry A. Klemm QES-KN	Date: 09-09-94 Time: 09:00
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29] Samples @ Ambient : 29A/12641 - Reason ?
Sample @ Ambient : 37A/12734 - High Flowrate recorded through Controller.
Sample 204/93161 - No Flow recorded through Controller : Post Pressure test shows 29 in Hg

MCA 3/15/91

White: To accompany samples Yellow: Field copy *See back of form for special instructions.

COC NO.

0000482

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

WO # 1317

Reference Document No. 422826

Page 1 of 2

IT CORPORATION — Seneca Army Depot

Project Name/No.[1] #514070

Sample Team Members[2] D Harrington, S. Noonan

Profit Center No.[3] 3513

Project Manager[4] Jeff Kolb

Purchase Order No.[6] 162254

Required Report Date[11] 9-16-94

Samples Shipment Date[7] 9-8-94

Lab Destination[8] Middle Brook

Lab Contact[9] Jackie Waddell

Project Contact/Phone[12] J Kolb / 716-271-0430 716-271-0251 Fax

Carrier/Waybill No.[13] Fed Ex

Bill to:[5] IT Corp
2790 Mossside BLVD
Monroeville, PA

Report to:[10] Jeff Kolb
IT Corp.
140 Allens Creek Suite 150
Rochester, NY 14618

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Pre-servative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
NA	PUF Filter	16:20 9-8-94	Quartz Filter	22948 m³	NA	Particulate	Rec'd at 2°C with custody seals intact KAK 9/9/94	RL# 1609
~~264/4294~~	SUMMA Canister (SSTEEL)	~~18:45 9-8-94~~	~~Canister~~	~~14.1 lb~~	NA	TO-14 (EPA list) DKH		
9285487	PM10 Filter (Paper)	18:12 9-8-94	Filter	16978.8 m³	NA	PM10 Particulate	Rec'd at ambient temperature with custody seals intact. KAK 9/9/94	119 2488 263 1614

Special Instructions:[23]

Possible Hazard Identification:[24] Non-hazard [X] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ]

Sample Disposal:[25] Return to Client [ ] Disposal by Lab [X] Archive (mos.)

Turnaround Time Required:[26] Normal [ ] Rush [X] 5 DAY TAT

QC Level:[27] I [X] II [ ] III [ ] Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) Don Harrington IT Corp	Date: 9-8-94 Time: 20:46	1. Received by[28] (Signature/Affiliation) Kenya Klemm QES-KN	Date: 09-09-94 Time: 09:00
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

MCA 3/15/91

White: To accompany samples Yellow: Field copy

*See back of form for special instructions.

Quanterra Environmental Services

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

615 588-6401 Telephone
615 584-4315 Fax

IT Engineering Services
140 Allen's Creek Road
Suite 150
Rochester, NY 14618
Attn: Jeff Korb

September 19, 1994

Job Number: 1347

P.O. Number: 162254

This is the Certificate of Analysis for the following sample:

Client Project ID:	Seneca Army Depot
Date Received by Lab:	September 13, 1994
Number of Samples:	One (1)
Sample Type:	Summa Canister

I. Introduction

One sample arrived at Quanterra Environmental Services, Knoxville, Tennessee on September 13, 1994 for chemical analysis. The sample was collected on September 9, 1994 and was labeled as follows:

Client Sample ID	Lab Sample ID
16A/0038	AB9425

Reviewed and Approved:

Kenneth Mueller
Project Manager

Quanterra Environmental Services

II. Analytical Results/Methodology

The analytical results for this report are presented by analytical test. The data will include sample identification information, the analytical results, and the appropriate detection limits.

The sample was analyzed for Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry; EPA Method TO-14.

III. Quality Control

Immediately following the analytical data for the samples can be found the QA/QC information that pertains to these samples. The purpose of this information is to demonstrate that the data enclosed is scientifically valid and defensible. This QA/QC data is used to assess the laboratory's performance during the analysis of the samples it accompanies. All quantitations were performed within the calibrated range of the analytical instrument.

IV. Data Report Qualifiers

Following are descriptions of data report qualifiers which may have been used in this analytical report.

U - The analyte was not detected in the sample or extract. The value reported with the "U" is the detection limit for that compound in that sample.

VALUE - The result is a value equal to or greater than the detection limit for that compound.

J - Indicates an estimated value. This flag is used when mass spectral data indicates the presence of the compound, but the result is less than the specified detection limit.

D - This flag indicates that the compound was analyzed at a secondary dilution factor.

E - This flag indicates that the quantity of this compound detected in this sample is above the linear range of the instrument. Results are probably lower than actual.

