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Site Closure Report

Volume 1 of 2

Report and Appendix 1-4

Site Location:

Atlas Graphics, Inc.
567 Main Street
Westbury, NY 11590
VCP Site # 01-30-034B

Prepared for:

New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7015

Prepared by:

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743

Date:

May 2004

P00025

"Your Environmental Partner"

Site Closure Report
Atlas Graphics Inc.
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1.0 Introduction

The New York State Department of Environmental Conservation (NYSDEC) has performed an environmental investigation at the Atlas Graphics, Inc. (Atlas) site that identified contamination in the former cesspool. Trichloroethene (TCE) and toluene were accidentally discharged to the pool when Atlas initiated operations. This accidental discharge resulted in soil and groundwater contamination. These findings resulted in the site being designated a New York State Inactive Hazardous Waste Disposal Site, # 130034B. Based on NYSDEC's Remedial Investigation/Feasibility Study, a Record of Decision (ROD) was prepared that identified soil vapor extraction and air sparging as the selected remedial technologies.

A Remedial Design/Remedial Action work plan, dated September 20, 2000, addressing the on-site soil remediation and groundwater remediation at Atlas was prepared. Activities conducted pursuant to the Work Plan were conducted under NYSDEC oversight; the implementation of the Work Plan was pursuant to an Order on Consent between Atlas and the NYSDEC. The objective of the Work Plan was to remediate on-site contaminated subsurface soils using Soil Vapor Extraction (SVE) as well as air sparging (AS) to address the contamination in the groundwater on-site. Annual groundwater sampling was performed in adjacent off-site existing groundwater-monitoring wells.

This report summarizes the groundwater sampling data and formally request that the Atlas Graphics, Inc. site be reclassified to a Class 5 Site on the Registry of Inactive Hazardous Waste Sites in New York State.

2.0 Summary of Existing and background Information

2.1 Site Location, Ownership and Access

The NYSDEC designated Inactive Hazardous Waste Disposal Site, Atlas Graphics, Inc., is located at 567 Main Street, Westbury, Nassau County, New York. The site is approximately 0.2 acres in size. The designation on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry) is # 1-30-034B. HDP Printing, Inc. owns the property. The site and its proximate environs are shown on Figure 1.

2.2 Site Description

The property is roughly rectangular in shape, and is approximately 72 feet by 122 feet in size. There is a two story commercial building on site that occupies approximately 4,330 square feet (roughly ½) of the site's plan area. It is built on a concrete slab and has no basement, except for a small boiler room in the southwestern corner of the building.

It was erected in the 1950's and past site occupants include a heating company, a construction company, a development association, and a mill supply company. Atlas began operations at the site in 1977 and continues to utilize the site today.

It is presently connected to the municipal water and sewer systems.

The site is bounded by Swalm Street on the west, commercial building and parking lots on the north and east, and Main Street on the south. It is wholly within that area designated by NYSDEC as the New Cassel Industrial Area (NCIA).

2.3 Background Information

2.3.1 Hydrogeology

The site is located near the southern perimeter of the Town of North Hempstead. The groundwater reservoir underlying the Town of North Hempstead is composed of unconsolidated deposits of Holocene Age, glacial deposits of Pleistocene Age, and coastal-plain deposits of continental and marine origin of the Late Cretaceous Age. The deposits consist of clay, silt and bedrock. Weathered and crystalline bedrock of Low Paleozoic and/or Precambrian Age underlies the unconsolidated deposits and forms the virtually impermeable base of the groundwater reservoir.

From oldest (deepest) to youngest (shallowest) these sediments have been identified and divided into a series of hydrogeologic units: the Lloyd Aquifer; the Raritan clay confining unit; the Magothy Aquifer; and the Upper Glacial Aquifer.

The Upper Glacial Aquifer consists of late Pleistocene and Holocene Age poorly sorted san, gravel, silt and clay deposits. The upper surface of the Upper Glacial deposits comprise present day land surface except in areas such as the Westbury site where they

are overlain by recent Holocene deposits and/or fill materials. The Upper Glacial Aquifer at the site is found in this aquifer at a depth of approximately 60 feet below grade.

The southernmost part of the Town is underlain by a highly permeable glacial outwash consisting of stratified sand and gravel and occasional thin clay layers. The deposits forming the Upper Glacial Aquifer range in thickness from 6 feet to more than 350 feet. The extreme variation in thickness results from the highly eroded surface upon which these materials were deposited and the irregularity of their upper surface that is the present land surface. The outwash deposits range in thickness from 14 feet to about 165 feet.

2.3.2 Public Water Supply Wells

The NCIA is immediately north of and serviced by public water provided by the Bowling Green Water District. As the Record of Decision (ROD) dated February 2000 for the site states, "(a) supplemental treatment system, air striping followed by carbon polishing, was constructed in 1996 to mitigate the impact of groundwater contamination (emanating from the NCIA) on the Bowling Green public water supply wells. Presently, no site-specific contaminants exceeding the drinking water standards have been detected in water distributed to the public. Guard wells have been installed south of Old Country Road, in locations down gradient of the NCIA hazardous waste disposal sites and up gradient of the water supply wells as a precautionary measure. Therefore, use of groundwater in the area is not currently considered to be an exposure pathway of concern."

Moreover, the public water supply wells are located southeast of the site. The groundwater beneath the site flows southerly. Hence, the public wells are cross rather than down gradient of the Atlas site, and contaminated groundwater from beneath the Atlas site would not impact the public supply wells.

2.3.3 Previous Investigations

The building at 567 Main Street was built in 1950, and used as a warehouse for construction vehicles until 1977 (see Section 2.2 supra). In 1977, the property was taken over by Atlas, which currently operates a photo engraving manufacturing operation. This operation reportedly utilized approximately 300 gallons of trichloroethene (TCE) annually. At the time, Atlas originally commenced operations on site there was a documented discharge of approximately 50-gallons of TCE to the site's on-site sanitary system. In 1978 the on-site cesspool collapsed. As a result of this collapse, the site was connected to the public sewer system and the on-site sanitary system was abandoned.

In 1988, the NYSDEC classified the entire NCIA as a class 2 inactive hazardous waste disposal site. Based on the results of a subsequent Site Investigation (SI) and Preliminary Site Assessment (PSA performed by Lawler, Matusky and Skelly, LLP (LMS) the individual sites responsible for contamination were identified and placed on the Registry as class 2 sites. Atlas is one such site.

LMS conducted an Immediate Investigation Work Assignment (IIWA) at the Atlas site pursuant to a NYSDEC commission. The IIWA concluded that the contamination appeared to be the result of past disposal practices. LMS concluded that on-site waste disposal to the site's former cesspool was the most likely source of this contamination. However, as the OD states, "(t)he overall nature and extent of groundwater contamination is difficult to determine since the Atlas site is directly up gradient of the Former IMC Magnetics (IMC) site...Past investigations of this (IMC) facility indicate that the soils and groundwaters (sic) at this (IMC) site were heavily contaminated with similar contaminants as those used at the Atlas site. It is likely that the large contaminant concentrations found in HP-05, NC-2 and NC-2D (the off-site down gradient ground water monitoring wells proximate to Atlas) are the result of past disposal practices at IMC Magnetics."

2.3.4 Soil Vapor Extraction and Air Sparge Systems

In accordance with the September 20, 2000 Remedial Design/Remedial Action (RD/RA) work plan, AEL installed a soil vapor extraction (SVE) system and air sparging (AS) system at the Atlas site in October 2000. The system became operational during January 2001.

A Soil Vapor Extraction and Air Sparge Systems Design Report dated May 31, 2001 was submitted to the NYSDEC.

3.0 Groundwater Sampling

3.1 Nassau County Department of Health Investigation June 1986

The Nassau County Department of Health (NCDH) and Dvirka and Bartilucci Consulting Engineers (D&B) installed 35 wells in the New Cassel area as part of the Investigation of Contaminated Aquifer Segments. The wells were sampled one to three times from October 1984 to February 1986. The table below summarizes the sampling results from wells NC-2s and NC-2d the off-site down gradients ground water monitoring wells proximate to the Atlas Site.

Table 1
Summary of Laboratory Analytical Results
Nassau County Department of Health Investigation
October 1984 thru February 1986

Compound	NC-2s 12/4/84	NC-2s 3/13/85	NC-2s 3/26/85	NC-2s 12/27/85	NC-2s 1/31/86	NC-2d 11/25/85	NC-2d 1/31/86	NYSDOH TOGS
1,1,2-Trichlorotrifluoroethane	**14**	**11**	**11**	*	**24**	*	**310**	5
c & t-1,2-Dichloroethylene	*	*	*	**17**	**22**	*	*	5
1,1- Dichloroethane	*	*	*	*	*	*	71	5
1,1,1- Trichloroethane	**40**	**130**	**150**	**390**	**560**	**430**	**260**	5
Trichloroethylene	**1,300**	**2,100**	**2,300**	**2,200**	**1,500**	**68**	**64**	5
1,1,2- Trichloroethane		**2**	**2**		1			1
Tetrachloroethylene	**1,200**	**420**	**470**	**950**	**2,200**	**41**	**90**	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.2 NYSDEC IIWA Monitoring Well Samples March 1999

A total of four existing monitoring wells were sampled during the IIWA field sampling. The wells included NC-17, NC-2, NC-2d and N-11843. NC-2 and NC-2d are located down gradient of the Atlas site. Wells NC-17 and N-11843 are located up gradient of the Atlas site. Well NC-2 showed a decrease in the concentrations of contaminants since the last sampling conducted by the NCDH in 1986. Where the concentrations of contaminants in NC-2d showed a slight increase since the last sampling in 1986. The concentrations in NC-17 and N-11843 are significantly less than the down gradient monitoring wells. The below table summarizes the laboratory results of the monitoring well sampling.

Table 2
Summary of Laboratory Analytical Results
New York State Department of Conservation
March 1999

Compound	NC-2D	NC-2S	N-11843	NC-17	NYSDOH TOGS
1,1- Dichloroethane	*	2j	*	*	5
1,2-Dichloroethylene (total)	*	24	7j	3j	N/A
1,2- Dichloroethane	**7j**	*	*	*	0.8
1,1,1-Trichloroethane	**29**	**100**	3j	*	5
Trichloroethylene	**81**	**290 d**	**19**	5j	5
Tetrachloroethylene	**160**	**510 d**	**20**	**41**	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit
d= Concentration recovered from diluted 5:1 sample

3.3 Anson Environmental Ltd. Sampling October 10, 2001

On October 10, 2001, AEL conducted a round of groundwater sampling from two monitoring wells on-site NC-2s and N-11843. The wells were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8601. The results of the sampling showed a significant decrease in the levels detected during the previous investigation conducted by the NYSDEC in March 1999. The below table summarizes the laboratory results of the monitoring well sampling.

Table 3
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
October 10, 2001

Compound	NC-2s	N-11843	NYSDOH TOGS
Trichloroethylene	**20**	2	5
Tetrachloroethene	4	**6**	5
1,2 Dichloroethene	**24**	*	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.4 Anson Environmental Ltd. Sampling November 19, 2002

On November 19, 2002 AEL conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-3. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a significant decrease in the levels detected during the previous investigation conducted by the NYSDEC in March 1999. The below table summarizes the laboratory results of the monitoring well sampling.

Table 4
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
November 19, 2002

Compound	NC-2D (AEL)	NC-2D (NYSDEC)	P-3 (AEL)	P-3 (NYSDEC)	NYSDOH TOGS
c & t-1,2 Dichloroethylene	**41**	**42**	*		5
Trichloroethylene	**58**	**68**	*	**10J**	5
Tetrachloroethylene	**150**	**130**	*	2J	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected

3.5 Anson Environmental Ltd. Sampling May 14, 2003

On May 14, 2003 AEL conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-3. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a slight decrease in the levels detected during the previous sampling conducted in November 2002. The below table summarizes the laboratory results of the monitoring well sampling.

Table 5
Summary of Laboratory Analytical Results
Anson Environmental Ltd.
May 14, 2003

Compound	NC-2D	P-3	NYSDOH TOGS
c & t-1,2 Dicholorethene	**31**	*	5
1,1,1-Trichloroethane	**6J**	*	5
Trichloroethene	**23**	*	5
Tetrachloroethane	**57**	*	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit

3.6 Anson Environmental Ltd. and NYSDEC Sampling November 13, 2003

On November 13, 2003 AEL and the NYSDEC conducted a round of groundwater sampling on-site and down gradient of the Atlas site. The groundwater samples were collected from one down gradient monitoring well NC-2D and one on-site piezometer P-2. The well and piezometer were first purged of 3-5 well volumes then groundwater samples were collected and submitted to a laboratory for analysis via EPA Method 8260. The results of the sampling showed a decrease in the levels detected during the previous sampling conducted in May 2003. The below table summarizes the laboratory results of the monitoring well sampling.

Table 6
Summary of Laboratory Analytical Results
Anson Environmental Ltd. & NYSDEC
November 13, 2003

Compound	NC-2D (AEL)	NC-2D (NYSDEC)	P-2 (AEL)	P-2 (NYSDEC)	NYSDOH TOGS
c & t-1,2 Dichloroethene	4J	3J	*	*	5
1,1,1 Trichloroethane	1J	*	*	*	5
Trichloroethene	**7J**	4J	1J	*	5
Tetrachloroethene	**42**	**23**	4J	2J	5

Notes:
Numbers in **BOLD** exceed the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1
*= Not Detected
j= Estimated concentration; compound present below quantitation limit

4.0 Conclusions

Based on the above sampling events, the on-site and down gradient groundwater are either below the New York State Department of Health Technical and Operation Guidance Series (TOGS) 1.1.1 standards or have reached an asymptotic condition. The below tables and graphs show the trend in the up gradient and down gradient monitoring wells.

At this time AEL is requesting that the Atlas Graphics VCP Site # 01-30-034B be reclassified as a Class 5 site on the NYSDEC registry of Inactive Hazardous Waste Sites.

Table 7
Summary of Laboratory Analytical Results
Up Gradient Groundwater Monitoring

Compound	N-11843 1999	NC-17 1999	N-11843 10/10/01	P-3 (AEL) 11/19/02	P-3 (NYSDEC) 11/19/02	P-3 5/14/03	P-2 (AEL) 11/13/03	P-2 (NYSDEC) 11/13/03
c & t-1,2-Dichloroethylene	7	3	0	0	0	0	0	0
Trichloroethylene	19	5	2	0	10	0	1	0
Tetrachloroethylene	20	41	6	0	2	0	4	2

Notes:
Upgradient water samples were collected from various wells and piezometers located within a 20-foot radius of each other due to the availability of water in the wells during the sampling events.

Atlas Graphics
Laboratory Analytical Data Up Gradient Groundwater Monitoring

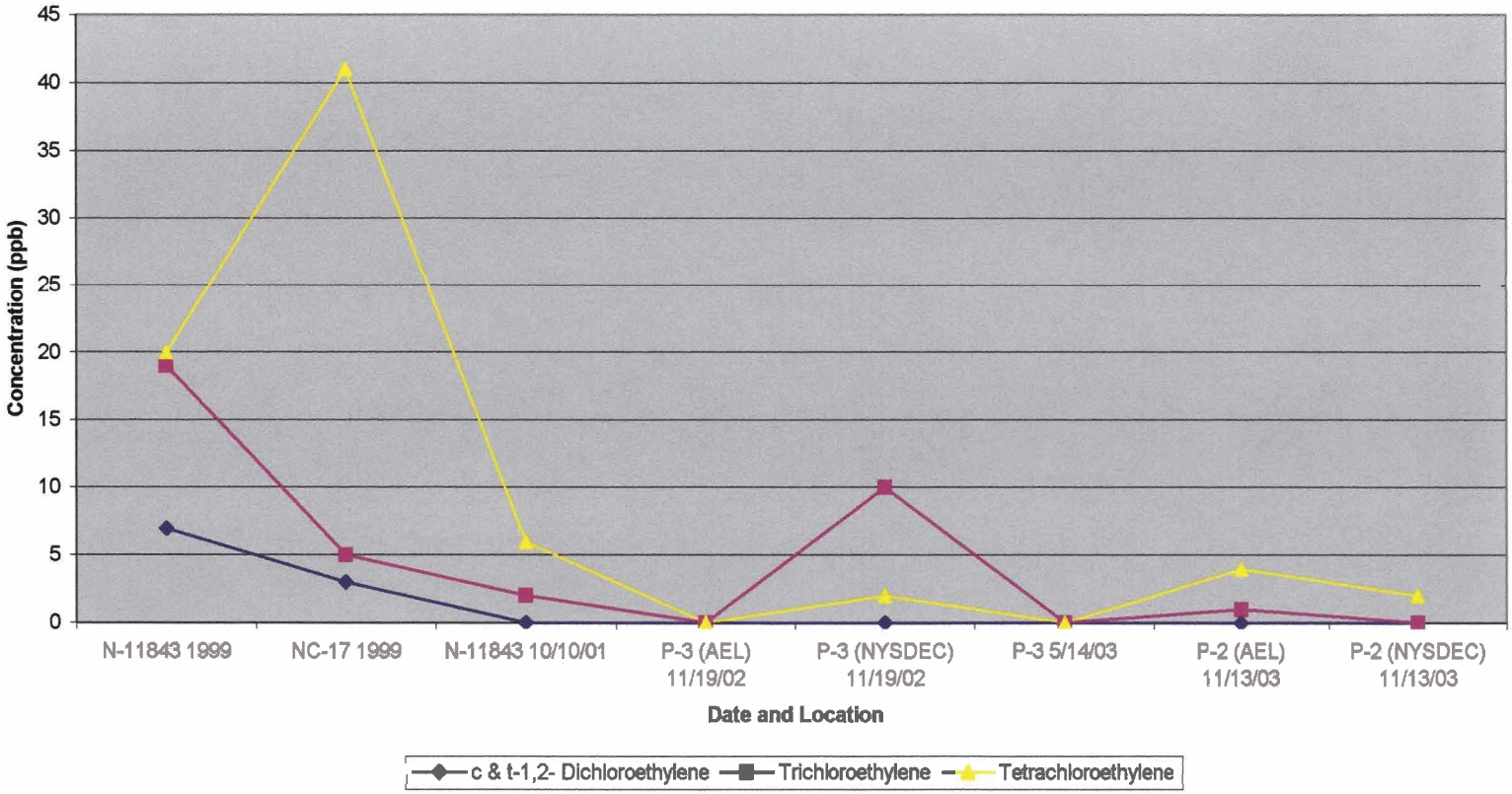


Table 8
Summary of Laboratory Analytical Results
NC-2D Down Gradient Monitoring Well

Compound	NC-2D 11/25/85	NC-2D 1/31/86	NC-2D 1999	NC-2D (AEL) 11/19/02	NC-2D (NYSDEC) 11/19/02	NC-2D 5/14/03	NC-2D (AEL) 11/13/03	NC-2D (NYSDEC) 11/13/03
c & t-1,2-Dichloroethylene	0	0	0	41	42	31	4	3
1,1,1- Trichloroethane	430	260	29	0	0	6	1	0
Trichloroethylene	68	64	81	58	68	23	7	4
Tetrachloroethylene	41	90	160	150	130	57	42	23

Compound	NC-2D 5/14/03	NC-2D (AEL) 11/13/03	NC-2D (NYSDEC) 11/13/03
c & t-1,2-Dichloroethylene	31	4	3
1,1,1- Trichloroethane	6	1	0
Trichloroethylene	23	7	4
Tetrachloroethylene	57	42	23

Atlas Graphics
Laboratory Analytical Data NC-2D Downgradient Well

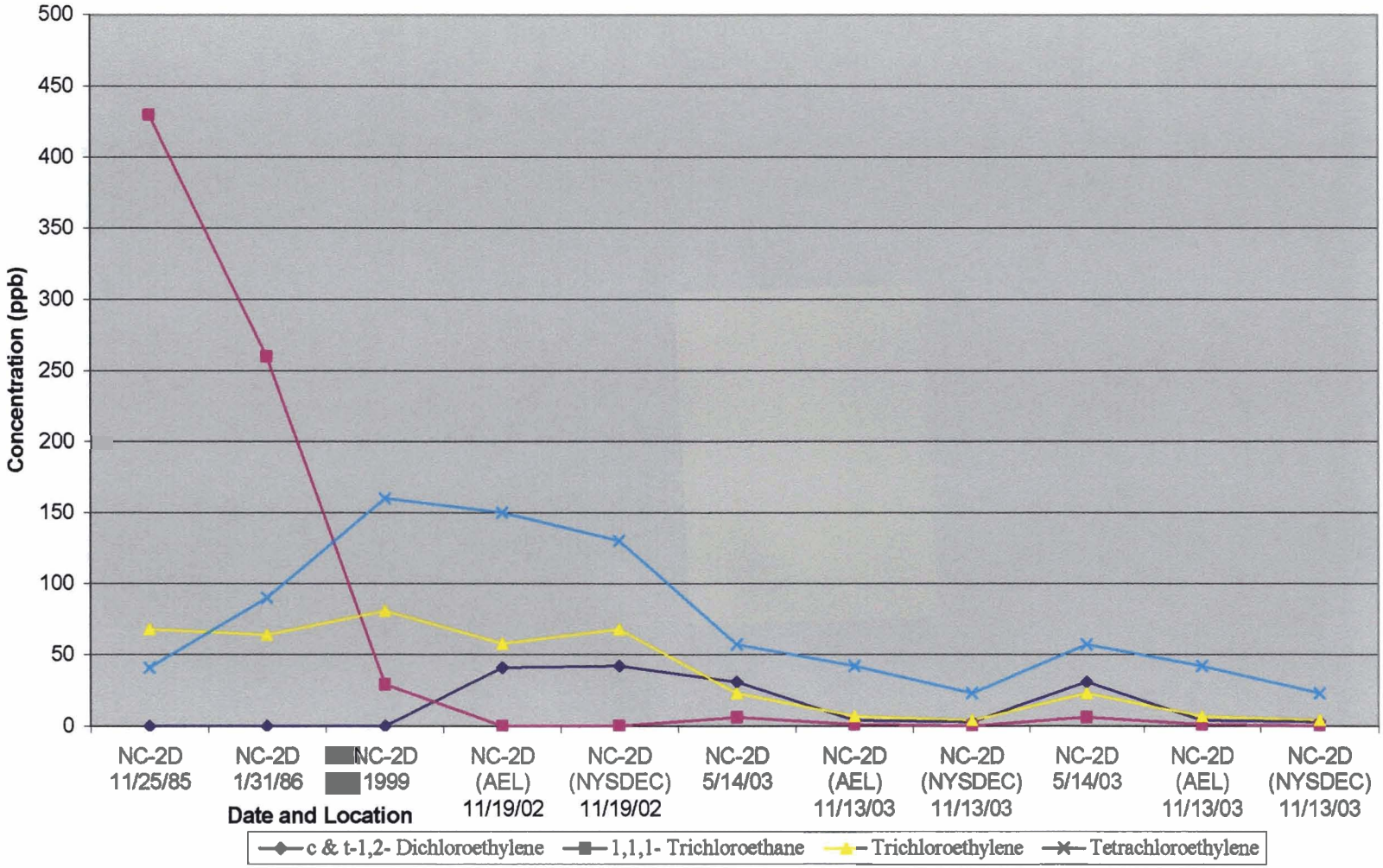


Table 9
Summary of Laboratory Analytical Results
NC-2S Down Gradient Monitoring Well

Compound	NC-2S 12/27/85	NC-2S 1/31/86	NC-2S 1999	NC-2S 10/10/01
c & t-1,2-Dichloroethylene	17	22	24	24
1,1,1- Trichloroethane	390	560	100	0
Trichloroethylene	2200	1500	290	20
Tetrachloroethylene	950	2200	510	4

Atlas Graphics
Laboratory Analytical Data NC-2S Downgradient Well

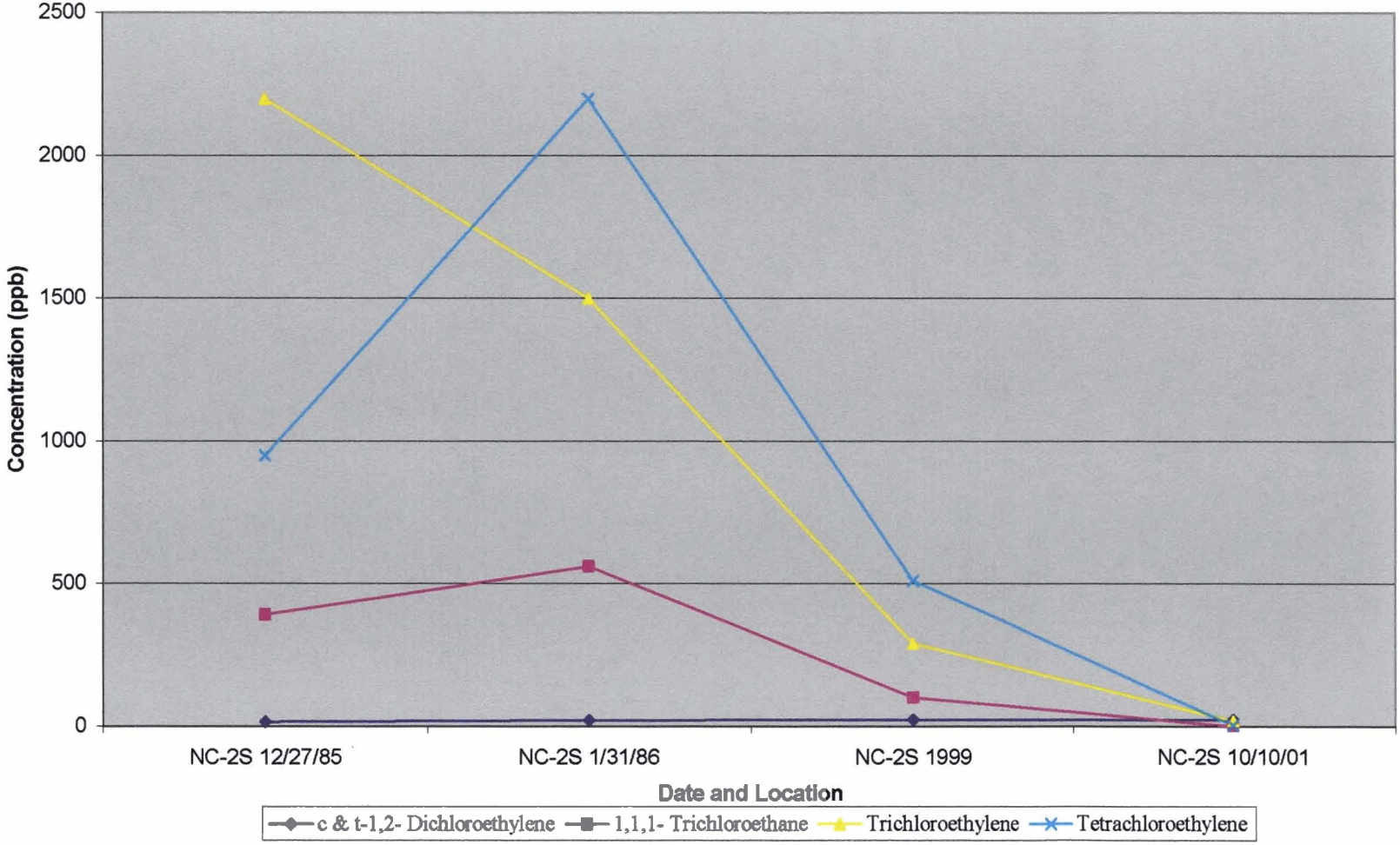


TABLE 3-2

ANALYTICAL RESULTS - NEW CASSEL - GROUNDWATER QUALITY

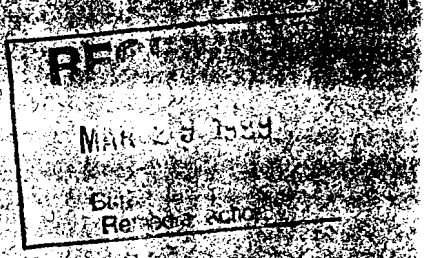
WELL NUMBER	NC-1	NC-1	NC-1	NC-2s	NC-2s	NC-2s	NC-2s	NC-2s	NC-2s	NC-2d	NC-2d	NC-3	NC-3
WELL DEPTH	60	60	60	57	57	57	57	57	57	120	120	60	60
SAMPLE DATE	12/4/84	3/26/85	12/27/85	10/16/84	12/4/84	3/19/85	9/26/85	12/27/85	1/31/86	11/25/85	1/31/86	12/4/84	9/13/85
Trichlorofluoroethane	<1	<1	NA	<8	<1	<1	<1	NA	NA	NA	NA	<1	<1
Methylene Chloride)													
1,1,2-Trichlorotrifluoroethane--)--	<10	<4	<8	10	14	11	11	<8	24	<8	810	<10	<4
1,1-Dichloroethylene)													
c & t-1,2-Dichloroethylene	<15		<14	<10	<15		<20	17	22	NR	<10	<15	
t-1,2-Dichloroethylene		<5				<5							<5
1,1-Dichloroethane	<15	NA	<14	<15	<15	NA	NA	<14	<12	NR	71	<15	NA
c-1,2-Dichloroethylene		<20				<20							<20
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	2	<1	<1
1,1,1-Trichloroethane	<1	<1	1	69	40	130	150	890	560	480	260	2	8
Carbon Tetrachloride	<1	<1	<1	<1	<1	NR	<1	<1	<1	<1	<1	<1	<1
Trichloroethylene	<1	<1	<1	190	1800	2100	2800	2200	1500	68	64	<1	8
Bromodichloromethane	<1	<1	<1	<8	<10	NR	NR	<1	<1	<1	<1	<1	<1
c-1,3-Dichloropropene)													
Dibromochloromethane--)--	<2			<2	<2							<2	
1,1,2-Trichloroethane)													
c-1,3 Dichloropropene)													
Dibromochloromethane--)--		<1	<1			<1	<1	<1	<1	<1	<1		<1
1,1,2-Trichlroroethane		<2	<1			2	2	NR	1	<1	<1		<2
1,2-Dibromoethane	<6	<2	NA	<10	<60	NR	NR	NA	NA	NA	NA	<6	<2
Tetrachloroethylene	<1	1	2	62	1200	420	470	950	2200	41	90	16	39
Bromoform	<3	<1	<2	<6	<8	<1	<1	<2	<1	<2	<1	<3	<1
Benzene	<8	<8	<8	<3	<8	<3	<8	<8	<8	NA	<8	<8	<8
Toluene	<3	<4	<6	<3	<8	<4	<4	<6	<4	NA	<4	<8	<4
Chlorobenzene	<8	<8	<3	<8	<8	<8	<8	<8	<4	NA	<4	<8	<8
Ethylbenzene	<8	<8	<6	<3	<8	NR	NR	<6	<4	NA	<4	<8	<8
Xylene (o,m,p)	<3	<8	<6	<8	<8	<10	<9	<6	<5	NA	<5	<3	<8
Dichlorobenzene (o,m,p)	<5	<4	<9	<6	<5	<8	<4	<9	<9	NA	<9	<5	<4
Total	0	1	8	831	2554	2663	2933	3557	4307	541	797	18	45

NA-Not Analyzed NR-No Result Due To Technical Reasons ?-No Mention On Lab Results

NEW YORK STATE SUPERFUND CONTRACT
IMMEDIATE INVESTIGATION WORK ASSIGNMENT

VOLUME I
REPORT
AND APPENDICES A-B

Atlas Graphics
Site No. 1-30-043B
Work Assignment No. D002676-20
DATE: March 1999



Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
John Cahill, *Commissioner*

Division of Environmental Remediation
Michael J. O'Toole, *Director*

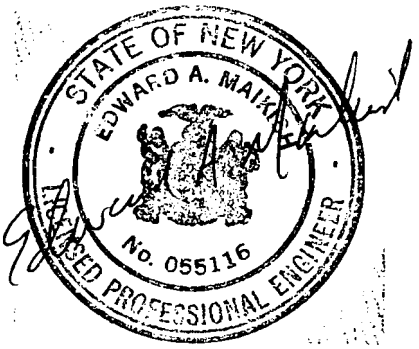
By:
Lawler, Matusky & Skelly Engineers LLP

ATLAS GRAPHICS (Site I.D. No. 1-30-043B)
IMMEDIATE INVESTIGATION WORK ASSIGNMENT
(IIWA)

TOWN OF NORTH HEMPSTEAD, NASSAU COUNTY

Work Assignment No. D002676-20

IIWA Report



Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation

March 1999

LMSE-99/0101&650/201

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science & Engineering Consultants
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Pearl River, New York 10965

ATLAS GRAPHICS SITE
IIWA REPORT
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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW AND OBJECTIVES OF THE IIWA

The New Cassel Industrial Area (NCIA) is located in the unincorporated village of Westbury in the Town of North Hempstead, Nassau County, New York (Figure 1-1). Approximately 200 industrial or commercial businesses occupy this 170-acre site (Figure 1-2). Due to extensive halogenated volatile organic contamination of groundwater beneath the site, the New York State Department of Environmental Conservation (NYSDEC) classified the entire industrial area as a hazardous waste site in 1988. Based on the results of a Site Investigation (SI) and Preliminary Site Assessment (PSA) conducted by Lawler, Matusky & Skelly Engineers LLP (LMS) the individual facilities responsible for the contamination were identified as Class 2 sites on the New York State Registry of Inactive Hazardous Waste Disposal Sites. The Atlas Graphics Site was identified as one of these facilities.

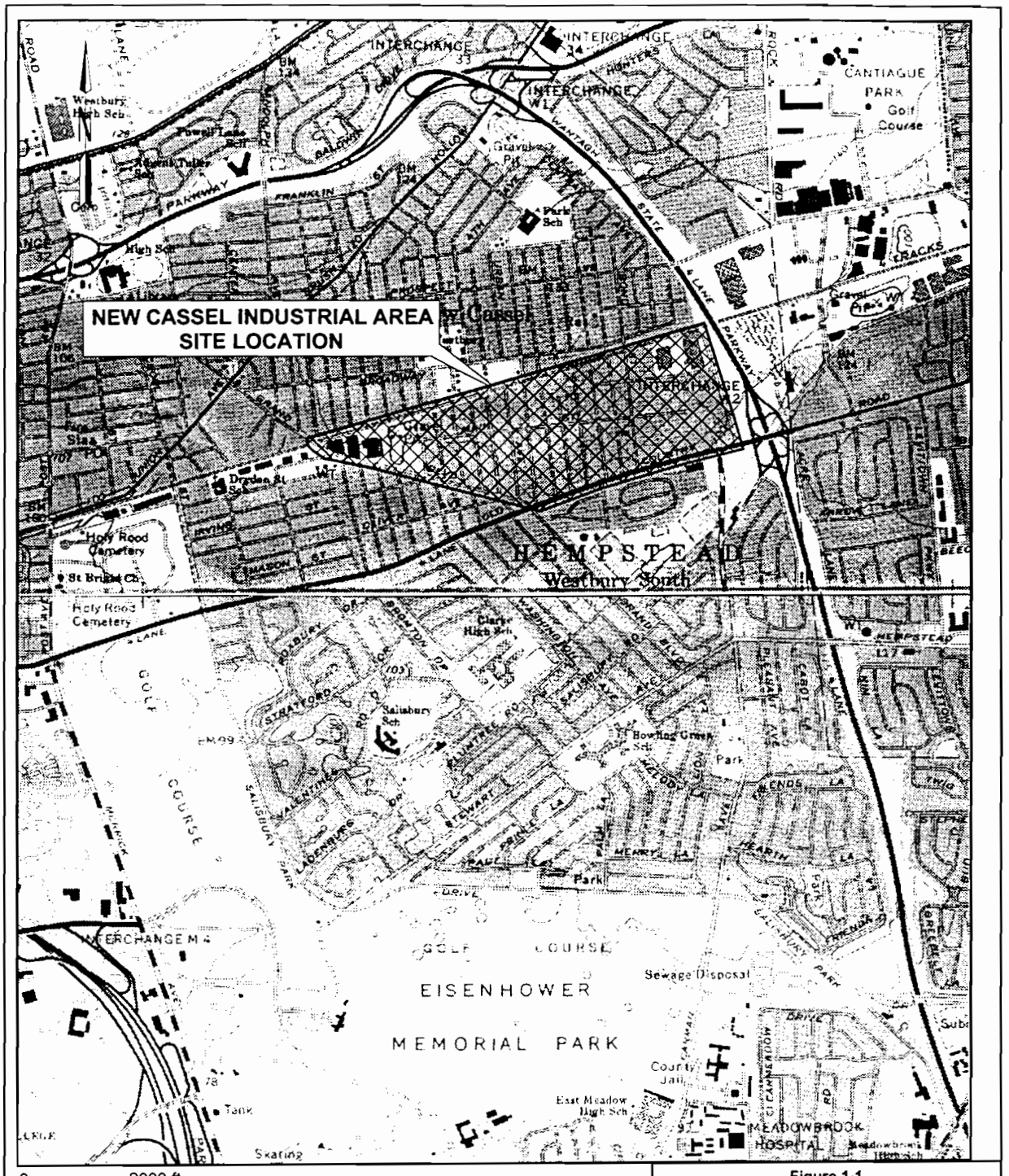
The objectives of the Immediate Investigation Work Assignment (IIWA) at the Atlas Graphic site were to locate the source of the contaminants in on-site soils and determine the nature and extent of the groundwater contamination plume under the site.

1.2 SITE LOCATION AND DESCRIPTION

The Atlas Graphics Site, (NYSDEC Site No. 1-30-143B on the New York State Registry of Inactive Hazardous Waste Sites) is located at 567 Main Street in the New Cassel Industrial Area (NCIA), Town of North Hempstead, Nassau County, New York (Figure 1-2). The site is comprised of approximately 8000 square feet which is bounded by a Swalm Avenue to the west, commercial buildings and parking lots to the north and east, and Main Street to the south. The property is currently a active printing and graphics operation which occupies the small two story commercial building on the site.

1.3 SITE BACKGROUND

Historic records of the Atlas Graphics site indicate the site was developed prior to 1971. Past occupants of the site include a construction company, a heating company, a development association, and a mill/mill supply company. Atlas Graphics began operations at the site in 1977 and have operated continuously since that time. Chemical usage records indicate that Atlas Graphics used 312 gallons of trichloroethylene (TCE) each year for degreasing purposes. The



Map source:

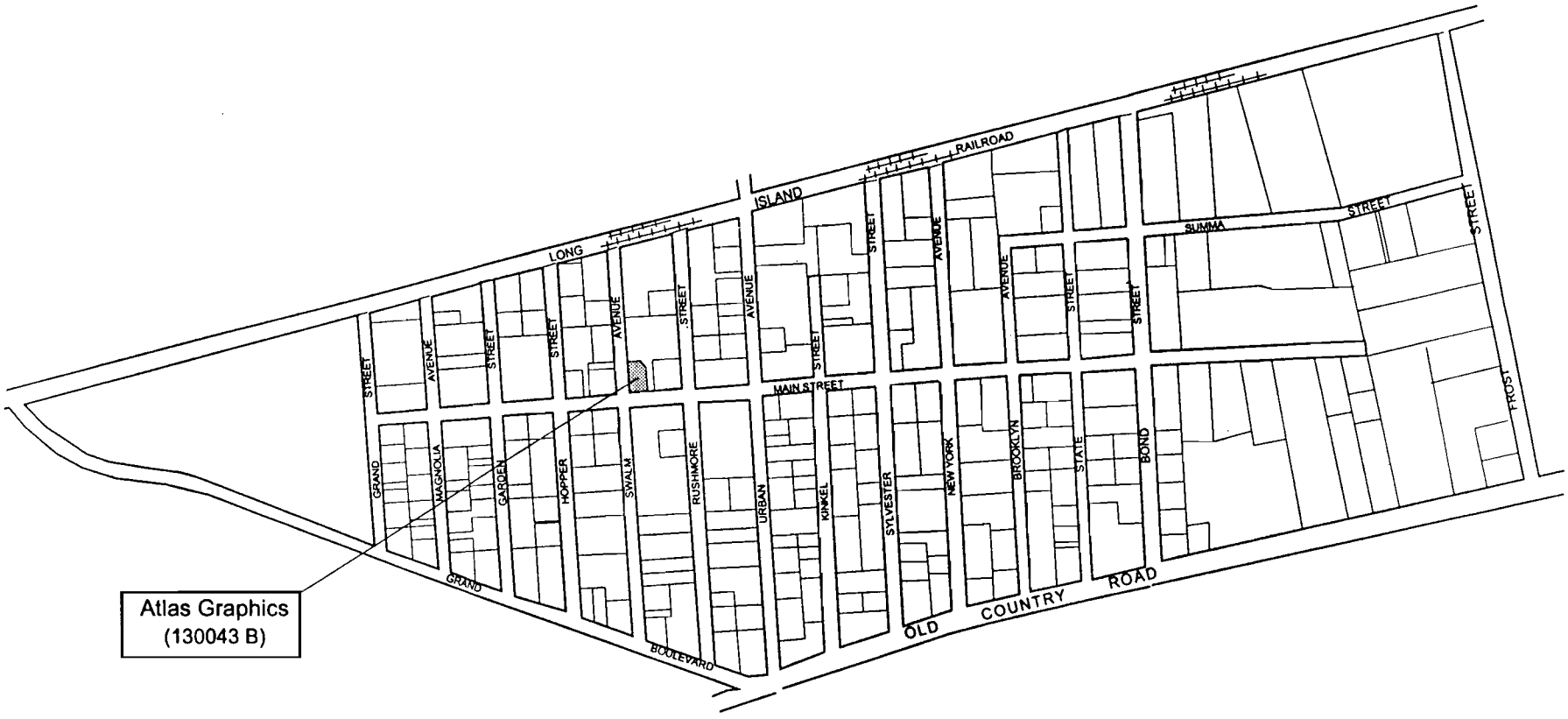
USGS 7.5-minute quadrangle series, Freeport, NY, 1969, photorevised 1979, Hicksville, NY, 1967, photorevised 1979.

Figure 1-1

New Cassel Industrial Area Site Location

ATLAS GRAPHICS
NEW CASSEL INDUSTRIAL AREA
NYSDEC I.D. No. 130043 B

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York



0 ~500 ft

APPROXIMATE SCALE
1 in. = 500 ft

Figure 1-2

Atlas Graphics
Site Location

ATLAS GRAPHICS
NEW CASSEL INDUSTRIAL AREA
NYSDEC I.D. No. 130043

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York

wastewater from this operation was discharged directly into a cesspool off the southwest corner of the building. The cesspool reportedly received both the industrial wastewater and the sanitary discharge. Investigations conducted by the Nassau County Health Department (NCDOH) indicated that the cesspool was heavily contaminated with TCE. In 1978 a sample collected by NCDOH showed 4,500 µg/kg TCE and 100 µg/kg of 1,1,1-trichloroethane (1,1,1-TCA), an additional sample collected in 1980 contained 318,760 µg/kg of TCE. The industrial discharges to the cesspool resulted in a SPDES violation which was corrected by equipment changes at the facility. The Atlas Graphics facility was eventually connected to the county sewer system in November 1980. Records pertaining to the cleaning and abandonment of the cesspool when the facility was connected to the county sewer were not located. It is not know if the cesspool was cleaned and removed or if any hazardous wastes were removed from the site at that time.

Previous investigations in the vicinity of the Atlas Graphics site include the SI and PSA conducted by LMS in 1994 to 1997. The records search conducted during the SI revealed the past discharge history and sampling data for the site. Concentrations of tetrachloroethylene (PCE) related contaminants were found to significantly higher in a geoprobe point (GP-20) located downgradient of the Atlas Graphics site than upgradient concentrations. Although significant concentrations were measured in GP-20 the contamination could not be entirely attributed to the Atlas Graphics site since GP-20 was also in the immediate vicinity of IMC Magnetics. This site is also a Class 2 site which is located directly across Main Street south of the Atlas Graphics site. Past records and sampling data indicated IMC used and disposed of wastes with similar compounds as those used by Atlas Graphics. The sampling data and the documented disposal of hazardous wastes resulted in a Class 2 status on the New York State Registry of Inactive Hazardous Waste Disposal Sites for the Atlas Graphics site. At that time the contribution of the Altas Graphics site to the known groundwater contamination problem in the area could not be resolved due to the presence of IMC Magnetics.

Prior to beginning the IIWA sampling a site reconnaissance of the site was conducted by LMS and NYSDEC representatives. The site reconnaissance verified that site conditions had not changed since the initial site investigation. During the site reconnaissance sampling locations were selected and the location of any subsurface utilities noted. The original scope of work for the sampling efforts included a number of soil and groundwater probes. This was latter modified to include the installation of several hydropunches and a single test pit due to difficult subsurface conditions. A full description of the field investigation procedures are found in Chapter 2.

CHAPTER 2

FIELD INVESTIGATION PROCEDURES

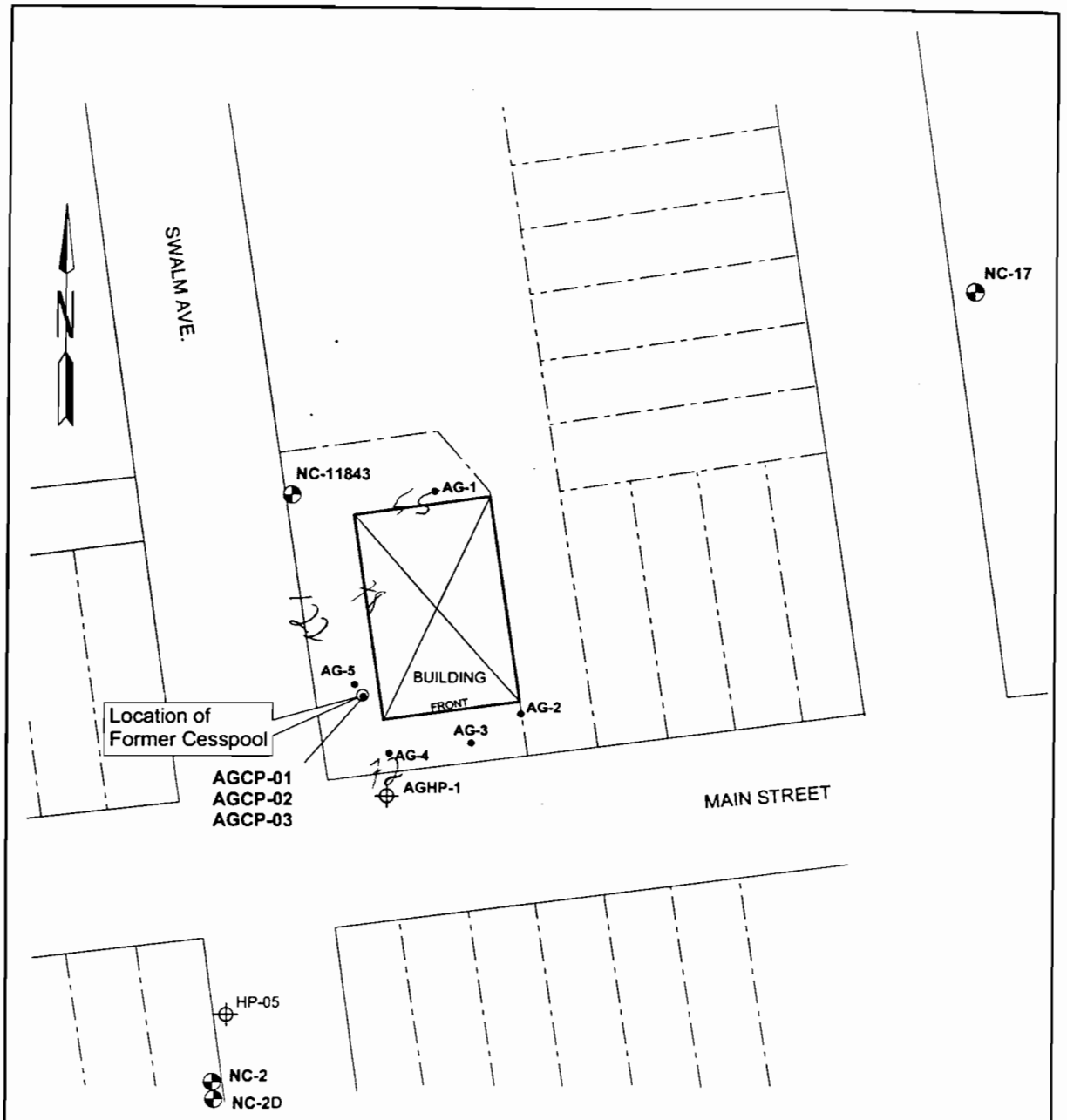
2.1 SOIL AND GROUNDWATER PROBES

A total of 5 (AG-01 to AG-05) soil and groundwater probe sample locations were completed during the IIWA (Figure 2-1). Each of the soil and groundwater probe samples were advanced using a truck mounted probe unit utilizing a direct push hydraulic hammer system.

