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FOURTH QUARTER 2004 OPERATIONS AND MAINTENANCE STATUS REPORT FOR AIR SPARGING SYSTEM AT BUILDING 271 NAS CECIL FIELD FL

6/1/2005

CH2MHILL CONSTRUCTORS INC

Fourth Quarter 2004
Operations and Maintenance Status Report

Air Sparging System
Building 271

Former Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-98-D-0995
Contract Task Order No. 0086

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

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Acronyms

acfm	actual cubic feet per minute
AS	air sparging
bls	below land surface
BTEX	benzene, toluene, ethylbenzene, xylenes
CH2M HILL	CH2M HILL Constructors, Inc.
cfm	cubic feet per minute
CSR	Confirmatory Sampling Report
CTO	Contract Task Order
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GCTLs	groundwater cleanup target levels
HLA	Harding Lawson Associates
JEA	Jacksonville Electric Authority
JETC	Jet Engine Test Cell
LCAR	Limited Closure Assessment Report
LNAPL	Light Non-Aqueous Phase Liquids
µg/L	micrograms per liter
mg/L	milligrams per liter
MTBE	methyl tert butyl ether
NADSC	Natural Attenuation Default Source Concentration
NAS	Naval Air Station
NAVFAC EFD SOUTH	Naval Facilities Engineering Command, Southern Division
O&M	Operation and Maintenance
ORP	oxygen-reduction potential
OWS	oil-water separator
PAH	polynuclear aromatic hydrocarbon

psi	pounds per square inch
PVC	polyvinyl chloride
RAP	Remedial Action Plan
RAPA	Remedial Action Plan Addendum
SA	Site Assessment
scfm	standard cubic feet per minute
TRPH	total recoverable petroleum hydrocarbon
TtNUS	Tetra Tech NUS
UST	underground storage tank
VOC	volatile organic compound

1.0 Introduction

CH2M HILL Constructors, Inc. (CH2M HILL) provides operation and maintenance (O&M) services at Building 271, at the former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida, to the Department of the Navy, Naval Facilities Engineering Command Engineering Field Division South (NAVFAC EFD SOUTH) under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0086.

An air sparging (AS) system was installed at the Building 271 site to reduce the concentration and volume of petroleum hydrocarbon contaminants in site groundwater. The purpose of this 4th Quarter 2004 Operation and Maintenance Status Report is to provide a summary of activities performed at the site during the period from October 1, 2004, to December 31, 2004. The 4th Quarter 2004 groundwater sampling at the Jet Engine Test Cell (JETC) was conducted in February 2005. The delay was due to schedule conflicts caused by construction of the treatment systems at the North Fuel Farm site, which was impacted significantly from the hurricane activity during Fall 2004.

1.1 Objective

The objective of the remedial action at the Building 271 site is to reduce the concentrations and volume of petroleum contaminants in the groundwater to Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs), as specified in Table I of Chapter 62-777, Florida Administrative Code (FAC). AS is the technology currently utilized to achieve this objective.

1.2 Site History

Building 271 was a former retail gasoline facility that contained four underground storage tanks (USTs) (designated 271-D, 271-R, 271-UL, and 271-SUL) and two oil/water separators (OWSs). The USTs were grouped in a tank pit located on the west side of Building 271, while the OWSs were located on the east side of the building. USTs 271-UL, 271-R, and 271-SUL each had an approximate capacity of 10,000 gallons and UST 271-D had an approximate capacity of 6,000 gallons (Tetra Tech NUS, Inc. [TtNUS], 2002).

According to UST closure records, UST 271-D was removed on March 5, 1996, and no soil or groundwater contamination was detected. The report also indicates that the UST and associated piping were removed from the site (TtNUS, 2002).

In July 1999, Harding Lawson Associates (HLA) compiled a Confirmatory Sampling Report (CSR) for the USTs and the two OWSs that indicated petroleum-impacted soil was encountered at two locations relative to the USTs. The CSR concluded that soil and groundwater were not impacted as a result of past OWS operations. Based on the CSR finding of soil contamination, a Site Assessment (SA) was recommended for the UST site. An SA Plan for the assessment of soil and groundwater at the UST site was prepared by TtNUS (TtNUS, 2002).

Following completion of the planned investigation in the SA Plan, CH2M HILL removed the remaining three USTs, associated piping, and distribution systems. The UST and associated soil removals addressed the soil contamination issues; however, groundwater samples collected following UST and soil removal indicated the presence of volatile organic compounds (VOCs) in site groundwater. TtNUS proceeded to plan and execute a second investigation in an SA Plan Addendum (2001) to further define the extent of contamination in the groundwater (TtNUS, 2002).

CH2M HILL also removed both OWSs, and submitted separate Limited Closure Assessment Reports (LCARs) for each OWS site in April 2001 to the FDEP. Both LCARs for the OWSs indicated that no petroleum contamination of the soil or groundwater existed in the immediate areas surrounding the former OWSs. On May 23, 2001, the FDEP issued separate letters agreeing with CH2M HILL's findings (TtNUS, 2002).

An SA report prepared by TtNUS in May 2002 concluded that petroleum constituents had impacted groundwater in the vicinity of the former USTs and that all of the contaminated soil was removed by CH2M HILL during the UST removal. TtNUS recommended the preparation and implementation of a Remedial Action Plan (RAP) to remediate groundwater at the site (TtNUS, 2002).

TtNUS submitted to FDEP for approval a RAP in September 2002 and a RAP Addendum (RAPA) in January 2003 to select the remedial alternative to remediate the contaminated groundwater at the site. AS was selected as the remedial alternative. FDEP approval on the RAP and RAPA was received in February 2003.

CH2M HILL installed an AS system in accordance with the RAP (TtNUS, 2002), RAPA (TtNUS, 2003), and Work Plan Addendum No. 18, Installation of Air Sparging Systems at the JETC and Building 271 (CH2M HILL, 2003) from September to November 2003. The AS system commenced operation on November 17, 2003. A site plan showing the Building 271 site and the AS system layout is provided as Figure 1-1.

1.3 Remediation System/Technology Description

AS is a physical treatment method of expediting the transfer of VOCs from the soil and groundwater to the sparging air. Atmospheric air is injected into air sparge wells, which are screened within the groundwater contaminant plume. As the injected air passes upward through the VOC laden groundwater and soil, VOCs are partitioned to the passing air and migrate to the vadose zone.

The Building 271 AS system consists of seven AS wells (AS-1 through AS-7), rotary vane air compressor, receiver tank, and associated piping and instrumentation. The AS wells are screened from approximately 24 to 26 feet below land surface (bls). The AS system is designed for each AS well to operate at an airflow rate of 10 cubic feet per minute (cfm) and an injection pressure of 15 pounds per square inch (psi). The locations of the AS wells are shown on Figure 1-1.

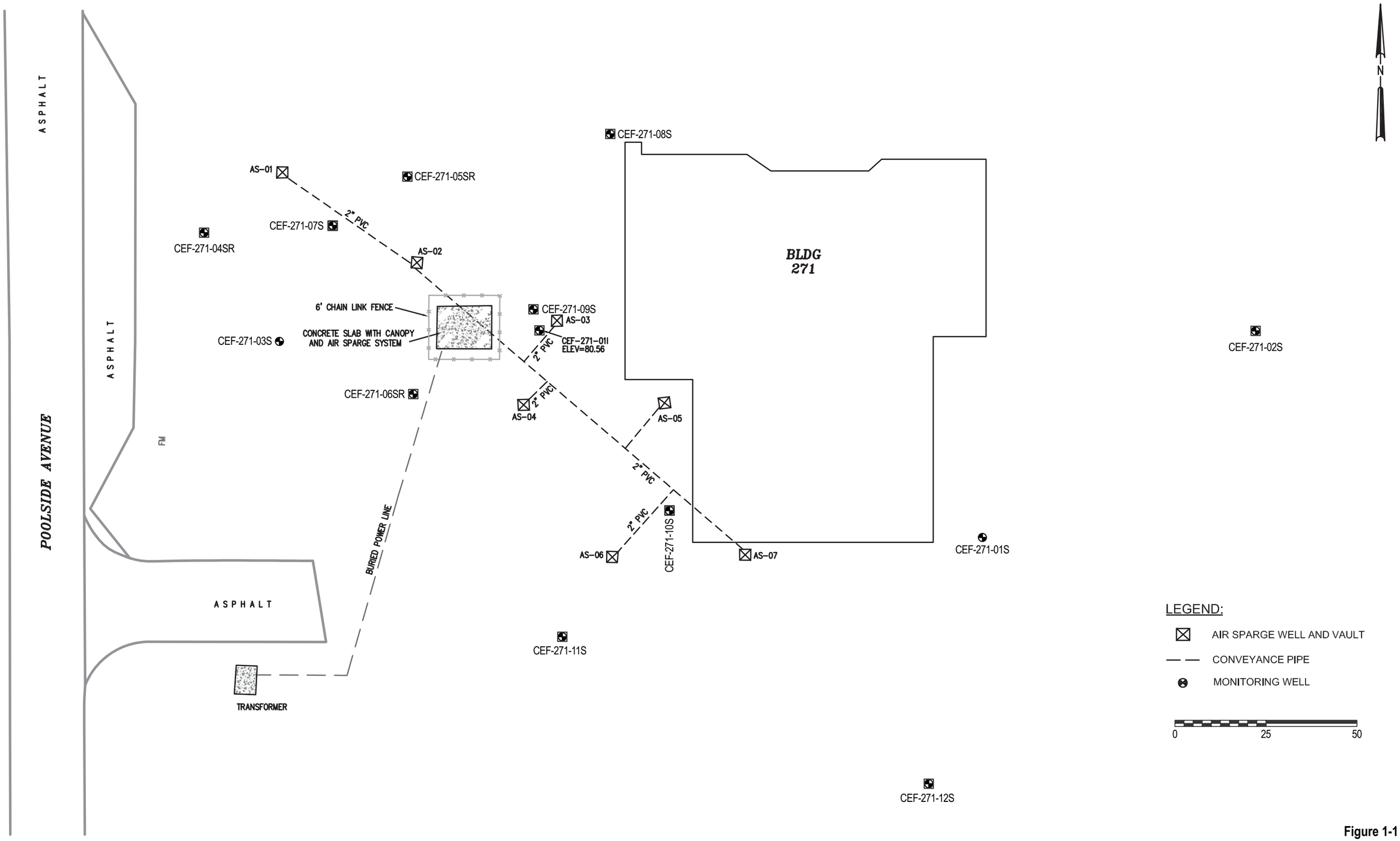

Figure 1-1
Site Layout
Building 271
Former Naval Air Station, Cecil Field
Jacksonville, Florida

CH2MHILL

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2.0 System Performance Monitoring

O&M checks of the system were performed weekly during the monitoring period. During an O&M check, a preventative maintenance checklist (based upon manufacturers' recommendations) is completed, and any required maintenance activity is performed. All meters and gauges at the system are read and recorded during the O&M check. Well vault gauges and meters are read and recorded on a monthly basis.

2.1 Operational Efficiencies

	Period	To Date
Air Sparging System		
Hours of Possible Operation	2,208	9,852.5
Hours of Actual Operation	1,976.9	7,721.5
Percent Hours of Operation	89.5%	78.4%

2.2 AS System Summary of Maintenance and Downtime

During the period from October 1, 2004, to December 31, 2004, the AS system ran a total of 82.4 days out of a possible 92 days, resulting in 231.1 hours of downtime. The AS system downtime is detailed as follows:

- Down for a total of 231.1 hours due to power interruptions. After each occurrence, the panel alarm was reset and the air compressor was restarted.

2.3 AS System Pressure/Flow Rate Monitoring

During the monitoring period, injection pressure was measured at each AS wellhead weekly for the first month and monthly thereafter. The wellhead pressures for the operating AS wells averaged 8.8 psi, compared to the design pressure of 15 psi. The wellhead flow rates for the operating AS wells averaged 7.9 scfm, compared to the design flow rate of 10 standard cubic feet per minute (scfm). The compressor is operating at maximum capacity and is achieving the specified flow rates but is unable to achieve the specified wellhead pressure. The AS wellhead pressure data is provided in Table 2-1.

TABLE 2-1
AIR SPARGING WELL MEASUREMENTS
Building 271, 4th Quarter 2004

Air Sparge Well	Date	Wellhead Pressure (psi)	Flow Rate (scfm)
AS-01	10/21/2004	8.0	8.00
	11/29/2004	8.0	7.00
	12/30/2004	8.0	8.00
AS-02	10/21/2004	9.0	8.00
	11/29/2004	9.0	8.00
	12/30/2004	9.5	7.50

TABLE 2-1
AIR SPARGING WELL MEASUREMENTS
Building 271, 4th Quarter 2004

Air Sparge Well	Date	Wellhead Pressure (psi)	Flow Rate (scfm)
AS-03	10/21/2004	8.5	9.00
	11/29/2004	9.0	9.00
	12/30/2004	9.0	8.00
AS-04	10/21/2004	9.0	9.00
	11/29/2004	10.0	8.00
	12/30/2004	9.5	8.00
AS-05	10/21/2004	8.0	8.00
	11/29/2004	9.0	6.00
	12/30/2004	9.0	7.00
AS-06	10/21/2004	9.0	8.00
	11/29/2004	9.0	8.50
	12/30/2004	9.0	8.00
AS-07	10/21/2004	9.0	9.00
	11/29/2004	8.0	7.00
	12/30/2004	8.5	7.50

psi – pounds per square inch
acfm – actual cubic feet per minute

2.4 Water Level Measurements

Depth to groundwater measurements were recorded on December 2004, from 13 monitoring wells during the monitoring period. The results from the groundwater level measurement surveys are provided in Table 2-2. Light non-aqueous phase liquid (LNAPL) was not detected in monitoring wells during the monitoring period.

The potentiometric surface of the groundwater at the site based on December 2004, water levels is depicted on Figure 2-1. In general, the groundwater at the site flows to the north with a component of flow to the south in the southeastern portion of the site.

TABLE 2-2
Water Level Measurements
Building 271, 4th Quarter 2004

Monitoring Well	Date	TOC Elevation (feet)	Depth to Water (feet bTOC)	Water Level Elevation (feet NGVD)
CEF-271-01S	12/30/04	81.15	7.11	74.04
CEF-271-02S	12/30/04	80.68	7.58	73.10
CEF-271-03S	12/30/04	79.88	5.93	73.95
CEF-271-04SR	12/30/04	79.17	5.76	73.41
CEF-271-05SR	12/30/04	79.85	7.40	72.45
CEF-271-06S	12/30/04	80.50	7.59	72.91
CEF-271-07S	12/30/04	79.99	6.63	73.36
CEF-271-08S	12/30/04	80.89	8.42	72.47
CEF-271-09S	12/30/04	80.51	6.88	73.63
CEF-271-10S	12/30/04	81.18	7.65	73.53
CEF-271-11S	12/30/04	80-29	6.01	74.28
CEF-271-12S	12/30/04	80.19	6.56	73.63
CEF-271-1I	12/30/04	80.56	7.61	72.95

Top of Casing Elevations and data prior to 04/27/00 obtained from BEI.
TOC – top of casing bTOC – Below top of casing Depth to water measured from top of casing
Elevation is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929)

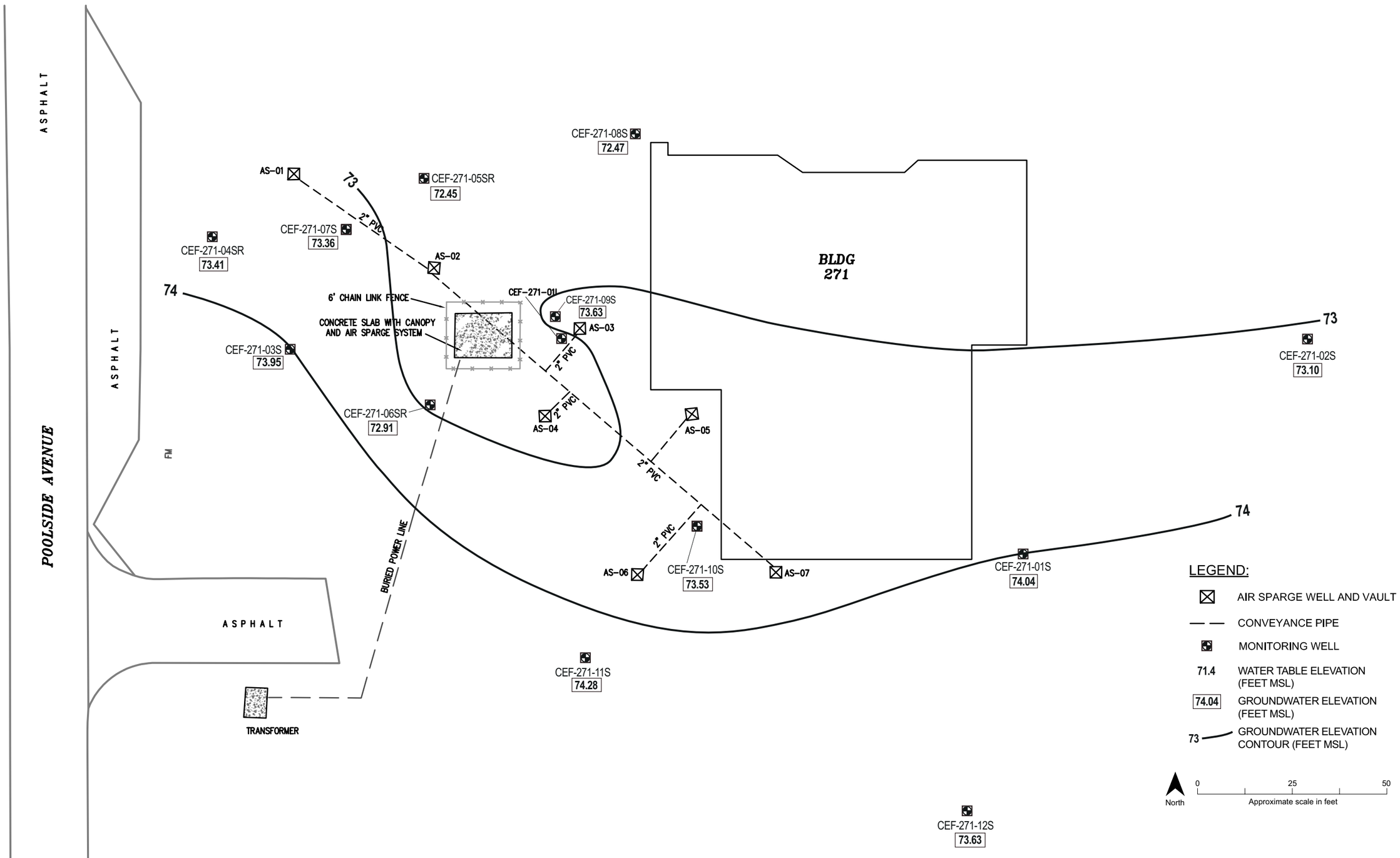


FIGURE 2-1
Potentiometric Surface Map - December 30, 2004
Building 271
Former Naval Air Station, Cecil Field
Jacksonville, Florida

3.0 Summary of Sampling and Laboratory Analytical Results

3.1 Vapor Monitoring

Historically, air emissions were monitored by collecting air samples from AS well vaults AS-02, AS-03, AS-05, AS-06, and AS-07, and monitoring well manholes CEF-271-7S and CEF-271-10S for volatile organic compound (VOC) analysis by U.S. Environmental Protection Agency (EPA) Method TO-14. Air emissions screening is required to demonstrate that the 13.7 pounds per day Hazardous Air Pollutant threshold is not exceeded and local receptors will not be exposed to hazardous vapor emissions, including migration to confined spaces. Historical air sample analytical results are presented in Table A-1 in Appendix A.

The results of the historical air sampling indicated that 13.7 pounds per day of VOCs emission threshold was not exceeded and most likely would not be exceeded in the future. Therefore, the Navy recommended that the air sampling program at the Building 271 site be discontinued. FDEP concurred with the recommendation in a letter provided in Appendix B. Therefore, vapor monitoring was not conducted in 4th Quarter 2004 and the program has been discontinued for the future.

3.2 Groundwater Monitoring

CH2M HILL conducted the 4th Quarter 2004 groundwater monitoring event on February 15, 2005. The delay was due to schedule conflicts caused by the construction of the treatment systems at the North Fuel Farm site, which was impacted significantly from hurricane activity during Fall 2004. Groundwater samples were collected from four monitoring wells (CEF-271-07S, CEF-271-09S, CEF-271-10, and CEF-271-12) during the monitoring period. The groundwater samples were laboratory analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert butyl ether (MTBE) by EPA Method 8260B and the 16 listed polynuclear aromatic hydrocarbons (PAHs) and 1- and 2-methylnapthalene by EPA Method 8310. Laboratory analytical results from the 4th Quarter 2004 groundwater monitoring event are summarized in Table 3-1. A map showing the locations of the monitoring wells is presented on Figure 1-1. Copies of the analytical laboratory reports from the groundwater monitoring events are provided in Appendix C.

TABLE 3-1
Summary of Groundwater Analytical Results
Building 271, 4th Quarter 2004

		Station ID	CEF-271-7S	CEF-271-9S	CEF-271-10S	CEF-271-12S
		Sample ID	86-CEF271-7S-Q1-05	86-CEF271-9S-Q1-05	86-CEF271-10S-Q1-05	86-CEF271-12S-Q1-05
		Sample Date	2/15/2005	02/15/2005	02/15/2005	02/15/2005
	GCTL[1]	NADC[1]				
Parameter			**micrograms per liter (ug/L)**			
Volatile organic compounds						
Benzene	1	10	5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	30	300	50 U	5 U	5 U	5 U
Tert-butyl methyl ether	50	500	50 U	5 U	5 U	5 U
Toluene	40	400	**123**	5 U	5 U	5 U
Xylenes, total	20	200	**2910 J**	10 U	10 U	10 U
Semi-volatile organic compounds						
1-methylnaphthalene	20	200	**93.4 J**	1 U	1 U	1 U
2-Methylnaphthalene	20	200	**83.6 J**	1 U	1 U	1 U
Acenaphthene	20	200	**100 U**	1 U	1 U	1 U
Acenaphthylene	210	2100	**266**	1 U	1 U	1 U
Anthracene	2100	21000	10 U	0.1 U	0.1 U	0.1 U
Benzo(a)anthracene*	0.2	2	10 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene*	0.2	2	10 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene*	0.2	2	10 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	210	2100	10 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene*	0.5	5	10 U	0.1 U	0.1 U	0.1 U
Chrysene	4.8	48	10 U	0.1 U	0.1 U	0.1 U
Dibenz(a,h)anthracene*	0.2	2	10 U	0.1 U	0.1 U	0.1 U
Fluoranthene	280	2800	10 U	0.1 U	0.1 U	0.1 U
Fluorene	280	2800	50 U	0.5 U	0.5 U	0.5 U
Indeno(1,2,3-c,d)pyrene*	0.2	2	25 U	0.25 U	0.25 U	0.25 U
Naphthalene	20	200	**430**	0.25 U	0.25 U	0.25 U
Phenanthrene	210	2100	10 U	0.1 U	0.1 U	0.1 U
Pyrene	210	2100	10 U	0.1 U	0.1 U	0.1 U

Notes:

GCTL – Groundwater Cleanup Target Level

NADC – Natural Attenuation Default Concentration

1 – Ch 62-777 FAC Groundwater Cleanup Target Levels (GCTLs) reported in µg/L

U – The analyte was analyzed for, but not detected.

J – Result is estimated

Bold indicates concentration exceeds GCTL.

Shade indicates concentration exceeds Natural Attenuation Default Concentration

* Compound was analyzed using best developed available technology (BDAT); lower reporting or detection limits are not achievable by current technology.

Field parameters (pH, temperature, dissolved oxygen (DO), and specific conductivity) were measured during purging of the monitoring wells. The field parameters are summarized in Table 3-2. As expected, the aquifer at the Building 271 site within the treatment area remains highly aerobic with each dissolved oxygen (DO) measurement above 1 milligram per liter (mg/L) and oxidation-reduction potential (ORP) measurements greater than 50 millivolts in 11 of the 13 monitoring wells.

TABLE 3-2
Field Parameter Measurements
Building 271 - 4th Quarter 2004

		Groundwater					
Well	**Sample Date**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (^oC)**	**ORP (mV)**
CEF-271-01S	12/30/2004	6.33	0.605	24	4.16	22.7	163
CEF-271-02S	12/30/2004	6.01	0.197	63	4.07	22.5	185
CEF-271-03S	12/30/2004	6.38	0.421	94	3.53	22.7	103
CEF-271-04SR	12/30/2004	6.36	0.29	61	3.22	22.5	74
CEF-271-05SR	12/30/2004	6.57	0.242	15.5	2.86	22.4	118
CEF-271-06S	12/30/2004	6.36	0.515	35	3.44	22.7	142
CEF-271-07S	12/30/2004	6.47	0.973	75	3.59	22.4	-135
CEF-271-08S	12/30/2004	6.39	0.443	164	3.56	22.6	53
CEF-271-09S	12/30/2004	7.05	0.417	228	3.72	22.2	-48
CEF-271-10S	12/30/2004	6.61	0.531	31	5.53	22.4	160
CEF-271-11S	12/30/2004	6.08	0.421	80	5.45	22.5	132
CEF-271-12S	12/30/2004	6.38	0.438	28	5.68	22.3	140
CEF-271-1I	12/30/2004	6.91	0.221	12	5.33	22.6	58

Note: All measurements taken using direct reading instruments in the field.
% = percent
mS/cm = millisiemans per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
^oC = degrees Celsius
ORP = oxygen reducing potential
mV = millivolts

Results of groundwater samples from monitoring well CEF-271-7S showed the following parameters at concentrations exceeding GCTLs: toluene, total xylenes, acenaphthene, acenaphthylene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. The total xylenes and naphthalene concentrations in well CEF-271-7S also exceeded the Natural Attenuation Default Source Concentrations (NADSC).

Compared to the historical groundwater sampling results (Table A-2 in Appendix A), in general, the 4th Quarter 2004 groundwater analytical concentrations have decreased. This indicates that the air sparge system is successfully reducing groundwater contamination at the site.

4.0 Conclusions and Recommendations

The AS systems operated with minimal downtime during the monitoring period with a resulting operational efficiency of 89.5 percent.

The results of historical air sampling indicated that 13.7 pounds per day of VOCs emission threshold was not exceeded and most likely would not be exceeded in the future. Therefore, the Navy recommended that the air sampling program at the Building 271 site be discontinued and EPA concurred with the recommendation. Therefore, vapor monitoring was not conducted in the 4th Quarter 2004 sampling event and the program has been discontinued for the future.

Results of the groundwater samples from monitoring well CEF-271-7S detected the following parameters at concentrations exceeding GCTLs: toluene, total xylenes, acenaphthene, acenaphthylene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. The total xylenes and naphthalene concentrations in well CEF-271-7S also exceeded their Natural Attenuation Default Source Concentrations (NADSCs).

Compared to the historical groundwater sampling results, in general, the 4th Quarter 2004 groundwater analytical concentrations have decreased. This indicates that the air sparge system is successfully reducing the groundwater contamination at the site.

Based on contaminant concentrations in the groundwater at the site still exceeding the NADSCs as well as the decreasing contaminant trend since AS system start-up, CH2M HILL recommends continuing operation of the AS system.

5.0 References

CH2M HILL Constructors, Inc. April 2001. Limited Closure Assessment Report, Oil/Water Separator Removal. NAS Cecil Field, Jacksonville, Florida.

CH2M HILL Constructors, Inc. August 2003. Work Plan Addendum No. 18, Work Plan Addendum No. 18 Installation of Air Sparging Systems at the Jet Engine Test Cell and Building 271, Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech NUS, Inc. September 2002. Remedial Action Plan for Building 271 Tanks UL/R/SUL/D at Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech NUS, Inc. January 2003. Remedial Action Plan Addendum for Building 271 Tanks UL/R/SUL/D at Naval Air Station Cecil Field, Jacksonville, Florida.

Appendix A

Historical Results

TABLE A-1
Summary of Air Analytical Results

Parameter	StationID	CEF-271-10S								CEF-271-7S						
	Sample ID	86-10S-A-1125-03	86-271-10S-A-1202-03	86-271-10S-A-1210-03	86-271-10S-A-1215-03	86-271-10S-A-0120-04	86-271-10S-A-0407-04	86-271-10S-A-0624-04	86-271-10S-A-0922-04	86-271-7S-A-1202-03	86-271-7S-A-1210-03	86-271-7S-A-1215-03	86-271-7S-A-0120-04	86-271-7S-A-0407-04	86-271-7S-A-0624-04	86-271-7S-A-0922-04
	Sample Date	11/25/2003	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004
Volatile Organic Compounds		**milligrams per cubic meter (mg/m3)**														
1,2,4-Trimethylbenzene		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	40	2.2	1.7	0.11	0.098	0.074 U	0.067 U
1,3,5-Trimethylbenzene (Mesitylene)		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	21	1.7	0.89	0.29	0.056 J	0.074 U	0.067 U
4-ethyltoluene		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	55	3	2.1	0.24	0.14	0.074 U	0.067 U
Benzene		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	0.065 U	0.067 U	0.066 U	0.066 U	0.066 U	0.074 U	0.067 U
Carbon disulfide		0.35	0.12 JB	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	0.065 U	0.067 U	0.066 U	0.066 U	0.066 U	0.074 U	0.067 U
Ethylbenzene		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	1.9	0.12	0.2	0.066 U	0.066 U	0.074 U	0.067 U
HEXANE		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	0.4	0.067 U	0.07 B	0.066 U	0.066 U	0.074 U	0.067 U
m,p-Xylene (sum of isomers)		NA	NA	NA	NA	NA	NA	0.14 U	0.14 U	NA	NA	NA	NA	0.26	0.15 U	0.13 U
m-xylene (1,3-dimethylbenzene)		0.14 U	0.13 U	0.14 U	0.14 U	0.13 U	0.13 U	NA	NA	69	1.5	1.5	0.11 J	NA	NA	NA
o-Xylene (1,2-Dimethylbenzene)		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	40	1.3	0.97	0.28	0.12	NA	0.067 U
Tetrachloroethene (PCE)		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	0.065 U	0.067 U	0.066 U	0.066 U	0.066 U	0.074 U	0.067 U
Toluene		0.071 U	0.066 U	0.069 U	0.068 U	0.065 U	0.067 U	0.07 U	0.068 U	1.1	0.13	0.16	0.066 U	0.074	0.074 U	0.067 U

Notes
U - The analyte was analyzed for, but not detected.
J - estimated value
B- Analyte detected in Blank
NA - Not analyzed

TABLE A-1
Summary of Air Analytical Results

Parameter	StationID	Air Sparg 2							Air Sparg 3						
	Sample ID	86-271-AS2-A-1202-03	86-271-AS2-A-1210-03	86-271-AS2-A-1215-03	86-271-AS2-A-0120-04	86-271-AS2-A-0407-04	86-271-AS2-A-0624-04	86-271-AS2-A-0922-04	86-271-AS3-A-1202-03	86-271-AS3-A-1210-03	86-271-AS3-A-1215-03	86-271-AS3-A-0120-04	86-271-AS3-A-0407-04	86-271-AS3-A-0624-04	86-271-AS3-A-0922-04
	Sample Date	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004
Volatile Organic Compounds		milligrams per cubic meter (mg/m3)													
1,2,4-Trimethylbenzene		9.5	1.7	0.6	0.14	0.067 U	0.069 U	0.067 U	1.3	0.18	0.18	0.065 U	0.067 U	0.069 U	0.067 U
1,3,5-Trimethylbenzene (Mesitylene)		4	2	1	0.28	0.067 U	0.069 U	0.067 U	0.5	0.1	0.061 J	0.065 U	0.067 U	0.069 U	0.067 U
4-ethyltoluene		6.4	1.8	0.72	0.22	0.067 U	0.069 U	0.067 U	0.76	0.15	0.15	0.065 U	0.067 U	0.069 U	0.067 U
Benzene		0.082	0.068 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U	0.068 U	0.067 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U
Carbon disulfide		0.067 U	0.068 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U	0.068 U	0.067 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U
Ethylbenzene		0.86	0.056 J	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U	0.068 U	0.067 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U
HEXANE		0.24	0.092	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U	0.068 U	0.067 U	0.052 J	0.065 U	0.067 U	0.069 U	0.067 U
m,p-Xylene (sum of isomers)		NA	NA	NA	NA	0.13 U	0.14 U	0.13 U	NA	NA	NA	NA	0.13 U	0.14 U	0.13 U
m-xylene (1,3-dimethylbenzene)		3.3	0.26	0.14 U	0.13 U	NA	NA	NA	0.22	0.087 J	0.14 U	0.13 U	NA	NA	NA
o-Xylene (1,2-Dimethylbenzene)		1.7	0.2	0.07	0.065 U	0.067 U	0.069 U	0.067 U	0.14	0.05 J	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U
Tetrachloroethene (PCE)		0.067 U	0.068 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U	0.068 U	0.067 U	0.068 U	0.065 U	0.067 U	0.069 U	0.067 U
Toluene		0.31	0.068 U	0.068 U	0.065 U	0.049 J	0.069 U	0.067 U	0.068 U	0.041 J	0.045 J	0.065 U	0.067 U	0.069 U	0.067 U

Notes
U - The analyte was analyzed for, but not detected.
J - estimated value
B- Analyte detected in Blank
NA - Not analyzed

TABLE A-1
Summary of Air Analytical Results

Parameter	StationID	Air Sparg 5							Air Sparg 6						
	Sample ID	86-271-AS5-A-1202-03	86-271-AS5-A-1210-03	86-271-AS5-A-1215-03	86-271-AS5-A-0120-04	86-271-AS5-A-0407-04	86-271-AS5-A-0624-04	86-271-AS5-A-0922-04	86-271-AS6-A-1202-03	86-271-AS6-A-1210-03	86-271-AS6-A-1215-03	86-271-AS6-A-0120-04	86-271-AS6-A-0407-04	86-271-AS6-A-0624-04RE	86-271-AS6-A-0922-04
	Sample Date	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004
Volatile Organic Compounds		milligrams per cubic meter (mg/m3)													
1,2,4-Trimethylbenzene		0.14	0.069 U	0.069 U	0.064 J	0.068 U	0.07 U	0.067 U	0.066 U	0.077	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
1,3,5-Trimethylbenzene (Mesitylene)		0.065 U	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
4-ethyltoluene		0.088	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
Benzene		0.065 U	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
Carbon disulfide		0.065 U	0.069 U	0.086	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
Ethylbenzene		0.065 U	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
HEXANE		0.065 U	0.069 U	0.08 B	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
m,p-Xylene (sum of isomers)		NA	NA	NA	NA	0.14 U	0.14 U	0.13 U	NA	NA	NA	NA	0.13 U	0.14 U	0.14 U
m-xylene (1,3-dimethylbenzene)		0.13 U	0.14 U	0.14 U	0.14 U	NA	NA	NA	0.13 U	0.14 U	0.14 U	0.13 U	NA	NA	NA
o-Xylene (1,2-Dimethylbenzene)		0.065 U	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U
Tetrachloroethene (PCE)		0.065 U	0.069 U	0.069 U	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.15	0.072 U	0.068 U
Toluene		0.065 U	0.069 U	0.087	0.068 U	0.068 U	0.07 U	0.067 U	0.066 U	0.068 U	0.068 U	0.067 U	0.067 U	0.072 U	0.068 U

Notes
U - The analyte was analyzed for, but not detected.
J - estimated value
B- Analyte detected in Blank
NA - Not analyzed

TABLE A-1
Summary of Air Analytical Results

Parameter	StationID	Air Sparg 7						
	Sample ID	86-271-AS7-A-1202-03	86-271-AS7-A-1210-03	86-271-AS7-A-1215-03	86-271-AS7-A-0120-04	86-271-AS7-A-0407-04	86-271-AS7-A-0624-04RE	86-271-AS7-A-0922-04
	Sample Date	12/02/2003	12/10/2003	12/15/2003	01/20/2004	04/07/2004	06/24/2004	09/22/2004
Volatile Organic Compounds		milligrams per cubic meter (mg/m3)						
1,2,4-Trimethylbenzene		0.16	0.068 U	0.26	0.067 U	0.066 U	0.072 U	0.068 U
1,3,5-Trimethylbenzene (Mesitylene)		0.047 J	0.068 U	0.05 J	0.067 U	0.066 U	0.072 U	0.068 U
4-ethyltoluene		0.084	0.068 U	0.27	0.067 U	0.066 U	0.072 U	0.068 U
Benzene		0.065 U	0.068 U	0.069 U	0.067 U	0.066 U	0.072 U	0.068 U
Carbon disulfide		0.065 U	0.068 U	0.069 U	0.039 J	0.066 U	0.072 U	0.068 U
Ethylbenzene		0.065 U	0.068 U	0.069 U	0.067 U	0.066 U	0.072 U	0.068 U
HEXANE		0.065 U	0.068 U	0.069 U	0.067 U	0.066 U	0.072 U	0.068 U
m,p-Xylene (sum of isomers)		NA	NA	NA	NA	0.13 U	0.14 U	0.14 U
m-xylene (1,3-dimethylbenzene)		0.13 U	0.14 U	0.14 U	0.13 U	NA	NA	NA
o-Xylene (1,2-Dimethylbenzene)		0.065 U	0.068 U	0.05 J	0.067 U	0.066 U	0.072 U	0.068 U
Tetrachloroethene (PCE)		0.065 U	0.068 U	0.069 U	0.067 U	0.066 U	0.072 U	0.068 U
Toluene		0.065 U	0.068 U	0.069 U	0.067 U	0.066 U	0.072 U	0.068 U

Notes
U - The analyte was analyzed for, but not detected.
J - estimated value
B- Analyte detected in Blank
NA - Not analyzed

TABLE A-2
Summary of Groundwater Analytical Results

Parameter	Station ID		CEF-271-1I	CEF-271-1S	CEF-271-2S	CEF-271-3S	CEF-271-4SR	CEF-271-5SR	CEF-271-6S	CEF-271-7S				
	Sample ID		86-CEF271-1I-Q4-03	86-CEF271-1S-Q4-03	86-CEF271-2S-Q4-03	86-CEF271-3S-Q4-03	86-CEF271-4SR-Q4-03	86-CEF271-5SR-Q4-03	86-CEF271-6S-Q4-03	86-CEF271-7S-Q4-03	86-CEF271-7S-Q1-04	86-CEF271-7S-Q2-04	86-CEF271-7S-Q3-04	86-CEF271-7S-Q1-05
	Sample Date		10/27/2003	10/27/2003	10/27/2003	10/27/2003	10/27/2003	10/28/2003	10/28/2003	10/28/2003	04/26/2004	06/24/2004	09/24/2004	02/15/2005
	GCTL[1]	NADSC[1]												
	micrograms per liter (µg/L)													
Volatile organic compounds														
Benzene	1.0	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**188**	**324 J**	**165 J**	**32.2**	**5 U**
Ethylbenzene	30	300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**398**	**133**	14	6.37	**50 U**
Tert-butyl methyl ether	50	500	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.1 J	1.12 J	50 U
Toluene	40	400	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**1180 JB**	16.7 J	4.42 J	3.65 J	**123**
Xylenes, total	20	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**1690**	17.2 J	**48.2 J**	**58.2**	**2910 J**
Semi-volatile organic compounds														
1-methylnaphthalene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**21.1**	**37 J**	**44.5**	**24.1**	**93.4 J**
2-Methylnaphthalene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**58.9**	**74**	**86.3**	**43.6 J**	**83.6 J**
Acenaphthene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	50 U	20 U	10 UJ	**100 U**
Acenaphthylene	210	2100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	117	50 U	157	90.3 J	**266**
Benzo(a)anthracene	0.2	2	0.1 U	**0.216**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Benzo(a)pyrene*	0.2	2	0.1 U	**0.256**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Benzo(b)fluoranthene	0.2	2	0.1 U	**0.25**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Dibenz(a,h)anthracene	0.2	2	0.1 U	**0.553**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Fluorene	280	2800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	1.17 J	50 U
Indeno(1,2,3-c,d)pyrene*	0.2	2	0.25 U	**0.372**	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5 U	12.5 U	5 U	2.5 U	**25 U**
Naphthalene	20	200	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	**184**	**476**	**422**	**178**	**430**
Phenanthrene	210	2100	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	4.19	7.78	2 U	4.31	10 U

Notes:
GCTL - Groundwater Cleanup Target Level
NADC - Natural Attenuation Default Concentration
1 = Chapter 62-777 FAC Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
U - The analyte was analyzed for, but not detected.
J - Result is estimated
B-The analyte was detected in the associated method and/or calibration blank.
Bold indicates concentration exceeds GCTL.
Shade indicates concentration exceeds NADSC.
NA - Not Available at time of rule adoption
* Compound was analyzed using best developed available technology (BDAT), lower reporting or detection limits are not achievable by current technology.

TABLE A-2
Summary of Groundwater Analytical Results

Parameter	Station ID		CEF271-8S	CEF271-9S					CEF-271-10				
	Sample ID		86-CEF271-8S-Q4-03	86-CEF271-9S-Q4-03	86-CEF271-9S-Q1-04	86-CEF271-9S-Q2-04	86-CEF271-9S-Q3-04	86-CEF271-9S-Q1-05	86-CEF271-10S-Q4-03	86-CEF271-10S-Q1-04	86-CEF271-10S-Q2-04	86-CEF271-10S-Q3-04	86-CEF271-10S-Q1-05
	Sample Date		10/23/2003	10/23/2003	04/26/2004	06/24/2004	09/24/2004	02/15/2005	10/27/2003	04/27/2004	06/24/2004	09/24/2004	02/15/2005
	GCTL[1]	NADSC[1]											
			micrograms per liter (µg/L)										
Volatile organic compounds													
Benzene	1.0	10	0.5 U	**1.93**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	30	300	5 U	25.8	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tert-butyl methyl ether	50	500	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	40	400	5 U	20.3	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylenes, total	20	200	10 U	**98.5**	3.06 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Semi-volatile organic compounds													
1-methylnaphthalene	20	200	1 U	0.536 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	20	200	1 U	1.13 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acenaphthene	20	200	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 UJ	1 UJ	1 U
Acenaphthylene	210	2100	1 U	3.05 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)anthracene	0.2	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene*	0.2	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.2	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz(a,h)anthracene	0.2	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	280	2800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Indeno(1,2,3-c,d)pyrene*	0.2	2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	**0.25 U**	0.25 U	0.25 U	0.25 U	0.25 U	**0.25 U**
Naphthalene	20	200	0.25 U	5.89 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Phenanthrene	210	2100	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:
GCTL - Groundwater Cleanup Target Level
NADC - Natural Attenuation Default Concentration
1 = Chapter 62-777 FAC Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
U - The analyte was analyzed for, but not detected.
J - Result is estimated
B-The analyte was detected in the associated method and/or calibration blank.
Bold indicates concentration exceeds GCTL.
Shade indicates concentration exceeds NADC.
NA - Not Available at time of rule adoption
* Compound was analyzed using best developed available technology (BDAT), lower reporting or detection limits are not achievable by current technology.

TABLE A-2
Summary of Groundwater Analytical Results

Parameter	Station ID		CEF-271-1I	CEF-271-1S	CEF-271-2S	CEF-271-3S	CEF-271-4SR	CEF-271-5SR	CEF-271-6S	CEF-271-7S				
	Sample ID		86-CEF271-1I-Q4-03	86-CEF271-1S-Q4-03	86-CEF271-2S-Q4-03	86-CEF271-3S-Q4-03	86-CEF271-4SR-Q4-03	86-CEF271-5SR-Q4-03	86-CEF271-6S-Q4-03	86-CEF271-7S-Q4-03	86-CEF271-7S-Q1-04	86-CEF271-7S-Q2-04	86-CEF271-7S-Q3-04	86-CEF271-7S-Q1-05
	Sample Date		10/27/2003	10/27/2003	10/27/2003	10/27/2003	10/27/2003	10/28/2003	10/28/2003	10/28/2003	04/26/2004	06/24/2004	09/24/2004	02/15/2005
	GCTL[1]	NADSC[1]												
	micrograms per liter (µg/L)													
Volatile organic compounds														
Benzene	1.0	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**188**	**324 J**	**165 J**	**32.2**	**5 U**
Ethylbenzene	30	300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**398**	**133**	14	6.37	**50 U**
Tert-butyl methyl ether	50	500	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.1 J	1.12 J	50 U
Toluene	40	400	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**1180 JB**	16.7 J	4.42 J	3.65 J	**123**
Xylenes, total	20	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**1690**	17.2 J	**48.2 J**	**58.2**	**2910 J**
Semi-volatile organic compounds														
1-methylnaphthalene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**21.1**	**37 J**	**44.5**	**24.1**	**93.4 J**
2-Methylnaphthalene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**58.9**	**74**	**86.3**	**43.6 J**	**83.6 J**
Acenaphthene	20	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	50 U	20 U	10 UJ	**100 U**
Acenaphthylene	210	2100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	117	50 U	157	90.3 J	**266**
Benzo(a)anthracene	0.2	2	0.1 U	**0.216**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Benzo(a)pyrene*	0.2	2	0.1 U	**0.256**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Benzo(b)fluoranthene	0.2	2	0.1 U	**0.25**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Dibenz(a,h)anthracene	0.2	2	0.1 U	**0.553**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2 U	5 U	2 U	1 U	**10 U**
Fluorene	280	2800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	1.17 J	50 U
Indeno(1,2,3-c,d)pyrene*	0.2	2	0.25 U	**0.372**	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5 U	12.5 U	5 U	2.5 U	**25 U**
Naphthalene	20	200	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	**184**	**476**	**422**	**178**	**430**
Phenanthrene	210	2100	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	4.19	7.78	2 U	4.31	10 U

Notes:
GCTL - Groundwater Cleanup Target Level
NADC - Natural Attenuation Default Concentration
1 = Chapter 62-777 FAC Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
U - The analyte was analyzed for, but not detected.
J - Result is estimated
B-The analyte was detected in the associated method and/or calibration blank.
Bold indicates concentration exceeds GCTL.
Shade indicates concentration exceeds NADC.
NA - Not Available at time of rule adoption
* Compound was analyzed using best developed available technology (BDAT), lower reporting or detection limits are not achievable by current technology.

Appendix B

FDEP Approval of Discontinuation of Air Monitoring

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

March 22, 2005

Mr. Gabe Magwood
Code ES24 (UST RPM)
Southern Division
Naval Facilities Engineering Command
Post Office Box 190010
North Charleston, South Carolina 29419-9010

RE: Technical Memorandum, Discontinuation of Air Sampling at Building 271 and Jet Engine Test Cell Building, Former Naval Air Station Cecil Field, Jacksonville, Florida

Dear Mr. Magwood:

The Department has completed its review of the Technical Memorandum, Discontinuation of Air Sampling at Building 271 and Jet Engine Test Cell Building, Former Naval Air Station Cecil Field, dated February 24, 2005 (received by e-mail on March 22, 2005), prepared by CH2M Hill, Inc. The Department assumes a blank in the table represents non-detection of the analyte but that the sample was analyzed for that analyte. If that is the case, Building 271 is non-detect for all analytes at all sample points for the latest data (9-22-04) and the Jet Engine Test Cell Building is also non-detect for all analytes for the latest data (9-22-04) except for a couple of minor detections of carbon disulfide that should not be of consequence (0.001 lb./day). Based on the length of system operation and the data provided, the Department approves the request to cease air sampling at both sites.

If I can be of any further assistance with this matter, please contact me at (850) 245-8997.

Sincerely,

David P. Grabka

David P. Grabka, P.G.
Remedial Project Manager

cc: Mark Davidson, SouthDiv
Sam Naik, CH2M Hill
Doyle Brittain, USEPA Region 4
Mike Fitzsimmons, FDEP Northeast District

JJC JJC ESN ESN

Appendix C

Laboratory Analytical Reports for Groundwater Samples

(provided on CD)

Former NAS Cecil Field

PREPARED FOR: Former NAS Cecil Field Bldg. 271/ 4th Quarter GW Sampling Event 2004

FINAL REVEIWER: Camden Robinson/ Associate Project Chemist/CCI

COPIES: Sam Naik /Project Manager/CCI

DATE: March 21, 2005

SUBJECT: Quality Assessment for Samples Collected February 15, 2005

This quality assurance memorandum is based upon a review of analytical data generated for water samples and associated field quality control samples collected February 15, 2005 at the Former Naval Air Station Cecil Field Bldg. 271 in Jacksonville, Florida. The samples were collected as a part of the building 271 quarterly groundwater sampling event conducted at the site. Table 1-1 presents a summary of the CCI sample identification numbers, laboratory sample identification numbers, dates of collection, sample matrices, and the analyses performed.