Client: SENECA
Workorder: 1347

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: 16A0038

Lab Sample ID: AB9425

Analysis Date: 09/14/94

Dilution Factor: 2.41

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	0.58	0.48
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.48
74-87-3	Chloromethane	0.56	0.48
75-01-4	Vinyl Chloride	ND	0.48
74-83-9	Bromomethane	ND	0.48
75-00-3	Chloroethane	ND	0.48
75-69-4	Trichlorofluoromethane	ND	0.48
75-35-4	1,1-Dichloroethene	ND	0.48
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.48
75-09-2	Methylene Chloride	29	0.72
75-34-3	1,1-Dichloroethane	ND	0.48
156-59-2	cis-1,2-Dichloroethene	ND	0.48
67-66-3	Chloroform	ND	0.48
71-55-6	1,1,1-Trichloroethane	ND	0.48
56-23-5	Carbon Tetrachloride	ND	0.48
71-43-2	Benzene	ND	0.48
107-06-2	1,2-Dichloroethane	ND	0.48
79-01-6	Trichloroethene	ND	0.48
78-87-5	1,2-Dichloropropane	ND	0.48
10061-01-5	cis-1,3-Dichloropropene	ND	0.48
108-88-3	Toluene	ND	0.48
10061-02-6	trans-1,3-Dichloropropene	ND	0.48
79-00-5	1,1,2-Trichloroethane	ND	0.48
127-18-4	Tetrachloroethene	ND	0.48
106-93-4	1,2-Dibromoethane	ND	0.48
108-90-7	Chlorobenzene	ND	0.48
100-41-4	Ethylbenzene	ND	0.48
IT5-30-5	m/p-Xylene	ND	0.48
95-47-6	o-Xylene	ND	0.48
100-42-5	Styrene	ND	0.48
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.48
108-67-8	1,3,5-Trimethylbenzene	ND	0.48
95-63-6	1,2,4-Trimethylbenzene	ND	0.48
541-73-1	1,3-Dichlorobenzene	ND	0.48

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Environmental Services

Client: SENECA
Workorder: 1347

TO-14 Volatile Organics

Client Sample ID: 16A0038

Lab Sample ID: AB9425

Analysis Date: 09/14/94

Dilution Factor: 2.41

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.48
95-50-1	1,2-Dichlorobenzene	ND	0.48
100-44-7	Benzyl Chloride	ND	0.48
120-82-1	1,2,4-Trichlorobenzene	ND	0.48
87-68-3	Hexachlorobutadiene	ND	0.48

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	93
D8-Toluene	105
Bromofluorobenzene	94

Client: SENECA
Workorder: 1347

Quanterra Environmental Services

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKJ3

Analysis Date: 09/14/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
75-71-8	Dichlorodifluoromethane	ND	0.20
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl Chloride	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1-Dichloroethene	ND	0.20
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.20
75-09-2	Methylene Chloride	ND	0.30
75-34-3	1,1-Dichloroethane	ND	0.20
156-59-2	cis-1,2-Dichloroethene	ND	0.20
67-66-3	Chloroform	ND	0.20
71-55-6	1,1,1-Trichloroethane	ND	0.20
56-23-5	Carbon Tetrachloride	ND	0.20
71-43-2	Benzene	ND	0.20
107-06-2	1,2-Dichloroethane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
78-87-5	1,2-Dichloropropane	ND	0.20
10061-01-5	cis-1,3-Dichloropropene	ND	0.20
108-88-3	Toluene	ND	0.20
10061-02-6	trans-1,3-Dichloropropene	ND	0.20
79-00-5	1,1,2-Trichloroethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
106-93-4	1,2-Dibromoethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
IT5-30-5	m/p-Xylene	ND	0.20
95-47-6	o-Xylene	ND	0.20
100-42-5	Styrene	ND	0.20
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20
108-67-8	1,3,5-Trimethylbenzene	ND	0.20
95-63-6	1,2,4-Trimethylbenzene	ND	0.20
541-73-1	1,3-Dichlorobenzene	ND	0.20

Quanterra
Environmental Services

Client: SENECA
Workorder: 1347

TO-14 Volatile Organics

Client Sample ID: SYSTEM BLANK

Lab Sample ID: ABLKJ3

Analysis Date: 09/14/94

Dilution Factor: 1

CAS #	Compound	Result ppb(V/V)	Detection Limit
106-46-7	1,4-Dichlorobenzene	ND	0.20
95-50-1	1,2-Dichlorobenzene	ND	0.20
100-44-7	Benzyl Chloride	ND	0.20
120-82-1	1,2,4-Trichlorobenzene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20

Surrogate Compound	% Recovery
D4-1,2-Dichloroethane	95
D8-Toluene	107
Bromofluorobenzene	93

INTERNATIONAL TECHNOLOGY CORPORATION

COC NO: *0000510*

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

US #1644 RI #1644

Reference Document No. 3 400

Page 1 of ____

Project Name/No. [1] Seneca Army Depot #S-19078

Sample Team Members [2] D. Harrington, J. Korb

Profit Center No. [3] 3513

Project Manager [4] Jeff Korb

Purchase Order No. [6] 162254

Required Report Date [11] 9-16-94

Samples Shipment Date [7] 9-12-94

Lab Destination [8] Middle Brook

Lab Contact [9] Jackie Waddle

Project Contact/Phone [12] J. Korb / 716-271-6430 716-271-0251 (FAX)

Carrier/Waybill No. [13] Fed Ex 119 2765 655

Bill to: [5] IT Corp
2790 Mosside BLVD
Monroeville, PA

Report to: [10] Jeff Korb
IT Corp
140 Allens Creek Suite 150
Rochester NY 14618

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Preservative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
16A/CC038	SUMMA Canister (SSTEEL)	9-9-94	Canister	5.5in Hg	N/A	TO-14 (EPA List)	Rec'd intact at ambient temperature with custody seals intact KAKlemm 9/13/94	

FOR LAB USE ONLY

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard [X] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ]

Sample Disposal: [25]
Return to Client [ ] Disposal by Lab [X] Archive ____ (mos.)

Turnaround Time Required: [26]
Normal [ ] Rush [X] 5 DAY TAT

QC Level: [27]
I [X] II [ ] III [ ] Project Specific (specify): ____

1. Relinquished by [28] (Signature/Affiliation) Don Harrington IT Corp Roch	Date: 09-12-94 Time: 10:52	1. Received by [28] (Signature/Affiliation) Kenny A Klemm QES-KN	Date: 9-13-94 Time: 09:00
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

MCA 3/15/91

White: To accompany samples Yellow: Field copy

*See back of form for special instructions.