Soil samples were taken with a sampling tube which was fitted with a dedicated disposable acetate liner. Soil samples were examined and described on a boring log, noting the following characteristics: moisture content, lithology, color, texture, and evidence of contamination (odor, staining, sheen, organic vapor readings, and other sample-specific notations). Depth, rate of penetration, and sample recovery were also noted on the same log. The soil samples were scanned with a photoionization detector (PID) immediately upon the opening the acetate liner in order to detect the presence of any volatile organic compounds (VOCs). Probe boring logs and the field notes can be found in Appendix A.

The groundwater probe screen sampler is constructed of a tightly wound coil of stainless steel enclosed in a steel sheath. The groundwater screen sampler enables samples to be collected from discrete 4-ft intervals. When the screen sampler reached the desired depth, the probe rods and the screen sheath were raised four feet, exposing the screen. A dedicated length of polyethylene tubing fitted with a check valve was then inserted through the probe rods to the screen. By manually surging the tubing, water was drawn to the surface. The tubing was then surged until at least three times the volume of water in the probe rods was purged to insure that the groundwater sample was from the correct interval. The sample was then collected by transferring it directly to the sample containers. Once the deepest sample was obtained, the entire assembly was raised to the next sampling interval above. A new length of dedicated tubing, fitted with a check valve, was then inserted through the probe rods and the process repeated. After the sample was collected, the entire assembly was raised to the shallow interval and the entire process repeated.

Groundwater and soil probe samples were transferred to laboratory-cleaned glass jars and labeled with the appropriate sample location, interval, date, time, sampler, and required analyses. Each of the samples were shipped by overnight carrier to the NYSDEC contract



LEGEND

- Existing monitoring well locations
- **AG-#** • Geoprobe sampling locations (Soil probes -SP, groundwater -GW)
- **AGHP-01** *and* **HP-05** ⊕ Hydropunch sample locations
- **AGCP-0#** Geoprobe soil samples within the former cesspool
- **NOTE:** Locations are approximate

0 10 ft 50 ft
APPROXIMATE SCALE IN FEET

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LMS Lawler, Matusky & Skelly Engineers LLP One Blue Hill Plaza • Pearl River, New York 10965 ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS	**Probe, Hydropunch, and Monitoring Well Locations** New Cassell Industrial Area • Atlas Graphics Property NYSDEC I.D. No. 130043	**Figure 2-1**

laboratory for analysis of VOC's. Specific information on the analytical methods and protocols are found in Section 2.5.

2.2 TEST PIT INSTALLATION

A single test pit was constructed at the Atlas site to assist in placement of additional soil probe sampling locations. Delta Well & Pump Inc. (Delta), of Ronkonkoma, New York, was subcontracted to complete the test pit at the site. Delta used a tire mounted backhoe to complete the test pit under direct supervised of a LMS geologist. The test pit was located to uncover the precise location of the former leachpool located off the south west corner of the building. Once the pool was located several soil probes were completed in the test pit using the procedures found in Section 2.1.

Once the test pit was completed the excavated soils were returned to the test pit and a hot patch placed over the excavated area. The asphalt removed form the test pit location was disposed of at an off-site location.

2.3 HYDROPUNCH GROUNDWATER SAMPLING

Groundwater samples were collected using the hydropunch sampling equipment at 2 locations (Figure 3-3). The hydropunches were conducted during two mobilizations on 22 September 1997 and 24 February 1998. The second mobilization was required since this hydropunch was placed within the town roadway and required a roadway lane closure. Hydropunch groundwater samples were collected from the water table (~60-ft), 70 ft, and 80 ft below the ground surface. The hydropunch sampling resulted in a total of 6 samples.

Delta was also subcontracted to complete the hydropunches at the site using a truck-mounted drill rig. Each of the hydropunch's were completed using 4.25-in. hollow-stem augers (HSA). All drilling and sampling activities were supervised by an LMS geologist. Soil sampling was conducted according to the standard penetration test method ASTM 1586-D. This procedure involves sampling the overburden in 2-ft intervals with a 2-ft-long, 2-in. O.D. split-spoon sampler driven by a 140-lb hammer falling 30 in. Soil samples were examined and described on a boring log, noting the following characteristics: moisture content, lithology, color, texture, and evidence of contamination (odor, staining, sheen, organic vapor readings, and other sample-specific notations). Depth, blow counts, and sample recovery were also noted on the same log. The soil samples were scanned with a photoionization detector (PID)

immediately upon the opening of the split-spoon sampler in order to detect the presence of any volatile organic compounds (VOCs).

At each of the hydropunch sampling depths, the drilling rods were removed from the boring and a steam-cleaned hydropunch tool was attached to the rods. The rods were then lowered back into the boring and the hydropunch driven to the desired sampling depth. Once the hydropunch tool had been driven to the desired depth, it was retracted several inches to expose the sample port. The hydropunch tool was then allowed to fill with the groundwater sample. Once the hydropunch tool was filled, it was returned to the surface.

Hydropunch groundwater samples were then transferred to laboratory-cleaned glass jars and labeled with the appropriate sample location, interval, date, time, sampler, and required analyses. Each of these groundwater samples were shipped by overnight carrier to the NYSDEC contract laboratory for analysis. Specific information on the analytical methods and protocols are found in Section 2.5

Once completed, the hydropunch boreholes were grouted to the ground surface and a concrete or blacktop patched was then placed over the borehole. All investigation derived wastes (IDW) including drilling cuttings and fluids were containerized in a neat and orderly fashion and transported to a staging area for later disposal. Analytical data from the drilling cuttings indicated that the soils were uncontaminated drilling cuttings and were disposed of accordingly. All drilling and hydropunch sampling equipment that came into contact with potentially contaminated soil, groundwater, or dust was decontaminated before being removed from the site and between each sample location.

2.4 EXISTING MONITORING WELL SAMPLING

A total of 4 existing monitoring wells (NC-2, NC-2d, N-11843, and NC-17) in the vicinity of the Atlas site were sampled. Based on the SWL and the total depth of the well, the volume of water in the well was calculated. All of the wells were then purged until three well volumes were removed. If a well did not produce sufficient water to allow three well volumes to be purged, it was purged dry. Monitoring well sampling logs can be found in Appendix B.

During the purging process, turbidity, temperature, pH, and conductance were measured at routine intervals to track the purging process and provide sampling chemistries. All samples were collected from the top of the water column using new, dedicated Teflon bailers and rope. Sample chemistries, including temperature, turbidity, pH, and specific conductance,

were taken when sufficient volume of water was available. Hydropunch groundwater samples were then transferred to laboratory-cleaned glass jars and labeled with the appropriate sample location, interval, date, time, sampler, and required analyses. Each of these groundwater samples from the existing monitoring wells were shipped by overnight carrier to the NYSDEC contract laboratory for analysis. Specific information on the analytical methods and protocols are found in Section 2.5.

2.5 SOIL AND GROUNDWATER ANALYTICAL PROCEDURES

Each of the soil and groundwater samples were submitted to a New York State Department of Health (NYSDOH) certified laboratory for the analysis of TCL VOCs using CLP Methods 95-1. A subset of the samples were also analyzed for TAL metals using. A summary of the analysis which were completed and the analytical procedures are found on Table 2-1. For QA/QC purposes, each sample shipment containing groundwater samples included a trip blank. During the soil and groundwater sampling dedicated sampling equipment was used which eliminated the need to collect equipment blanks.

CHAPTER 3

SOIL AND GROUNDWATER ANALYTICAL RESULTS

3.1 SOIL PROBE RESULTS

Sampling data from the LMS contract laboratory was received directly by LMS. The remaining data packages were supplied to LMS through the NYSDEC once the data was received and reviewed by the NYSDEC project manager. The soil probe results include the analysis of Samples from 8 locations, the results are summarized on Table 3-1.

No target compounds were detected at the quantitation limit in AGSP-01 at each of the ten depths which were sampled and analyzed. The single soil sample at AGSP-02 also did not contain any target compounds. No target compounds were detected at the quantitation limit in AGSP-03 at each of the five depths (5-7 ft, 10-12 ft, 22-24 ft, 30-32 ft, and 40-42 ft) which were sampled and analyzed (Table 3-1). No target compounds were also detected at the quantitation limit in AGSP-04 at each of the three depths (20-22 ft, 30-32 ft, and 40-42 ft) which were sampled and analyzed (Table 3-1). Traces of methylene chloride were found in many of the samples, the presence of methylene chloride is a result of laboratory contamination.

A total of seven soil samples were collected at AGSP-05 the results of the VOC analysis are shown on Table 3-1. No target compounds in excess of the NYSDEC recommended soil cleanup objective were detected in the samples with the exception of acetone at .43 mg/kg in the 20-22 ft sample. In addition to acetone TCE was detected at .042 mg/kg in AGSP-05 (5-7 ft) and at .11 mg/kg in the 20-22 ft sample. AGSP-05 was located adjacent to the former cesspool location and the presence of target compounds in the soil in this area suggest a nearby source area. This is supported by the high concentrations in the groundwater which were found in this area (AGGP-05). On reviewing the data found in this area three additional soil probes through the former cesspool (AGCP-01 to AGCP-03) were added to the investigation to collect additional soil samples for VOC analysis. A single soil sample from AGSP-05 (17 to 19 ft) was collected for SVOC analysis, no SVOC's in excess of the NYSDEC recommended soil cleanup objective were detected (Table 3-1).

Three additional probes (AGCP-01, AGCP-02, and AGCP-03) were completed inside of the test pit which was constructed to located the exact position of the former cesspool. At AGCP-01 soil probe samples were collected at 8-12 ft, 12-16 ft, and 16-20 ft bgs. The analytical data for these soil probe samples did not indicate the presence of any target compounds above the quantitation limit (Table 3-1). At AGCP-02 soil probe samples were also collected at 8-12 ft, 12-16 ft, and 16-

TABLE 3-1(PAGE 1 OF 7)

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11/11/98

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	AGSP-01 B60201 (5-7ft)	AGSP-01 B60202 (10-12ft)	AGSP-01 B60203 (15-17ft)	AGSP-01 B60204 (20-22ft)	AGSP-01 B60205 (25-27ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (a)
VOLATILE ORGANICS (mg/kg)						
Chloromethane	ND	ND	ND	ND	ND	1.9
Methylene chloride	ND	ND	ND	ND	0.001 j	0.1
Acetone	ND	ND	ND	ND	ND	0.2
2-Butanone	ND	ND	ND	ND	ND	0.3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.8
Trichloroethylene	ND	ND	ND	ND	ND	0.7
2-Hexanone	ND	ND	ND	ND	ND	N/A
Tetrachloroethylene	ND	ND	ND	ND	ND	1.4
Toluene	ND	ND	ND	ND	ND	1.5

(a) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	AGSP-01 B60206 (30-32ft)	AGSP-01 B60207 (35-37ft)	AGSP-01 B60208 (40-42ft)	AGSP-01 B60209 (45-47ft)	AGSP-02 B60210 (10-12ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (a)
VOLATILE ORGANICS (mg/kg)						
Chloromethane	ND	ND	ND	ND	ND	1.9
Methylene chloride	ND	ND	ND	ND	ND	0.1
Acetone	ND	ND	ND	ND	ND	0.2
2-Butanone	ND	ND	ND	ND	ND	0.3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.8
Trichloroethylene	ND	ND	ND	ND	ND	0.7
2-Hexanone	ND	ND	ND	ND	ND	N/A
Tetrachloroethylene	ND	ND	ND	ND	ND	1.4
Toluene	ND	ND	ND	ND	ND	1.5

(a) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
e - Estimated concentration; exceeds GC/MS calibration range.
j - Estimated concentration; compound present below quantitation limit.
DL - Diluted sample analysis.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # NYSDEC Sample Designation DEPTH	AGSP-03 B60231 (5-7ft)	AGSP-03 B60232 (10-12ft)	AGSP-03 B60233 (22-24ft)	AGSP-03 B60234 (30-32ft)	AGSP-03 B60236 (40-42ft)	AGSP-04 B60250 (20-22ft)	AGSP-04 B60251 (30-32ft)	AGSP-04 B60252 (40-32ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
VOLATILE ORGANICS(mg/kg)									
Methylene chloride	0.002 j b	ND	ND	ND	ND	ND	ND	0.002 j b	5
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	50
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	N/A
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	5
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	5
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	50
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	5

(b) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # NYSDEC Sample Designation DEPTH	AGSP-05 B60211 (5-7 ft)	AGSP-05 B60211 (10-12 ft)	AGSP-05 B60213 (15–17 ft)	AGSP-05 B60214 (17-19 ft)	AGSP-05 B60215 (20-22 ft)	AGSP-05 B60216 (25-27 ft)	AGSP-05 B60217 (30-32 ft)	AGSP-05 B60218 (35-37 ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
VOLATILE ORGANICS(mg/kg)									
Methylene chloride	0.001 j	ND	ND	♦	ND	ND	ND	0.002 j b	5
Acetone	ND	ND	0.005 j	♦	.430 d	0.008 j	0.003 j	0.009 j b	50
2-Butanone	ND	ND	ND	♦	0.008 j	ND	ND	ND	N/A
1,1,1-Trichloroethane	0.001 j	ND	ND	♦	0.002 j	ND	ND	ND	5
Trichloroethylene	.042 d	ND	0.002 j	♦	0.110	ND	ND	ND	5
2-Hexanone	ND	ND	ND	♦	0.002 j	ND	ND	ND	50
Tetrachloroethylene	0.002 j	ND	ND	♦	ND	ND	ND	ND	5
Toluene	ND	ND	ND	♦	0.006 j	ND	ND	ND	5

(b) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
♦ - Not analyzed.
b - Found in associated blanks.
d - Concentration recovered from a 5:1 diluted sample.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	TOTAL AGSP-03 B60240 (10-12ft)	TOTAL AGSP-05 B60219 (35-37ft)	EASTERN USA BACKGROUND SOIL CONCENTRATIONS (b)	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
TAL METALS (mg/kg)				
Aluminum	1,340	394	33,000	SB
Antimony	ND N	ND	0.6 - 10 (n)	SB
Arsenic	ND N	0.95 B	3.0 - 12.0 æ	7.5 or SB
Barium	5.8 B	1.5 B	15 - 600	300 or SB
Beryllium	0.11 B	0.17 B	0 - 1.75	0.16 or SB
Cadmium	ND N	0.12 B	0.1 - 1.0	1 or SB
Calcium	169 B	73.5 B	130 - 35,000 æ	SB
Chromium	17.6 N R	7.3 R	1.5 - 40.0 æ	10 or SB
Cobalt	0.97 B	0.33 B	2.5 - 60.0 æ	30 or SB
Copper	3.1 B	1.6 B	1.0 - 50.0	25 or SB
Iron	3,590 R	1,800 R	2,000 - 550,000	2,000 or SB
Lead	1.3	1.5	4.0 - 61 or 200 - 500*	SB*
Magnesium	349 B	48.8 B	100 - 5,000	SB
Manganese	36.1	3.5	50 - 5,000	SB
Mercury	ND N	0.06 B	0.001 - 0.2	0.1
Nickel	2.7 B	3.9 B	0.5 - 25	13 or SB
Potassium	230 B	40.7 B	8,500 - 43,000 æ	SB
Selenium	ND N	ND	0.1 - 3.9	2 or SB
Silver	ND N	1.3 B	0.1 - 5.0 (n)	SB
Sodium	38.3 B	30.5 B	6,000 - 8,000	SB
Thallium	0.31 B	0.49 B	0.1 - 0.8 (q)	SB
Vanadium	4.6 B	2.1 B	1.0 - 300	150 or SB
Zinc	ND N	3.8 B	9.0 - 50	20 or SB
Cyanide	ND	ND	N/A	**

* - Background levels for lead range from 4 - 61 ppm in undeveloped, rural areas to 200 - 500 ppm in metropolitan or suburban areas or near highways.
** - Some forms of Cyanide are complex and stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objectives.
æ - New York State background concentration.
(b) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
(n) - Dragun, J., The Soil Chemistry of Hazardous Materials.
(q) - Bowan, H.J., Environmental Chemistry of the Elements.
B - Value is less than the contract-required detection limit but greater than the instrument detection limit.
N - Spiked sample recovery is not within control limits.
R - Duplicate analysis not within control limits.
N/A - Not available.
SB - Site background
ND - Not detected at analytical detection limit.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	AGSP-05 B60214 (17-19ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
SEMIVOLATILE ORGANICS (mg/kg)		
Phenanthrene	0.055 j	50
Fluoranthene	0.110 j	50
Pyrene	0.110 j	50
Benzo(a)anthracene	0.058 j	0.002
Chrysene	0.099 j	0.002
bis(2-Ethylhexyl)phthalate	0.400	4
Benzo(b)fluoranthene	0.064 j	0.002
Benzo(k)fluoranthene	0.069 j	0.002
Benzo(a)pyrene	0.055 j	0.002
Indeno(1,2,3-c,d)pyrene	0.049 j	0.002
Benzo(g,h,i)perylene	0.069 j	N/A

(b) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
j - Estimated concentration; compound present below quantitation limit.
N/ - Not available.

SOIL PROBE SAMPLING RESULTS

Atlas Graphics

PARAMETER	AGCP-01 (8-12ft)	AGCP-01 (12-16ft)	AGCP-01 (16-20ft)	AGCP-02 (8-12ft)	AGCP-02 (12-16ft)	AGCP-02 (16-20ft)	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
VOLATILE ORGANICS (mg/kg)							
Methylene chloride	0.002 j b	0.002 j b	0.002 j b	0.002 j b	0.002 j b	0.002 j b	0.1
Acetone	ND	ND	ND	ND	ND	ND	0.2
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND.	0.8
Trichloroethylene	ND	ND	ND	0.930 e	0.015	ND	0.7
2-Hexanone	ND	ND	ND	ND	ND	ND	N/A
Tetrachloroethylene	ND	ND	ND	0.016	0.002 j	ND	N/A
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	0.6
Toluene	ND	ND	ND	0.160	0.004 j	ND	1.5
Ethylbenzene	ND	ND	ND	0.008 j	ND	ND	5.5
Xylene (total)	ND	ND	ND	0.028	ND	0.008 j	1.2

PARAMETER	AGCP-03 (4-8ft)	AGCP-03 (8-12ft)	AGCP-03 (12-16ft)	AGCP-03 DL (12-16ft)	AGCP-03 (16-20ft)	GCP-02 (8-12ft)D	RECOMMENDED SOIL CLEANUP OBJECTIVE (b)
VOLATILE ORGANICS (mg/kg)							
Methylene chloride	0.002 j b	0.002 j b	0.003 j b	ND	0.002 j b	0.024 j b	0.1
Acetone	ND	ND	ND	ND	ND	ND	0.2
1,1,1-Trichloroethane	ND	ND	0.006 j	ND	ND	ND	0.8
Trichloroethylene	0.009 j	ND	1.100 e	7.600	0.065	2.300	0.7
2-Hexanone	0.005 j	ND	ND	ND	ND	ND	N/A
Tetrachloroethylene	ND	ND	0.008 j	ND	0.016	0.068 j	N/A
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	0.6
Toluene	ND	ND	0.540 e	4.900	0.026	0.530	1.5
Ethylbenzene	0.003 j	ND	0.005 j	ND	ND	ND	5.5
Xylene (total)	0.006 j	0.006 j	0.017	ND	ND	ND	1.2

(b) - NYSDEC Division Technical and Administrative Guidance Memorandum (TAGM), 1/94.
b - Found in associated blanks.
e - Estimated concentration; exceeds GC/MS calibration range.
j - Estimated concentration; compound present below quantitation limit.
N/ - Not available.
N - Not detected at analytical detection limit.

20 ft bgs. The analytical data for these soil probe samples did not indicate the presence of any target compounds in the 16-20 ft sample at AGCP-02 (Table 3-1). The concentration of TCE exceeded the recommended cleanup objective in the 8-12 ft soil probe sample with a concentration of 2.3 mg/kg. The recommended cleanup objective for TCE is .7 mg/kg. Only trace levels of TCE (.015 mg/kg) were found in the 12-16 ft soil probe sample. At AGCP-03 soil probe samples were collected at 4-8 ft, 8-12 ft, and 12-16 ft bgs. The analytical data for these soil probe samples did not indicate the presence of any target compounds above the quantitation limit in the 4-8 ft sample and the 8-12 ft sample (Table 3-1). The concentration of TCE exceeded the recommended cleanup objective in the 12-16 ft soil probe sample with a concentration of 7.6 mg/kg. Trace levels of TCE (.009 mg/kg), PCE (.005 mg/kg), ethylbenzene (.003 mg/kg), and xylene (.006 mg/kg) were also found in the 4-8 ft soil probe sample.

Soil samples for TAL metals analysis were collected at two locations (AGSP-03 [35-37 ft] and AGSP-03 [10-12 ft]) (Table 3-1). No metals were detected at concentrations which exceed the recommended soil cleanup objective or the anticipated site background concentrations in an industrialized area. All of the measured soil concentrations were within the eastern background soil concentrations.

3.2 GROUNDWATER PROBE RESULTS

A total of groundwater probe samples were collected from AGGW-01, AGGW-03, and AGGW-05, the results are summarized on Table 3-2. Groundwater probe samples were not collected at AGGW-02 and AGGW-04 due to refusals above the watertable. Several attempts to reach the other groundwater sampling depths at these locations also resulted in shallow refusal and after discussions with the NYSDEC project manager these locations were abandoned.

The results of AGGW-01 indicate concentrations of VOCs in excess of NYSDEC class GA groundwater standards at the shallow depth (56-60 ft). A groundwater probe sample was not taken at the intermediate depth (66-70 ft) since this zone appeared dry. Target compounds above the quantitation limit were not detected in the deep sample (76-80 ft). The primary target compound which was detected in the 56-60 ft sample was PCE (10µg/l). Other compounds found above the Class GA groundwater standards included acetone (150 µg/l), and benzene (2 µg/l). Trace levels of 1,2-DCE (10 µg/l), 2-butone (40 µg/l), TCE (4 µg/l), toluene (3 µg/l), xylene (2 µg/l), 4-methyl-2-pentanone (9 µg/l), 2-hexanone (5 µg/l), and styrene (1 µg/l).

The results of AGGW-03 indicate concentrations of VOCs in excess of NYSDEC class GA groundwater standards at all three of the depths sampled (56-60, 66-70 ft and 76-80 ft). The primary target compound which was detected is TCE and concentrations are highest at the shallow

TABLE 3-2 (PAGE 1 OF 3)

DRAFT
11/11/98

GROUNDWATER PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	AGGW-01 B60230 (56-60ft)	AGGW-01 B60235 (76-80ft)	AGGW-03 B60239 (56-60ft)	AGGW-03 B60238 (66-70ft)	AGGW-03 B60237 (76-80ft)	TRIP BLANK	NYSDEC CLASS GA STANDARDS (a)
VOLATILE ORGANICS (µg/l)							
Methylene chloride	ND	ND	ND	ND	ND	1 j b	5
Acetone	150	ND	16	ND	ND	ND	50
1,1-Dichloroethylene	ND	ND	2 j	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	5
1,2-Dichloroethylene (total)	10	ND	10	3 j	ND	ND	N/A
1,2-Dichloroethane	ND	ND	8 j	ND	ND	ND	0.8
2-Butanone	40	ND	ND	ND	ND	ND	N/A
1,1,1-Trichloroethane	ND	ND	47	1 j	ND	ND	5
Trichloroethylene	4 j	ND	310 e	16	ND	ND	5
1,1,2-Trichloroethane	ND	ND	3 j	ND	ND	ND	5
Tetrachloroethylene	10	ND	30	6 j	40	ND	5
Toluene	3 j	ND	ND	ND	3 j	ND	5
Ethylbenzene	ND	ND	ND	ND	ND	ND	5
Xylene (total)	2	ND	ND	ND	ND	ND	N/A
Benzene	2 j	ND	ND	ND	ND	ND	0.7
4-Methyl-2-pentanone	9 j	ND	ND	ND	ND	ND	N/A
2-Hexanone	5 j	ND	ND	ND	ND	ND	50
Styrene	1 j	ND	ND	ND	ND	ND	5

(a) - NYSDEC Division Division of Water Technical and Operational Guidance Series (1.1.1) June 1998
♦ - Not analyzed.
d - Concentration recovered from diluted sample.
e - Estimated concentration; exceeds GC/MS calibration range.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

GROUNDWATER PROBE SAMPLING RESULTS

Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	AGGW-05 B60220 (76-80 ft)	AGGW-05 B60221 (66-70 ft)	AGGW-05 B60222 (56-60 ft)	NYSDEC CLASS GA STANDARDS (a)
	[DL 25:1]	[DL 5:1]	[DL 5:1]	
VOLATILE ORGANICS (µg/l)				
Methylene chloride	1 j	1 j	ND	5
Acetone	440 e	130	92	50
1,1-Dichloroethene	1 j	ND	2 j	5
1,1-Dichloroethane	ND	ND	5 j	5
1,2-Dichloroethylene (total)	ND	4 j	13	N/A
1,2-Dichloroethane	ND	ND	3 j	8
2-Butanone	9 j	ND	ND	N/A
1,1,1-Trichloroethane	82	17	160	5
Trichloroethylene	3900 d	550 d	710 d	5
Benzene	ND	ND	ND	0.7
4-Methyl-2-pentanone	ND	ND	ND	N/A
2-Hexanone	ND	ND	ND	50
Tetrachloroethylene	56	17	15	5
Toluene	320 d	37	10	5
Ethylbenzene	1 j	ND	ND	5
Styrene	ND	ND	ND	5
Xylene (total)	4 j	ND	ND	N/A

(a) - NYSDEC Division Division of Water Technical and Operational Guidance Series (1.1.1) June 1998
d - Concentration recovered from diluted sample.
e - Estimated concentration; exceeds GC/MS calibration range.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

GROUNDWATER PROBE SAMPLING RESULTS

Atlas Graphics

	TOTAL AGSP-05 B60223 (56-60ft)	DISSOLVED AGSP-05 B223AX (56-60ft)	TOTAL AGSP-05 B60224 (66-70ft)	DISSOLVED AGSP-05 B224AX (66-70ft)	NYSDEC CLASS GA STANDARDS
TAL METALS (µg/l)					
Aluminum	2111000	ND	68200	ND	NS
Antimony	ND N	ND	6.0 B N	ND	3.0
Arsenic	1500	ND	222	ND	25
Barium	852	28.7 B	356	41.4 B	1,000
Beryllium	18.9	0.20 B	4.8 B	0.27 B	3.0 GV
Cadmium	ND	ND	ND	0.63 B	5.0
Calcium	44700 B	17400	48900	43900	NS
Chromium	4710 N	ND	612 N	ND	50
Cobalt	73.1	6.0 B	33.7 B	7.7 B	NS
Copper	1490	1.5 B E	273	1.1 B E	200
Iron	2550000	4550	313000	10700	300 (m)
Lead	438 E	ND	75.5 E	ND	25
Magnesium	50400 B	17000	22900	19000	35,000 GV
Manganese	6370	407	1550	402	300 (m)
Mercury	3.4	ND	0.52	ND	0.7
Nickel	447	26.6 B	161	30.6 B	100
Potassium	89200	66100	19700	12300	NS
Selenium	34.4 B	ND	9.4 B	ND	10
Silver	2740	ND	281	ND	50
Sodium	44000	34000	33100	31400	20,000
Thallium	105 B	3.3 B	13.6 B	4.0 B	0.5 GV
Vanadium	1730	ND	304	1.7 B	NS
Zinc	15900	557	4450	1250	2,000 GV
Cyanide	N/A	N/A	N/A	N/A	200

(m) - Iron and manganese not to exceed 500 µg/l.
B - Value is less than the contract-required detection limit but greater than the instrument detection limit.
N - Spiked sample recovery is not within control limits.
R - Duplicate analysis not within control limits.
N/A - Not available.
GV - Guidance value.
ND - Not detected at analytical detection limit.

depth (76-80 ft) (Table 3-2). Target compounds found at the shallow depth (56-60 ft) in excess of the Class GA groundwater standards include 1,1-DCE (2 µg/l), 1,1-DCA (8 µg/l), 1,1,1-TCA (47 µg/l), TCE (310 µg/l), and PCE (30 µg/l). Other compounds found at the shallow depth include acetone (16 µg/l) and 1,1,2-TCA (3 µg/l). Target compounds found at the intermediate depth (66-70 ft) in excess of the Class GA groundwater standards include TCE (16 µg/l), and PCE (6 µg/l). Other compounds found at the intermediate depth include 1,1,1-TCA (1 µg/l), and 1,2-DCE (3 µg/l). The only target compound found at the deepest depth (76-80 ft) in excess of the Class GA groundwater standards was PCE (40 µg/l). Toluene (3 µg/l) was also detected at the deepest depth. The only trend noted in the data from the AGGW-03 is a decreasing concentration of TCE with depth. The presence of high concentrations of TCE at the shallow depth suggest an on-site source of TCE. However, similar concentrations of TCE were noted in the upgradient sampling point (NC-17).

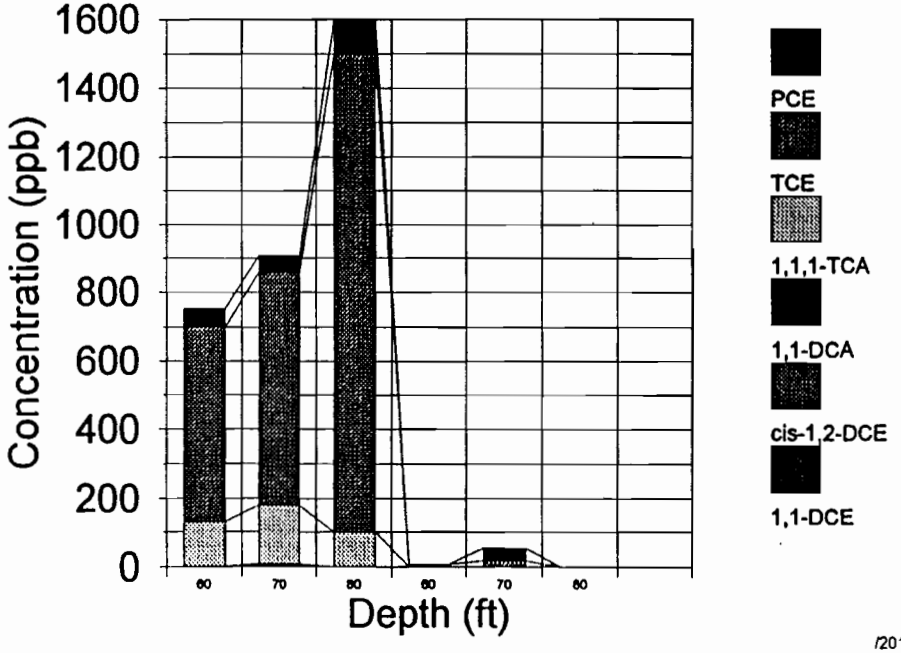
The results of AGGW-05 indicate concentrations of VOCs in excess of NYSDEC class GA groundwater standards at all three of the depths sampled (56-60, 66-70 ft and 76-80 ft). The primary target compound which was detected was TCE and concentrations are highest at the deepest depth (76-80 ft) (Table 3-2). Total VOCs at the two shallow depths (56-60 ft and 66-70 ft) were 1010 µg/l and 756 µg/l, respectively. At the deepest depth (76-80 ft) total VOCs were 4819 µg/l including 3900 µg/l of TCE. This geoprobe was located on the Atlas Graphics site just north of the former cesspool location. The presence of high levels of TCE in the vicinity of the former cesspool suggests that the past disposal of TCE into the cesspool has affected the groundwater quality in this area.

3.3 HYDROPUNCH GROUNDWATER SAMPLING RESULTS

The results of AGHP-01 indicate concentrations of VOCs in excess of NYSDEC class GA groundwater standards at 60, and 70 ft below the ground surface (Figure 3-1). No target compounds were detected at the deepest sampling depth (80 ft). At the 60 ft depth 8 µg/l PCE was detected, total VOC's at the 70 ft depth were 53 µg/l including 18 µg/l TCE and 35 µg/l PCE. This hydropunch was located along the north side of Main Street just south (downgradient) of the former cesspool on the Atlas site. The source of this groundwater contamination cannot be entirely attributed to the Atlas site since the upgradient groundwater contaminant concentrations are similar to those found in AGHP-01.

The results of HP-05 indicate concentrations of VOCs in excess of NYSDEC class GA groundwater standards at 60, 70, and 80 ft below the ground surface (Figure 3-1). The primary target compounds are 1,1-DCE, 1,1- DCA, 1,1,1-TCA, TCE, PCE and Toulene. The concentrations reach a peak concentration at 80 ft (Figure 3-1). The trend of the concentrations

Hydropunch:	HP-05	9/22/97		AGHP-01		2/24/98	
Depth	60	70	80	60	70	80	TB
1,1-DCE	0	4.9	0	0	0	0	0
cis-1,2-DCE	0	0	0	0	0	0	0
1,1-DCA	0	4.6	0	0	0	0	0
1,1,1-TCA	130	170	100	0	0	0	0
TCE	570	680	1400	8	18	0	0
PCE	53	48	99	0	35	0	0
Toulene	0	0	39				
Total VOC's	**753**	**907.5**	**1599**	**8**	**53**	**0**	**0**



/201DATA.dsf

Figure 3-1

Hydropunch Results

ATLAS GRAPHICS SITE
NEW CASSEL INDUSTRIAL AREA
NYSDEC I.D. No. 130043

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York

with depth below 80 ft is not known as sampling was stopped at 80 ft. Total VOCs peaked at 80 ft where 1599 µg/l was detected including 100 µg/l 1,1,1-TCA, 1400 µg/l TCE, 99 µg/l PCE, and 39 µg/l Toulene. Total VOCs at 70 ft where 907.5 µg/l including 4.9 µg/l 1,1-DCE, 4.6 µg/l 1,1-DCA, 170 µg/l 1,1,1 TCA, 680 µg/l TCE, and 48 µg/l PCE. Total VOCs at 60 ft where 753 µg/l including 130 µg/l 1,1,1 TCA, 570 µg/l TCE, and 53 µg/l PCE. This hydropunch was located along the west side of Swalm Avenue (Figure 3-1). This location is in a downgradient position of the former cesspool at the Atlas site. However, this sampling location is located immediately west of the IMC Magnetics site. Investigations at this site have shown that this site is heavily contaminated with target compounds as a result of past activities at this site. It is believed that most of the contamination detected in the HP-05 groundwater samples can be attributed to the IMC Magnetics site.

3.4 MONITORING WELL SAMPLING RESULTS

A total of four existing monitoring wells were sampled during the IIWA field sampling. The wells included NC-17, NC-2, NC-2D, and NC-11843. The analytical results for these groundwater samples are found in Table 3-3

The results from the NC-2 and NC-2D well pair showed concentrations of VOCs in excess of NYSDEC class GA groundwater standards in both wells (Table 3-3). NC-2 is the shallow watertable well completed to a total depth of approximately 122 ft. Target compounds detected in excess of NYSDEC class GA groundwater standards in this well include 1,2-DCE (24 µg/l), TCE (290 µg/l), and PCE (510 µg/l). NC-2D is the deeper well in this well pair with a total depth of approximately 122 ft. Target compounds detected in excess of NYSDEC class GA groundwater standards in this well include 1,2-DCA (7 µg/l), 1,1,1-TCA (29 µg/l), TCE (81 µg/l), and PCE (160 µg/l). The contamination in this area appears to be associated with the plume of TCE/PCE contamination which appears to originate from the Former IMC Magnetics site which is located just east of the NC-2 well pair. The maximum downgradient extent of this contamination is unknown.

The results from N-11843 also showed concentrations of VOCs in excess of NYSDEC class GA groundwater standards (Table 3-3). Target compounds detected in excess of NYSDEC class GA groundwater standards in this well include 1,2-DCE (7 µg/l), TCE (19 µg/l), and PCE (20 µg/l). This well is located approximately 22 ft from the center line of Swalm Street in the northwest corner of the Atlas property. It is in a upgradient position of the Atlas cesspool and the NC-2 well pair and is completed to a total depth of 59 ft. NC-17 has a total depth of approximately 64 ft. TCE (81µg/l) was the only target compound detected in excess of NYSDEC class GA groundwater standards (Table 3-3). Trace levels of 1,2-DCE, and PCE were also detected in NC-17.

TABLE 3-3

DRAFT
11/11/98

MONITORING WELL SAMPLING RESULTS
Atlas Graphics

LMS Sample # / NYSDEC Sample Designation	NC-2D B60226	NC-2 B60227	N-11843 B60228	NC-17 B60229	TRIP BLANK	NYSDEC CLASS GA STANDARDS(a)
VOLATILE ORGANICS (µg/l)						
Methylene chloride	ND	ND	ND	ND	1 j b	5
Acetone	ND	ND	ND	10 j	ND	50
1,1-Dichloroethene	ND	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	2 j	ND	ND	ND	5
1,2-Dichloroethylene (total)	ND	24	7 j	3 j	ND	N/A
1,2-Dichloroethane	7 j	ND	ND	ND	ND	0.8
2-Butanone	ND	ND	ND	ND	ND	N/A
1,1,1-Trichloroethane	29	100	3 j	ND	ND	5
Trichloroethylene	81	290 d	19	5 j	ND	5
Benzene	ND	ND	ND	ND	ND	0.7
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	N/A
2-Hexanone	ND	ND	ND	ND	ND	50
Tetrachloroethylene	160	510 d	20	41	ND	5
Toluene	3 j	2 j	2 j	3 j	ND	5
Ethylbenzene	ND	ND	ND	ND	ND	5
Styrene	ND	ND	ND	ND	ND	5
Xylene (total)	ND	ND	ND	ND	ND	N/A

(a) - NYSDEC Division Division of Water Technical and Operational Guidance Series (1.1.1) June 1998
d - Concentration recovered from diluted 5:1 sample.
e - Estimated concentration; exceeds GC/MS calibration range.
j - Estimated concentration; compound present below quantitation limit.
N/A - Not available.
ND - Not detected at analytical detection limit.

CHAPTER 4

CONCLUSIONS

This chapter presents the conclusions of the IIWA sampling and analysis at the Atlas Graphics Site, (NYSDEC Site No. 1-30-143B on the New York State Registry of Inactive Hazardous Waste Sites) is located at 567 Main Street in the New Cassel Industrial Area (NCIA), Town of North Hempstead, Nassau County, New York. Several of the soil samples collected during this investigation confirmed that hazardous wastes were disposed of on the site or are present on the site. The source area of this contamination appears to be isolated to the former cesspool location off the south west corner of the building.

The contamination appears to be the result of past disposal practices at the site. It is believed that wastes associated with the on-site graphics facility were disposed of in the on-site cesspool sometime between 1977 and 1980. Chemical usage records indicate that Atlas Graphics used 312 gallons of TCE each year for degreasing purposes. NCDOH indicated that the cesspool was heavily contaminated with TCE. In 1978 a sample collected by NCDOH showed 4,500 µg/l TCE and 100 µg/l of 1,1,1-TCA, an additional sample collected in 1980 contained 318,760 µg/l of TCE. The industrial discharges to the cesspool resulted in a SPDES violation which was corrected by equipment changes at the facility. The Atlas Graphics facility was eventually connected to the county sewer system in November 1980. Records pertaining to the cleaning and abandonment of the cesspool when the facility was connected to the county sewer were not located. It is not know if the cesspool was cleaned and removed or if any hazardous wastes were removed from the site at that time.

The groundwater probe, hydropunch groundwater samples, and the monitoring well groundwater samples were analyzed for the site to determine upgradient and downgradient contaminant concentrations. The upgradient groundwater sampling points included NC-17, AGGW-01, and NC-11843. The noted concentrations in the three upgradient points are significantly less than the downgradient groundwater sampling points (AGGW-03, AGGW-05, HP-01, HP-05, and NC-2 well cluster). The AGGW-05 was the closest groundwater sampling point to the former cesspool location which received the TCE contaminated wastewater. This sampling point showed the highest concentrations measured during this investigation. At AGGW-05 the concentrations of TCE were 710 µg/l in the 56-60 ft sample, 550 µg/l in the 66-70 ft sample, and 3900 µg/l in the 76-80 ft sample. The concentrations appear to be increasing with depth and the concentrations below 80 feet are not known as deeper sampling was not conducted. The vertical distribution of TCE suggests that the main body of contamination has migrated downward from the watertable.

The overall nature and extent of the groundwater contamination associated with the Atlas site is difficult to determine since the Atlas site is directly upgradient of the Former IMC Magnetics site located south of the Atlas site on Main Street. Past investigations at this facility indicate that the soils and groundwaters at this site were heavily contaminated with similar contaminants as those used at the Atlas site. It is likely that the large contaminant concentrations found in HP-05, NC-2 and NC-2D are the result of past disposal practices at IMC Magnetics.

APPENDIX A

Probe Boring Logs and Field Notes

SUBSURFACE EXPLORATION BORING LOG

BORING ID: AG-1

Project: Atlas Graphics IIWA

Client: NYSDEC
Site Location: New Cassel, NY
Boring Location: NE corner of building
Drilling Co: Zebra Environmental
Drill Method: Direct push soil probe
Geologist: Perry Young

LMS Job No.: 650-201
LMS Disk No.: HSI1246
Date Begin/End: 1/21/97
Total Depth: 47
Depth to Water:
NYSDEC Site No.: 1-30-043B

Geologic Description

and = 35 - 50% f = fine
some = 20 - 35% m = medium
little = 10 - 20% c = coarse
trace = 0 - 10%

DEPTH (FT)	SAMPLER	RECOVERY	PID	FID	LITHOLOGY	Geologic Description	Remarks
2							
4							
6	LB	1.6		8 10 5		5-7 Orange medium and coarse quartz sand.	CLP VOA (5-7)
8							
10				1			
12	LB	1.8		1 2		10-12 Brown-orange medium and coarse quartz sand, loose.	CLP VOA (10-12)
14							
16	LB	1.8		7 7 5		15-17 Tan medium quartz sand, little to some coarse sand, loose.	CLP VOA (15-17)
18							
20				3			
22	LB	1.4		3.5 3		20-22 Tan medium quartz sand, little to some coarse sand, loose.	CLP VOA (20-22)
24							
26	LB	1.5		3 5 4		25-27 Tan medium and coarse quartz sand, loose.	CLP VOA (25-27)
28							
30				2			
32	LB	1.8		5 4		30-32 Tan-brown medium quartz sand.	CLP VOA (30-32)
34							
36	LB	1.7		3 0 1		35-37 Tan medium quartz sand.	CLP VOA (35-37)
38							
40				3			
42	LB	2.0		2 2		40-42 Tan medium quartz sand, little fine sand.	CLP VOA (40-42)
44							
46	LB	2.0		1 1 0		45-47 Tan medium quartz sand, little fine sand.	CLP VOA (45-47)
48						END OF BORING - REFUSAL AT 47 FT.	

SUBSURFACE EXPLORATION BORING LOG

BORING ID: AG-2

Project: Atlas Graphics IIWA

Client: NYSDEC
Site Location: New Cassel, NY
Boring Location: SE corner of building
Drilling Co: Zebra Environmental
Drill Method: Direct push soil probe
Geologist: Perry Young

LMS Job No.: 650-201
LMS Disk No.: HS11246
Date Begin/End: 1/21/97
Total Depth: 12
Depth to Water:
NYSDEC Site No.: 1-30-043B

DEPTH (FT)	SAMPLER	RECOVERY	PID	FID	LITHOLOGY	Geologic Description	Remarks
						and = 35 – 50% f = fine some = 20 – 35% m = medium little = 10 – 20% c = coarse trace = 0 – 10%	
10	LB	2.0		2 1		10-12 Tan-brown medium and coarse quartz sand, loose.	CLP VOA (10-12)
12				2		END OF BORING – REFUSAL AT 12 FT.	

SUBSURFACE EXPLORATION BORING LOG

BORING ID: AG-3

Project: Atlas Graphics IIWA

Client: NYSDEC
Site Location: New Cassel, NY
Boring Location: In front of building
Drilling Co: Zebra Environmental
Drill Method: Direct push soil probe
Geologist: Perry Young

LMS Job No.: 650-201
LMS Disk No.: HS11246
Date Begin/End: 1/23/97
Total Depth: 42
Depth to Water:
NYSDEC Site No.: 1-30-043B

Geologic Description

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 0 - 10%

f = fine
m = medium
c = coarse

DEPTH (FT)	SAMPLER	RECOVERY	PID	FID	LITHOLOGY	Geologic Description	Remarks
2							
4				1			
6	LB	1.7		3		5-7 Orange medium and coarse quartz sand.	CLP VOA (5-7)
8				1			
10				4			
12	LB	1.2		2		10-12 Brown-orange medium and coarse quartz sand.	CLP VOA (10-12)
14							
16							
18							
20							
22	LB	0.0				20-22 No recovery.	
24	LB	1.0		1		22-24 Tan medium and coarse quartz sand.	CLP VOA (22-24)
26				1			
28				5			
30							
32	LB	0.8		12		30-32 Brown-red medium quartz sand, trace coarse sand.	CLP VOA (30-32)
34				12			
36							
38							
40							
42	LB					40-42 Orange-tan medium quartz sand.	CLP VOA (40-42)
44						END OF BORING - REFUSAL AT 42 FT.	