Gulf Coast Laboratory of Baton Rouge, Louisiana served as the laboratory for this Building 271 Quarterly Groundwater sampling event for the following analyses:

- Benzene, Etylbenzene, Toluene, Total Xylenes, and MTBE (BTEX + MTBE) by SW-846 method 8260B
- Polyaromatic nuclear hydrocarbons (PAH) by HPLC method 8310

Table 1-1 Summary Sample Data Reviewed
Former NAS Cecil Field

Sample Number	Lab Sample ID	Date Sampled	Analysis Required
86-CEF271-7S-Q1-05	20502170401	02/15/2005	[1], [2]
86-CEF271-9S-Q1-05	20502170402	02/15/2005	[1], [2]
86-CEF271-10S-Q1-05	20502170403	02/15/2005	[1], [2]
86-CEF271-12S-Q1-05	20502170404	02/15/2005	[1], [2]
*086-271-DP-Q1-05	20502170407	02/15/2005	[1], [2]
086-271-EB-Q1-05	20502170408	02/15/2005	[1], [2]
086-271-TB-Q1-05	20502170409	02/15/2005	[1]

ANALYSES PERFORMED CODES:
[1] –Benzene, Ethylbenzene, Toluene, Total Xylenes, and MTBE (BTEX + MTBE) by method SW846 8260B,
[2] –Polyaromatic nuclear hydrocarbons (PAH) by HPLC method 8310,

* *086-271-DP-Q1-05 blind field duplicate of 86-CEF271-9S-Q1-05*

Data for the analyses were reviewed for adherence to the specified analytical protocols in accordance with CCI Sampling Analysis Plan. All analysis results have been validated or qualified according to general guidance provided in the adherence to the Department of Defense (DOD) Quality Systems Manual-Version 2 June 2002.

The findings of this quality assurance report are based upon the comprehensive review of the following results summaries reported according to the CCI Level C (CLP-like data deliverables format): chain of custody documentation, holding times, laboratory method and field blank analyses, surrogate compound recoveries, matrix spike compound recoveries and reproducibility, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration, second source recovery and internal standard area performance summaries, target compound identification, laboratory control sample results, laboratory and blind field duplicate sample results, detection limits/sensitivity, and electronic data deliverables.

The analyses were performed acceptably, but require several qualifying statements; it is recommended that the analytical data be used only with the qualifying statements provided below. Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. A result summary report presenting the validated and qualified results is presented in Attachment I.

General Data Qualifiers

As required by U.S. EPA protocols, all compounds which were qualitatively identified at concentrations below their respective reporting limits (RL) but above the method detection limit (MDL) have been qualified with "J" qualifiers on the data summary reports to indicate that they are quantitative estimates.

GROUNDWATER CLEANUP TARGET ACTION LEVEL REGULARTORY LIMITS

All samples collected and analyzed for the month of February 2005 for the BTEX + MTBE and polyaromatic hydrocarbon analyses were less than the action level groundwater cleanup target level regulartory limits with the exception of the analytes listed below:

Analyte (Volatile List)	Affected Sample	Sample Results (ug/l)	Groundwater Cleanup Target Levels (ug/l)
Benzene	86-CEF271-7S-Q1-05	5U	1
Ethylbenzene	86-CEF271-7S-Q1-05	50U	30
Toluene	86-CEF271-7S-Q1-05	123	40
Xylenes (Total)	86-CEF271-7S-Q1-05	2910J	20

Analyte (PAH List)	Affected Sample	Sample Results (ug/l)	Groundwater Cleanup Target Levels (ug/l)
1-Methylnaphthalene	86-CEF271-7S-Q1-05	93.4J	20
2-Methylnaphthalene	86-CEF271-7S-Q1-05	83.6J	20
Acenaphthene	86-CEF271-7S-Q1-05	100U	20
Acenaphthylene	86-CEF271-7S-Q1-05	266	210
Benzo(a)anthracene	86-CEF271-7S-Q1-05	10U	0.2
Benzo(a)pyrene	86-CEF271-7S-Q1-05	10U	0.2
Benzo(b)fluoranthene	86-CEF271-7S-Q1-05	10U	0.2
Benzo(k)fluroanthene	86-CEF271-7S-Q1-05	10U	0.5
Chrysene	86-CEF271-7S-Q1-05	10U	4.8
Dibenz(a,h)anthracene	86-CEF271-7S-Q1-05	10U	0.2
Naphthalene	86-CEF271-7S-Q1-05	430	20
Indeno(1,2,3-c,d)pyrene	86-CEF271-7S-Q1-05	25U	0.2
Indeno(1,2,3-c,d)pyrene	86-CEF271-9S-Q1-05	0.25U	0.2
Indeno(1,2,3-c,d)pyrene	86-CEF271-10S-Q1-05	0.25U	0.2
Indeno(1,2,3-c,d)pyrene	86-CEF271-12S-Q1-05	0.25U	0.2
Indeno(1,2,3-c,d)pyrene	086-271-DP-Q1-05	0.25U	0.2

Organic Data Qualifiers

The positive result for total xylenes in sample 86-CEF271-7S-Q1-05 should be considered bias low quantitative estimates and may be higher than reported. The associated recoveries for the client specific matrix spike (MS) and matrix spike duplicate (MSD) samples were below the established quality control (QC) limit for this analyte. The bias low recoveries for this compound indicate the possible presence of matrix interferences in samples of similar matrix. This has been indicated by placing a "J" qualifier next to the total xylenes result for sample 86-CEF271-7S-Q1-05 on the data summary tables.

The sample presented below was analyzed at a dilution for the volatile organic and polyaromatic hydrocarbon analyses. These dilutions may have resulted in surrogate compounds diluted below the instrument detection limit; therefore surrogate recoveries may not be reported for all diluted analysis. These dilutions were required to prevent saturation of the instrument and to allow quantitation of the compounds within the linear range of the calibration curve. Positive results for these compounds in the samples below have been reported from the diluted analysis. All other results and quantitation limits have been reported on the sample report summary from the initial analysis. However, higher quantitation limits have resulted for specific volatile organic and polyaromatic hydrocarbon compounds, which were not detected, in this sample. This should be noted when assessing these samples for the qualitative absence of specific volatile organic and polyaromatic hydrocarbon compounds.

Sample ID	Analysis	Dilution Factor
86-CEF271-7S-Q1-05	VOC	10x
86-CEF271-7S-Q1-05	PAH	100x

Sample 86-CEF271-9S-Q1-05 and its blind field duplicate sample 086-271-DP-Q1-05 were submitted to the laboratory to evaluate sampling and analytical precision for those compounds determined to be confidently detected. All compounds met CCI's blind duplicate precision criteria of 30% for water samples relative percent difference (RPD) for volatile organic and polyaromatic hydrocarbon analyses. The RPD was not calculated for the compounds that were not detected in both samples.

Summary

The organic analyses were performed acceptably, but required qualifying statements. This analytical quality assurance report has identified the aspects of the data, which required qualification. These qualifiers are noted on the attached analytical sample summary reports. A support documentation package has been prepared for this quality assurance review and is filed with the Former NAS Cecil Field CTO 86/Bldg. 271 quarterly groundwater sampling project file.

Attachment I

VALID QUALIFIERS

QUALIFIER	
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit
J	The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R/UR	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet the quality control criteria. The presence or absence of the analyte cannot be verified.
B	The analyte was detected in the associated method and/or calibration blank.
JB	The analyte detected in the associated field, equipment, and/or trip blank.

QUALIFICATION CODE REFERENCE

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
K	Second source %D was noncompliant.	Second source %D was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
MB	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) blank or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or high RPD.	MS/MSD recovery was poor or high RPD.
G	Result is over the calibration range. No other acceptable result was provided.	Result is over the calibration range. Not other acceptable result was provided.
E	Not applicable.	Lab duplicate RPD showed poor agreement.
Z	Field duplicate RPD showed poor agreement.	Field duplicate RPD showed poor agreement
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D was not within control limits.
TN	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive—reported compound was not present.	Not applicable.
-	False negative—compound was present but not reported.	Not applicable.
F	Presumed contamination from FB or ER.	Presumed contamination from FB or ER.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Confirmation analysis RPD exceeded 40%.	Post Digestion Spike recovery was not within control limits.
T/D	Not applicable.	Total metals results were less than the dissolved metals result.
SD	Not applicable.	Seed correction factor was below the acceptable limit.
M	Reported values may be biased due to apparent matrix interferences. (AIR ANALYSIS ONLY)	Not applicable

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

NELAP CERTIFICATE NUMBER 01955

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date 02/24/2005

GCAL Report 205021704

Deliver To	CH2M Hill Constructors, Inc 115 Perimeter Center Place NE Atlanta, GA 30346 770-604-9182 Ext. 564
Attn	Kama White

Customer CH2M Hill Constructors

Project CTO 86 Cecil Field - South Fue

000001

CASE NARRATIVE

Client: CH2M Hill Constructors **Report:** 205021704

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the SW-846 8260B analysis, samples 20502170401 (86-CEF271-7S-Q1-05), 20502170405 (086-271-MS-Q1-05), and 20502170406 (086-271-MSD-Q1-05) had to be diluted due to compounds that were detected above the linear range of the calibration.

In the SW-846 8260B analysis for analytical batch 287753, the MS/MSD exhibited sporadic recovery failures. These recoveries were within limits in the LCS. This is attributed to a matrix interference.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

In the SW-846 8310 analysis, samples 20502170401 (86-CEF271-7S-Q1-05), 20502170405 (086-271-MS-Q1-05), and 20502170406 (086-271-MSD-Q1-05) had to be diluted due to compounds that were detected above the linear range of the calibration. The surrogate recoveries p-Terphenyl are reported as "DO" (diluted out), due to the dilution performed on the sample.

In the SW-846 8310 analysis for prep batch 287663, the LCS/LCSD exhibited RPD failures, however all compounds were recovered within control limits with the exception of the LCS recovery for Indeno(1,2,3-cd)pyrene being below the lower control limit. The MS/MSD were diluted out.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates an estimated value
U	Indicates the compound was analyzed for but not detected
B	(ORGANICS) Indicates the analyte was detected in the associated Method Blank
B	(INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Curtis Ekker

CURTIS EKKER
DATA VALIDATION MANAGER
GCAL REPORT 205021704

THIS REPORT CONTAINS 257 PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20502170401	86-CEF271-7S-Q1-05	Water	02/15/2005 15:50	02/16/2005 16:40
20502170402	86-CEF271-9S-Q1-05	Water	02/15/2005 16:45	02/16/2005 16:40
20502170403	86-CEF271-10S-Q1-05	Water	02/15/2005 15:00	02/16/2005 16:40
20502170404	86-CEF271-12S-Q1-05	Water	02/15/2005 14:10	02/16/2005 16:40
20502170405	086-271-MS-Q1-05	Water	02/15/2005 15:50	02/16/2005 16:40
20502170406	086-271-MSD-Q1-05	Water	02/15/2005 15:50	02/16/2005 16:40
20502170407	086-271-DP-Q1-05	Water		02/16/2005 16:40
20502170408	086-271-EB-Q1-05	Water	02/15/2005 17:00	02/16/2005 16:40
20502170409	086-271-TB-Q1-05	Water		02/16/2005 16:40

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1.	86-CEF271-7S-Q1-05	110		105		112		106		0
2.	LCS224391	108		108		110		105		0
3.	MB224390	107		108		111		106		0
4.	86-CEF271-9S-Q1-05	103		105		109		106		0
5.	86-CEF271-10S-Q1-05	108		108		111		105		0
6.	86-CEF271-12S-Q1-05	107		106		109		106		0
7.	086-271-MS-Q1-05	110		103		112		106		0
8.	086-271-MSD-Q1-05	110		107		110		106		0
9.	086-271-DP-Q1-05	107		105		110		105		0
10.	086-271-EB-Q1-05	108		106		108		106		0
11.	086-271-TB-Q1-05	108		108		109		112		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	75 - 120
SMC 2	Dibromofluoromethane	73 - 125
SMC 3	Toluene-d8	78 - 127
SMC 4	1,2-Dichloroethane-d4	70 - 123

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Analytical Batch: 287753

SAMPLE NO. : 224391

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	#	QC. LIMITS
1,1-Dichloroethene	ug/L	25	0	28.1	112		72 - 138
Benzene	ug/L	25	0	26.1	104		77 - 119
Chlorobenzene	ug/L	25	0	26.2	105		78 - 116
Ethylbenzene	ug/L	25	0	26.9	108		76 - 118
Toluene	ug/L	25	0	26.4	106		78 - 114
Trichloroethene	ug/L	25	0	26.3	105		67 - 126
Xylene (total)	ug/L	75	0	81.6	109		77 - 119
tert-Butyl methyl ether (MTBE)	ug/L	25	0	26	104		61 - 135

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

* Values outside of QC limits

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 8 outside limits

FORM III VOA-1

3A

WATER VOLATILE MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix Spike - EPA Sample No: 86-CEF271-7S-Q1-05

Analytical Batch: 287753

SAMPLE NO. : 20502170405

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS % REC	#	QC. LIMITS
1,1-Dichloroethene	ug/L	250	0	284	114		72 - 138
Benzene	ug/L	250	0	269	108		77 - 119
Chlorobenzene	ug/L	250	0	269	108		78 - 116
Ethylbenzene	ug/L	250	0	311	124	*	76 - 118
Toluene	ug/L	250	123	384	104		78 - 114
Trichloroethene	ug/L	250	0	271	108		67 - 126
Xylene (total)	ug/L	750	2910	3380	63	*	77 - 119
tert-Butyl methyl ether (MTBE)	ug/L	250	0	268	107		61 - 135

SAMPLE NO. : 20502170406

COMPOUND	UNITS	SPIKE ADDED	MSD CONC.	MSD % REC	#	% RPD	#	QC. LIMITS REC	QC. LIMITS RPD
1,1-Dichloroethene	ug/L	250	265	106		7		72 - 138	0 - 14
Benzene	ug/L	250	271	108		.7		77 - 119	0 - 11
Chlorobenzene	ug/L	250	269	108		0		78 - 116	0 - 13
Ethylbenzene	ug/L	250	305	122	*	2		76 - 118	0 - 30
Toluene	ug/L	250	372	100		3		78 - 114	0 - 13
Trichloroethene	ug/L	250	252	101		7		67 - 126	0 - 14
Xylene (total)	ug/L	750	3330	56	*	1		77 - 119	0 - 30
tert-Butyl methyl ether (MTBE)	ug/L	250	268	107		0		61 - 135	0 - 30

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

* Values outside of QC limits

RPD : 0 out of 8 outside limits

Spike Recovery: 4 out of 16 outside limits

FORM III VOA-1

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB224390

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 205021704

Lab File ID: 2050219/E7421

Lab Sample ID: 224390 Date Extracted:

GC Column: DB-624-30M ID: .53 (mm)

Date Analyzed: 02/19/05 Time: 1441

Instrument ID: MSV5 Matrix: Water

Heated Purge: N

Level: LOW

Prep Batch: Analytical Batch: 287753

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS224391	224391	2050219/E7420	02/19/05	1413
2.	86-CEF271-7S-Q1-05	20502170401	2050219/E7422	02/19/05	1507
3.	86-CEF271-9S-Q1-05	20502170402	2050219/E7423	02/19/05	1531
4.	86-CEF271-10S-Q1-05	20502170403	2050219/E7424	02/19/05	1555
5.	086-271-MS-Q1-05	20502170405	2050219/E7425M	02/19/05	1619
6.	086-271-MSD-Q1-05	20502170406	2050219/E7426M	02/19/05	1642
7.	86-CEF271-12S-Q1-05	20502170404	2050219/E7428	02/19/05	1736
8.	086-271-DP-Q1-05	20502170407	2050219/E7429	02/19/05	1800
9.	086-271-EB-Q1-05	20502170408	2050219/E7430	02/19/05	1824
10.	086-271-TB-Q1-05	20502170409	2050219/E7431	02/19/05	1848

FORM IV VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 205021704

Lab File ID: 2050219/E7410

BFB Injection Date: 02/19/05

Instrument ID: MSV5

BFB Injection Time: 0822

GC Column: DB-624-30M ID: .53 (mm)

Analytical Batch: 287753

m / e	ION ABUNDANCE CRITERIA	% Relative Abundance			
50	15.0 - 40.0% of mass 95	18.81	(	)	
75	30.0 - 60.0% of mass 95	43.42	(	)	
95	Base Peak, 100% relative abundance	100	(	)	
96	5.0 -9.0% of mass 95	7.11	(	)	
173	Less than 2.0% of mass 174	0	(0	)	1
174	50.0 - 99.9% of mass 95	73.1	(	)	
175	5.0 - 9.0% of mass 174	4.26	(5.83	)	1
176	95.0 - 101.0% of mass 174	71.94	(98.42	)	1
177	5.0 - 9.0% of mass 176	4.06	(5.65	)	2

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

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	V5STD0.50	1207	2050219/E7411	02/19/05	0907
2.	V5STD002	1206	2050219/E7412	02/19/05	0931
3.	V5STD005	1201	2050219/E7413	02/19/05	0955
4.	V5STD020	1202	2050219/E7414	02/19/05	1019
5.	V5STD050	1203	2050219/E7415	02/19/05	1147
6.	V5STD100	1204	2050219/E7416	02/19/05	1217
7.	V5STD200	1205	2050219/E7417	02/19/05	1240
8.	8260ICV	1600	2050219/E7419	02/19/05	1337
9.	LCS224391	224391	2050219/E7420	02/19/05	1413
10.	MB224390	224390	2050219/E7421	02/19/05	1441
11.	86-CEF271-7S-Q1-05	20502170401	2050219/E7422	02/19/05	1507
12.	86-CEF271-9S-Q1-05	20502170402	2050219/E7423	02/19/05	1531
13.	86-CEF271-10S-Q1-05	20502170403	2050219/E7424	02/19/05	1555
14.	086-271-MS-Q1-05	20502170405	2050219/E7425M	02/19/05	1619
15.	086-271-MSD-Q1-05	20502170406	2050219/E7426M	02/19/05	1642
16.	86-CEF271-12S-Q1-05	20502170404	2050219/E7428	02/19/05	1736

FORM V VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Lab File ID: 2050219/E7410 BFB Injection Date: 02/19/05

Instrument ID: MSV5 BFB Injection Time: 0822

GC Column: DB-624-30M ID: .53 (mm)

Analytical Batch: 287753

17.	086-271-DP-Q1-05	20502170407	2050219/E7429	02/19/05	1800
18.	086-271-EB-Q1-05	20502170408	2050219/E7430	02/19/05	1824
19.	086-271-TB-Q1-05	20502170409	2050219/E7431	02/19/05	1848

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 205021704

Lab File ID (Standard): 2050219/E7415

Date Analyzed: 02/19/05

Instrument ID: MSV5

Time: 1147

GC Column: DB-624-30M ID: .53 (mm)

Heated Purge: (Y/N) N

Analytical Batch: 287753

	IS 1 Area		IS 1 RT		IS 2 Area		IS 2 RT		IS 3 Area		IS 3 RT	
12 HOUR STD	139569		8.414		111117		10.01		319476		6.118	
EPA Sample		#		#		#		#		#		#
1 . LCS224391	131230		8.42		104406		10.02		306225		6.12	
2 . 086-271-EB-Q1-05	117623		8.42		89371		10.02		274524		6.12	
3 . 086-271-TB-Q1-05	111468		8.42		84370		10.02		258181		6.12	
4 . MB224390	129281		8.42		97536		10.02		301544		6.12	
5 . 86-CEF271-7S-Q1-05	126879		8.42		97330		10.02		304270		6.12	
6 . 86-CEF271-9S-Q1-05	126266		8.42		97265		10.03		296724		6.12	
7 . 86-CEF271-10S-Q1-05	122117		8.42		93788		10.02		293810		6.12	
8 . 086-271-MS-Q1-05	124190		8.42		98627		10.02		296621		6.12	
9 . 086-271-MSD-Q1-05	123757		8.42		98360		10.02		289637		6.13	
10 . 86-CEF271-12S-Q1-05	125624		8.42		96735		10.02		293107		6.12	
11 . 086-271-DP-Q1-05	121594		8.42		96173		10.02		290349		6.12	

IS 1 ID : Chlorobenzene-d5
IS 2 ID : 1,4-Dichlorobenzene-d4
IS 3 ID : Fluorobenzene

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
RTLOWER LIMIT = -0.50 minutes of internal standard RT

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

86-CEF271-7S-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170401

Level: (low/med) LOW Lab File ID: 2050219/E7422

% Moisture: not dec. Date Collected: 02/15/05 Time: 1550

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1507

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	5.00	U	2.25	5.00
100-41-4	Ethylbenzene	50.0	U	2.27	50.0
108-88-3	Toluene	123		2.13	50.0
1330-20-7	Xylene (total)	2910		5.09	100
1634-04-4	tert-Butyl methyl ether (MTBE)	50.0	U	1.79	50.0

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7422.d
Lab Smp Id: 20502170401 Client Smp ID: 86-CEF271-7S-Q1-05
Inj Date : 19-FEB-2005 15:07
Operator : JCK Inst ID: msv5.i
Smp Info : 20502170401*86-CEF271-7S-Q1-05
Misc Info : MSV~5838~*10*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:35 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 3
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

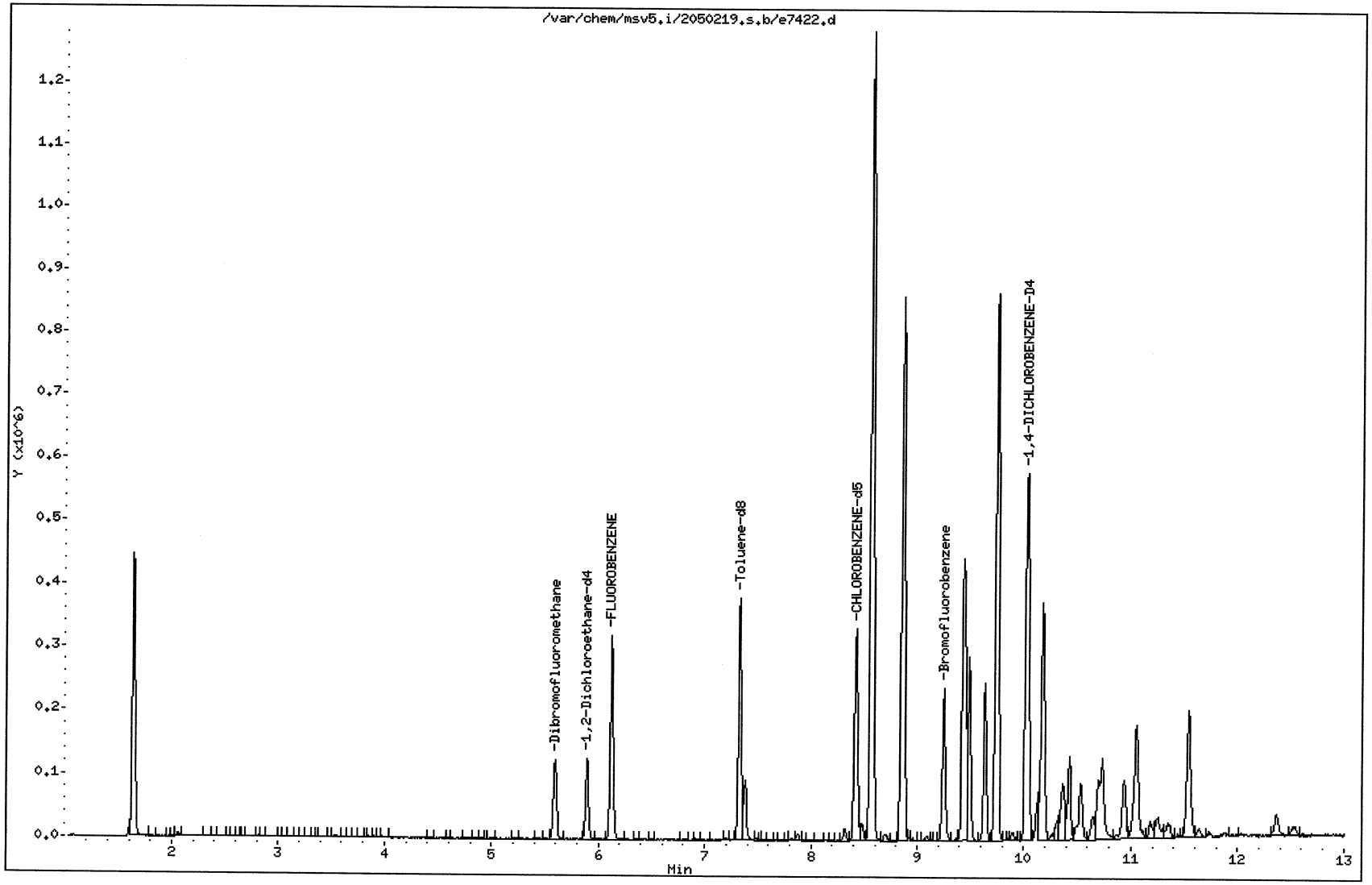
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	84504	52.7224	527	1766
$ 45 1,2-Dichloroethane-d4	67	5.896	5.887	(0.963)	46267	52.8704	529	
* 47 FLUOROBENZENE	96	6.124	6.121	(1.000)	304270	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.870)	279373	56.0433	560	
61 Toluene +	91	7.376	7.371	(0.876)	75482	12.2603	123	
67 2-Hexanone	43	7.873	7.858	(0.935)	2851	2.20641	22.1	
* 70 CHLOROBENZENE-d5	82	8.423	8.415	(1.000)	126879	50.0000		
74 p,m-Xylene	106	8.564	8.563	(1.017)	449010	175.006	1750	
75 o-Xylene	106	8.863	8.856	(1.052)	294545	116.022	1160	
$ 80 Bromofluorobenzene	174	9.255	9.249	(1.099)	80903	55.0663	551	
88 1,3,5-Trimethylbenzene	105	9.490	9.485	(0.947)	194324	39.9806	400	
92 1,2,4-Trimethylbenzene	105	9.748	9.744	(0.973)	582619	115.361	1150	
* 99 1,4-DICHLOROBENZENE-D4	152	10.018	10.016	(1.000)	97330	50.0000		
M 101 TOTAL XYLENE	106				743555	291.028	2910	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
102 n-Butylbenzene	91	10.177	10.192	(1.016)	41990	7.93473	79.3	
108 Naphthalene	128	11.538	11.535	(1.152)	248851	53.5560	536	

Data File: /var/chem/msv5.i/2050219.s.b/e7422.d
Date : 19-FEB-2005 15:07
Client ID: 86-CEF271-7S-Q1-05
Sample Info: 20502170401*86-CEF271-7S-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



000015

Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

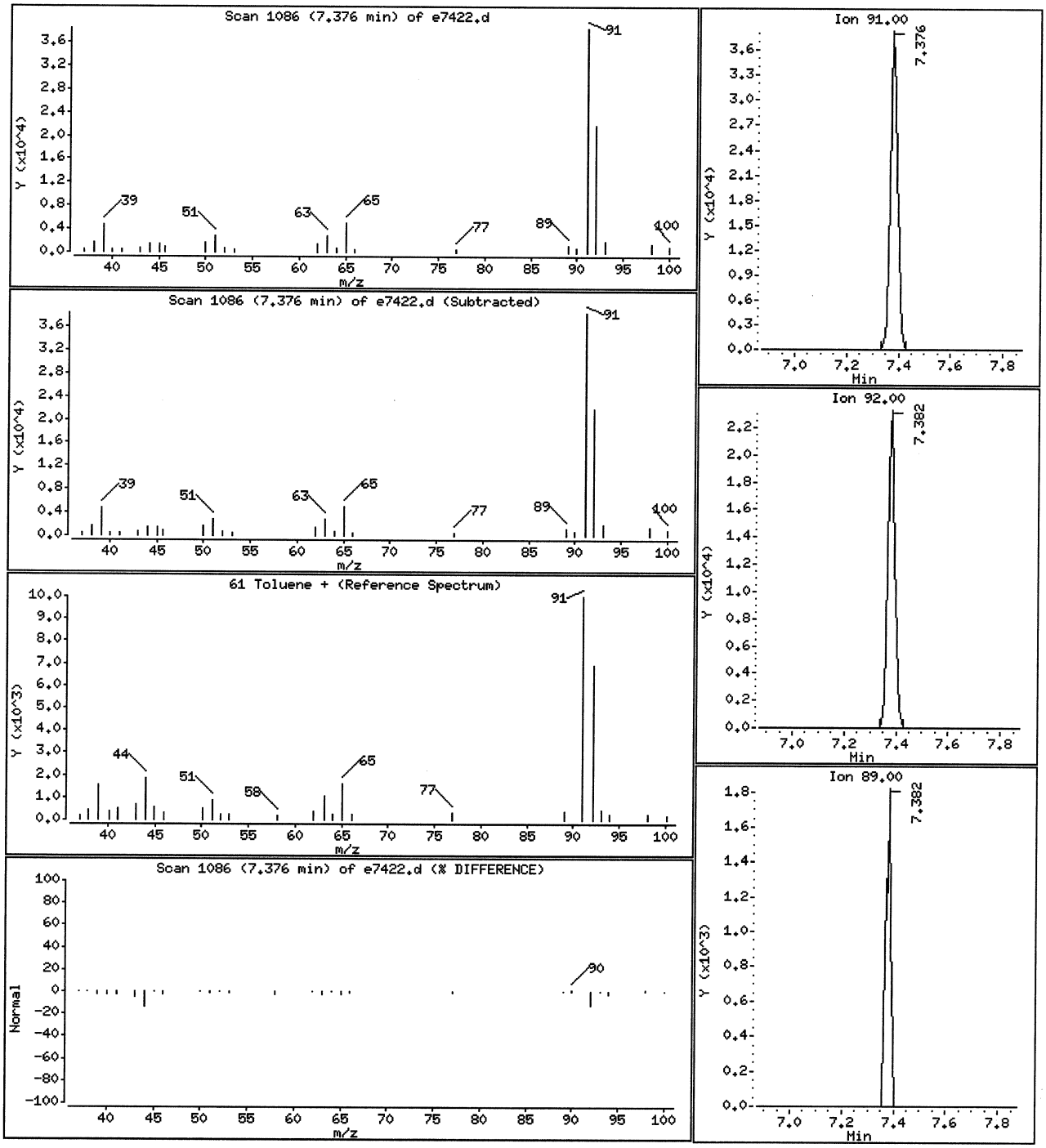
Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53

61 Toluene +

Concentration: 123 ug/L



Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

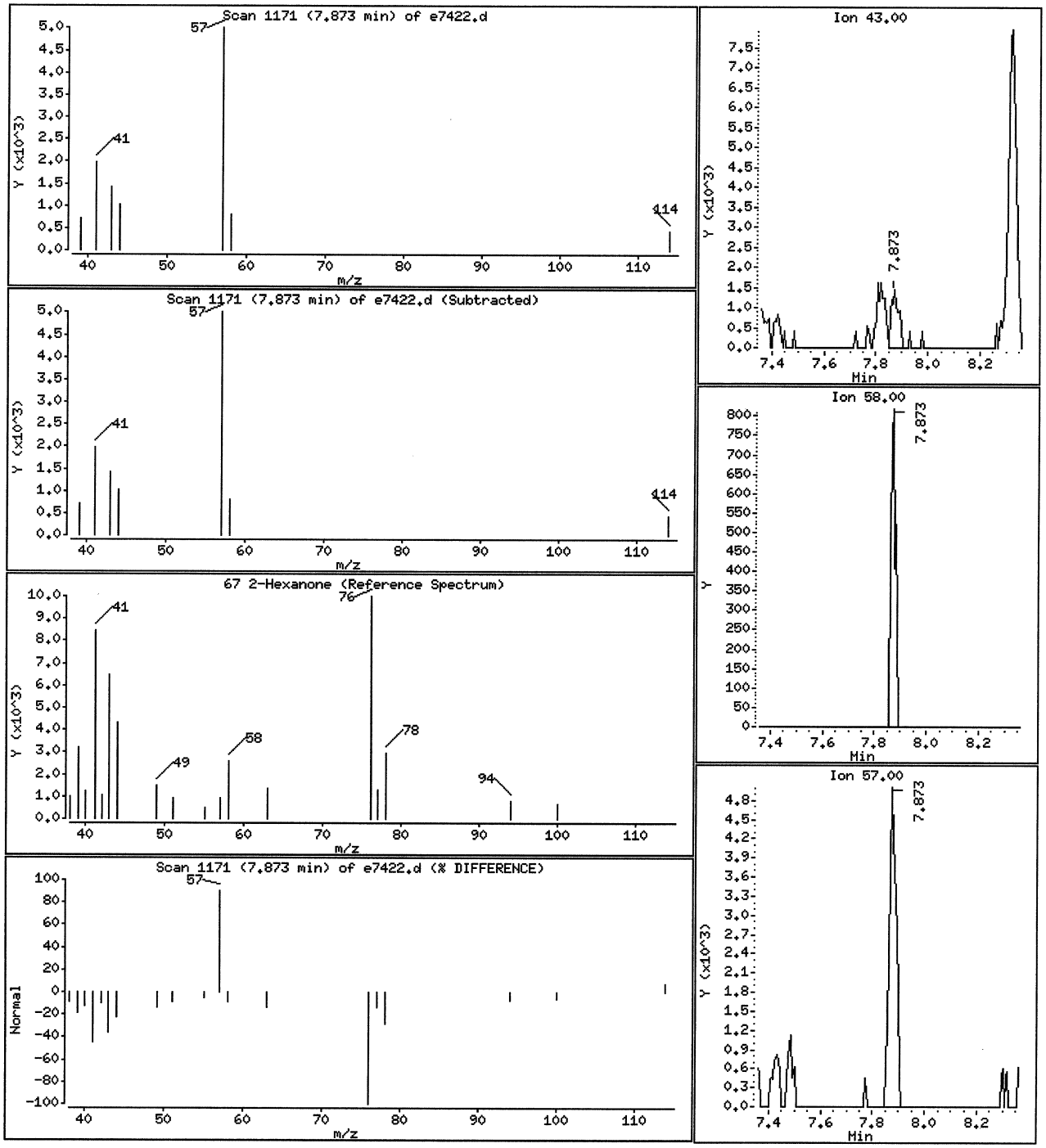
Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53

67 2-Hexanone

Concentration: 22.1 ug/L



Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

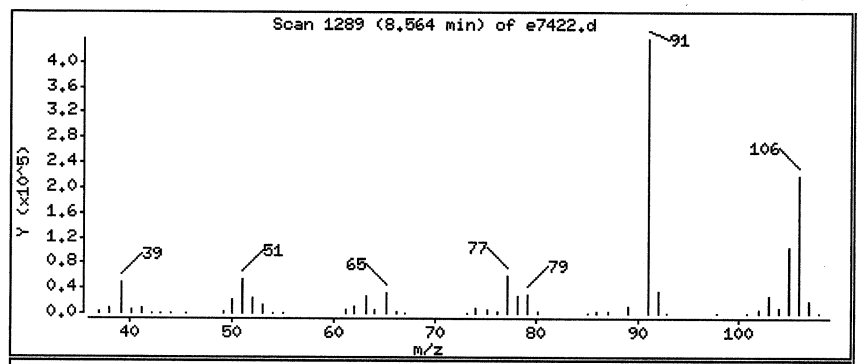
Operator: JCK

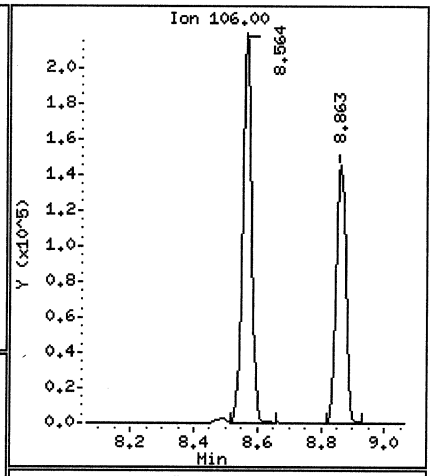
Column phase: DB-624-30M

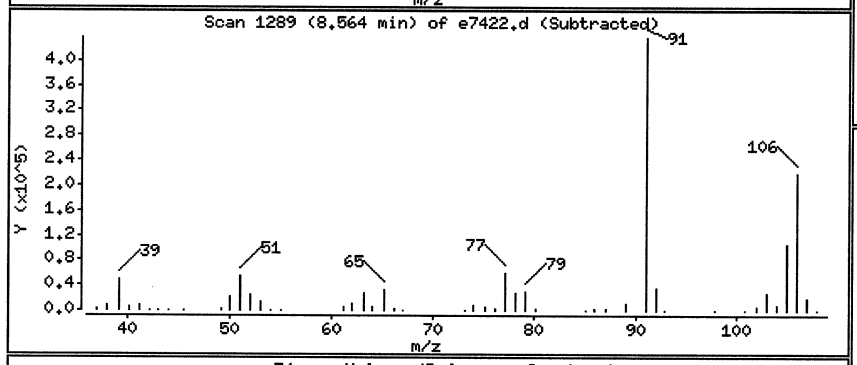
Column diameter: 0.53

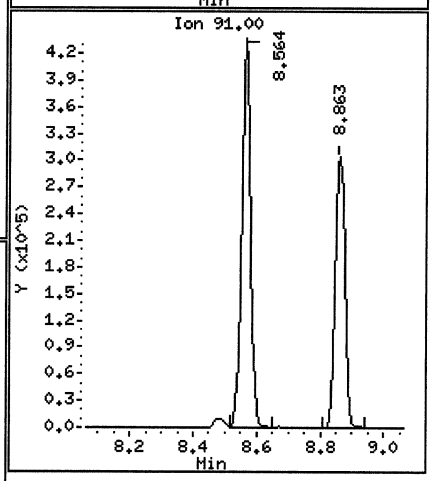
74 p,m-Xylene

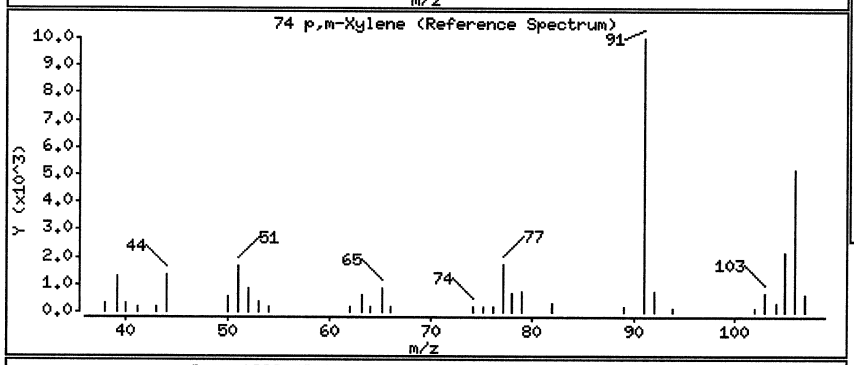
Concentration: 1750 ug/L

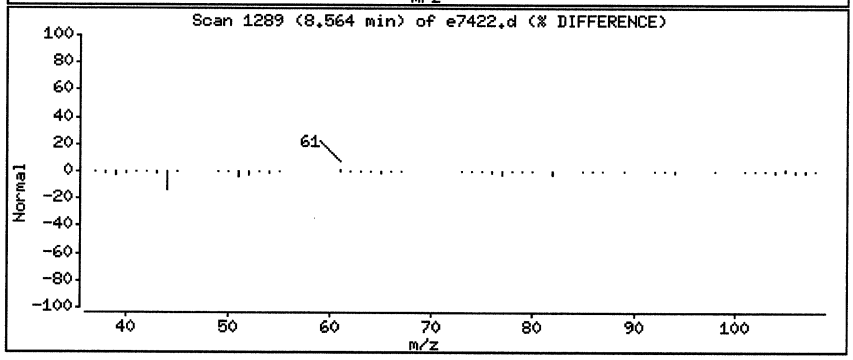












Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

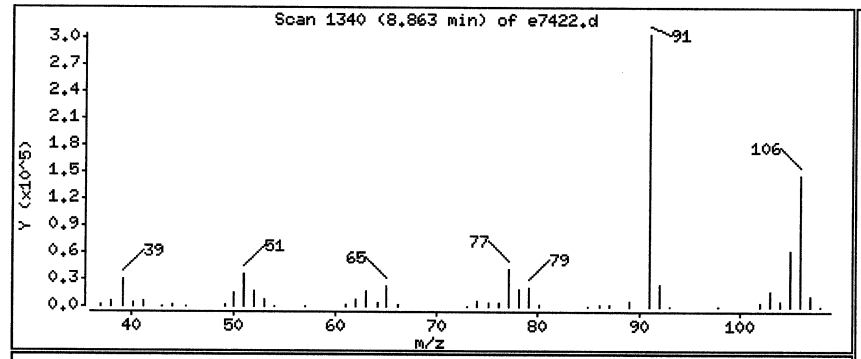
Operator: JCK

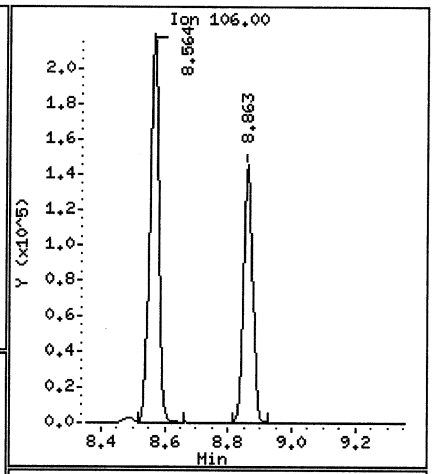
Column phase: DB-624-30M

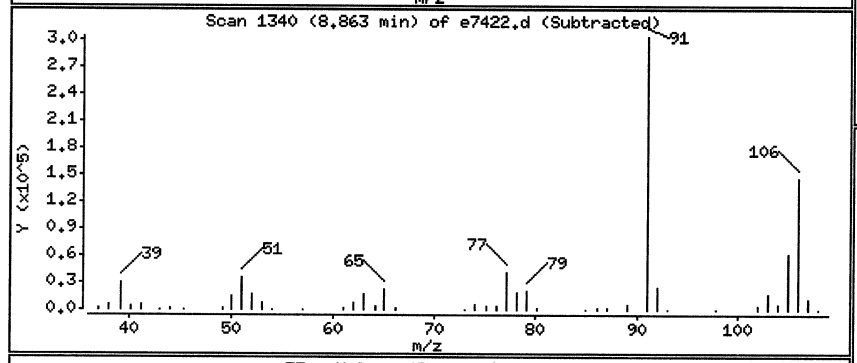
Column diameter: 0.53

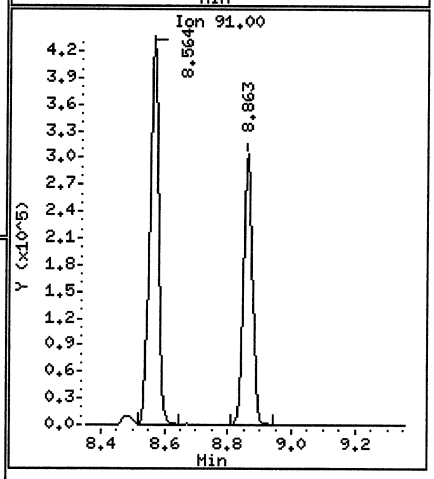
75 o-Xylene

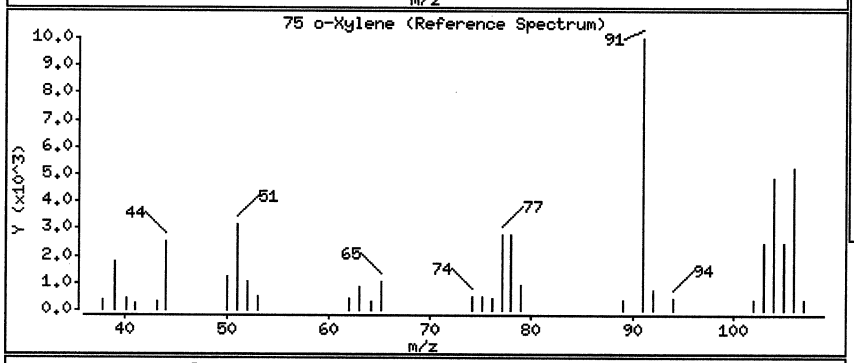
Concentration: 1160 ug/L

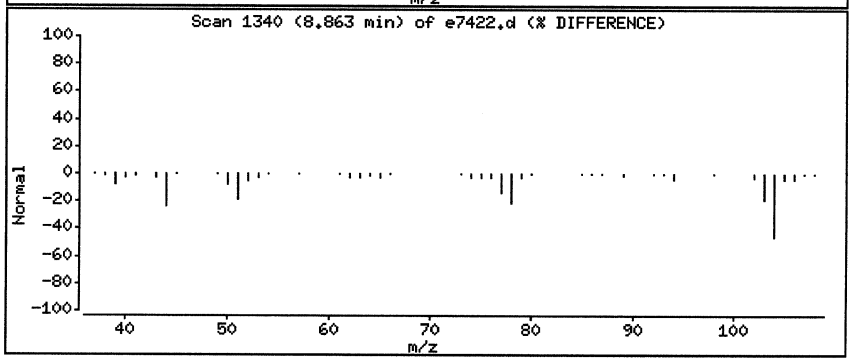












Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

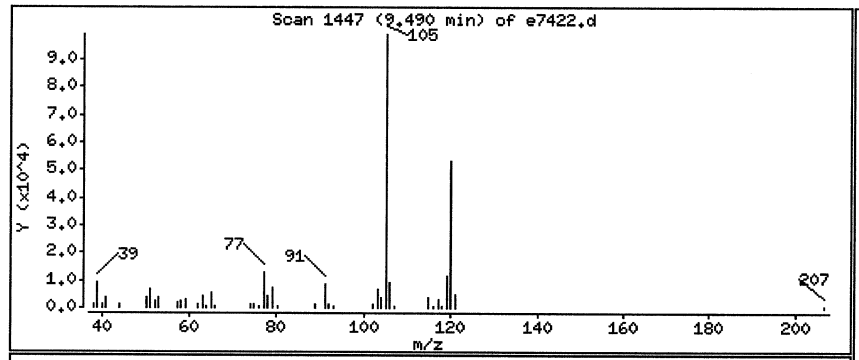
Operator: JCK

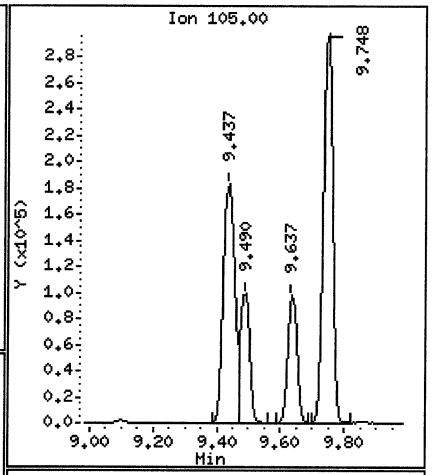
Column phase: DB-624-30M

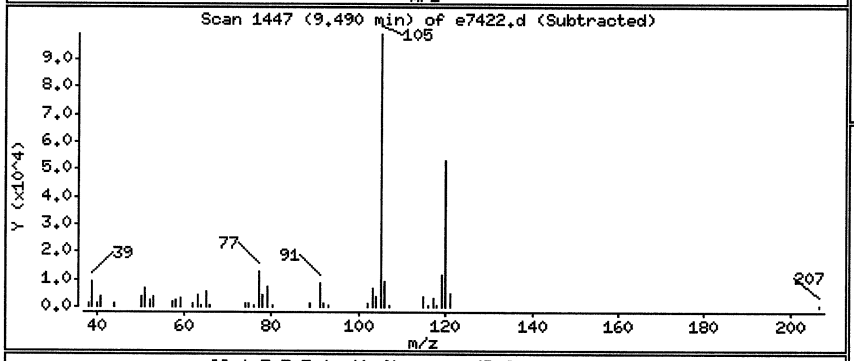
Column diameter: 0.53

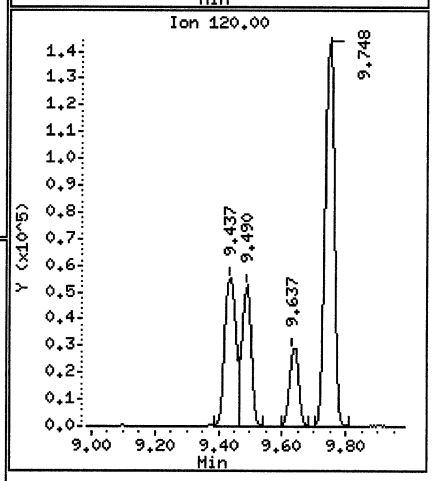
88 1,3,5-Trimethylbenzene

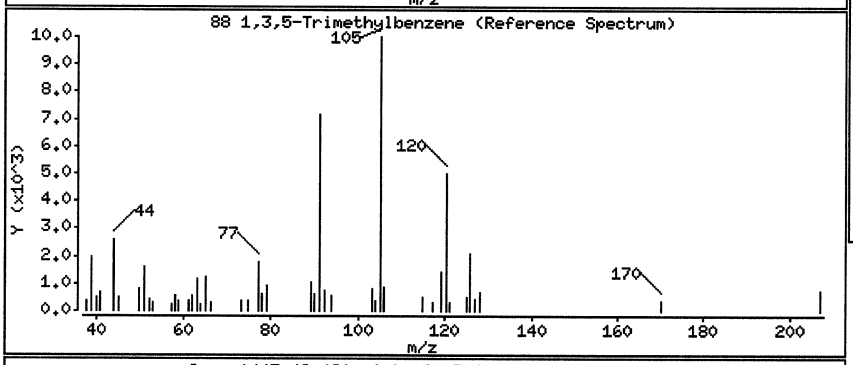
Concentration: 400 ug/L

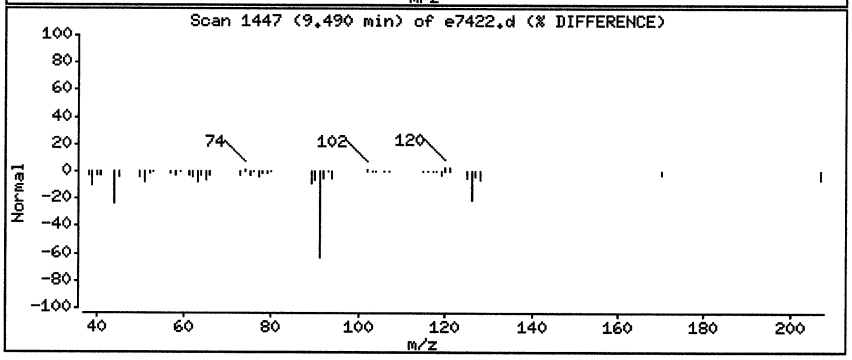












Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

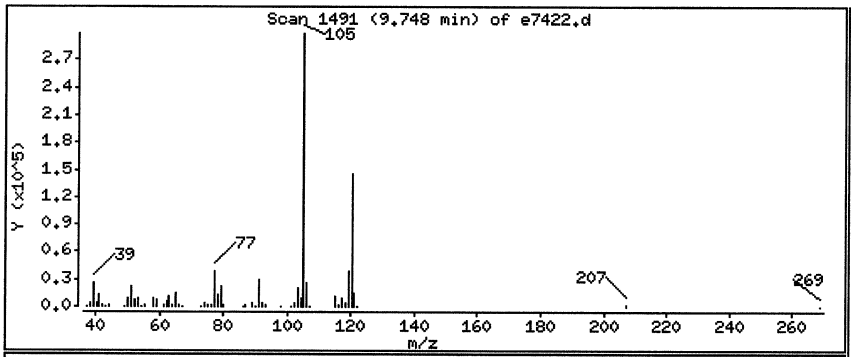
Operator: JCK

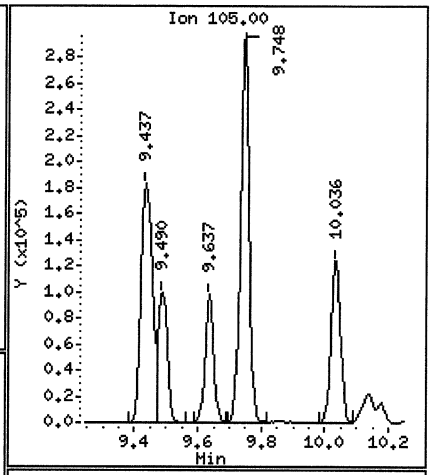
Column phase: DB-624-30M

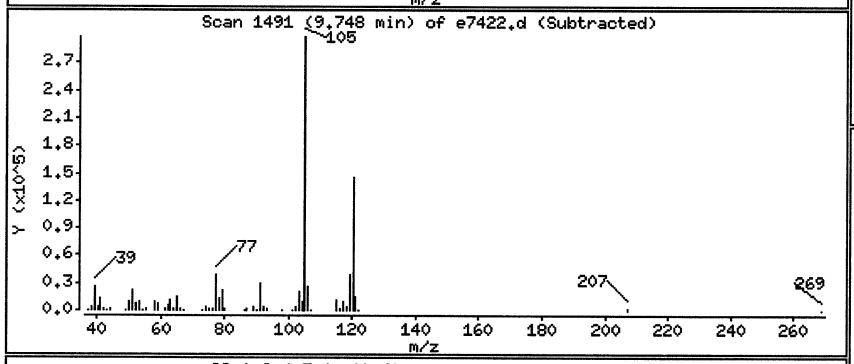
Column diameter: 0.53

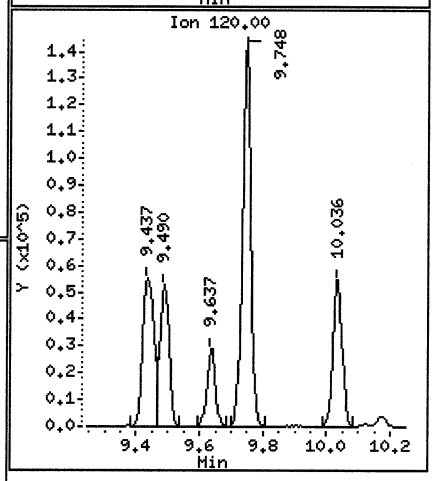
92 1,2,4-Trimethylbenzene

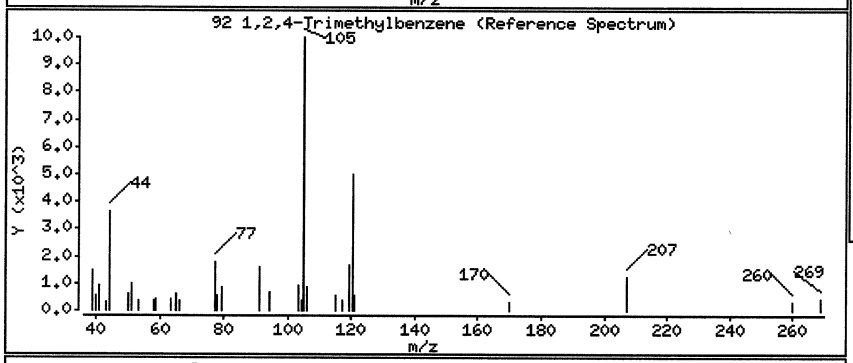
Concentration: 1150 ug/L

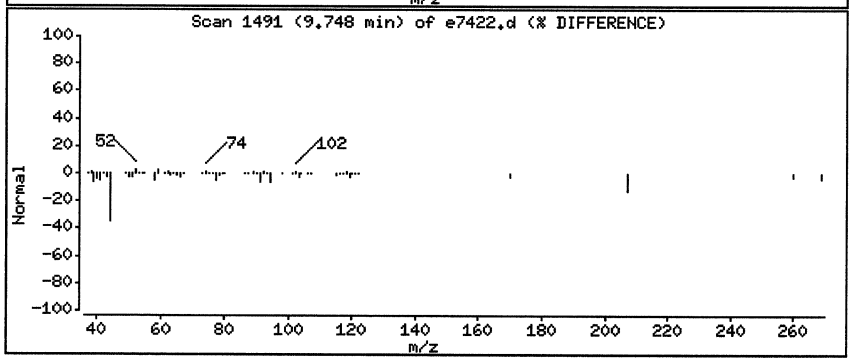












Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

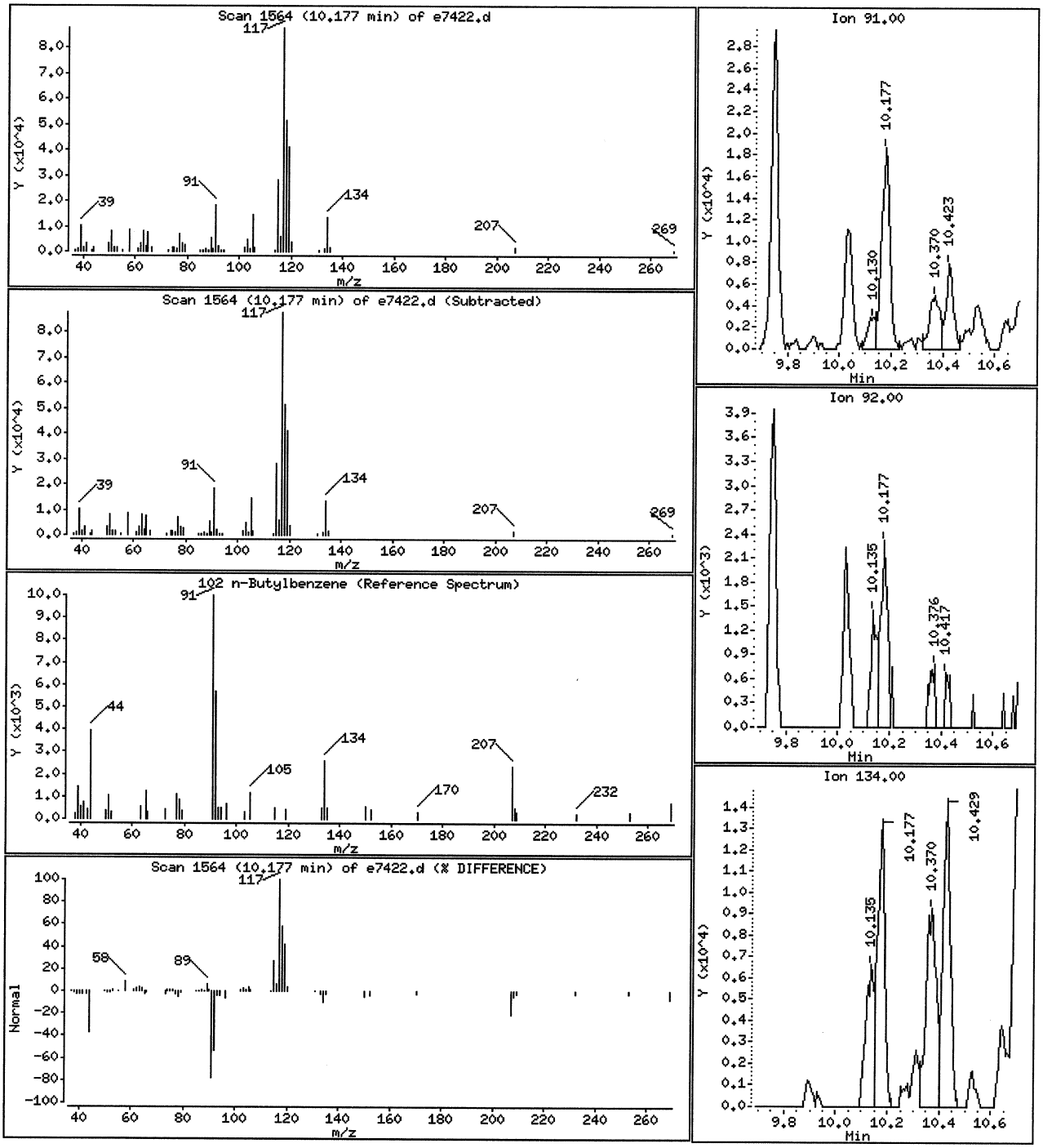
Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53

102 n-Butylbenzene

Concentration: 79.3 ug/L



Data File: /var/chem/msv5.i/2050219.s.b/e7422.d

Date : 19-FEB-2005 15:07

Client ID: 86-CEF271-7S-Q1-05

Instrument: msv5.i

Sample Info: 20502170401*86-CEF271-7S-Q1-05

Purge Volume: 5.0

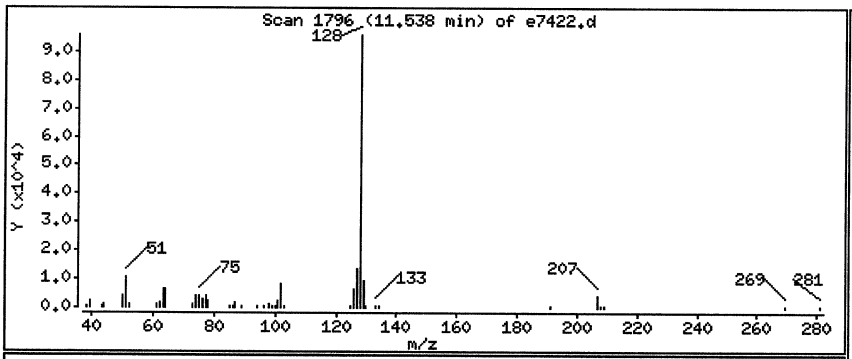
Operator: JCK

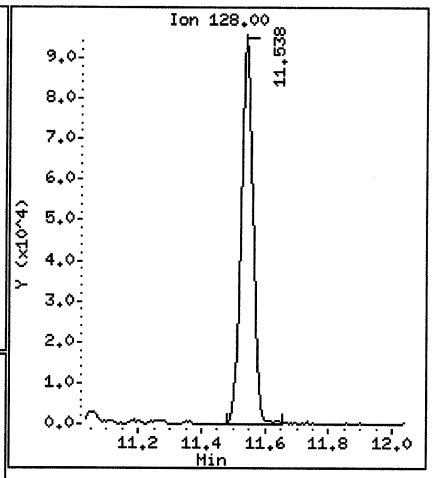
Column phase: DB-624-30M

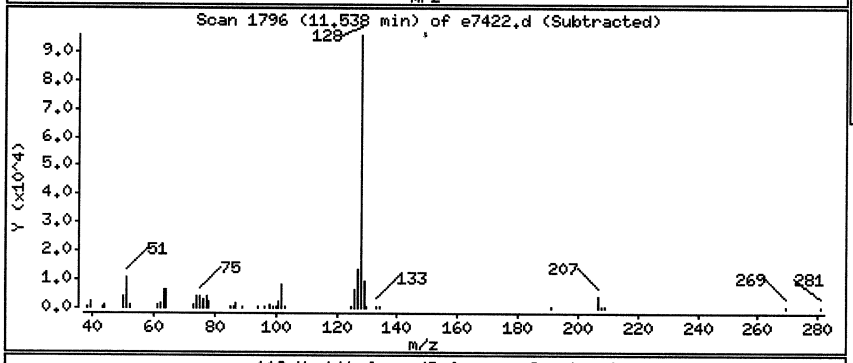
Column diameter: 0.53

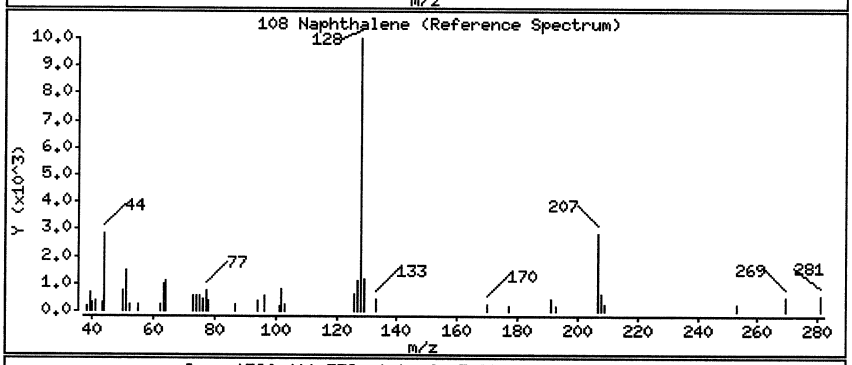
108 Naphthalene

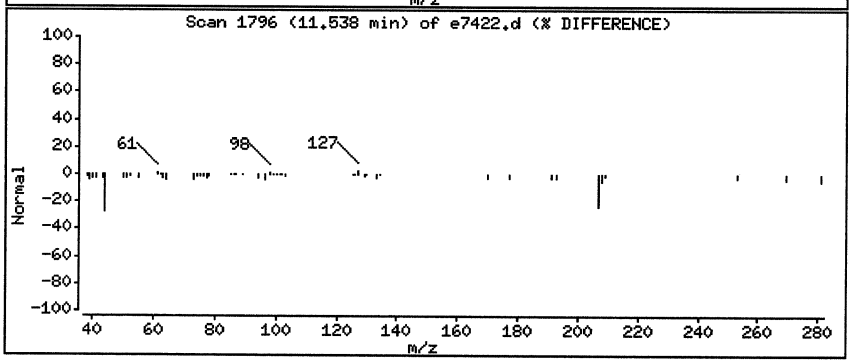
Concentration: 536 ug/L







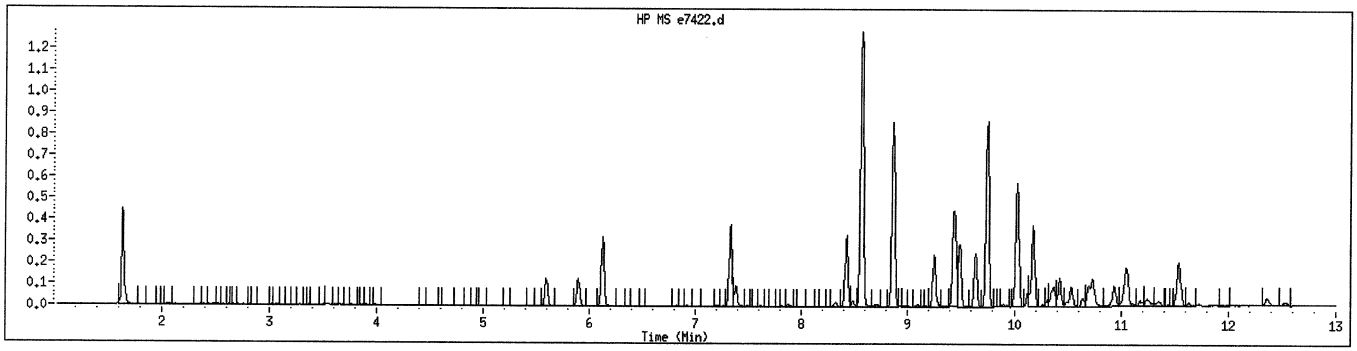




Data file : /var/chem/msv5.i/2050219.s.b/e7422.d
Report Date: 02/19/2005 15:28

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170401	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 15:07	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 20502170401*86-CEF271-7S-Q1-05		
Misc Info	: MSV~5838~*10*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 10.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

86-CEF271-9S-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170402

Level: (low/med) LOW Lab File ID: 2050219/E7423

% Moisture: not dec. Date Collected: 02/15/05 Time: 1645

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1531

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7423.d
Lab Smp Id: 20502170402 Client Smp ID: 86-CEF271-9S-Q1-05
Inj Date : 19-FEB-2005 15:31
Operator : JCK Inst ID: msv5.i
Smp Info : 20502170402*86-CEF271-9S-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

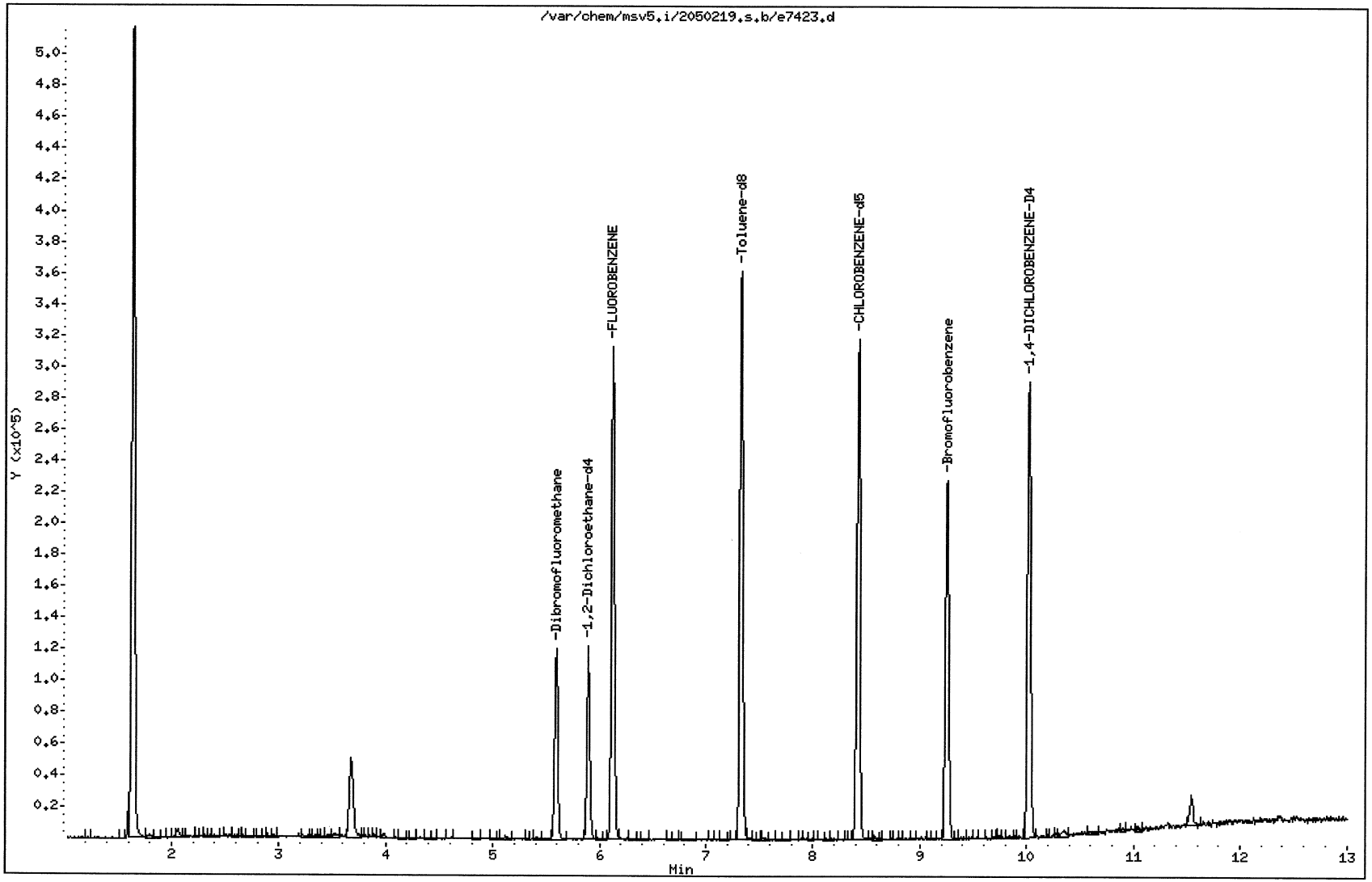
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	82444	52.7453	52.7	1719
$ 45 1,2-Dichloroethane-d4	67	5.890	5.887	(0.962)	45208	52.9741	53.0	
* 47 FLUOROBENZENE	96	6.125	6.121	(1.000)	296724	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.871)	270826	54.5925	54.6	
* 70 CHLOROBENZENE-d5	82	8.417	8.415	(1.000)	126266	50.0000		
$ 80 Bromofluorobenzene	174	9.253	9.249	(1.099)	75304	51.5042	51.5	
* 99 1,4-DICHLOROBENZENE-D4	152	10.026	10.016	(1.000)	97265	50.0000		
108 Naphthalene	128	11.542	11.535	(1.151)	23374	5.03376	5.03	

Data File: /var/chem/msv5.i/2050219.s.b/e7423.d
Date : 19-FEB-2005 15:31
Client ID: 86-CEF271-9S-Q1-05
Sample Info: 20502170402*86-CEF271-9S-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



000027

Data File: /var/chem/msv5.i/2050219.s.b/e7423.d

Date : 19-FEB-2005 15:31

Client ID: 86-CEF271-9S-Q1-05

Instrument: msv5.i

Sample Info: 20502170402*86-CEF271-9S-Q1-05

Purge Volume: 5.0

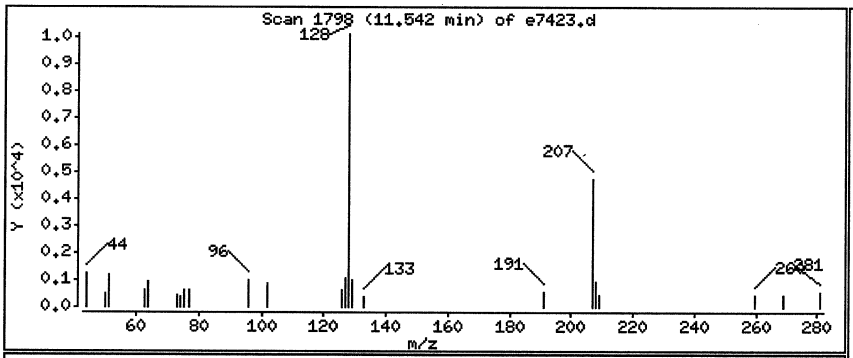
Operator: JCK

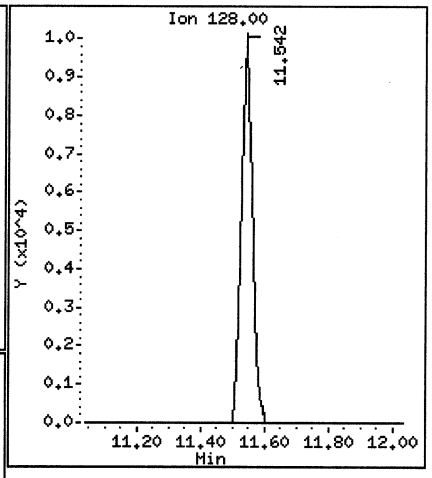
Column phase: DB-624-30M

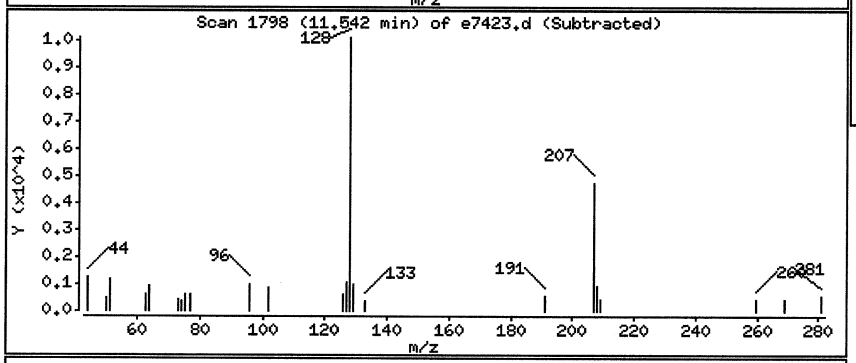
Column diameter: 0.53

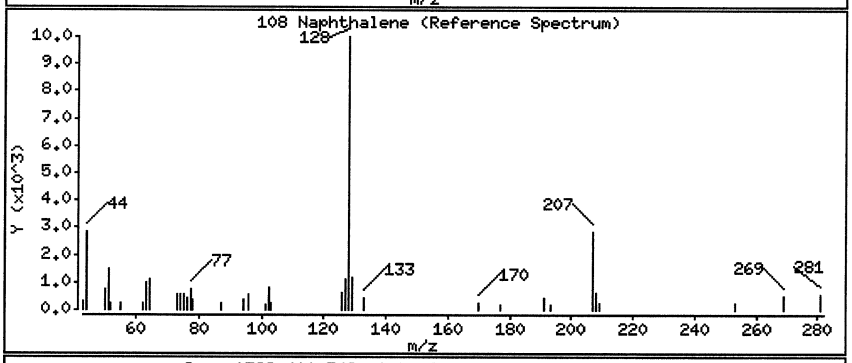
108 Naphthalene

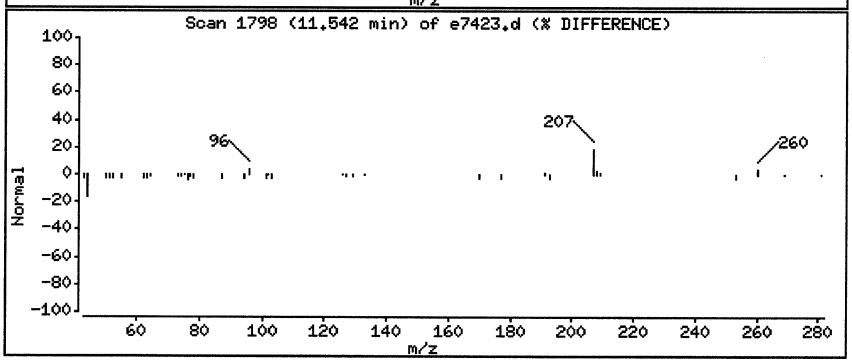
Concentration: 5.03 ug/L







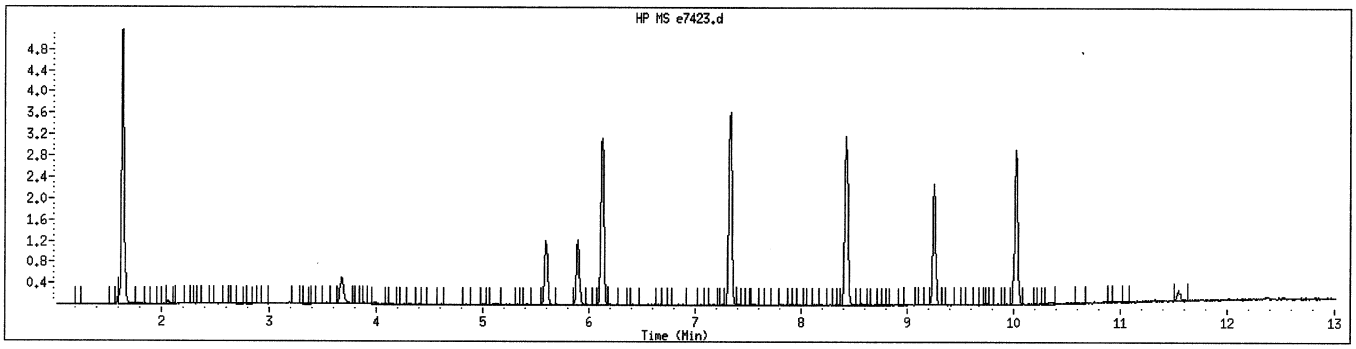




Data file : /var/chem/msv5.i/2050219.s.b/e7423.d
Report Date: 02/19/2005 16:15

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170402	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 15:31	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 20502170402*86-CEF271-9S-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

86-CEF271-10S-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170403

Level: (low/med) LOW Lab File ID: 2050219/E7424

% Moisture: not dec. Date Collected: 02/15/05 Time: 1500

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1555

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7424.d
Lab Smp Id: 20502170403 Client Smp ID: 86-CEF271-10S-Q1-05
Inj Date : 19-FEB-2005 15:55
Operator : JCK Inst ID: msv5.i
Smp Info : 20502170403*86-CEF271-10S-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

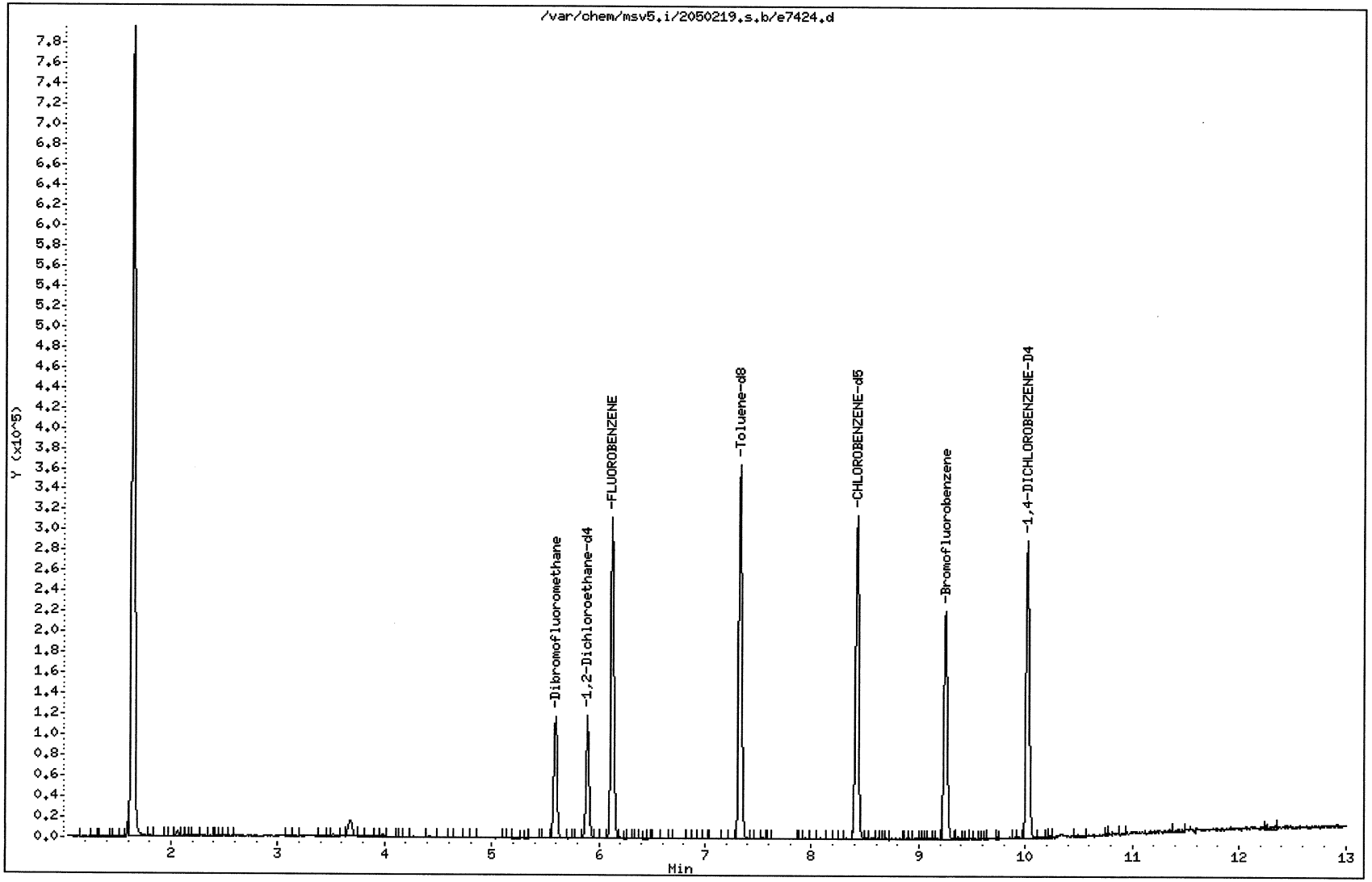
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.598	5.587	(0.914)	83463	53.9268	53.9	1746
$ 45 1,2-Dichloroethane-d4	67	5.896	5.887	(0.963)	44384	52.5243	52.5	
* 47 FLUOROBENZENE	96	6.125	6.121	(1.000)	293810	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.871)	266902	55.6294	55.6	
* 70 CHLOROBENZENE-d5	82	8.417	8.415	(1.000)	122117	50.0000		
$ 80 Bromofluorobenzene	174	9.253	9.249	(1.099)	76663	54.2151	54.2	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	93788	50.0000		

Data File: /var/chem/msv5.i/2050219.s.b/e7424.d
Date : 19-FEB-2005 15:55
Client ID: 86-CEF271-10S-Q1-05
Sample Info: 20502170403*86-CEF271-10S-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

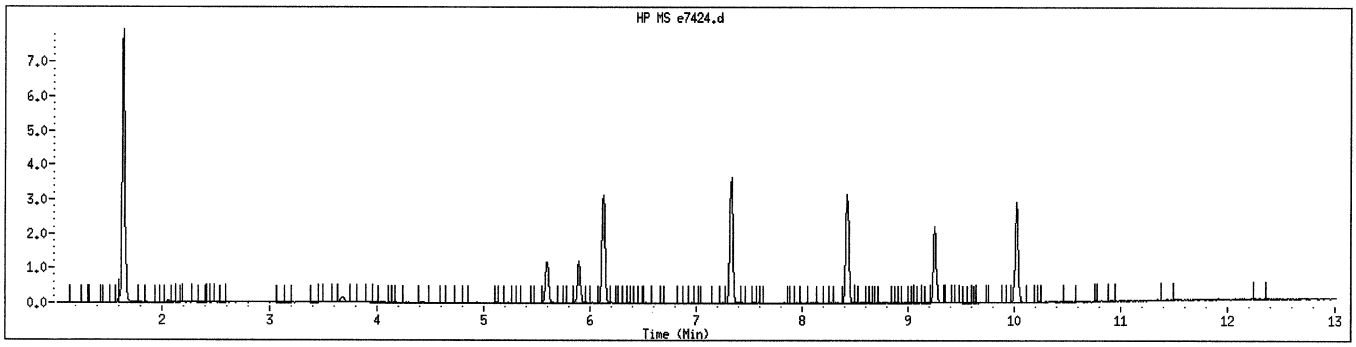
Instrument: msv5.i
Operator: JCK
Column diameter: 0.53



Data file : /var/chem/msv5.i/2050219.s.b/e7424.d
Report Date: 02/19/2005 16:15

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170403	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 15:55	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 20502170403*86-CEF271-10S-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

86-CEF271-12S-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170404

Level: (low/med) LOW Lab File ID: 2050219/E7428

% Moisture: not dec. Date Collected: 02/15/05 Time: 1410

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1736

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RFS

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7428.d
Lab Smp Id: 20502170404 Client Smp ID: 86-CEF271-12S-Q1-05
Inj Date : 19-FEB-2005 17:36
Operator : RFS Inst ID: msv5.i
Smp Info : 20502170404*86-CEF271-12S-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 20-Feb-2005 09:27 rfs Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

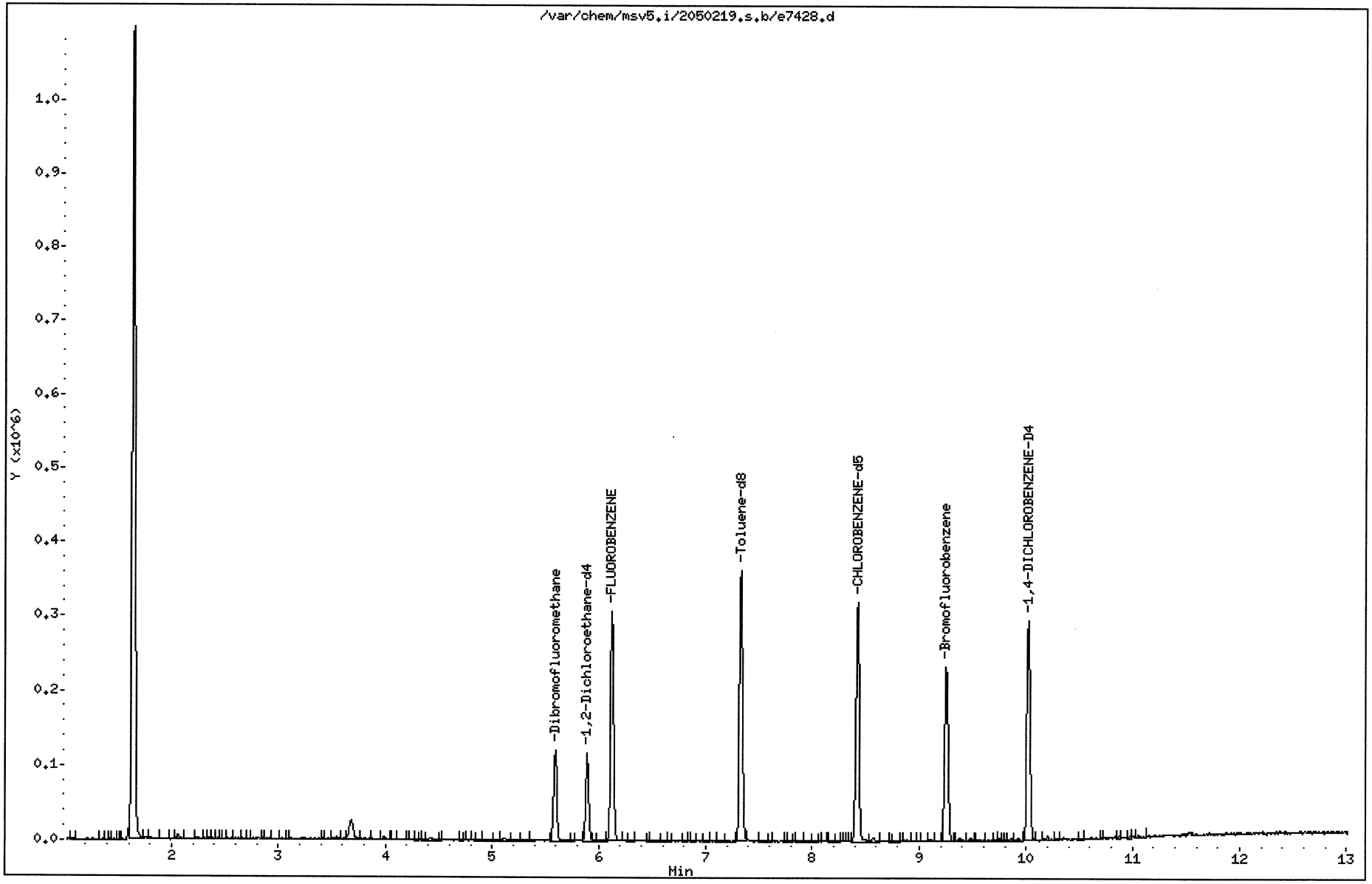
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.598	(0.913)	81530	52.8042	52.8	1780
$ 45 1,2-Dichloroethane-d4	67	5.891	5.890	(0.962)	44607	52.9148	52.9	
* 47 FLUOROBENZENE	96	6.125	6.118	(1.000)	293107	50.0000		
$ 60 Toluene-d8	98	7.329	7.323	(0.870)	268929	54.4871	54.5	
* 70 CHLOROBENZENE-d5	82	8.423	8.417	(1.000)	125624	50.0000		
$ 80 Bromofluorobenzene	174	9.254	9.247	(1.099)	78009	53.6269	53.6	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.014	(1.000)	96735	50.0000		

Data File: /var/chem/msv5.i/2050219.s.b/e7428.d
Date : 19-FEB-2005 17:36
Client ID: 86-CEF271-12S-Q1-05
Sample Info: 20502170404*86-CEF271-12S-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i
Operator: RFS
Column diameter: 0.53

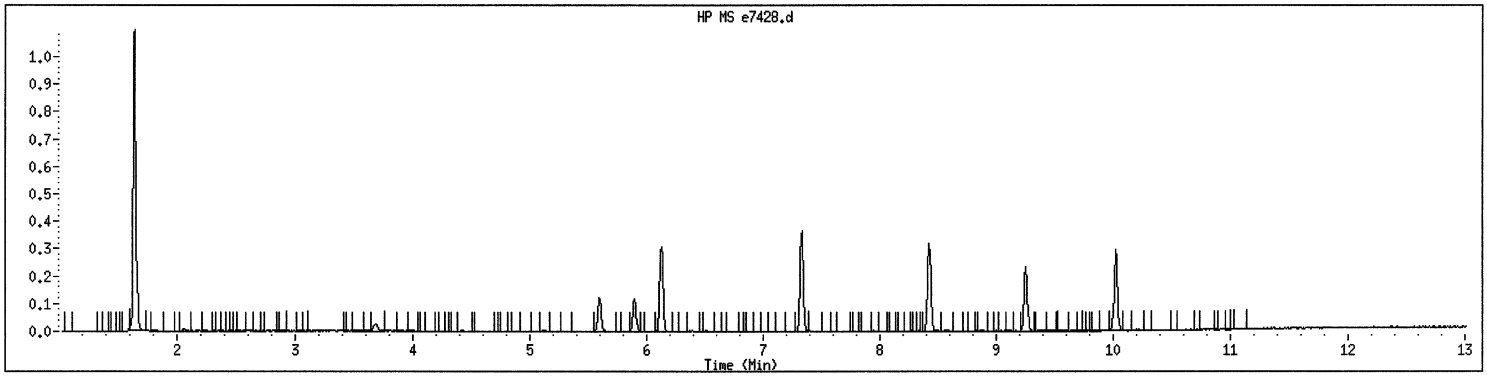
000036



Data file : /var/chem/msv5.i/2050219.s.b/e7428.d
Report Date: 02/20/2005 15:55

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170404	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 17:36	Instrument	: msv5.i
Operator	: RFS		
Sample Info	: 20502170404*86-CEF271-12S-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-271-DP-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170407

Level: (low/med) LOW Lab File ID: 2050219/E7429

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1800

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RFS

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7429.d
Lab Smp Id: 20502170407 Client Smp ID: 086-271-DP-Q1-05
Inj Date : 19-FEB-2005 18:00
Operator : RFS Inst ID: msv5.i
Smp Info : 20502170407*086-271-DP-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

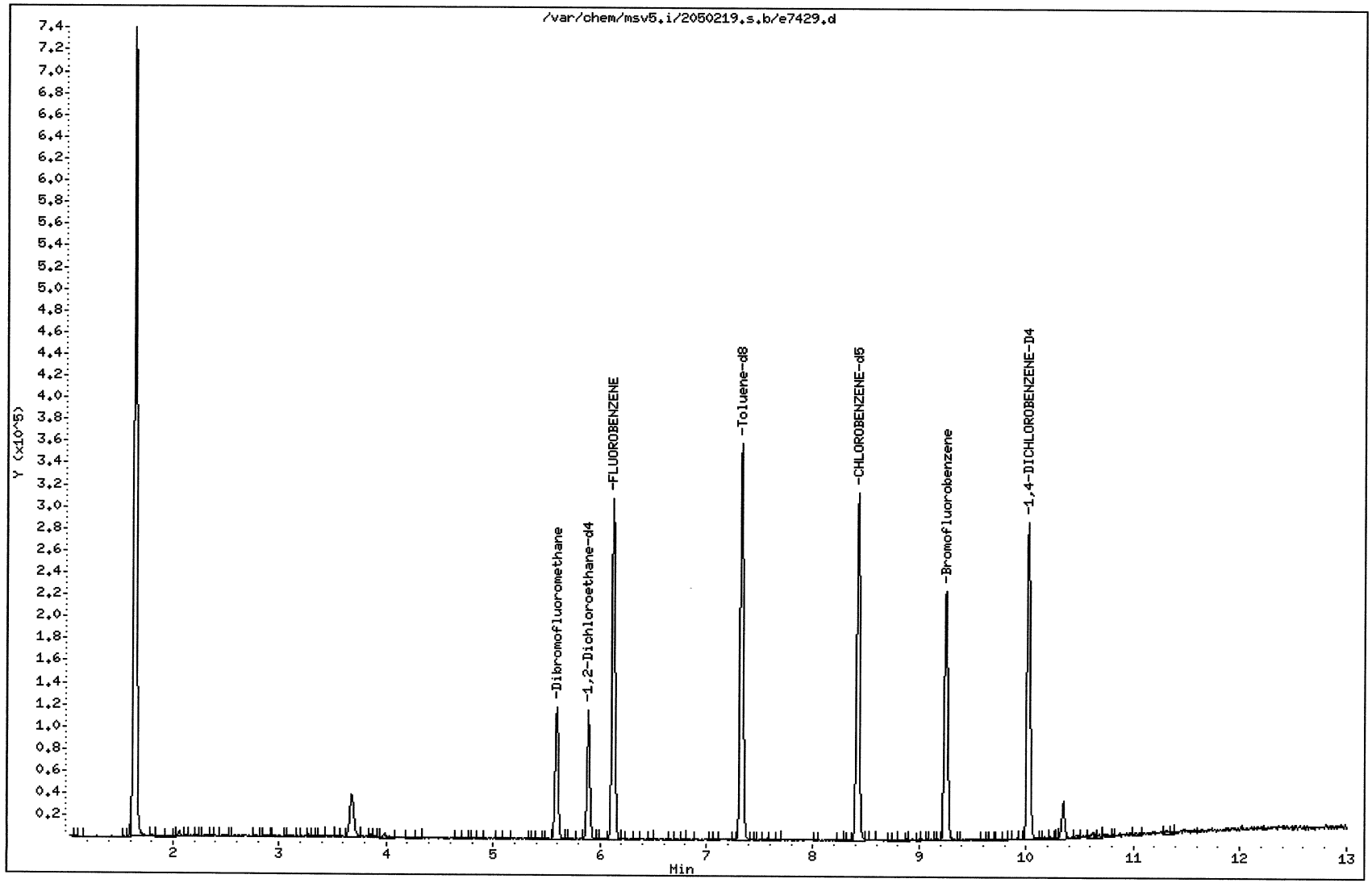
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	80289	52.4944	52.5	1709
$ 45 1,2-Dichloroethane-d4	67	5.890	5.887	(0.962)	43636	52.2547	52.3	
* 47 FLUOROBENZENE	96	6.124	6.121	(1.000)	290349	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.870)	263135	55.0802	55.1	
* 70 CHLOROBENZENE-d5	82	8.423	8.415	(1.000)	121594	50.0000		
$ 80 Bromofluorobenzene	174	9.253	9.249	(1.099)	75471	53.6017	53.6	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	96173	50.0000		