SUBSURFACE EXPLORATION BORING LOG

BORING ID: AG-4

Project: Atlas Graphics IIWA

Page 1 of 1

Client: NYSDEC
Site Location: New Cassel, NY
Boring Location: SW corner of building
Drilling Co: Zebra Environmental
Drill Method: Direct push soil probe
Geologist: Perry Young

LMS Job No.: 650-201
LMS Disk No.: HS11246
Date Begin/End: 1/24/97
Total Depth: 42
Depth to Water:
NYSDEC Site No.: 1-30-043B

DEPTH (FT)	SAMPLER	RECOVERY	PID	FID	LITHOLOGY	Geologic Description (and = 35 - 50%; some = 20 - 35%; little = 10 - 20%; trace = 0 - 10%; f = fine; m = medium; c = coarse)	Remarks
2							
4							
6	LB	1.9		1 0 0		5-7 Tan medium and coarse quartz sand, loose.	CLP VOA (5-7)
8	LB	1.8		20 15		7-9 Tan medium and coarse quartz sand, loose.	CLP metals (7-9)
10	LB	1.6		0 0 1		10-12 Tan medium and coarse quartz sand, loose.	CLP VOA (10-12)
12							
14							
16							
18							
20	LB	0.8		0 1		20-22 Tan medium and coarse quartz sand, trace pebbles, loose.	CLP VOA (20-22)
22							
24							
26							
28							
30	LB	0.9		0 0		30-32 Tan medium quartz sand, trace coarse sand, loose.	CLP VOA (30-32)
32							
34							
36							
38							
40	LB	1.2		5 6		40-42 Tan medium quartz sand.	CLP VOA (40-42)
42						END OF BORING - REFUSAL AT 42 FT.	
44							

SUBSURFACE EXPLORATION BORING LOG

BORING ID: AG-5

Project: Atlas Graphics IIWA

Client: NYSDEC
Site Location: New Cassel, NY
Boring Location: West of bldg, thru frm cesspool
Drilling Co: Zebra Environmental
Drill Method: Direct push soil probe
Geologist: Perry Young

LMS Job No.: 650-201
LMS Disk No.: HS11246
Date Begin/End: 1/22/97
Total Depth: 37
Depth to Water:
NYSDEC Site No.: 1-30-043B

DEPTH (FT)	SAMPLER	RECOVERY	PID	FID	LITHOLOGY	Geologic Description (and = 35 – 50%; some = 20 – 35%; little = 10 – 20%; trace = 0 – 10%; f = fine; m = medium; c = coarse)	Remarks
2							
4							
				5			
6	LB	0.7		2		5-7 Brown medium and coarse quartz sand, loose.	CLP VOA (5-7)
8							
10				2			
	LB	1.2		5		10-12 Brown medium and coarse quartz sand, loose.	CLP VOA (10-12)
12				2			
14							
				4			
16	LB	1.0		5		15-17 Orange-tan medium and coarse quartz sand, little pebbles.	CLP VOA (15-17)
				0			
18	LB	1.1		3		17-19 Dark orange-brown medium and coarse quartz sand. Presumed bottom depth of former cesspool.	CLP metals (17-19)
20							
	LB	0.6		30		20-22 Tan medium quartz sand, some coarse sand, little to trace fine sand.	CLP VOA (20-22)
22							
24							
				1			
26	LB	1.4		1		25-27 Orange-tan medium quartz sand, some fine sand, trace coarse sand.	CLP VOA (25-27)
				3			
28							
30				1			
	LB	1.5		1		30-32 Tan medium and fine quartz sand.	CLP VOA (30-32)
32				10			
34							
				2			
36	LB	1.2		6		35-37 Tan fine quartz sand, some medium sand.	CLP VOA (35-37)
				10			
38						END OF BORING - REFUSAL AT 37 FT.	

ATLAS GRAPHICS IIWA — 21 JAN 1997 — 30° CLEAR — TUES.

0715 PY LEAVES HOTEL TO PICK UP BOTTLES AT H2M

0745 PICK UP BOTTLES AT H2M

0815 ARRIVE ON SITE. GAS, ELEC. & WATER MARKOUTS ARE VISIBLE ON THE WEST SIDE OF THE PROPERTY ALONG SWALM AVE. INDENTATIONS IN PAVEMENT BEHND BUILDING (NW CORNER) INDICATE POSSIBLE DRUM STAGING AREA.

0930 JEFF FROM ANSON ARRIVES. ANSON IS ATLAS GR. CONSULTANT. HERE TO OBSERVE

1000 ZEBRA ARRIVES. JOHN, MANNY.

1015 ZEBRA SET UP ON ~~#1~~ HOLE. BEGIN SOIL SAMPLING EVERY 5' TO ~~1~~.. (AGSP-1)

1130 JEFF & I UNCOVERED NC11843 - 2" ϕ WELL UNDER "WATER" COVER.

1200 ZEBRA OFF-SITE FOR LUNCH.

1250 ZEBRA RETURNS, CONTINUE @ AGSP-1

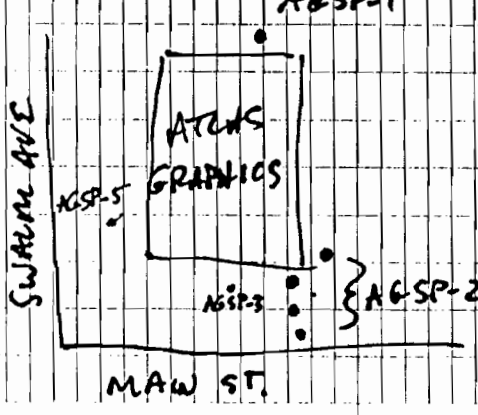
1450 AGSP-1 - REFUSAL AT 45' NO GW. TAKEN YET. SAMPLED SOIL @ 5' INTERVALS.

1500 CALL MIKE L. TOLD HIM JOE JONES HASN'T ARRIVED, REFUSAL @ 45'.

1505 JOE JONES ARRIVES ON SITE. (NYSDEC) WE MOB ZEBRA TO AGSP-2 ON SE CORNER ON BUILDING. WE WILL SAMPLE SOIL @ 10' INTERVALS HERE AND RETURN TO SAMPLE GW AT AGSP-1 AT ANOTHER DAY. JOE JONES CONCURS PLAN.

1530 JEFF (ANSON) LEAVES SITE. MAY RETURN TOMORROW. HE TOOK SPLIT SAMPLES OF AGSP-1.

1630 ZEBRA - GOT 10-12' SOIL SAMPLE, WAS REFUSED ~14' (AGSP-2) MOVED 3', REFUSAL 4-10'. WE WILL SAMPLE THROUGH CESSPOOL TOMORROW, WHERE PREVIOUS REPORT (ANSON) INDICATES THAT IT'S POSSIBLE TO REACH 50' (AT LEAST) WITH THE GEOPROBE.



1645 JOE JONES (NYSDEC) OFF-SITE. HE TOOK SOIL SAMPLES, WILL DROP OFF AT H2M TOMORROW (1.22.97) MORNING, AND WILL PICK UP MORE SOIL VOA JARS.

1650 ZEBRA OFF SITE

1706 PY OFF SITE.

22-JAN - WED.

ATLAS GRAPHICS - 30° OVERCAST

0800 PY ON-SITE

0815 ZEBRA ON-SITE (JOHN, MANNY) MOVE TO CESS POOL AREA, WILL SAMPLE SOIL @ 5' INT. TO 7'

1000 JEFF BONIEW (ANSAN) ON-SITE.

1045 NYSDEC DELIVERS MORE SAMPLE BOTTLES JOE JONES LEAVES SITE W/ OTHER NYSDEC REPS. THEY WILL BE NEARBY (TISCHMAN-NY AVE.)

1130 JEFF B OFF-SITE.

1150 ZEBRA IS STOPPED @ 37' AT AGSP-5. WILL MOVE OFF HOLE ~3' & TRY TO PUSH WATER SAMPLER DEEPER. PY CHECKED SWL IN NC 11843 - 55' BGS.

1230 JEFF B ON-SITE.

1235 ZEBRA IS AT 66'. ONLY HAVE ENOUGH RODS TO GET TO ~72'. THEY WILL GO TO PLAINVIEW & GET MORE RODS FROM ANOTHER CREW TO ATTEMPT TO SAMPLE GW @ 80'.

23 JAN - TH ATLAS GRAPHICS 45° & CLEAR

0930 PY ON-SITE - J.T. ON-SITE
ZEBRA ON-SITE, BEGINS AGGW-1

JT, PY RECON WELLS, SET UP A NC-2, NC-2D ACROSS STREET AT S.W. CORNER OF SWALM & MAIN. PURGING, SETTING UP GRUNDFOS.
JEFF B. ON SITE

1145 ZEBRA AT 80' COLLECTED VOA 76-80

1230 NO GW @ 66-70
ZEBRA TAKES LUNCH

1315 STILL NO GW 66-70
MOVING UP 10' TO 56-60
80 GAL PURGED FROM NC-2D

1330 COLLECTED 56-60 AGGW-1
SCREEN JAMMED IN SAMPLER.
JEFF B LEAVES.

1420 NC-2D PURGED. JOE JONES & JT SAMPLING.

1430 ADVANCING AGSP-3 IN FRONT OF BUILDING.

1245 ZEBRA OFFSITE.

1345 ZEBRA ON-SITE, PREPARING TO CONTINUE AGSP-3 AGGW-5'
SEE PROBE LOGS.

1400 JEFF B. OFF SITE

1410 ZEBRA OFF SITE

1415 JOE JONES & I WILL FILTER GW SAMPLES, PACK UP.
WILL RETURN TO ATTEMPT GW SAMPLE AT AG-1 TOMORROW.

1645 PY OFF-SITE
JEFF B TOOK SPLITS OF SOIL (32-35') & GW - METALS & VOA.

1530 NC2, NC2D SAMPLED. MOVING TO N-11843

1610 JT TO NC-17, BEGINS PURGING.

1630 N-11843 - 76GL PURGED OUT OF 15
NC-17 - 4GL PURGED OUT OF 15
ZEBRA OFF SITE.

1715 SAMPLED NC-17

1825 SAMPLED BACK N-11843

1740 JT, JOE JONES OFF-SITE

1845 PY OFF-SITE

24. JAN FRI 25° OVERCAST

0750 PY ON-SITE

0800 ZEBRA (STEVE) ON-SITE

0820 ZEBRA (JOHN) ON-SITE

0830 CONTINUING AGSP-3

1100 REFUSAL @ 42'
SHAWN (ZEBRA) ON-SITE.
THEY NEED GEOPROBE ON
ANOTHER SITE TO RETRIEVE
STUCK RODS. WILL RETURN
IN 1 HR. ZEBRA OFF SITE.

1300 ZEBRA BACK ON-SITE.

1400 AGSP-3 ADVANCED TO 80'

1500 MOB TO AGSP-4
REFUSED 2' ~ 5'
ADV A TO 12' TODAY. WILL
RETURN MON.

1615 ZEBRA OFF SITE.
JOE JONES OFF SITE.

1625 PY OFF SITE

1800 PY @ NYACK - DEPREP

1830 END DAY.

27 JAN

0630 PY @ NYACK

0800 PY ON-SITE
ZEBRA ON-SITE.
MOVING TO AGSP-4 TO BEGIN.
CONTINUE BORING.
REFUSAL 45' (SOIL)
REFUSAL 42' JUST OFF HOCE.
REFUSAL IN STREET 4X:
5', 5', 9', 22'

1130-1200 LUNCH - HOLES IN ASPHALT PATCHED.

1230 MOVING TO STREET IN FRONT OF AGSP-2 TO ATTEMPT GW SAMPLING.
REFUSAL: 4X
9', 4', 9', 9'

1400 CALLED MIKE L. ZEBRA HAS 2 MORE EXPENDABLE POINTS. MIKE WILL CALL JOE JONES (NYSDEC) TO SEE IF HE NEEDS MORE GW DATA.

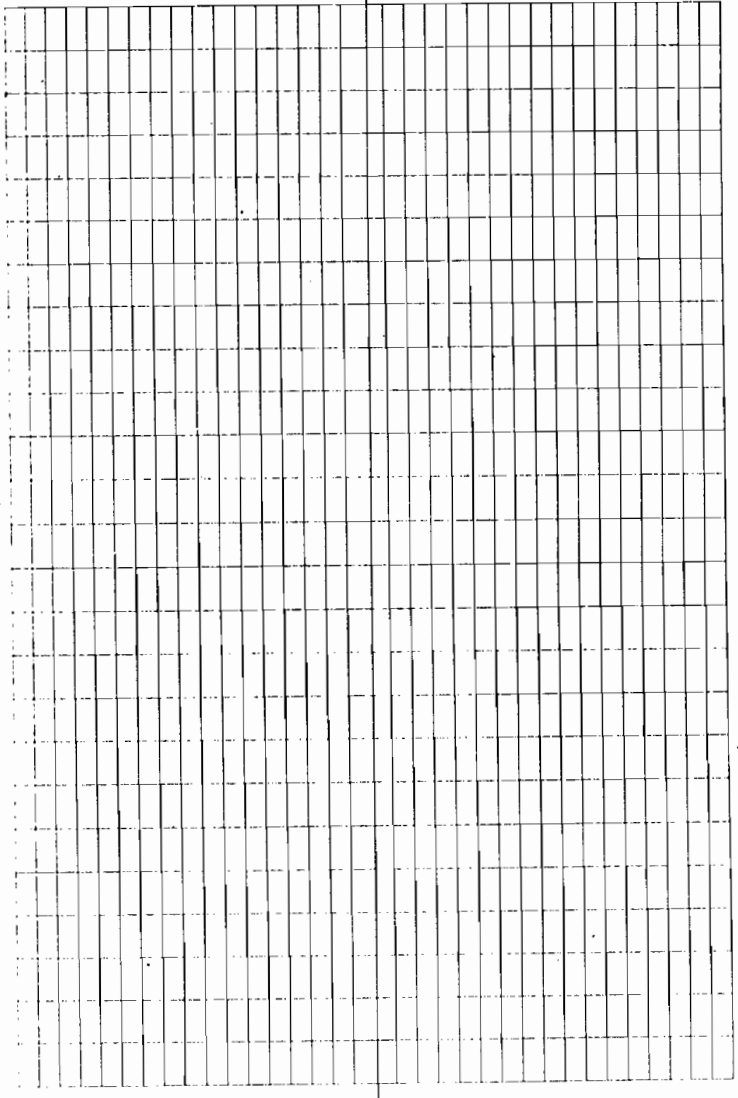
1415 CALL MIKE L. BACK. JOE JONES IS NOT ON WE WILL DRIVE LAST 2 PT POINTS & CALL BACK.

1530 ZEBRA OFFSITE.
SPOKE TO JOE JOHNS (WYSDEC).
WE DECIDED THAT WE WILL
NOT RETURN WITH ZEBRA. WE
WILL DISCUSS HYDROPUNCH OR
WELL DRILLING WITH MIKE
AND RETURN AT A LATER DATE.

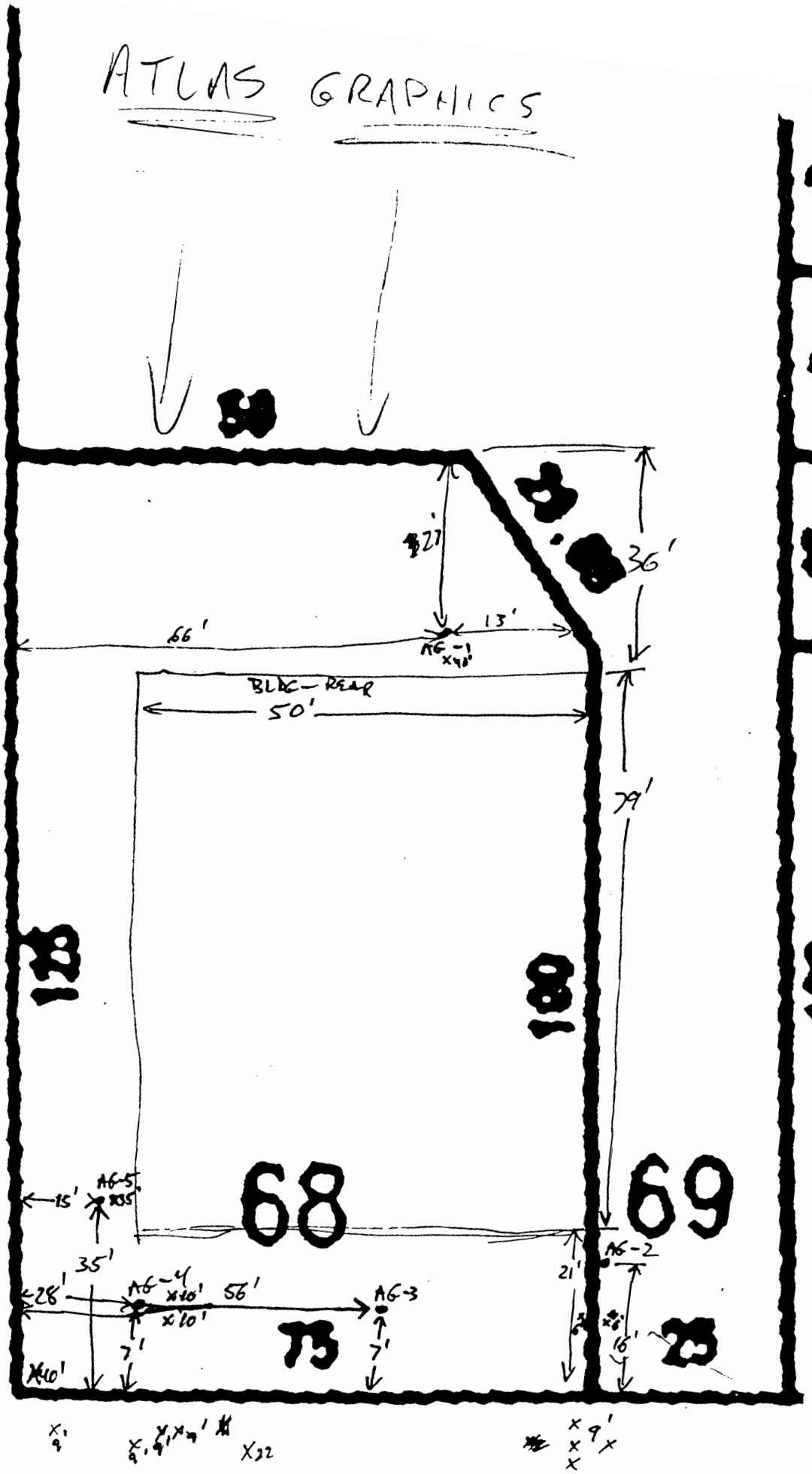
1600 P7 OFFSITE TO GET CAMERA.

1630 LEFT SITE TO HOME

B60250 - AGSP-4 (20-22)
B60251 - AGSP-4 (30-32)
B60252 - AGSP-4 (40-42)



ATLAS GRAPHICS



ZEBRA

Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
P. O. Box 1509
Pearl River, New York 10965

January 29, 1997

Attention: Mr. Michael Lehtinen

RE: Project Summary, Geoprobe Sampling Services
Atlas Graphics
567 Main Street, New Cassel, New York
Work Performed on January 21 through 24, and 27, 1997

Dear Mr. Lehtinen:

Following is a summary of site activities performed by ZEBRA Environmental at the Atlas Graphics site located in New Cassel, New York. The work was performed on January 21 through 24, and 27, 1997.

PROJECT PERSONNEL ON SITE:
Mr. Perry Young, Lawler, Matusky & Skelly
Mr. John Mutuski, ZEBRA Environmental
Mr. Emanuel Poulos, ZEBRA Environmental
Mr. Stephen Salembier, ZEBRA Environmental
Mr. Brian Hoashi, ZEBRA Environmental

ZEBRA mobilized a fully equipped truck-mounted Geoprobe unit to the project site on January 21, 1997. ZEBRA personnel met Mr. Perry Young of Lawler, Matusky & Skelly at approximately 9:30 AM and walked the site with Mr. Young noting utilities and anticipated location of sampling points.

The project involved collecting soil and groundwater samples from twelve (12) points identified by Mr. Young. The location of the points was recorded on a site plan by Mr. Young.

To penetrate the surface pavement, a rotary carbide tipped concrete drill bit was utilized with the probe unit.

At each of the sampling points, ZEBRA's truck-mounted Geoprobe unit was positioned over the point and a blind probe was driven to a depth above the desired sampling elevation in order to clear obstructions and/or debris. Subsequent to opening a probe hole or drilling a hole in the pavement (if required), a clean Large Bore (LB) sampler was driven to the desired sampling depth and a soil core measuring approximately 22" long by 1 1/16" in diameter was collected. The LB sampler remains completely closed while it is being driven to depth and is opened by releasing a stop pin from the surface. Removal of the stop pin allows the piston to retract into the sample tube as it is displaced by the soil core. Each of the samplers used was fitted with a new acetate liner prior to use. The acetate liner assists in the removal of the soil sample from the tube and helps insure sample integrity.

ZEBRA ENVIRONMENTAL CORP.
200 ROGER AVENUE, INWOOD, NY 11096 • (516) 371-2020 FAX: (516) 371-4422

To collect groundwater samples, a clean Geoprobe Screen Point 15 groundwater sampler (SP15) was used. The SP15 is a 1.5" (38 mm) O.S. X 52" (1321 mm) overall length sampler and within the protective sheath, the SP15 has a 41" (1041 mm) screen. The screen consists of a slotted screen of .004" (0.1 mm) which is exposed as the sampler is retracted. Once the sampler is driven to its desired depth, chase rods are inserted down the inside of the probe rods. As the probe rods are retracted ≈4', the chase rods allow the screen to be exposed by holding the chase rods in place. The design of the SP15 sampler allows the stainless steel screen to remain retracted within the protective sheath until it is driven to the desired sampling depth. The screen is held in place by a sacrificial point fitted with a watertight "O" ring seal. Once the chase rods are used to expose the screen, the sacrificial point is lost. After the screen had been exposed, an unused, clean section of ⅜" polyethylene tubing was fitted with a stainless steel bottom check valve and inserted down the probe rod to the desired sampling depth. The poly tubing was oscillated up and down to drive a column of water to the surface.

A copy of the Field Sampling Log recorded on site has been transcribed below:

ZEBRA PT#/SAMPLE#	TYPE	DESCRIPTION
January 21, 1997		
1/1	Soil-LB	Collected sample @ 5-7' BG.
1/2	Soil-LB	Collected sample @ 10-12' BG.
1/3	Soil-LB	Collected sample @ 15-17' BG.
1/4	Soil-LB	Collected sample @ 20-22' BG.
1/5	Soil-LB	Collected sample @ 25-27' BG.
1/6	Soil-LB	Collected sample @ 30-32' BG.
1/7	Soil-LB	Collected sample @ 35-37' BG.
1/8	Soil-LB	Collected sample @ 40-42' BG.
1/9	Soil-LB	Collected sample @ 45-47' BG.
	Soil-LB	Attempted to sample @ 50-52' BG (did not grab, refusal @ 48' BG).
2/1	Soil-LB	Collected sample @ 10-12' BG.
3/1	Soil-LB	Refusal @ 5.5' BG.
4/1	Soil-LB	Refusal @ 5.5' BG.
5/1	Soil-LB	Refusal @ 5.5' BG.
January 22, 1997		
1/1	Soil-LB	Collected sample @ 5-7' BG.
1/2	Soil-LB	Collected sample @ 10-12' BG.
1/3	Soil-LB	Collected sample @ 15-17' BG.
1/4	Soil-LB	Collected sample @ 17-19' BG.
1/5	Soil-LB	Collected sample @ 20-22' BG.

ZEBRA PT#/SAMPLE#	TYPE	DESCRIPTION
January 22, 1997, cont'd.		
1/6	Soil-LB	Collected sample @ 25-27' BG.
1/7	Soil-LB	Collected sample @ 30-32' BG.
1/8	Soil-LB	Collected sample @ 35-37' BG. Refusal @ 37' BG.
1/9	GW-SP15	Collected sample @ 76-80' BG.
1/10	GW-SP15	Collected sample @ 66-70' BG.
1/11	GW-SP15	Collected sample @ 56-60' BG.
January 23, 1997		
1/1	GW-SP15	Collected sample @ 76-80' BG.
1/2	GW-SP15	Collected sample @ 66-70' BG, no water encountered.
1/3	GW-SP15	Collected sample @ 56-60' BG.
2/1	Soil-LB	Collected sample @ 5-7' BG.
2/2	Soil-LB	Collected sample @ 10-12' BG.
2/	Soil-LB	Collected sample @ 20-22' BG, not sufficient recovery.
2/3	Soil-LB	Collected sample @ 22-24' BG.
2/4	Soil-LB	Collected sample @ 30-32' BG.
January 24, 1997		
1/1	GW-SP15	Collected sample @ 76-80' BG.
1/2	GW-SP15	Collected sample @ 66-70' BG.
1/3	GW-SP15	Collected sample @ 56-60' BG.
2/1	Soil-LB	Collected sample @ 5-7' BG.
2/2	Soil-LB	Collected sample @ 7-9' BG.
2/3	Soil-LB	Collected sample @ 10-12' BG.
January 27, 1997		
1/1	Soil-LB	Collected sample @ 20-22' BG.
1/2	Soil-LB	Collected sample @ 30-32' BG.
1/3	Soil-LB	Collected sample @ 40-42' BG.
1/4	GW-SP15	Refusal @ 44' BG.
1/5	GW-SP15	Refusal @ 42' BG.

ZEBRA PT#/SAMPLE#	TYPE	DESCRIPTION
January 27, 1997, cont'd.		
2/1	GW-SP15	Refusal @ 4' BG.
2/2	GW-SP15	Refusal @ 4' BG.
2/3	GW-SP15	Refusal @ 9' BG.
2/4	GW-SP15	Refusal @ 22' BG.
3/1	GW-SP15	Refusal @ 9' BG.
3/2	GW-SP15	Refusal @ 9' BG.
3/3	GW-SP15	Refusal @ 4' BG.
3/4	GW-SP15	Refusal @ 8' BG.
4/1	GW-SP15	Refusal @ 9' BG.
5/1	GW-SP15	Refusal @ 40' BG.

A total of twenty-eight (28) soil samples and eight (8) groundwater samples were collected by ZEBRA during the five (5) days on site.

All sampling tools and probe rods were washed with Alconox and steam cleaned back at ZEBRA's office each night.

All samples were left in the custody of Mr. Young and all drilled holes were sealed with asphalt prior to leaving the site.

ZEBRA appreciates the opportunity to provide these services and looks forward to working with Lawler, Matusky & Skelly in the future. Should there be any questions regarding this project or our other services, please do not hesitate to call.

Sincerely yours,

John Mutuski

John Mutuski
ZEBRA Environmental Corp.

JM:bal

cc: Alex Nadolishny

APPENDIX B

Monitoring Well Sampling Logs

WELL SAMPLING LOG

Date: 1-23-97
Crew: JT / PY
Job No: 650-201
Project: ATLAS GRAPHICS TIWA
Project Site: New Cassel

METERS USED
Temp: DEC - 560
pH: 393
Cond: DEC - 560
Turb: NYSDEC S/N 19834

Well ID No: N-11843 (B-60228)
Well Condition: Poor
Well Depth/Diameter: ~ 59 ft / 2 in
Well Casing Type: PVC
Screened Interval:
Casing Ht/Lock No:
Reference Pt: TOC
Depth to Water (DTW): 52.88
Water Column; Ht/Vol: 6.12 / 5.5
Purge Est: 16.5
Purge Date/Time(s): 1-23-97 / 1600
Purge Method: Teflon bailer
Depth(s): Top of column
Rates (gpm): 0.25
Purged Volume: 15 gal
DTW After Purging: 53.44

Yield Rate: L-M-(H)

Purge Observations: Large amounts of fine sand (up to ½ bailer) coming up in bailer each withdrawal

DTW Before Sampling: 53.44
Sample Date/Time(s): 1-23-97 / 1525
Sampling Method: Teflon disp bailer
Sampling Depth(s): Top of Column
DTW After Sampling: 53.44
Sampling Observations: wtr. cloudy
Chain-of-Custody No(s): Samples retrieved by DEC
Analytical Lab(s):

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	12.8	down	340	200+
End	13.0	↓	393	200+

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC		<4°	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
0	13.7	8	371	200+
5	13.2	7.2	291	200+
10	13.8	Meter down	296	200+
15	2.2	↓	340	200+

Comments:

Air Temp: ~ 35°
Weather Conditions: Clear

Crew Chief Signature: [signature] Date: 1-23-97

WELL SAMPLING LOG

Date: 1-23-97
Crew: JT / PK
Job No: 650 201
Project: ATLAS CERAMICS DEWA
Project Site: New Castle

METERS USED
Temp: DEC-560
pH: 303
Cond: DEC 560
Turb: NYSDEC
S/N 69834

Well ID No: NC-17 (B-60229)
Well Condition: Good
Well Depth/Diameter: ~61' / 2"
Well Casing Type: PVC - SCH 40
Screened Interval:
Casing Ht/Lock No:
Reference Pt: TOC
Depth to Water (DTW): 53.23
Water Column; Ht/Vol: 8 ft / 7.1
Purge Est: 21.3
Purge Date/Time(s): 1-23-97 / 1600
Purge Method: Teflon Bailer
Depth(s): Top of Column
Rates (gpm): 0.25 gpm
Purged Volume: 15 gal
DTW After Purging: 53.23

Yield Rate: L-M-H
Purge Observations: water very cloudy very color.

DTW Before Sampling: 53.24
Sample Date/Time(s): 1-23-97 / 1715
Sampling Method: Teflon disp. bailer
Sampling Depth(s): Top of column
DTW After Sampling: 53.23
Sampling Observations: water cloudy
Chain-of-Custody No(s): Samples retained by DEC
Analytical Lab(s):

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	12.2	Down	536	200+
End	12.0	↓	563	200+

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC		<4°	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
0	12.6	Down	453	200+
7.5	13.0	↓	536	200+
15	12.2	↓	576	200+

Comments:

Air Temp: 35°
Weather Conditions: Clear

Crew Chief Signature: [signature] Date: 1-23-97

WELL SAMPLING LOG

Date: 1-23-97
Crew: JT / PY
Job No: 650-201
Project: ATLAS GRAPHICS IRWA
Project Site: New Cassel

METERS USED
Temp: DEC-560
pH: 303
Cond: DEC-560
Turb: NYSDEC
6/N 19834

Well ID No: ~~MW~~-2 (B-60227) NC
Well Condition: poor
Well Depth/Diameter: ~54 ft / 2 in
Well Casing Type: PVC
Screened Interval:
Casing Ht/Lock No:
Reference Pt: TOC
Depth to Water (DTW): 52.78
Water Column; Ht/Vol: 1 ft / 0.9 gal
Purge Est: 3.7

Purge Date/Time(s): 1-23-97 / 1000
Purge Method: Teflon bailer
Depth(s): Total column
Rates (gpm): 0.25 gpm
Purged Volume: 6 gal
DTW After Purging: 53.00

Yield Rate: L-M-H
Purge Observations: Lots of fine sand in bailer (2-3 in) per with depth

DTW Before Sampling: 53.00
Sample Date/Time(s): 1-23-97 / 1500
Sampling Method: Disp. teflon bailer
Sampling Depth(s): Total column
DTW After Sampling: 53.00
Sampling Observations: water cloudy
Chain-of-Custody No(s): samples retained by NYSDEC
Analytical Lab(s):

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
0	16.3	8.4	694	200+
.5	15.3	6.4	663	200+
3	15.8	6.6	643	200+
4.5	16.0	6.0	615	200+
6	15.2	6.6	609	200+

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	14.5	6.7	605	200+
End	14.3	6.6	621	200+

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC		<4°	

Comments:

Air Temp: 40
Weather Conditions: Clear

Crew Chief Signature: [signature] Date: 1-23-97

WELL SAMPLING LOG

Date: 1-23-97
Crew: JT / PY
Job No: 650-201
Project: ATLAS GRAPHICS IIWA
Project Site: New Castle

METERS USED
Temp: DEC - 560
pH: 303
Cond: DEC 560
Turb: NYSDEC
S/N 19834

Well ID No: NL MW-20 (B-60226)
Well Condition: fair
Well Depth/Diameter: ~122 ft / 4 in
Well Casing Type: PVC
Screened Interval:
Casing Ht/Lock No:
Reference Pt: TOC
Depth to Water (DTW): 52.74
Water Column; Ht/Vol: 70 ft / 52.4
Purge Est: 157 gal
Purge Date/Time(s): 1-23-97 / .000
Purge Method: Grundfos pump
Depth(s): bottom of column
Rates (gpm): ~5 gpm
Purged Volume: 200 gal.
DTW After Purging: 52.75

Yield Rate: L-M-H

Purge Observations: Purge in 40 gal. increments and shut off pump to dispose of water.

DTW Before Sampling: 52.75
Sample Date/Time(s): 1-23-97 / 1435
Sampling Method: Teflon bailer
Sampling Depth(s): Bottom of column
DTW After Sampling: 53.00
Sampling Observations: water slightly turb
Chain-of-Custody No(s): samples retrieved by NYSDEC
Analytical Lab(s):

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	14.7	7.6	121	25
End	14.9	6.0	129	30

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC		<4°	

PURGE CHEMISTRIES

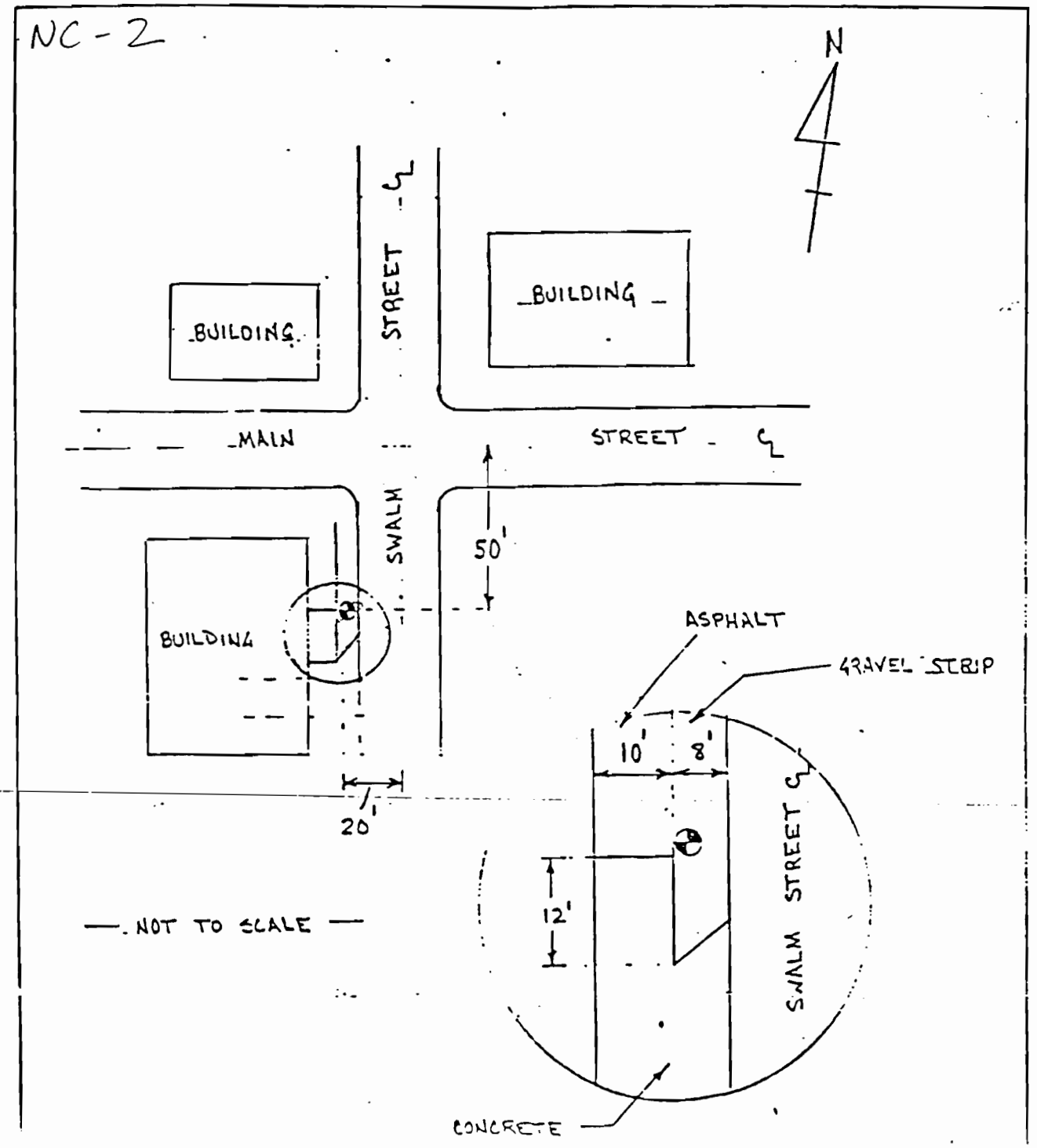
VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
20	14.7	5.7	830	6
40	14.6	5.7	832	3
60	15.0	6.0	846	0.2
80	14.7	6.7	835	0.2
100	14.2	6.6	846	0.2
120	14.6	6.4	857	0.7
Comments:				
140	14.5	6.2	851	0.1
160	15.0	6.2	849	0.1
180	14.2	5.7	845	0.1
200	14.4	5.8	825	0.1

Air Temp: 45°
Weather Conditions: Clear

Crew Chief Signature: [signature] Date: 1-23-97

DEPARTMENT OF HEALTH
Bureau of Public Water Supply
Nassau County, New York

NASSAU COUNTY WELL NO: NC-2s
LOCATION: New Cassel
N.Y. STATE NO: 10319
INSTALLED: 10/3/84
TOTAL DEPTH: 57'
MEAS. POINT: Top of Casing
DIAMETER: 2" Schedule 80 PVC
ELEV. MEAS. PT: 121.35
APPROX. DEPTH TO WATER: 42'
DRILLER: Moretrench American Corp.



DEPARTMENT OF HEALTH
Bureau of Public Water Supply
Nassau County, New York

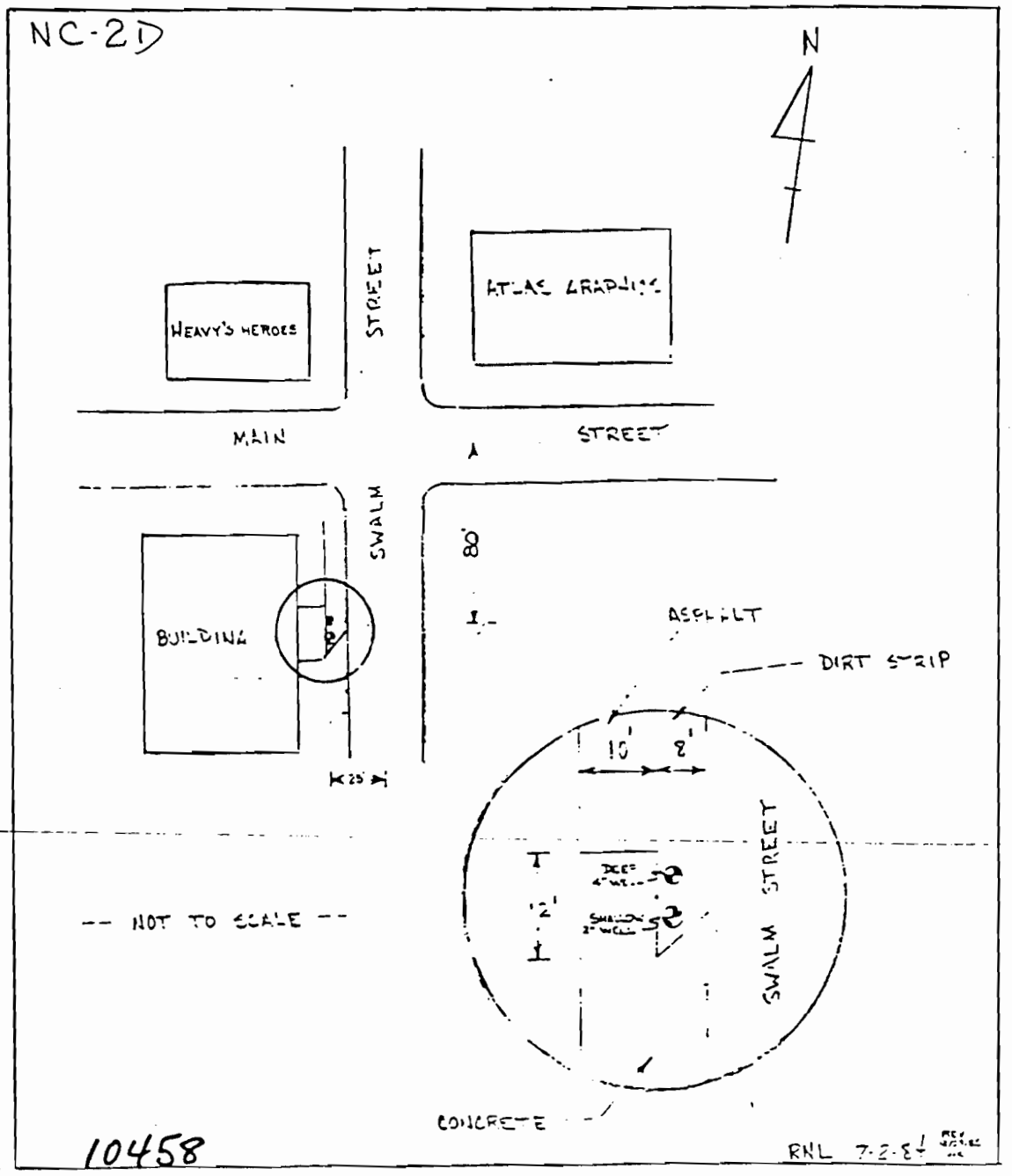
NASSAU COUNTY WELL No: NC-2d — LOCATION: New Cassel

N.Y. STATE No: 10458 — INSTALLED: 11/18/85

TOTAL DEPTH: 120' — MEAS. POINT: Top of Casing

DIAMETER: 4" Schedule 80 PVC — ELEV. MEAS. PT: 121.09

APPROX. DEPTH TO WATER: 48 — DRILLER: Moretrench American Corp.



DEPARTMENT OF HEALTH
Bureau of Public Water Supply
Nassau County, New York

NASSAU COUNTY WELL No: NC-17 LOCATION: New Cassel

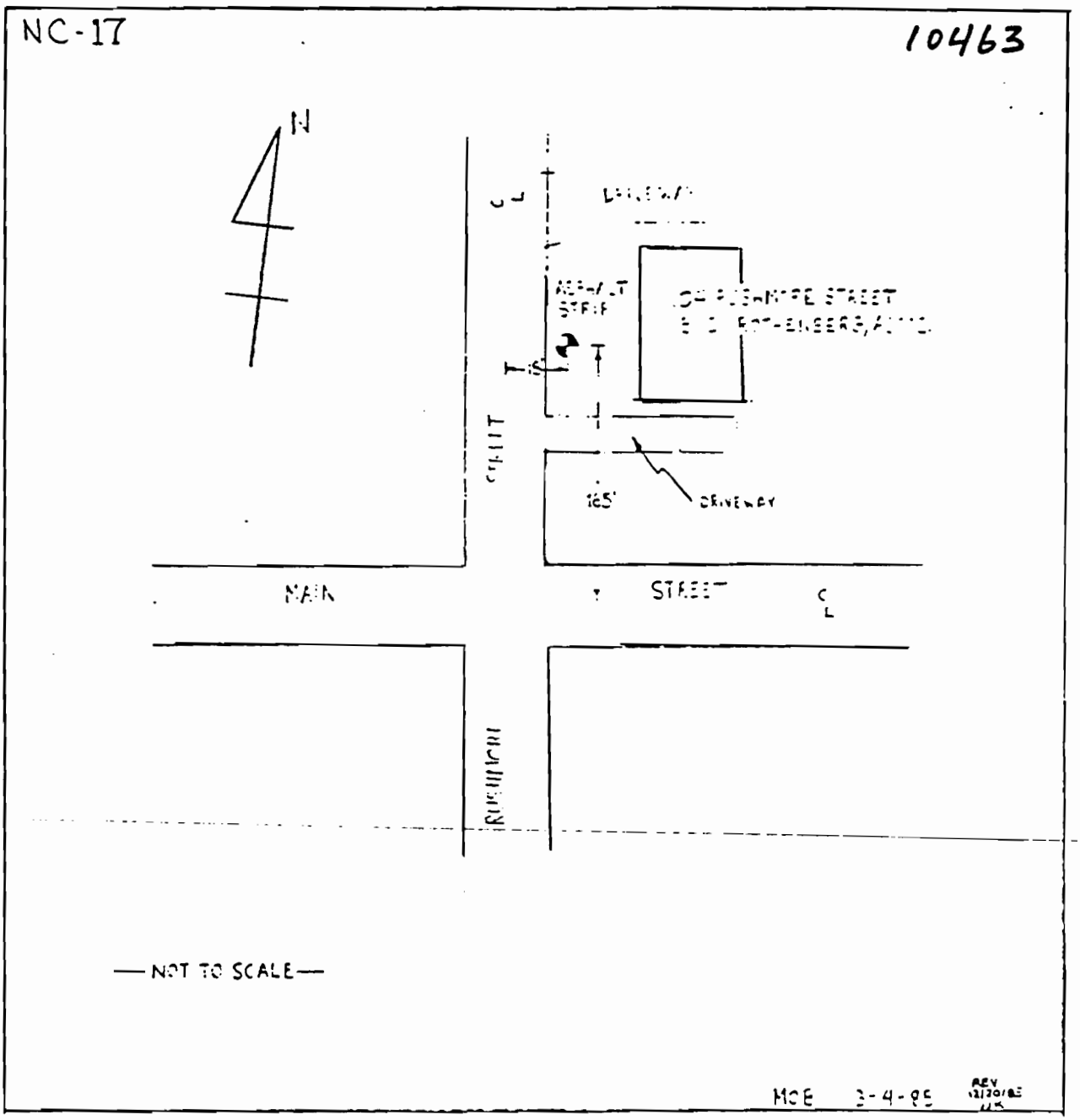
N.Y. STATE No: 10463 INSTALLED: 8/30/85

TOTAL DEPTH: 64' MEAS. POINT: Top of Casing

DIAMETER: 2" Schedule 80 PVC ELEV. MEAS. PT: 122.12

APPROX. DEPTH TO WATER: 48 DRILLER: Moretrench American Corp.

NC-17 10463



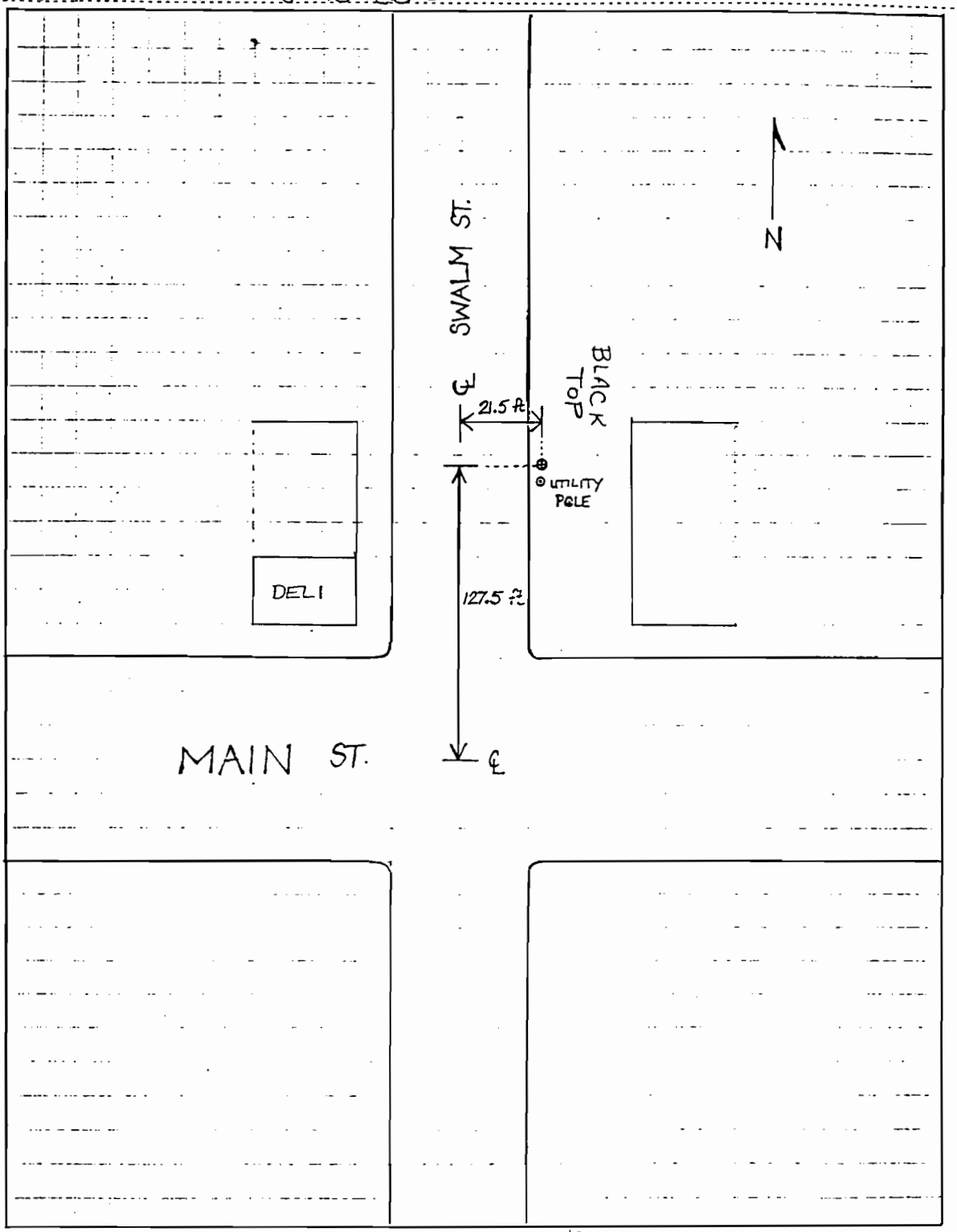
— NOT TO SCALE —

MCE 3-4-95 REV 12/20/95

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

File N-11843

LAT 40° 45' 24" LONG 73° 33' 55"



Sheet No. 3 of 3 Sheets. Prepared by T. Chu Date 1/91 Checked by ..... Date .....