Data File: /var/chem/msv5.i/2050219.s.b/e7429.d
Date : 19-FEB-2005 18:00
Client ID: 086-271-DP-Q1-05
Sample Info: 20502170407*086-271-DP-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: RFS
Column diameter: 0.53

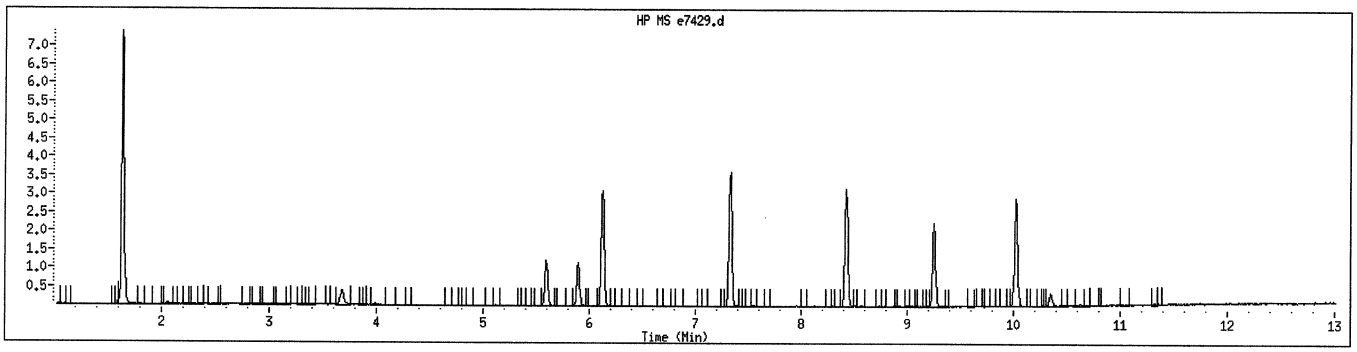


000040

Data file : /var/chem/msv5.i/2050219.s.b/e7429.d
Report Date: 02/20/2005 07:45

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170407	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 18:00	Instrument	: msv5.i
Operator	: RFS		
Sample Info	: 20502170407*086-271-DP-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-271-EB-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170408

Level: (low/med) LOW Lab File ID: 2050219/E7430

% Moisture: not dec. Date Collected: 02/15/05 Time: 1700

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1824

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RFS

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7430.d
Lab Smp Id: 20502170408 Client Smp ID: 086-271-EB-Q1-05
Inj Date : 19-FEB-2005 18:24
Operator : RFS Inst ID: msv5.i
Smp Info : 20502170408*086-271-EB-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

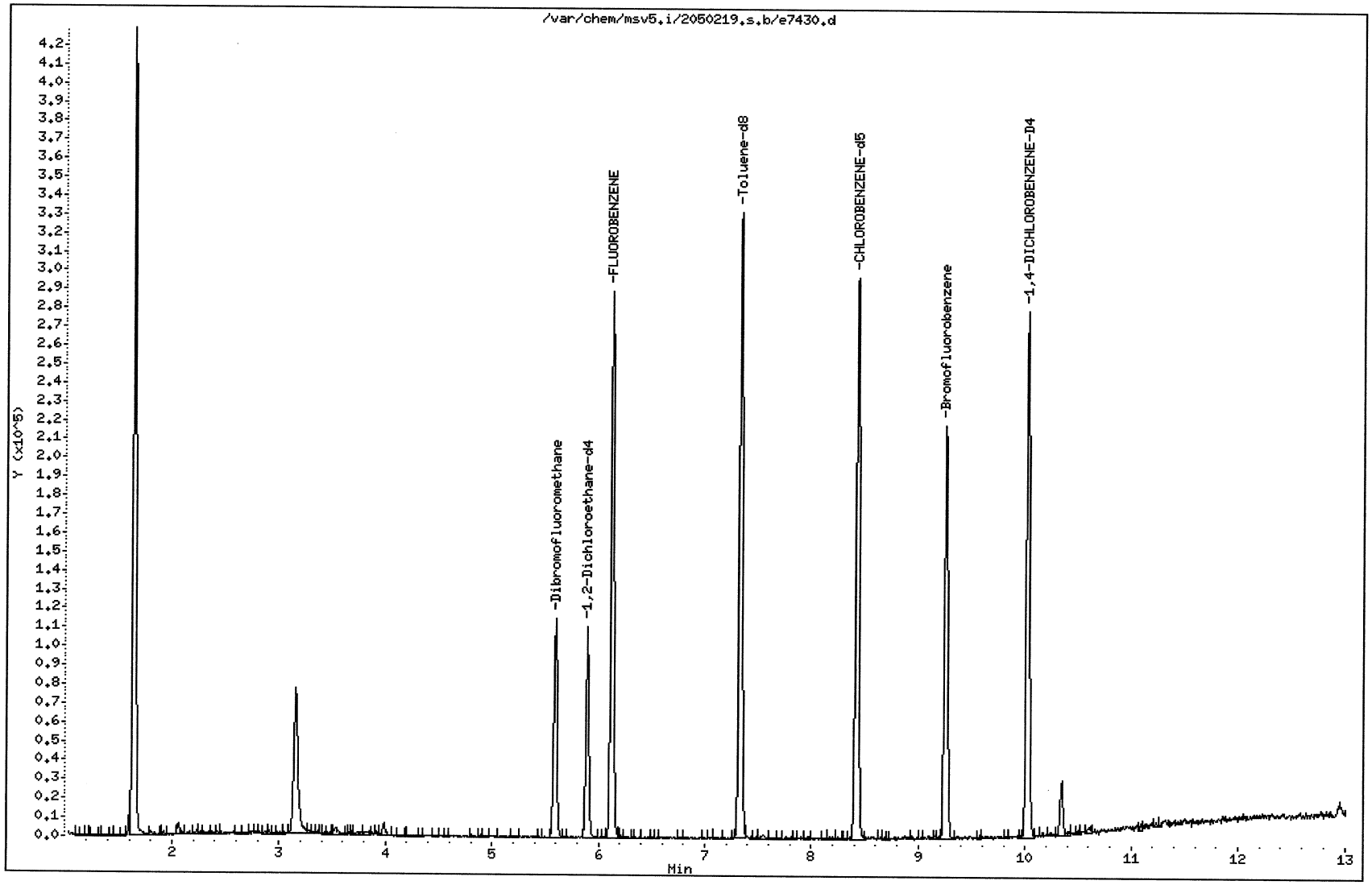
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
18 Methylene Chloride	49	3.984	3.981	(0.651)	4730	2.24918	2.25	
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	76756	53.0773	53.1	1723
$ 45 1,2-Dichloroethane-d4	67	5.896	5.887	(0.963)	41750	52.8782	52.9	
* 47 FLUOROBENZENE	96	6.125	6.121	(1.000)	274524	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.871)	249706	54.0338	54.0	
* 70 CHLOROBENZENE-d5	82	8.417	8.415	(1.000)	117623	50.0000		
$ 80 Bromofluorobenzene	174	9.248	9.249	(1.099)	73326	53.8365	53.8	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	89371	50.0000		

Data File: /var/chem/msv5.i/2050219.s.b/e7430.d
Date : 19-FEB-2005 18:24
Client ID: 086-271-EB-Q1-05
Sample Info: 20502170408*086-271-EB-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: RFS
Column diameter: 0.53



000044

Data File: /var/chem/msv5.i/2050219.s.b/e7430.d

Date : 19-FEB-2005 18:24

Client ID: 086-271-EB-Q1-05

Instrument: msv5.i

Sample Info: 20502170408*086-271-EB-Q1-05

Purge Volume: 5.0

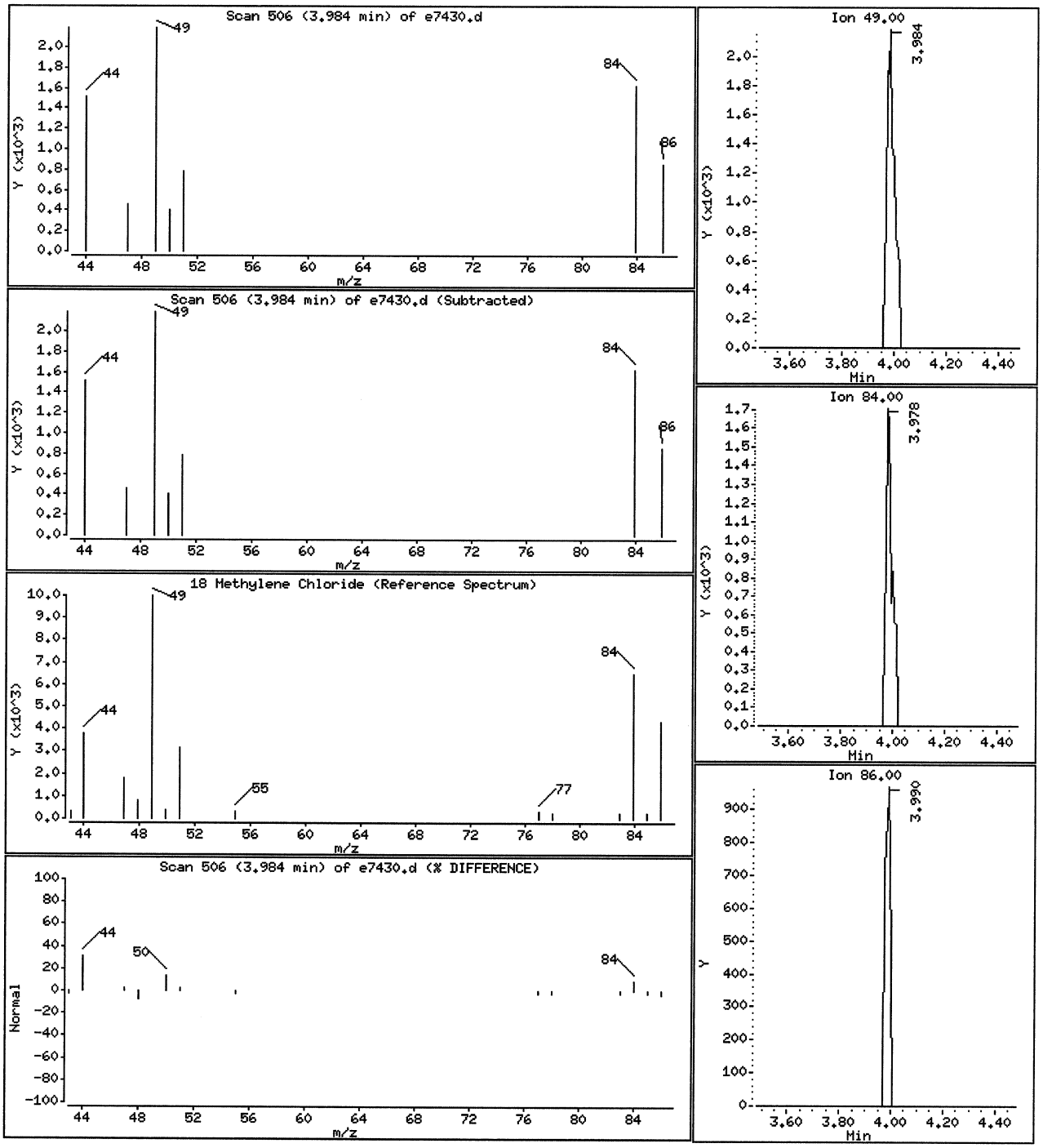
Operator: RFS

Column phase: DB-624-30M

Column diameter: 0.53

18 Methylene Chloride

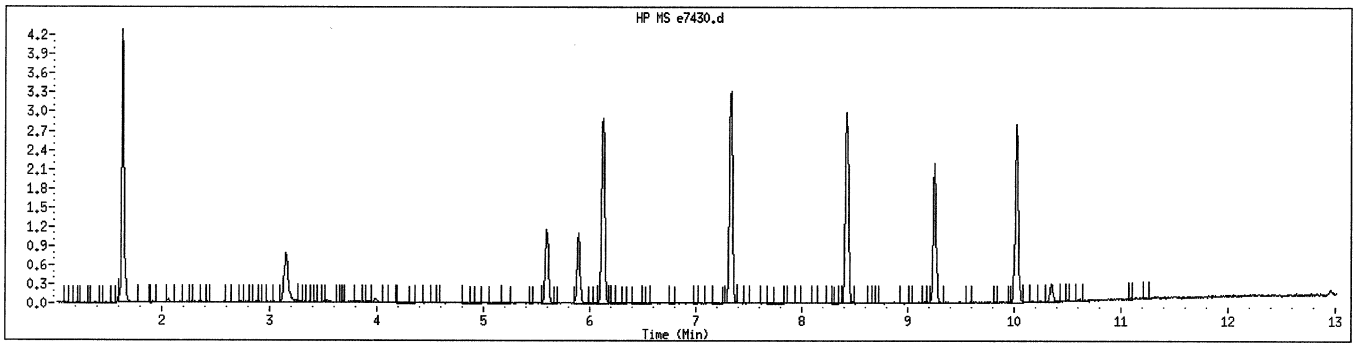
Concentration: 2.25 ug/L



Data file : /var/chem/msv5.i/2050219.s.b/e7430.d
Report Date: 02/20/2005 07:46

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170408	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 18:24	Instrument	: msv5.i
Operator	: RFS		
Sample Info	: 20502170408*086-271-EB-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-271-TB-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170409

Level: (low/med) LOW Lab File ID: 2050219/E7431

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1848

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RFS

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7431.d
Lab Smp Id: 20502170409 Client Smp ID: 086-271-TB-Q1-05
Inj Date : 19-FEB-2005 18:48
Operator : RFS Inst ID: msv5.i
Smp Info : 20502170409*086-271-TB-Q1-05
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

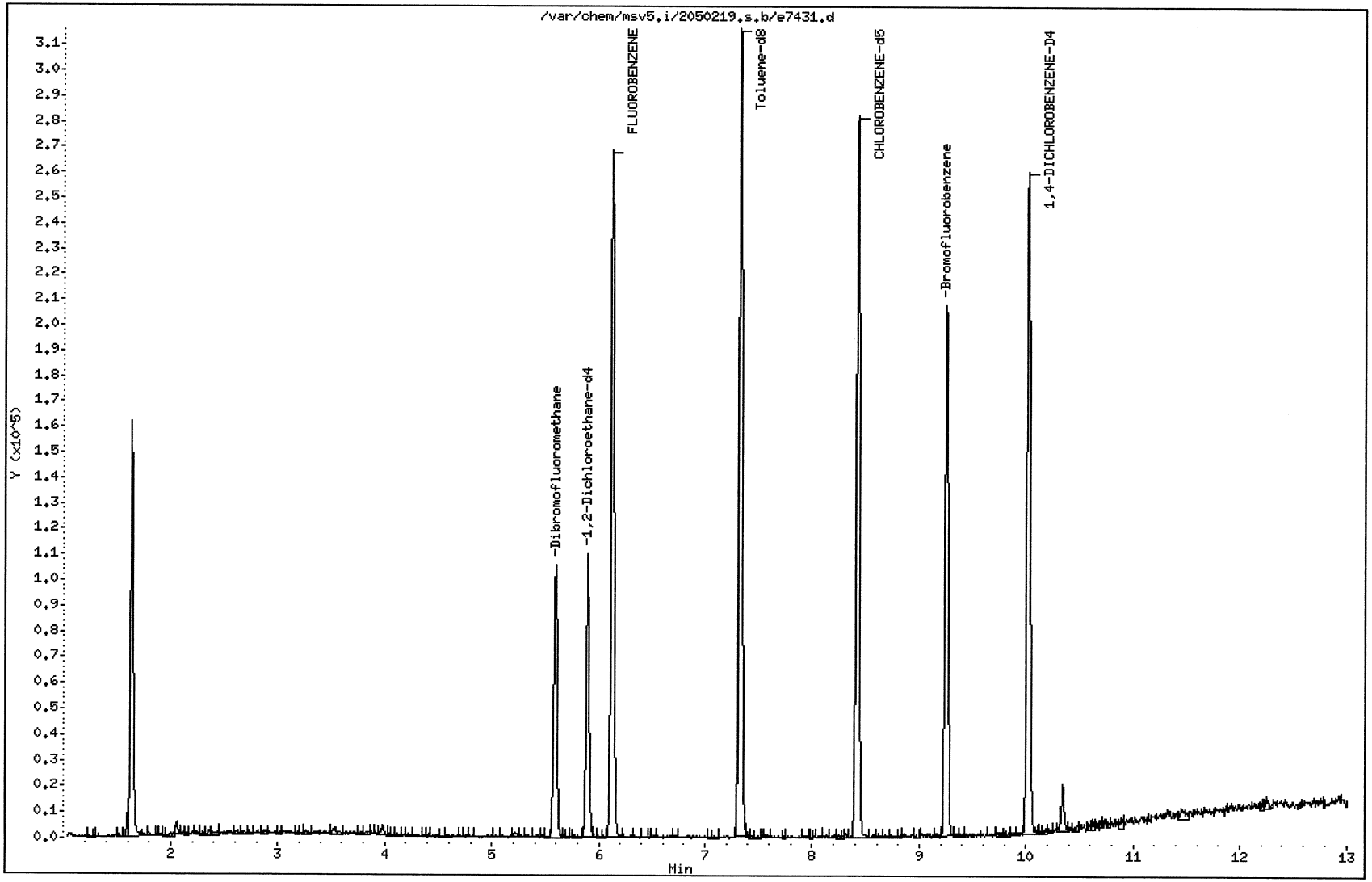
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	73771	54.2424	54.2	1737
$ 45 1,2-Dichloroethane-d4	67	5.896	5.887	(0.963)	41720	56.1850	56.2	
* 47 FLUOROBENZENE	96	6.124	6.121	(1.000)	258181	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.871)	239651	54.7215	54.7	
* 70 CHLOROBENZENE-d5	82	8.417	8.415	(1.000)	111468	50.0000		
$ 80 Bromofluorobenzene	174	9.253	9.249	(1.099)	69602	53.9240	53.9	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	84370	50.0000		

Data File: /var/chem/msv5.i/2050219.s.b/e7431.d
Date : 19-FEB-2005 18:48
Client ID: 086-271-TB-Q1-05
Sample Info: 20502170409*086-271-TB-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

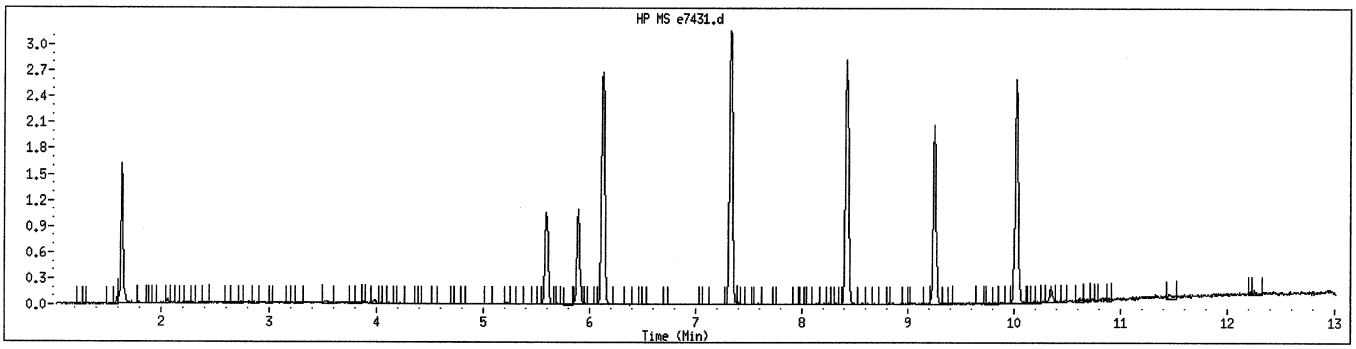
Instrument: msv5.i
Operator: RFS
Column diameter: 0.53



Data file : /var/chem/msv5.i/2050219.s.b/e7431.d
Report Date: 02/20/2005 07:47

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170409	SampleType	: SAMPLE
Injection Date	: 19-FEB-2005 18:48	Instrument	: msv5.i
Operator	: RFS		
Sample Info	: 20502170409*086-271-TB-Q1-05		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Instrument ID: MSV5 Calibration Date 1: 02/19/05 Time 1: 0907

GC Column: DB-624-30M ID: .53 (mm) Calibration Date 2: 02/19/05 Time 2: 1240

Heated Purge: (Y/N) N Method: SW-846 8260

Analytical Batch: 287753

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$ / b / A	m / B	C	FIT	TYPE
Acetone	2958	7115	20750	45080	66950	2705				8.495	0.066	46.9	0.991	Q
Acrolein	2366	11408	40908	78655	164179					0.026	0.340		0.999	L
Acrylonitrile	0.122	0.118	0.116	0.113	0.112					0.116			3.608	A
Bromochloromethane	0.148	0.145	0.142	0.138	0.136					0.142			3.492	A
Bromodichloromethane	0.279	0.297	0.301	0.302	0.306	0.260				0.291			6.114	A
Bromoform	0.315	0.386	0.383	0.401	0.410					0.379			9.900	A
Bromomethane	0.267	0.212	0.222	0.203	0.184					0.218			14.23	A
Carbon disulfide	0.715	0.711	0.646	0.631	0.665					0.673			5.634	A
Carbon tetrachloride	0.235	0.252	0.221	0.229	0.249					0.237			5.543	A
Chloroethane	0.151	0.156	0.144	0.139	0.141					0.146			4.746	A
m,p-Xylene	1.083	1.048	0.985	0.975	0.965					1.011			5.087	A
Chloroform	0.410	0.409	0.388	0.388	0.398	0.363				0.393			4.434	A
Chloromethane	0.373	0.361	0.343	0.337	0.344					0.352			4.184	A
Dibromochloromethane	0.606	0.635	0.630	0.671	0.661	0.476				0.613			11.58	A
Dibromomethane	0.187	0.190	0.189	0.183	0.186					0.187			1.412	A
Dichlorodifluoromethane	0.246	0.264	0.226	0.220	0.259					0.243			8.098	A
1,1-Dichloroethane	0.503	0.481	0.458	0.454	0.460					0.471			4.406	A
1,2-Dichloroethane	0.308	0.299	0.304	0.309	0.309	0.270				0.300			5.056	A
cis-1,2-Dichloroethene	0.442	0.427	0.401	0.412	0.413					0.419			3.814	A

FIT = %RSD For Average Curve And Calibration Coefficent For Linear And Quadratic

$\overline{RF}$ = Mean Response Factor For Average Curve

m,b = Slope and Intercept For Linear Curve

A,B,C = Coefficents For Quadratic Curve

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 205021704

Instrument ID: MSV5

Calibration Date 1: 02/19/05 Time 1: 0907

GC Column: DB-624-30M ID: .53 (mm)

Calibration Date 2: 02/19/05 Time 2: 1240

Heated Purge: (Y/N) N

Method: SW-846 8260

Analytical Batch: 287753

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$ / b / A	m / B	C	FIT	TYPE
trans-1,2-Dichloroethene	0.363	0.355	0.339	0.327	0.342					0.345			4.096	A
Methylene chloride	0.448	0.391	0.363	0.357	0.356					0.383			10.20	A
1,2-Dichloropropane	0.327	0.326	0.315	0.311	0.316					0.319			2.309	A
cis-1,3-Dichloropropene	0.464	0.459	0.451	0.455	0.463	0.458				0.458			1.135	A
trans-1,3-Dichloropropene	0.947	1.003	0.967	1.002	1.006					0.985			2.705	A
Ethylbenzene	0.814	0.874	0.798	0.811	0.809					0.821			3.670	A
2-Hexanone	0.480	0.520	0.505	0.534	0.507					0.509			3.955	A
Isopropylbenzene (Cumene)	2.665	2.612	2.343	2.334	2.339					2.459			6.728	A
2-Butanone	0.128	0.136	0.143	0.147	0.132					0.137			5.719	A
Methyl iodide	0.280	0.311	0.239	0.254	0.275					0.272			10.13	A
4-Methyl-2-pentanone	0.365	0.359	0.345	0.337	0.340					0.349			3.565	A
n-Propylbenzene	4.377	4.063	3.791	3.697	3.814					3.948			6.965	A
Styrene	1.920	1.831	1.786	1.756	1.728					1.804			4.171	A
Tetrachloroethene	0.481	0.456	0.414	0.412	0.437					0.440			6.636	A
1,1,1,2-Tetrachloroethane	0.520	0.521	0.509	0.514	0.512	0.470				0.508			3.762	A
1,1,2,2-Tetrachloroethane	1.025	0.962	0.958	0.920	0.954	0.945				0.961			3.612	A
1,2,4-Trichlorobenzene	0.882	0.830	0.819	0.810	0.811	0.699				0.808			7.405	A
1,1,1-Trichloroethane	0.322	0.308	0.276	0.283	0.295	0.262				0.291			7.524	A
1,1,2-Trichloroethane	0.615	0.558	0.555	0.562	0.565	0.483				0.556			7.596	A

FIT = %RSD For Average Curve And Calibration Coefficent For Linear And Quadratic

$\overline{RF}$ = Mean Response Factor For Average Curve

m,b = Slope and Intercept For Linear Curve

A,B,C = Coefficents For Quadratic Curve

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Instrument ID: MSV5 Calibration Date 1: 02/19/05 Time 1: 0907

GC Column: DB-624-30M ID: .53 (mm) Calibration Date 2: 02/19/05 Time 2: 1240

Heated Purge: (Y/N) N Method: SW-846 8260

Analytical Batch: 287753

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$ / b / A	m / B	C	FIT	TYPE
Trichlorofluoromethane	0.274	0.275	0.234	0.230	0.254					0.254			8.480	A
1,2,3-Trichloropropane	1.301	1.262	1.213	1.193	1.211					1.236			3.601	A
1,2,4-Trimethylbenzene	2.864	2.592	2.526	2.474	2.516					2.594			6.025	A
1,3,5-Trimethylbenzene	2.546	2.587	2.435	2.420	2.497					2.497			2.861	A
Vinyl chloride	0.286	0.297	0.276	0.266	0.286	0.287				0.283			3.869	A
o-Xylene	1.082	1.025	0.980	0.964	0.952					1.000			5.342	A
1,2-Dibromo-3-chloropropane	0.155	0.162	0.166	0.161	0.168					0.162			3.089	A
1,2-Dibromoethane	0.652	0.659	0.644	0.648	0.662					0.653			1.104	A
Vinyl acetate	0.616	0.638	0.657	0.649	0.611					0.634			3.192	A
tert-Butyl methyl ether (MTBE)	0.657	0.638	0.608	0.600	0.603					0.621			4.074	A
1,2-Dichloroethene	0.403	0.391	0.370	0.370	0.377	0.364				0.379			3.918	A
4-Isopropyltoluene	3.063	2.812	2.622	2.578	2.694					2.754			7.053	A
Xylene (total)	1.083	1.040	0.984	0.971	0.961	1.063				1.017			5.077	A
Methylcyclohexane	0.420	0.425	0.356	0.354	0.420					0.395			9.157	A
n-Hexane	0.404	0.415	0.323	0.324	0.381					0.369			11.85	A
trans-1,4-Dichloro-2-butene	0.227	0.253	0.249	0.244	0.247					0.244			4.096	A
Cyclohexane	0.496	0.475	0.398	0.391	0.439					0.440			10.49	A
2,2-Dichloropropane	0.328	0.326	0.295	0.294	0.306					0.310			5.310	A
Methyl Acetate	0.183	0.148	0.142	0.138	0.138					0.150			12.77	A

FIT = %RSD For Average Curve And Calibration Coefficent For Linear And Quadratic

$\overline{RF}$ = Mean Response Factor For Average Curve

m,b = Slope and Intercept For Linear Curve

A,B,C = Coefficents For Quadratic Curve

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Instrument ID: MSV5 Calibration Date 1: 02/19/05 Time 1: 0907

GC Column: DB-624-30M ID: .53 (mm) Calibration Date 2: 02/19/05 Time 2: 1240

Heated Purge: (Y/N) N Method: SW-846 8260

Analytical Batch: 287753

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$ / b / A	m / B	C	FIT	TYPE
Trichlorotrifluoroethane	0.175	0.186	0.156	0.154	0.181					0.170			8.576	A
1,1-Dichloropropene	0.331	0.341	0.310	0.311	0.335					0.326			4.367	A
2-Chloroethylvinyl ether	0.238	0.240	0.238	0.238	0.253					0.242			2.738	A
1,3-Dichloropropane	1.126	1.117	1.067	1.076	1.072	1.146				1.101			3.020	A
Bromobenzene	2.061	1.967	1.897	1.835	1.842					1.920			4.939	A
2-Chlorotoluene	2.797	2.561	2.483	2.430	2.420					2.538			6.100	A
4-Chlorotoluene	2.718	2.499	2.320	2.298	2.396					2.446			6.992	A
tert-Butylbenzene	1.875	1.700	1.607	1.532	1.647					1.672			7.697	A
sec-Butylbenzene	3.773	3.515	3.226	3.199	3.354					3.414			6.937	A
1,3-Dichlorobenzene	1.516	1.472	1.446	1.452	1.474	1.518				1.480			2.096	A
1,4-Dichlorobenzene	1.650	1.563	1.491	1.431	1.447	1.504				1.514			5.360	A
n-Butylbenzene	3.075	2.777	2.560	2.529	2.651					2.719			8.152	A
1,2-Dichlorobenzene	1.466	1.357	1.321	1.317	1.340	1.260				1.344			5.112	A
Hexachlorobutadiene	0.415	0.413	0.385	0.368	0.403					0.397			5.054	A
Naphthalene	2.428	2.249	2.610	2.293	2.354					2.387			5.933	A
1,2,3-Trichlorobenzene	0.753	0.780	0.796	0.746	0.752					0.765			2.775	A
1-Bromo-2-chloroethane	0.489	0.520	0.505	0.488	0.487					0.497			2.890	A
1,3-Dichloropropylene	0.433	0.446	0.437	0.444	0.449	0.415				0.437			2.840	A
1,1-Dichloroethene	0.169	0.168	0.154	0.151	0.159					0.160			5.048	A

FIT = %RSD For Average Curve And Calibration Coefficent For Linear And Quadratic

$\overline{RF}$ = Mean Response Factor For Average Curve

m,b = Slope and Intercept For Linear Curve

A,B,C = Coefficents For Quadratic Curve

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 205021704

Instrument ID: MSV5

Calibration Date 1: 02/19/05 Time 1: 0907

GC Column: DB-624-30M ID: .53 (mm)

Calibration Date 2: 02/19/05 Time 2: 1240

Heated Purge: (Y/N) N

Method: SW-846 8260

Analytical Batch: 287753

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$ / b / A	m / B	C	FIT	TYPE
Benzene	1.091	1.031	0.986	0.953	0.963	1.054	1.047			1.018			5.066	A
Trichloroethene	0.265	0.274	0.256	0.257	0.263					0.263			2.803	A
Toluene	2.565	2.466	2.266	2.317	2.343	2.600				2.426			5.696	A
Chlorobenzene	1.726	1.668	1.588	1.591	1.572	1.746				1.649			4.595	A
4-Bromofluorobenzene	0.588	0.599	0.568	0.579	0.561					0.579			2.634	A
Dibromofluoromethane	0.284	0.264	0.254	0.261	0.254					0.263			4.569	A
Toluene-d8	2.127	2.004	1.904	1.884	1.902					1.964			5.220	A
1,2-Dichloroethane-d4	0.152	0.147	0.140	0.141	0.139					0.144			4.050	A

FIT = %RSD For Average Curve And Calibration Coefficent For Linear And Quadratic

$\overline{RF}$ = Mean Response Factor For Average Curve

m,b = Slope and Intercept For Linear Curve

A,B,C = Coefficents For Quadratic Curve

FORM V I VOA

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7410.d
Lab Smp Id: 1000 Client Smp ID: V5BFB
Inj Date : 19-FEB-2005 08:22
Operator : JCK Inst ID: msv5.i
Smp Info : 1000*V5BFB
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/bfb1.m
Meth Date : 15-Jul-2004 15:50 jck Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER

Concentration Formula: Amt * DF * Uf * Vf * VI * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
VI	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.242	9.611	(0.000)	95	18417			100.00- 100.00	100.00
9.242	9.611	(0.000)	50	3465			15.00- 40.00	18.81
9.242	9.611	(0.000)	75	7996			30.00- 60.00	43.42
9.242	9.611	(0.000)	96	1310			5.00- 9.00	7.11
9.242	9.611	(0.000)	173	0			0.00- 2.00	0.00
9.242	9.611	(0.000)	174	13462			50.00- 99.99	73.10
9.242	9.611	(0.000)	175	785			5.00- 9.00	5.83
9.242	9.611	(0.000)	176	13249			95.00- 101.00	98.42
9.242	9.611	(0.000)	177	749			5.00- 9.00	5.65

Data File: /var/chem/msv5.i/2050219.s.b/e7410.d

Date : 19-FEB-2005 08:22

Client ID: V5BFB

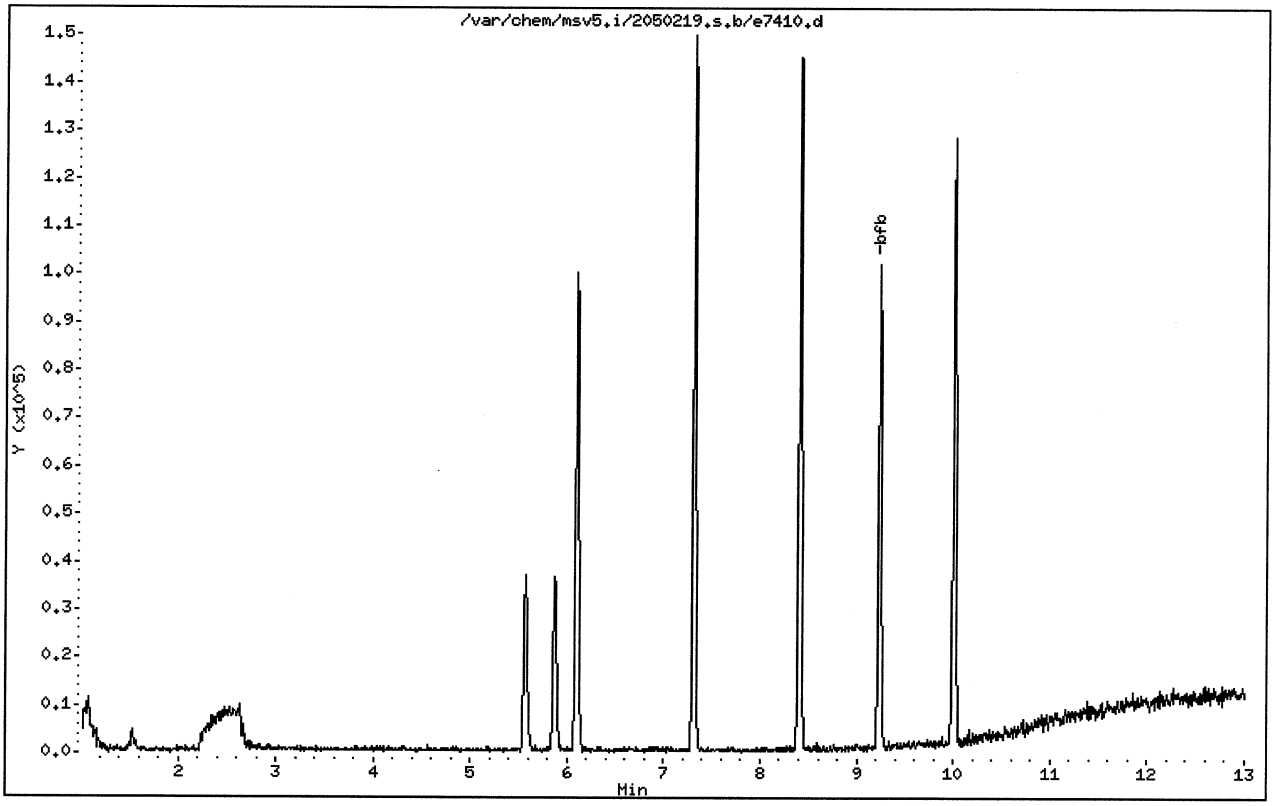
Instrument: msv5.i

Sample Info: 1000*V5BFB

Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53



Data File: /var/chem/msv5.i/2050219.s.b/e7410.d

Date : 19-FEB-2005 08:22

Client ID: V5BFB

Instrument: msv5.i

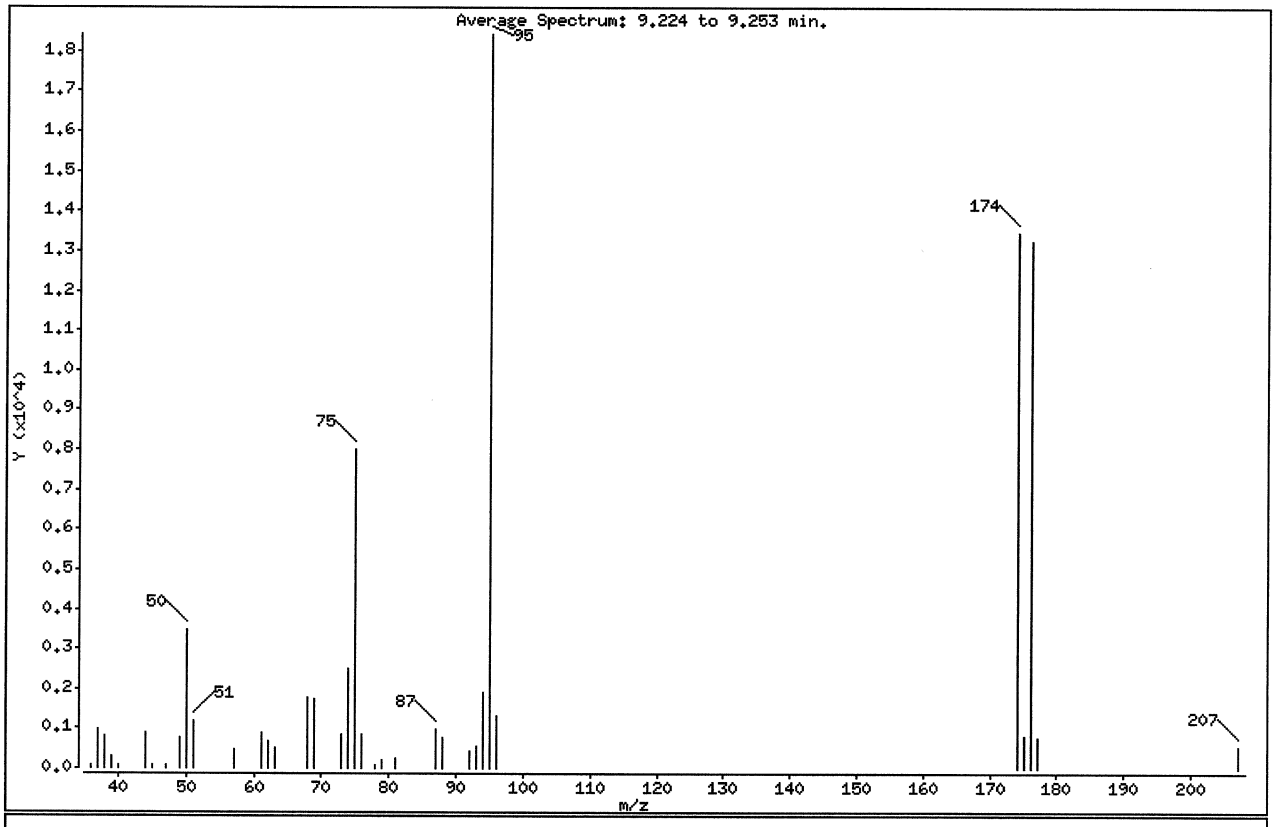
Sample Info: 1000*V5BFB

Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.81
75	30.00 - 60.00% of mass 95	43.42
96	5.00 - 9.00% of mass 95	7.11
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 99.99% of mass 95	73.10
175	5.00 - 9.00% of mass 174	4.26 (5.83)
176	95.00 - 101.00% of mass 174	71.94 (98.42)
177	5.00 - 9.00% of mass 176	4.07 (5.65)

Data File: /var/chem/msv5.i/2050219.s.b/e7410.d

Date : 19-FEB-2005 08:22

Client ID: V5BFB

Instrument: msv5.i

Sample Info: 1000*V5BFB

Operator: JCK

Column phase: DB-624-30M

Column diameter: 0.53

Data File: e7410.d
Spectrum: Average Spectrum: 9.224 to 9.253 min.
Location of Maximum: 95.00
Number of points: 36

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	93	51.00	1194	76.00	829	96.00	1310
37.00	965	57.00	482	78.00	72	174.00	13462
38.00	802	61.00	875	79.00	222	175.00	785
39.00	301	62.00	697	81.00	258	176.00	13249
40.00	74	63.00	492	87.00	960	177.00	749
44.00	894	68.00	1770	88.00	752	207.00	564
45.00	80	69.00	1737	92.00	427		
47.00	80	73.00	860	93.00	542		
49.00	757	74.00	2507	94.00	1903		
50.00	3465	75.00	7996	95.00	18416		

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7411.d
Lab Smp Id: 1210 Client Smp ID: V5STD0.50
Inj Date : 19-FEB-2005 09:07
Operator : JCK Inst ID: msv5.i
Smp Info : 1210*V5STD0.50*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 09:07 Cal File: e7411.d
Als bottle: 1 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)	SIMILARITY
15 Carbon Disulfide	76	3.633	3.633	(0.594)	2102	0.50000	0.540	
18 Methylene Chloride	49	3.978	3.978	(0.650)	3297	0.50000	1.49	
22 Acrylonitrile	53	4.288	4.288	(0.701)	1679	2.50000	2.50	
28 Vinyl Acetate	43	4.692	4.692	(0.767)	1413	0.50000	0.385	
$ 38 Dibromofluoromethane	111	5.598	5.598	(0.915)	161	50.0000	0.106	0(aM)
44 Benzene	78	5.890	5.890	(0.963)	3026	0.50000	0.514	
$ 45 1,2-Dichloroethane-d4	67	5.890	5.890	(0.963)	149	50.0000	0.179	(aM)
* 47 FLUOROBENZENE	96	6.118	6.118	(1.000)	289071	50.0000		
58 cis-1,3-Dichloropropene	75	7.153	7.153	(1.169)	1040	0.50000	0.393	(M)
$ 60 Toluene-d8	98	7.323	7.323	(0.870)	3518	50.0000	0.705	(a)
61 Toluene +	91	7.381	7.381	(0.877)	4124	0.50000	0.670	(M)
63 trans-1,3-Dichloropropene	75	7.580	7.580	(0.901)	747	0.50000	0.299	(M)
66 1,3-Dichloropropane	76	7.843	7.843	(0.932)	1218	0.50000	0.436	
* 70 CHLOROBENZENE-d5	82	8.417	8.417	(1.000)	126922	50.0000		

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
71 Chlorobenzene ++	112	8.440	8.440	(1.003)	2360	0.50000	0.564	
72 Ethylbenzene +	106	8.481	8.481	(1.008)	842	0.50000	0.404	
74 p,m-Xylene	106	8.557	8.557	(1.017)	2892	1.00000	1.13	
75 o-Xylene	106	8.855	8.855	(1.052)	1324	0.50000	0.521	
76 Styrene	104	8.879	8.879	(1.055)	2257	0.50000	0.493	
78 Isopropylbenzene	105	9.095	9.095	(1.081)	3742	0.50000	0.600	
$ 80 Bromofluorobenzene	174	9.247	9.247	(1.099)	1072	50.0000	0.729	(a)
81 1,1,2,2-Tetrachloroethane++	83	9.341	9.341	(0.933)	1024	0.50000	0.531	(M)
82 Bromobenzene	77	9.370	9.370	(0.936)	3247	0.50000	0.843	(M)
85 n-Propylbenzene	91	9.376	9.376	(0.936)	5187	0.50000	0.655	
87 2-Chlorotoluene	91	9.475	9.475	(0.946)	3474	0.50000	0.682	(M)
88 1,3,5-Trimethylbenzene	105	9.487	9.487	(0.947)	3076	0.50000	0.614	(M)
89 4-Chlorotoluene	91	9.557	9.557	(0.954)	2945	0.50000	0.600	(M)
91 tert-butylbenzene	91	9.703	9.703	(0.969)	1694	0.50000	0.505	
92 1,2,4-Trimethylbenzene	105	9.744	9.744	(0.973)	2986	0.50000	0.573	
96 sec-Butylbenzene	105	9.844	9.844	(0.983)	3922	0.50000	0.572	(M)
97 p-Isopropyltoluene	119	9.931	9.931	(0.992)	3671	0.50000	0.664	(M)
98 1,3-Dichlorobenzene	146	9.967	9.967	(0.995)	1729	0.50000	0.582	
* 99 1,4-DICHLOROBENZENE-D4	152	10.014	10.014	(1.000)	100350	50.0000		
100 1,4-Dichlorobenzene	146	10.031	10.031	(1.002)	1763	0.50000	0.580	
M 101 TOTAL XYLENE	106				4216	1.50000	1.65	
102 n-Butylbenzene	91	10.195	10.195	(1.018)	3676	0.50000	0.674	
103 1,2-Dichlorobenzene	146	10.283	10.283	(1.027)	1528	0.50000	0.567	
106 1,2,4-Trichlorobenzene	180	11.342	11.342	(1.133)	435	0.50000	0.268	
108 Naphthalene	128	11.541	11.541	(1.153)	2144	0.50000	0.448	
M 139 1-3 Dichloropropene-Total	100				1787	0.50000	0.691	0