GPO: 1980 OF 320-636

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NASSAU
County

N-11843
Well No.

COMPLETION REPORT – LONG ISLAND WELL

OWNER: U.S. GEOLOGICAL SURVEY

ADDRESS: 5 AERIAL WAY
SYOSSET, NEW YORK 11791

LOCATION OF WELL: 21.5 E/O CL SWALM ST., 127.5 N/O CL MAIN ST.

DEPTH OF WELL BELOW SURFACE	DEPTH TO GROUND WATER FROM SURFACE
60 ft.	APPROX. 46 ft.

CASINGS

DIAMETER	2 in.	in.	in.	in.
LENGTH	50 ft.	ft.	ft.	ft.

SEALING

CASINGS REMOVED

SCREENS

MAKE

OPENINGS .01

DIAMETER	2 in.	SUMP 2 in.	in.	in.
LENGTH	5 ft.	Sump 5 ft.	ft.	ft.

DEPTH TO TOP FROM TOP OF CASING

PUMPING TEST

DATE

TEST OR PERMANENT PUMP?

DURATION OF TEST: days | hours

MAXIMUM DISCHARGE: gallons per min.

STATIC LEVEL PRIOR TO TEST: ft. | in. below top of casing

LEVEL DURING MAXIMUM PUMPING: ft. | in. below top of casing

MAXIMUM DRAWDOWN: ft.

Approximate time of return to normal level after cessation of pumping: hrs. | min.

PUMP INSTALLED

TYPE	MAKE	MODEL NO.
MOTIVE POWER	MAKE	H.P.

CAPACITY: g.p.m. against ft. of discharge head

NUMBER BOWLS OR STAGES: ft. of total head

DROP LINE	SUCTION LINE
DIAMETER: in.	DIAMETER: in.
LENGTH: ft.	LENGTH: ft.

METHOD OF DRILLING: ☐ rotary ☐ cable tool ☒ other AUGER

USE OF WATER

WORK STARTED: 11/29/90

COMPLETED: 11/29/90

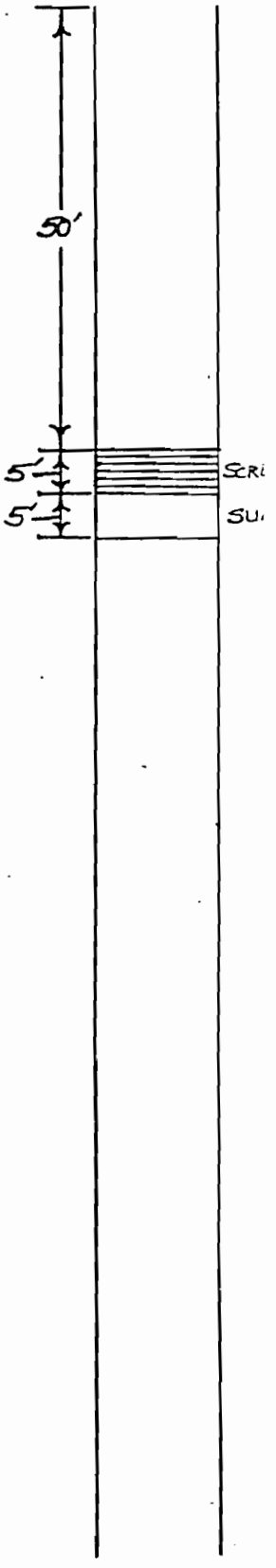
DATE | DRILLER: U.S. GEOLOGICAL SURVEY | LICENSE NO.

*LOG

Ground Surface El. _____ ft. abov

A
V

TOP OF WELL



*NOTE: Show log of well - materials encountered, with depth below ground surface, water bearing beds and water levels in each, casings, screens, pump, additional pumping tests and other matters of interest. Describe repair job.

See Instructions as to Well Drillers' Licenses and Reports. Pages 5 - 7.

ORIGINAL – Environmental Conservation Copy

DEPARTMENT OF HEALTH
Bureau of Public Water Supply
Nassau County, New York

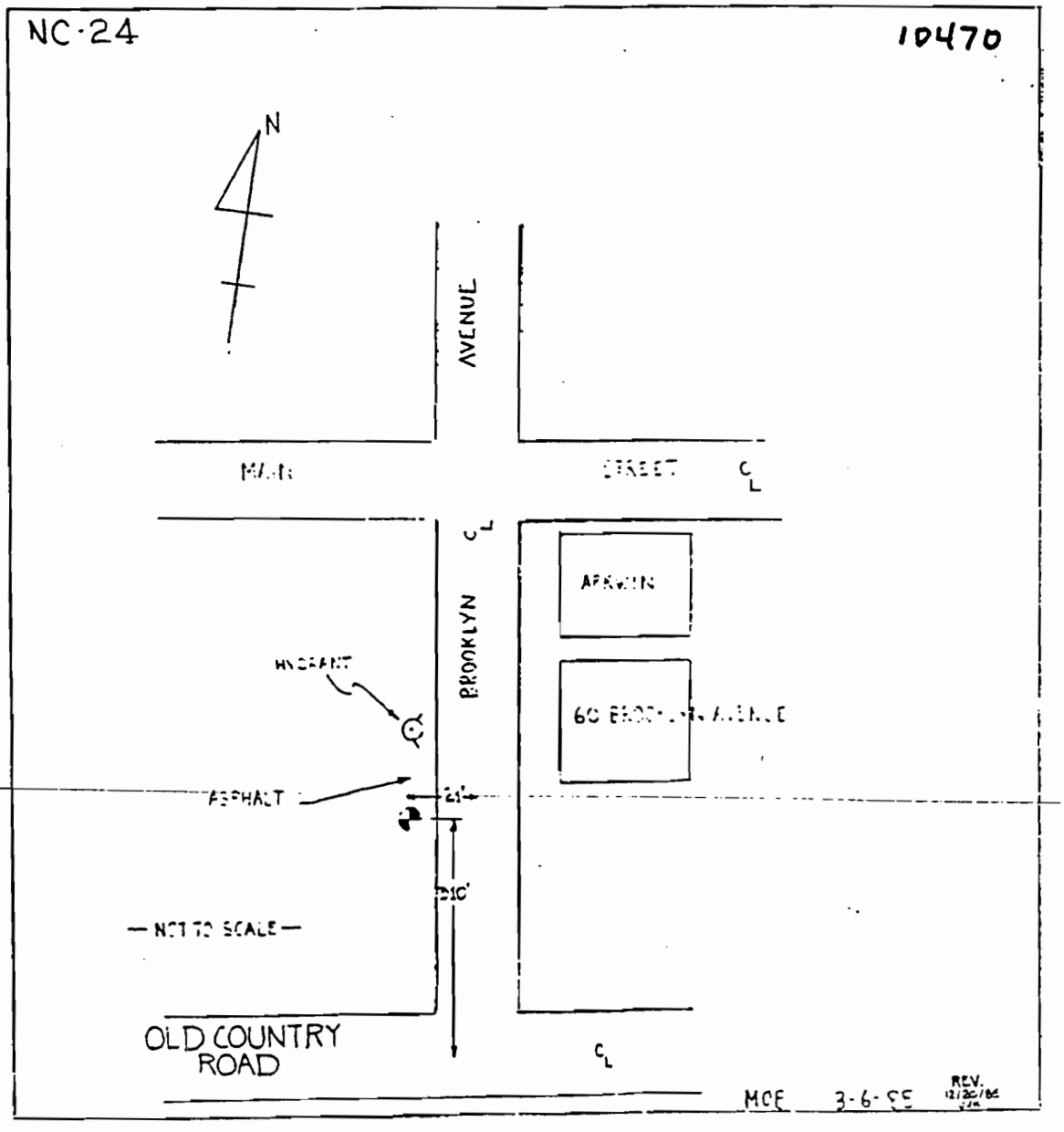
NASSAU COUNTY WELL No: NC-24 LOCATION: New Cassel

N.Y. STATE No: 10470 INSTALLED: 9/03/85

TOTAL DEPTH: 65' MEAS. POINT: Top of Casing

DIAMETER: 2" Schedule 80 PVC ELEV. MEAS. PT: 119.99

APPROX. DEPTH TO WATER: 46 DRILLER: Moretrench American Corp.



3

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO:215315.01 10/17/01

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Matt Schieferstein

SOURCE OF SAMPLE: Atlas Graphics, #00025
COLLECTED BY: Client DATE COL'D:10/10/01 RECEIVED:10/10/01

SAMPLE: Wastewater sample, NC-11843, 1400

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	2
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c-1,3Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	6

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS: Method: EPA 601

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO:215315.02 10/17/01

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Matt Schieferstein

SOURCE OF SAMPLE: Atlas Graphics, #00025
COLLECTED BY: Client DATE COL'D:10/10/01 RECEIVED:10/10/01

SAMPLE: Wastewater sample, NC-2S, 1150

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	24
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	20
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c-1,3Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	4

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS: Method: EPA 601

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO:215315.03 10/17/01

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Matt Schieferstein

SOURCE OF SAMPLE: Atlas Graphics, #00025
COLLECTED BY: Client DATE COL'D:10/10/01 RECEIVED:10/10/01

SAMPLE: Wastewater sample, PMW-4U, 1330

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	3
1,1 Dichloroethane	ug/L	1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	13
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c-1,3Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	2

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS: Method: EPA 601

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO:215315.04 10/17/01

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Matt Schieferstein

SOURCE OF SAMPLE: Atlas Graphics, #00025
COLLECTED BY: Client DATE COL'D:10/10/01 RECEIVED:10/10/01

SAMPLE: Wastewater sample, PMW-4M, 1220

ANALYTICAL PARAMETERS			ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1	Chlorobenzene	ug/L	<1
Bromomethane	ug/L	<1	1,3 Dichlorobenzene	ug/L	<1
Dichlordifluomethane	ug/L	<1	1,2 Dichlorobenzene	ug/L	<1
Vinyl Chloride	ug/L	<1	1,4 Dichlorobenzene	ug/L	<1
Chloroethane	ug/L	<1			
Methylene Chloride	ug/L	<1			
Trichlorofluomethane	ug/L	<1			
1,1 Dichloroethene	ug/L	4			
1,1 Dichloroethane	ug/L	1			
1,2 Dichloroethene	ug/L	<1			
Chloroform	ug/L	<1			
1,2 Dichloroethane	ug/L	<1			
111 Trichloroethane	ug/L	20			
Carbon Tetrachloride	ug/L	<1			
Bromodichloromethane	ug/L	<1			
1,2 Dichloropropane	ug/L	<1			
t-1,3Dichloropropene	ug/L	<1			
Trichloroethylene	ug/L	<1			
Chlorodibromomethane	ug/L	<1			
112 Trichloroethane	ug/L	<1			
c-1,3Dichloropropene	ug/L	<1			
2chloroethvinylether	ug/L	<1			
Bromoform	ug/L	<1			
1122Tetrachloroethan	ug/L	<1			
Tetrachloroethene	ug/L	5			

cc:

REMARKS: Method: EPA 601

DIRECTOR

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

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Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO:215315.05 10/17/01

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Matt Schieferstein

SOURCE OF SAMPLE: Atlas Graphics, #00025
COLLECTED BY: Client DATE COL'D:10/10/01 RECEIVED:10/10/01

SAMPLE: Wastewater sample, PMW-4L, 1300

ANALYTICAL PARAMETERS			ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1	Chlorobenzene	ug/L	<1
Bromomethane	ug/L	<1	1,3 Dichlorobenzene	ug/L	<1
Dichlordifluomethane	ug/L	<1	1,2 Dichlorobenzene	ug/L	<1
Vinyl Chloride	ug/L	<1	1,4 Dichlorobenzene	ug/L	<1
Chloroethane	ug/L	<1			
Methylene Chloride	ug/L	<1			
Trichlorofluomethane	ug/L	<1			
1,1 Dichloroethene	ug/L	<1			
1,1 Dichloroethane	ug/L	<1			
1,2 Dichloroethene	ug/L	<1			
Chloroform	ug/L	<1			
1,2 Dichloroethane	ug/L	<1			
111 Trichloroethane	ug/L	<1			
Carbon Tetrachloride	ug/L	<1			
Bromodichloromethane	ug/L	<1			
1,2 Dichloropropane	ug/L	<1			
t-1,3Dichloropropene	ug/L	<1			
Trichloroethylene	ug/L	4			
Chlorodibromomethane	ug/L	<1			
112 Trichloroethane	ug/L	<1			
c-1,3Dichloropropene	ug/L	<1			
2chloroethvinylether	ug/L	<1			
Bromoform	ug/L	<1			
1122Tetrachloroethan	ug/L	<1			
Tetrachloroethene	ug/L	9			

cc:

REMARKS: Method: EPA 601

DIRECTOR

ECO TEST LABORATORIES, INC. • ENVIRONMENTAL TESTING

377 Sheffield Avenue, North Babylon, New York 11703
(631) 422-5777 • FAX (631) 422-5770

CHAIN OF CUSTODY RECORD

Client:
Address:
Phone: FAX:
Person receiving report:
Sampled by:
Source:
Job No.:

MATRIX (Soil, Water, etc.)	COLLECTED DATE	COLLECTED TIME	SAMPLE IDENTIFICATION	TOTAL NUMBER OF CONTAINERS	TYPE & NUMBER OF CONTAINERS	REMARKS–TESTS REQUIRED, SPECIAL TURNAROUND, SPECIAL Q.C. etc

Relinquished by: *(Signature)* / Representing:	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: *(Signature)* / Representing:	Relinquished by: *(Signature)* / Representing:	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: *(Signature)* / Representing:
Relinquished by: *(Signature)* / Representing:	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: *(Signature)* / Representing:	Relinquished by: *(Signature)* / Representing:	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: *(Signature)* / Representing:

4

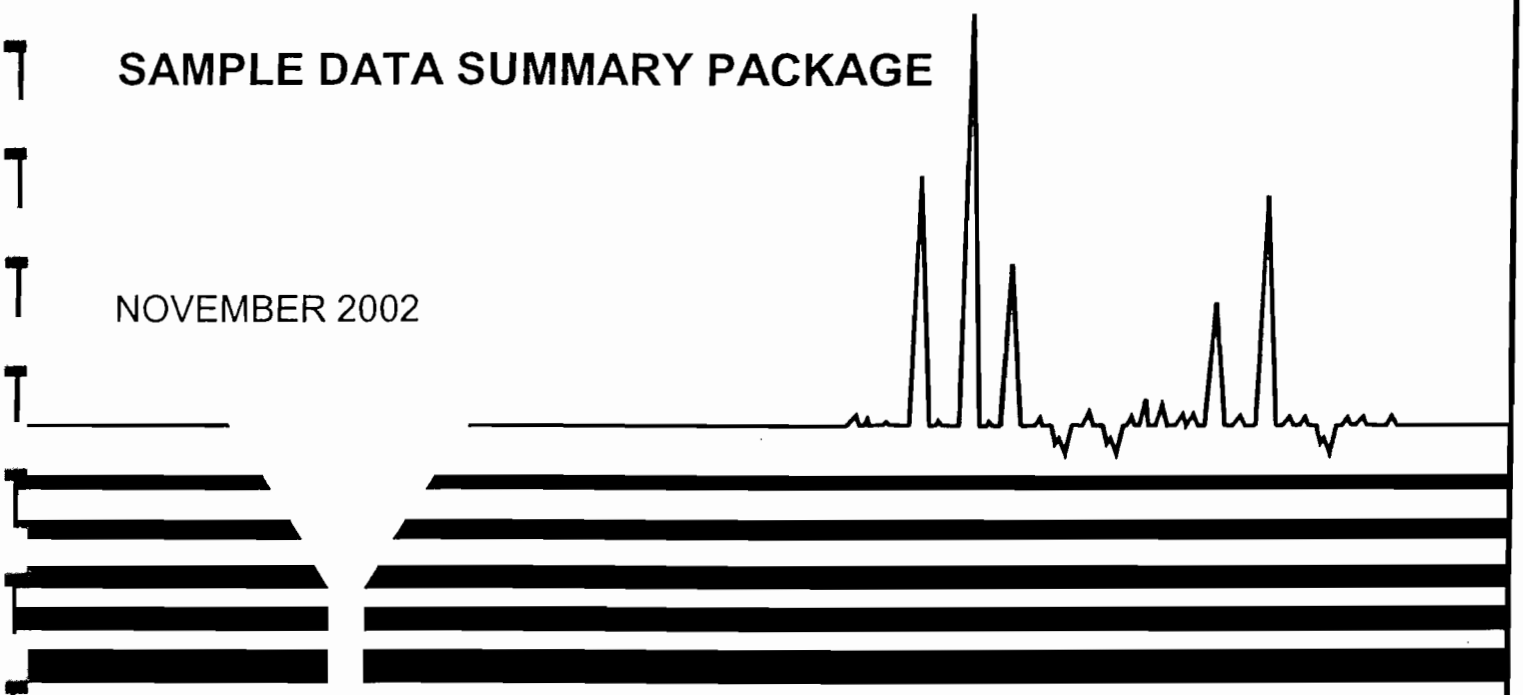
Analytical Data Package For

ANSON ENVIRONMENTAL
ATLAS GRAPHICS
SDG NO: ANSON013

Water Samples
Received: 11/20/02

SAMPLE DATA SUMMARY PACKAGE

NOVEMBER 2002



H2M LABS, INC.
Environmental Testing Laboratories
575 Broad Hollow Road, Melville, N.Y. 11747

H2M LABS, INC.

SAMPLE DATA SUMMARY PACKAGE

TABLE OF CONTENTS

ANSON ENVIRONMENTAL, LTD.
PROJECT NO.: 00025
PROJECT NAME: ATLAS GRAPHICS
SAMPLES RECEIVED: 11/20/02
SDG NO.: ANSON013

H2M LABS, INC.

1. NYS DEC SUMMARY FORMS

H2M LABS, INC.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY
ANSON ENVIRONMENTAL, LTD.
ATLAS GRAPHICS
PROJET NO. 00025
SAMPLES RECEIVED: 11/20/02
SDG #: ANSON013

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS	*BNA GC/MS	*GC VOA	PCB	*METALS	OTHER TS
NC2D11	0211606-001	X					
P3	0211606-002	X					
TRIP BLANK	0211606-003	X					

* Check Appropriate Boxes
* CLP/~~Non-CLP~~ (Please indicate year of protocol) ASP B 10/95
* ~~TCL/TAL~~, HCL, TS

ANSON013 S 3

VOLATILE SAMPLE ANALYSIS SUMMARY						
Sample ID	**DF**	**Matrix**	**Date Collected**	**Date Received**	**Level**	**Date Analyzed**
NC2D11	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3MS	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3MSD	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
TRIP BLANK	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02

2. CHAIN OF CUSTODY DOCUMENTATION

H2M LABS, INC.

4678

EXTERNAL CHAIN OF CUSTOD.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

CLIENT: ANSON ENVIRONMENTAL LTD. **H2M SDG NO:** 013

PROJECT NAME/NUMBER: ATLAS GRAPHICS - # 00025

SAMPLERS: (signature)/Client: Dean Anson x JT.

DELIVERABLES: ASP CATEGORY B 8260

TURNAROUND TIME: NORMAL

NOTES: ANALYZE FOR VOA'S USING 8260
P3 will be analyzed w/o MS/MSD

Project Contact: DEAN ANSON
Phone Number: 631-351-3555

	DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: 8260/40 mL GLASS	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
3	11/19		WATER	TRIP BLANK	1	1						0211606-003	
1	11/19	1300	WATER	NC2D11	2	2						0211606-001	USE ONE FOR MS DUPLICATE?
	11/19	1330	WATER	P3 MATRIX SPIKE	1	1							
2	11/19	~~1370~~ JT. 30	WATER	P3	2	2						0211606-002	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	11/20/02	3:00	John Tozzino	11/20/02	1500
John Tozzino	11/20/02	1535	[signature]	11/20/02	15:35

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

ANSON013-S 6 WHITE COPY - ORIGINAL 11/19/02 YELLOW COPY - CLIENT PINK COPY - LABORATORY

ANSON013

H2M LABS, INC.

Sample Receipt Checklist

Client Name **ANSON** Date and Time Receive **11/20/2002 3:35:00 PM**

Work Order Numbe **0211606** Received by SD

Checklist completed b _____ 11/21/02 Reviewed by _____

Signature Date Initials Date

Matrix Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
ıainer/Temp Blank temperature in compliance?	Yes ☑	No ☐	26°C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

ANSON013 S 7

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: ANSON DELIVERABLES: B5-70 TURN AROUND TIME: 28 Days

SDG #: ANSON013 CASE #: _____ MATRIX: GW pH CHECK Y or (N)

REMARKS: _____

RECEIVED BY: SSH SIGNATURE: [signature] DATE: 11/20/02 TIME: 15:35

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
NC2D11	0211606-001A	11/19/02	D	2	ASPB5_8260_W
P3 MS/MSD	002A			3	
TRIP BLANK	003A			1	

SSH 11/21/02

VOLATILE

ANSON013 S 8

H2M LABS, INC.

CLIENT: ANSON

: ANSON013

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
21/02	17:00	SIGN	SIGN	D	Analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			

VOLATILE

3. SDG NARRATIVES

H2M LABS, INC.

SDG NARRATIVE FOR VOLATILES ANALYSES
SAMPLE RECEIVED: 11/20/01
SDG #: ANSON013

For Samples:

NC2D11
P3 MS/MSD
TRIP BLANK

The above samples were analyzed for the TCL volatile organic analytes by EPA method 8260B according to the requirements of the NYSDEC ASP, Rev. 10/95.

In the lab fortified blank (LFB), the recovery for two ketones were above the QC limits. The analytes were not found in the samples, and no data were affected.

All other QC data and the calibrations met the requirements of the protocol. The following should be noted:

- Sample P3 was analyzed as the matrix spike/matrix spike duplicate.
- %RSD for 1,1-dichloroethene in the initial calibration exceeded 20.5% D but met the limit of 40%.

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

Date Reported: December 12, 2002

****
* *
* *
****
Ursula Middel
Technical Manager

ANSON013 SDG

H2M LABS, INC.

4. SAMPLE REPORTS
4.1 VOLATILES

QUALIFIERS FOR REPORTING ORGANICS DATA

Value - If the result is a value greater than or equal to the quantification limit, report the value.

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(300\ U)}{D} \times df \text{ where } D = \frac{100\%moisture}{100}$$

and df - dilution factor

For example, at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(300\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For semivolatile soil samples, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Similarly, pesticide samples subjected to GPC are concentrated to 5.0 mL. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified quantification limit but greater than zero. (e.g.: If limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.) The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported of Form I with a "P".

C - This flag applies to pesticide results when the identification has been confirmed by GC/MS.. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a Laboratory defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

E - This flag identified compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, except as noted in Exhibit D, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration ranges in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g. a diluted analysis is not required for total xylenes unless the concentration of the peak representing the single isomer exceed 200 ug/L or the peak representing the two coeluting isomers on that GC column exceed 400 ug/L. Similarly, if the two 1,2-Dichloroethene isomers coelute, a diluted analysis is not required unless the concentration exceed 400 ug/L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG narrative. Begin by using "X". If more than one flag is required use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, used the "X" flag to combine several flags as needed. For instance, the "X" flag might combine "A", "B", and "D" flags for some samples. The laboratory defined flags limited to the letters "X", "Y" and "Z".

The combination of flags "BU' or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are detected in the sample.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC2D11

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	41	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC2D11

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	58	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	0.6	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	150	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

NC2D11

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

P3

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ɔ Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

TRIP BLANK

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

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5. SURROGATE SPIKE ANALYSIS RESULTS

5.1 VOLATILES

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

	EPA SAMPLE NO.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	Other	TOT OUT
01	VBLK112502	87	98	97		0
02	LFB112502	86	97	97		0
03	MSB112502	88	97	95		0
04	P3	89	96	96		0
05	NC2D11	88	96	97		0
06	TRIP BLANK	87	95	96		0
07	P3MS	89	96	94		0
08	P3MSD	88	96	94		0

			QC Limits
SMC 1	DCE	= 1,2-Dichloroethane-d4	(76-114)
SMC 2	TOL	= Toluene-d8	(88-110)
SMC 3	BFB	= 4-Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

6.1 VOLATILES

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix Spike - EPA Sample No.: P3

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	40	79	61-145
Trichloroethene	50	7	68	121*	71-120
Benzene	50	0	51	101	76-127
Toluene	50	0	58	115	76-125
Chlorobenzene	50	0	62	124	75-130

COMPOUND	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	32	64	21*	14	61-145
Trichloroethene	50	63	111	9	14	71-120
Benzene	50	46	91	10	11	76-127
Toluene	50	53	106	8	13	76-125
Chlorobenzene	50	57	114	8	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS: _____

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID LFB112502 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
Chloromethane	50	0	41	83	70-114
Bromomethane	50	0	54	109	50-136
Vinyl chloride	50	0	48	96	66-117
Chloroethane	50	0	50	99	71-116
Methylene chloride	50	0	40	81	80-112
Acetone	50	0	56	111	71-125
1,1-Dichloroethene	50	0	40	81	67-120
Carbon disulfide	50	0	39	79	61-126
1,1-Dichloroethane	50	0	43	86	77-114
1,2-Dichloroethene (total)	100	0	96	96	78-128
Chloroform	50	0	51	102	75-119
1,2-Dichloroethane	50	0	50	100	76-120
2-Butanone	50	0	48	96	74-121
1,1,1-Trichloroethane	50	0	48	96	66-126
Carbon tetrachloride	50	0	50	101	64-126
Bromodichloromethane	50	0	51	101	78-118
1,2-Dichloropropane	50	0	51	101	81-115
cis-1,3-Dichloropropene	50	0	51	102	79-116
Trichloroethene	50	0	49	99	72-121
Dibromochloromethane	50	0	52	105	75-125
1,1,2-Trichloroethane	50	0	53	107	82-116
Benzene	50	0	49	98	77-116
trans-1,3-Dichloropropene	50	0	53	107	77-120
Bromoform	50	0	55	109	75-121
4-Methyl-2-pentanone	50	0	61	122*	79-121
2-Hexanone	50	0	64	128*	76-119
Tetrachloroethene	50	0	51	102	59-133
1,1,2,2-Tetrachloroethane	50	0	56	111	77-120
Toluene	50	0	50	100	70-125
Chlorobenzene	50	0	51	102	72-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 8 outside limits

53 DF 12/07/12

COMMENTS: _____

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID LFB112502 Level: (low/med) LOW

Ethylbenzene	50	0	50	100	68-128
Styrene	50	0	51	101	72-124
Xylene (total)	150	0	140	96	78-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of ~~0~~ 33 DF 12/19/02 outside limits

COMMENTS: _____

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3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID MSB112502 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	38	76	61-145
Trichloroethene	50	0	59	117	71-120
Benzene	50	0	50	99	76-127
Toluene	50	0	56	112	76-125
Chlorobenzene	50	0	62	123	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 0 outside limits

COMMENTS: _____

7. BLANK SUMMARY DATA AND RESULTS

7.1 VOLATILES

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No. _____ SDG No.: ANSON013

Lab File ID: F11264.D Lab Sample ID: VBLK112502

Date Analyzed: 11/25/02 Time Analyzed: 23:48

GC Column: HP-VOC ID: .2 (mm) Heated Purge: (Y/N) N

Instrument ID: HP5973-1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LFB112502	LFB112502	F11265.D	0:13
02	MSB112502	MSB112502	F11266.D	2:11
03	P3	0211606-002A	F11267.D	2:37
04	NC2D11	0211606-001A	F11268.D	3:02
05	TRIP BLANK	0211606-003A	F11269.D	3:28
06	P3MS	0211606-002A	F11270.D	3:53
07	P3MSD	0211606-002A	F11271.D	4:18

COMMENTS: _____

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

VBLK112502

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ɔ Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

H2M LABS, INC.

8. INTERNAL STANDARD AREA DATA
8.1 VOLATILES

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No. _____ SDG No.: ANSON013

Lab File ID (Standard): F11258.D Date Analyzed: 11/25/02

EPA Sample No. (VSTD050##): VSTD050 Time Analyzed: 20:28

Instrument ID: HP5973-1 Heated Purge: (Y/N) N

GC Column: HP-VOC ID: .2 (mm)

		IS1 AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
	12 HOUR STD	63831	4.81	422998	5.77	390859	8.53
	UPPER LIMIT	127662	5.31	845996	6.27	781718	9.03
	LOWER LIMIT	31916	4.31	211499	5.27	195430	8.03
	EPA SAMPLE						
01	VBLK112502	62635	4.81	397536	5.77	360309	8.53
02	LFB112502	60577	4.81	394123	5.77	359694	8.53
03	MSB112502	56515	4.81	362168	5.77	332558	8.52
04	P3	57174	4.81	368291	5.77	331527	8.53
05	NC2D11	57221	4.81	360859	5.77	325840	8.53
06	TRIP BLANK	55334	4.81	348773	5.77	334963	8.53
07	P3MS	55131	4.81	346419	5.77	320100	8.53
08	P3MSD	55122	4.81	354491	5.77	319140	8.53

IS1 = Bromochloromethane
IS2 DFB = 1,4-Difluorobenzene
IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

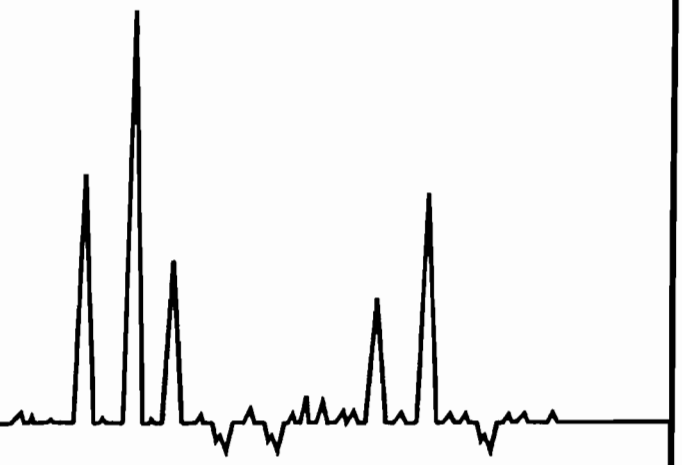
Analytical Data Package For

ANSON ENVIRONMENTAL
ATLAS GRAPHICS
SDG NO: ANSON013

Water Samples
Received: 11/20/02

VOLATILES DATA PACKAGE

NOVEMBER 2002



H2M LABS, INC.
Environmental Testing Laboratories
575 Broad Hollow Road, Melville, N.Y. 11747

H2M LABS, INC.

ANALYTICAL DATA PACKAGE

TABLE OF CONTENTS

ANSON ENVIRONMENTAL, LTD.
PROJECT NO.: 00025
PROJECT NAME: ATLAS GRAPHICS
SAMPLES RECEIVED: 11/20/02
SDG NO.: ANSON013

DATA PACKAGE FOR CLIENT INFORMATION
PURPOSES ONLY

I. NYS DEC SUMMARY FORMS

H2M LABS, INC.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY
ANSON ENVIRONMENTAL, LTD.
ATLAS GRAPHICS
PROJET NO. 00025
SAMPLES RECEIVED: 11/20/02
SDG #: ANSON013

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS	*BNA GC/MS	*GC VOA	PCB	*METALS	OTHER TS
NC2D11	0211606-001	X					
P3	0211606-002	X					
TRIP BLANK	0211606-003	X					

* Check Appropriate Boxes
* CLP, ~~Non-CLP~~ (Please indicate year of protocol) ASP B 10/95
* TCL/TAL, HCL, TS

ANSON013 A 3

VOLATILE SAMPLE ANALYSIS SUMMARY						
Sample ID	**DF**	**Matrix**	**Date Collected**	**Date Received**	**Level**	**Date Analyzed**
NC2D11	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3MS	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
P3MSD	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02
TRIP BLANK	1	Water	19-Nov-02	20-Nov-02	LOW	26-Nov-02

II. SDG NARRATIVES

H2M LABS, INC.

SDG NARRATIVE FOR VOLATILES ANALYSES
SAMPLE RECEIVED: 11/20/01
SDG #: ANSON013

For Samples:

NC2D11
P3 MS/MSD
TRIP BLANK

The above samples were analyzed for the TCL volatile organic analytes by EPA method 8260B according to the requirements of the NYSDEC ASP, Rev. 10/95.

In the lab fortified blank (LFB), the recovery for two ketones were above the QC limits. The analytes were not found in the samples, and no data were affected.

All other QC data and the calibrations met the requirements of the protocol. The following should be noted:

- Sample P3 was analyzed as the matrix spike/matrix spike duplicate.
- %RSD for 1,1-dichloroethene in the initial calibration exceeded 20.5% D but met the limit of 40%.

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

Date Reported: December 12, 2002

****
* *
* *
****

Ursula Middel
Technical Manager

12/13/02

ANSON013 AG

III. CHAIN OF CUSTODY DOCUMENTATION

H2M LABS, INC.

4678

EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

CLIENT: ANSON ENVIRONMENTAL LTD. **H2M SDG NO:** 013

PROJECT NAME/NUMBER: ATLAS GRAPHICS - # 00025

SAMPLERS: (signature)/Client: Dean Anson + jt.

DELIVERABLES: ASP CATEGORY B 8260

TURNAROUND TIME: NORMAL

NOTES: ANALYZE FOR VOA'S USING 8260
P3 will be analyzed w/ MS/MSD no spike

Project Contact: DEAN ANSON
Phone Number: 631-351-3555

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: 8260/40 mL GLASS	ORGANIC: VOA	ORGANIC: BNA	ORGANIC: Pest/PCB	INORG.: Metal	INORG.: CN	LAB I.D. NO.	REMARKS:
11/19		WATER	TRIP BLANK	1	1						0211606-003	
11/19	1300	WATER	NC2D11	2	2						0211606-001	USE ONE FOR MS DUPLICATE?
11/19	1330	WATER	P3 MATRIX SPIKE	1	1							
11/19	1330	WATER	P3	2	2						0211606-002	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	11/20/02	3:00	John Tozzi	11/20/02	1500
John Tozzi	11/20/02	1535	[signature]	11/20/02	15:35

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain: _____

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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WHITE COPY - ORIGINAL 11/19/02 YELLOW COPY - CLIENT PINK COPY - LABORATORY

C

ANSON013

H2M LABS, INC.

Sample Receipt Checklist

Client Name **ANSON** Date and Time Receive **11/20/2002 3:35:00 PM**

Work Order Numbe **0211606** Received by SD

Checklist completed b _____ (Signature) 11/21/02 (Date) Reviewed by _____ (Initials) _____ (Date)

Matrix Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐ <6°C	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

ANSON013 A 9

H2M LABS, INC.

INTERNAL CHAIN OF CUSTODY

CLIENT: ANSON DELIVERABLES: B5-70 TURN AROUND TIME: 28 Days

SDG #: ANSON013 CASE #: _____ MATRIX: GW pH CHECK Y or (N)

REMARKS: _____

RECEIVED BY: SH SIGNATURE: [signature] DATE: 11/20/02 TIME: 15:35

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
NC2D11	0211606-001A	11/19/02	D	2	ASPB5-8260-W
P3 MS/MSD	002A	↓	↓	3	↓
TRIP BLANK	003A	↓	↓	1	↓

SH 11/21/02

VOLATILE

P 0034

ANSON013 A 10

H2M LABS, INC.

CLIENT: Anson

#: ANSON013

INTERNAL CHAIN OF CUSTODY

DATE	TIME	SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	BOTTLE TYPE	PURPOSE OF CHANGE OF CUSTODY	INIT
7/31/02	17:00	SIGN [signature]	SIGN [signature]	D	Analysis	
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
		SIGN	SIGN			
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VOLATILE

H2M LABS, INC.

IV. ANALYTICAL DATA PACKAGE

A. VOLATILES

H2M LABS, INC.

ANSON013

VOLATILE ORGANICS

TABLE OF CONTENTS

H2M LABS, INC.

I. QC SUMMARY FOR VOLATILE ORGANICS

A. SYSTEM MONITORING COMPOUND RECOVERY FORM
B. MS/MSD FORM
C. MSB FORM
D. METHOD BLANK FORM
E. GC/MS TUNING FORM
F. INTERNAL STANDARD AREA AND RT SUMMARY
G. INSTRUMENT DETECTION LIMITS

H2M LABS, INC.

QUALIFIERS FOR REPORTING ORGANICS DATA

Value - If the result is a value greater than or equal to the quantification limit, report the value.

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(300\ U)}{D} \times df \text{ where } D = \frac{100\% moisture}{100}$$

and df - dilution factor

For example, at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(300\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For semivolatile soil samples, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Similarly, pesticide samples subjected to GPC are concentrated to 5.0 mL. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified quantification limit but greater than zero. (e.g.: If limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.) The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported of Form I with a "P".

C - This flag applies to pesticide results when the identification has been confirmed by GC/MS.. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a Laboratory defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

E - This flag identified compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, except as noted in Exhibit D, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration ranges in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g. a diluted analysis is not required for total xylenes unless the concentration of the peak representing the single isomer exceed 200 ug/L or the peak representing the two coeluting isomers on that GC column exceed 400 ug/L. Similarly, if the two 1,2-Dichloroethene isomers coelute, a diluted analysis is not required unless the concentration exceed 400 ug/L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - This flag indicates suspected column bleed.

Y - This flag denotes concentration of tentatively identified compounds (TICs) to be biased low due to matrix interference with internal standard.

Z - Other specific flags may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG narrative. Begin by using "X". If more than one flag is required use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, used the "X" flag to combine several flags as needed. For instance, the "X" flag might combine "A", "B", and "D" flags for some samples. The laboratory defined flags limited to the letters "X", "Y" and "Z".

The combination of flags "BU' or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are detected in the sample.

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

b Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

	EPA SAMPLE NO.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	Other	TOT OUT
01	VBLK112502	87	98	97		0
02	LFB112502	86	97	97		0
03	MSB112502	88	97	95		0
04	P3	89	96	96		0
05	NC2D11	88	96	97		0
06	TRIP BLANK	87	95	96		0
07	P3MS	89	96	94		0
08	P3MSD	88	96	94		0

			QC Limits
SMC 1	DCE	= 1,2-Dichloroethane-d4	(76-114)
SMC 2	TOL	= Toluene-d8	(88-110)
SMC 3	BFB	= 4-Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix Spike - EPA Sample No.: P3

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	40	79	61-145
Trichloroethene	50	7	68	121*	71-120
Benzene	50	0	51	101	76-127
Toluene	50	0	58	115	76-125
Chlorobenzene	50	0	62	124	75-130

COMPOUND	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	32	64	21*	14	61-145
Trichloroethene	50	63	111	9	14	71-120
Benzene	50	46	91	10	11	76-127
Toluene	50	53	106	8	13	76-125
Chlorobenzene	50	57	114	8	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS: _____

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID LFB112502 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
Chloromethane	50	0	41	83	70-114
Bromomethane	50	0	54	109	50-136
Vinyl chloride	50	0	48	96	66-117
Chloroethane	50	0	50	99	71-116
Methylene chloride	50	0	40	81	80-112
Acetone	50	0	56	111	71-125
1,1-Dichloroethene	50	0	40	81	67-120
Carbon disulfide	50	0	39	79	61-126
1,1-Dichloroethane	50	0	43	86	77-114
1,2-Dichloroethene (total)	100	0	96	96	78-128
Chloroform	50	0	51	102	75-119
1,2-Dichloroethane	50	0	50	100	76-120
2-Butanone	50	0	48	96	74-121
1,1,1-Trichloroethane	50	0	48	96	66-126
Carbon tetrachloride	50	0	50	101	64-126
Bromodichloromethane	50	0	51	101	78-118
1,2-Dichloropropane	50	0	51	101	81-115
cis-1,3-Dichloropropene	50	0	51	102	79-116
Trichloroethene	50	0	49	99	72-121
Dibromochloromethane	50	0	52	105	75-125
1,1,2-Trichloroethane	50	0	53	107	82-116
Benzene	50	0	49	98	77-116
trans-1,3-Dichloropropene	50	0	53	107	77-120
Bromoform	50	0	55	109	75-121
4-Methyl-2-pentanone	50	0	61	122*	79-121
2-Hexanone	50	0	64	128*	76-119
Tetrachloroethene	50	0	51	102	59-133
1,1,2,2-Tetrachloroethane	50	0	56	111	77-120
Toluene	50	0	50	100	70-125
Chlorobenzene	50	0	51	102	72-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 33 DF 12/09/02 8 outside limits

COMMENTS: _____

FORM III SW8260B

ANSON013 V 7

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID LFB112502 Level: (low/med) LOW

Ethylbenzene	50	0	50	100	68-128
Styrene	50	0	51	101	72-124
Xylene (total)	150	0	140	96	78-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 33 DF 12/19/02 outside limits

COMMENTS: _____

FORM III SW8260B

ANSON013 V 8

3A

SYSTEM MONITORING SPIKE RECOVERY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Sample ID MSB112502 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	SPIKE CONCENTRATION (µg/L)	SPIKE % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	38	76	61-145
Trichloroethene	50	0	59	117	71-120
Benzene	50	0	50	99	76-127
Toluene	50	0	56	112	76-125
Chlorobenzene	50	0	62	123	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

12/12/02

Spike Recovery: 0 out of ~~0~~ 5 outside limits

COMMENTS: _____

FORM III SW8260B

ANSON013 V 9

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No. _____ SDG No.: ANSON013

Lab File ID: F11264.D Lab Sample ID: VBLK112502

Date Analyzed: 11/25/02 Time Analyzed: 23:48

GC Column: HP-VOC ID: .2 (mm) Heated Purge: (Y/N) N

Instrument ID: HP5973-1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LFB112502	LFB112502	F11265.D	0:13
02	MSB112502	MSB112502	F11266.D	2:11
03	P3	0211606-002A	F11267.D	2:37
04	NC2D11	0211606-001A	F11268.D	3:02
05	TRIP BLANK	0211606-003A	F11269.D	3:28
06	P3MS	0211606-002A	F11270.D	3:53
07	P3MSD	0211606-002A	F11271.D	4:18

COMMENTS: _____

_____

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Lab File ID: F11255.D BFB Injection Date: 11/25/02

Instrument ID: HP5973-1 BFB Injection Time: 18:50

GC Column: HP-VOCO ID: .2 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	52.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	Greater than 50.0% of mass 95	71.5
175	5.0 - 9.0% of mass 174	5.5 (7.6)1
176	95.0 - 101.0% of mass 174	69.7 (97.4)1
177	5.0 - 9.0% of mass 176	4.7 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	F11256.D	11/25/02	19:37
02	VSTD020	VSTD020	F11257.D	11/25/02	20:03
03	VSTD050	VSTD050	F11258.D	11/25/02	20:28
04	VSTD100	VSTD100	F11259.D	11/25/02	20:54
05	VSTD200	VSTD200	F11260.D	11/25/02	21:19

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Lab File ID: F11255.D BFB Injection Date: 11/25/02

Instrument ID: HP5973-1 BFB Injection Time: 18:50

GC Column: HP-VOCO ID: .2 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	52.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	Greater than 50.0% of mass 95	71.5
175	5.0 - 9.0% of mass 174	5.5 (7.6)1
176	95.0 - 101.0% of mass 174	69.7 (97.4)1
177	5.0 - 9.0% of mass 176	4.7 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	F11258.D	11/25/02	20:28
02	VBLK112502	VBLK112502	F11264.D	11/25/02	23:48
03	LFB112502	LFB112502	F11265.D	11/26/02	0:13
04	MSB112502	MSB112502	F11266.D	11/26/02	2:11
05	P3	0211606-002A	F11267.D	11/26/02	2:37
06	NC2D11	0211606-001A	F11268.D	11/26/02	3:02
07	TRIP BLANK	0211606-003A	F11269.D	11/26/02	3:28
08	P3MS	0211606-002A	F11270.D	11/26/02	3:53
09	P3MSD	0211606-002A	F11271.D	11/26/02	4:18

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No. _____ SDG No.: ANSON013

Lab File ID (Standard): V\F11258.D Date Analyzed: 11/25/02

EPA Sample No.(VSTD050##): VSTD050 Time Analyzed: 20:28

Instrument ID: HP5973-1 Heated Purge: (Y/N) N

GC Column: HP-VOC ID: .2 (mm)

		IS1 AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
	12 HOUR STD	63831	4.81	422998	5.77	390859	8.53
	UPPER LIMIT	127662	5.31	845996	6.27	781718	9.03
	LOWER LIMIT	31916	4.31	211499	5.27	195430	8.03
	EPA SAMPLE						
01	VBLK112502	62635	4.81	397536	5.77	360309	8.53
02	LFB112502	60577	4.81	394123	5.77	359694	8.53
03	MSB112502	56515	4.81	362168	5.77	332558	8.52
04	P3	57174	4.81	368291	5.77	331527	8.53
05	NC2D11	57221	4.81	360859	5.77	325840	8.53
06	TRIP BLANK	55334	4.81	348773	5.77	334963	8.53
07	P3MS	55131	4.81	346419	5.77	320100	8.53
08	P3MSD	55122	4.81	354491	5.77	319140	8.53

IS1 = Bromochloromethane
IS2 DFB = 1,4-Difluorobenzene
IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

H2M LABS, INC.