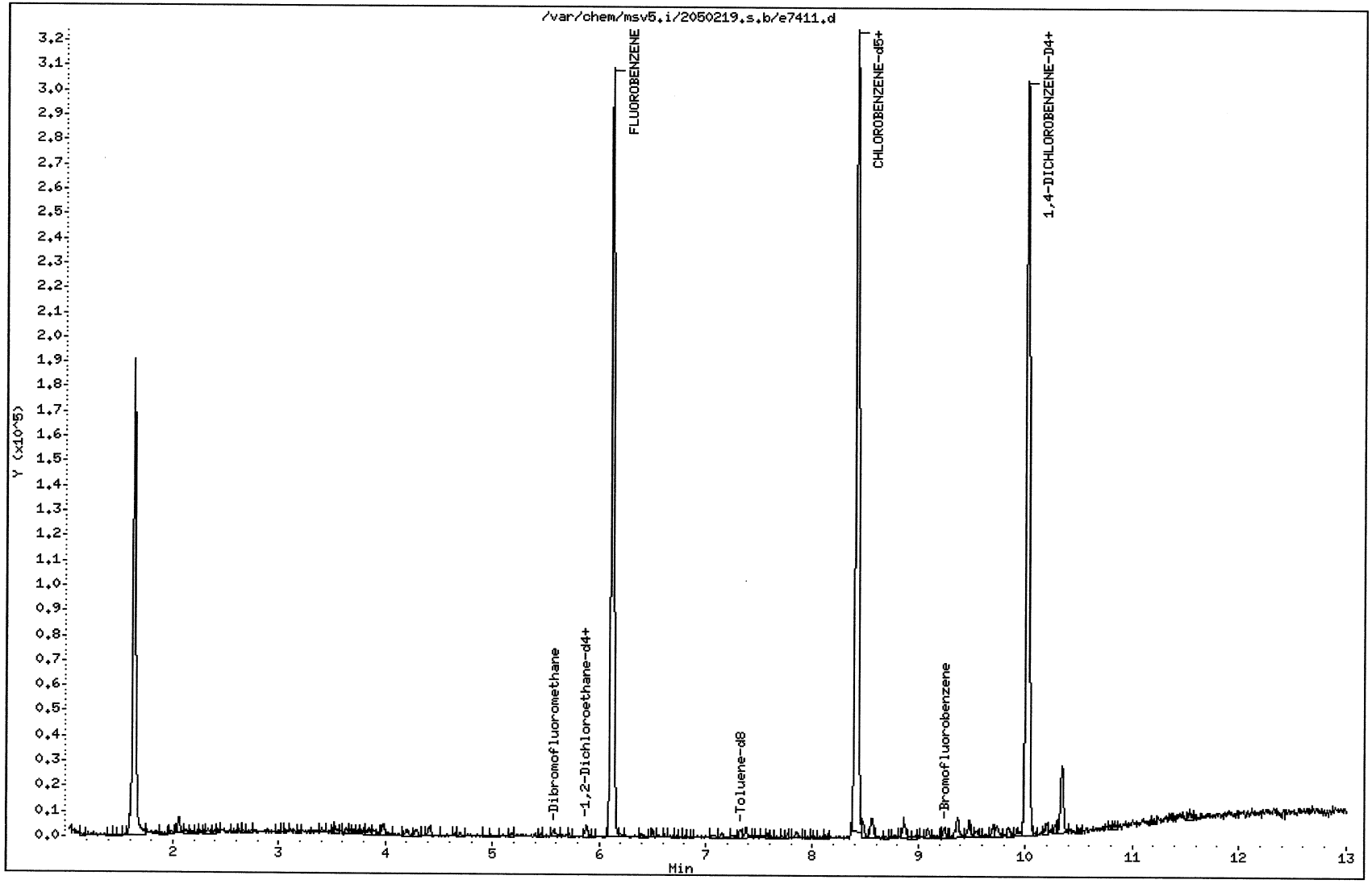
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /var/chem/msv5.i/2050219.s.b/e7411.d
Date : 19-FEB-2005 09:07
Client ID: V5STD0.50
Sample Info: 1210*V5STD0.50*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

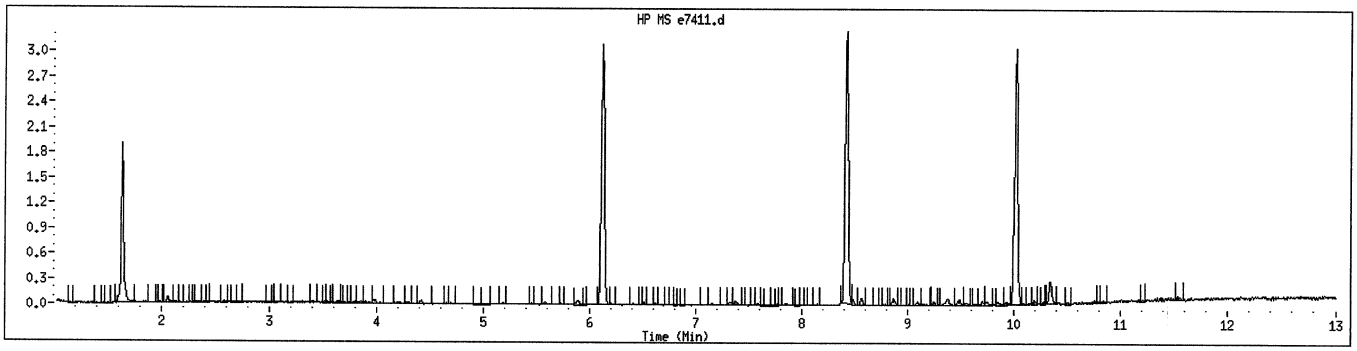
Operator: JCK
Column diameter: 0.53



Data file : /var/chem/msv5.i/2050219.s.b/e7411.d
Report Date: 02/19/2005 14:26

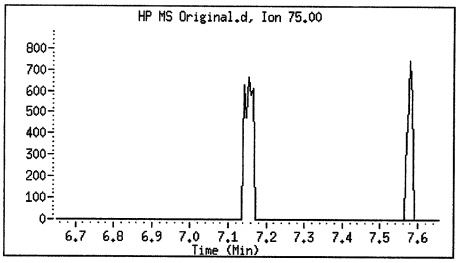
MANUAL INTEGRATION GRAPHIC REPORT

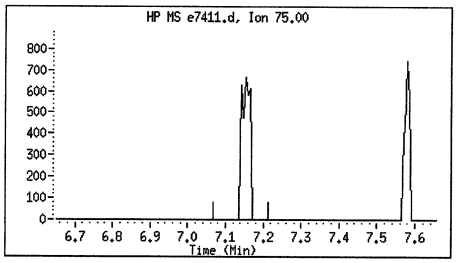
Lab ID	: 1210	SampleType	: CALIB_10
Injection Date	: 19-FEB-2005 09:07	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1210*V5STD0.50*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



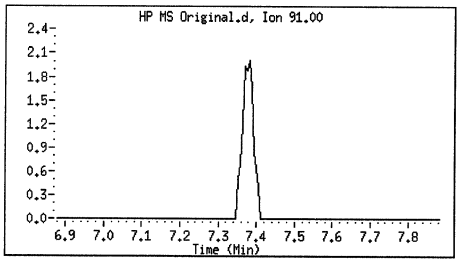
Original | Final

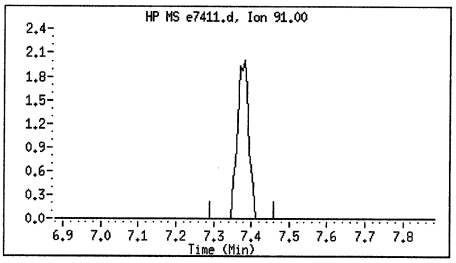
58 cis-1,3-Dichloropropene CAS#: 10061-01-5





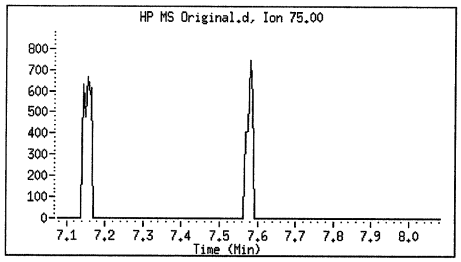
61 Toluene + CAS#: 108-88-3

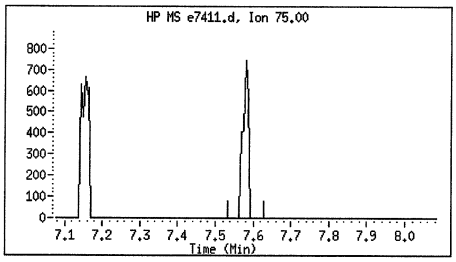




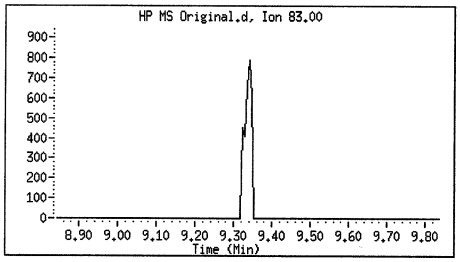
Original Final

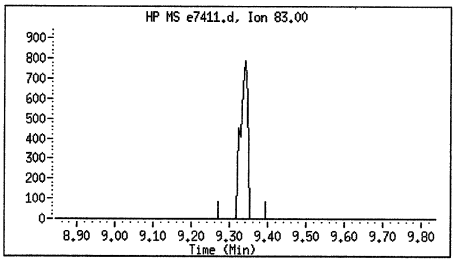
63 trans-1,3-Dichloropropene CAS#: 10061-02-6



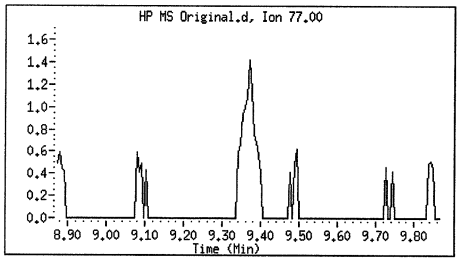


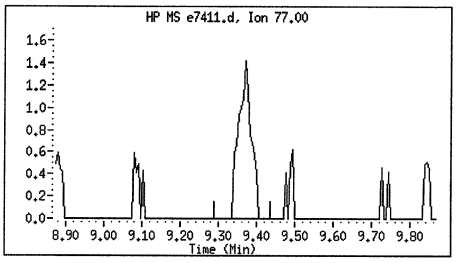
81 1,1,2,2-Tetrachloroethane++ CAS#: 79-34-5



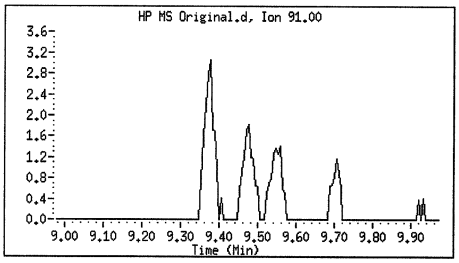


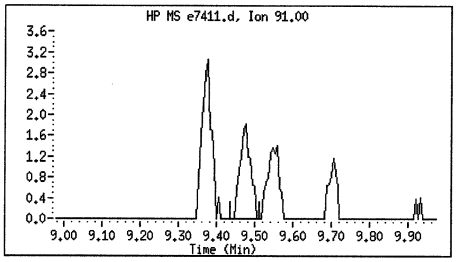
82 Bromobenzene CAS#: 108-86-1



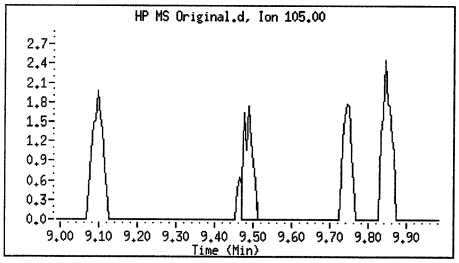


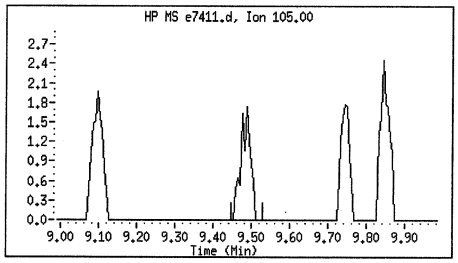
87 2-Chlorotoluene CAS#: 95-49-8





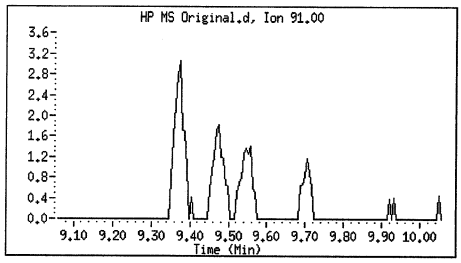
88 1,3,5-Trimethylbenzene CAS#: 108-67-8

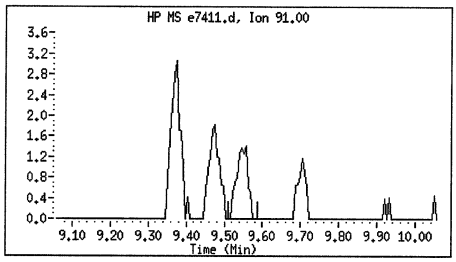




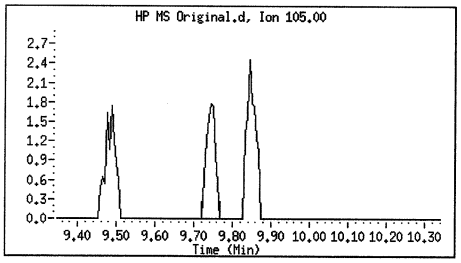
Original | Final

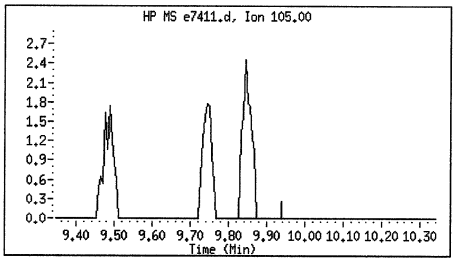
89 4-Chlorotoluene CAS#: 106-43-4



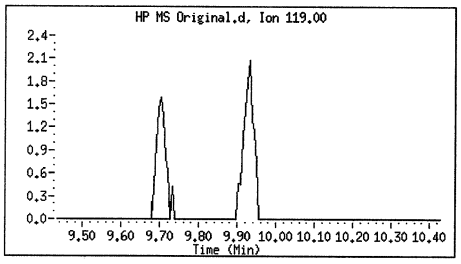


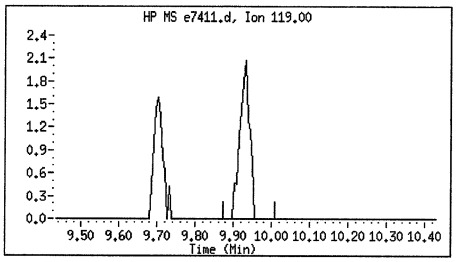
96 sec-Butylbenzene CAS#: 135-98-8



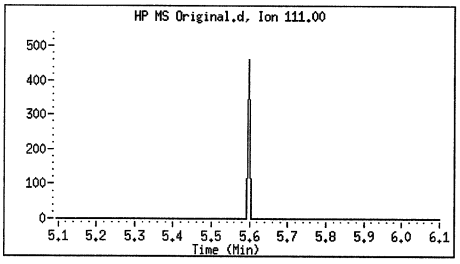


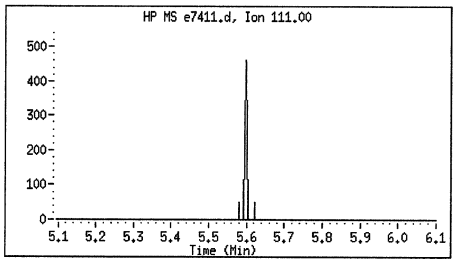
97 p-Isopropyltoluene CAS#: 99-87-6



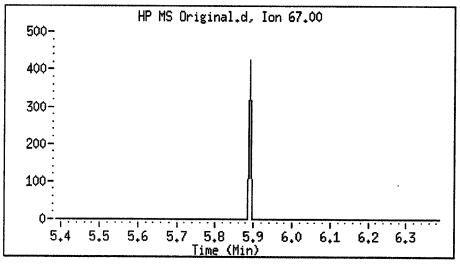


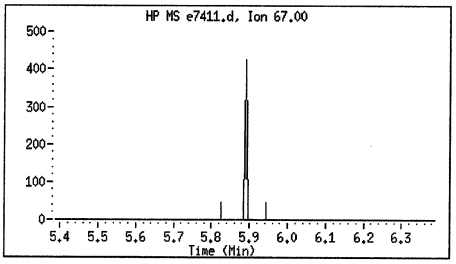
$ 38 Dibromofluoromethane CAS#: 1868-53-7





$ 45 1,2-Dichloroethane-d4 CAS#: 17060-07-0





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7412.d
Lab Smp Id: 1206 Client Smp ID: V5STD002
Inj Date : 19-FEB-2005 09:31
Operator : JCK Inst ID: msv5.i
Smp Info : 1206*V5STD002*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
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Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 09:31 Cal File: e7412.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.791	1.791	(0.293)	2597	2.00000	1.83	
2 Chloromethane ++	50	1.990	1.990	(0.326)	4202	2.00000	2.05	
3 Vinyl Chloride +	62	2.096	2.096	(0.343)	3357	2.00000	2.03	
5 Bromomethane	94	2.441	2.441	(0.399)	3467	2.00000	2.73	
6 Chloroethane	64	2.546	2.546	(0.416)	1156	2.00000	1.35	(M)
7 Trichlorofluoromethane	101	2.809	2.809	(0.459)	3308	2.00000	2.23	
10 Acrolein	56	3.358	3.358	(0.549)	344	10.0000	19.2	
11 1,1,2Trichlotrifluoroethane	101	3.382	3.382	(0.553)	1385	2.00000	1.39	
12 1,1-Dichloroethene +	96	3.411	3.411	(0.558)	1905	2.00000	2.04	
13 Acetone	43	3.516	3.516	(0.575)	2705	2.00000	7.44	(M)
14 Methyl Iodide	142	3.587	3.587	(0.587)	3338	2.00000	2.10	
15 Carbon Disulfide	76	3.633	3.633	(0.594)	8130	2.00000	2.07	
17 Methyl Acetate	43	3.838	3.838	(0.628)	2387	2.00000	2.73	0(M)
18 Methylene Chloride	49	3.978	3.978	(0.651)	7279	2.00000	3.25	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.189	4.189	(0.685)	7704	2.00000	2.12	7283
	21 trans-1,2-Dichloroethene	61	4.207	4.207	(0.688)	3692	2.00000	1.83	
	22 Acrylonitrile	53	4.277	4.277	(0.700)	7102	10.0000	10.5	
	24 Hexane	57	4.417	4.417	(0.723)	5196	2.00000	2.41	0(M)
	27 1,1-Dichloroethane ++	63	4.651	4.651	(0.761)	5940	2.00000	2.16	(M)
	28 Vinyl Acetate	43	4.686	4.686	(0.767)	7880	2.00000	2.13	
	30 2,2-Dichloropropane	77	5.154	5.154	(0.843)	4134	2.00000	2.28	(M)
	31 cis-1,2-Dichloroethene	61	5.183	5.183	(0.848)	4814	2.00000	1.97	
	32 2-Butanone	43	5.206	5.206	(0.852)	1914	2.00000	2.39	
	35 Bromochloromethane	128	5.394	5.394	(0.882)	624	2.00000	0.754	
	36 Chloroform +	83	5.446	5.446	(0.891)	4238	2.00000	1.85	
	37 Cyclohexane	56	5.569	5.569	(0.911)	5667	2.00000	2.21	8559
$	38 Dibromofluoromethane	111	5.587	5.587	(0.914)	2903	2.00000	1.89	8223(a)
	39 1,1,1-Trichloroethane	97	5.575	5.575	(0.912)	3060	2.00000	1.80	
	40 Carbon Tetrachloride	117	5.686	5.686	(0.930)	2219	2.00000	1.60	
	41 1,1-Dichloropropene	75	5.709	5.709	(0.934)	3623	2.00000	1.91	
M	42 Total 1,2-Dichloroethene	61				8506	4.00000	3.80	
	44 Benzene	78	5.885	5.885	(0.963)	12312	2.00000	2.07	
$	45 1,2-Dichloroethane-d4	67	5.885	5.885	(0.963)	1518	2.00000	1.81	(a)
	46 1,2-Dichloroethane	62	5.944	5.944	(0.972)	3153	2.00000	1.80	(M)
*	47 FLUOROBENZENE	96	6.113	6.113	(1.000)	291928	50.0000		
	49 Trichloroethene	130	6.400	6.400	(1.047)	2979	2.00000	1.94	
	50 Methyl Cyclohexane	83	6.499	6.499	(1.063)	4699	2.00000	2.04	8402
	51 1,2-Dichloropropane +	63	6.605	6.605	(1.080)	3624	2.00000	1.95	
	55 Dibromomethane	93	6.710	6.710	(1.098)	2145	2.00000	1.96	
	56 Bromodichloromethane	83	6.815	6.815	(1.115)	3039	2.00000	1.79	
	57 2-Chloroethyl vinyl ether	63	7.031	7.031	(1.150)	2391	2.00000	1.70	(M)
	58 cis-1,3-Dichloropropene	75	7.148	7.148	(1.169)	5344	2.00000	2.00	(H)
	59 4-methyl-2-pentanone	43	7.242	7.242	(1.185)	3925	2.00000	1.93	
$	60 Toluene-d8	98	7.318	7.318	(0.870)	10167	2.00000	2.07	(a)
	61 Toluene +	91	7.371	7.371	(0.876)	13018	2.00000	2.14	(M)
	63 trans-1,3-Dichloropropene	75	7.575	7.575	(0.901)	4352	2.00000	1.76	
	64 1,1,2-Trichloroethane	97	7.710	7.710	(0.917)	2420	2.00000	1.74	
	65 Tetrachloroethene	164	7.774	7.774	(0.924)	2256	2.00000	2.05	
	66 1,3-Dichloropropane	76	7.839	7.839	(0.932)	5738	2.00000	2.08	
	67 2-Hexanone	43	7.862	7.862	(0.935)	3090	2.00000	2.42	(M)
	68 Dibromochloromethane	129	8.002	8.002	(0.951)	2384	2.00000	1.55	(M)
	69 1,2-Dibromoethane(EDB)	107	8.102	8.102	(0.963)	3153	2.00000	1.93	
*	70 CHLOROBENZENE-d5	82	8.412	8.412	(1.000)	125177	50.0000		
	71 Chlorobenzene ++	112	8.435	8.435	(1.003)	8744	2.00000	2.12	
	72 Ethylbenzene +	106	8.471	8.471	(1.007)	3647	2.00000	1.77	
	73 1,1,1,2-Tetrachloroethane	133	8.494	8.494	(1.010)	2352	2.00000	1.85	(M)
	74 p,m-Xylene	106	8.559	8.559	(1.017)	11152	4.00000	4.41	
	75 o-Xylene	106	8.863	8.863	(1.054)	4809	2.00000	1.92	
	76 Styrene	104	8.868	8.868	(1.054)	8440	2.00000	1.87	
	77 Bromoform ++	173	9.038	9.038	(1.074)	1244	2.00000	1.31	
	78 Isopropylbenzene	105	9.091	9.091	(1.081)	12907	2.00000	2.10	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.243	9.243	(1.099)	3049	2.00000	2.10	(a)
81 1,1,2,2-Tetrachloroethane++	83	9.325	9.325	(0.932)	3731	2.00000	1.97	
82 Bromobenzene	77	9.372	9.372	(0.936)	8416	2.00000	2.22	
84 trans-1,4-Dichloro-2-Butene	53	9.377	9.377	(0.937)	512	2.00000	1.06	
85 n-Propylbenzene	91	9.372	9.372	(0.936)	16965	2.00000	2.18	
86 1,2,3-Trichloropropane	75	9.372	9.372	(0.936)	4768	2.00000	1.95	
87 2-Chlorotoluene	91	9.471	9.471	(0.946)	10585	2.00000	2.11	
88 1,3,5-Trimethylbenzene	105	9.477	9.477	(0.947)	10541	2.00000	2.14	
89 4-Chlorotoluene	91	9.541	9.541	(0.953)	9824	2.00000	2.03	
91 tert-butylbenzene	91	9.699	9.699	(0.969)	7436	2.00000	2.25	
92 1,2,4-Trimethylbenzene	105	9.746	9.746	(0.974)	11463	2.00000	2.24	
96 sec-Butylbenzene	105	9.840	9.840	(0.983)	15393	2.00000	2.28	(H)
97 p-Isopropyltoluene	119	9.928	9.928	(0.992)	11901	2.00000	2.19	(H)
98 1,3-Dichlorobenzene	146	9.974	9.974	(0.996)	5996	2.00000	2.05	
* 99 1,4-DICHLOROBENZENE-D4	152	10.010	10.010	(1.000)	98728	50.0000		
100 1,4-Dichlorobenzene	146	10.039	10.039	(1.003)	5938	2.00000	1.99	
M 101 TOTAL XYLENE	106				15961	6.00000	6.33	
102 n-Butylbenzene	91	10.185	10.185	(1.018)	11230	2.00000	2.09	
103 1,2-Dichlorobenzene	146	10.279	10.279	(1.027)	4974	2.00000	1.87	
106 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.133)	2761	2.00000	1.73	
108 Naphthalene	128	11.531	11.531	(1.152)	8661	2.00000	1.84	
109 1,2,3-Trichlorobenzene	180	11.701	11.701	(1.169)	2674	2.00000	1.77	
140 1-Bromo-2-chloroethane	63	7.067	7.067	(1.156)	5962	2.00000	2.05	0(M)
M 139 1-3 Dichloropropene-Total	100				9696	4.00000	3.76	0

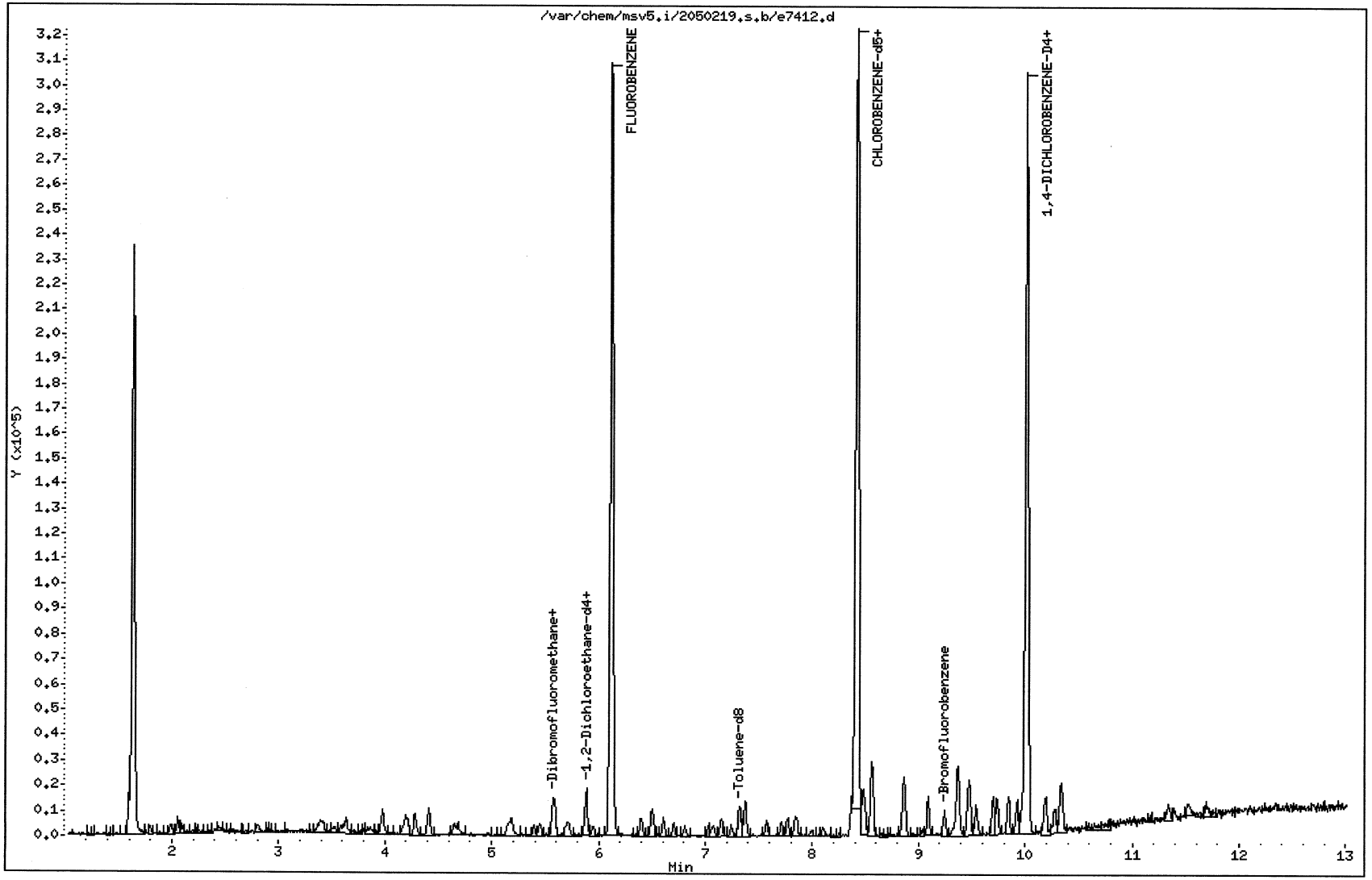
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7412.d
Date : 19-FEB-2005 09:31
Client ID: V5STD002
Sample Info: 1206*V5STD002*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53

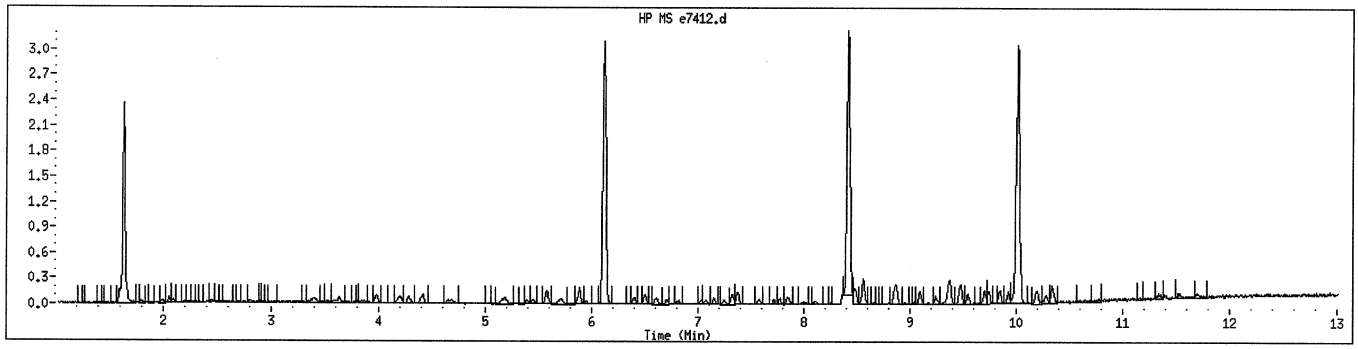


000069

Data file : /var/chem/msv5.i/2050219.s.b/e7412.d
Report Date: 02/19/2005 14:26

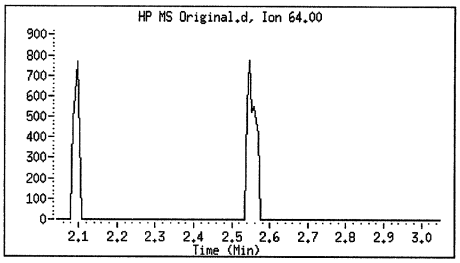
MANUAL INTEGRATION GRAPHIC REPORT

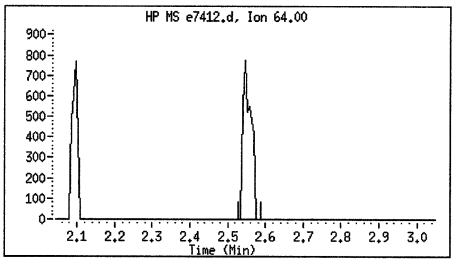
Lab ID	: 1206	SampleType	: CALIB_6
Injection Date	: 19-FEB-2005 09:31	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1206*V5STD002*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



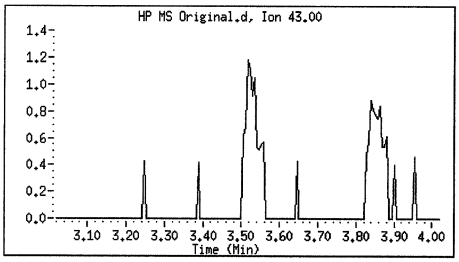
Original | Final

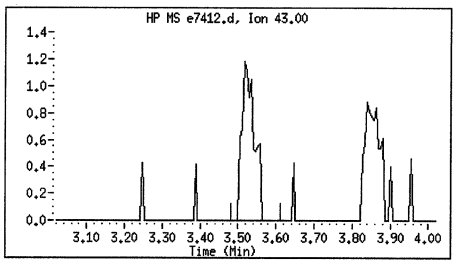
6 Chloroethane CAS#: 75-00-3





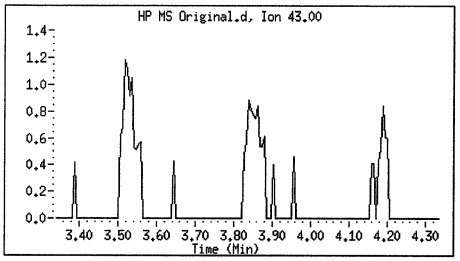
13 Acetone CAS#: 67-64-1

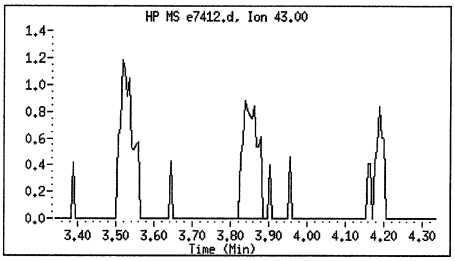




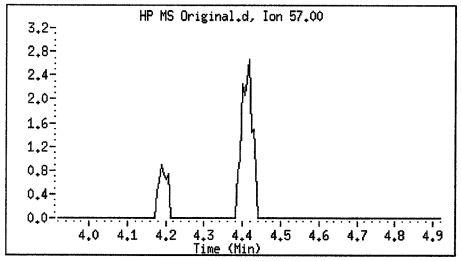
Original | Final

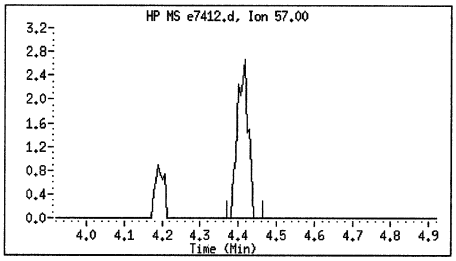
17 Methyl Acetate CAS#: 79-20-9



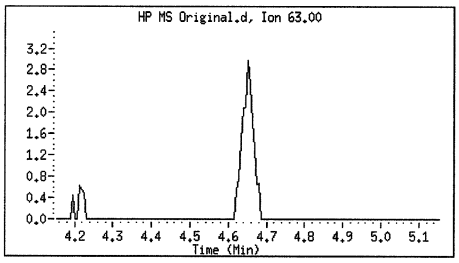


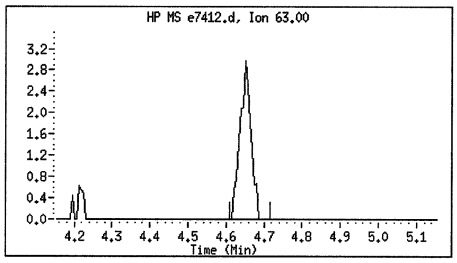
24 Hexane CAS#: 110-54-3



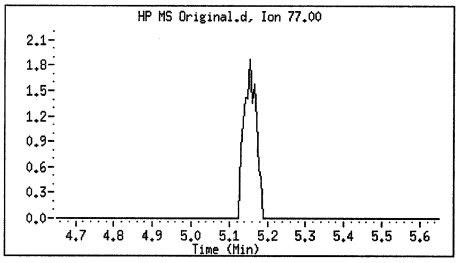


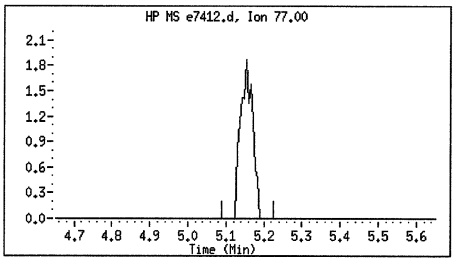
27 1,1-Dichloroethane ++ CAS#: 75-34-3



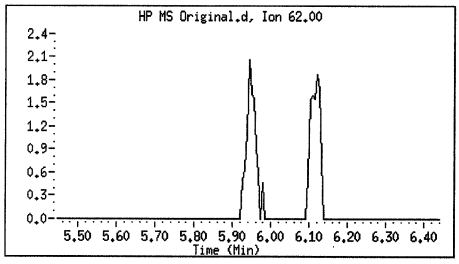


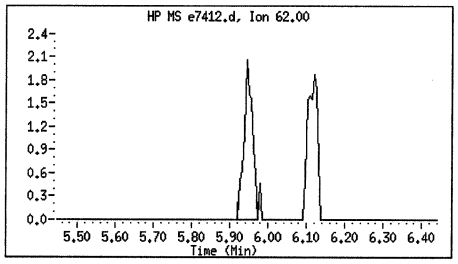
30 2,2-Dichloropropane CAS#: 594-20-7





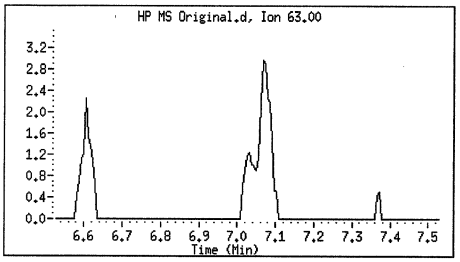
46 1,2-Dichloroethane CAS#: 107-06-2

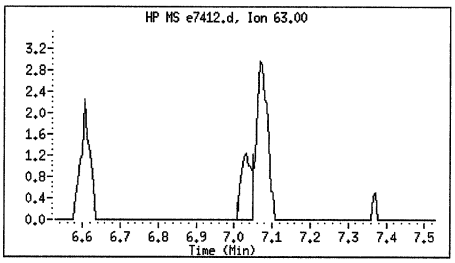




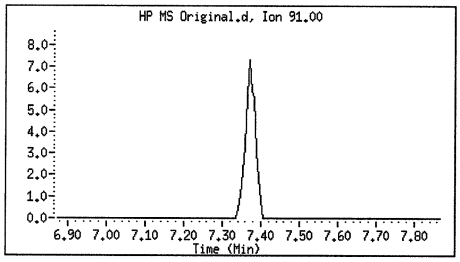
Original Final

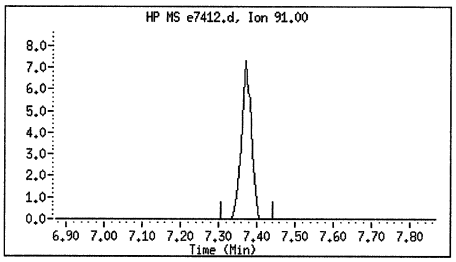
57 2-Chloroethyl vinyl ether CAS#: 110-75-8



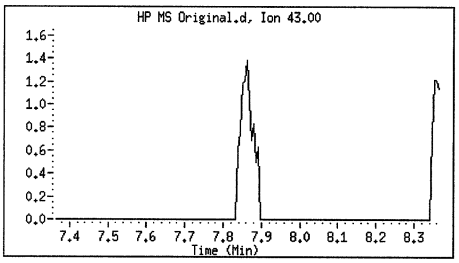


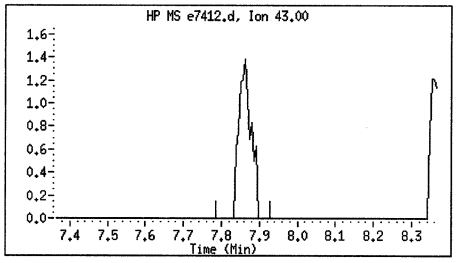
61 Toluene + CAS#: 108-88-3



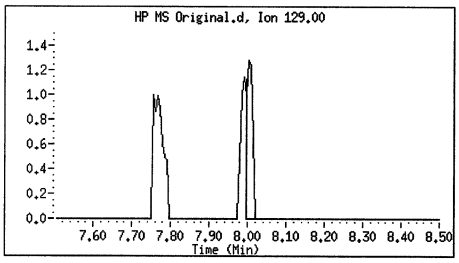


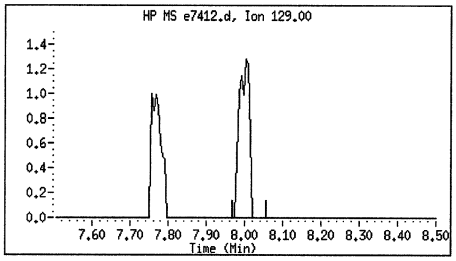
67 2-Hexanone CAS#: 591-78-6



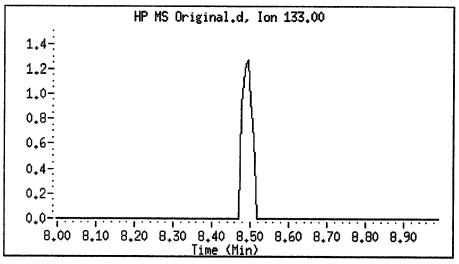


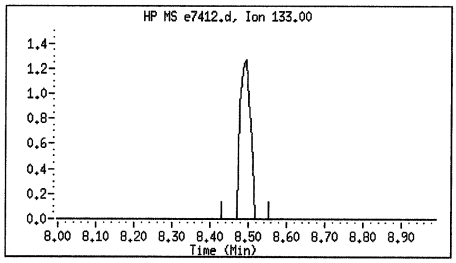
68 Dibromochloromethane CAS#: 124-48-1





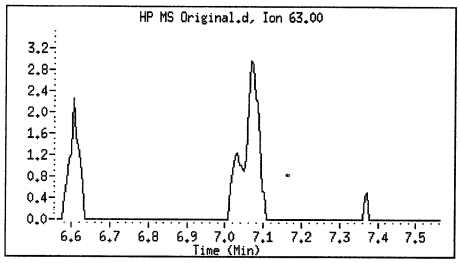
73 1,1,1,2-Tetrachloroethane CAS#: 630-20-6

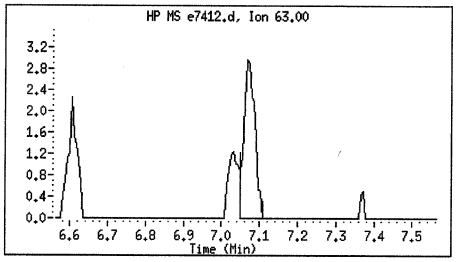




Original | Final

140 1-Bromo-2-chloroethane CAS#: 107-04-0





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7413.d
Lab Smp Id: 1201 Client Smp ID: V5STD005
Inj Date : 19-FEB-2005 09:55
Operator : JCK Inst ID: msv5.i
Smp Info : 1201*V5STD005*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 09:55 Cal File: e7413.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.791	1.791	(0.293)	7349	5.00000	5.07	
2 Chloromethane ++	50	1.990	1.990	(0.326)	11113	5.00000	5.30	
3 Vinyl Chloride +	62	2.090	2.090	(0.342)	8512	5.00000	5.04	
5 Bromomethane	94	2.441	2.441	(0.399)	7968	5.00000	6.14	
6 Chloroethane	64	2.546	2.546	(0.416)	4507	5.00000	5.17	
7 Trichlorofluoromethane	101	2.797	2.797	(0.458)	8177	5.00000	5.41	
10 Acrolein	56	3.370	3.370	(0.551)	2366	25.0000	32.2	(M)
11 1,1,2Trichlotrifluoroethane	101	3.376	3.376	(0.552)	5231	5.00000	5.15	
12 1,1-Dichloroethene +	96	3.405	3.405	(0.557)	5049	5.00000	5.28	
13 Acetone	43	3.522	3.522	(0.576)	2958	5.00000	7.75	(M)
14 Methyl Iodide	142	3.598	3.598	(0.589)	8345	5.00000	5.15	
15 Carbon Disulfide	76	3.634	3.634	(0.594)	21303	5.00000	5.31	
17 Methyl Acetate	43	3.850	3.850	(0.630)	5462	5.00000	6.12	6281
18 Methylene Chloride	49	3.973	3.973	(0.650)	13360	5.00000	5.85	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.183	4.183	(0.684)	19592	5.00000	5.29	7873
	21 trans-1,2-Dichloroethene	61	4.207	4.207	(0.688)	10833	5.00000	5.26	
	22 Acrylonitrile	53	4.277	4.277	(0.700)	18233	25.0000	26.3	
	24 Hexane	57	4.417	4.417	(0.722)	12047	5.00000	5.47	0(M)
	27 1,1-Dichloroethane ++	63	4.651	4.651	(0.761)	15000	5.00000	5.34	
	28 Vinyl Acetate	43	4.681	4.681	(0.766)	18380	5.00000	4.86	
	30 2,2-Dichloropropane	77	5.160	5.160	(0.844)	9791	5.00000	5.30	
	31 cis-1,2-Dichloroethene	61	5.184	5.184	(0.848)	13181	5.00000	5.27	
	32 2-Butanone	43	5.207	5.207	(0.852)	3805	5.00000	4.65	
	35 Bromochloromethane	128	5.394	5.394	(0.882)	4409	5.00000	5.22	
	36 Chloroform +	83	5.441	5.441	(0.890)	12231	5.00000	5.23	
	37 Cyclohexane	56	5.575	5.575	(0.912)	14791	5.00000	5.64	8952
$	38 Dibromofluoromethane	111	5.587	5.587	(0.914)	8453	5.00000	5.38	8768
	39 1,1,1-Trichloroethane	97	5.575	5.575	(0.912)	9609	5.00000	5.53	
	40 Carbon Tetrachloride	117	5.693	5.693	(0.931)	7009	5.00000	4.96	
	41 1,1-Dichloropropene	75	5.716	5.716	(0.935)	9865	5.00000	5.08	
M	42 Total 1,2-Dichloroethene	61				24014	10.0000	10.5	
	44 Benzene	78	5.880	5.880	(0.962)	32537	5.00000	5.36	
$	45 1,2-Dichloroethane-d4	67	5.886	5.886	(0.963)	4542	5.00000	5.30	
	46 1,2-Dichloroethane	62	5.950	5.950	(0.973)	9187	5.00000	5.14	
*	47 FLUOROBENZENE	96	6.114	6.114	(1.000)	298144	50.0000		
	49 Trichloroethene	130	6.401	6.401	(1.047)	7900	5.00000	5.04	
	50 Methyl Cyclohexane	83	6.500	6.500	(1.063)	12517	5.00000	5.31	8874
	51 1,2-Dichloropropane +	63	6.611	6.611	(1.081)	9759	5.00000	5.13	
	55 Dibromomethane	93	6.705	6.705	(1.097)	5576	5.00000	5.00	
	56 Bromodichloromethane	83	6.804	6.804	(1.113)	8315	5.00000	4.79	
	57 2-Chloroethyl vinyl ether	63	7.027	7.027	(1.149)	7107	5.00000	4.93	
	58 cis-1,3-Dichloropropene	75	7.144	7.144	(1.168)	13843	5.00000	5.07	
	59 4-methyl-2-pentanone	43	7.243	7.243	(1.185)	10878	5.00000	5.23	
$	60 Toluene-d8	98	7.319	7.319	(0.870)	26862	5.00000	5.41	
	61 Toluene +	91	7.372	7.372	(0.876)	32386	5.00000	5.29	
	63 trans-1,3-Dichloropropene	75	7.571	7.571	(0.900)	11955	5.00000	4.81	
	64 1,1,2-Trichloroethane	97	7.717	7.717	(0.917)	7771	5.00000	5.53	
	65 Tetrachloroethene	164	7.770	7.770	(0.924)	6075	5.00000	5.47	
	66 1,3-Dichloropropane	76	7.846	7.846	(0.933)	14219	5.00000	5.12	
	67 2-Hexanone	43	7.858	7.858	(0.934)	6064	5.00000	4.72	
	68 Dibromochloromethane	129	7.998	7.998	(0.951)	7651	5.00000	4.94	
	69 1,2-Dibromoethane(EDB)	107	8.097	8.097	(0.962)	8232	5.00000	4.99	
*	70 CHLOROBENZENE-d5	82	8.413	8.413	(1.000)	126274	50.0000		
	71 Chlorobenzene ++	112	8.437	8.437	(1.003)	21789	5.00000	5.23	
	72 Ethylbenzene +	106	8.472	8.472	(1.007)	10277	5.00000	4.96	
	73 1,1,1,2-Tetrachloroethane	133	8.490	8.490	(1.009)	6569	5.00000	5.12	
	74 p,m-Xylene	106	8.554	8.554	(1.017)	27346	10.0000	10.7	
	75 o-Xylene	106	8.847	8.847	(1.052)	13667	5.00000	5.41	
	76 Styrene	104	8.870	8.870	(1.054)	24247	5.00000	5.32	
	77 Bromoform ++	173	9.040	9.040	(1.074)	3977	5.00000	4.16	
	78 Isopropylbenzene	105	9.087	9.087	(1.080)	33655	5.00000	5.42	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.245	9.245	(1.099)	7427	5.00000	5.08	
81 1,1,2,2-Tetrachloroethane++	83	9.333	9.333	(0.932)	10187	5.00000	5.33	
82 Bromobenzene	77	9.356	9.356	(0.934)	20490	5.00000	5.37	
84 trans-1,4-Dichloro-2-Butene	53	9.380	9.380	(0.937)	2260	5.00000	4.66	
85 n-Propylbenzene	91	9.368	9.368	(0.936)	43512	5.00000	5.54	
86 1,2,3-Trichloropropane	75	9.374	9.374	(0.936)	12937	5.00000	5.26	
87 2-Chlorotoluene	91	9.467	9.467	(0.946)	27804	5.00000	5.51	
88 1,3,5-Trimethylbenzene	105	9.485	9.485	(0.947)	25316	5.00000	5.10	
89 4-Chlorotoluene	91	9.544	9.544	(0.953)	27018	5.00000	5.56	
91 tert-butylbenzene	91	9.696	9.696	(0.968)	18639	5.00000	5.61	
92 1,2,4-Trimethylbenzene	105	9.737	9.737	(0.972)	28470	5.00000	5.52	
96 sec-Butylbenzene	105	9.842	9.842	(0.983)	37511	5.00000	5.53	
97 p-Isopropyltoluene	119	9.924	9.924	(0.991)	30449	5.00000	5.56	(H)
98 1,3-Dichlorobenzene	146	9.971	9.971	(0.996)	15074	5.00000	5.12	
* 99 1,4-DICHLOROBENZENE-D4	152	10.012	10.012	(1.000)	99418	50.0000		
100 1,4-Dichlorobenzene	146	10.024	10.024	(1.001)	16405	5.00000	5.45	
M 101 TOTAL XYLENE	106				41013	15.0000	16.1	
102 n-Butylbenzene	91	10.194	10.194	(1.018)	30574	5.00000	5.66	
103 1,2-Dichlorobenzene	146	10.276	10.276	(1.026)	14579	5.00000	5.46	
104 1,2-Dibromo-3-Chloropropane	157	10.803	10.803	(1.079)	1542	5.00000	4.78	
106 1,2,4-Trichlorobenzene	180	11.341	11.341	(1.133)	8767	5.00000	5.45	
107 Hexachlorobutadiene	225	11.382	11.382	(1.137)	4122	5.00000	5.23	
108 Naphthalene	128	11.529	11.529	(1.151)	24141	5.00000	5.09	
109 1,2,3-Trichlorobenzene	180	11.699	11.699	(1.168)	7490	5.00000	4.92	
140 1-Bromo-2-chloroethane	63	7.068	7.068	(1.156)	14572	5.00000	4.91	0(M)
M 139 1-3 Dichloropropene-Total	100				25798	10.0000	9.87	0