Date: 11-Dec-02

Test Code: ASPB5-8260_W
Test Number: SW8260B
Test Name: ASPB5 8260B(VOA IN WATER BY GC/MS)
Matrix: Aqueous **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Updated: 23-Jul-01

Type	Analyte	MDL	PQL
A	1,1,1-Trichloroethane	0.12	10
A	1,1,2,2-Tetrachloroethane	0.35	10
A	1,1,2-Trichloroethane	0.24	10
A	1,1-Dichloroethane	0.12	10
A	1,1-Dichloroethene	0.14	10
A	1,2-Dichloroethane	0.26	10
A	1,2-Dichloroethene (total)	2.9	10
A	1,2-Dichloropropane	0.33	10
A	2-Butanone	0.75	10
A	2-Hexanone	1.4	10
A	4-Methyl-2-pentanone	0.30	10
A	Acetone	2.8	10
A	Benzene	0.25	10
A	Bromodichloromethane	0.20	10
A	Bromoform	0.47	10
A	Bromomethane	0.46	10
A	Carbon disulfide	0.15	10
A	Carbon tetrachloride	0.18	10
A	Chlorobenzene	0.34	10
A	Chloroethane	0.48	10
A	Chloroform	0.27	10
A	Chloromethane	0.42	10
A	cis-1,3-Dichloropropene	0.19	10
A	Dibromochloromethane	0.29	10
A	Ethylbenzene	0.30	10
A	Methylene chloride	0.20	10
A	Styrene	0.35	10
A	Tetrachloroethene	0.42	10
A	Toluene	0.23	10
A	trans-1,3-Dichloropropene	0.39	10
A	Trichloroethene	0.14	10
A	Vinyl chloride	0.41	10
A	Xylene (total)	0.33	10
I	1,4-Difluorobenzene	-	10
I	Bromochloromethane	-	10
I	Chlorobenzene-d5	-	10
S	1,2-Dichloroethane-d4	2.7	10
S	4-Bromofluorobenzene	1.3	10
S	Toluene-d8	0.77	10
X	cis-1,2-Dichloroethene	0.17	10
X	Freon-113	0.76	10
X	m,p-Xylene	0.56	10

H2M LABS, INC.

Date: 11-Dec-02

Test Code: ASPB5-8260_W
Test Number: SW8260B
Test Name: ASPB5 8260B(VOA IN WATER BY GC/MS)
Matrix: Aqueous **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Updated: 19-Jul-01

Type	Analyte	MDL	PQL
X	Methyl tert-butyl ether	0.58	10
X	o-Xylene	0.33	10
X	trans-1,2-Dichloroethene	0.13	10

H2M LABS, INC.

II. SAMPLE DATA PACKAGE FOR VOLATILE ORGANICS

A. REPORTS
B. RAW DATA

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NC2D11

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	41	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC2D11

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	58	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	0.6	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	150	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

NC2D11

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

b Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11268.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

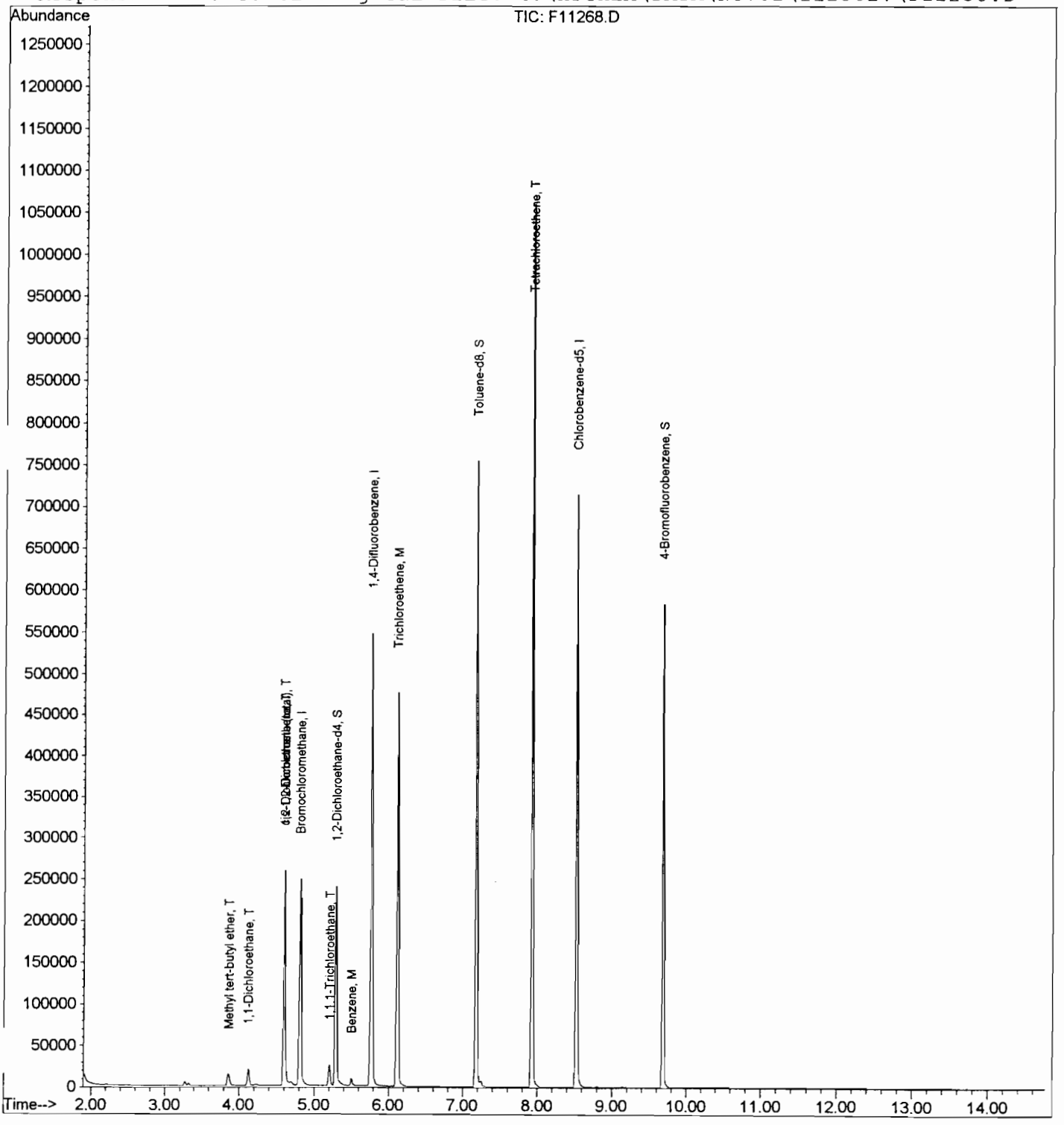
Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11268.D Vial: 14
Acq On : 26 Nov 2002 3:02 Operator:
Sample : 0211606-001A Inst : GC/MS Ins
Misc : ANSON013,NC2D11,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:25 2002 Quant Results File: OLMW1125.RES

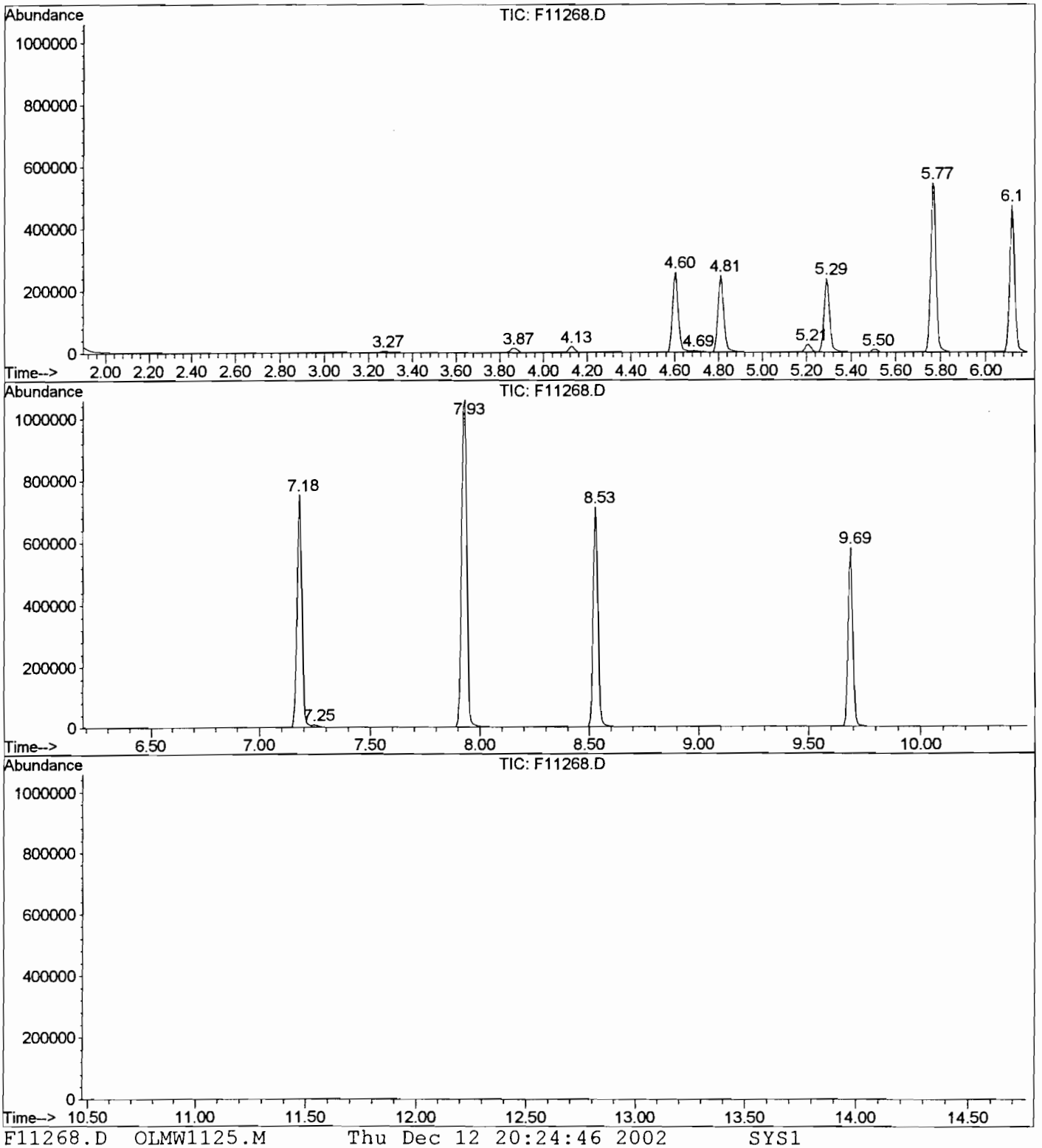
Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 20

LSC Report - Integrated Chromatogram

File : O:\MS\5973\DATA\NOV02\112502V\F11268.D
Operator :
Acquired : 26 Nov 2002 3:02 using AcqMethod OLMW1125
Instrument : GC/MS Ins
Sample Name: 0211606-001A
Misc Info : ANSON013,NC2D11,H2O,SAMP,,
Vial Number: 14
Quant File :OLMW1125.RES (RTE Integrator)



F11268.D OLMW1125.M Thu Dec 12 20:24:46 2002 SYS1

ANSON013 V 21

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11268.D Vial: 14
Acq On : 26 Nov 2002 3:02 Operator:
Sample : 0211606-001A Inst : GC/MS Ins
Misc : ANSON013,NC2D11,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:25 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	57221	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	360859	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	325840	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	162865	43.82	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 87.64%			
45) Toluene-d8	7.18	98	422827	48.06	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.12%			
49) 4-Bromofluorobenzene	9.69	95	178028	48.36	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 96.72%			
Target Compounds						Qvalue
13) 1,1-Dichloroethane	4.13	63	17897	3.54	ug/l	94
16) Methyl tert-butyl ether	3.87	73	12644	1.69	ug/l #	49
18) cis-1,2-Dichloroethene	4.60	96	102376	38.67	ug/l	93
19) 1,2-Dichloroethene (total)	4.60	96	103328m	41.23	ug/l	
25) 1,1,1-Trichloroethane	5.21	97	14342	3.48	ug/l	96
32) Trichloroethene	6.12	95	135212	57.80	ug/l	96
34) Benzene	5.50	78	6251	0.55	ug/l	100
43) Tetrachloroethene	7.93	166	267190	147.99	ug/l	96

(#) = qualifier out of range (m) = manual integration

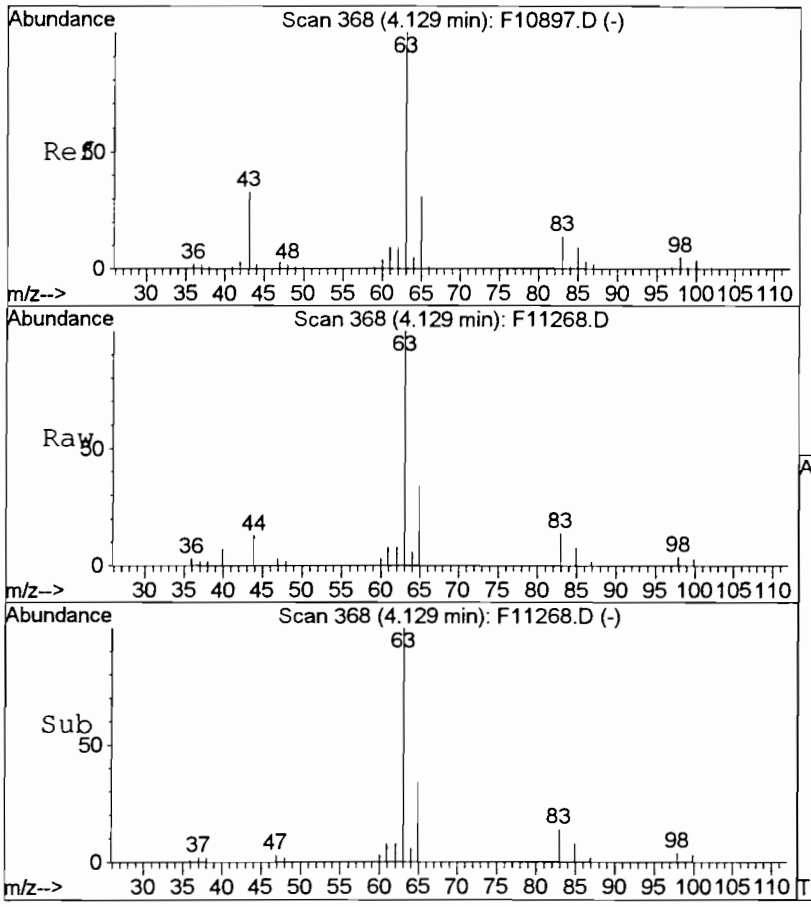
ANSON013 V 22

Tentatively Identified Compound (LSC) summary

Operator ID: Date Acquired: 26 Nov 2002 3:02
Data File: O:\MS\5973\DATA\NOV02\112502V\F11268.D
Name: 0211606-001A
Misc: ANSON013,NC2D11,H2O,SAMP,,
Method: C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title: VOA Standards for 5 point calibration
Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
F11268.D OLMW1125.M	Thu Dec 12 20:24:46 2002				SYS1			

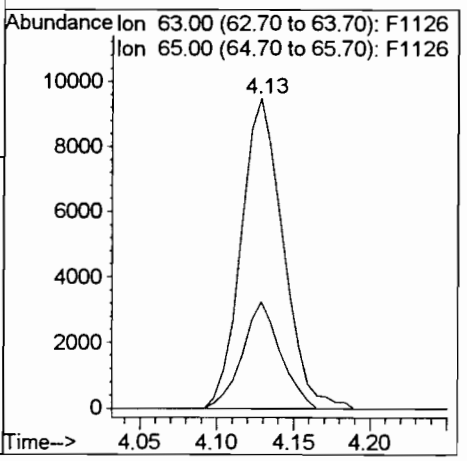
ANSON013 V 23

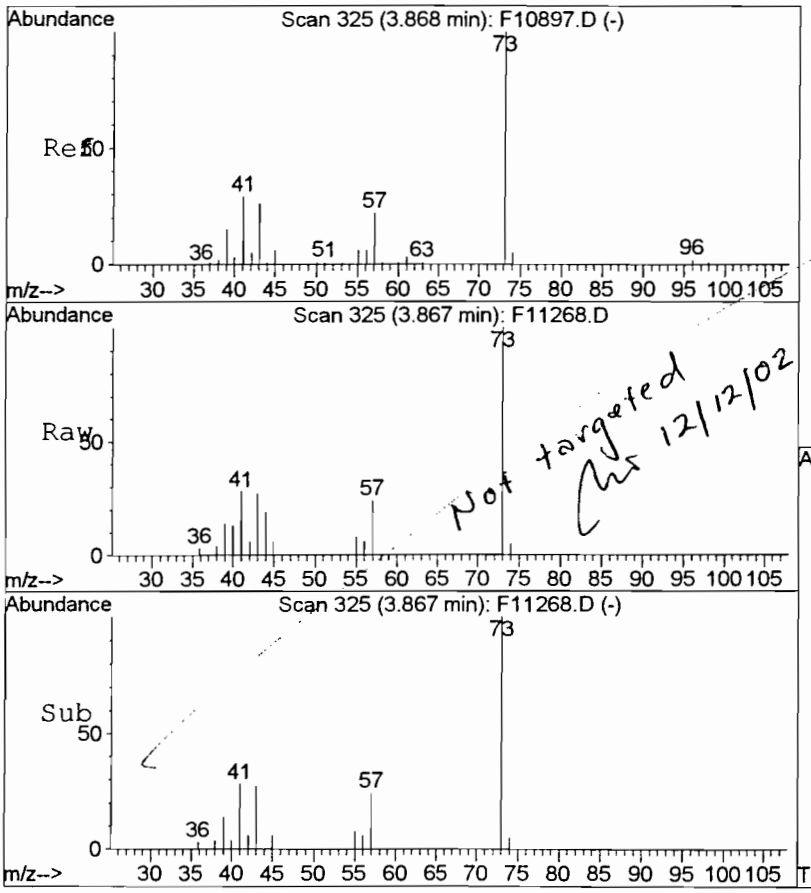


#13
1,1-Dichloroethane
Concen: 3.54 ug/l
RT: 4.13 min Scan# 368
Delta R.T. -0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 63 Resp: 17897

Ion	Ratio	Lower	Upper
63	100		
65	34.2	10.8	50.8



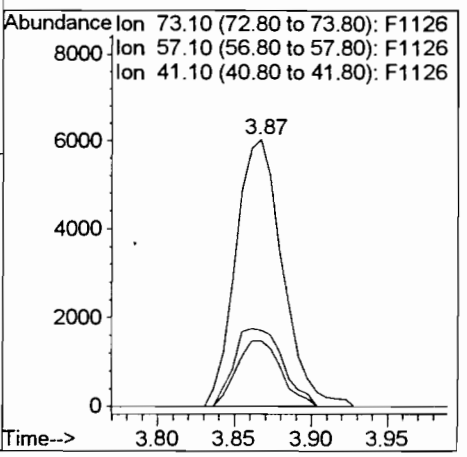


#16
Methyl tert-butyl ether
Concen: 1.69 ug/l
RT: 3.87 min Scan# 325
Delta R.T. 0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

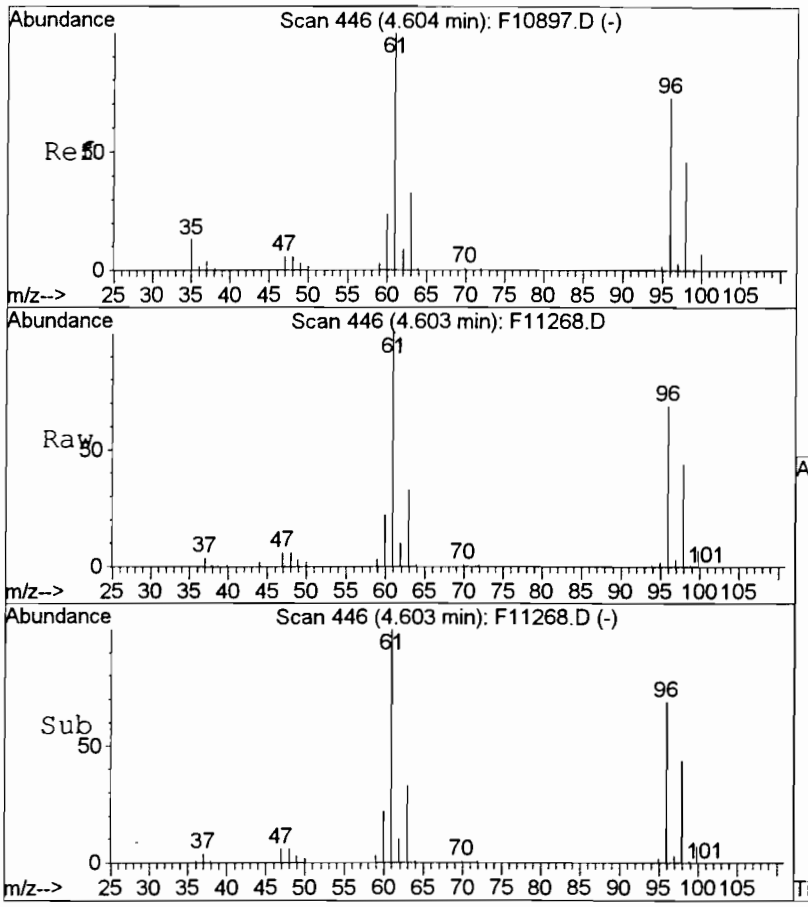
Tgt Ion: 73 Resp: 12644

Ion	Ratio	Lower	Upper
73	100		
57	0.0	17.7	26.5#
41	0.0	23.2	34.8#

Not targeted
12/12/02



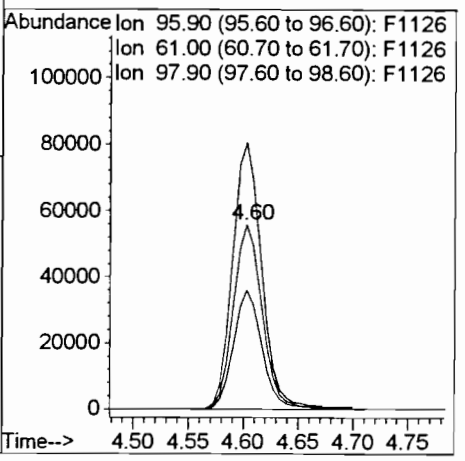
ANSON013 V 24

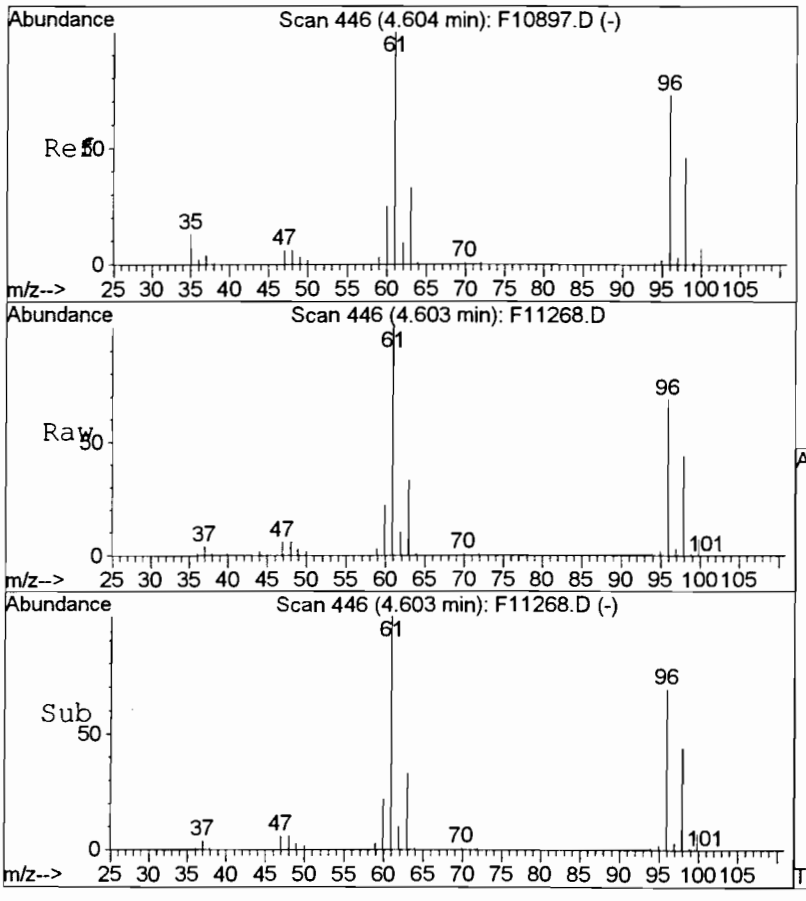


#18
cis-1,2-Dichloroethene
Concen: 38.67 ug/l
RT: 4.60 min Scan# 446
Delta R.T. -0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 96 Resp: 102376

Ion	Ratio	Lower	Upper
96	100		
61	146.8	108.6	162.8
98	63.6	50.5	75.7

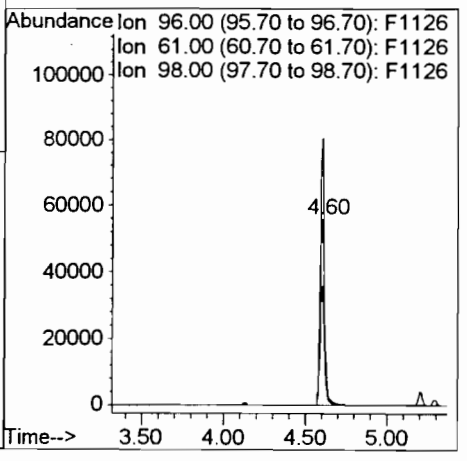




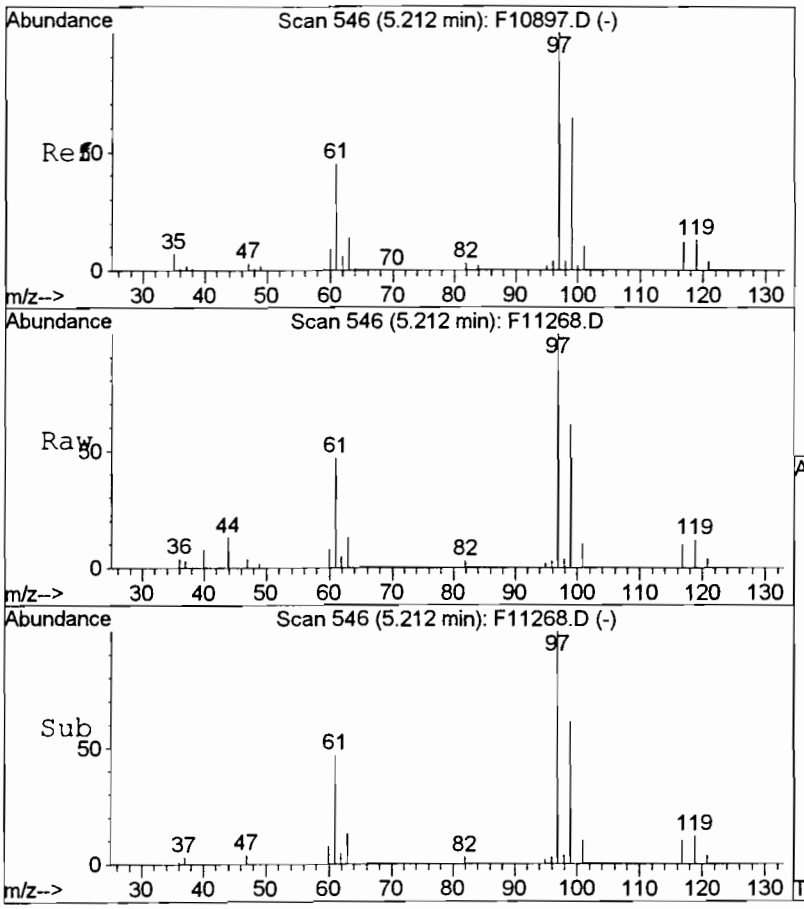
#19
1,2-Dichloroethene (total)
Concen: 41.23 ug/l m
RT: 4.60 min Scan# 446
Delta R.T. -0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 96 Resp: 103328

Ion	Ratio	Lower	Upper
96	100		
61	144.1	116.3	156.3
98	64.0	42.2	82.2



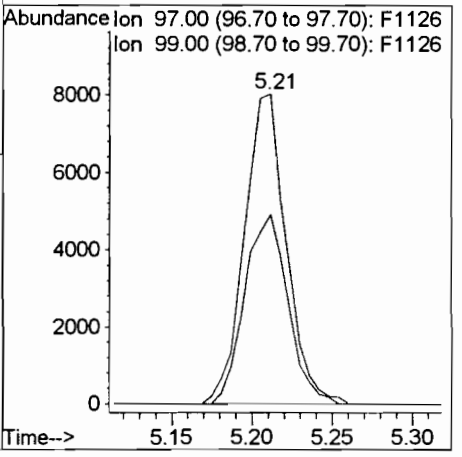
ANSON013 V 25

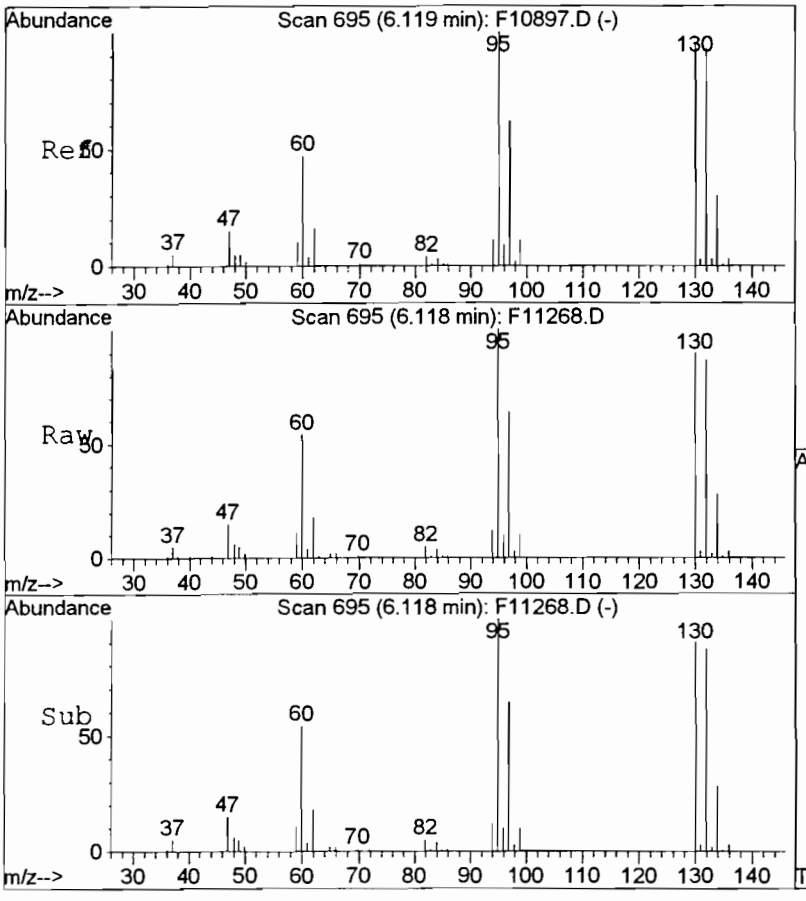


#25
1,1,1-Trichloroethane
Concen: 3.48 ug/l
RT: 5.21 min Scan# 546
Delta R.T. 0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 97 Resp: 14342

Ion	Ratio	Lower	Upper
97	100		
99	61.2	44.1	84.1

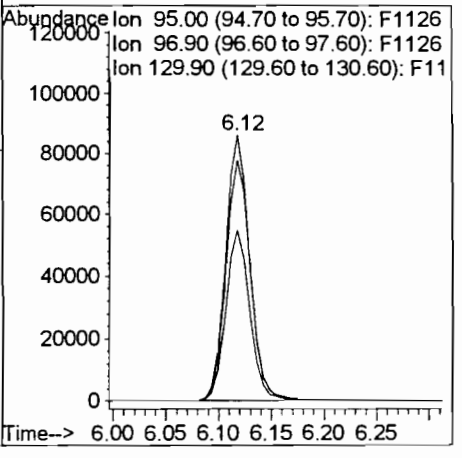




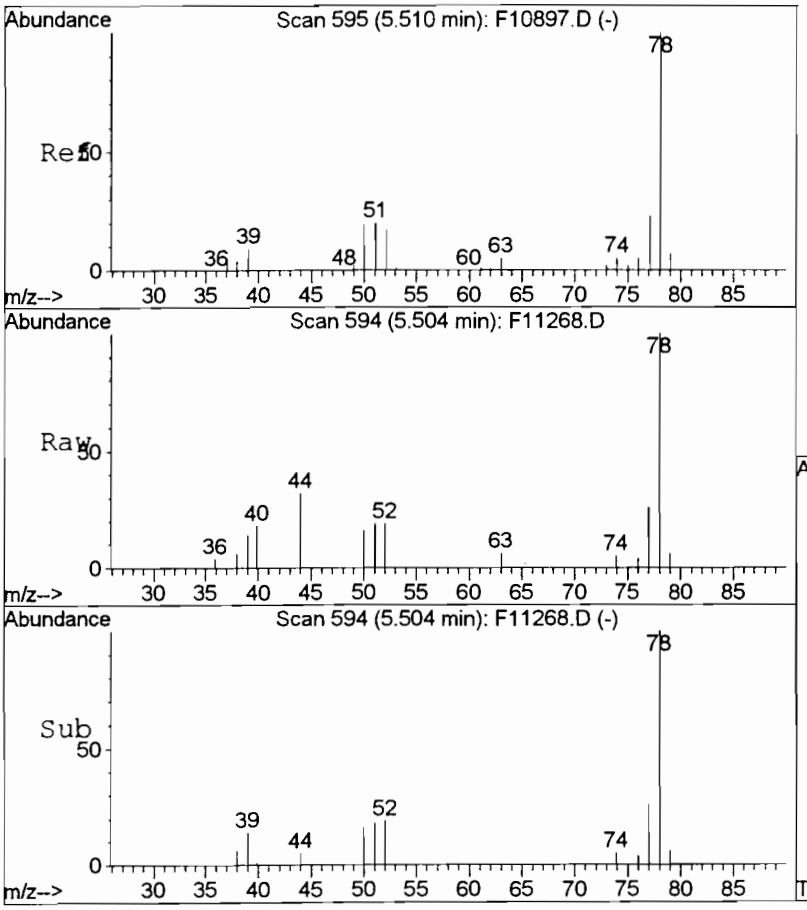
#32
Trichloroethene
Concen: 57.80 ug/l
RT: 6.12 min Scan# 695
Delta R.T. -0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 95 Resp: 135212

Ion	Ratio	Lower	Upper
95	100		
97	63.6	42.4	82.4
130	90.3	75.3	115.3

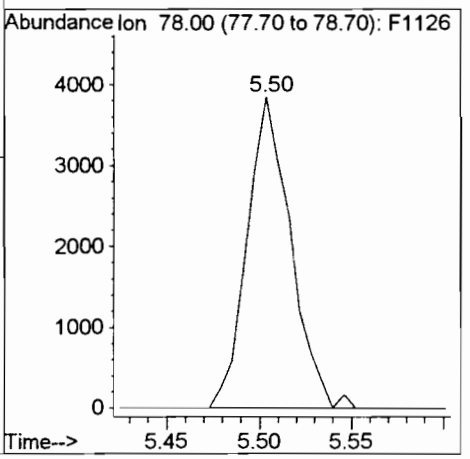


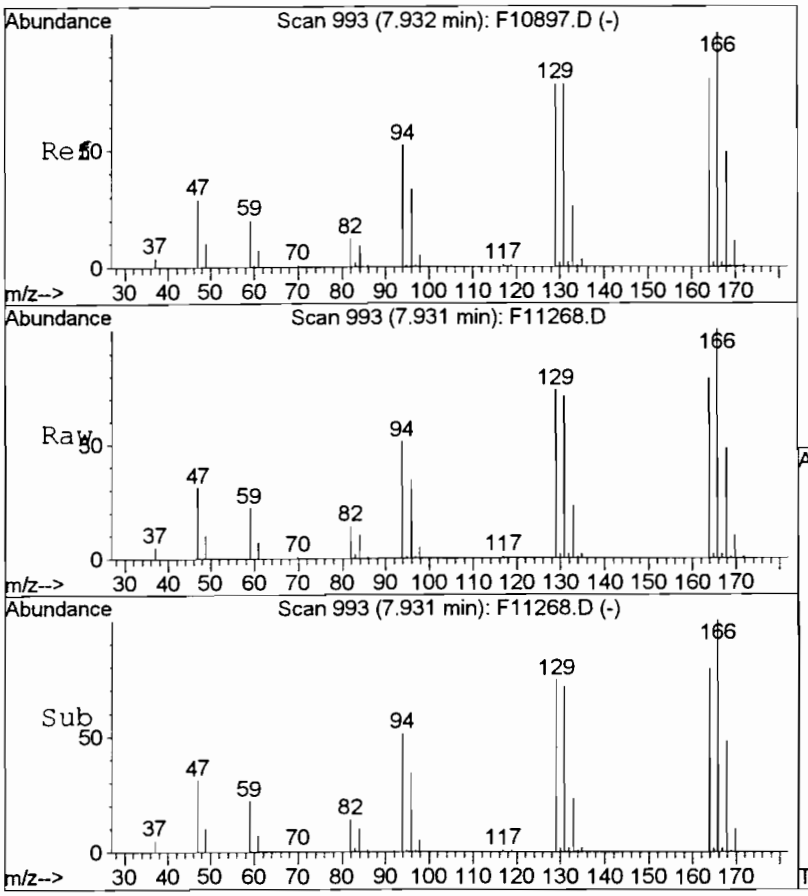
ANSON013 V 26



#34
Benzene
Concen: 0.55 ug/l
RT: 5.50 min Scan# 594
Delta R.T. -0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion: 78 Resp: 6251

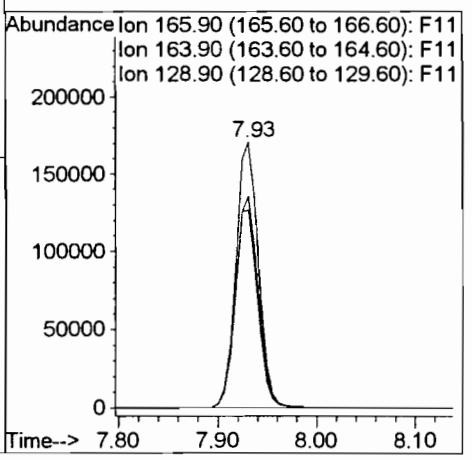




#43
Tetrachloroethene
Concen: 147.99 ug/l
RT: 7.93 min Scan# 993
Delta R.T. 0.00 min
Lab File: F11268.D
Acq: 26 Nov 2002 3:02

Tgt Ion:166 Resp: 267190

Ion	Ratio	Lower	Upper
166	100		
164	79.4	60.3	100.3
129	74.0	60.5	100.5



ANSON013 V 27

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

P3

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

› Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11267.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

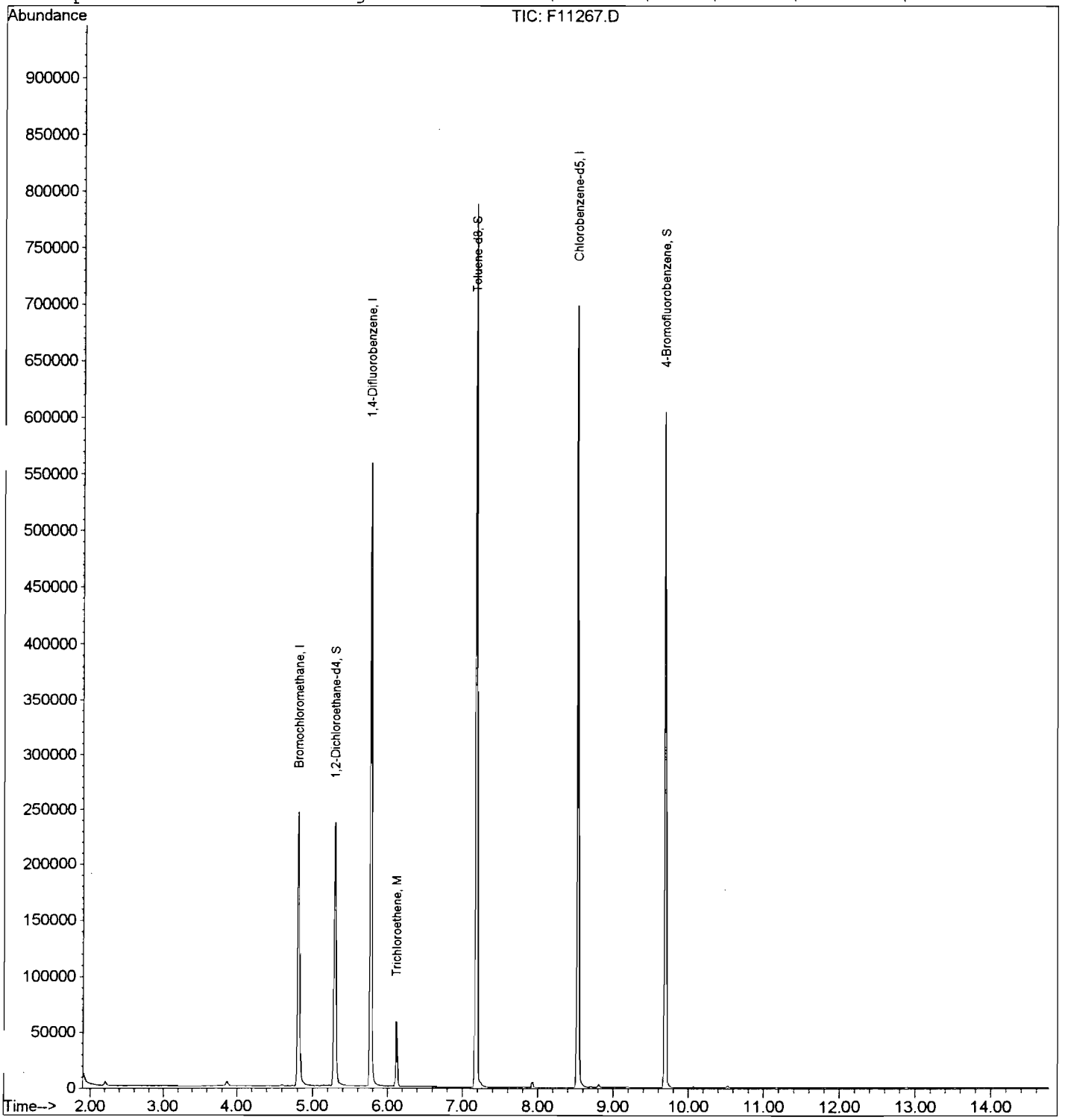
Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11267.D Vial: 13
Acq On : 26 Nov 2002 2:37 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:24 2002 Quant Results File: OLMW1125.RES

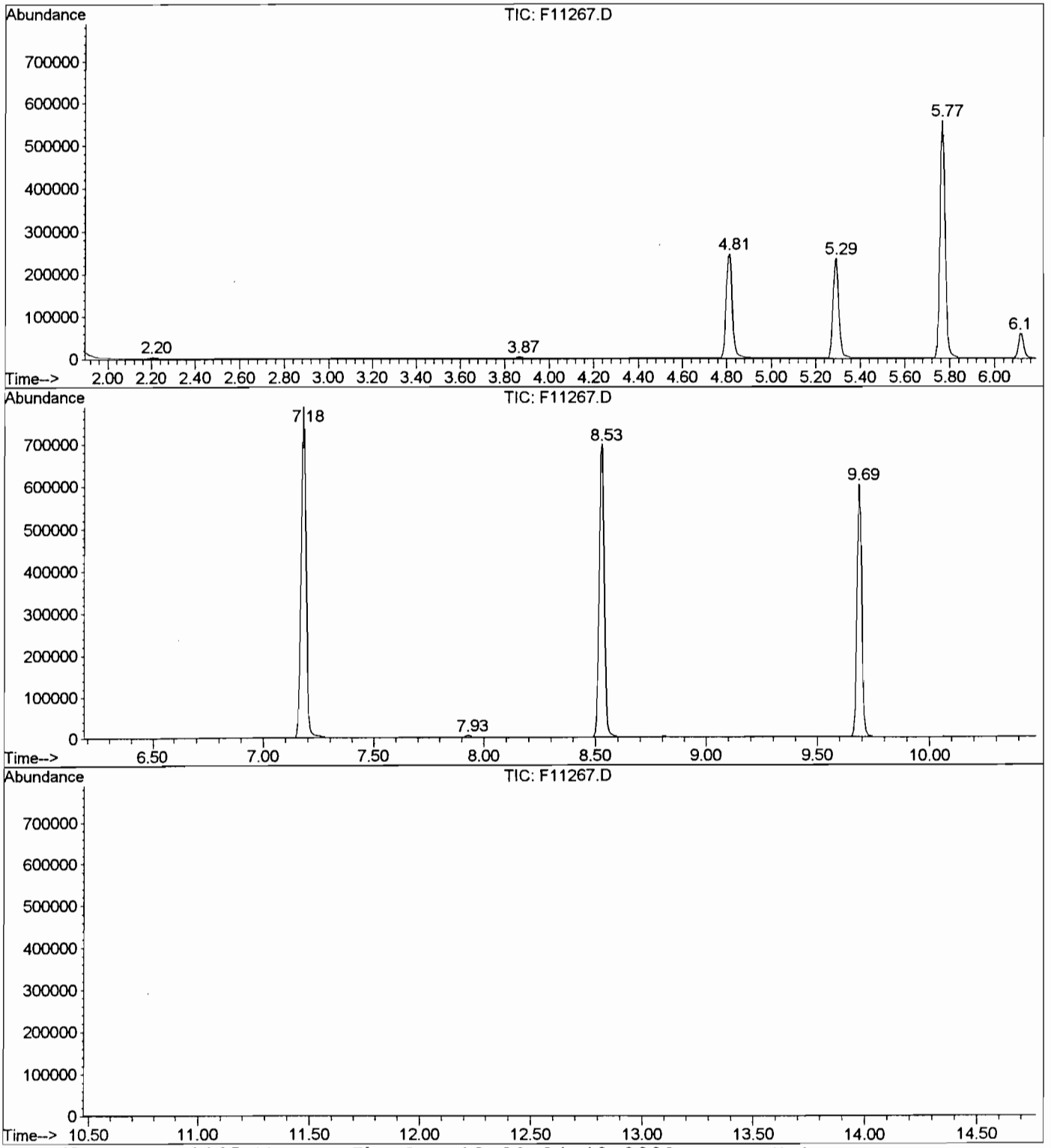
Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 31

LSC Report - Integrated Chromatogram

File : O:\MS\5973\DATA\NOV02\112502V\F11267.D
Operator :
Acquired : 26 Nov 2002 2:37 using AcqMethod OLMW1125
Instrument : GC/MS Ins
Sample Name: 0211606-002A
Misc Info : ANSON013,P3,H2O,SAMP,,
Vial Number: 13
Quant File :OLMW1125.RES (RTE Integrator)



F11267.D OLMW1125.M Thu Dec 12 20:24:40 2002 SYS1

ANSON013 V 32

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11267.D Vial: 13
Acq On : 26 Nov 2002 2:37 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:24 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	57174	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	368291	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	331527	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	165007	44.43	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 88.86%			
45) Toluene-d8	7.18	98	427758	47.78	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 95.56%			
49) 4-Bromofluorobenzene	9.69	95	179485	47.92	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 95.84%			
Target Compounds						Qvalue
32) Trichloroethene	6.12	95	17294	7.24	ug/l	96

(#) = qualifier out of range (m) = manual integration

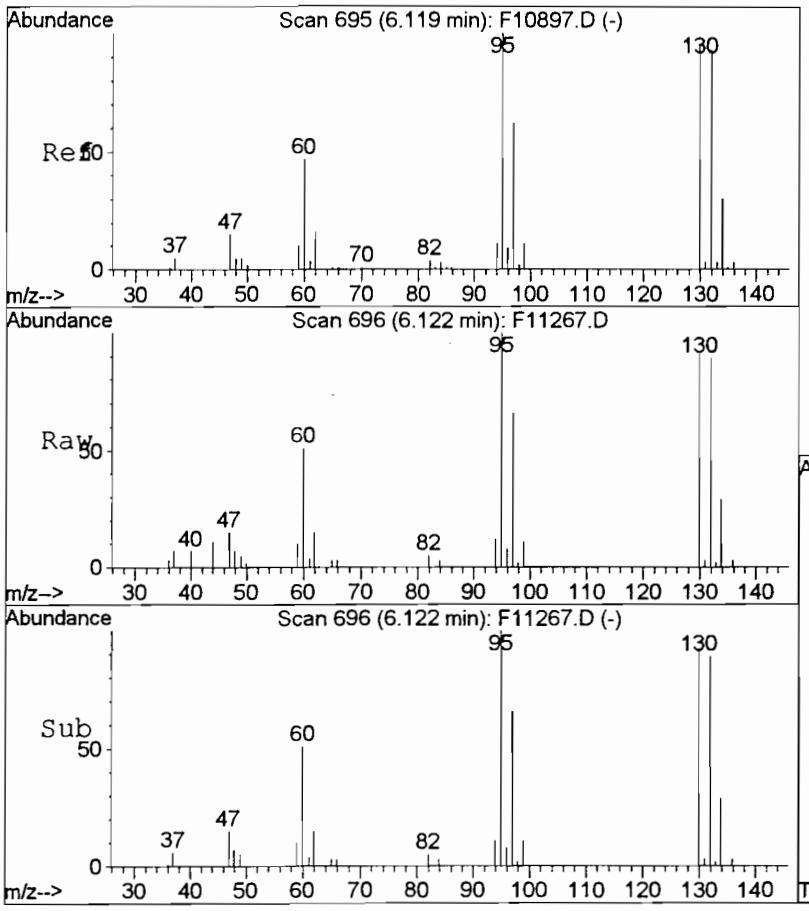
ANSON013 V 33

Tentatively Identified Compound (LSC) summary

Operator ID: Date Acquired: 26 Nov 2002 2:37
Data File: O:\MS\5973\DATA\NOV02\112502V\F11267.D
Name: 0211606-002A
Misc: ANSON013,P3,H2O,SAMP,,
Method: C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title: VOA Standards for 5 point calibration
Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
F11267.D OLMW1125.M	Thu Dec 12 20:24:41 2002				SYS1			

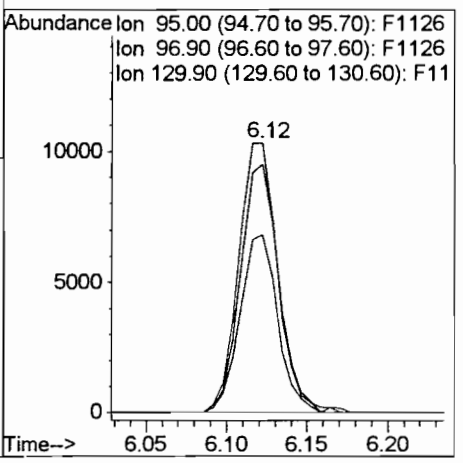
ANSON013 V 34



#32
Trichloroethene
Concen: 7.24 ug/l
RT: 6.12 min Scan# 696
Delta R.T. 0.00 min
Lab File: F11267.D
Acq: 26 Nov 2002 2:37

Tgt Ion: 95 Resp: 17294

Ion	Ratio	Lower	Upper
95	100		
97	66.1	42.4	82.4
130	92.2	75.3	115.3



ANSON013 V 35

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

TRIP BLANK

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ɔ Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11269.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

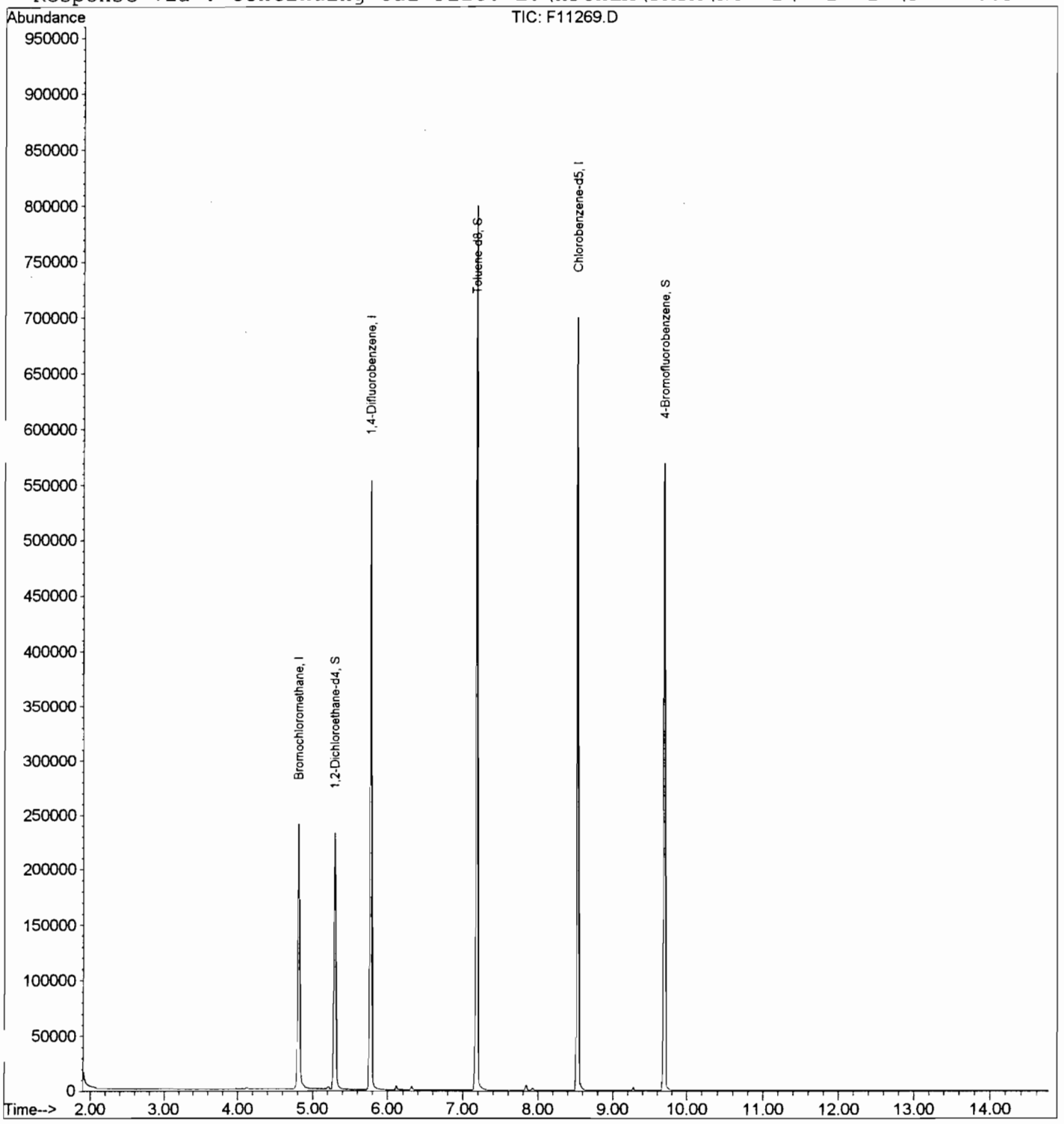
Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11269.D Vial: 15
Acq On : 26 Nov 2002 3:28 Operator:
Sample : 0211606-003A Inst : GC/MS Ins
Misc : ANSON013,TRIP BLANK,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:26 2002 Quant Results File: OLMW1125.RES

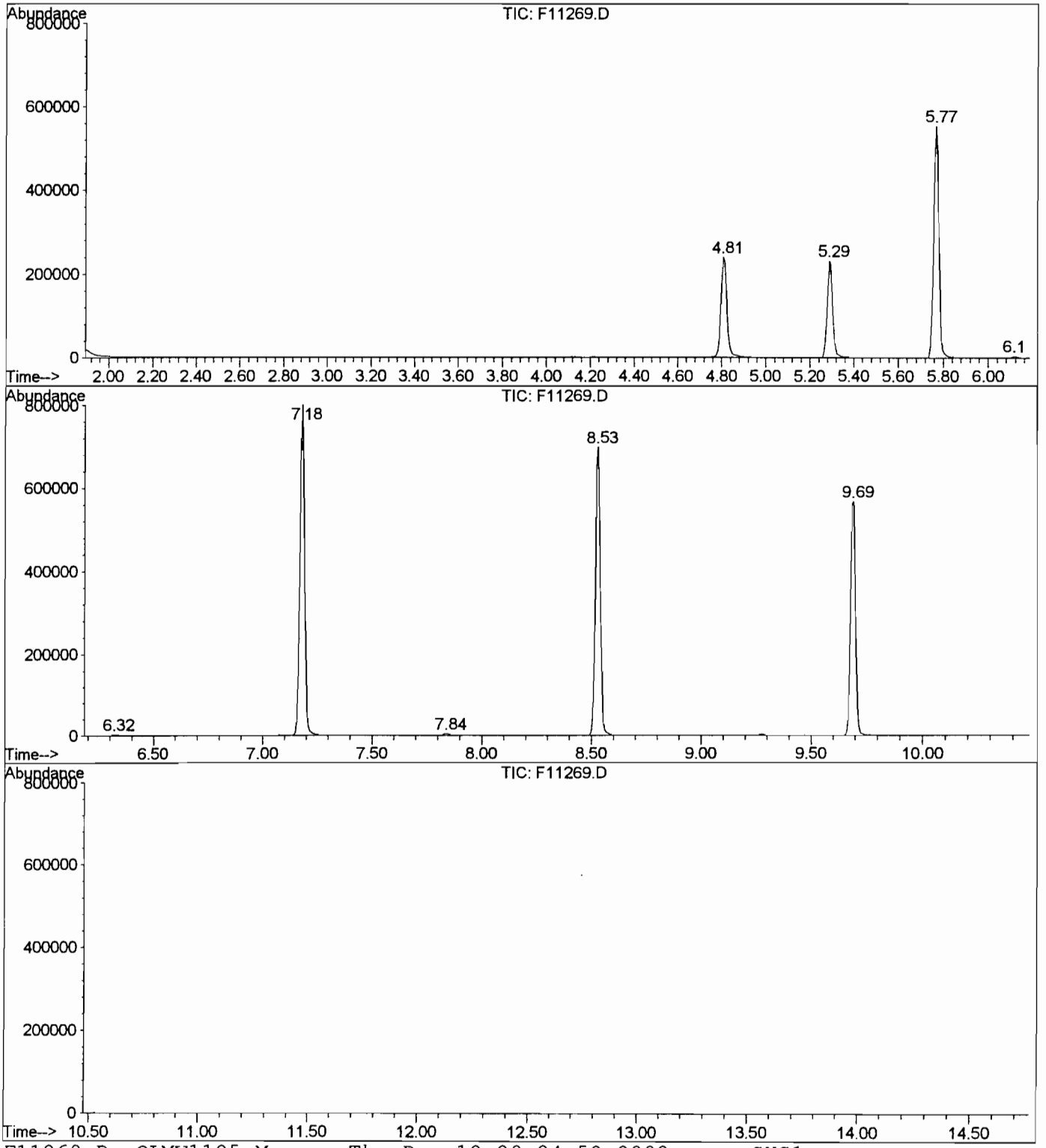
Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 39

LSC Report - Integrated Chromatogram

File : O:\MS\5973\DATA\NOV02\112502V\F11269.D
Operator :
Acquired : 26 Nov 2002 3:28 using AcqMethod OLMW1125
Instrument : GC/MS Ins
Sample Name: 0211606-003A
Misc Info : ANSON013,TRIP BLANK,H2O,SAMP,,
Vial Number: 15
Quant File :OLMW1125.RES (RTE Integrator)



F11269.D OLMW1125.M Thu Dec 12 20:24:52 2002 SYS1

ANSON013 V 40

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11269.D Vial: 15
Acq On : 26 Nov 2002 3:28 Operator:
Sample : 0211606-003A Inst : GC/MS Ins
Misc : ANSON013,TRIP BLANK,H2O,SAMP,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:26 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	55334	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	348773	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	334963	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	157052	43.69	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 87.38%			
45) Toluene-d8	7.18	98	428243	47.35	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 94.70%			
49) 4-Bromofluorobenzene	9.69	95	180978	47.83	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 95.66%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

ANSON013 V 41

Tentatively Identified Compound (LSC) summary

Operator ID: Date Acquired: 26 Nov 2002 3:28
Data File: O:\MS\5973\DATA\NOV02\112502V\F11269.D
Name: 0211606-003A
Misc: ANSON013,TRIP BLANK,H2O,SAMP,,
Method: C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title: VOA Standards for 5 point calibration
Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc

F11269.D OLMW1125.M Thu Dec 12 20:24:52 2002 SYS1

ANSON013 V 42

III. STANDARD DATA PACKAGE FOR VOLATILE ORGANICS

A. INITIAL CALIBRATION FORM
B. STANDARD GC/MD CHROMATOGRAMS
C. DATA SYSTEM REPORT
D. CONTINUING CALIBRATION FORM
E. STANDARD GC/MS CHROMATOGRAMS
F. DATA SYSTEM REPORT

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: SDG No.: ANSON013

Instrument ID: HP5973-1 Calibration Date(s): 11/25/02 11/25/02

Heated Purge: (Y/N) N Calibration Times: 19:37 21:19

GC Column: HP-VOCOL ID: .2 (mm)

LAB FILE ID: VSTD010 F11256.D VSTD020 F11257.D
VSTD050 F11258.D VSTD100 F11259.D VSTD200 F11260.D

COMPOUND		VSTD010	VSTD020	VSTD050	VSTD100	VSTD200	RRF	% RSD	
Chloromethane		4.192	3.768	3.375	2.981	3.428	3.549	12.8	
Bromomethane	*	1.906	1.865	1.513	1.591	1.922	1.759	10.9	*
Vinyl chloride	*	3.165	2.870	2.273	2.249	2.668	2.645	14.8	*
Chloroethane		2.029	1.930	1.495	1.499	1.812	1.753	14.0	
Methylene chloride		2.991	1.974	2.256	1.594	2.008	2.165	24.0	
Acetone		0.906	0.820	0.732	0.670	0.706	0.767	12.5	
1,1-Dichloroethene	*	2.269	1.664	1.815	1.320	1.472	1.708	21.4	*
Carbon disulfide		8.535	5.809	6.710	4.904	6.090	6.410	21.1	
1,1-Dichloroethane	*	5.195	4.305	4.415	4.401	4.499	4.563	7.9	*
1,2-Dichloroethene (total)		5.429	4.382	4.379	3.809	4.533	4.506	13.0	
Chloroform	*	4.930	4.261	4.512	4.331	4.277	4.462	6.3	*
1,2-Dichloroethane	*	4.285	4.101	4.034	3.719	3.917	4.011	5.3	*
2-Butanone		1.408	1.329	1.284	1.264	1.322	1.321	4.2	
trans-1,2-Dichloroethene		2.588	2.054	2.047	1.414	2.073	2.035	20.5	
1,1,1-Trichloroethane	*	0.640	0.526	0.570	0.555	0.519	0.562	8.6	*
Carbon tetrachloride	*	0.514	0.436	0.449	0.439	0.465	0.461	6.9	*
Bromodichloromethane	*	0.622	0.495	0.535	0.517	0.530	0.540	9.0	*
1,2-Dichloropropane		0.462	0.366	0.401	0.401	0.409	0.408	8.6	
cis-1,2-Dichloroethene		2.836	2.321	2.313	2.370	2.447	2.458	8.9	
cis-1,3-Dichloropropene	*	0.717	0.580	0.637	0.626	0.634	0.639	7.8	*
Trichloroethene	*	0.389	0.296	0.324	0.319	0.338	0.333	10.3	*
Dibromochloromethane	*	0.419	0.344	0.382	0.381	0.383	0.382	7.0	*
1,1,2-Trichloroethane	*	0.363	0.298	0.322	0.322	0.322	0.325	7.1	*
Benzene	*	1.737	1.386	1.563	1.518	1.418	1.524	9.1	*
trans-1,3-Dichloropropene	*	0.685	0.571	0.622	0.610	0.586	0.615	7.2	*
Bromoform	*	0.273	0.227	0.264	0.265	0.269	0.260	7.0	*
4-Methyl-2-pentanone		0.443	0.470	0.467	0.463	0.479	0.464	2.9	
2-Hexanone		0.296	0.321	0.324	0.329	0.336	0.321	4.7	
Tetrachloroethene	*	0.327	0.268	0.277	0.265	0.327	0.293	10.7	*
1,1,2,2-Tetrachloroethane	*	0.445	0.415	0.471	0.457	0.460	0.450	4.8	*
Toluene	*	1.061	0.875	0.964	0.910	0.884	0.939	8.2	*
Chlorobenzene	*	1.110	0.939	1.017	0.964	1.007	1.007	6.5	*
Ethylbenzene	*	0.526	0.425	0.476	0.432	0.491	0.470	9.0	*
Styrene	*	1.190	1.015	1.145	1.057	1.110	1.103	6.3	*
Xylene (total)	*	0.658	0.552	0.625	0.551	0.603	0.598	7.8	*
m,p-Xylene	*	1.324	1.076	1.180	1.044	1.101	1.145	9.8	*

6B

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: SDG No.: ANSON013

Instrument ID: HP5973-1 Calibration Date(s): 11/25/02 11/25/02

Heated Purge: (Y/N) N Calibration Times: 19:37 21:19

GC Column: HP-VOCOL ID: .2 (mm)

LAB FILE ID: VSTD010 F11256.D VSTD020 F11257.D
VSTD050 F11258.D VSTD100 F11259.D VSTD200 F11260.D

COMPOUND		VSTD010	VSTD020	VSTD050	VSTD100	VSTD200	$\overline{RRF}$	% RSD	
o-Xylene	*	0.658	0.552	0.625	0.551	0.603	0.598	7.8	*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6B

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: SDG No.: ANSON013

Instrument ID: HP5973-1 Calibration Date(s): 11/25/02 11/25/02

Heated Purge: (Y/N) N Calibration Times: 19:37 21:19

GC Column: HP-VOCOL ID: .2 (mm)

LAB FILE ID: VSTD010 F11256.D VSTD020 F11257.D
VSTD050 F11258.D VSTD100 F11259.D VSTD200 F11260.D

COMPOUND		VSTD010	VSTD020	VSTD050	VSTD100	VSTD200	$\overline{RRF}$	% RSD	
1,2-Dichloroethane-d4		3.716	3.381	3.248	3.223	3.148	3.343	6.7	
Toluene-d8		1.595	1.325	1.350	1.412	1.302	1.397	8.4	
4-Bromofluorobenzene	*	0.649	0.554	0.565	0.605	0.568	0.588	6.6	*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11256.D Vial: 2
Acq On : 25 Nov 2002 19:37 Operator:
Sample : VSTD010 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	4.81	128	63565	50.00	ug/l		0.00
24) 1,4-Difluorobenzene	5.77	114	405494	50.00	ug/l		0.00
39) Chlorobenzene-d5	8.53	117	398300	50.00	ug/l		0.00
System Monitoring Compounds							
22) 1,2-Dichloroethane-d4	5.29	65	47243	15.68	ug/l		0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 31.36%#				
45) Toluene-d8	7.18	98	127033	13.55	ug/l		0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 27.10%#				
49) 4-Bromofluorobenzene	9.69	95	51690	13.03	ug/l		0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 26.06%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.94	85	44595	120.53	ug/l	#	93
3) Chloromethane	2.11	50	53297	42.87	ug/l		99
4) Bromomethane	2.50	94	24230	27.00	ug/l		94
5) Vinyl Chloride	2.21	62	40233	35.08	ug/l		94
6) Chloroethane	2.58	64	25790	25.94	ug/l		99
7) Methylene Chloride	3.51	84	38030	17.53	ug/l		94
8) Acetone	3.02	43	11521	15.86	ug/l		80
9) Carbon Disulfide	3.59	76	108508	19.76	ug/l		100
10) Methyl Acetate	3.42	43	28046	15.92	ug/l		99
11) 1,1,2-Trichlorotrifluoroet	3.29	101	26332	27.01	ug/l		98
12) 1,1-Dichloroethene	3.27	96	28852	20.11	ug/l		95
13) 1,1-Dichloroethane	4.13	63	66043	16.61	ug/l		99
14) Trichlorofluoromethane	2.86	101	47805	21.70	ug/l		98
16) Methyl tert-butyl ether	3.87	73	102718	17.03	ug/l		96
17) trans-1,2-Dichloroethene	3.89	96	32901	17.75	ug/l		90
18) cis-1,2-Dichloroethene	4.60	96	36055	16.47	ug/l		95
19) 1,2-Dichloroethene (total)	4.60	96	69016m	63.06	ug/l		
20) 2-Butanone	4.40	43	17897	15.03	ug/l	#	57
21) Chloroform	4.78	83	62673	13.98	ug/l		99
23) 1,2-Dichloroethane	5.36	62	54476	14.16	ug/l		99
25) 1,1,1-Trichloroethane	5.21	97	51926	16.11	ug/l		99
26) Cyclohexane	5.42	56	38967	24.16	ug/l		95
27) Carbon Tetrachloride	5.48	117	41706	17.87	ug/l		100
29) Bromodichloromethane	6.32	83	50458	14.21	ug/l		98
30) 1,2-Dichloropropane	6.17	63	37508	14.73	ug/l		98
31) cis-1,3-Dichloropropene	6.82	75	58176	14.14	ug/l		98
32) Trichloroethene	6.12	95	31523	16.61	ug/l		97
33) Methylcyclohexane	6.44	83	20521	21.78	ug/l		97

(#) = qualifier out of range (m) = manual integration

ANSON013 V 47

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11256.D Vial: 2
Acq On : 25 Nov 2002 19:37 Operator:
Sample : VSTD010 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Benzene	5.50	78	140852	14.90 ug/l	100
35) Dibromochloromethane	7.84	129	34006	13.16 ug/l	99
36) trans-1,3-Dichloropropene	7.24	75	55576	13.43 ug/l	97
37) 1,1,2-Trichloroethane	7.40	97	29402	13.34 ug/l	95
38) Bromoform	9.28	173	22110	12.71 ug/l	97
40) 4-Methyl-2-Pentanone	6.73	43	35291	11.17 ug/l	96
41) 2-Hexanone	7.52	43	23584	10.40 ug/l	94
42) 1,2-Dibromoethane	8.04	107	29755	12.94 ug/l	99
43) Tetrachloroethene	7.93	166	26015	17.88 ug/l	89
44) 1,1,2,2-Tetrachloroethane	9.51	83	35440	11.78 ug/l	96
46) Toluene	7.25	92	84540	15.53 ug/l	99
47) Chlorobenzene	8.56	112	88389	14.54 ug/l	99
48) Ethylbenzene	8.70	106	41901	15.82 ug/l	97
50) Styrene	9.16	104	94826	14.56 ug/l	97
51) m,p-Xylene	8.81	106	105440	30.88 ug/l	98
52) o-Xylene	9.19	106	52384	14.74 ug/l	99
53) Xylene (total)	9.19	106	52384	14.74 ug/l	97
54) Isopropylbenzene	9.57	105	92929	13.99 ug/l	97
55) 1,3-Dichlorobenzene	10.81	146	50884	12.95 ug/l	97
56) 1,4-Dichlorobenzene	10.90	146	54637	12.80 ug/l	98
57) 1,2-Dichlorobenzene	11.22	146	52953	13.18 ug/l	98
58) 1,2-Dibromo-3-Chloropropan	11.84	75	6047	12.75 ug/l #	59
59) 1,2,4-Trichlorobenzene	12.76	180	17628	9.97 ug/l	98

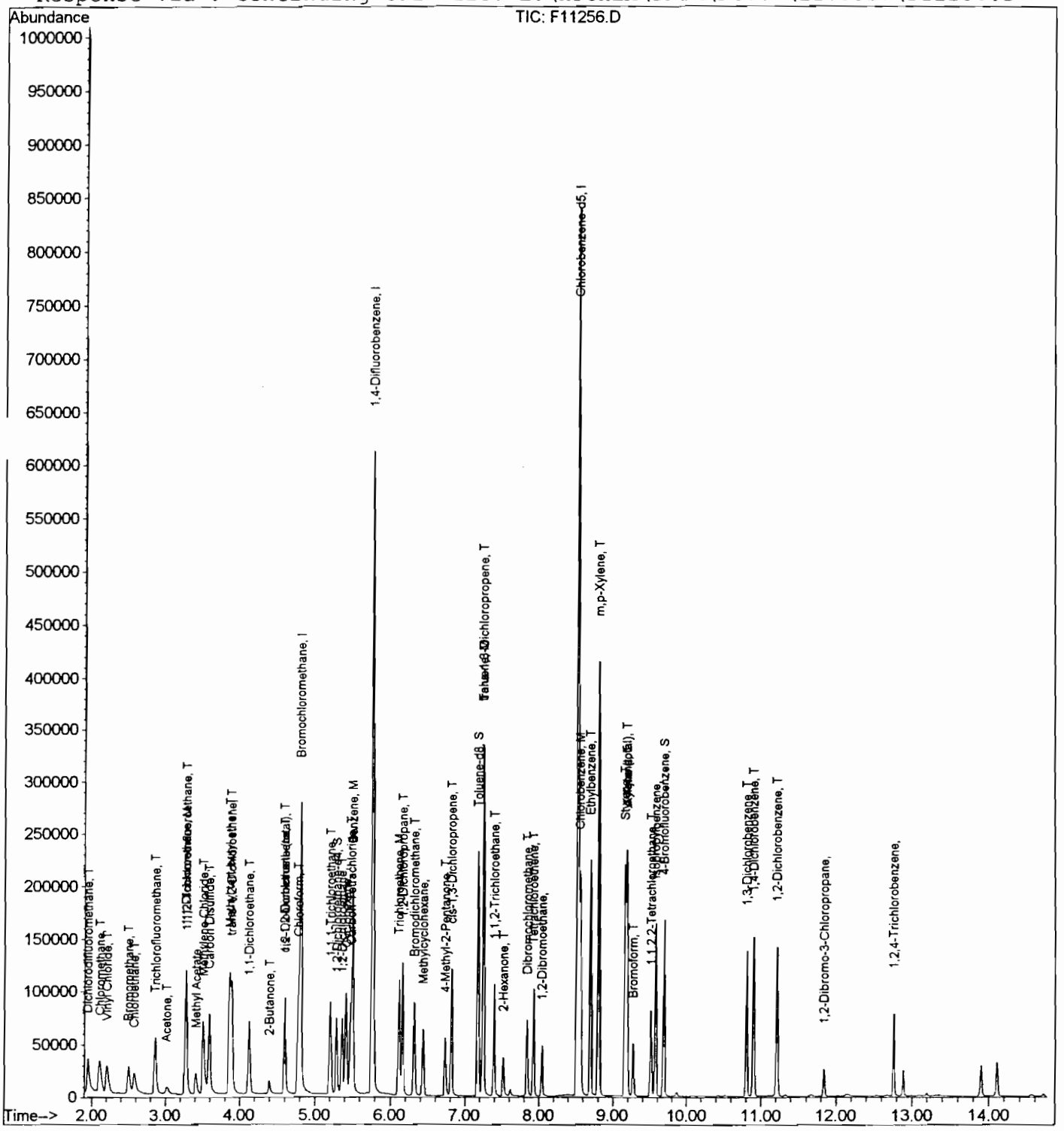
(#) = qualifier out of range (m) = manual integration

ANSON013 V 48

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11256.D Vial: 2
Acq On : 25 Nov 2002 19:37 Operator:
Sample : VSTD010 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D



ANSON013 V 49

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11257.D Vial: 3
Acq On : 25 Nov 2002 20:03 Operator:
Sample : VSTD020 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	63742	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	439974	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	395156	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	86200	28.52	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 57.04%#			
45) Toluene-d8	7.18	98	209462	22.52	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 45.04%#			
49) 4-Bromofluorobenzene	9.69	95	87618	22.27	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 44.54%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.95	85	80169	216.08	ug/l	97
3) Chloromethane	2.11	50	96080	77.06	ug/l	98
4) Bromomethane	2.50	94	47546	52.83	ug/l	99
5) Vinyl Chloride	2.21	62	73185	63.63	ug/l	99
6) Chloroethane	2.58	64	49220	49.36	ug/l	99
7) Methylene Chloride	3.52	84	50339	23.13	ug/l	96
8) Acetone	3.02	43	20916	28.71	ug/l	93
9) Carbon Disulfide	3.60	76	148116	26.89	ug/l	100
10) Methyl Acetate	3.41	43	40776	23.08	ug/l	99
11) 1,1,2-Trichlorotrifluoroet	3.29	101	34543	35.34	ug/l	99
12) 1,1-Dichloroethene	3.27	96	42420	29.49	ug/l	92
13) 1,1-Dichloroethane	4.13	63	109772	27.54	ug/l	100
14) Trichlorofluoromethane	2.86	101	90062	40.76	ug/l	99
16) Methyl tert-butyl ether	3.86	73	176427	29.16	ug/l	97
17) trans-1,2-Dichloroethene	3.89	96	52360	28.17	ug/l	89
18) cis-1,2-Dichloroethene	4.61	96	59183	26.96	ug/l	93
19) 1,2-Dichloroethene (total)	4.61	96	111726m	101.80	ug/l	
20) 2-Butanone	4.40	43	33882	28.38	ug/l	97
21) Chloroform	4.78	83	108654	24.17	ug/l	97
23) 1,2-Dichloroethane	5.37	62	104566	27.10	ug/l	99
25) 1,1,1-Trichloroethane	5.21	97	92576	26.47	ug/l	97
26) Cyclohexane	5.42	56	65649	37.51	ug/l	97
27) Carbon Tetrachloride	5.48	117	76715	30.30	ug/l	97
29) Bromodichloromethane	6.32	83	87068	22.60	ug/l	100
30) 1,2-Dichloropropane	6.17	63	64379	23.30	ug/l	100
31) cis-1,3-Dichloropropene	6.81	75	102013	22.85	ug/l	100
32) Trichloroethene	6.12	95	52147	25.32	ug/l	99
33) Methylcyclohexane	6.44	83	35994	35.20	ug/l	96

(#) = qualifier out of range (m) = manual integration

ANSON013 V 50

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11257.D Vial: 3
Acq On : 25 Nov 2002 20:03 Operator:
Sample : VSTD020 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

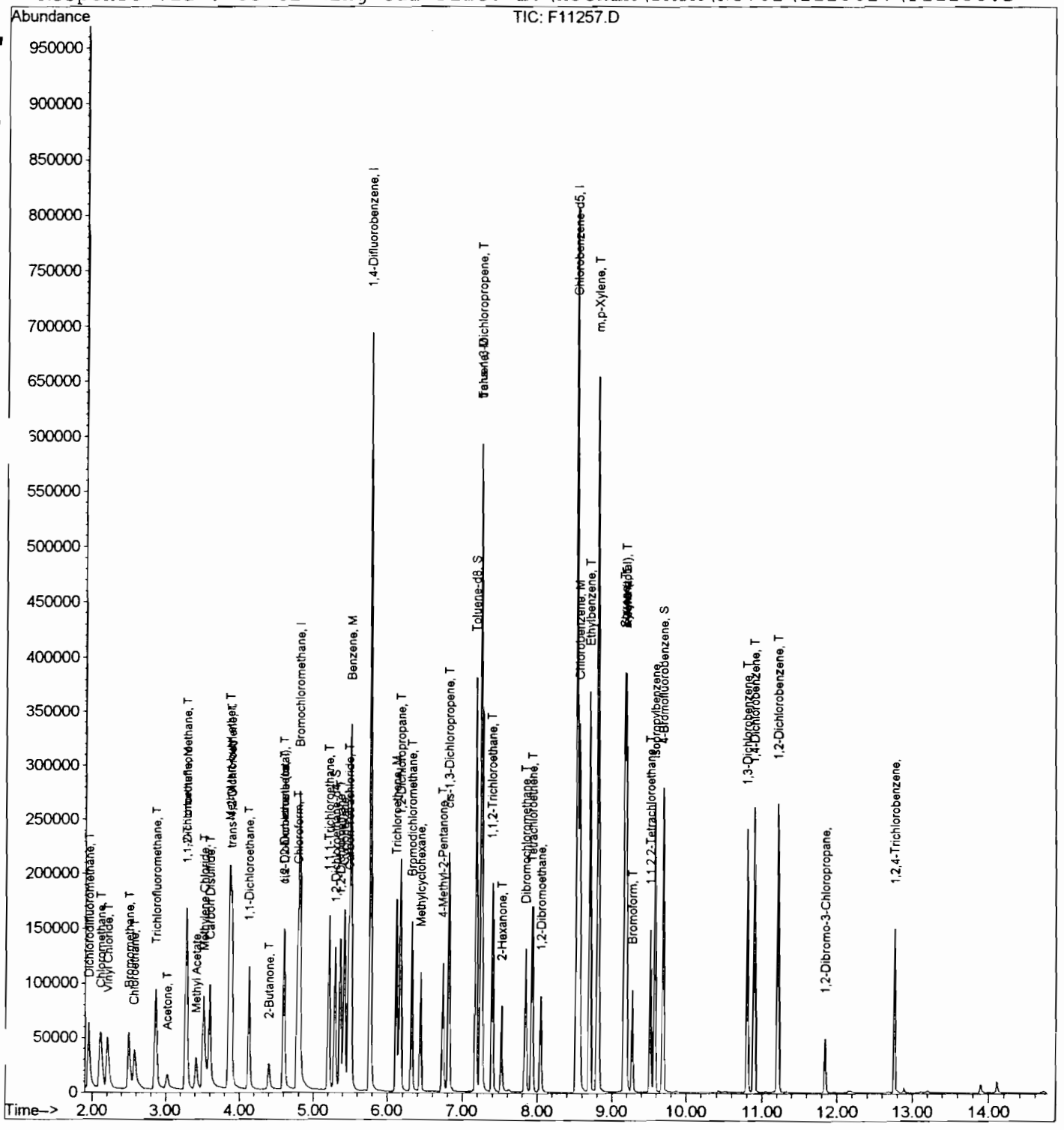
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Benzene	5.51	78	243867	23.77 ug/l	100
35) Dibromochloromethane	7.84	129	60554	21.61 ug/l	100
36) trans-1,3-Dichloropropene	7.25	75	100459	22.37 ug/l	98
37) 1,1,2-Trichloroethane	7.39	97	52519	21.97 ug/l	100
38) Bromoform	9.27	173	40031	21.20 ug/l	98
40) 4-Methyl-2-Pentanone	6.74	43	74262	23.70 ug/l	100
41) 2-Hexanone	7.52	43	50747	22.55 ug/l	93
42) 1,2-Dibromoethane	8.04	107	53539	23.46 ug/l	99
43) Tetrachloroethene	7.93	166	42422	29.39 ug/l	96
44) 1,1,2,2-Tetrachloroethane	9.52	83	65563	21.96 ug/l	97
46) Toluene	7.25	92	138304	25.60 ug/l	99
47) Chlorobenzene	8.56	112	148455	24.61 ug/l	100
48) Ethylbenzene	8.70	106	67107	25.54 ug/l	96
50) Styrene	9.16	104	160371	24.82 ug/l	97
51) m,p-Xylene	8.81	106	170058	50.19 ug/l	98
52) o-Xylene	9.19	106	87300	24.77 ug/l	99
53) Xylene (total)	9.19	106	87300	24.77 ug/l	98
54) Isopropylbenzene	9.58	105	156103	23.69 ug/l	97
55) 1,3-Dichlorobenzene	10.81	146	87385	22.41 ug/l	98
56) 1,4-Dichlorobenzene	10.90	146	94237	22.25 ug/l	97
57) 1,2-Dichlorobenzene	11.21	146	92409	23.19 ug/l	98
58) 1,2-Dibromo-3-Chloropropan	11.85	75	11179	23.76 ug/l	96
59) 1,2,4-Trichlorobenzene	12.76	180	35326	20.13 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11257.D Vial: 3
Acq On : 25 Nov 2002 20:03 Operator:
Sample : VSTD020 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 20:53 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D



ANSON013 V 52

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
isc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Quant Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	63831	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	422998	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	390859	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	207319	50.00	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 100.00%			
45) Toluene-d8	7.18	98	527701	50.00	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.00%			
49) 4-Bromofluorobenzene	9.69	95	220775	50.00	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.95	85	168084	50.00	ug/l	98
3) Chloromethane	2.11	50	215446	50.00	ug/l	99
4) Bromomethane	2.50	94	96571	50.00	ug/l	97
5) Vinyl Chloride	2.21	62	145081	50.00	ug/l	99
6) Chloroethane	2.58	64	95440	50.00	ug/l	98
7) Methylene Chloride	3.52	84	143974	50.00	ug/l	99
8) Acetone	3.02	43	46738	50.00	ug/l	93
9) Carbon Disulfide	3.60	76	428297	50.00	ug/l	100
10) Methyl Acetate	3.42	43	124722	50.00	ug/l	98
11) 1,1,2-Trichlorotrifluoroet	3.29	101	93593	50.00	ug/l	97
12) 1,1-Dichloroethene	3.27	96	115847	50.00	ug/l	94
13) 1,1-Dichloroethane	4.13	63	281795	50.00	ug/l	98
14) Trichlorofluoromethane	2.86	101	184528	50.00	ug/l	99
16) Methyl tert-butyl ether	3.86	73	418414	50.00	ug/l	97
17) trans-1,2-Dichloroethene	3.90	96	130671	50.00	ug/l	88
18) cis-1,2-Dichloroethene	4.61	96	147665	50.00	ug/l	91
19) 1,2-Dichloroethene (total)	4.61	96	279706m	100.00	ug/l	
20) 2-Butanone	4.41	43	81978	50.00	ug/l	99
21) Chloroform	4.78	83	288008	50.00	ug/l	99
23) 1,2-Dichloroethane	5.36	62	257480	50.00	ug/l	100
25) 1,1,1-Trichloroethane	5.21	97	241237	50.00	ug/l	99
26) Cyclohexane	5.42	56	153051	50.00	ug/l	97
27) Carbon Tetrachloride	5.48	117	189815	50.00	ug/l	100
29) Bromodichloromethane	6.32	83	226389	50.00	ug/l	99
30) 1,2-Dichloropropane	6.17	63	169452	50.00	ug/l	99
31) cis-1,3-Dichloropropene	6.82	75	269477	50.00	ug/l	100
32) Trichloroethene	6.12	95	137111	50.00	ug/l	98
33) Methylcyclohexane	6.44	83	85567	50.00	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Quant Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
34) Benzene	5.51	78	661114	50.00	ug/l	100
35) Dibromochloromethane	7.84	129	161627	50.00	ug/l	99
36) trans-1,3-Dichloropropene	7.25	75	263147	50.00	ug/l	100
37) 1,1,2-Trichloroethane	7.40	97	136046	50.00	ug/l	98
38) Bromoform	9.27	173	111464	50.00	ug/l	100
40) 4-Methyl-2-Pentanone	6.74	43	182497	50.00	ug/l	98
41) 2-Hexanone	7.52	43	126756	50.00	ug/l	96
42) 1,2-Dibromoethane	8.04	107	140041	50.00	ug/l	99
43) Tetrachloroethene	7.93	166	108283	50.00	ug/l	97
44) 1,1,2,2-Tetrachloroethane	9.52	83	184241	50.00	ug/l	98
46) Toluene	7.25	92	376973	50.00	ug/l	99
47) Chlorobenzene	8.56	112	397513	50.00	ug/l	100
48) Ethylbenzene	8.70	106	185929	50.00	ug/l	99
50) Styrene	9.16	104	447558	50.00	ug/l	98
51) m,p-Xylene	8.81	106	461409	100.00	ug/l	99
52) o-Xylene	9.19	106	244239	50.00	ug/l	98
53) Xylene (total)	9.19	106	244239	50.00	ug/l	98
54) Isopropylbenzene	9.58	105	454751	50.00	ug/l	97
55) 1,3-Dichlorobenzene	10.81	146	248133	50.00	ug/l	97
56) 1,4-Dichlorobenzene	10.90	146	269206	50.00	ug/l	98
57) 1,2-Dichlorobenzene	11.21	146	262854	50.00	ug/l	99
58) 1,2-Dibromo-3-Chloropropan	11.85	75	31774	50.00	ug/l	94
59) 1,2,4-Trichlorobenzene	12.77	180	104468	50.00	ug/l	97

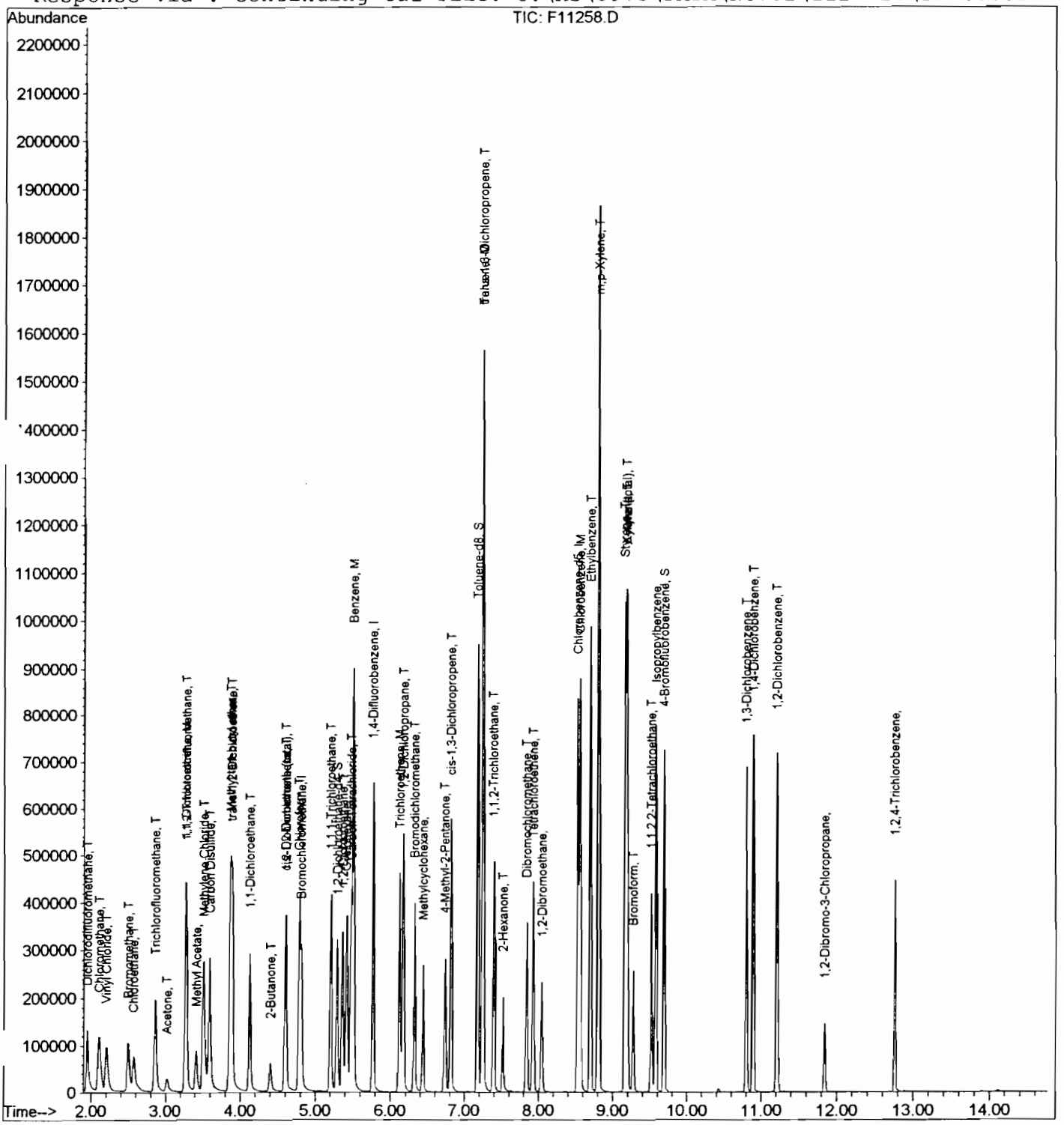
(#) = qualifier out of range (m) = manual integration

ANSON013 V 54

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D



ANSON013 V 55

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11259.D Vial: 5
Acq On : 25 Nov 2002 20:54 Operator:
Sample : VSTD100 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:22 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane	4.81	128	65773	50.00 ug/l		0.00
24) 1,4-Difluorobenzene	5.77	114	422775	50.00 ug/l		0.00
39) Chlorobenzene-d5	8.53	117	391529	50.00 ug/l		0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	423920	135.94 ug/l		0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 271.88%#			
45) Toluene-d8	7.18	98	1105741	119.97 ug/l		0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 239.94%#			
49) 4-Bromofluorobenzene	9.69	95	474092	121.59 ug/l		0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 243.18%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.95	85	290798	759.60 ug/l		98
3) Chloromethane	2.11	50	392172	304.83 ug/l		98
4) Bromomethane	2.50	94	209316	225.41 ug/l		99
5) Vinyl Chloride	2.21	62	295846	249.26 ug/l		100
6) Chloroethane	2.58	64	197220	191.67 ug/l		98
7) Methylene Chloride	3.51	84	209703	93.39 ug/l		97
8) Acetone	3.02	43	88120	117.21 ug/l		94
9) Carbon Disulfide	3.59	76	645043	113.50 ug/l		100
10) Methyl Acetate	3.42	43	176608	96.86 ug/l		99
11) 1,1,2-Trichlorotrifluoroet	3.29	101	146227	144.96 ug/l		100
12) 1,1-Dichloroethene	3.27	96	173576	116.93 ug/l	#	86
13) 1,1-Dichloroethane	4.13	63	578958	140.74 ug/l		98
14) Trichlorofluoromethane	2.87	101	352516	154.63 ug/l		99
16) Methyl tert-butyl ether	3.86	73	624827	100.09 ug/l		97
17) trans-1,2-Dichloroethene	3.89	96	185949	96.94 ug/l	#	83
18) cis-1,2-Dichloroethene	4.60	96	311813	137.67 ug/l		93
19) 1,2-Dichloroethene (total)	4.60	96	501004m	442.39 ug/l		
20) 2-Butanone	4.40	43	166316	135.02 ug/l		98
21) Chloroform	4.78	83	569710	122.79 ug/l		98
23) 1,2-Dichloroethane	5.36	62	489218	122.87 ug/l		98
25) 1,1,1-Trichloroethane	5.21	97	469146	139.58 ug/l		100
26) Cyclohexane	5.42	56	316757	188.36 ug/l		97
27) Carbon Tetrachloride	5.48	117	371511	152.71 ug/l		99
29) Bromodichloromethane	6.32	83	436971	118.06 ug/l		98
30) 1,2-Dichloropropane	6.17	63	338645	127.53 ug/l		99
31) cis-1,3-Dichloropropene	6.82	75	529353	123.41 ug/l		98
32) Trichloroethene	6.12	95	270069	136.45 ug/l		98
33) Methylcyclohexane	6.44	83	190166	193.55 ug/l		96

(#) = qualifier out of range (m) = manual integration

ANSON013 V 56

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11259.D Vial: 5
Acq On : 25 Nov 2002 20:54 Operator:
Sample : VSTD100 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:22 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