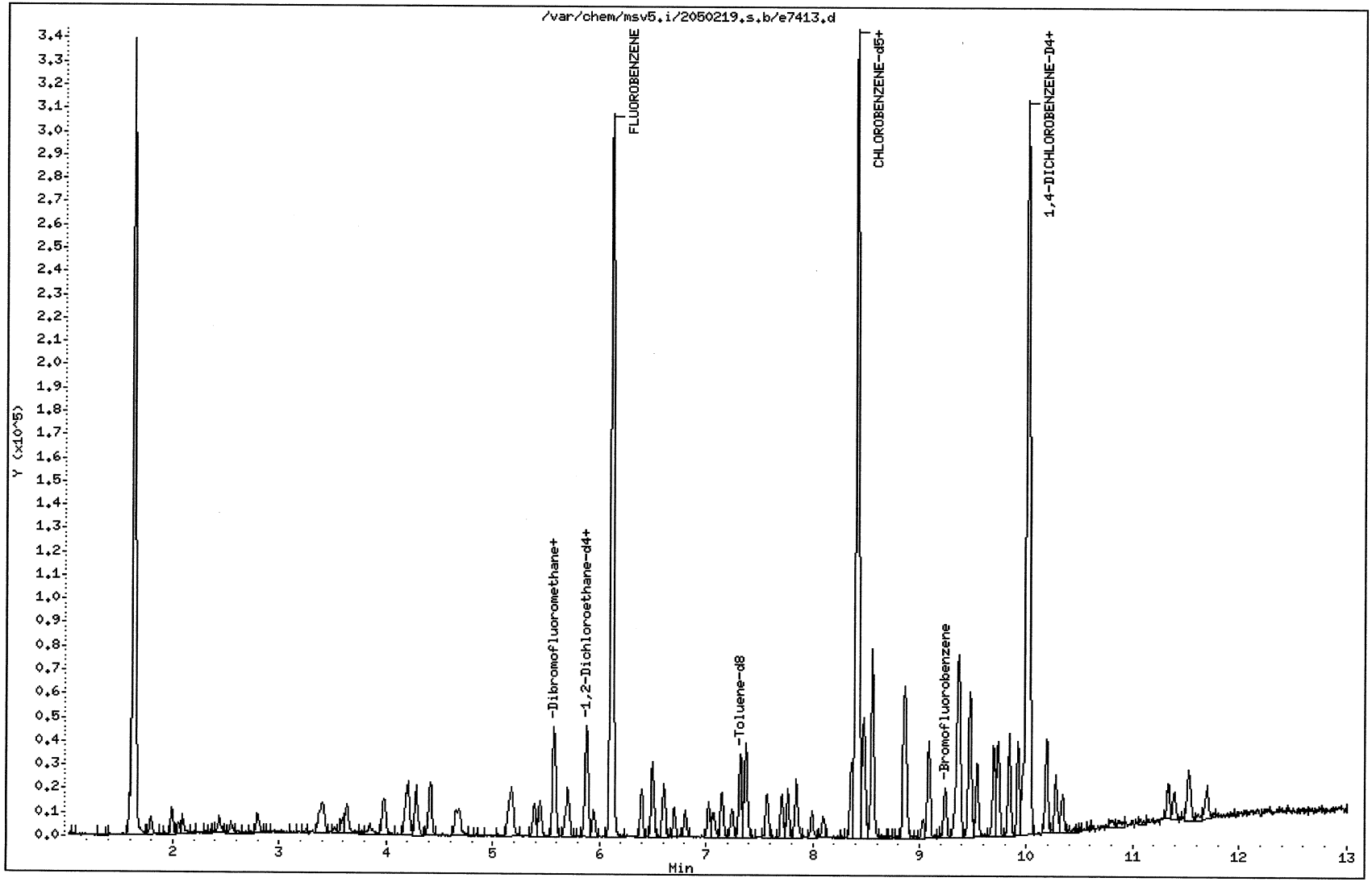
QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7413.d
Date : 19-FEB-2005 09:55
Client ID: V5STD005
Sample Info: 1201*V5STD005*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53

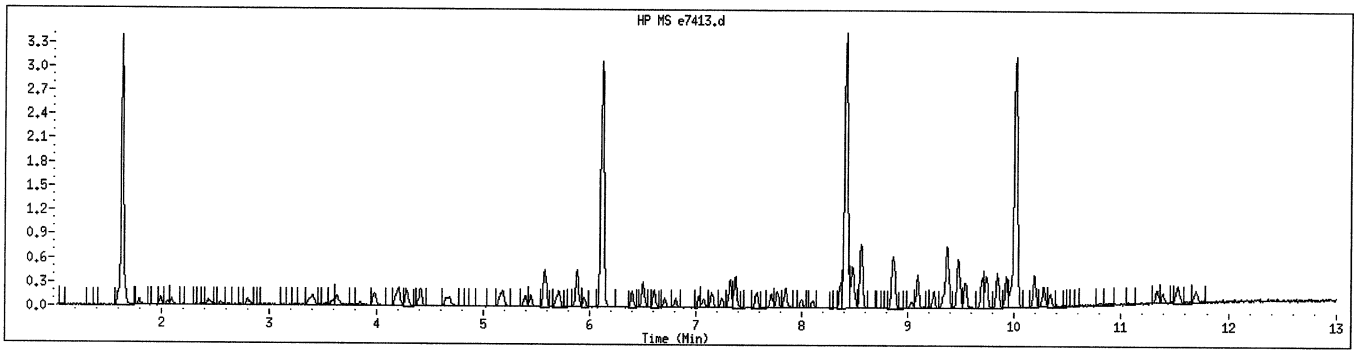


000077

Data file : /var/chem/msv5.i/2050219.s.b/e7413.d
Report Date: 02/19/2005 14:26

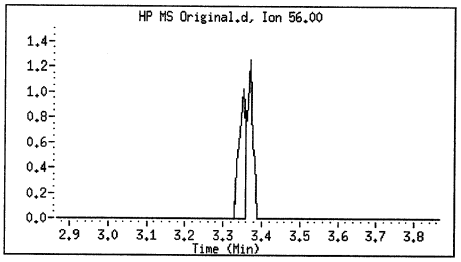
MANUAL INTEGRATION GRAPHIC REPORT

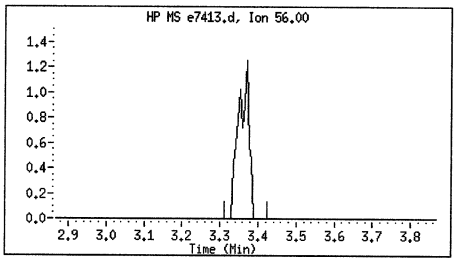
Lab ID	: 1201	SampleType	: CALIB_1
Injection Date	: 19-FEB-2005 09:55	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1201*V5STD005*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



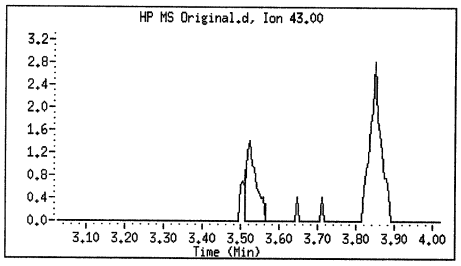
Original | Final

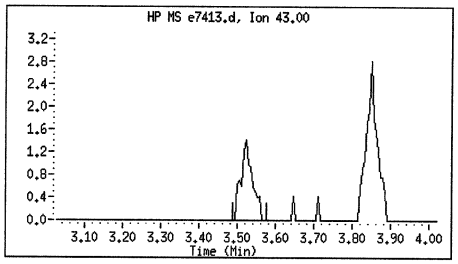
10 Acrolein CAS#: 107-02-8





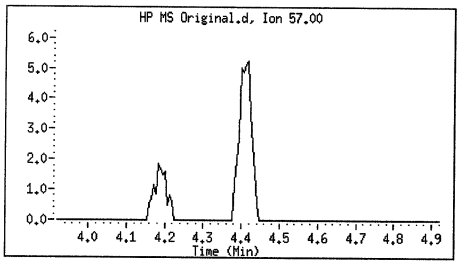
13 Acetone CAS#: 67-64-1

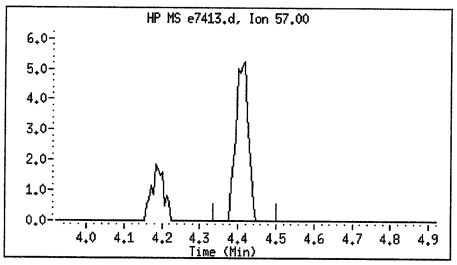




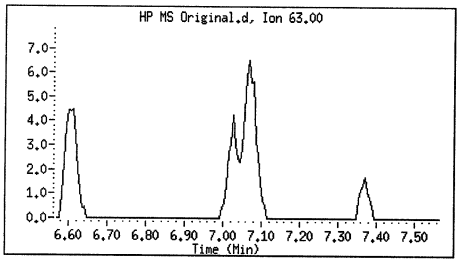
Original | Final

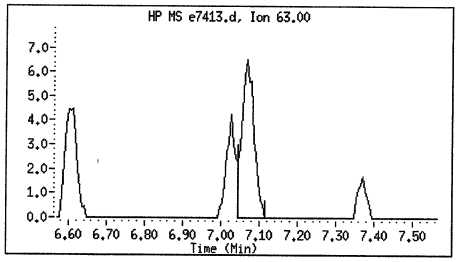
24 Hexane CAS#: 110-54-3





140 1-Bromo-2-chloroethane CAS#: 107-04-0





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7414.d
Lab Smp Id: 1202 Client Smp ID: V5STD020
Inj Date : 19-FEB-2005 10:19
Operator : JCK Inst ID: msv5.i
Smp Info : 1202*V5STD020*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 10:19 Cal File: e7414.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.791	1.791	(0.293)	31500	20.0000	21.7	
2 Chloromethane ++	50	1.990	1.990	(0.325)	42996	20.0000	20.5	
3 Vinyl Chloride +	62	2.090	2.090	(0.342)	35447	20.0000	21.0	
5 Bromomethane	94	2.435	2.435	(0.398)	25267	20.0000	19.5	
6 Chloroethane	64	2.552	2.552	(0.417)	18539	20.0000	21.3	
7 Trichlorofluoromethane	101	2.803	2.803	(0.458)	32826	20.0000	21.7	
10 Acrolein	56	3.353	3.353	(0.548)	11408	100.000	90.2	
11 1,1,2Trichlotrifluoroethane	101	3.376	3.376	(0.552)	22133	20.0000	21.8	
12 1,1-Dichloroethene +	96	3.412	3.412	(0.558)	20002	20.0000	20.9	
13 Acetone	43	3.529	3.529	(0.577)	7115	20.0000	14.8	
14 Methyl Iodide	142	3.593	3.593	(0.588)	37100	20.0000	22.9	
15 Carbon Disulfide	76	3.634	3.634	(0.594)	84666	20.0000	21.1	
17 Methyl Acetate	43	3.845	3.845	(0.629)	17593	20.0000	19.7	4520(H)
18 Methylene Chloride	49	3.979	3.979	(0.651)	46589	20.0000	20.4	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.190	4.190	(0.685)	76041	20.0000	20.5	8738
	21 trans-1,2-Dichloroethene	61	4.207	4.207	(0.688)	42318	20.0000	20.6	
	22 Acrylonitrile	53	4.278	4.278	(0.699)	70081	100.000	101	
	24 Hexane	57	4.407	4.407	(0.721)	49464	20.0000	22.5	0(M)
	27 1,1-Dichloroethane ++	63	4.652	4.652	(0.761)	57300	20.0000	20.4	
	28 Vinyl Acetate	43	4.676	4.676	(0.765)	76014	20.0000	20.1	
	30 2,2-Dichloropropane	77	5.155	5.155	(0.843)	38859	20.0000	21.0	
	31 cis-1,2-Dichloroethene	61	5.185	5.185	(0.848)	50921	20.0000	20.4	
	32 2-Butanone	43	5.202	5.202	(0.851)	16251	20.0000	19.9	
	35 Bromochloromethane	128	5.389	5.389	(0.881)	17283	20.0000	20.5	
	36 Chloroform +	83	5.442	5.442	(0.890)	48690	20.0000	20.8	
	37 Cyclohexane	56	5.571	5.571	(0.911)	56643	20.0000	21.6	9186
$	38 Dibromofluoromethane	111	5.583	5.583	(0.913)	31455	20.0000	20.0	8991
	39 1,1,1-Trichloroethane	97	5.577	5.577	(0.912)	36664	20.0000	21.1	
	40 Carbon Tetrachloride	117	5.682	5.682	(0.929)	29987	20.0000	21.2	
	41 1,1-Dichloropropene	75	5.712	5.712	(0.934)	40668	20.0000	21.0	
M	42 Total 1,2-Dichloroethene	61				93239	40.0000	41.0	
	44 Benzene	78	5.881	5.881	(0.962)	122858	20.0000	20.3	
$	45 1,2-Dichloroethane-d4	67	5.887	5.887	(0.963)	17558	20.0000	20.5	
	46 1,2-Dichloroethane	62	5.946	5.946	(0.972)	35638	20.0000	19.9	
*	47 FLUOROBENZENE	96	6.116	6.116	(1.000)	297898	50.0000		
	49 Trichloroethene	130	6.397	6.397	(1.046)	32642	20.0000	20.8	
	50 Methyl Cyclohexane	83	6.502	6.502	(1.063)	50587	20.0000	21.5	9065
	51 1,2-Dichloropropane +	63	6.607	6.607	(1.080)	38876	20.0000	20.5	
	55 Dibromomethane	93	6.701	6.701	(1.096)	22645	20.0000	20.3	
	56 Bromodichloromethane	83	6.807	6.807	(1.113)	35425	20.0000	20.4	
	57 2-Chloroethyl vinyl ether	63	7.023	7.023	(1.148)	28576	20.0000	19.9	
	58 cis-1,3-Dichloropropene	75	7.146	7.146	(1.168)	54665	20.0000	20.0	
	59 4-methyl-2-pentanone	43	7.234	7.234	(1.183)	42813	20.0000	20.6	
$	60 Toluene-d8	98	7.322	7.322	(0.870)	103048	20.0000	20.4	
	61 Toluene +	91	7.369	7.369	(0.876)	126797	20.0000	20.3	
	63 trans-1,3-Dichloropropene	75	7.574	7.574	(0.900)	51546	20.0000	20.4	
	64 1,1,2-Trichloroethane	97	7.714	7.714	(0.917)	28668	20.0000	20.0	
	65 Tetrachloroethene	164	7.767	7.767	(0.923)	23421	20.0000	20.7	
	66 1,3-Dichloropropane	76	7.843	7.843	(0.932)	57418	20.0000	20.3	
	67 2-Hexanone	43	7.849	7.849	(0.933)	26743	20.0000	20.4	
	68 Dibromochloromethane	129	7.989	7.989	(0.950)	32670	20.0000	20.7	
	69 1,2-Dibromoethane(EDB)	107	8.101	8.101	(0.963)	33862	20.0000	20.2	
*	70 CHLOROBENZENE-d5	82	8.411	8.411	(1.000)	128522	50.0000		
	71 Chlorobenzene ++	112	8.434	8.434	(1.003)	85759	20.0000	20.2	
	72 Ethylbenzene +	106	8.470	8.470	(1.007)	44934	20.0000	21.3	
	73 1,1,1,2-Tetrachloroethane	133	8.487	8.487	(1.009)	26776	20.0000	20.5	
	74 p,m-Xylene	106	8.558	8.558	(1.017)	107703	40.0000	41.4	
	75 o-Xylene	106	8.851	8.851	(1.052)	52670	20.0000	20.5	
	76 Styrene	104	8.868	8.868	(1.054)	94122	20.0000	20.3	
	77 Bromoform ++	173	9.032	9.032	(1.074)	19852	20.0000	20.4	
	78 Isopropylbenzene	105	9.091	9.091	(1.081)	134292	20.0000	21.2	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.249	9.249	(1.100)	30801	20.0000	20.7	
81 1,1,2,2-Tetrachloroethane++	83	9.337	9.337	(0.933)	39985	20.0000	20.0	
82 Bromobenzene	77	9.360	9.360	(0.935)	81727	20.0000	20.5	
84 trans-1,4-Dichloro-2-Butene	53	9.372	9.372	(0.936)	10526	20.0000	20.7	
85 n-Propylbenzene	91	9.366	9.366	(0.936)	168839	20.0000	20.6	
86 1,2,3-Trichloropropane	75	9.378	9.378	(0.937)	52441	20.0000	20.4	
87 2-Chlorotoluene	91	9.472	9.472	(0.946)	106428	20.0000	20.2	
88 1,3,5-Trimethylbenzene	105	9.478	9.478	(0.947)	107515	20.0000	20.7	
89 4-Chlorotoluene	91	9.543	9.543	(0.953)	103863	20.0000	20.4	
91 tert-butylbenzene	91	9.695	9.695	(0.968)	70658	20.0000	20.3	
92 1,2,4-Trimethylbenzene	105	9.736	9.736	(0.972)	107736	20.0000	20.0	
96 sec-Butylbenzene	105	9.842	9.842	(0.983)	146100	20.0000	20.6	
97 p-Isopropyltoluene	119	9.924	9.924	(0.991)	116870	20.0000	20.4	(H)
98 1,3-Dichlorobenzene	146	9.971	9.971	(0.996)	61196	20.0000	19.9	
* 99 1,4-DICHLOROBENZENE-D4	152	10.012	10.012	(1.000)	103898	50.0000		
100 1,4-Dichlorobenzene	146	10.024	10.024	(1.001)	64944	20.0000	20.6	
M 101 TOTAL XYLENE	106				160373	60.0000	61.9	
102 n-Butylbenzene	91	10.188	10.188	(1.018)	115426	20.0000	20.4	
103 1,2-Dichlorobenzene	146	10.276	10.276	(1.026)	56407	20.0000	20.2	
104 1,2-Dibromo-3-Chloropropane	157	10.797	10.797	(1.078)	6727	20.0000	19.9	
106 1,2,4-Trichlorobenzene	180	11.336	11.336	(1.132)	34500	20.0000	20.5	
107 Hexachlorobutadiene	225	11.389	11.389	(1.137)	17159	20.0000	20.8	
108 Naphthalene	128	11.535	11.535	(1.152)	93486	20.0000	18.8	
109 1,2,3-Trichlorobenzene	180	11.705	11.705	(1.169)	32408	20.0000	20.4	
140 1-Bromo-2-chloroethane	63	7.070	7.070	(1.156)	61910	20.0000	20.9	7462
M 139 1-3 Dichloropropene-Total	100				106211	40.0000	40.4	0

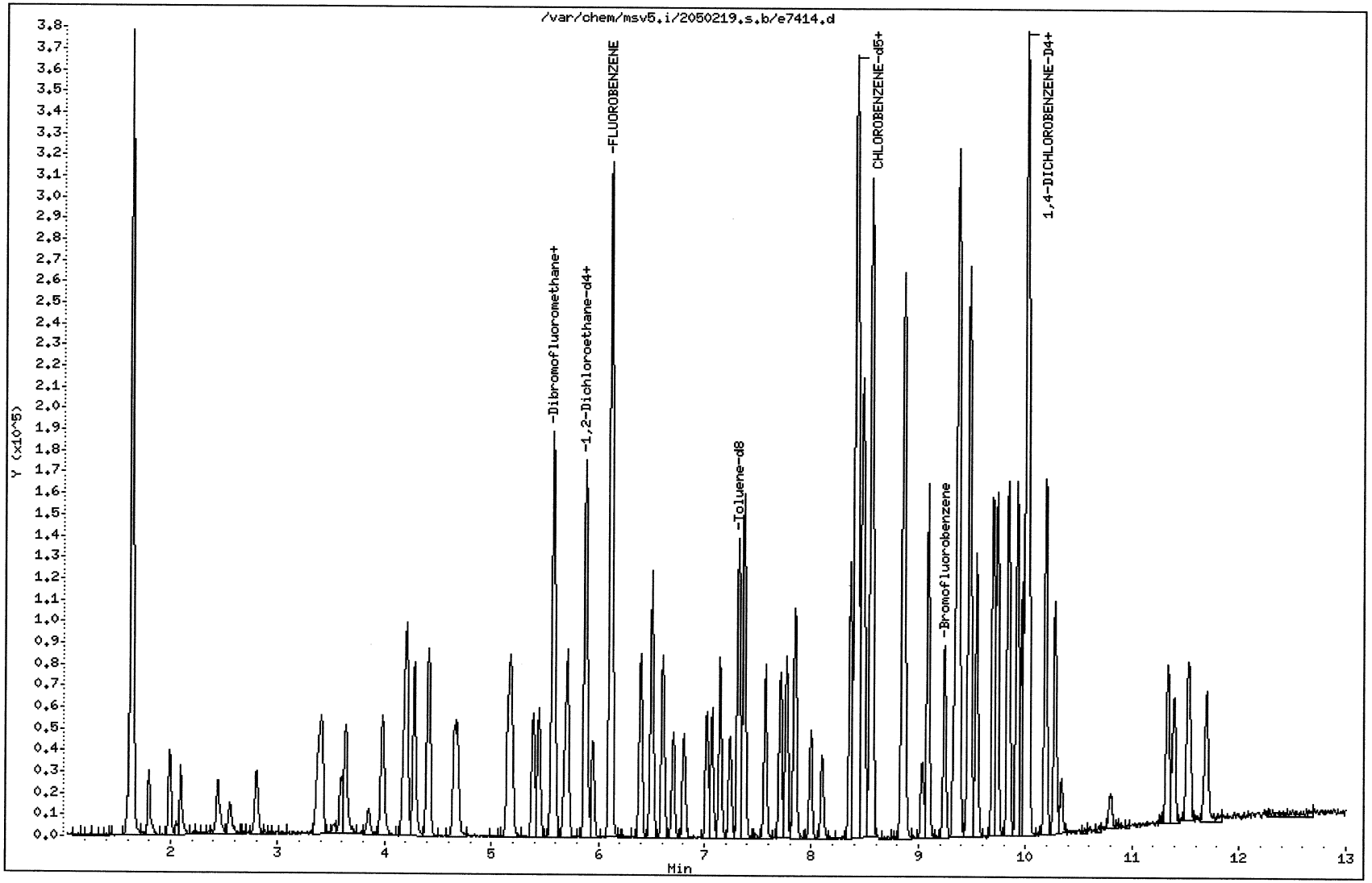
QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7414.d
Date : 19-FEB-2005 10:19
Client ID: V5STD020
Sample Info: 1202*V5STD020*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



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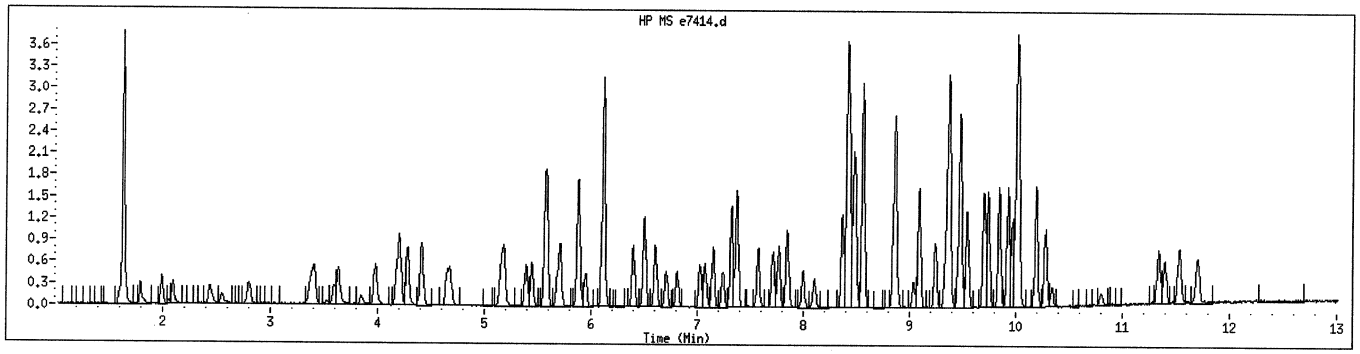
Data file : /var/chem/msv5.i/2050219.s.b/e7414.d
Report Date: 02/19/2005 14:26

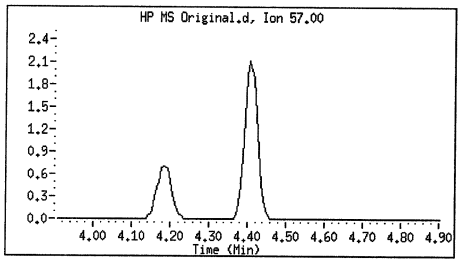
MANUAL INTEGRATION GRAPHIC REPORT

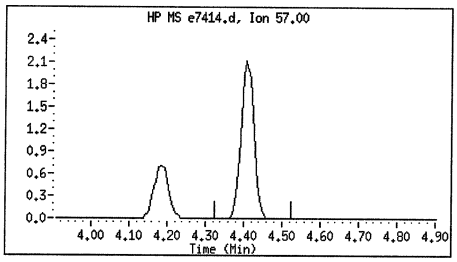
Lab ID	: 1202	SampleType	: CALIB_2
Injection Date	: 19-FEB-2005 10:19	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1202*V5STD020*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original | Final

24 Hexane CAS#: 110-54-3





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7415.d
Lab Smp Id: 1203 Client Smp ID: V5STD050
Inj Date : 19-FEB-2005 11:47
Operator : JCK Inst ID: msv5.i
Smp Info : 1203*V5STD050*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 11:47 Cal File: e7415.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.791	1.791	(0.293)	72151	50.0000	46.4	
2 Chloromethane ++	50	1.990	1.990	(0.325)	109635	50.0000	48.8	
3 Vinyl Chloride +	62	2.096	2.096	(0.343)	88232	50.0000	48.8	
5 Bromomethane	94	2.441	2.441	(0.399)	70992	50.0000	51.0	
6 Chloroethane	64	2.552	2.552	(0.417)	46157	50.0000	49.4	
7 Trichlorofluoromethane	101	2.804	2.804	(0.458)	74642	50.0000	46.1	
10 Acrolein	56	3.359	3.359	(0.549)	40908	250.000	262	(A)
11 1,1,2Trichlotrifluoroethane	101	3.383	3.383	(0.553)	49781	50.0000	45.7	
12 1,1-Dichloroethene +	96	3.412	3.412	(0.558)	49201	50.0000	48.0	
13 Acetone	43	3.523	3.523	(0.576)	20746	50.0000	40.8	
14 Methyl Iodide	142	3.594	3.594	(0.587)	76355	50.0000	44.0	
15 Carbon Disulfide	76	3.635	3.635	(0.594)	206265	50.0000	48.0	
17 Methyl Acetate	43	3.845	3.845	(0.629)	45401	50.0000	47.5	3889(H)
18 Methylene Chloride	49	3.980	3.980	(0.651)	116104	50.0000	47.4	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.191	4.191	(0.685)	194089	50.0000	48.9	8617
	21 trans-1,2-Dichloroethene	61	4.208	4.208	(0.688)	108248	50.0000	49.1	
	22 Acrylonitrile	53	4.279	4.279	(0.699)	185844	250.000	250	(A)
	24 Hexane	57	4.413	4.413	(0.721)	103135	50.0000	43.7	0(M)
	27 1,1-Dichloroethane ++	63	4.647	4.647	(0.760)	146374	50.0000	48.6	
	28 Vinyl Acetate	43	4.682	4.682	(0.765)	210040	50.0000	51.8	
	30 2,2-Dichloropropane	77	5.156	5.156	(0.843)	94221	50.0000	47.6	
	31 cis-1,2-Dichloroethene	61	5.180	5.180	(0.847)	127999	50.0000	47.8	
	32 2-Butanone	43	5.197	5.197	(0.850)	45588	50.0000	52.0	
	35 Bromochloromethane	128	5.396	5.396	(0.882)	45302	50.0000	50.0	
	36 Chloroform +	83	5.443	5.443	(0.890)	123869	50.0000	49.4	
	37 Cyclohexane	56	5.572	5.572	(0.911)	127174	50.0000	45.2	9034
$	38 Dibromofluoromethane	111	5.584	5.584	(0.913)	81257	50.0000	48.3	8945
	39 1,1,1-Trichloroethane	97	5.578	5.578	(0.912)	88154	50.0000	47.4	
	40 Carbon Tetrachloride	117	5.690	5.690	(0.930)	70704	50.0000	46.6	
	41 1,1-Dichloropropene	75	5.713	5.713	(0.934)	99164	50.0000	47.7	
M	42 Total 1,2-Dichloroethene	61				236247	100.000	96.9	
	44 Benzene	78	5.883	5.883	(0.962)	314899	50.0000	48.4	
$	45 1,2-Dichloroethane-d4	67	5.889	5.889	(0.963)	44584	50.0000	48.5	
	46 1,2-Dichloroethane	62	5.948	5.948	(0.972)	97255	50.0000	50.7	
*	47 FLUOROBENZENE	96	6.118	6.118	(1.000)	319476	50.0000		
	49 Trichloroethene	130	6.399	6.399	(1.046)	81697	50.0000	48.7	
	50 Methyl Cyclohexane	83	6.504	6.504	(1.063)	113885	50.0000	45.1	9079
	51 1,2-Dichloropropane +	63	6.610	6.610	(1.080)	100595	50.0000	49.4	
	55 Dibromomethane	93	6.703	6.703	(1.096)	60273	50.0000	50.4	
	56 Bromodichloromethane	83	6.809	6.809	(1.113)	96030	50.0000	51.7	
	57 2-Chloroethyl vinyl ether	63	7.025	7.025	(1.148)	75993	50.0000	49.2	
	58 cis-1,3-Dichloropropene	75	7.149	7.149	(1.169)	143980	50.0000	49.2	
	59 4-methyl-2-pentanone	43	7.236	7.236	(1.183)	110102	50.0000	49.4	
$	60 Toluene-d8	98	7.318	7.318	(0.870)	265767	50.0000	48.5	
	61 Toluene +	91	7.371	7.371	(0.876)	316300	50.0000	46.7	
	63 trans-1,3-Dichloropropene	75	7.571	7.571	(0.900)	134981	50.0000	49.1	
	64 1,1,2-Trichloroethane	97	7.711	7.711	(0.916)	77460	50.0000	49.9	
	65 Tetrachloroethene	164	7.770	7.770	(0.923)	57773	50.0000	47.0	
	66 1,3-Dichloropropane	76	7.846	7.846	(0.932)	148942	50.0000	48.5	
	67 2-Hexanone	43	7.852	7.852	(0.933)	70438	50.0000	49.6	
	68 Dibromochloromethane	129	7.998	7.998	(0.951)	87858	50.0000	51.3	
	69 1,2-Dibromoethane(EDB)	107	8.098	8.098	(0.962)	89907	50.0000	49.3	
*	70 CHLOROBENZENE-d5	82	8.414	8.414	(1.000)	139569	50.0000		
	71 Chlorobenzene ++	112	8.438	8.438	(1.003)	221643	50.0000	48.2	
	72 Ethylbenzene +	106	8.473	8.473	(1.007)	111409	50.0000	48.6	
	73 1,1,1,2-Tetrachloroethane	133	8.491	8.491	(1.009)	71109	50.0000	50.2	
	74 p,m-Xylene	106	8.562	8.562	(1.018)	275079	100.000	97.5	
	75 o-Xylene	106	8.854	8.854	(1.052)	136720	50.0000	49.0	
	76 Styrene	104	8.866	8.866	(1.054)	249271	50.0000	49.5	
	77 Bromoform ++	173	9.042	9.042	(1.075)	53399	50.0000	50.5	
	78 Isopropylbenzene	105	9.089	9.089	(1.080)	327000	50.0000	47.6	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.247	9.247	(1.099)	79205	50.0000	49.0	
81 1,1,2,2-Tetrachloroethane++	83	9.335	9.335	(0.932)	106459	50.0000	49.9	
82 Bromobenzene	77	9.365	9.365	(0.935)	210742	50.0000	49.4	
84 trans-1,4-Dichloro-2-Butene	53	9.377	9.377	(0.937)	27710	50.0000	51.1	
85 n-Propylbenzene	91	9.371	9.371	(0.936)	421293	50.0000	48.0	
86 1,2,3-Trichloropropane	75	9.382	9.382	(0.937)	134754	50.0000	49.1	
87 2-Chlorotoluene	91	9.471	9.471	(0.946)	275950	50.0000	48.9	
88 1,3,5-Trimethylbenzene	105	9.483	9.483	(0.947)	270517	50.0000	48.8	
89 4-Chlorotoluene	91	9.541	9.541	(0.953)	257763	50.0000	47.4	
91 tert-butylbenzene	91	9.700	9.700	(0.969)	178537	50.0000	48.0	
92 1,2,4-Trimethylbenzene	105	9.741	9.741	(0.973)	280660	50.0000	48.7	
96 sec-Butylbenzene	105	9.847	9.847	(0.984)	358429	50.0000	47.2	
97 p-Isopropyltoluene	119	9.929	9.929	(0.992)	291344	50.0000	47.6	(H)
98 1,3-Dichlorobenzene	146	9.970	9.970	(0.996)	160688	50.0000	48.9	
* 99 1,4-DICHLOROBENZENE-D4	152	10.012	10.012	(1.000)	111117	50.0000		
100 1,4-Dichlorobenzene	146	10.029	10.029	(1.002)	165659	50.0000	49.2	
M 101 TOTAL XYLENE	106				411799	150.000	146	
102 n-Butylbenzene	91	10.193	10.193	(1.018)	284451	50.0000	47.1	
103 1,2-Dichlorobenzene	146	10.276	10.276	(1.026)	146796	50.0000	49.2	
104 1,2-Dibromo-3-Chloropropane	157	10.803	10.803	(1.079)	18496	50.0000	51.3	
106 1,2,4-Trichlorobenzene	180	11.342	11.342	(1.133)	90997	50.0000	50.6	
107 Hexachlorobutadiene	225	11.395	11.395	(1.138)	42776	50.0000	48.5	
108 Naphthalene	128	11.530	11.530	(1.152)	290018	50.0000	54.7	
109 1,2,3-Trichlorobenzene	180	11.700	11.700	(1.169)	88399	50.0000	52.0	
140 1-Bromo-2-chloroethane	63	7.072	7.072	(1.156)	161235	50.0000	50.7	7378
M 139 1-3 Dichloropropene-Total	100				278961	100.000	98.3	0

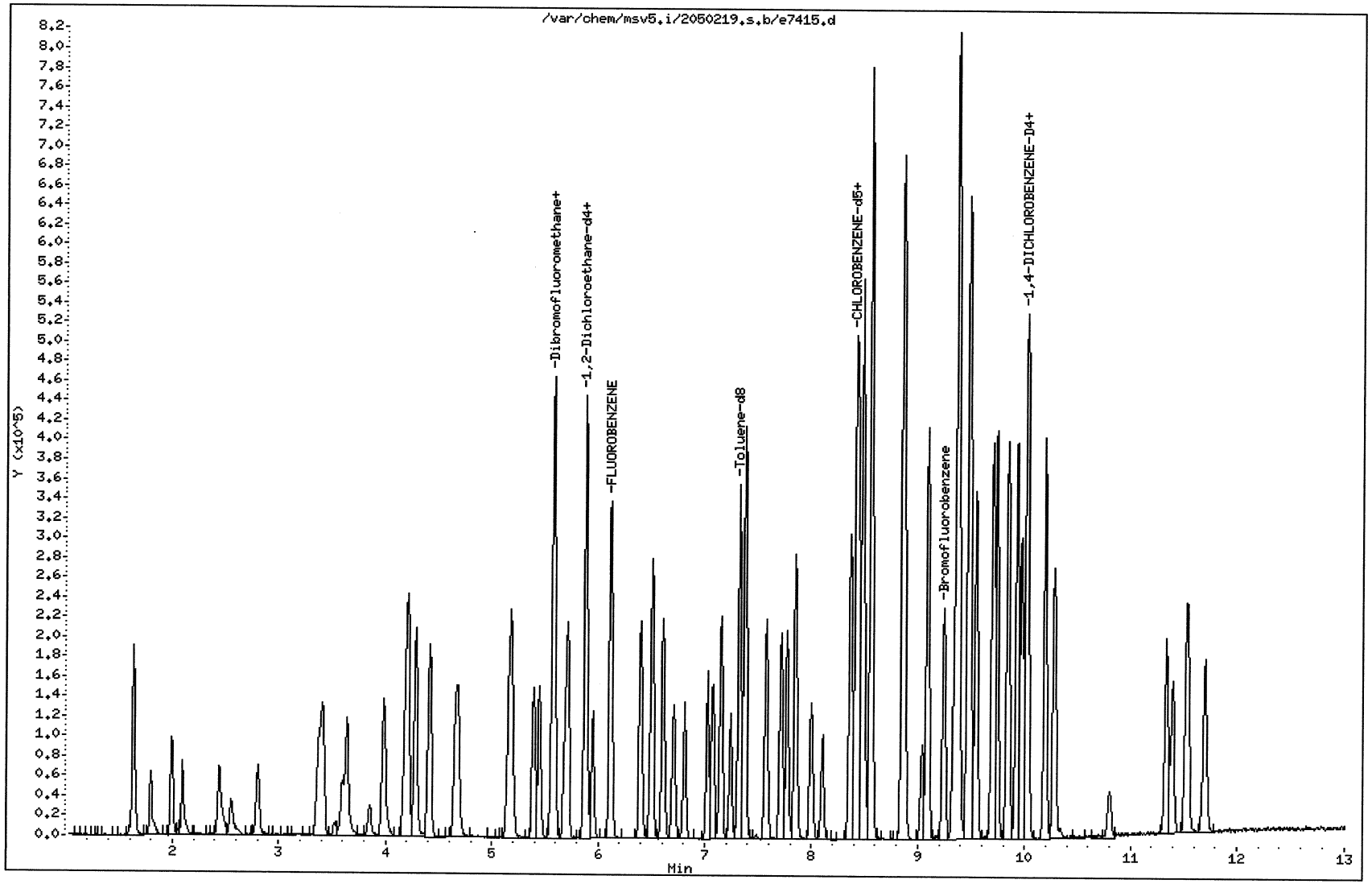
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7415.d
Date : 19-FEB-2005 11:47
Client ID: V5STD050
Sample Info: 1203*V5STD050*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



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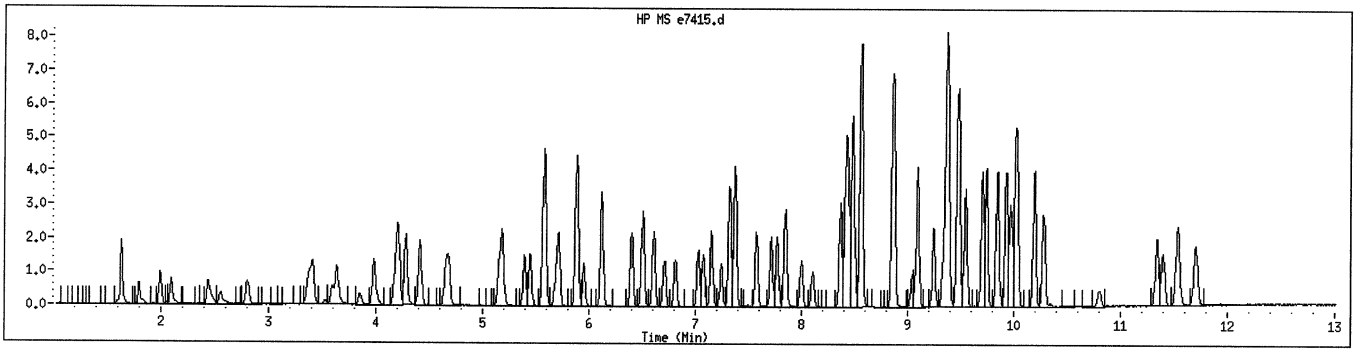
Data file : /var/chem/msv5.i/2050219.s.b/e7415.d
Report Date: 02/19/2005 14:26

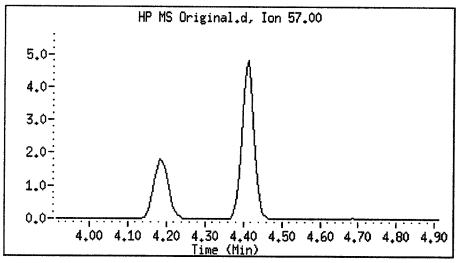
MANUAL INTEGRATION GRAPHIC REPORT

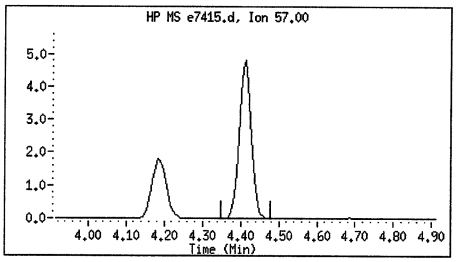
Lab ID	: 1203	SampleType	: CALIB_3
Injection Date	: 19-FEB-2005 11:47	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1203*V5STD050*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

24 Hexane CAS#: 110-54-3





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7416.d
Lab Smp Id: 1204 Client Smp ID: V5STD100
Inj Date : 19-FEB-2005 12:17
Operator : JCK Inst ID: msv5.i
Smp Info : 1204*V5STD100*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:17 Cal File: e7416.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.797	1.797	(1.000)	140830	100.000	90.5	
2 Chloromethane ++	50	1.990	1.990	(1.000)	215789	100.000	95.9	
3 Vinyl Chloride +	62	2.096	2.096	(1.000)	169837	100.000	93.8	
5 Bromomethane	94	2.441	2.441	(1.000)	129685	100.000	93.1	
6 Chloroethane	64	2.552	2.552	(1.000)	89223	100.000	95.4	
7 Trichlorofluoromethane	101	2.804	2.804	(1.000)	147289	100.000	90.8	
10 Acrolein	56	3.360	3.360	(1.000)	78655	500.000	487	(A)
11 1,1,2Trichlotrifluoroethane	101	3.383	3.383	(1.000)	98483	100.000	90.4	
12 1,1-Dichloroethene +	96	3.407	3.407	(1.000)	96751	100.000	94.3	
13 Acetone	43	3.524	3.524	(1.000)	45075	100.000	110	
14 Methyl Iodide	142	3.594	3.594	(1.000)	162456	100.000	93.4	
15 Carbon Disulfide	76	3.635	3.635	(1.000)	403339	100.000	93.7	
17 Methyl Acetate	43	3.852	3.852	(1.000)	87967	100.000	91.8	3542(H)
18 Methylene Chloride	49	3.980	3.980	(1.000)	228382	100.000	93.2	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.185	4.185	(1.000)	383664	100.000	96.6	7856
	21 trans-1,2-Dichloroethene	61	4.209	4.209	(1.000)	209382	100.000	94.8	
	22 Acrylonitrile	53	4.279	4.279	(1.000)	361659	500.000	487	(A)
	24 Hexane	57	4.414	4.414	(1.000)	207147	100.000	87.7	8796
	27 1,1-Dichloroethane ++	63	4.654	4.654	(1.000)	290125	100.000	96.3	
	28 Vinyl Acetate	43	4.683	4.683	(1.000)	415151	100.000	102	
	30 2,2-Dichloropropane	77	5.157	5.157	(1.000)	188304	100.000	95.0	
	31 cis-1,2-Dichloroethene	61	5.181	5.181	(1.000)	263756	100.000	98.4	
	32 2-Butanone	43	5.198	5.198	(1.000)	94045	100.000	107	
	35 Bromochloromethane	128	5.392	5.392	(1.000)	88478	100.000	97.6	
	36 Chloroform +	83	5.450	5.450	(1.000)	248380	100.000	98.9	
	37 Cyclohexane	56	5.574	5.574	(1.000)	250353	100.000	89.0	8953
$	38 Dibromofluoromethane	111	5.585	5.585	(1.000)	166951	100.000	99.1	8802
	39 1,1,1-Trichloroethane	97	5.580	5.580	(1.000)	181323	100.000	97.4	
	40 Carbon Tetrachloride	117	5.691	5.691	(1.000)	146189	100.000	96.3	
	41 1,1-Dichloropropene	75	5.715	5.715	(1.000)	198737	100.000	95.4	
M	42 Total 1,2-Dichloroethene	61				473138	200.000	193	
	44 Benzene	78	5.879	5.879	(1.000)	609883	100.000	93.7	
$	45 1,2-Dichloroethane-d4	67	5.885	5.885	(1.000)	90021	100.000	97.9	
	46 1,2-Dichloroethane	62	5.949	5.949	(1.000)	197517	100.000	103	
*	47 FLUOROBENZENE	96	6.119	6.119	(1.000)	319847	50.0000		(M)
	49 Trichloroethene	130	6.400	6.400	(1.000)	164159	100.000	97.6	
	50 Methyl Cyclohexane	83	6.506	6.506	(1.000)	226694	100.000	89.7	9039
	51 1,2-Dichloropropane +	63	6.611	6.611	(1.000)	198868	100.000	97.5	
	55 Dibromomethane	93	6.705	6.705	(1.000)	117112	100.000	97.9	
	56 Bromodichloromethane	83	6.811	6.811	(1.000)	193429	100.000	104	
	57 2-Chloroethyl vinyl ether	63	7.027	7.027	(1.000)	152440	100.000	98.7	
	58 cis-1,3-Dichloropropene	75	7.150	7.150	(1.000)	290775	100.000	99.2	
	59 4-methyl-2-pentanone	43	7.244	7.244	(1.000)	215272	100.000	96.4	
$	60 Toluene-d8	98	7.321	7.321	(0.870)	521046	100.000	95.9	
	61 Toluene +	91	7.374	7.374	(0.876)	640543	100.000	95.5	
	63 trans-1,3-Dichloropropene	75	7.573	7.573	(0.900)	277151	100.000	102	
	64 1,1,2-Trichloroethane	97	7.713	7.713	(0.916)	155414	100.000	101	
	65 Tetrachloroethene	164	7.772	7.772	(0.923)	113874	100.000	93.6	
	66 1,3-Dichloropropane	76	7.843	7.843	(0.932)	297419	100.000	97.7	
	67 2-Hexanone	43	7.854	7.854	(0.933)	147751	100.000	105	
	68 Dibromochloromethane	129	8.001	8.001	(0.951)	185476	100.000	109	
	69 1,2-Dibromoethane(EDB)	107	8.101	8.101	(0.962)	179246	100.000	99.3	
*	70 CHLOROBENZENE-d5	82	8.417	8.417	(1.000)	138245	50.0000		
	71 Chlorobenzene ++	112	8.441	8.441	(1.003)	439994	100.000	96.5	
	72 Ethylbenzene +	106	8.476	8.476	(1.007)	224252	100.000	98.8	
	73 1,1,1,2-Tetrachloroethane	133	8.494	8.494	(1.009)	141999	100.000	101	
	74 p,m-Xylene	106	8.559	8.559	(1.017)	538936	200.000	193	
	75 o-Xylene	106	8.857	8.857	(1.052)	266583	100.000	96.4	
	76 Styrene	104	8.869	8.869	(1.054)	485593	100.000	97.3	
	77 Bromoform ++	173	9.045	9.045	(1.075)	110849	100.000	106	
	78 Isopropylbenzene	105	9.092	9.092	(1.080)	645455	100.000	94.9	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.245	9.245	(1.098)	159987	100.000	99.9	
81 1,1,2,2-Tetrachloroethane++	83	9.333	9.333	(0.932)	203737	100.000	95.8	
82 Bromobenzene	77	9.362	9.362	(0.935)	406079	100.000	95.5	
84 trans-1,4-Dichloro-2-Butene	53	9.374	9.374	(0.936)	54048	100.000	100	
85 n-Propylbenzene	91	9.374	9.374	(0.936)	818257	100.000	93.6	
86 1,2,3-Trichloropropane	75	9.380	9.380	(0.937)	264073	100.000	96.5	
87 2-Chlorotoluene	91	9.474	9.474	(0.946)	537865	100.000	95.7	
88 1,3,5-Trimethylbenzene	105	9.486	9.486	(0.947)	535605	100.000	96.9	
89 4-Chlorotoluene	91	9.545	9.545	(0.953)	508632	100.000	93.9	
91 tert-butylbenzene	91	9.704	9.704	(0.969)	339193	100.000	91.6	
92 1,2,4-Trimethylbenzene	105	9.739	9.739	(0.972)	547671	100.000	95.4	
96 sec-Butylbenzene	105	9.845	9.845	(0.983)	708164	100.000	93.7	
97 p-Isopropyltoluene	119	9.927	9.927	(0.991)	570531	100.000	93.6	(H)
98 1,3-Dichlorobenzene	146	9.974	9.974	(0.996)	321365	100.000	98.1	
* 99 1,4-DICHLOROBENZENE-D4	152	10.016	10.016	(1.000)	110673	50.0000		
100 1,4-Dichlorobenzene	146	10.034	10.034	(1.002)	316811	100.000	94.5	
M 101 TOTAL XYLENE	106				805519	300.000	289	
102 n-Butylbenzene	91	10.192	10.192	(1.018)	559727	100.000	93.0	
103 1,2-Dichlorobenzene	146	10.280	10.280	(1.026)	291461	100.000	98.0	
104 1,2-Dibromo-3-Chloropropane	157	10.801	10.801	(1.078)	35544	100.000	98.9	
106 1,2,4-Trichlorobenzene	180	11.346	11.346	(1.133)	179208	100.000	100	
107 Hexachlorobutadiene	225	11.400	11.400	(1.138)	81360	100.000	92.7	
108 Naphthalene	128	11.535	11.535	(1.152)	507593	100.000	96.1	
109 1,2,3-Trichlorobenzene	180	11.705	11.705	(1.169)	165146	100.000	97.5	
140 1-Bromo-2-chloroethane	63	7.074	7.074	(1.000)	311991	100.000	98.0	7213
M 139 1-3 Dichloropropene-Total	100				567926	200.000	201	0