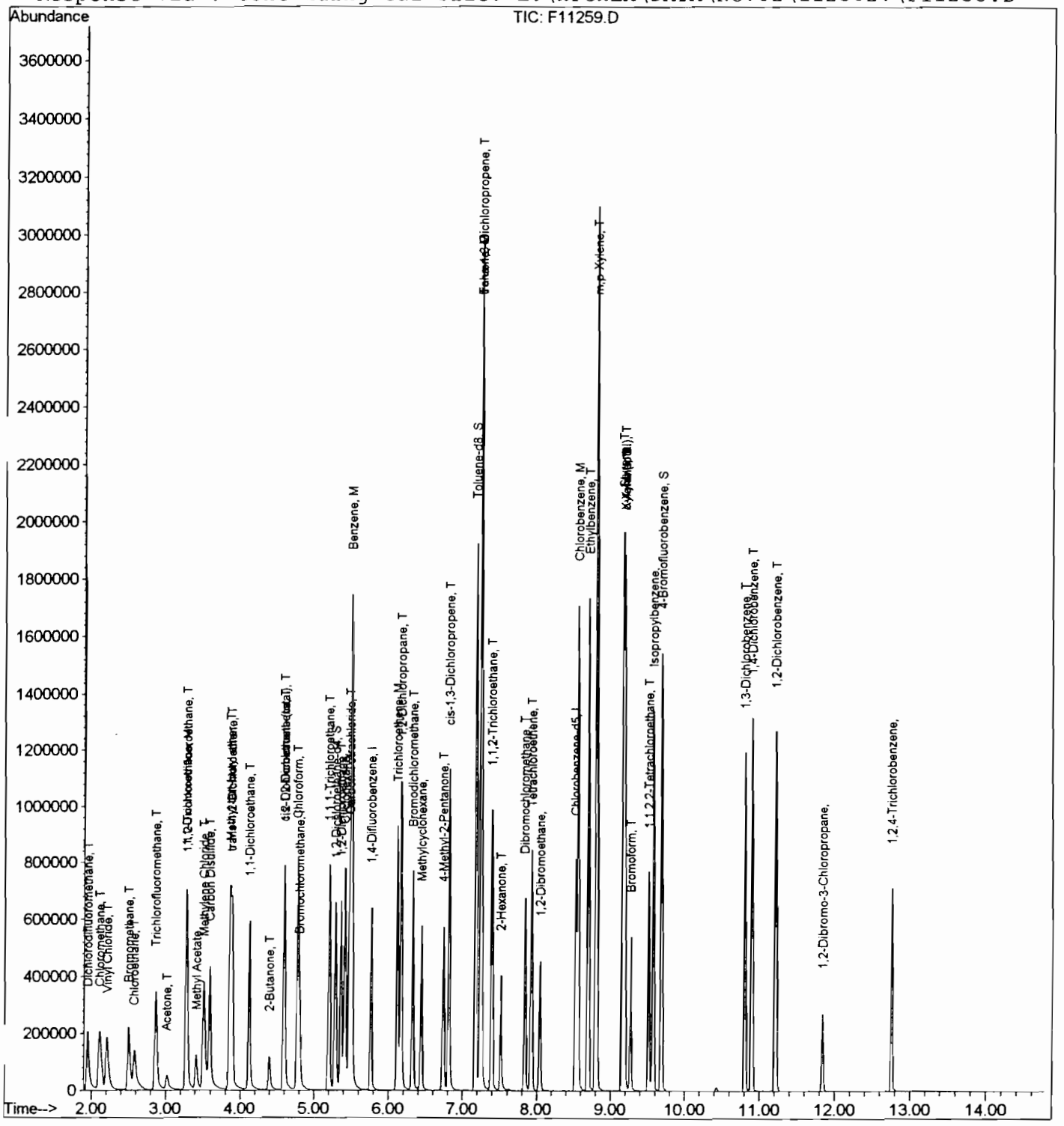
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Benzene	5.50	78	1283773	130.23 ug/l	100
35) Dibromochloromethane	7.85	129	322539	119.76 ug/l	100
36) trans-1,3-Dichloropropene	7.25	75	515720	119.49 ug/l	99
37) 1,1,2-Trichloroethane	7.40	97	272447	118.59 ug/l	98
38) Bromoform	9.28	173	224025	123.48 ug/l	99
40) 4-Methyl-2-Pentanone	6.74	43	362454	116.74 ug/l	98
41) 2-Hexanone	7.52	43	257839	115.61 ug/l	93
42) 1,2-Dibromoethane	8.05	107	279868	123.78 ug/l	99
43) Tetrachloroethene	7.93	166	207673	145.21 ug/l	96
44) 1,1,2,2-Tetrachloroethane	9.52	83	357743	120.92 ug/l	98
46) Toluene	7.25	92	712534	133.13 ug/l	99
47) Chlorobenzene	8.56	112	754577	126.24 ug/l	100
48) Ethylbenzene	8.70	106	338366	129.99 ug/l	98
50) Styrene	9.17	104	827421	129.23 ug/l	98
51) m,p-Xylene	8.81	106	817829	243.62 ug/l	100
52) o-Xylene	9.19	106	431270	123.49 ug/l	99
53) Xylene (total)	9.19	106	431270	123.49 ug/l	99
54) Isopropylbenzene	9.58	105	807962	123.76 ug/l	97
55) 1,3-Dichlorobenzene	10.81	146	431570	111.71 ug/l	98
56) 1,4-Dichlorobenzene	10.90	146	460813	109.83 ug/l	97
57) 1,2-Dichlorobenzene	11.22	146	448670	113.62 ug/l	98
58) 1,2-Dibromo-3-Chloropropan	11.85	75	59068	126.72 ug/l	93
59) 1,2,4-Trichlorobenzene	12.76	180	169834	97.67 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11259.D Vial: 5
Acq On : 25 Nov 2002 20:54 Operator:
Sample : VSTD100 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:22 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D



ANSON013 V 58

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11260.D Vial: 6
Acq On : 25 Nov 2002 21:19 Operator:
Sample : VSTD200 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:47 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	4.81	128	59486	50.00	ug/l		0.00
24) 1,4-Difluorobenzene	5.77	114	419535	50.00	ug/l		0.00
39) Chlorobenzene-d5	8.53	117	383175	50.00	ug/l		0.00
System Monitoring Compounds							
22) 1,2-Dichloroethane-d4	5.29	65	749117	265.61	ug/l		0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 531.22%#				
45) Toluene-d8	7.18	98	1996090	221.30	ug/l		0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 442.60%#				
49) 4-Bromofluorobenzene	9.69	95	870181	228.05	ug/l		0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 456.10%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.95	85	663068	1915.06	ug/l		98
3) Chloromethane	2.11	50	815689	701.02	ug/l		98
4) Bromomethane	2.51	94	457424	544.67	ug/l		99
5) Vinyl Chloride	2.21	62	634952	591.51	ug/l		99
6) Chloroethane	2.58	64	431110	463.27	ug/l		100
7) Methylene Chloride	3.51	84	477682	235.23	ug/l		97
8) Acetone	3.02	43	168019	247.11	ug/l		97
9) Carbon Disulfide	3.59	76	1449008	281.92	ug/l		100
10) Methyl Acetate	3.42	43	402154	243.88	ug/l		98
11) 1,1,2-Trichlorotrifluoroet	3.28	101	325060	356.31	ug/l		100
12) 1,1-Dichloroethene	3.27	96	350368	260.98	ug/l	#	85
13) 1,1-Dichloroethane	4.13	63	1070416	287.72	ug/l		99
14) Trichlorofluoromethane	2.86	101	817725	396.59	ug/l		100
16) Methyl tert-butyl ether	3.87	73	1554174	275.26	ug/l		97
17) trans-1,2-Dichloroethene	3.89	96	493365	284.40	ug/l		88
18) cis-1,2-Dichloroethene	4.60	96	582150	284.19	ug/l		92
19) 1,2-Dichloroethene (total)	4.60	96	1078647m	1053.13	ug/l		
20) 2-Butanone	4.40	43	314481	282.28	ug/l		98
21) Chloroform	4.78	83	1017781	242.56	ug/l		99
23) 1,2-Dichloroethane	5.36	62	932014	258.81	ug/l		100
25) 1,1,1-Trichloroethane	5.21	97	870872	261.10	ug/l		100
26) Cyclohexane	5.42	56	788731	472.63	ug/l		96
27) Carbon Tetrachloride	5.48	117	779571	322.92	ug/l		100
29) Bromodichloromethane	6.33	83	888955	242.02	ug/l		99
30) 1,2-Dichloropropane	6.17	63	685886	260.30	ug/l		98
31) cis-1,3-Dichloropropene	6.82	75	1063547	249.87	ug/l		99
32) Trichloroethene	6.12	95	566464	288.41	ug/l		96
33) Methylcyclohexane	6.44	83	461388	473.22	ug/l		96

(#) = qualifier out of range (m) = manual integration

ANSON013 V 59

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11260.D Vial: 6
Acq On : 25 Nov 2002 21:19 Operator:
Sample : VSTD200 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:47 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Nov 06 09:27:31 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D
DataAcq Meth : OLMW1125

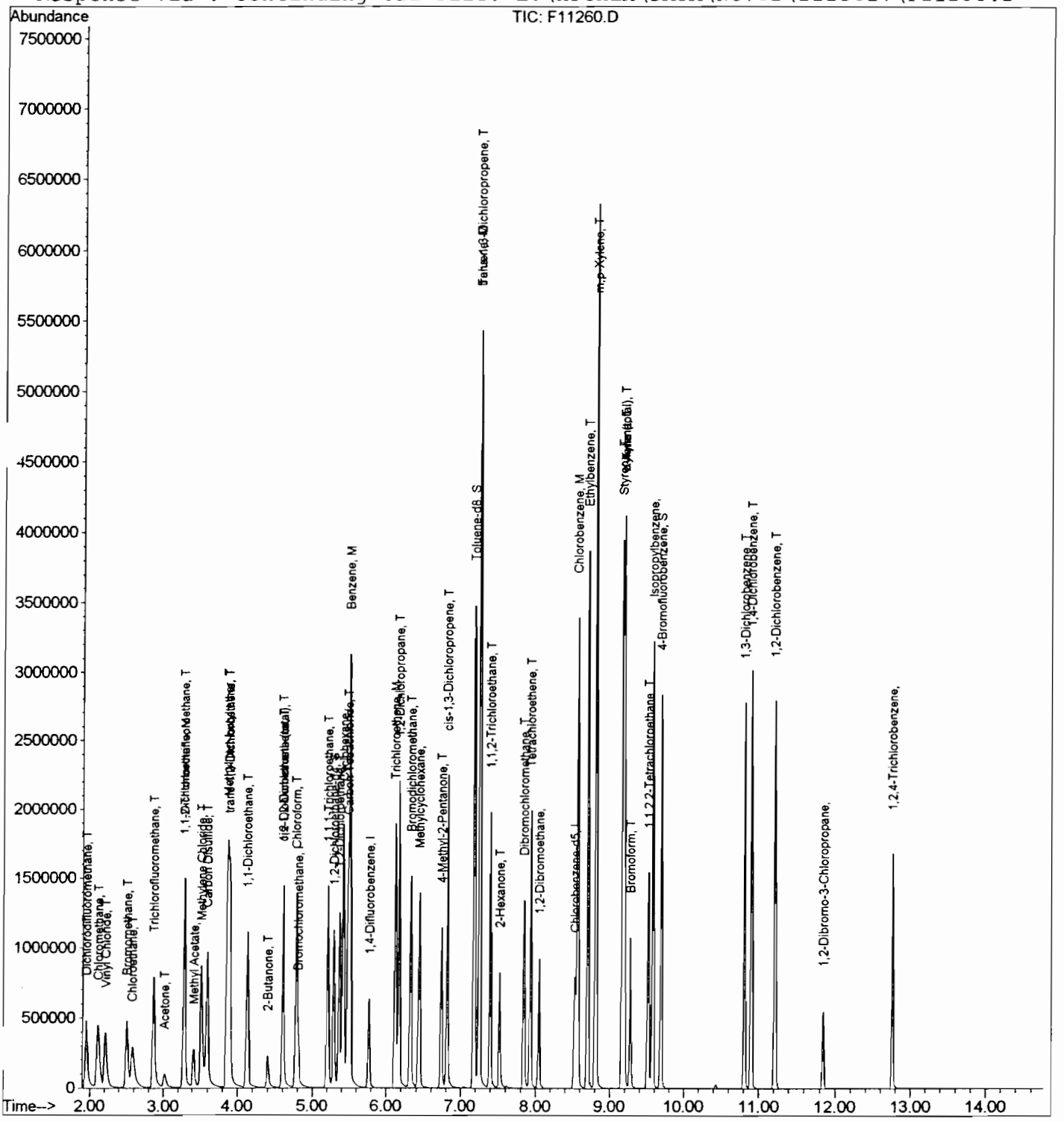
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Benzene	5.51	78	2378854	243.17 ug/l	100
35) Dibromochloromethane	7.85	129	643448	240.76 ug/l	98
36) trans-1,3-Dichloropropene	7.25	75	983589	229.65 ug/l	99
37) 1,1,2-Trichloroethane	7.40	97	540443	237.06 ug/l	100
38) Bromoform	9.28	173	451542	250.80 ug/l	99
40) 4-Methyl-2-Pentanone	6.74	43	734366	241.68 ug/l	99
41) 2-Hexanone	7.52	43	515086	236.00 ug/l	94
42) 1,2-Dibromoethane	8.05	107	573773	259.29 ug/l	99
43) Tetrachloroethene	7.93	166	501553	358.35 ug/l	96
44) 1,1,2,2-Tetrachloroethane	9.52	83	705741	243.74 ug/l	98
46) Toluene	7.25	92	1354279	258.56 ug/l	98
47) Chlorobenzene	8.56	112	1543246	263.80 ug/l	99
48) Ethylbenzene	8.70	106	752946	295.56 ug/l	100
50) Styrene	9.17	104	1700674	271.42 ug/l	96
51) m,p-Xylene	8.81	106	1687656	513.69 ug/l	98
52) o-Xylene	9.19	106	924042	270.35 ug/l	100
53) Xylene (total)	9.19	106	924042	270.35 ug/l	98
54) Isopropylbenzene	9.58	105	1939625	303.59 ug/l	96
55) 1,3-Dichlorobenzene	10.81	146	1007433	266.45 ug/l	97
56) 1,4-Dichlorobenzene	10.90	146	1078230	262.59 ug/l	97
57) 1,2-Dichlorobenzene	11.22	146	1022672	264.62 ug/l	99
58) 1,2-Dibromo-3-Chloropropan	11.85	75	122628	268.82 ug/l	96
59) 1,2,4-Trichlorobenzene	12.76	180	388656	228.38 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11260.D Vial: 6
Acq On : 25 Nov 2002 21:19 Operator:
Sample : VSTD200 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 25 21:47 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112302V\F11235.D



ANSON013 V 61

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Instrument ID: HP5973-1 Calibration Date: 11/25/02 Time: 20:28

Lab File ID: V\F11258.D Init. Calib. Date(s): 11/25/02 11/25/02

EPA Sample No. (VSTD050##): VSTD050 Init. Calib. Times: 19:37 21:19

Heated Purge: (Y/N) N

GC Column: HP-VOCOL ID: .2 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	3.549	3.375		-4.9	
Bromomethane	1.759	1.513	0.100	-14.0	25.0
Vinyl chloride	2.645	2.273	0.100	-14.1	25.0
Chloroethane	1.753	1.495		-14.7	
Methylene chloride	2.165	2.256		4.2	
Acetone	0.767	0.732		-4.6	
1,1-Dichloroethene	1.708	1.815	0.100	6.3	25.0
Carbon disulfide	6.410	6.710		4.7	
1,1-Dichloroethane	4.563	4.415	0.200	-3.2	25.0
1,2-Dichloroethene (total)	4.506	2.191		-51.4	
Chloroform	4.462	4.512	0.200	1.1	25.0
1,2-Dichloroethane	4.011	4.034	0.100	0.6	25.0
2-Butanone	1.321	1.284		-2.8	
1,1,1-Trichloroethane	0.562	0.570	0.100	1.4	25.0
Carbon tetrachloride	0.461	0.449	0.100	-2.5	25.0
Bromodichloromethane	0.540	0.535	0.200	-0.9	25.0
1,2-Dichloropropane	0.408	0.401		-1.6	
cis-1,3-Dichloropropene	0.639	0.637	0.200	-0.3	25.0
Trichloroethene	0.333	0.324	0.300	-2.8	25.0
Dibromochloromethane	0.382	0.382	0.100	0.0	25.0
1,1,2-Trichloroethane	0.325	0.322	0.100	-1.0	25.0
Benzene	1.524	1.563	0.500	2.5	25.0
trans-1,3-Dichloropropene	0.615	0.622	0.100	1.2	25.0
Bromoform	0.260	0.264	0.100	1.7	25.0
4-Methyl-2-pentanone	0.464	0.467		0.6	
2-Hexanone	0.321	0.324		0.8	
Tetrachloroethene	0.293	0.277	0.200	-5.4	25.0
1,1,2,2-Tetrachloroethane	0.450	0.471	0.300	4.7	25.0
Toluene	0.939	0.964	0.400	2.7	25.0
Chlorobenzene	1.007	1.017	0.500	1.0	25.0
Ethylbenzene	0.470	0.476	0.100	1.3	25.0
Styrene	1.103	1.145	0.300	3.8	25.0
Xylene (total)	0.598	0.625	0.300	4.6	25.0

All other compounds must meet a minimum RRF of 0.010.

7B

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: H2M LABS, INC. Contract: _____

Lab Code: 10478 Case No.: ANSON SAS No.: _____ SDG No.: ANSON013

Instrument ID: HP5973-1 Calibration Date: 11/25/02 Time: 20:28

Lab File ID: V\F11258.D Init. Calib. Date(s): 11/25/02 11/25/02

EPA Sample No. (VSTD050##): VSTD050 Init. Calib. Times: 19:37 21:19

Heated Purge: (Y/N) N

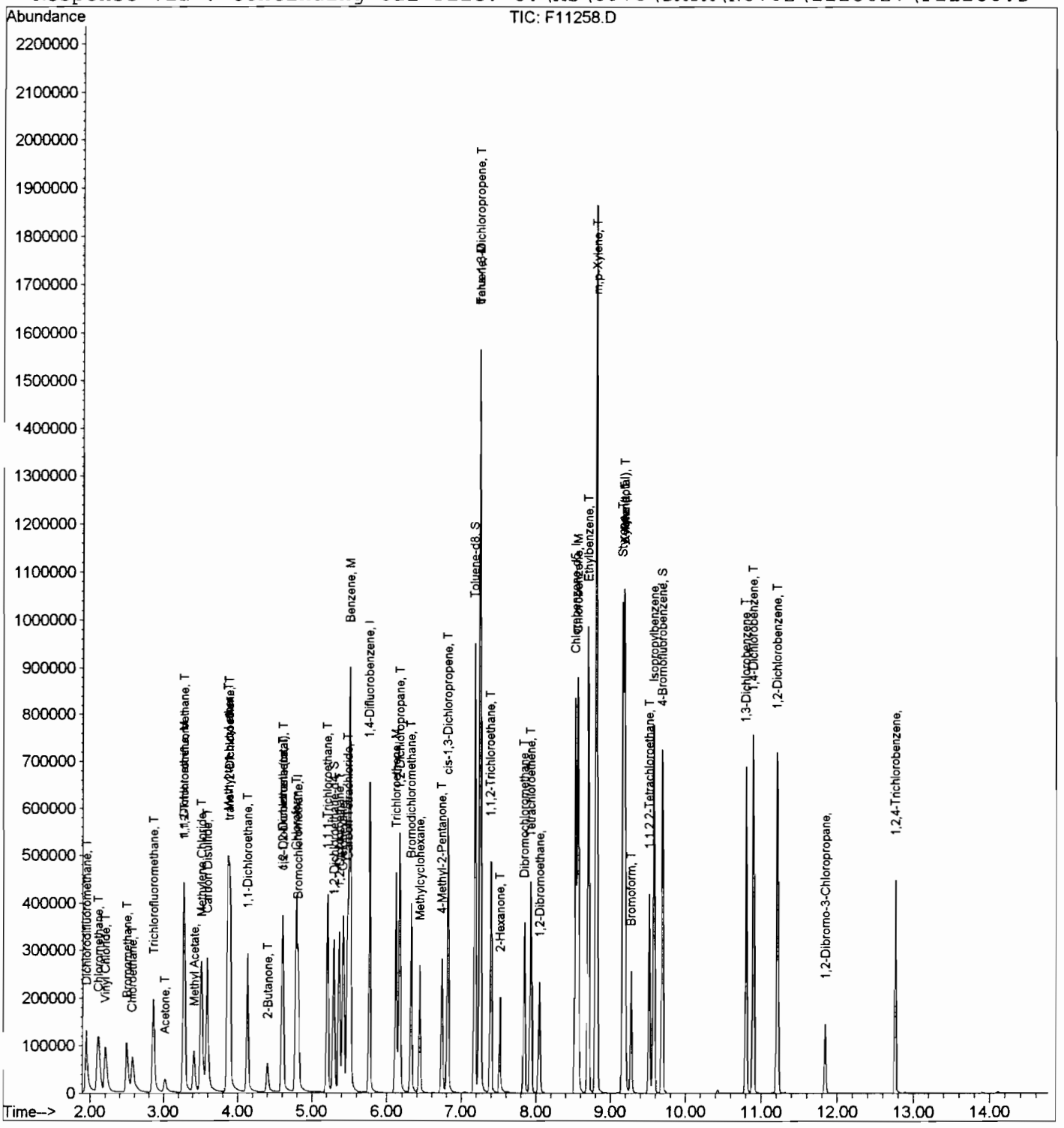
GC Column: HP-VOCOL ID: .2 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	3.343	3.248		-2.8	
Toluene-d8	1.397	1.350		-3.4	
4-Bromofluorobenzene	0.588	0.565	0.200	-4.0	25.0

All other compounds must meet a minimum RRF of 0.010.

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D



ANSON013 V 64

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Quant Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	63831	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	422998	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	390859	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	207319	50.00	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 100.00%			
45) Toluene-d8	7.18	98	527701	50.00	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.00%			
49) 4-Bromofluorobenzene	9.69	95	220775	50.00	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.95	85	168084	50.00	ug/l	98
3) Chloromethane	2.11	50	215446	50.00	ug/l	99
4) Bromomethane	2.50	94	96571	50.00	ug/l	97
5) Vinyl Chloride	2.21	62	145081	50.00	ug/l	99
6) Chloroethane	2.58	64	95440	50.00	ug/l	98
7) Methylene Chloride	3.52	84	143974	50.00	ug/l	99
8) Acetone	3.02	43	46738	50.00	ug/l	93
9) Carbon Disulfide	3.60	76	428297	50.00	ug/l	100
10) Methyl Acetate	3.42	43	124722	50.00	ug/l	98
11) 1,1,2-Trichlorotrifluoroet	3.29	101	93593	50.00	ug/l	97
12) 1,1-Dichloroethene	3.27	96	115847	50.00	ug/l	94
13) 1,1-Dichloroethane	4.13	63	281795	50.00	ug/l	98
14) Trichlorofluoromethane	2.86	101	184528	50.00	ug/l	99
16) Methyl tert-butyl ether	3.86	73	418414	50.00	ug/l	97
17) trans-1,2-Dichloroethene	3.90	96	130671	50.00	ug/l	88
18) cis-1,2-Dichloroethene	4.61	96	147665	50.00	ug/l	91
19) 1,2-Dichloroethene (total)	4.61	96	279706 mjf 11/05/02	100.00	ug/l	
20) 2-Butanone	4.41	43	81978	50.00	ug/l	99
21) Chloroform	4.78	83	288008	50.00	ug/l	99
23) 1,2-Dichloroethane	5.36	62	257480	50.00	ug/l	100
25) 1,1,1-Trichloroethane	5.21	97	241237	50.00	ug/l	99
26) Cyclohexane	5.42	56	153051	50.00	ug/l	97
27) Carbon Tetrachloride	5.48	117	189815	50.00	ug/l	100
29) Bromodichloromethane	6.32	83	226389	50.00	ug/l	99
30) 1,2-Dichloropropane	6.17	63	169452	50.00	ug/l	99
31) cis-1,3-Dichloropropene	6.82	75	269477	50.00	ug/l	100
32) Trichloroethene	6.12	95	137111	50.00	ug/l	98
33) Methylcyclohexane	6.44	83	85567	50.00	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11258.D Vial: 4
Acq On : 25 Nov 2002 20:28 Operator:
Sample : VSTD050 Inst : GC/MS Ins
Misc : ,,,ICAL,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:31 2002 Quant Results File: OLMW1125.RES

Quant Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: O:\MS\5973\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Benzene	5.51	78	661114	50.00 ug/l	100
35) Dibromochloromethane	7.84	129	161627	50.00 ug/l	99
36) trans-1,3-Dichloropropene	7.25	75	263147	50.00 ug/l	100
37) 1,1,2-Trichloroethane	7.40	97	136046	50.00 ug/l	98
38) Bromoform	9.27	173	111464	50.00 ug/l	100
40) 4-Methyl-2-Pentanone	6.74	43	182497	50.00 ug/l	98
41) 2-Hexanone	7.52	43	126756	50.00 ug/l	96
42) 1,2-Dibromoethane	8.04	107	140041	50.00 ug/l	99
43) Tetrachloroethene	7.93	166	108283	50.00 ug/l	97
44) 1,1,2,2-Tetrachloroethane	9.52	83	184241	50.00 ug/l	98
46) Toluene	7.25	92	376973	50.00 ug/l	99
47) Chlorobenzene	8.56	112	397513	50.00 ug/l	100
48) Ethylbenzene	8.70	106	185929	50.00 ug/l	99
50) Styrene	9.16	104	447558	50.00 ug/l	98
51) m,p-Xylene	8.81	106	461409	100.00 ug/l	99
52) o-Xylene	9.19	106	244239	50.00 ug/l	98
53) Xylene (total)	9.19	106	244239	50.00 ug/l	98
54) Isopropylbenzene	9.58	105	454751	50.00 ug/l	97
55) 1,3-Dichlorobenzene	10.81	146	248133	50.00 ug/l	97
56) 1,4-Dichlorobenzene	10.90	146	269206	50.00 ug/l	98
57) 1,2-Dichlorobenzene	11.21	146	262854	50.00 ug/l	99
58) 1,2-Dibromo-3-Chloropropan	11.85	75	31774	50.00 ug/l	94
59) 1,2,4-Trichlorobenzene	12.77	180	104468	50.00 ug/l	97

(#) = qualifier out of range (m) = manual integration

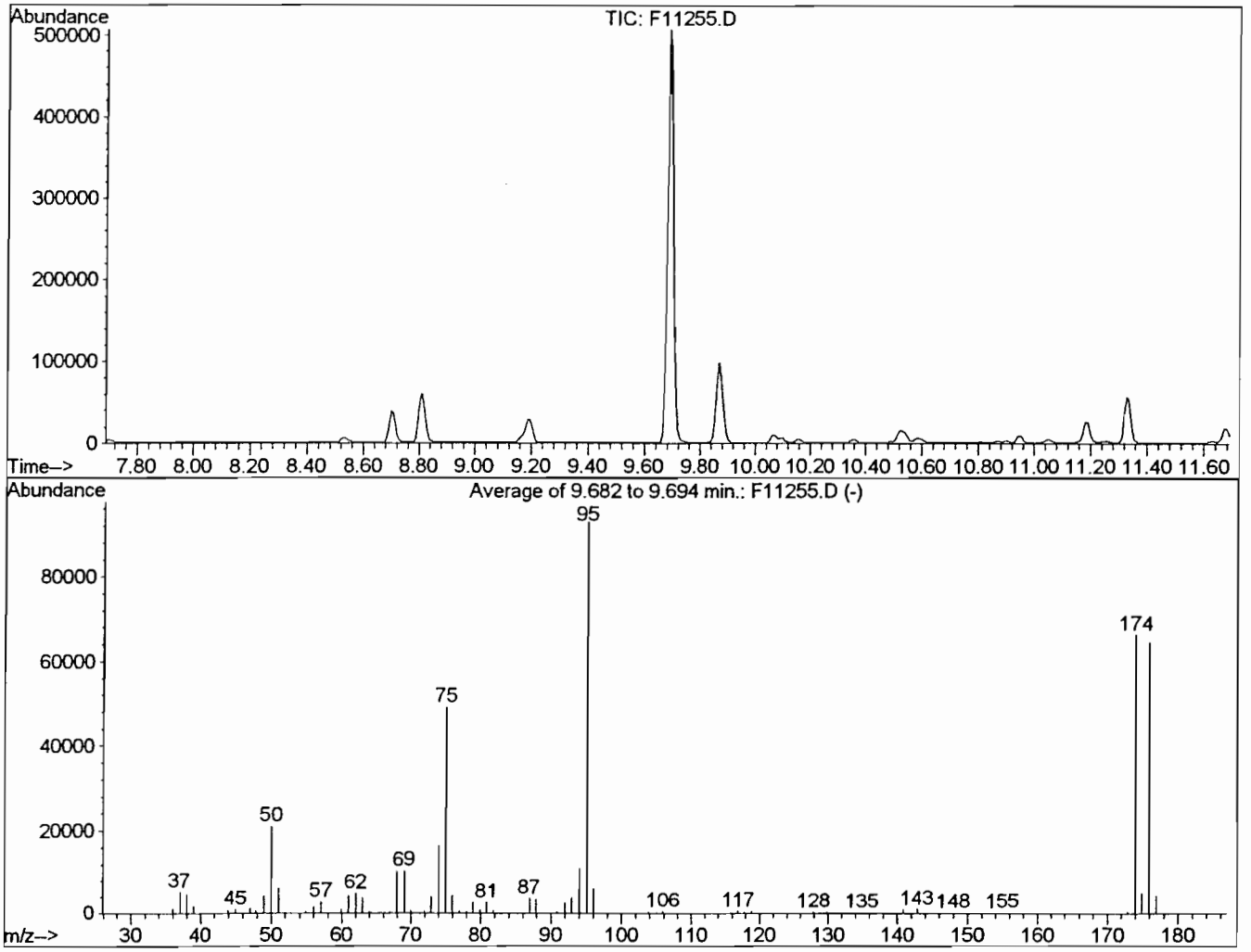
H2M LABS, INC.

IV. RAW QC DATA PACKAGE FOR VOLATILE ORGANICS

A. TUNING
B. BLANK
C. MATRIX SPIKE BLANK
D. SPIKE AND SPIKE DUPLICATE
E. COPY OF CALCULATIONS

CLPBFB

Data File : O:\MS\5973\DATA\NOV02\112502V\F11255.D Vial: 1
Acq On : 25 Nov 2002 18:50 Operator:
Sample : 50 NG BFB Inst : GC/MS Ins
Misc : ,,,TUNE,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration



AutoFind: Scans 1281, 1282, 1283; Background Corrected with Scan 1274

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.5	20933	PASS
75	95	30	60	52.9	49168	PASS
95	95	100	100	100.0	92947	PASS
96	95	5	9	6.7	6220	PASS
173	174	0.00	2	0.5	352	PASS
174	95	50	100	71.5	66483	PASS
175	174	5	9	7.6	5069	PASS
176	174	95	101	97.4	64776	PASS
177	176	5	9	6.8	4398	PASS

F11255.D OLMW1125.M Wed Dec 11 14:38:29 2002 SYS1

ANSON013 V 68

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1F

EPA SAMPLE NO.

VBLK112502

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

b Name H2M LABS, INC. Contract _____

Lab Code 10478 Case No. ANSON SAS No. _____ SDG No. ANSON013

Matrix: (soil/water) WATER Lab Sample ID: VBLK112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11264.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/25/02

GC Column HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µl) Soil Aliquot Volume: 0 (µL)

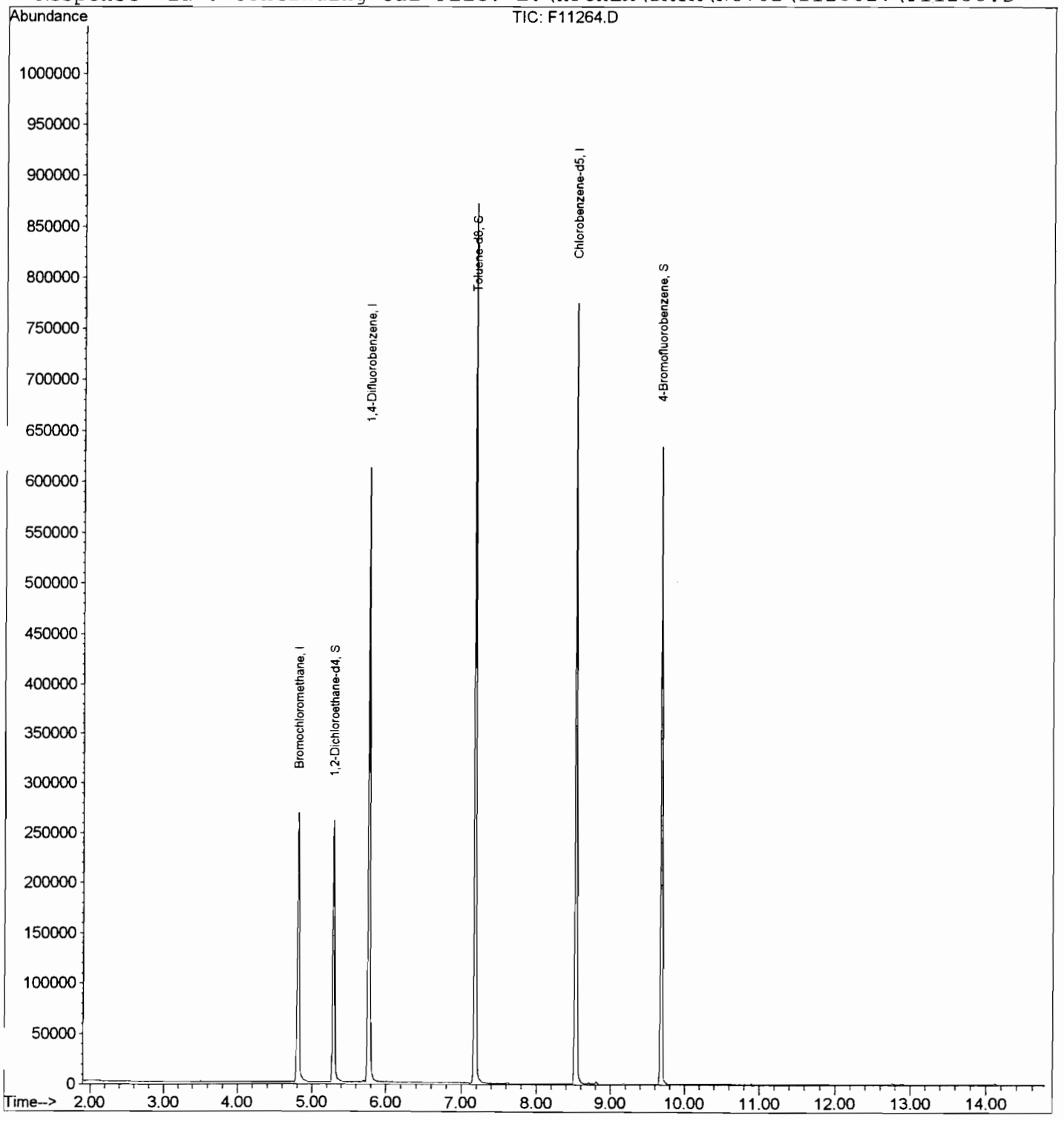
Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11264.D Vial: 10
Acq On : 25 Nov 2002 23:48 Operator:
Sample : VBLK112502 Inst : GC/MS Ins
Misc : ,,,MBLK,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 21:33 2002 Quant Results File: OLMW1125.RES

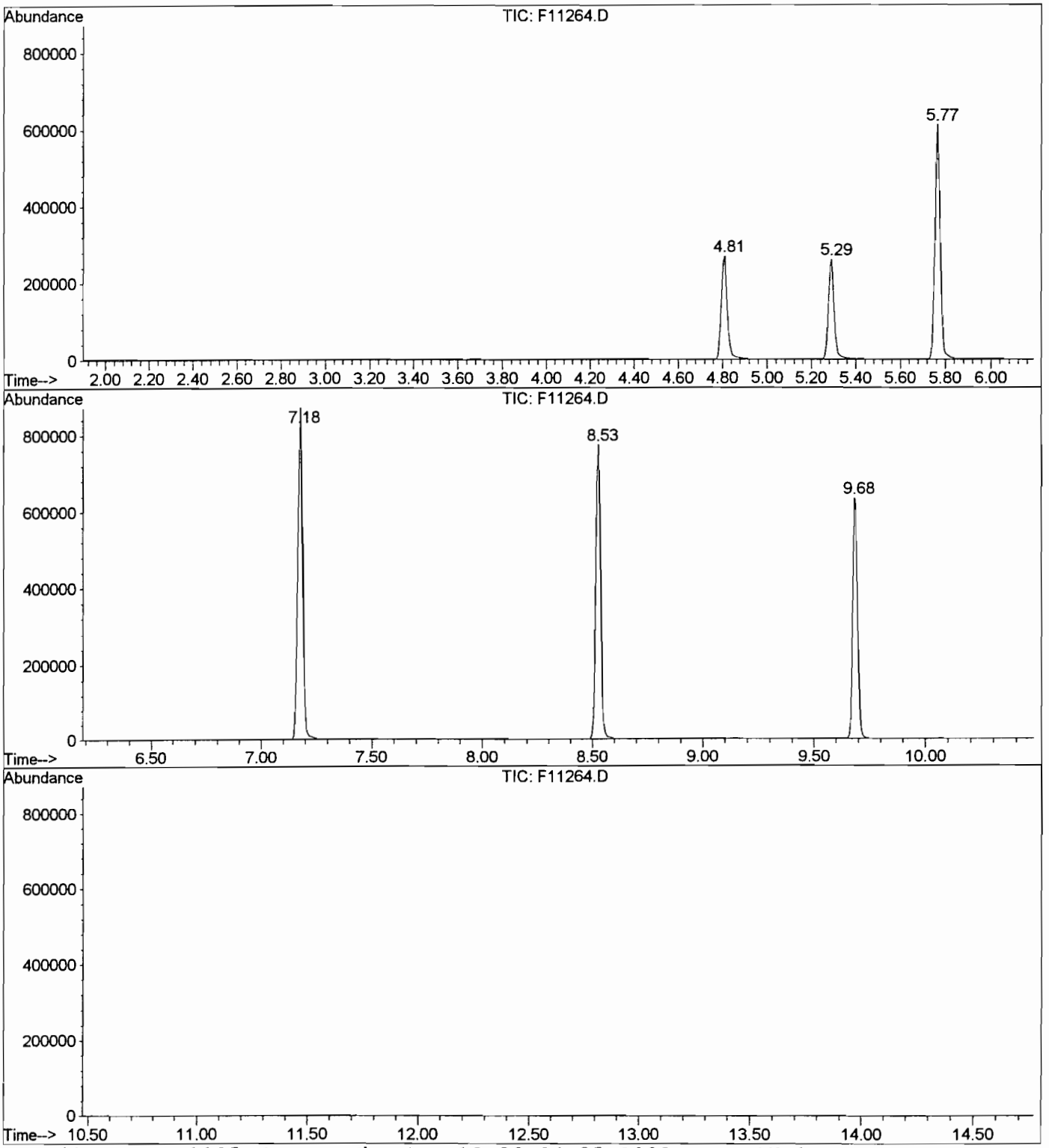
Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 72

LSC Report - Integrated Chromatogram

File : O:\MS\5973\DATA\NOV02\112502V\F11264.D
Operator :
Acquired : 25 Nov 2002 23:48 using AcqMethod OLMW1125
Instrument : GC/MS Ins
Sample Name: VBLK112502
Misc Info : ,,,MBLK,,
Vial Number: 10
Quant File :OLMW1125.RES (RTE Integrator)



F11264.D OLMW1125.M Thu Dec 12 20:24:35 2002 SYS1

ANSON013 V 73

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11264.D Vial: 10
Acq On : 25 Nov 2002 23:48 Operator:
Sample : VBLK112502 Inst : GC/MS Ins
Misc : ,,,MBLK,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 21:33 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	62635	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	397536	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	360309	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	177964	43.74	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 87.48%			
45) Toluene-d8	7.18	98	475300	48.85	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 97.70%			
49) 4-Bromofluorobenzene	9.68	95	196681	48.32	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 96.64%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Tentatively Identified Compound (LSC) summary

Operator ID: Date Acquired: 25 Nov 2002 23:48
Data File: O:\MS\5973\DATA\NOV02\112502V\F11264.D
Sample: VBLK112502
Misc: ,,,MBLK,,
Method: C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title: VOA Standards for 5 point calibration
Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
F11264.D OLMW1125.M	Thu Dec 12 20:24:35 2002				SYS1			

ANSON013 V 75

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: MSB112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11266.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	38	
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: MSB112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11266.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

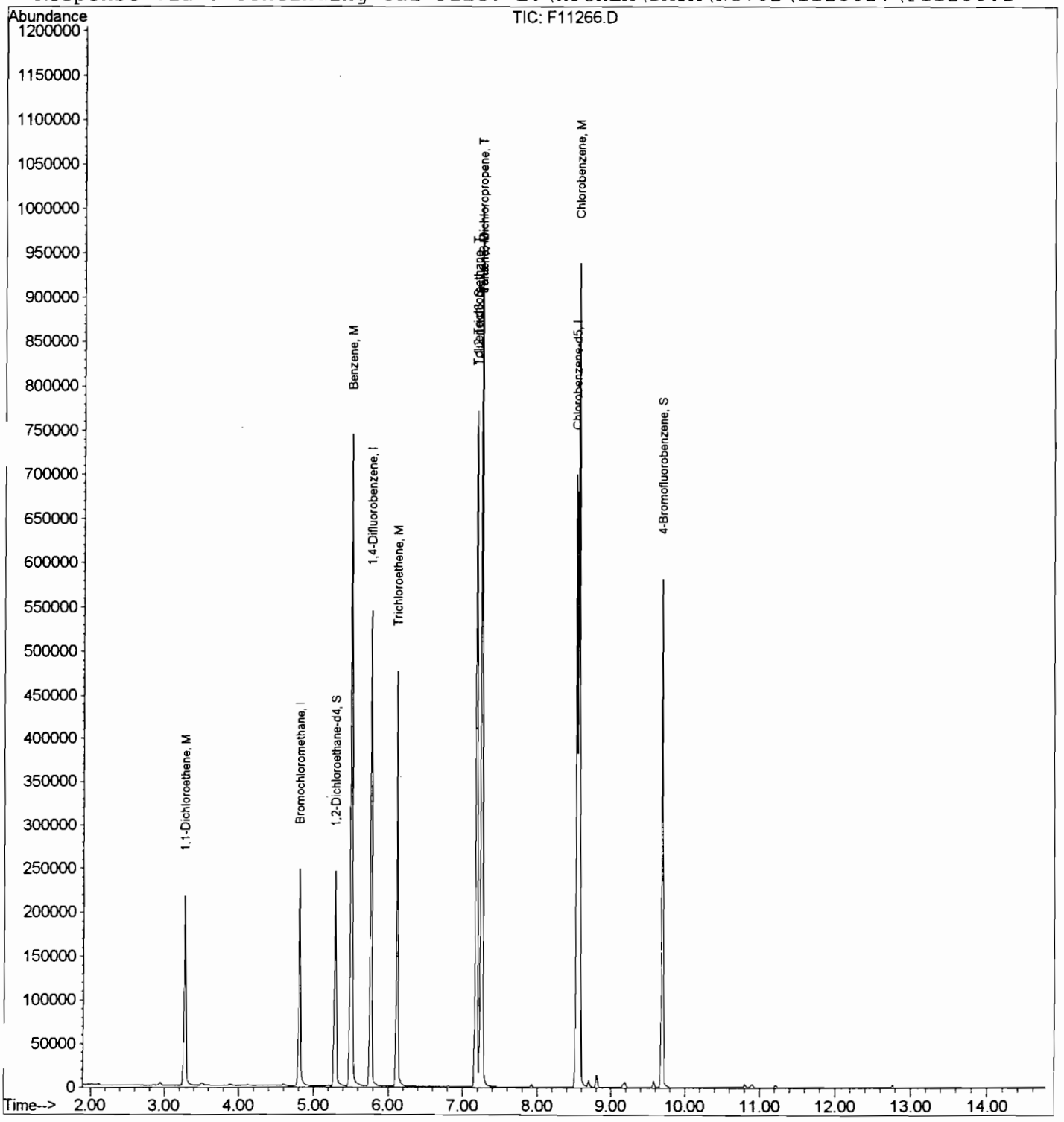
Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	59	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	5	J
71-43-2	Benzene	50	
10061-02-6	trans-1,3-Dichloropropene	1	J
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	56	
108-90-7	Chlorobenzene	62	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11266.D Vial: 12
Acq On : 26 Nov 2002 2:11 Operator:
Sample : MSB112502 Inst : GC/MS Ins
Misc : ,,,LCS,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 2:26 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 78

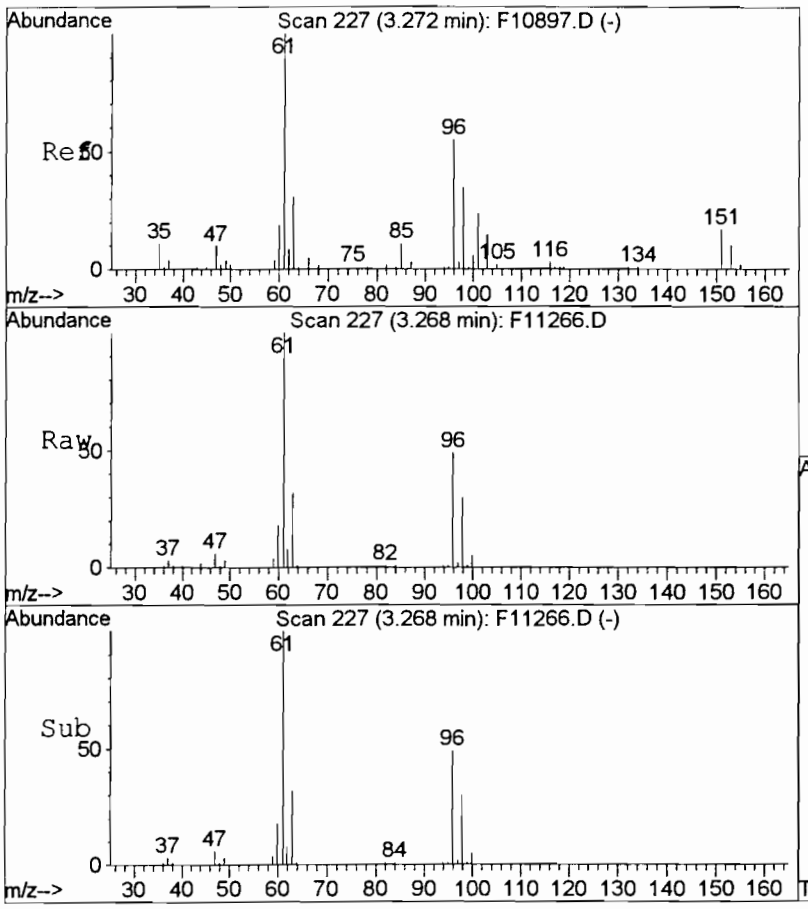
Quantitation Report (Not Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11266.D Vial: 12
Acq On : 26 Nov 2002 2:11 Operator:
Sample : MSB112502 Inst : GC/MS Ins
Misc : ,,,LCS,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 2:26 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	56515	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	362168	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.52	117	332558	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	160638	43.76	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 87.52%			
45) Toluene-d8	7.18	98	437002	48.67	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 97.34%			
49) 4-Bromofluorobenzene	9.69	95	179108	47.67	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 95.34%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.27	96	78168	38.11	ug/l #	88
32) Trichloroethene	6.11	95	137781	58.68	ug/l	96
34) Benzene	5.50	78	560547	49.51	ug/l	100
36) trans-1,3-Dichloropropene	7.25	75	5051	1.12	ug/l #	1
37) 1,1,2-Trichloroethane	7.19	97	11019	4.73	ug/l #	1
46) Toluene	7.25	92	360236	56.16	ug/l	99
47) Chlorobenzene	8.56	112	416202	61.53	ug/l	100