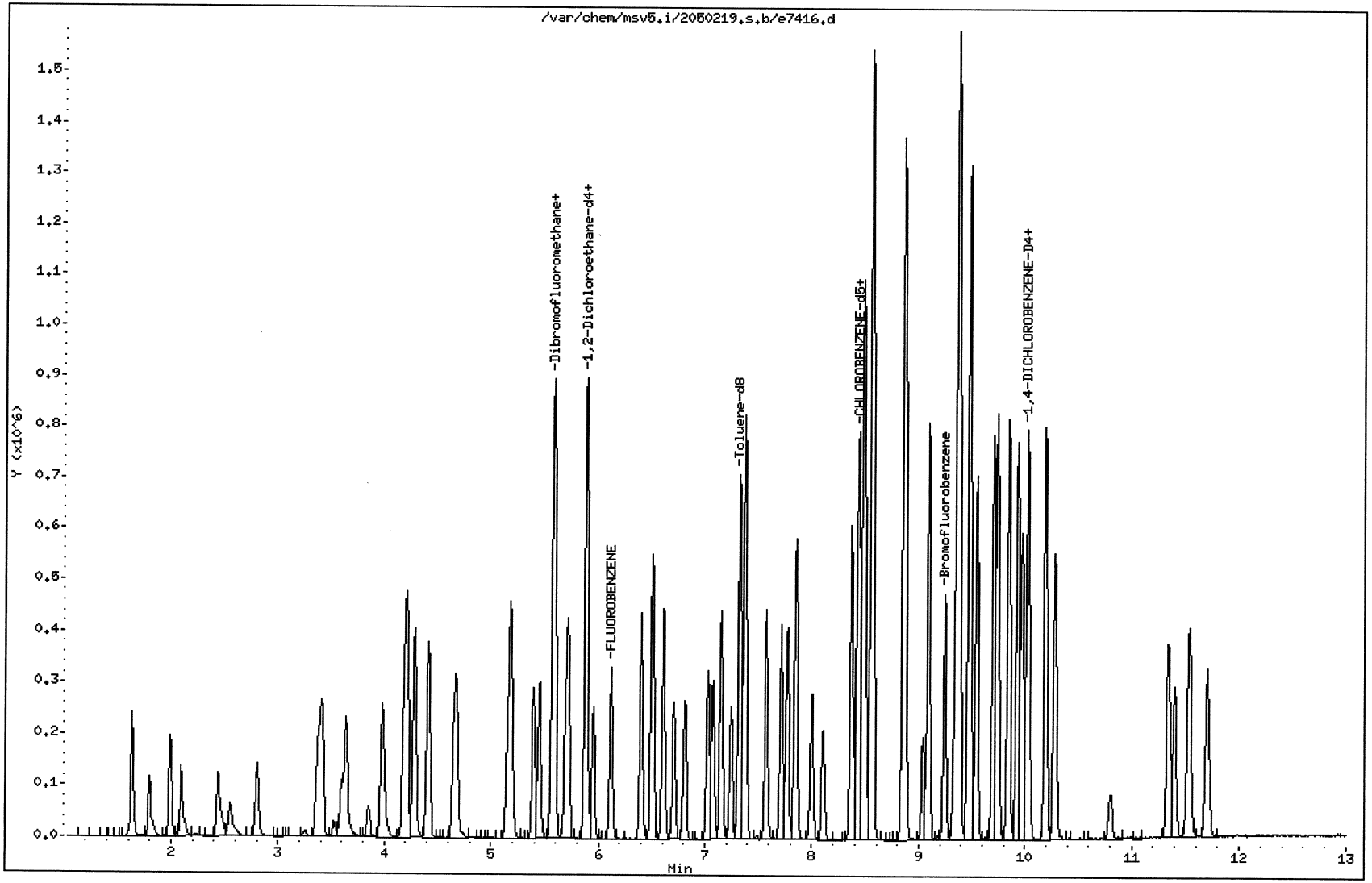
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7416.d
Date : 19-FEB-2005 12:17
Client ID: V5STD100
Sample Info: 1204*V5STD100*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



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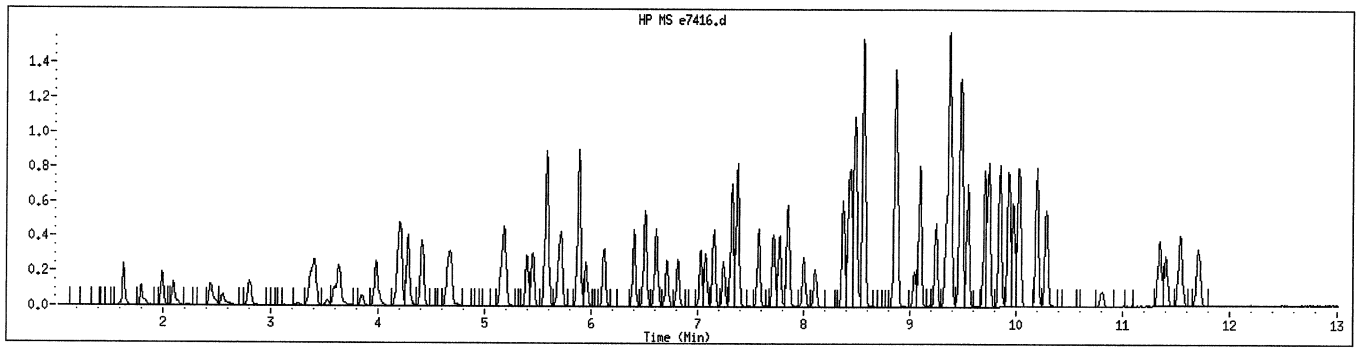
Data file : /var/chem/msv5.i/2050219.s.b/e7416.d
Report Date: 02/19/2005 14:26

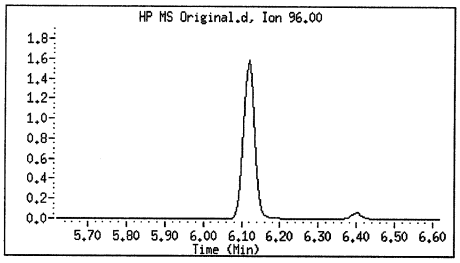
MANUAL INTEGRATION GRAPHIC REPORT

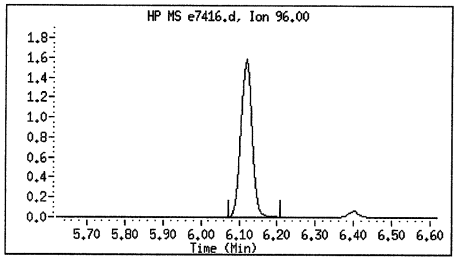
Lab ID	: 1204	SampleType	: CALIB_4
Injection Date	: 19-FEB-2005 12:17	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1204*V5STD100*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

* 47 FLUOROBENZENE CAS#: 462-06-6





GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7417.d
Lab Smp Id: 1205 Client Smp ID: V5STD200
Inj Date : 19-FEB-2005 12:40
Operator : JCK Inst ID: msv5.i
Smp Info : 1205*V5STD200*5-25-4
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.797	1.797	(1.000)	329893	200.000	213	(A)
2 Chloromethane ++	50	1.996	1.996	(1.000)	437430	200.000	196	
3 Vinyl Chloride +	62	2.096	2.096	(1.000)	364160	200.000	202	(A)
5 Bromomethane	94	2.424	2.424	(1.000)	234527	200.000	169	
6 Chloroethane	64	2.547	2.547	(1.000)	178777	200.000	192	
7 Trichlorofluoromethane	101	2.798	2.798	(1.000)	323506	200.000	201	(A)
10 Acrolein	56	3.354	3.354	(1.000)	164179	1000.00	1000	(A)
11 1,1,2Trichlotrifluoroethane	101	3.378	3.378	(1.000)	230080	200.000	212	(A)
12 1,1-Dichloroethene +	96	3.407	3.407	(1.000)	202414	200.000	199	
13 Acetone	43	3.525	3.525	(1.000)	66953	200.000	197	
14 Methyl Iodide	142	3.595	3.595	(1.000)	349747	200.000	202	(A)
15 Carbon Disulfide	76	3.636	3.636	(1.000)	845551	200.000	197	
17 Methyl Acetate	43	3.847	3.847	(1.000)	175813	200.000	185	3493 (H)
18 Methylene Chloride	49	3.981	3.981	(1.000)	452298	200.000	186	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	20 MTBE	73	4.186	4.186	(1.000)	766811	200.000	194	8168
	21 trans-1,2-Dichloroethene	61	4.210	4.210	(1.000)	434718	200.000	198	
	22 Acrylonitrile	53	4.280	4.280	(1.000)	709766	1000.00	961	(A)
	24 Hexane	57	4.409	4.409	(1.000)	484191	200.000	206	8796(A)
	27 1,1-Dichloroethane ++	63	4.655	4.655	(1.000)	584865	200.000	195	
	28 Vinyl Acetate	43	4.679	4.679	(1.000)	776750	200.000	193	
	30 2,2-Dichloropropane	77	5.159	5.159	(1.000)	389509	200.000	198	
	31 cis-1,2-Dichloroethene	61	5.182	5.182	(1.000)	525175	200.000	197	
	32 2-Butanone	43	5.200	5.200	(1.000)	167882	200.000	192	
	35 Bromochloromethane	128	5.399	5.399	(1.000)	172480	200.000	191	
	36 Chloroform +	83	5.446	5.446	(1.000)	505656	200.000	203	(A)
	37 Cyclohexane	56	5.575	5.575	(1.000)	558380	200.000	200	8991
$	38 Dibromofluoromethane	111	5.587	5.587	(1.000)	323203	200.000	193	8925
	39 1,1,1-Trichloroethane	97	5.575	5.575	(1.000)	375773	200.000	203	(A)
	40 Carbon Tetrachloride	117	5.687	5.687	(1.000)	317310	200.000	210	(A)
	41 1,1-Dichloropropene	75	5.716	5.716	(1.000)	425547	200.000	206	(A)
M	42 Total 1,2-Dichloroethene	61				959893	400.000	395	
	44 Benzene	78	5.881	5.881	(1.000)	1224716	200.000	189	
$	45 1,2-Dichloroethane-d4	67	5.887	5.887	(1.000)	176858	200.000	193	
	46 1,2-Dichloroethane	62	5.951	5.951	(1.000)	393459	200.000	206	(A)
*	47 FLUOROBENZENE	96	6.121	6.121	(1.000)	317982	50.0000		(M)
	49 Trichloroethene	130	6.402	6.402	(1.000)	334258	200.000	200	
	50 Methyl Cyclohexane	83	6.508	6.508	(1.000)	533818	200.000	213	8989(A)
	51 1,2-Dichloropropane +	63	6.608	6.608	(1.000)	401314	200.000	198	
	55 Dibromomethane	93	6.707	6.707	(1.000)	236960	200.000	199	
	56 Bromodichloromethane	83	6.813	6.813	(1.000)	389376	200.000	210	(A)
	57 2-Chloroethyl vinyl ether	63	7.024	7.024	(1.000)	322158	200.000	210	(A)
	58 cis-1,3-Dichloropropene	75	7.147	7.147	(1.000)	589462	200.000	202	(A)
	59 4-methyl-2-pentanone	43	7.241	7.241	(1.000)	432041	200.000	195	
$	60 Toluene-d8	98	7.324	7.324	(0.870)	1046633	200.000	194	
	61 Toluene +	91	7.371	7.371	(0.876)	1289431	200.000	193	
	63 trans-1,3-Dichloropropene	75	7.576	7.576	(0.900)	553651	200.000	204	(A)
	64 1,1,2-Trichloroethane	97	7.717	7.717	(0.917)	310906	200.000	203	(A)
	65 Tetrachloroethene	164	7.770	7.770	(0.923)	240699	200.000	199	
	66 1,3-Dichloropropane	76	7.846	7.846	(0.932)	590013	200.000	195	
	67 2-Hexanone	43	7.858	7.858	(0.934)	278761	200.000	199	
	68 Dibromochloromethane	129	7.999	7.999	(0.951)	363773	200.000	216	(A)
	69 1,2-Dibromoethane(EDB)	107	8.104	8.104	(0.963)	364116	200.000	203	(A)
*	70 CHLOROBENZENE-d5	82	8.415	8.415	(1.000)	137585	50.0000		
	71 Chlorobenzene ++	112	8.439	8.439	(1.003)	865014	200.000	191	
	72 Ethylbenzene +	106	8.474	8.474	(1.007)	445082	200.000	197	
	73 1,1,1,2-Tetrachloroethane	133	8.492	8.492	(1.009)	281500	200.000	202	(A)
	74 p,m-Xylene	106	8.563	8.563	(1.018)	1062161	400.000	382	(A)
	75 o-Xylene	106	8.856	8.856	(1.052)	523691	200.000	190	
	76 Styrene	104	8.873	8.873	(1.054)	950775	200.000	192	
	77 Bromoform ++	173	9.044	9.044	(1.075)	225841	200.000	217	(A)
	78 Isopropylbenzene	105	9.097	9.097	(1.081)	1287072	200.000	190	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.249	9.249	(1.099)	308979	200.000	194	
81 1,1,2,2-Tetrachloroethane++	83	9.338	9.338	(0.932)	398994	200.000	199	
82 Bromobenzene	77	9.361	9.361	(0.935)	770387	200.000	192	
84 trans-1,4-Dichloro-2-Butene	53	9.373	9.373	(0.936)	103174	200.000	202	(A)
85 n-Propylbenzene	91	9.373	9.373	(0.936)	1595222	200.000	193	
86 1,2,3-Trichloropropane	75	9.385	9.385	(0.937)	506629	200.000	196	
87 2-Chlorotoluene	91	9.474	9.474	(0.946)	1012339	200.000	191	
88 1,3,5-Trimethylbenzene	105	9.485	9.485	(0.947)	1044256	200.000	200	
89 4-Chlorotoluene	91	9.544	9.544	(0.953)	1002013	200.000	196	
91 tert-butylbenzene	91	9.703	9.703	(0.969)	689000	200.000	197	
92 1,2,4-Trimethylbenzene	105	9.744	9.744	(0.973)	1052440	200.000	194	
96 sec-Butylbenzene	105	9.844	9.844	(0.983)	1402897	200.000	197	
97 p-Isopropyltoluene	119	9.927	9.927	(0.991)	1126666	200.000	196	
98 1,3-Dichlorobenzene	146	9.974	9.974	(0.996)	616528	200.000	199	
* 99 1,4-DICHLOROBENZENE-D4	152	10.016	10.016	(1.000)	104562	50.0000		
100 1,4-Dichlorobenzene	146	10.033	10.033	(1.002)	605010	200.000	191	
M 101 TOTAL XYLENE	106				1585852	600.000	572	
102 n-Butylbenzene	91	10.192	10.192	(1.018)	1108937	200.000	195	
103 1,2-Dichlorobenzene	146	10.280	10.280	(1.026)	560513	200.000	199	
104 1,2-Dibromo-3-Chloropropane	157	10.808	10.808	(1.079)	70108	200.000	207	(A)
106 1,2,4-Trichlorobenzene	180	11.341	11.341	(1.132)	339197	200.000	201	(A)
107 Hexachlorobutadiene	225	11.400	11.400	(1.138)	168500	200.000	203	(A)
108 Naphthalene	128	11.535	11.535	(1.152)	984605	200.000	197	
109 1,2,3-Trichlorobenzene	180	11.700	11.700	(1.168)	314660	200.000	197	
140 1-Bromo-2-chloroethane	63	7.071	7.071	(1.000)	619059	200.000	196	7279
M 139 1-3 Dichloropropene-Total	100				1143113	400.000	407	0

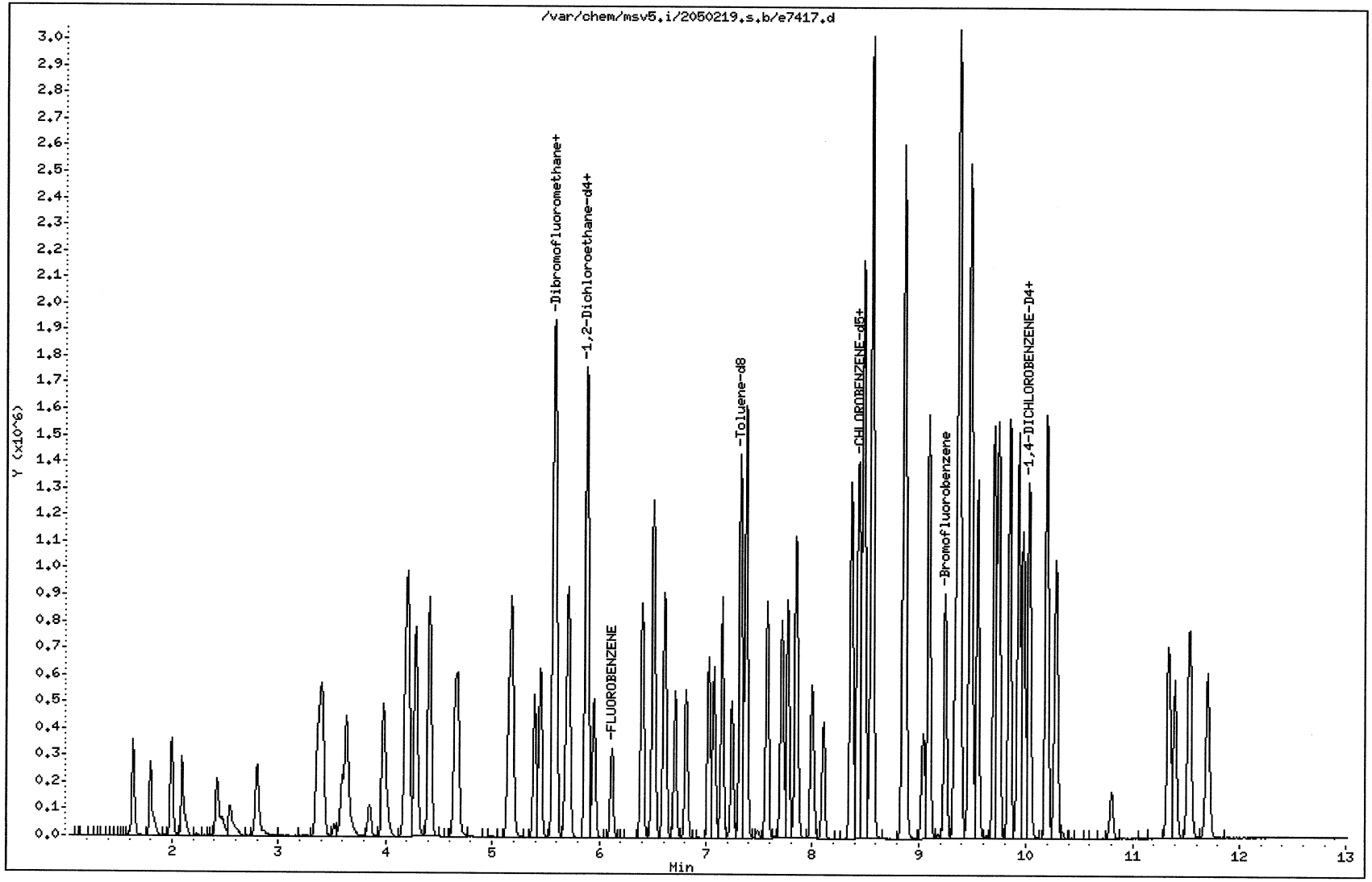
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7417.d
Date : 19-FEB-2005 12:40
Client ID: V5STD200
Sample Info: 1205*V5STD200*5-25-4
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53

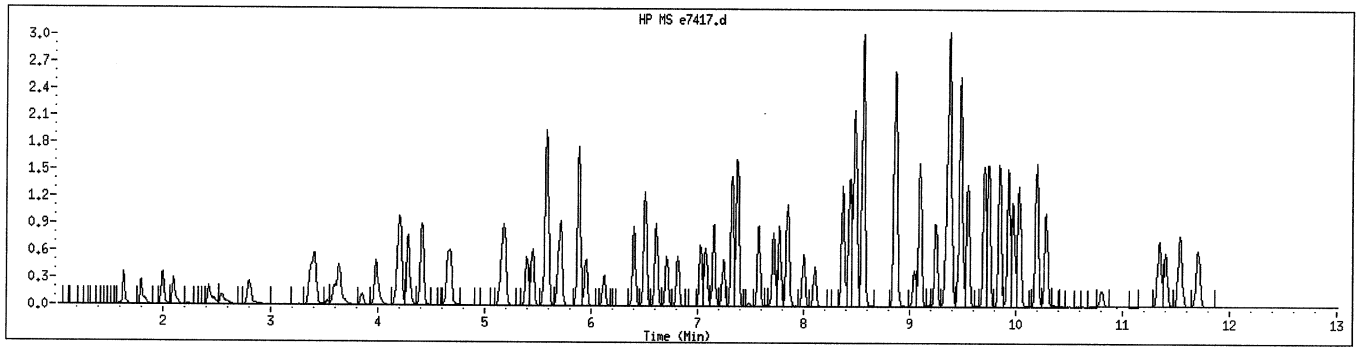


000098

Data file : /var/chem/msv5.i/2050219.s.b/e7417.d
Report Date: 02/19/2005 14:26

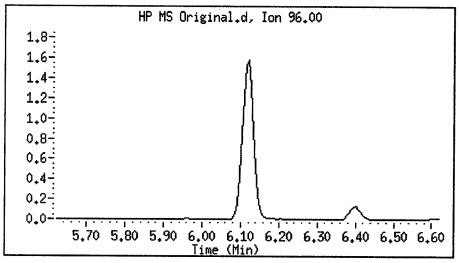
MANUAL INTEGRATION GRAPHIC REPORT

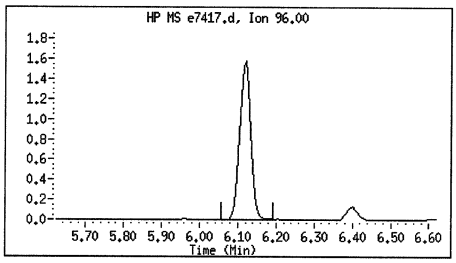
Lab ID	: 1205	SampleType	: CALIB_5
Injection Date	: 19-FEB-2005 12:40	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1205*V5STD200*5-25-4		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

* 47 FLUOROBENZENE CAS#: 462-06-6





Data file : /var/chem/msv5.i/2050219.s.b/e7419.d
Report Date: 02/26/2005 12:24

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: 8260b.sub
Method File: /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Misc Info: MSV~5838~*1*JCK

Client SDG: 2050219.s
Fraction: VOA
Client Smp ID: 8260ICV
Operator: JCK
Sample Type: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluoromethane	50.0	43.7	87.45	75-125
2 Chloromethane ++	50.0	47.7	95.49	75-125
3 Vinyl Chloride +	50.0	52.4	104.82	75-125
5 Bromomethane	50.0	51.1	102.26	75-125
6 Chloroethane	50.0	50.7	101.48	75-125
7 Trichlorofluoromethane	50.0	53.1	106.13	75-125
10 Acrolein	250	203	81.33	75-125
11 1,1,2Trichlotrifluoroethane	50.0	56.8	113.70	75-125
12 1,1-Dichloroethene +	50.0	55.7	111.30	75-125
13 Acetone	50.0	35.9	71.80*	75-125
14 Methyl Iodide	50.0	53.2	106.39	75-125
15 Carbon Disulfide	50.0	52.6	105.21	75-125
18 Methylene Chloride	50.0	51.2	102.32	75-125
20 MTBE	50.0	54.5	108.99	75-125
21 trans-1,2-Dichloroethene	50.0	54.1	108.29	75-125
22 Acrylonitrile	250	273	109.33	75-125
27 1,1-Dichloroethane ++	50.0	54.8	109.63	75-125
28 Vinyl Acetate	50.0	42.7	85.49	75-125
30 2,2-Dichloropropane	50.0	55.8	111.57	75-125
31 cis-1,2-Dichloroethene	50.0	54.0	107.97	75-125
32 2-Butanone	50.0	51.8	103.52	75-125
35 Bromochloromethane	50.0	51.1	102.14	75-125
36 Chloroform +	50.0	55.0	110.07	75-125
39 1,1,1-Trichloroethane	50.0	55.9	111.71	75-125
40 Carbon Tetrachloride	50.0	55.9	111.88	75-125
41 1,1-Dichloropropene	50.0	55.3	110.66	75-125
44 Benzene	50.0	52.1	104.12	75-125
46 1,2-Dichloroethane	50.0	53.0	106.01	75-125
49 Trichloroethene	50.0	54.8	109.53	75-125
51 1,2-Dichloropropane +	50.0	52.5	105.01	75-125

Data file : /var/chem/msv5.i/2050219.s.b/e7419.d
Report Date: 02/26/2005 12:24

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
55	Dibromomethane	50.0	53.2	106.35	75-125
56	Bromodichloromethane	50.0	55.1	110.30	75-125
57	2-Chloroethyl vinyl ether	50.0	59.2	118.39	75-125
58	cis-1,3-Dichloropropene	50.0	52.8	105.54	75-125
59	4-methyl-2-pentanone	50.0	55.0	109.97	75-125
61	Toluene +	50.0	53.7	107.50	75-125
63	trans-1,3-Dichloropropene	50.0	54.6	109.29	75-125
64	1,1,2-Trichloroethane	50.0	54.1	108.23	75-125
65	Tetrachloroethene	50.0	54.9	109.84	75-125
66	1,3-Dichloropropane	50.0	53.6	107.14	75-125
67	2-Hexanone	50.0	58.0	116.00	75-125
68	Dibromochloromethane	50.0	56.4	112.81	75-125
69	1,2-Dibromoethane(EDB)	50.0	54.4	108.79	75-125
71	Chlorobenzene ++	50.0	52.0	104.00	75-125
72	Ethylbenzene +	50.0	54.2	108.37	75-125
73	1,1,1,2-Tetrachloroethane	50.0	54.8	109.62	75-125
74	p,m-Xylene	100	109	109.19	75-125
75	o-Xylene	50.0	53.7	107.49	75-125
76	Styrene	50.0	52.9	105.79	75-125
77	Bromoform ++	50.0	56.1	112.16	75-125
78	Isopropylbenzene	50.0	54.4	108.73	75-125
81	1,1,2,2-Tetrachloroethane++	50.0	57.9	115.80	75-125
82	Bromobenzene	50.0	55.3	110.66	75-125
84	trans-1,4-Dichloro-2-Butene	50.0	61.1	122.20	75-125
85	n-Propylbenzene	50.0	56.8	113.61	75-125
86	1,2,3-Trichloropropane	50.0	57.4	114.74	75-125
87	2-Chlorotoluene	50.0	54.3	108.61	75-125
88	1,3,5-Trimethylbenzene	50.0	56.8	113.54	75-125
89	4-Chlorotoluene	50.0	54.9	109.81	75-125
91	tert-butylbenzene	50.0	55.7	111.43	75-125
92	1,2,4-Trimethylbenzene	50.0	55.7	111.31	75-125
96	sec-Butylbenzene	50.0	57.1	114.12	75-125
97	p-Isopropyltoluene	50.0	55.9	111.73	75-125
98	1,3-Dichlorobenzene	50.0	54.5	109.02	75-125
100	1,4-Dichlorobenzene	50.0	53.0	106.02	75-125
102	n-Butylbenzene	50.0	57.0	114.05	75-125
103	1,2-Dichlorobenzene	50.0	55.3	110.64	75-125
104	1,2-Dibromo-3-Chloropropane	50.0	59.9	119.87	75-125
106	1,2,4-Trichlorobenzene	50.0	56.7	113.38	75-125
107	Hexachlorobutadiene	50.0	56.5	112.90	75-125
108	Naphthalene	50.0	54.3	108.67	75-125
109	1,2,3-Trichlorobenzene	50.0	53.7	107.49	75-125

Data file : /var/chem/msv5.i/2050219.s.b/e7419.d
Report Date: 02/26/2005 12:24

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 38 Dibromofluoromethane	50.0	53.8	107.66	73-125
$ 45 1,2-Dichloroethane-d4	50.0	52.1	104.25	70-123
$ 60 Toluene-d8	50.0	55.7	111.45	78-127
$ 80 Bromofluorobenzene	50.0	52.7	105.44	75-120

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7419.d
Lab Smp Id: 1600 Client Smp ID: 8260ICV
Inj Date : 19-FEB-2005 13:37
Operator : JCK Inst ID: msv5.i
Smp Info : 1600*8260ICV
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 13:58 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
1 Dichlorodifluoromethane	85	1.797	1.797	(0.294)	66586	43.7272	43.7	
2 Chloromethane ++	50	1.996	1.996	(0.326)	105089	47.7439	47.7	
3 Vinyl Chloride +	62	2.096	2.096	(0.342)	92878	52.4105	52.4	
5 Bromomethane	94	2.441	2.424	(0.399)	69693	51.1310	51.1	
6 Chloroethane	64	2.552	2.547	(0.417)	46456	50.7393	50.7	
7 Trichlorofluoromethane	101	2.810	2.798	(0.459)	84244	53.0644	53.1	
10 Acrolein	56	3.365	3.354	(0.550)	30516	203.334	203	(A)
11 1,1,2Trichlotrifluoroethane	101	3.389	3.378	(0.553)	60635	56.8499	56.8	
12 1,1-Dichloroethene +	96	3.418	3.407	(0.558)	55854	55.6510	55.7	
13 Acetone	43	3.529	3.525	(0.576)	18192	35.8990	35.9	
14 Methyl Iodide	142	3.600	3.595	(0.588)	90525	53.1945	53.2	
15 Carbon Disulfide	76	3.640	3.636	(0.594)	221692	52.6033	52.6	
17 Methyl Acetate	43	3.851	3.847	(0.629)	50537	53.9114	53.9	3808(H)
18 Methylene Chloride	49	3.986	3.981	(0.651)	122677	51.1612	51.2	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
	20 MTBE	73	4.196	4.186	(0.685)	211895	54.4970	54.5	8682
	21 trans-1,2-Dichloroethene	61	4.214	4.210	(0.688)	117034	54.1431	54.1	
	22 Acrylonitrile	53	4.284	4.280	(0.700)	198817	273.329	273	(A)
	24 Hexane	57	4.419	4.409	(0.722)	134064	57.9880	58.0	0(M)
	27 1,1-Dichloroethane ++	63	4.659	4.655	(0.761)	161659	54.8137	54.8	
	28 Vinyl Acetate	43	4.683	4.679	(0.765)	169744	42.7466	42.7	
	30 2,2-Dichloropropane	77	5.156	5.159	(0.842)	108262	55.7841	55.8	
	31 cis-1,2-Dichloroethene	61	5.186	5.182	(0.847)	141632	53.9870	54.0	
	32 2-Butanone	43	5.203	5.200	(0.850)	44437	51.7585	51.8	
	35 Bromochloromethane	128	5.396	5.399	(0.881)	45313	51.0706	51.1	
	36 Chloroform +	83	5.455	5.446	(0.891)	135254	55.0368	55.0	
	37 Cyclohexane	56	5.578	5.575	(0.911)	156754	56.9104	56.9	9109
$	38 Dibromofluoromethane	111	5.596	5.587	(0.914)	88756	53.8282	53.8	8350
	39 1,1,1-Trichloroethane	97	5.578	5.575	(0.911)	101806	55.8563	55.9	
	40 Carbon Tetrachloride	117	5.696	5.687	(0.930)	83073	55.9409	55.9	
	41 1,1-Dichloropropene	75	5.719	5.716	(0.934)	112770	55.3305	55.3	
M	42 Total 1,2-Dichloroethene	61				258666	108.130	108	
	44 Benzene	78	5.883	5.881	(0.961)	331764	52.0616	52.1	
$	45 1,2-Dichloroethane-d4	67	5.895	5.887	(0.963)	46925	52.1242	52.1	
	46 1,2-Dichloroethane	62	5.954	5.951	(0.972)	99539	53.0071	53.0	
*	47 FLUOROBENZENE	96	6.124	6.121	(1.000)	313015	50.0000		
	49 Trichloroethene	130	6.404	6.402	(1.046)	90106	54.7668	54.8	
	50 Methyl Cyclohexane	83	6.510	6.508	(1.063)	143361	57.9774	58.0	9026
	51 1,2-Dichloropropane +	63	6.610	6.608	(1.079)	104848	52.5068	52.5	
	55 Dibromomethane	93	6.709	6.707	(1.096)	62257	53.1747	53.2	
	56 Bromodichloromethane	83	6.815	6.813	(1.113)	100438	55.1476	55.1	
	57 2-Chloroethyl vinyl ether	63	7.031	7.024	(1.148)	89503	59.1936	59.2	
	58 cis-1,3-Dichloropropene	75	7.155	7.147	(1.168)	151385	52.7721	52.8	
	59 4-methyl-2-pentanone	43	7.248	7.241	(1.184)	120128	54.9830	55.0	
$	60 Toluene-d8	98	7.325	7.324	(0.870)	293937	55.7266	55.7	
	61 Toluene +	91	7.378	7.371	(0.876)	350144	53.7495	53.7	
	63 trans-1,3-Dichloropropene	75	7.577	7.576	(0.900)	144518	54.6436	54.6	
	64 1,1,2-Trichloroethane	97	7.717	7.717	(0.916)	80844	54.1141	54.1	
	65 Tetrachloroethene	164	7.770	7.770	(0.923)	64877	54.9186	54.9	
	66 1,3-Dichloropropane	76	7.852	7.846	(0.933)	158315	53.5704	53.6	
	67 2-Hexanone	43	7.858	7.858	(0.933)	79302	58.0019	58.0	
	68 Dibromochloromethane	129	7.999	7.999	(0.950)	92857	56.4033	56.4	
	69 1,2-Dibromoethane(EDB)	107	8.104	8.104	(0.962)	95367	54.3972	54.4	
*	70 CHLOROBENZENE-d5	82	8.421	8.415	(1.000)	134252	50.0000		
	71 Chlorobenzene ++	112	8.444	8.439	(1.003)	230167	51.9988	52.0	
	72 Ethylbenzene +	106	8.480	8.474	(1.007)	119476	54.1857	54.2	
	73 1,1,1,2-Tetrachloroethane	133	8.497	8.492	(1.009)	74698	54.8113	54.8	
	74 p,m-Xylene	106	8.562	8.563	(1.017)	296429	109.191	109	
	75 o-Xylene	106	8.861	8.856	(1.052)	144370	53.7447	53.7	
	76 Styrene	104	8.872	8.873	(1.054)	256233	52.8935	52.9	
	77 Bromoform ++	173	9.048	9.044	(1.075)	57068	56.0796	56.1	
	78 Isopropylbenzene	105	9.095	9.097	(1.080)	358911	54.3662	54.4	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.254	9.249	(1.099)	81956	52.7195	52.7	
81 1,1,2,2-Tetrachloroethane++	83	9.336	9.338	(0.932)	113821	57.9021	57.9	
82 Bromobenzene	77	9.365	9.361	(0.935)	217391	55.3299	55.3	
84 trans-1,4-Dichloro-2-Butene	53	9.377	9.373	(0.936)	30526	61.0984	61.1	
85 n-Propylbenzene	91	9.377	9.373	(0.936)	458929	56.8045	56.8	
86 1,2,3-Trichloropropane	75	9.383	9.385	(0.937)	145106	57.3723	57.4	
87 2-Chlorotoluene	91	9.477	9.474	(0.946)	282057	54.3058	54.3	
88 1,3,5-Trimethylbenzene	105	9.489	9.485	(0.947)	290038	56.7678	56.8	
89 4-Chlorotoluene	91	9.548	9.544	(0.953)	274800	54.9038	54.9	
91 tert-butylbenzene	91	9.706	9.703	(0.969)	190655	55.7163	55.7	
92 1,2,4-Trimethylbenzene	105	9.748	9.744	(0.973)	295463	55.6545	55.7	
96 sec-Butylbenzene	105	9.847	9.844	(0.983)	398553	57.0593	57.1	
97 p-Isopropyltoluene	119	9.935	9.927	(0.992)	314775	55.8654	55.9	
98 1,3-Dichlorobenzene	146	9.977	9.974	(0.996)	165056	54.5082	54.5	
* 99 1,4-DICHLOROBENZENE-D4	152	10.018	10.016	(1.000)	102311	50.0000		
100 1,4-Dichlorobenzene	146	10.036	10.033	(1.002)	164242	53.0095	53.0	
M 101 TOTAL XYLENE	106				440799	162.935	163	
102 n-Butylbenzene	91	10.194	10.192	(1.018)	317229	57.0274	57.0	
103 1,2-Dichlorobenzene	146	10.288	10.280	(1.027)	152083	55.3195	55.3	
104 1,2-Dibromo-3-Chloropropane	157	10.815	10.808	(1.080)	19907	59.9331	59.9	
106 1,2,4-Trichlorobenzene	180	11.348	11.341	(1.133)	93783	56.6919	56.7	
107 Hexachlorobutadiene	225	11.401	11.400	(1.138)	45810	56.4518	56.5	
108 Naphthalene	128	11.542	11.535	(1.152)	265390	54.3348	54.3	
109 1,2,3-Trichlorobenzene	180	11.707	11.700	(1.169)	84181	53.7471	53.7	
140 1-Bromo-2-chloroethane	63	7.078	7.071	(1.156)	342454	109.958	110	7294
M 139 1-3 Dichloropropene-Total	100				295903	107.416	107	0

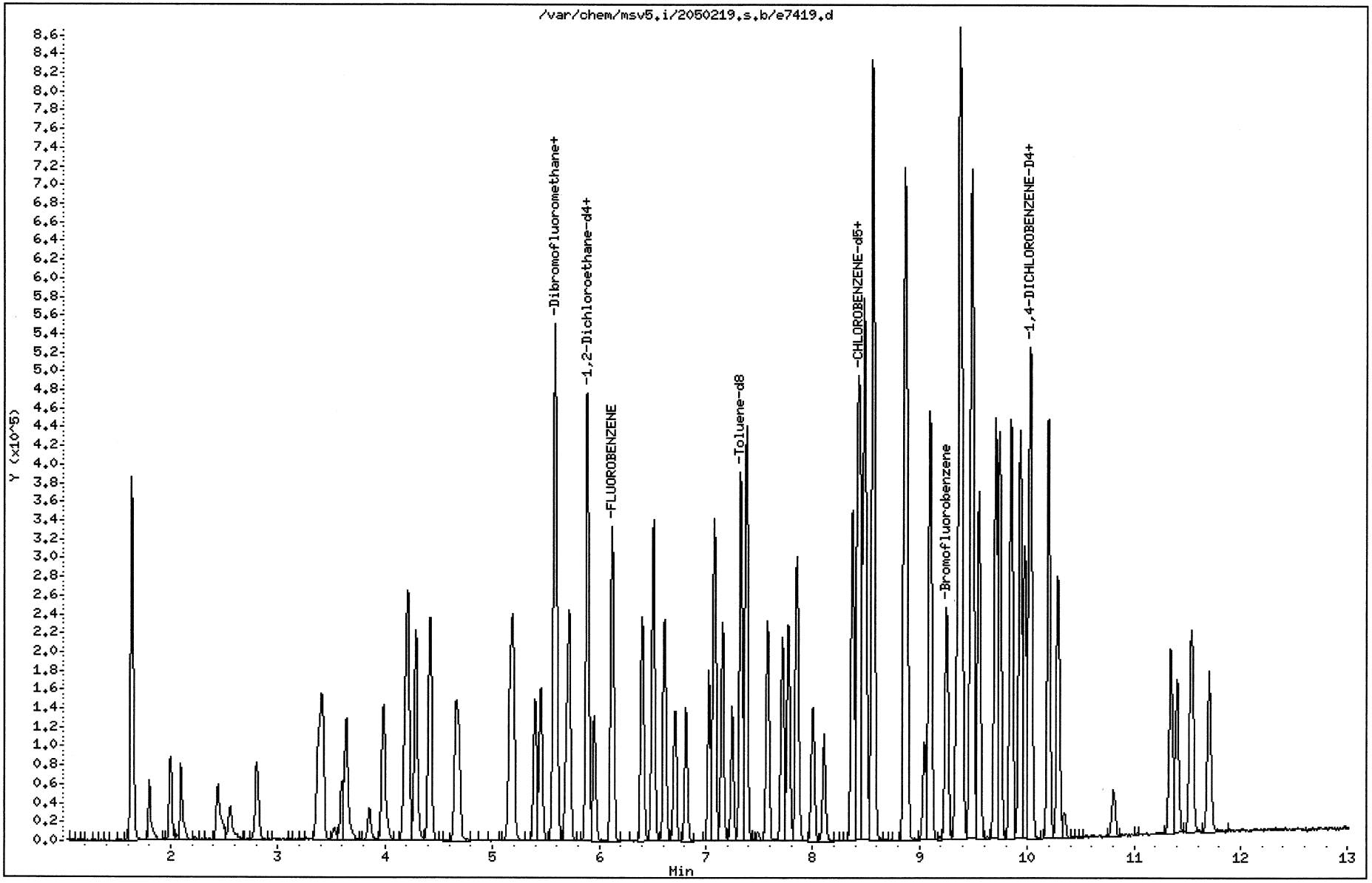
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

000106

Data File: /var/chem/msv5.i/2050219.s.b/e7419.d
Date : 19-FEB-2005 13:37
Client ID: 8260ICV
Sample Info: 1600X8260ICV
Purge Volume: 5.0
Column phase: DB-624-30M

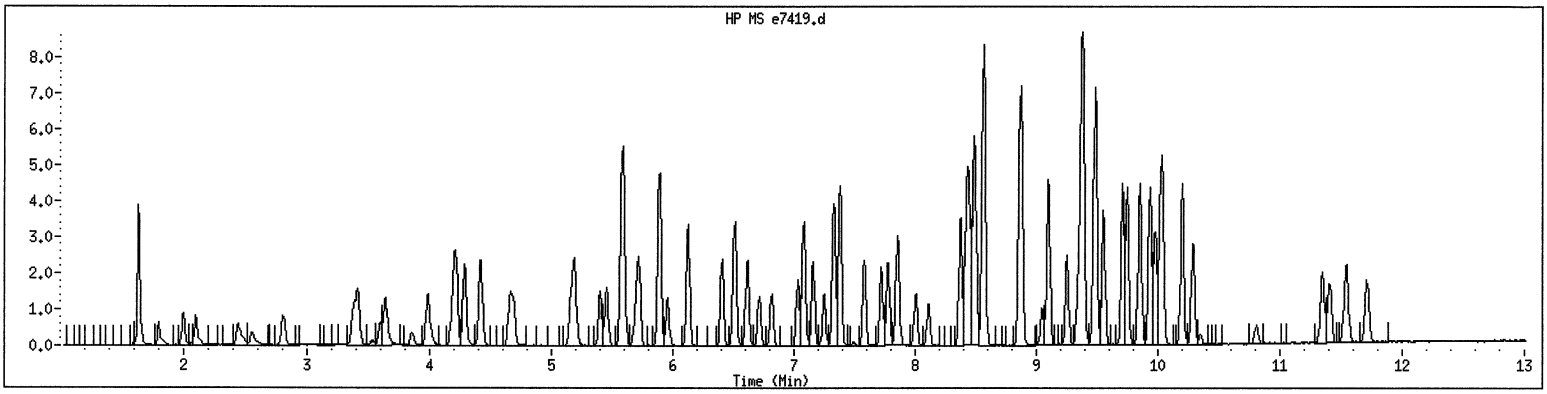
Instrument: msv5.i
Operator: JCK
Column diameter: 0.53



Data file : /var/chem/msv5.i/2050219.s.b/e7419.d
Report Date: 02/19/2005 14:00

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 1600	SampleType	: LCS
Injection Date	: 19-FEB-2005 13:37	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 1600*8260ICV		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

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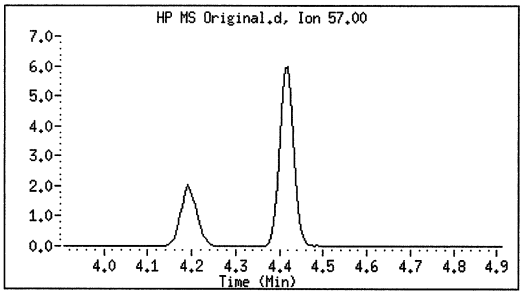
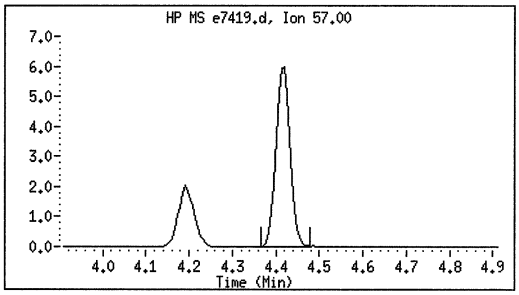
24 Hexane CAS#: 110-54-3