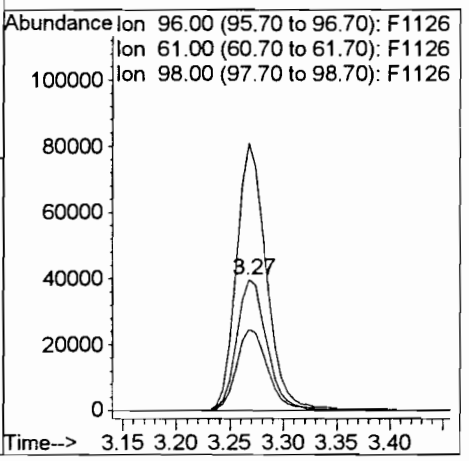
(#) = qualifier out of range (m) = manual integration

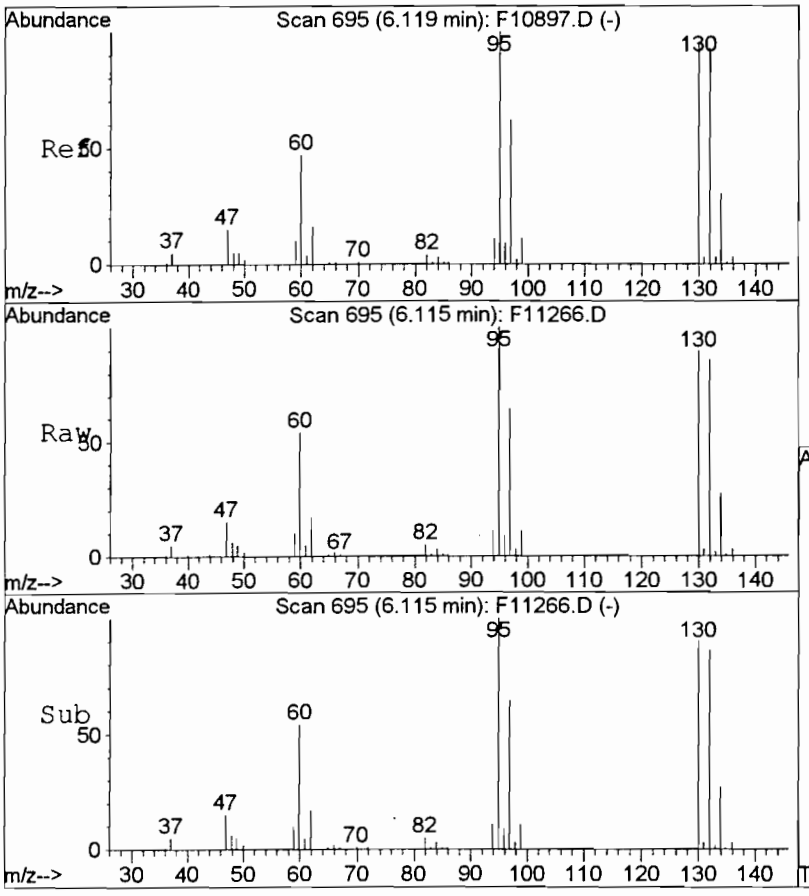


#12
1,1-Dichloroethene
Concen: 38.11 ug/l
RT: 3.27 min Scan# 227
Delta R.T. -0.01 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 96 Resp: 78168

Ion	Ratio	Lower	Upper
96	100		
61	204.0	161.9	201.9#
98	62.1	44.3	84.3

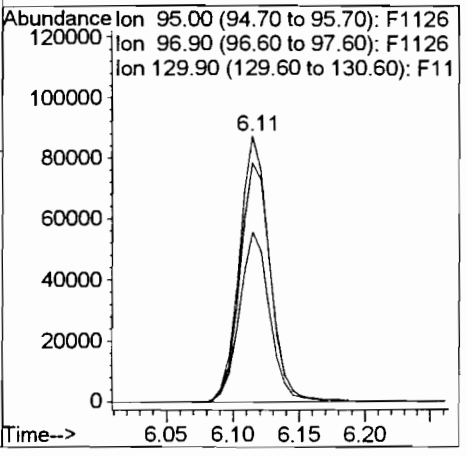




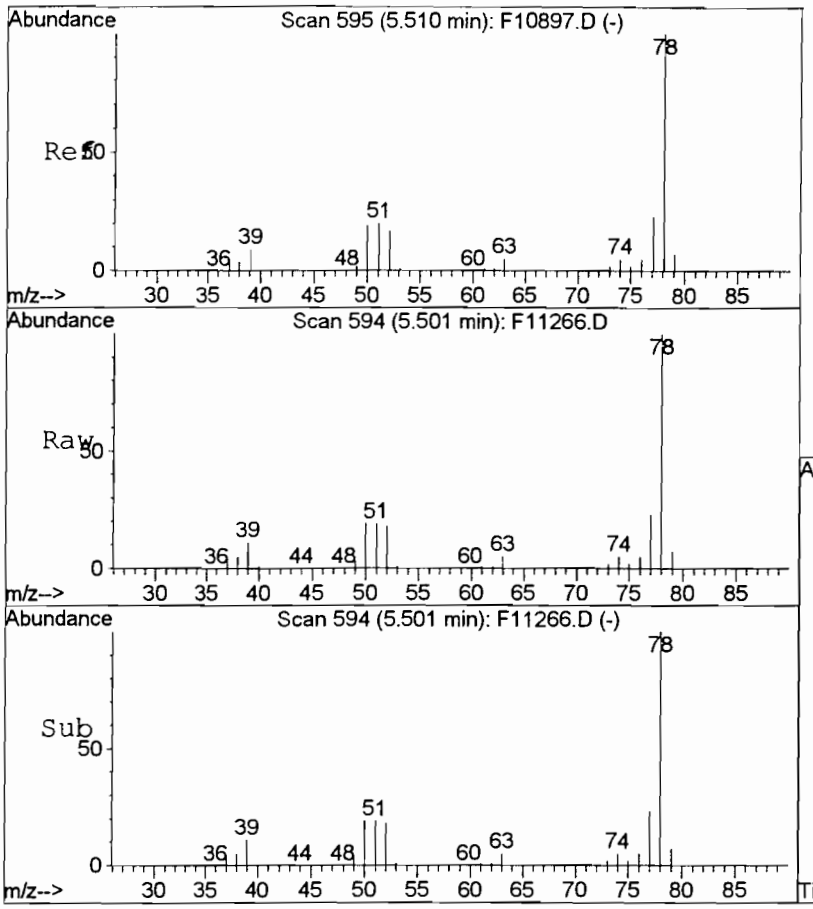
#32
Trichloroethene
Concen: 58.68 ug/l
RT: 6.11 min Scan# 695
Delta R.T. -0.01 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 95 Resp: 137781

Ion	Ratio	Lower	Upper
95	100		
97	63.6	42.4	82.4
130	89.9	75.3	115.3

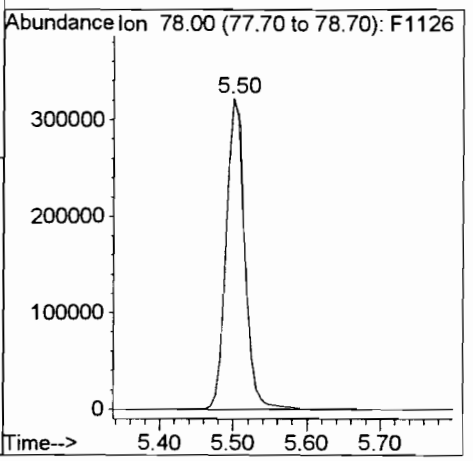


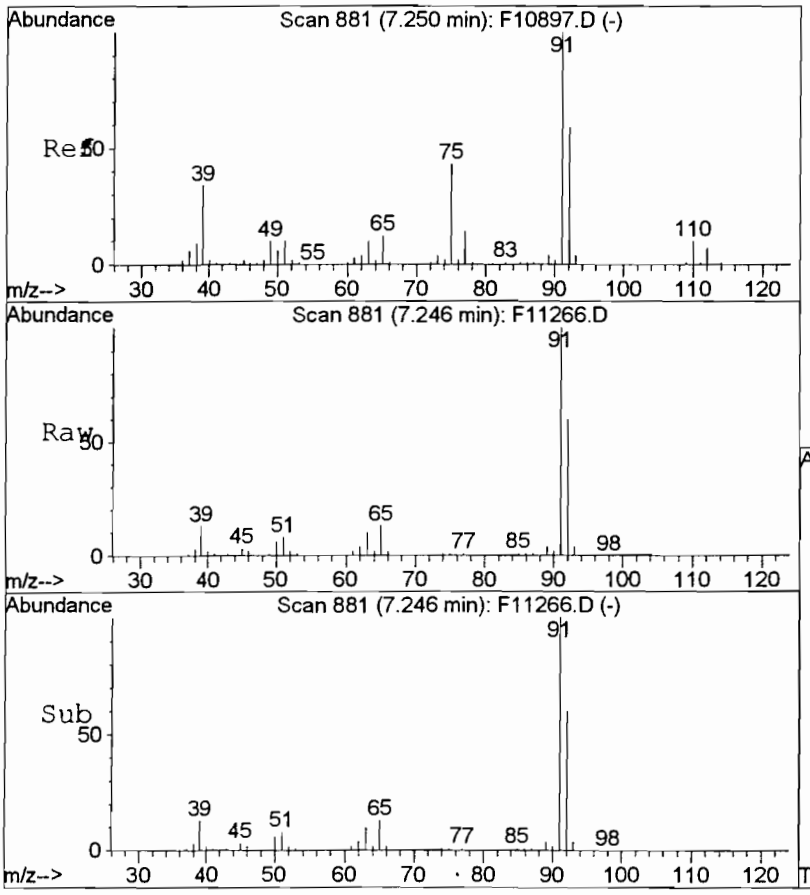
ANSON013 V 80



#34
Benzene
Concen: 49.51 ug/l
RT: 5.50 min Scan# 594
Delta R.T. -0.01 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 78 Resp: 560547

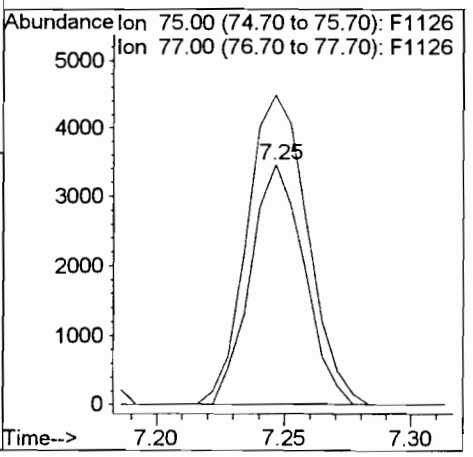




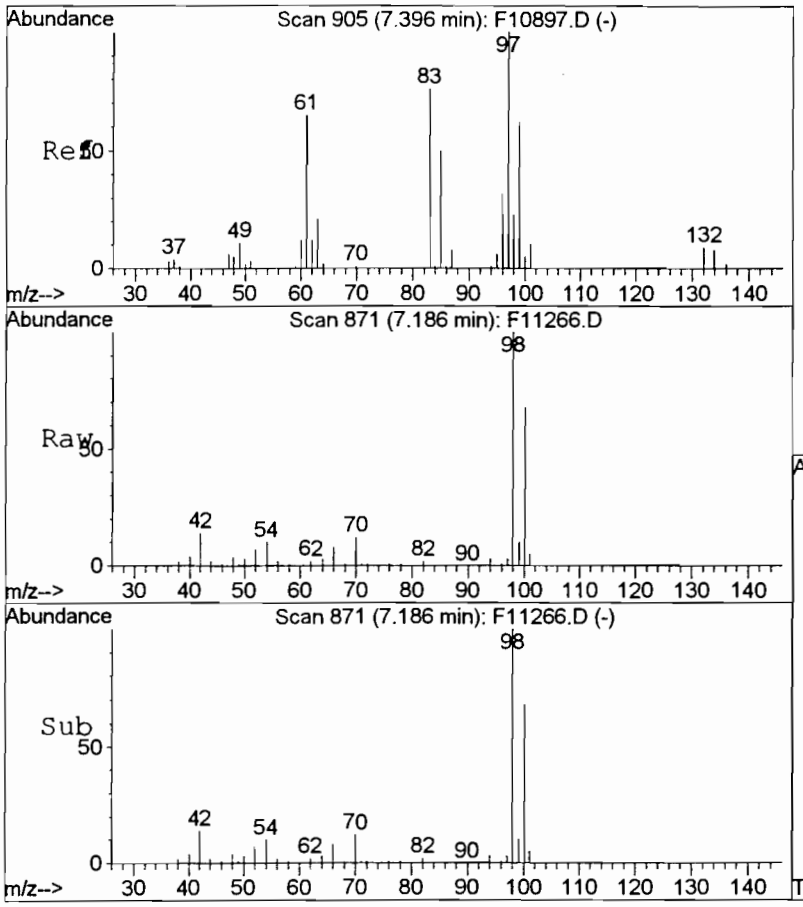
#36
trans-1,3-Dichloropropene
Concen: 1.12 ug/l
RT: 7.25 min Scan# 881
Delta R.T. -0.00 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 75 Resp: 5051

Ion	Ratio	Lower	Upper
75	100		
77	129.9	13.4	53.4#



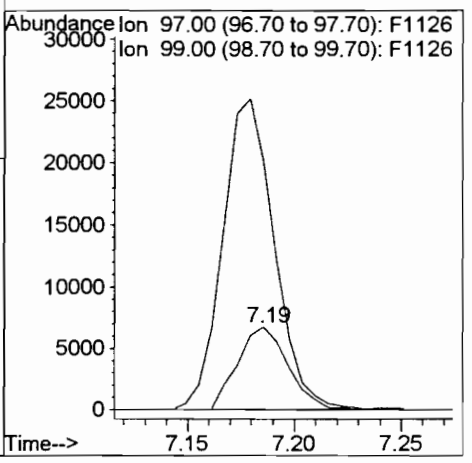
ANSON013 V 81

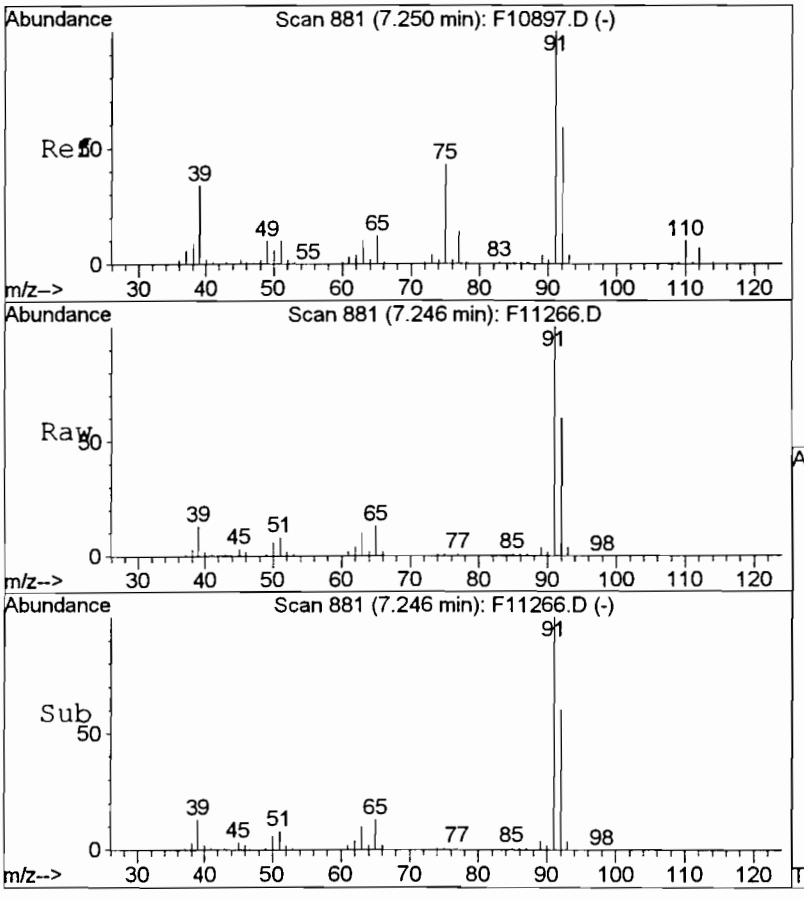


#37
1,1,2-Trichloroethane
Concen: 4.73 ug/l
RT: 7.19 min Scan# 871
Delta R.T. -0.21 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 97 Resp: 11019

Ion	Ratio	Lower	Upper
97	100		
99	298.3	42.1	82.1#

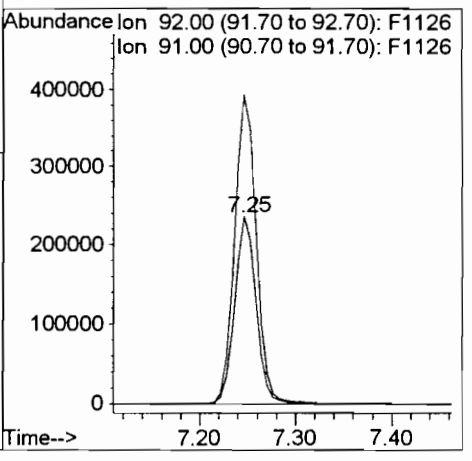




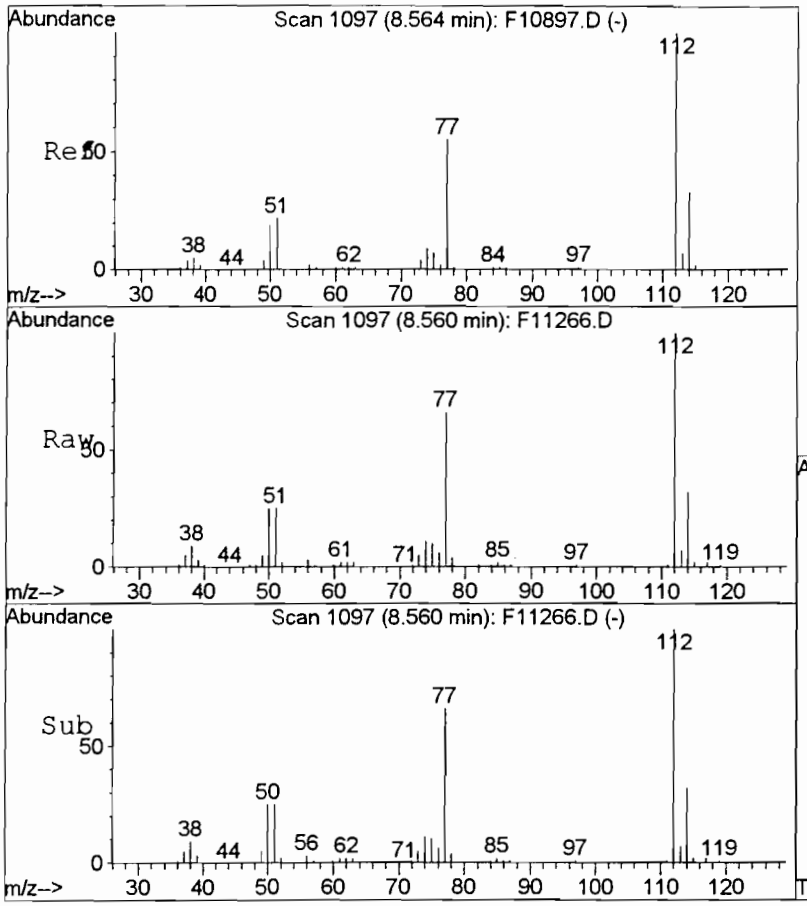
#46
Toluene
Concen: 56.16 ug/l
RT: 7.25 min Scan# 881
Delta R.T. -0.01 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion: 92 Resp: 360236

Ion	Ratio	Lower	Upper
92	100		
91	167.5	149.5	189.5



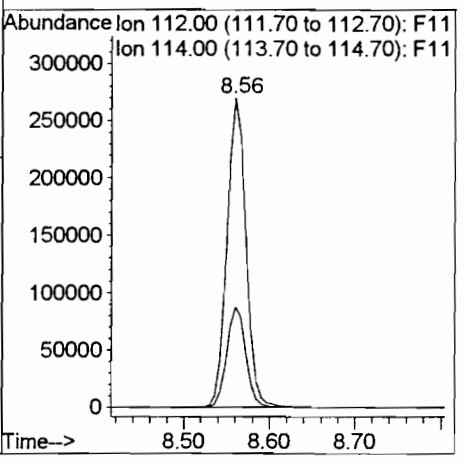
ANSON013 V 82



#47
Chlorobenzene
Concen: 61.53 ug/l
RT: 8.56 min Scan# 1097
Delta R.T. -0.00 min
Lab File: F11266.D
Acq: 26 Nov 2002 2:11

Tgt Ion:112 Resp: 416202

Ion	Ratio	Lower	Upper
112	100		
114	32.3	12.5	52.5



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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3MS

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002AMS

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11270.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	40	
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3MS

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002AMS

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11270.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

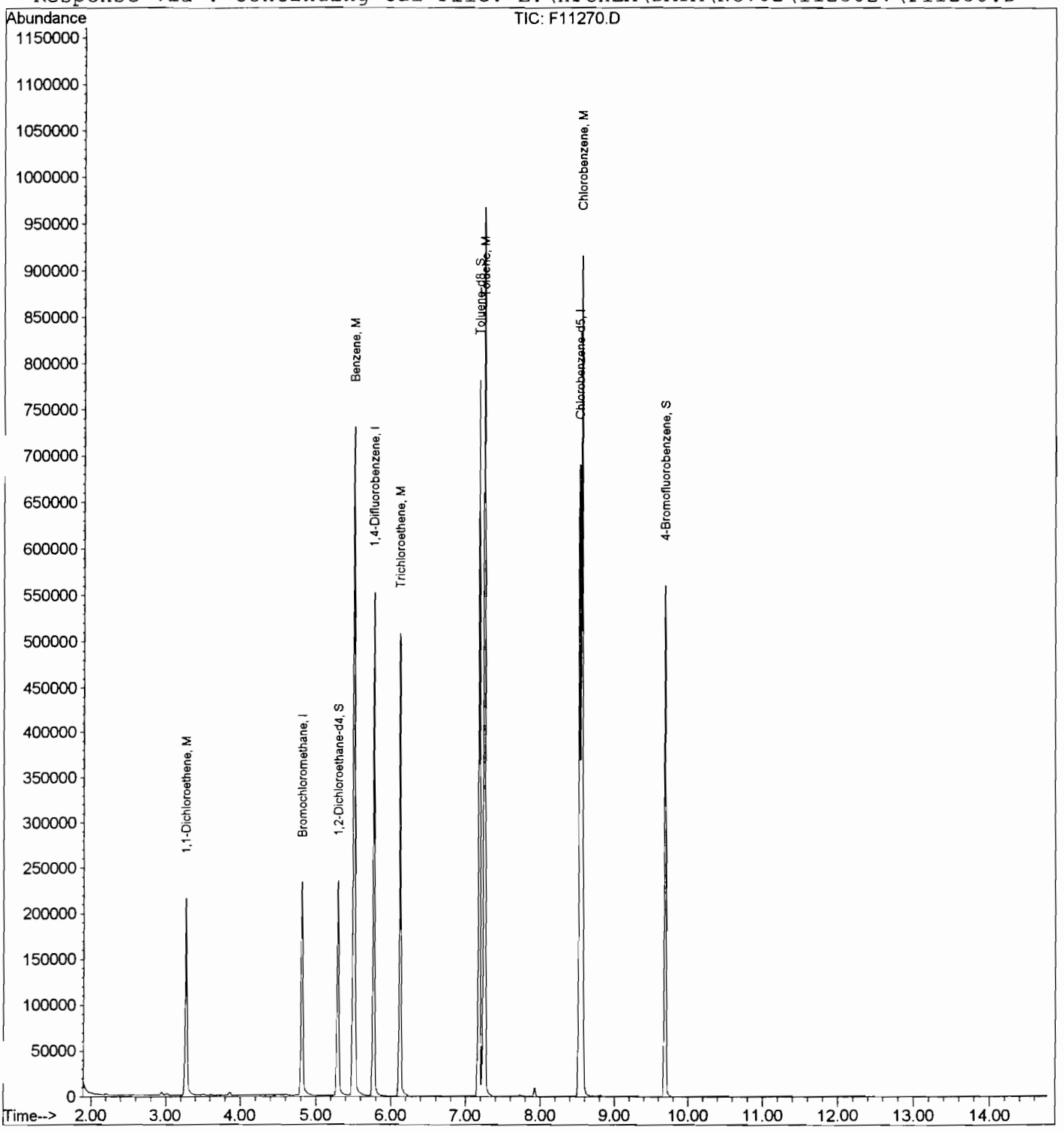
Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	68	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	51	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	58	
108-90-7	Chlorobenzene	62	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11270.D Vial: 16
Acq On : 26 Nov 2002 3:53 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3MS,H2O,MS,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:26 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



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Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11270.D Vial: 16
Acq On : 26 Nov 2002 3:53 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3MS,H2O,MS,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:26 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	55131	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	346419	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	320100	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	158849	44.36	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 88.72%			
45) Toluene-d8	7.18	98	416970	48.24	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.48%			
49) 4-Bromofluorobenzene	9.69	95	170546	47.16	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 94.32%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.27	96	79413	39.68	ug/l	89
32) Trichloroethene	6.12	95	151958	67.66	ug/l	96
34) Benzene	5.51	78	547990	50.61	ug/l	100
46) Toluene	7.25	92	356486	57.73	ug/l	99
47) Chlorobenzene	8.56	112	405168	62.23	ug/l	97

(#) = qualifier out of range (m) = manual integration

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3MSD

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002AMSD

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11271.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	32	
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P3MSD

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: 0211606-002AMSD

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11271.D

Level: (low/med) LOW Date Received: 11/20/02

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

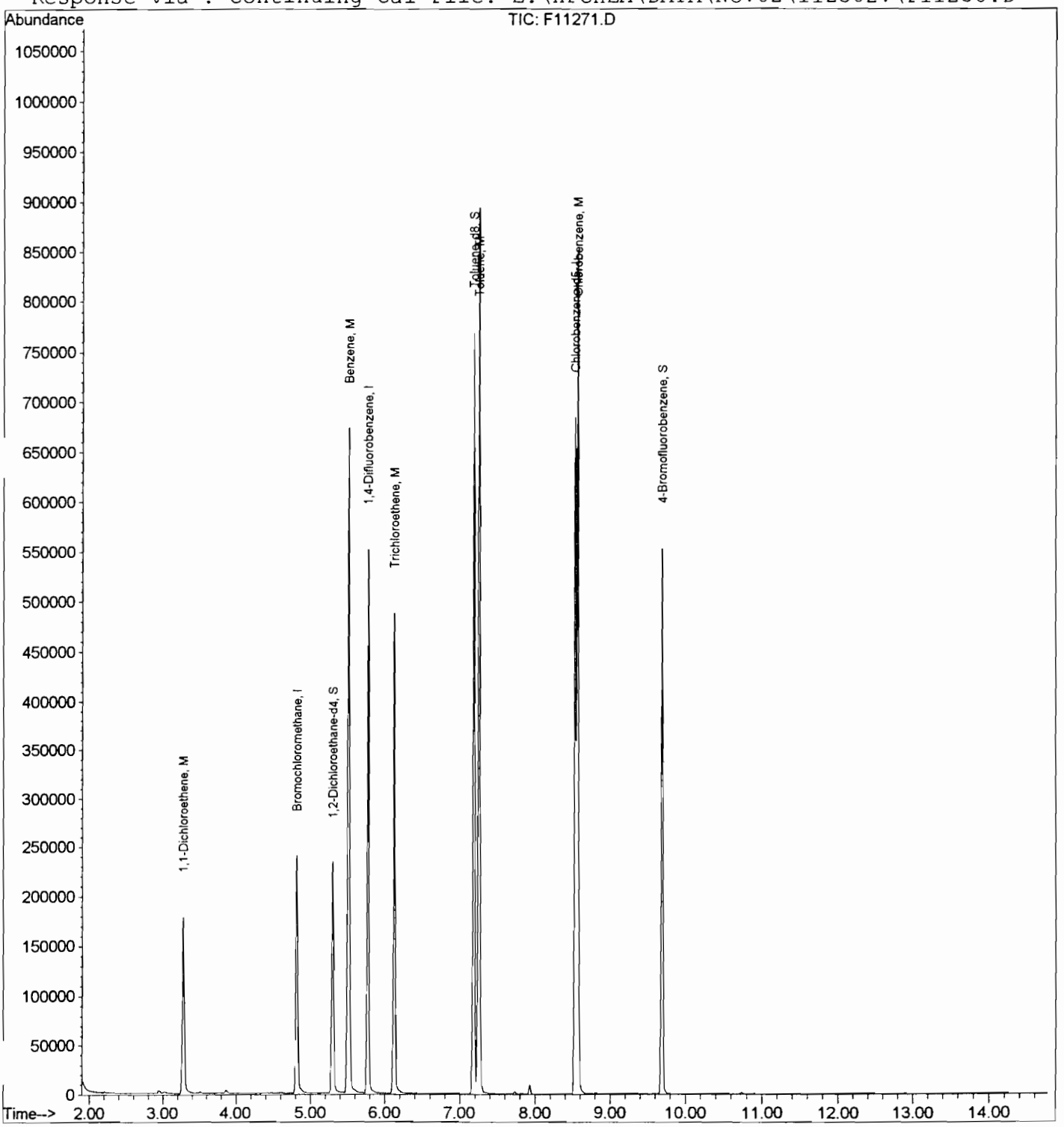
Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	63	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	46	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	53	
108-90-7	Chlorobenzene	57	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11271.D Vial: 17
Acq On : 26 Nov 2002 4:18 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3MSD,H2O,MSD,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:27 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



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Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11271.D Vial: 17
Acq On : 26 Nov 2002 4:18 Operator:
Sample : 0211606-002A Inst : GC/MS Ins
Misc : ANSON013,P3MSD,H2O,MSD,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 10 20:27 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.81	128	55122	50.00	ug/l	0.00
24) 1,4-Difluorobenzene	5.77	114	354491	50.00	ug/l	0.00
39) Chlorobenzene-d5	8.53	117	319140	50.00	ug/l	0.00
System Monitoring Compounds						
22) 1,2-Dichloroethane-d4	5.29	65	157446	43.97	ug/l	0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 87.94%			
45) Toluene-d8	7.18	98	414938	48.15	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.30%			
49) 4-Bromofluorobenzene	9.69	95	169701	47.07	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 94.14%			
Target Compounds						Qvalue
12) 1,1-Dichloroethene	3.28	96	64091	32.03	ug/l #	86
32) Trichloroethene	6.12	95	144479	62.87	ug/l	98
34) Benzene	5.51	78	505177	45.59	ug/l	100
46) Toluene	7.25	92	326986	53.12	ug/l	100
47) Chlorobenzene	8.56	112	369207	56.88	ug/l	99

(#) = qualifier out of range (m) = manual integration

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LFB112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: LFB112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11265.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
74-87-3	Chloromethane	41	
74-83-9	Bromomethane	54	
75-01-4	Vinyl chloride	48	
75-00-3	Chloroethane	50	
75-09-2	Methylene chloride	40	
67-64-1	Acetone	56	
75-35-4	1,1-Dichloroethene	40	
75-15-0	Carbon disulfide	39	
75-34-3	1,1-Dichloroethane	43	
540-59-0	1,2-Dichloroethene (total)	96	
67-66-3	Chloroform	51	
107-06-2	1,2-Dichloroethane	50	
78-93-3	2-Butanone	48	
71-55-6	1,1,1-Trichloroethane	48	
56-23-5	Carbon tetrachloride	50	
75-27-4	Bromodichloromethane	51	
78-87-5	1,2-Dichloropropane	51	

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LFB112502

Lab Name: H2M LABS, INC. Contract: ____

Lab Code: 10478 Case No.: ANSON SAS No.: ____ SDG No.: ANSON013

Matrix: (soil/water) WATER Lab Sample ID: LFB112502

Sample wt/vol: 5 (g/mL) ML Lab File ID: F11265.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/26/02

GC Column: HP-VOCOL ID: .2 (mm) Dilution Factor: 1.00

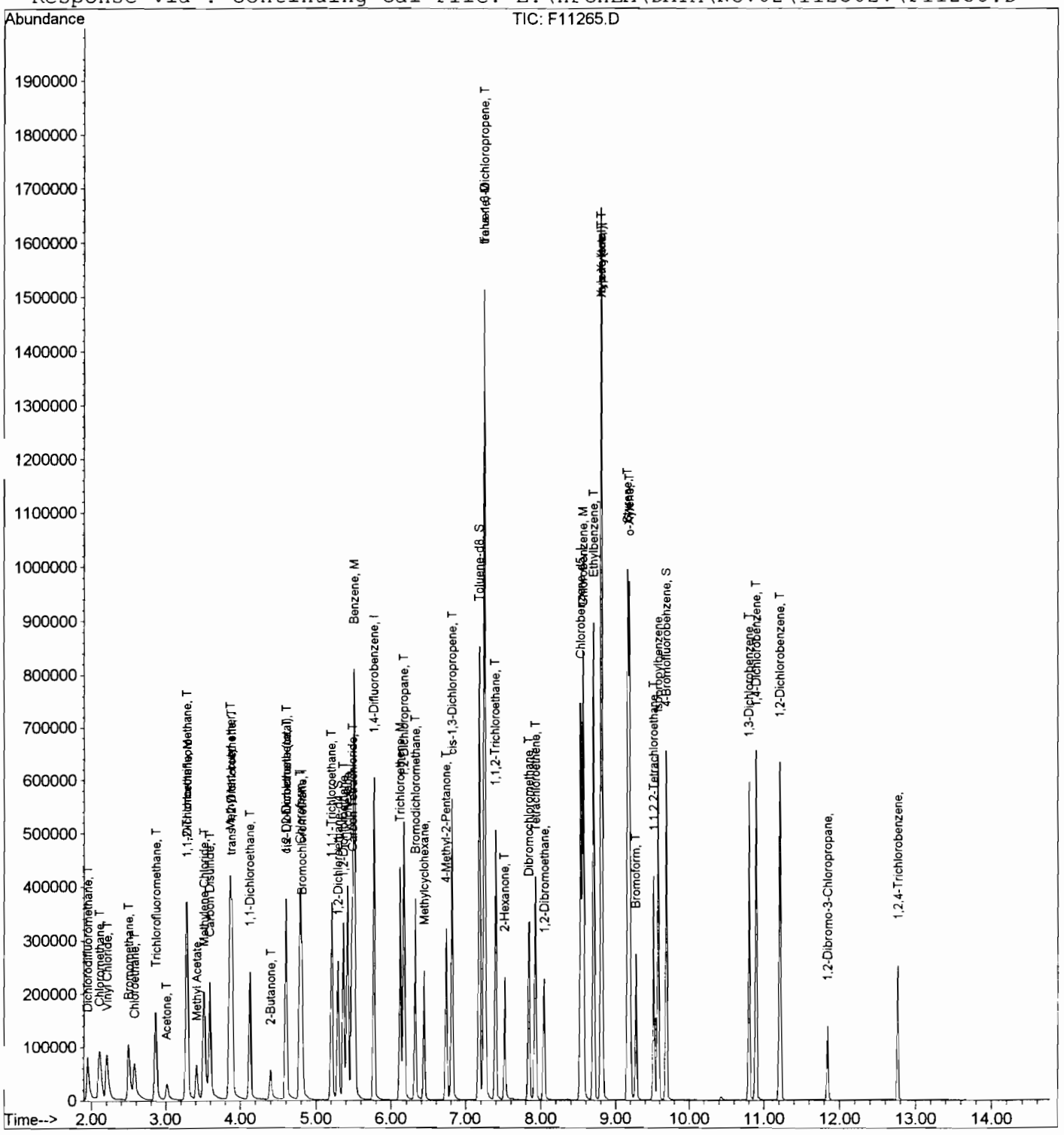
Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
10061-01-5	cis-1,3-Dichloropropene	51	
79-01-6	Trichloroethene	49	
124-48-1	Dibromochloromethane	52	
79-00-5	1,1,2-Trichloroethane	53	
71-43-2	Benzene	49	
10061-02-6	trans-1,3-Dichloropropene	53	
75-25-2	Bromoform	55	
108-10-1	4-Methyl-2-pentanone	61	
591-78-6	2-Hexanone	64	
127-18-4	Tetrachloroethene	51	
79-34-5	1,1,2,2-Tetrachloroethane	56	
108-88-3	Toluene	50	
108-90-7	Chlorobenzene	51	
100-41-4	Ethylbenzene	50	
100-42-5	Styrene	51	
1330-20-7	Xylene (total)	140	

Quantitation Report

Data File : O:\MS\5973\DATA\NOV02\112502V\F11265.D Vial: 11
Acq On : 26 Nov 2002 00:13 Operator:
Sample : LFB112502 Inst : GC/MS Ins
Misc : ,,,LFB,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 21:33 2002 Quant Results File: OLMW1125.RES

Method : O:\MS\5973\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 10 20:30:35 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D



ANSON013 V 94

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11265.D Vial: 11
Acq On : 26 Nov 2002 00:13 Operator:
Sample : LFB112502 Inst : GC/MS Ins
Misc : ,,,LFB,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 21:33 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	4.81	128	60577	50.00	ug/l		0.00
24) 1,4-Difluorobenzene	5.77	114	394123	50.00	ug/l		0.00
39) Chlorobenzene-d5	8.53	117	359694	50.00	ug/l		0.00
System Monitoring Compounds							
22) 1,2-Dichloroethane-d4	5.29	65	168255	42.76	ug/l		0.00
Spiked Amount 50.000	Range 76 - 114		Recovery = 85.52%				
45) Toluene-d8	7.18	98	469221	48.31	ug/l		0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.62%				
49) 4-Bromofluorobenzene	9.69	95	197922	48.71	ug/l		0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 97.42%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.95	85	114799	35.98	ug/l		99
3) Chloromethane	2.11	50	169418	41.43	ug/l		96
4) Bromomethane	2.50	94	99859	54.48	ug/l		98
5) Vinyl Chloride	2.21	62	131811	47.87	ug/l		96
6) Chloroethane	2.58	64	89736	49.54	ug/l		96
7) Methylene Chloride	3.51	84	110108	40.29	ug/l		95
8) Acetone	3.01	43	49444	55.74	ug/l		93
9) Carbon Disulfide	3.59	76	320139	39.38	ug/l		100
10) Methyl Acetate	3.41	43	96056	40.58	ug/l		97
11) 1,1,2-Trichlorotrifluoroet	3.29	101	81264	45.75	ug/l		98
12) 1,1-Dichloroethene	3.27	96	88500	40.25	ug/l	#	87
13) 1,1-Dichloroethane	4.13	63	230185	43.04	ug/l		100
14) Trichlorofluoromethane	2.87	101	157382	44.94	ug/l		100
16) Methyl tert-butyl ether	3.86	73	358835	45.18	ug/l		99
17) trans-1,2-Dichloroethene	3.89	96	103889	41.89	ug/l		86
18) cis-1,2-Dichloroethene	4.60	96	150296	53.62	ug/l		94
19) 1,2-Dichloroethene (total)	4.60	96	254222m	95.83	ug/l		
20) 2-Butanone	4.40	43	74557	47.92	ug/l		100
21) Chloroform	4.78	83	278971	51.03	ug/l		99
23) 1,2-Dichloroethane	5.36	62	243306	49.79	ug/l		99
25) 1,1,1-Trichloroethane	5.20	97	216786	48.22	ug/l		98
26) Cyclohexane	5.42	56	159231	55.83	ug/l		96
27) Carbon Tetrachloride	5.48	117	178094	50.35	ug/l		97
29) Bromodichloromethane	6.32	83	213288	50.56	ug/l		99
30) 1,2-Dichloropropane	6.16	63	160153	50.72	ug/l		98
31) cis-1,3-Dichloropropene	6.82	75	257197	51.22	ug/l		98
32) Trichloroethene	6.12	95	125863	49.26	ug/l		95
33) Methylcyclohexane	6.44	83	77459	48.58	ug/l		96

(#) = qualifier out of range (m) = manual integration

ANSON013 V 95

Quantitation Report (QT Reviewed)

Data File : O:\MS\5973\DATA\NOV02\112502V\F11265.D Vial: 11
Acq On : 26 Nov 2002 00:13 Operator:
Sample : LFB112502 Inst : GC/MS Ins
Misc : ,,,LFB,, Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 26 21:33 2002 Quant Results File: OLMW1125.RES

Quant Method : C:\HPCHEM\1\METHODS\OLMW1125.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Mon Nov 25 21:36:17 2002
Response via : Continuing Cal File: E:\HPCHEM\DATA\NOV02\112502V\F11258.D
DataAcq Meth : OLMW1125

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
34) Benzene	5.51	78	602410	48.90	ug/l	100
35) Dibromochloromethane	7.84	129	157893	52.42	ug/l	100
36) trans-1,3-Dichloropropene	7.25	75	261671	53.36	ug/l	100
37) 1,1,2-Trichloroethane	7.39	97	135569	53.48	ug/l	98
38) Bromoform	9.27	173	113603	54.69	ug/l	95
40) 4-Methyl-2-Pentanone	6.74	43	204939	61.01	ug/l	99
41) 2-Hexanone	7.51	43	149248	63.97	ug/l	93
42) 1,2-Dibromoethane	8.04	107	135971	52.75	ug/l	98
43) Tetrachloroethene	7.93	166	101590	50.97	ug/l	94
44) 1,1,2,2-Tetrachloroethane	9.52	83	188898	55.71	ug/l	100
46) Toluene	7.25	92	347879	50.14	ug/l	99
47) Chlorobenzene	8.56	112	374454	51.18	ug/l	99
48) Ethylbenzene	8.70	106	170324	49.77	ug/l	99
50) Styrene	9.16	104	416580	50.57	ug/l	99
51) m,p-Xylene	8.80	106	426019	100.33	ug/l	100
52) o-Xylene	9.19	106	219584	48.85	ug/l	100
53) Xylene (total)	8.80	106	645245	143.54	ug/l	
54) Isopropylbenzene	9.58	105	377620	45.12	ug/l	96
55) 1,3-Dichlorobenzene	10.81	146	211853	46.39	ug/l	97
56) 1,4-Dichlorobenzene	10.90	146	229907	46.40	ug/l	98
57) 1,2-Dichlorobenzene	11.21	146	223594	46.22	ug/l	99
58) 1,2-Dibromo-3-Chloropropan	11.85	75	29739	50.85	ug/l	93
59) 1,2,4-Trichlorobenzene	12.76	180	58479	30.41	ug/l	97

(#) = qualifier out of range (m) = manual integration

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H2M LABS, INC.

COMPUTATIONS FOR VOLATILE ORGANICS
PERFORMED BY RTE DATA SYSTEM OF HP

$$CONC = \frac{Ax}{Ais \times RRF} \quad \frac{Is}{W}$$

WHERE:

CONC = Concentration in sample (ug/L or ug/KG)

Ax = Area of characteristic ion of compound

Ais = Area of characteristic ion of internal standard

RRF = Relative response factor as area per (ng) of compound, divided by area per ng of respective internal standard

Is = Amount of internal standard injected (ng)

W = Volume of sample in (ml) or dry weight (g)

Generally the amount of each internal standard injected is 250 ng.

H2M LABS, INC.

V. DOCUMENTATION FOR VOLATILE ORGANICS

A. LOG BOOK PAGES
B. REPORTING ANALYST SIGNATURE PAGE

H2M LABS, INC.

VOLATILE

	LOT #	SOL'N ID
SURR.		
I.S.		
MS		
QC CHECK		
CALIBRATION		

SCAN VOA INSTRUMENT: H5973 COLUMN: RTX-Vocol

DATE	RUN #	SAMPLE	LAB #	VOL /WT	PH	HEAT. PUR. Y/N	METHD	TRAY POS	TIME INJ.	ANALYSTS SIGNATURE
11/23/02	F11234	50ng BFB		5ml		N	OLMW8260		1513	JB
	235	VSTD050						Q	1805	
	236	VBLK112302						Q	1840	
	237	LFB112302						Q	1906	
	238		0211515-001A					Q	1932	
	239		-002A					Q	1957	
	240		-003A	Diluk 1.5				Q	2023	
	241		-004A					Q	2048	
	242		-005A					Q	2114	
	243		-006A	Diluk 1:10				Q	2139	
	244		-007A					Q	2204	
	245		0211607-001A					Q	2230	
	246		-002A	Diluk 1:50				Q	2255	
	247		-003A					Q	2330	
	248		-004A					Q	2346	
	249		-005A					Q	0011	
	250		-005AMS					Q	0036	
	251		-005AMSD					Q	0102	
	252		-006A					Q	0127	
	253		-007A	Diluk 1.25				Q	0152	
	254		-008A					Q	0218	
11/25/02	F11255	50ng BFB		5ml		N	OLMW1125		1850	JB
	256	VSTD010 *							1937	
	257	VSTD020 *	OLMW1125.M						2003	
	258	VSTD050 *	#612						2028	
	259	VSTD100 *							2054	
	260	VSTD200 *							2119	

books\vinjlog.doc

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H2M LABS, INC.

VOLATILE

	LOT #	SOL'N ID
SURR.		
I.S.		
MS		
QC CHECK		
CALIBRATION		

SCAN VOA INSTRUMENT: H5973 COLUMN: HP-Vocl

DATE	RUN #	SAMPLE	LAB #	VOL /WT	PH	HEAT. PUR. Y/N	METHD	TRAY POS	TIME INJ.	ANALYSTS SIGNATURE
11/25/02	F11261	VSTD005		5ml		N	OLMW1125		2203	JBBrunelle
	262	VSTD002							2231	
	263	VSTD001							2300	
	264	VBLK112502							2348	
	265	LFB112502							0013	
	266	MSB112502							0211	
	267	P3	0211606-002A						0237	
	268	NCZD11	-001A						0302	
	269	Trip Blank	-003A						0328	
	270	P3MS	-002AMS						0353	
	271	P3MSD	-002AMSD						0418	
	272		0211515-003A	1:5	Q		Imported		0444	
	273		-006A	1:10	Q			11/26	0509	
	274		0211607-002A	1:50	Q				0535	
	275		-007A	1:25	Q				0600	
11/26/02	F11276	50ng BFB		5ml		N	OLMW1125		1925	JBBrunelle
	277	VSTD050							1951	
	278	VBLK112602							2037	
	279	LFB112602							2102	
	280		0211632-003A	Dilut 1:20					2127	
	281		-005A	Dilut 1:5					2152	
	282		-003A	1:20	Re c 1:50				2221	
	283		-005A	1:5					2247	
27/02	F11284	50 ngBFB					OLMW1125		1025	
	285	VSTD050		5ml		N			1057	
	286	VBLK112702							1135	
	287	LFB 112702							1200	

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H2M LABS, INC.

SDG # ANS013

SCAN VOA

This data package was reported by the undersigned. This reporting includes data calculations, manual edits, if necessary, and compilation of raw data. The information presented is true and correct to the best of my knowledge.

Signature: Robert Fellner

Date: 12/11/02