1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB224390

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 224390

Level: (low/med) LOW Lab File ID: 2050219/E7421

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1441

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	0.500	U	0.225	0.500
100-41-4	Ethylbenzene	5.00	U	0.227	5.00
108-88-3	Toluene	5.00	U	0.213	5.00
1330-20-7	Xylene (total)	10.0	U	0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.179	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.229	5.00
79-01-6	Trichloroethene	5.00	U	0.270	5.00
108-90-7	Chlorobenzene	5.00	U	0.213	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7421.d
Lab Smp Id: 224390 Client Smp ID: MB for HBN 287753
Inj Date : 19-FEB-2005 14:41
Operator : JCK Inst ID: msv5.i
Smp Info : 224390*MB for HBN 287753
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

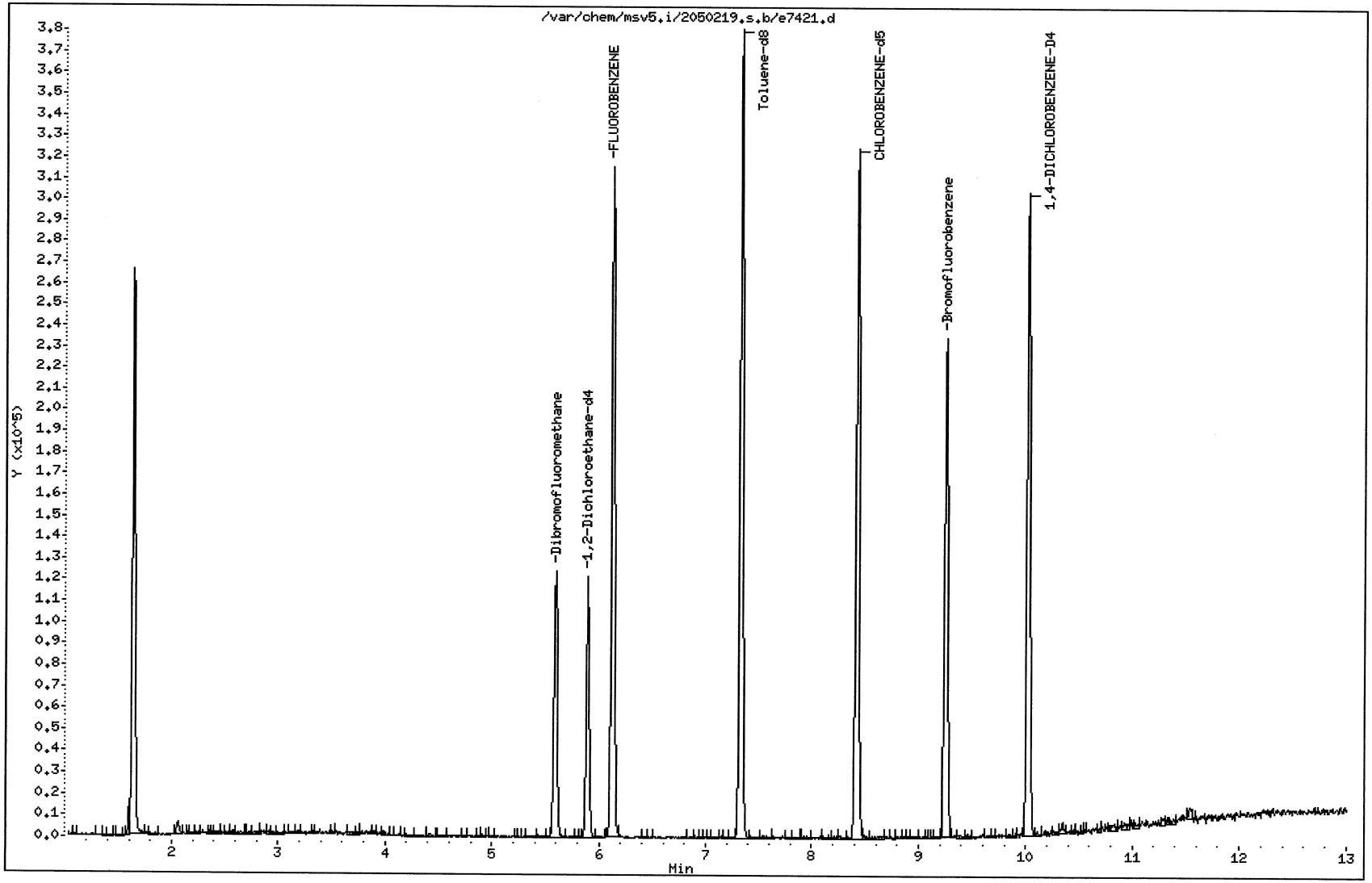
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 38 Dibromofluoromethane	111	5.592	5.587	(0.913)	85628	53.9066	53.9	1727
$ 45 1,2-Dichloroethane-d4	67	5.890	5.887	(0.962)	45864	52.8837	52.9	
* 47 FLUOROBENZENE	96	6.124	6.121	(1.000)	301544	50.0000		
$ 60 Toluene-d8	98	7.329	7.324	(0.870)	280837	55.2902	55.3	
* 70 CHLOROBENZENE-d5	82	8.423	8.415	(1.000)	129281	50.0000		
$ 80 Bromofluorobenzene	174	9.253	9.249	(1.099)	79994	53.4360	53.4	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	97536	50.0000		
108 Naphthalene	128	11.541	11.535	(1.152)	9288	1.99468	1.99	

Data File: /var/chem/msv5.i/2050219.s.b/e7421.d
Date : 19-FEB-2005 14:41
Client ID: MB for HBN 287753
Sample Info: 224390*MB for HBN 287753
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53



000110

Data File: /var/chem/msv5.i/2050219.s.b/e7421.d

Date : 19-FEB-2005 14:41

Client ID: MB for HBN 287753

Instrument: msv5.i

Sample Info: 224390*MB for HBN 287753

Purge Volume: 5.0

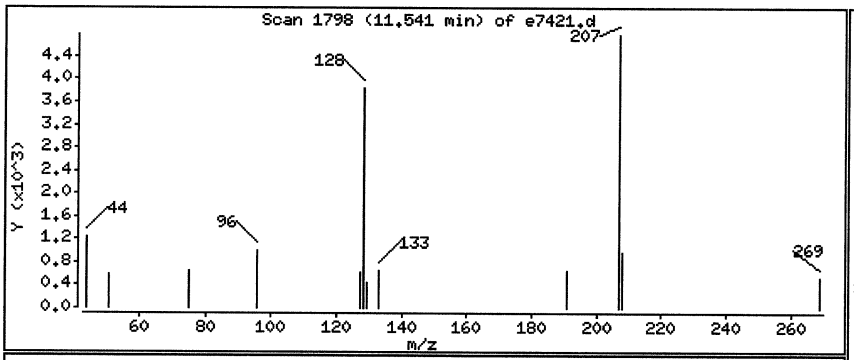
Operator: JCK

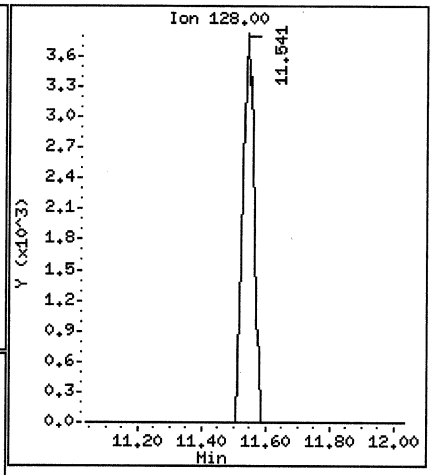
Column phase: DB-624-30M

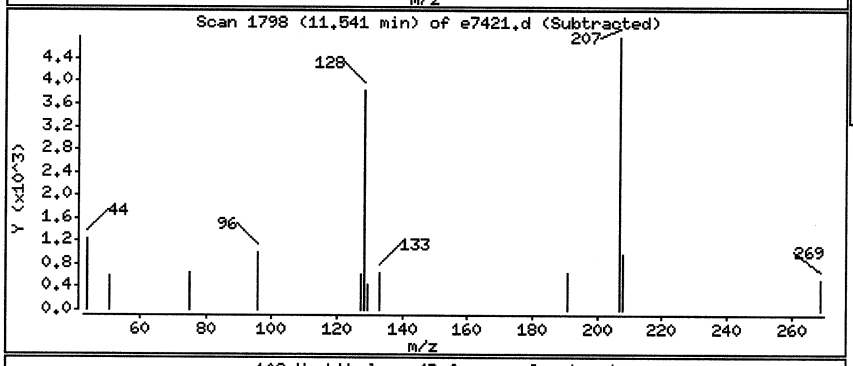
Column diameter: 0.53

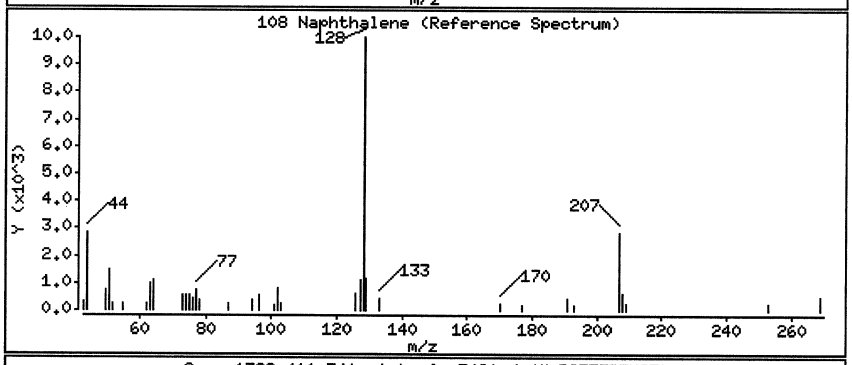
108 Naphthalene

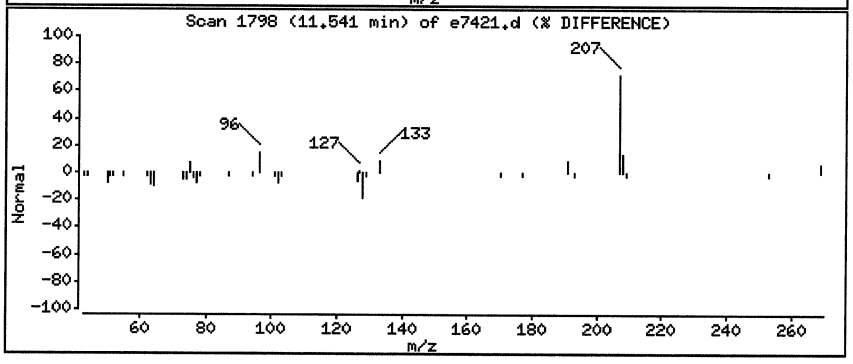
Concentration: 1.99 ug/L







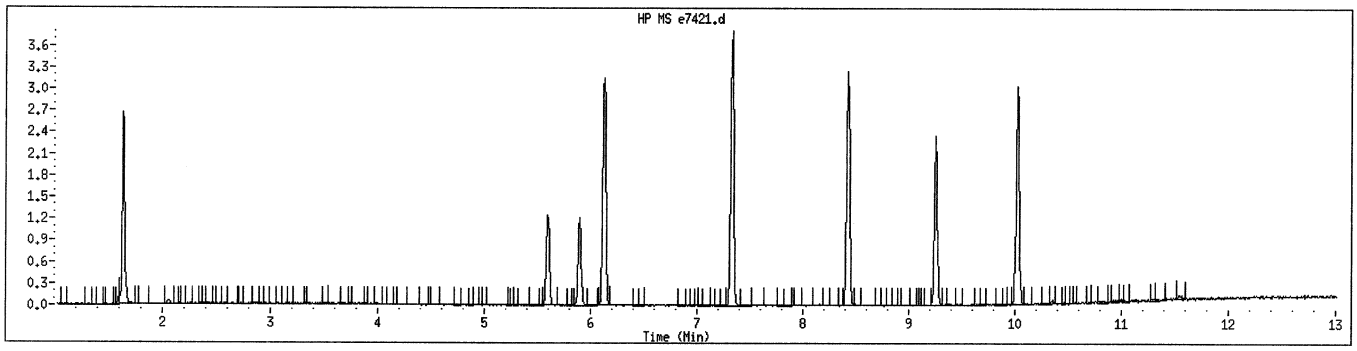




Data file : /var/chem/msv5.i/2050219.s.b/e7421.d
Report Date: 02/19/2005 16:18

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 224390	SampleType	: BLANK
Injection Date	: 19-FEB-2005 14:41	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 224390*MB for HBN 287753		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS224391

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 224391

Level: (low/med) LOW Lab File ID: 2050219/E7420

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1413

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	26.1		0.225	0.500
100-41-4	Ethylbenzene	26.9		0.227	5.00
108-88-3	Toluene	26.4		0.213	5.00
1330-20-7	Xylene (total)	81.6		0.509	10.0
1634-04-4	tert-Butyl methyl ether (MTBE)	26.0		0.179	5.00
75-35-4	1,1-Dichloroethene	28.1		0.229	5.00
79-01-6	Trichloroethene	26.3		0.270	5.00
108-90-7	Chlorobenzene	26.2		0.213	5.00

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7420.d
Lab Smp Id: 224391 Client Smp ID: LCS for HBN 287753
Inj Date : 19-FEB-2005 14:13
Operator : JCK Inst ID: msv5.i
Smp Info : 224391*LCS for HBN 287753
Misc Info : MSV~5838~*1*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 14:26 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
1 Dichlorodifluoromethane	85	1.803	1.797	(0.295)	41278	27.7084	27.7	
2 Chloromethane ++	50	1.996	1.996	(0.326)	56023	26.0167	26.0	
3 Vinyl Chloride +	62	2.096	2.096	(0.342)	46862	27.0303	27.0	
5 Bromomethane	94	2.447	2.424	(0.400)	38623	28.9645	29.0	
6 Chloroethane	64	2.558	2.547	(0.418)	23430	26.1577	26.2	
7 Trichlorofluoromethane	101	2.815	2.798	(0.460)	41469	26.7001	26.7	
10 Acrolein	56	3.371	3.354	(0.551)	20109	142.507	143	
11 1,1,2Trichlotrifluoroethane	101	3.383	3.378	(0.552)	28850	27.6488	27.6	
12 1,1-Dichloroethene +	96	3.418	3.407	(0.558)	27594	28.1033	28.1	
13 Acetone	43	3.529	3.525	(0.576)	9601	18.9202	18.9	
14 Methyl Iodide	142	3.599	3.595	(0.588)	37683	22.6343	22.6	
15 Carbon Disulfide	76	3.640	3.636	(0.595)	109021	26.4422	26.4	
17 Methyl Acetate	43	3.857	3.847	(0.630)	23143	25.2357	25.2	4629(H)
18 Methylene Chloride	49	3.979	3.981	(0.650)	58554	24.9608	25.0	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	20 MTBE	73	4.196	4.186	(0.685)	98847	25.9860	26.0	8572
	21 trans-1,2-Dichloroethene	61	4.220	4.210	(0.689)	56976	26.9431	26.9	
	22 Acrylonitrile	53	4.284	4.280	(0.700)	97557	137.093	137	
	24 Hexane	57	4.419	4.409	(0.722)	64400	28.4733	28.5	0(M)
	27 1,1-Dichloroethane ++	63	4.659	4.655	(0.761)	75776	26.2631	26.3	
	28 Vinyl Acetate	43	4.688	4.679	(0.766)	112859	29.0514	29.1	
	30 2,2-Dichloropropane	77	5.162	5.159	(0.843)	52317	27.5551	27.6	
	31 cis-1,2-Dichloroethene	61	5.185	5.182	(0.847)	67678	26.3694	26.4	
	32 2-Butanone	43	5.208	5.200	(0.851)	22843	27.1966	27.2	
	35 Bromochloromethane	128	5.402	5.399	(0.882)	21770	25.0802	25.1	
	36 Chloroform +	83	5.454	5.446	(0.891)	64791	26.9490	26.9	
	37 Cyclohexane	56	5.577	5.575	(0.911)	77871	28.8984	28.9	8887
$	38 Dibromofluoromethane	111	5.595	5.587	(0.914)	86848	53.8389	53.8	7383
	39 1,1,1-Trichloroethane	97	5.583	5.575	(0.912)	49518	27.7707	27.8	
	40 Carbon Tetrachloride	117	5.695	5.687	(0.930)	39736	27.3513	27.4	
	41 1,1-Dichloropropene	75	5.724	5.716	(0.935)	53317	26.7400	26.7	
M	42 Total 1,2-Dichloroethene	61				124654	53.3125	53.3	
	44 Benzene	78	5.888	5.881	(0.962)	162473	26.0612	26.1	
$	45 1,2-Dichloroethane-d4	67	5.894	5.887	(0.963)	46197	52.4534	52.5	
	46 1,2-Dichloroethane	62	5.953	5.951	(0.972)	48879	26.6065	26.6	
*	47 FLUOROBENZENE	96	6.122	6.121	(1.000)	306225	50.0000		
	49 Trichloroethene	130	6.409	6.402	(1.047)	42389	26.3355	26.3	
	50 Methyl Cyclohexane	83	6.509	6.508	(1.063)	68604	28.3597	28.4	8991
	51 1,2-Dichloropropane +	63	6.614	6.608	(1.080)	50558	25.8803	25.9	
	55 Dibromomethane	93	6.714	6.707	(1.097)	29546	25.7953	25.8	
	56 Bromodichloromethane	83	6.819	6.813	(1.114)	46049	25.8448	25.8	
	57 2-Chloroethyl vinyl ether	63	7.036	7.024	(1.149)	38950	26.3311	26.3	
	58 cis-1,3-Dichloropropene	75	7.159	7.147	(1.169)	71638	25.5264	25.5	
	59 4-methyl-2-pentanone	43	7.247	7.241	(1.184)	58699	27.4625	27.5	
$	60 Toluene-d8	98	7.329	7.324	(0.870)	284463	55.1724	55.2	
	61 Toluene +	91	7.376	7.371	(0.876)	167996	26.3824	26.4	
	63 trans-1,3-Dichloropropene	75	7.581	7.576	(0.900)	68488	26.4923	26.5	
	64 1,1,2-Trichloroethane	97	7.715	7.717	(0.916)	38019	26.0346	26.0	
	65 Tetrachloroethene	164	7.774	7.770	(0.923)	30667	26.5575	26.6	
	66 1,3-Dichloropropane	76	7.850	7.846	(0.932)	73896	25.5807	25.6	
	67 2-Hexanone	43	7.862	7.858	(0.933)	38010	28.4409	28.4	
	68 Dibromochloromethane	129	8.002	7.999	(0.950)	43756	27.1904	27.2	
	69 1,2-Dibromoethane(EDB)	107	8.114	8.104	(0.963)	44561	26.0028	26.0	
*	70 CHLOROBENZENE-d5	82	8.424	8.415	(1.000)	131230	50.0000		
	71 Chlorobenzene ++	112	8.442	8.439	(1.002)	113291	26.1838	26.2	
	72 Ethylbenzene +	106	8.483	8.474	(1.007)	58017	26.9183	26.9	
	73 1,1,1,2-Tetrachloroethane	133	8.495	8.492	(1.008)	37110	27.8573	27.9	
	74 p,m-Xylene	106	8.565	8.563	(1.017)	144975	54.6318	54.6	
	75 o-Xylene	106	8.864	8.856	(1.052)	70894	26.9995	27.0	
	76 Styrene	104	8.876	8.873	(1.054)	126834	26.7849	26.8	
	77 Bromoform ++	173	9.045	9.044	(1.074)	26821	26.9634	27.0	
	78 Isopropylbenzene	105	9.098	9.097	(1.080)	176408	27.3368	27.3	

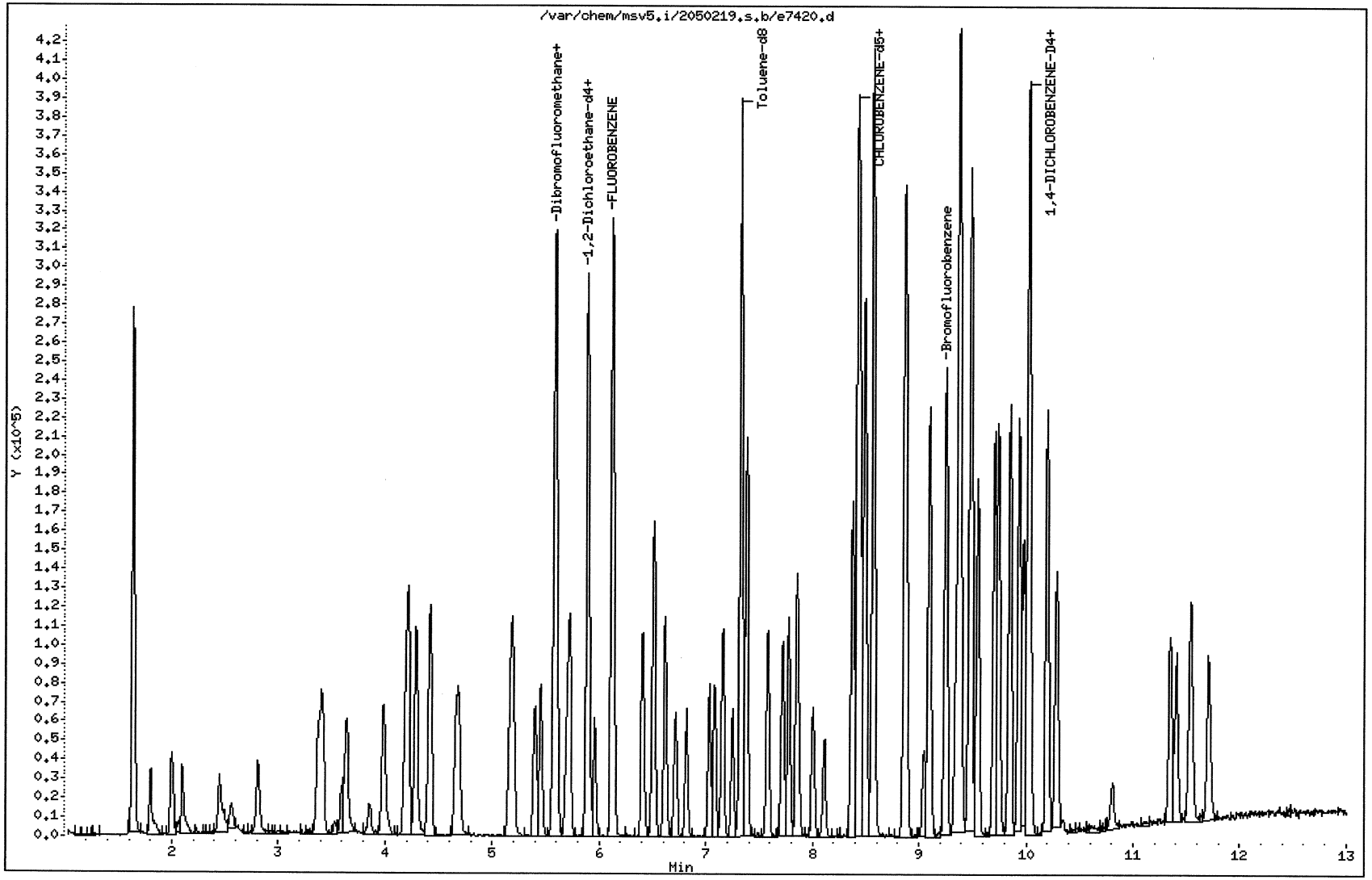
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.250	9.249	(1.098)	82321	54.1737	54.2	
81 1,1,2,2-Tetrachloroethane++	83	9.344	9.338	(0.933)	54562	27.1994	27.2	
82 Bromobenzene	77	9.368	9.361	(0.935)	106564	26.5782	26.6	
84 trans-1,4-Dichloro-2-Butene	53	9.380	9.373	(0.936)	14052	27.5610	27.6	
85 n-Propylbenzene	91	9.380	9.373	(0.936)	230719	27.9845	28.0	
86 1,2,3-Trichloropropane	75	9.386	9.385	(0.937)	71366	27.6506	27.7	
87 2-Chlorotoluene	91	9.474	9.474	(0.945)	146249	27.5930	27.6	
88 1,3,5-Trimethylbenzene	105	9.486	9.485	(0.947)	144389	27.6935	27.7	
89 4-Chlorotoluene	91	9.550	9.544	(0.953)	135707	26.5696	26.6	
91 tert-butylbenzene	91	9.709	9.703	(0.969)	94291	27.0023	27.0	
92 1,2,4-Trimethylbenzene	105	9.744	9.744	(0.972)	147057	27.1444	27.1	
96 sec-Butylbenzene	105	9.849	9.844	(0.983)	198567	27.8576	27.9	
97 p-Isopropyltoluene	119	9.932	9.927	(0.991)	160465	27.9074	27.9	
98 1,3-Dichlorobenzene	146	9.979	9.974	(0.996)	83066	26.8813	26.9	
* 99 1,4-DICHLOROBENZENE-D4	152	10.020	10.016	(1.000)	104406	50.0000		
100 1,4-Dichlorobenzene	146	10.038	10.033	(1.002)	82507	26.0950	26.1	
M 101 TOTAL XYLENE	106				215869	81.6313	81.6	
102 n-Butylbenzene	91	10.202	10.192	(1.018)	160501	28.2739	28.3	
103 1,2-Dichlorobenzene	146	10.284	10.280	(1.026)	73721	26.2776	26.3	
104 1,2-Dibromo-3-Chloropropane	157	10.817	10.808	(1.079)	9915	29.2517	29.3	
106 1,2,4-Trichlorobenzene	180	11.344	11.341	(1.132)	46128	27.3249	27.3	
107 Hexachlorobutadiene	225	11.402	11.400	(1.138)	24675	29.7969	29.8	
108 Naphthalene	128	11.543	11.535	(1.152)	150371	30.1685	30.2	
109 1,2,3-Trichlorobenzene	180	11.708	11.700	(1.168)	43106	26.9696	27.0	
140 1-Bromo-2-chloroethane	63	7.077	7.071	(1.156)	79290	26.0236	26.0	7554
M 139 1-3 Dichloropropene-Total	100				140126	52.0187	52.0	0

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7420.d
Date : 19-FEB-2005 14:13
Client ID: LCS for HBN 287753
Sample Info: 224391*LCS for HBN 287753
Purge Volume: 5.0
Column phase: DB-624-30M

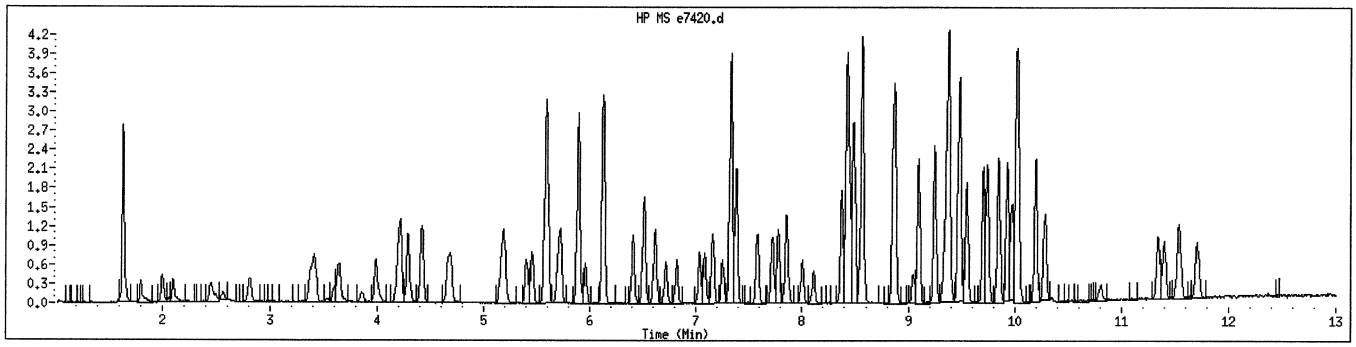
Instrument: msv5.i
Operator: JCK
Column diameter: 0.53



Data file : /var/chem/msv5.i/2050219.s.b/e7420.d
Report Date: 02/19/2005 14:29

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 224391	SampleType	: LCS
Injection Date	: 19-FEB-2005 14:13	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 224391*LCS for HBN 287753		
Misc Info	: MSV~5838~*1*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 1.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

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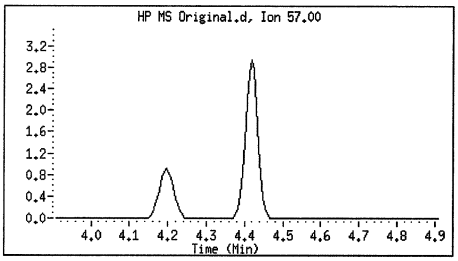
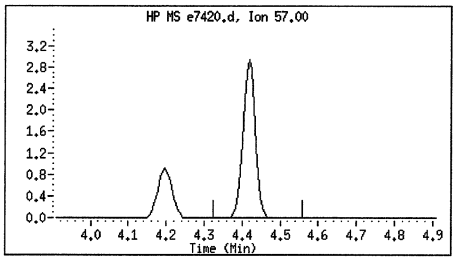
24 Hexane CAS#: 110-54-3





1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-271-MS-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170405

Level: (low/med) LOW Lab File ID: 2050219/E7425MS

% Moisture: not dec. Date Collected: 02/15/05 Time: 1550

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1619

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	269		2.25	5.00
100-41-4	Ethylbenzene	311		2.27	50.0
108-88-3	Toluene	384		2.13	50.0
1330-20-7	Xylene (total)	3380		5.09	100
1634-04-4	tert-Butyl methyl ether (MTBE)	268		1.79	50.0

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7425ms.d
Lab Smp Id: 20502170405 Client Smp ID: 086-271-MS-Q1-05
Inj Date : 19-FEB-2005 16:19
Operator : JCK Inst ID: msv5.i
Smp Info : 20502170405*086-271-MS-Q1-05
Misc Info : MSV~5838~*10*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 6 QC Sample: MS
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
1 Dichlorodifluoromethane	85	1.797	1.797	(0.294)	43581	30.2016	302	
2 Chloromethane ++	50	1.996	1.996	(0.326)	51486	24.6839	247	
3 Vinyl Chloride +	62	2.096	2.096	(0.342)	45488	27.0873	271	
5 Bromomethane	94	2.447	2.424	(0.400)	30709	23.7752	238	
6 Chloroethane	64	2.558	2.547	(0.418)	19393	22.3517	224	
7 Trichlorofluoromethane	101	2.809	2.798	(0.459)	41907	27.8557	279	
10 Acrolein	56	3.371	3.354	(0.551)	17537	129.997	1300	
11 1,1,2Trichlotrifluoroethane	101	3.382	3.378	(0.552)	27784	27.4894	275	
12 1,1-Dichloroethene +	96	3.418	3.407	(0.558)	27020	28.4097	284	
13 Acetone	43	3.535	3.525	(0.577)	13907	28.3641	284	
14 Methyl Iodide	142	3.605	3.595	(0.589)	48364	29.9905	300	
15 Carbon Disulfide	76	3.640	3.636	(0.595)	104572	26.1843	262	
17 Methyl Acetate	43	3.851	3.847	(0.629)	22651	25.4989	255	5140
18 Methylene Chloride	49	3.985	3.981	(0.651)	57585	25.3426	253	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	20 MTBE	73	4.196	4.186	(0.685)	98865	26.8323	268	8678
	21 trans-1,2-Dichloroethene	61	4.219	4.210	(0.689)	55017	26.8591	269	
	22 Acrylonitrile	53	4.290	4.280	(0.701)	97237	141.067	1410	
	24 Hexane	57	4.418	4.409	(0.722)	63975	29.2014	292	0(M)
	27 1,1-Dichloroethane ++	63	4.658	4.655	(0.761)	73137	26.1692	262	
	28 Vinyl Acetate	43	4.688	4.679	(0.766)	113290	30.1066	301	
	30 2,2-Dichloropropane	77	5.161	5.159	(0.843)	50986	27.7235	277	
	31 cis-1,2-Dichloroethene	61	5.185	5.182	(0.847)	67616	27.1982	272	
	32 2-Butanone	43	5.208	5.200	(0.851)	27112	33.3244	333	
	35 Bromochloromethane	128	5.401	5.399	(0.882)	21127	25.1275	251	
	36 Chloroform +	83	5.454	5.446	(0.891)	65059	27.9366	279	
	37 Cyclohexane	56	5.583	5.575	(0.912)	74487	28.5375	285	8172
$	38 Dibromofluoromethane	111	5.595	5.587	(0.914)	80577	51.5687	516	7374
	39 1,1,1-Trichloroethane	97	5.583	5.575	(0.912)	48015	27.7996	278	
	40 Carbon Tetrachloride	117	5.694	5.687	(0.930)	38418	27.3003	273	
	41 1,1-Dichloropropene	75	5.718	5.716	(0.934)	54331	28.1308	281	
M	42 Total 1,2-Dichloroethene	61				122633	54.0573	541	
	44 Benzene	78	5.888	5.881	(0.962)	162376	26.8889	269	
$	45 1,2-Dichloroethane-d4	67	5.894	5.887	(0.963)	45123	52.8928	529	
	46 1,2-Dichloroethane	62	5.958	5.951	(0.973)	48566	27.2921	273	
*	47 FLUOROBENZENE	96	6.122	6.121	(1.000)	296621	50.0000		
	49 Trichloroethene	130	6.409	6.402	(1.047)	42280	27.1183	271	
	50 Methyl Cyclohexane	83	6.508	6.508	(1.063)	68396	29.1892	292	9103
	51 1,2-Dichloropropane +	63	6.614	6.608	(1.080)	49951	26.3975	264	
	55 Dibromomethane	93	6.714	6.707	(1.097)	28929	26.0743	261	
	56 Bromodichloromethane	83	6.813	6.813	(1.113)	46919	27.1857	272	
	57 2-Chloroethyl vinyl ether	63	7.035	7.024	(1.149)	16352	11.4122	114	(R)
	58 cis-1,3-Dichloropropene	75	7.153	7.147	(1.168)	69741	25.6551	257	
	59 4-methyl-2-pentanone	43	7.246	7.241	(1.184)	59139	28.5642	286	
$	60 Toluene-d8	98	7.328	7.324	(0.870)	272185	55.7836	558	
	61 Toluene +	91	7.375	7.371	(0.876)	231699	38.4491	384	(R)
	63 trans-1,3-Dichloropropene	75	7.580	7.576	(0.900)	66431	27.1533	272	
	64 1,1,2-Trichloroethane	97	7.721	7.717	(0.917)	39017	28.2326	282	
	65 Tetrachloroethene	164	7.780	7.770	(0.924)	30252	27.6832	277	
	66 1,3-Dichloropropane	76	7.850	7.846	(0.932)	73662	26.9452	269	
	67 2-Hexanone	43	7.862	7.858	(0.933)	42933	33.9456	339	
	68 Dibromochloromethane	129	8.002	7.999	(0.950)	42036	27.6023	276	
	69 1,2-Dibromoethane(EDB)	107	8.108	8.104	(0.962)	43987	27.1229	271	
*	70 CHLOROBENZENE-d5	82	8.424	8.415	(1.000)	124190	50.0000		
	71 Chlorobenzene ++	112	8.441	8.439	(1.002)	110323	26.9433	269	
	72 Ethylbenzene +	106	8.477	8.474	(1.006)	63462	31.1137	311	
	73 1,1,1,2-Tetrachloroethane	133	8.500	8.492	(1.009)	34155	27.0925	271	
	74 p,m-Xylene	106	8.565	8.563	(1.017)	520095	207.101	2070	(AR)
	75 o-Xylene	106	8.858	8.856	(1.052)	324509	130.593	1310	(R)
	76 Styrene	104	8.876	8.873	(1.054)	132808	29.6364	296	
	77 Bromoform ++	173	9.046	9.044	(1.074)	25882	27.4944	275	
	78 Isopropylbenzene	105	9.099	9.097	(1.080)	180229	29.5122	295	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.251	9.249	(1.098)	79451	55.2489	552	
81 1,1,2,2-Tetrachloroethane++	83	9.339	9.338	(0.932)	54749	28.8918	289	
82 Bromobenzene	77	9.363	9.361	(0.934)	106274	28.0590	281	
84 trans-1,4-Dichloro-2-Butene	53	9.374	9.373	(0.935)	14980	31.1027	311	
85 n-Propylbenzene	91	9.374	9.373	(0.935)	235837	30.2814	303	
86 1,2,3-Trichloropropane	75	9.386	9.385	(0.937)	75379	30.9167	309	
87 2-Chlorotoluene	91	9.475	9.474	(0.945)	150609	30.0806	301	
88 1,3,5-Trimethylbenzene	105	9.487	9.485	(0.947)	336767	68.3759	684	(R)
89 4-Chlorotoluene	91	9.551	9.544	(0.953)	136758	28.3442	283	
91 tert-butylbenzene	91	9.704	9.703	(0.968)	141575	42.9187	429	(R)
92 1,2,4-Trimethylbenzene	105	9.745	9.744	(0.972)	651347	127.273	1270	(R)
96 sec-Butylbenzene	105	9.851	9.844	(0.983)	198603	29.4953	295	
97 p-Isopropyltoluene	119	9.933	9.927	(0.991)	168842	31.0849	311	
98 1,3-Dichlorobenzene	146	9.974	9.974	(0.995)	86029	29.4715	295	
* 99 1,4-DICHLOROBENZENE-D4	152	10.022	10.016	(1.000)	98627	50.0000		
100 1,4-Dichlorobenzene	146	10.034	10.033	(1.001)	81313	27.2242	272	
M 101 TOTAL XYLENE	106				844604	337.694	3380	
102 n-Butylbenzene	91	10.198	10.192	(1.018)	188775	35.2032	352	(R)
103 1,2-Dichlorobenzene	146	10.286	10.280	(1.026)	73967	27.9101	279	
104 1,2-Dibromo-3-Chloropropane	157	10.809	10.808	(1.079)	8678	27.1024	271	
106 1,2,4-Trichlorobenzene	180	11.349	11.341	(1.132)	46282	29.0226	290	
107 Hexachlorobutadiene	225	11.402	11.400	(1.138)	23401	29.9143	299	
108 Naphthalene	128	11.543	11.535	(1.152)	337884	71.7608	718	(R)
109 1,2,3-Trichlorobenzene	180	11.714	11.700	(1.169)	40435	26.7809	268	
140 1-Bromo-2-chloroethane	63	7.076	7.071	(1.156)	75980	25.7446	257	7197
M 139 1-3 Dichloropropene-Total	100				136172	52.8083	528	0

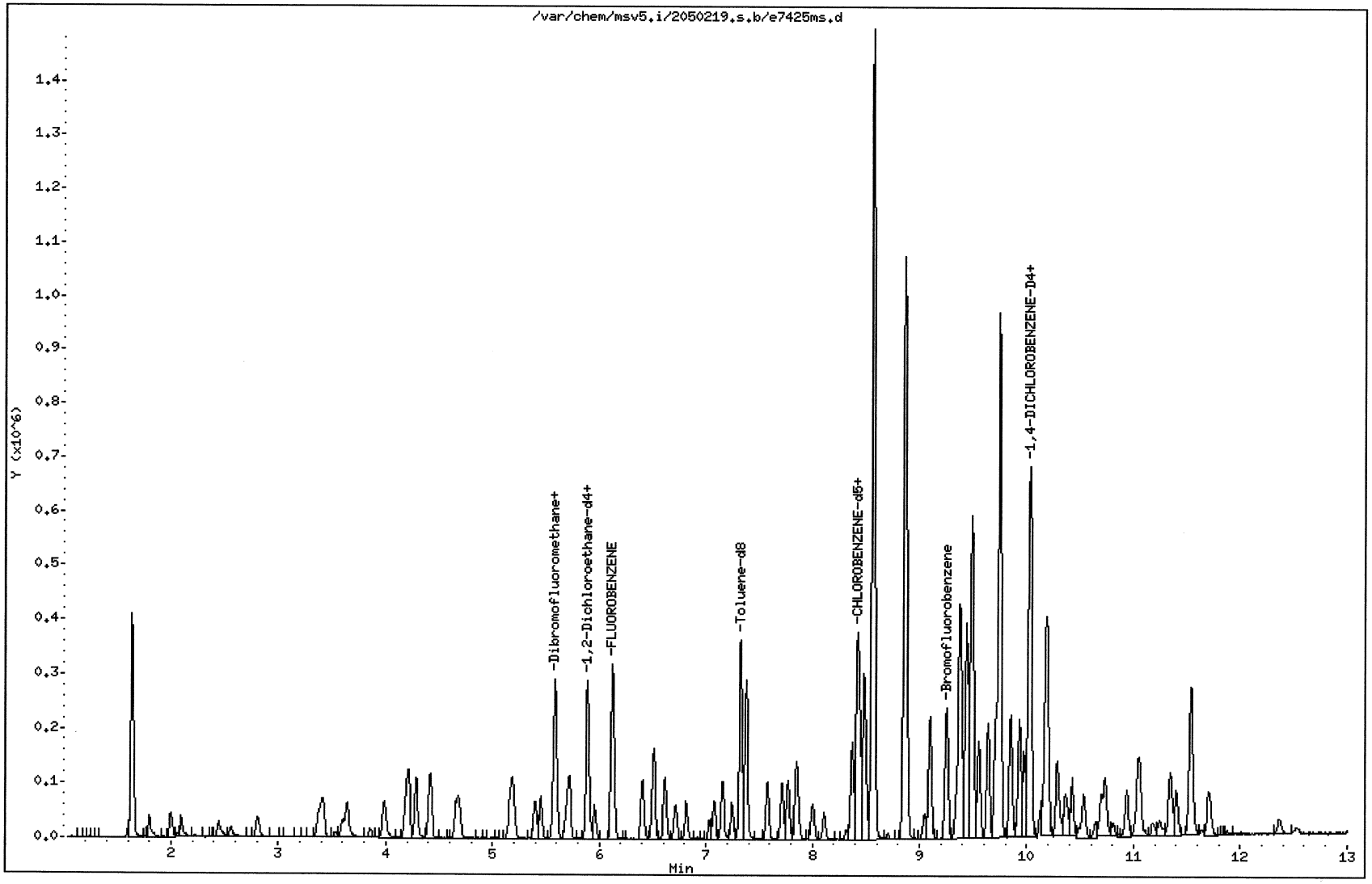
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/msv5.i/2050219.s.b/e7425ms.d
Date : 19-FEB-2005 16:19
Client ID: 086-271-MS-Q1-05
Sample Info: 20502170405*086-271-MS-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53

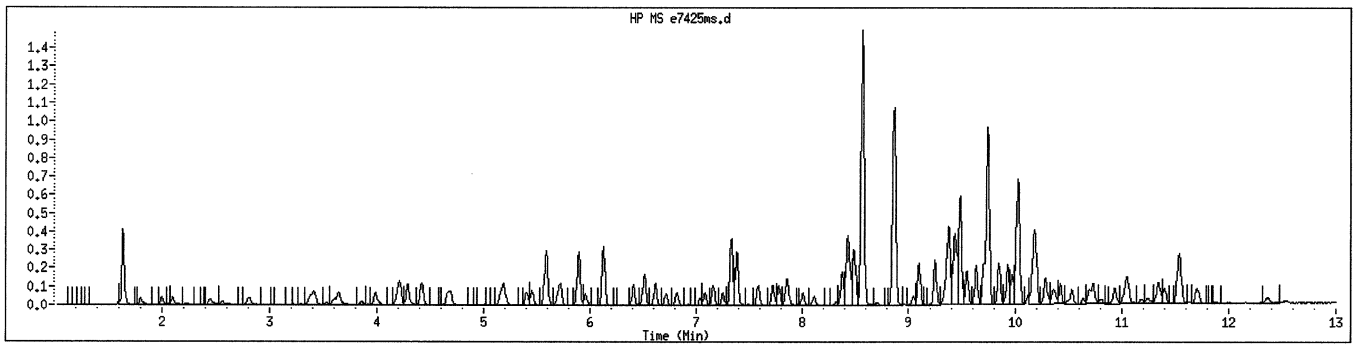


000123

Data file : /var/chem/msv5.i/2050219.s.b/e7425ms.d
Report Date: 02/19/2005 16:37

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID	: 20502170405	SampleType	: MS
Injection Date	: 19-FEB-2005 16:19	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 20502170405*086-271-MS-Q1-05		
Misc Info	: MSV~5838~*10*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 10.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

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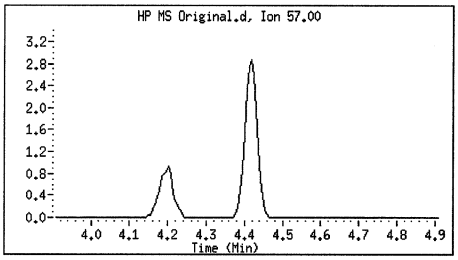
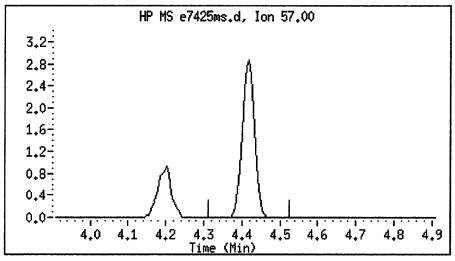
24 Hexane CAS#: 110-54-3





1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-271-MSD-Q1-05

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20502170406

Level: (low/med) LOW Lab File ID: 2050219/E7426MSD

% Moisture: not dec. Date Collected: 02/15/05 Time: 1550

GC Column: DB-624-30M ID: .53 (mm) Date Received: 02/16/05

Instrument ID: MSV5 Date Analyzed: 02/19/05 Time: 1642

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: JCK

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 287753

CONCENTRATION UNITS: ug/L Analytical Method: SW-846 8260

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-43-2	Benzene	271		2.25	5.00
100-41-4	Ethylbenzene	305		2.27	50.0
108-88-3	Toluene	372		2.13	50.0
1330-20-7	Xylene (total)	3330		5.09	100
1634-04-4	tert-Butyl methyl ether (MTBE)	268		1.79	50.0

GCAL, Inc.

Data file : /var/chem/msv5.i/2050219.s.b/e7426msd.d
Lab Smp Id: 20502170406 Client Smp ID: 086-271-MSD-Q1-05
Inj Date : 19-FEB-2005 16:42
Operator : JCK Inst ID: msv5.i
Smp Info : 20502170406*086-271-MSD-Q1-05
Misc Info : MSV~5838~*10*JCK
Comment :
Method : /var/chem/msv5.i/2050219.s.b/8260Bw5.m
Meth Date : 19-Feb-2005 16:13 jck Quant Type: ISTD
Cal Date : 19-FEB-2005 12:40 Cal File: e7417.d
Als bottle: 7 QC Sample: MSD
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	Sample Volume purged (mL)
DF	1.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
1 Dichlorodifluoromethane	85	1.797	1.797	(0.293)	40324	28.6183	286	
2 Chloromethane ++	50	1.996	1.996	(0.326)	51204	25.1406	251	
3 Vinyl Chloride +	62	2.096	2.096	(0.342)	43623	26.6031	266	
5 Bromomethane	94	2.447	2.424	(0.399)	34861	27.6405	276	
6 Chloroethane	64	2.552	2.547	(0.416)	22610	26.6879	267	
7 Trichlorofluoromethane	101	2.815	2.798	(0.459)	37555	25.5648	256	
10 Acrolein	56	3.365	3.354	(0.549)	19928	148.501	1490	
11 1,1,2Trichlotrifluoroethane	101	3.388	3.378	(0.553)	27204	27.5645	276	
12 1,1-Dichloroethene +	96	3.423	3.407	(0.559)	24572	26.4588	265	
13 Acetone	43	3.535	3.525	(0.577)	14170	29.6875	297	
14 Methyl Iodide	142	3.599	3.595	(0.587)	43740	27.7772	278	
15 Carbon Disulfide	76	3.640	3.636	(0.594)	99767	25.5836	256	
17 Methyl Acetate	43	3.856	3.847	(0.629)	22980	26.4930	265	4782(H)
18 Methylene Chloride	49	3.985	3.981	(0.650)	57461	25.8978	259	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	20 MTBE	73	4.196	4.186	(0.685)	96391	26.7917	268	8708
	21 trans-1,2-Dichloroethene	61	4.213	4.210	(0.688)	54383	27.1897	272	
	22 Acrylonitrile	53	4.284	4.280	(0.699)	102925	152.920	1530	
	24 Hexane	57	4.418	4.409	(0.721)	60633	28.3434	283	0(M)
	27 1,1-Dichloroethane ++	63	4.658	4.655	(0.760)	73323	26.8683	269	
	28 Vinyl Acetate	43	4.688	4.679	(0.765)	114129	31.0609	311	
	30 2,2-Dichloropropane	77	5.161	5.159	(0.842)	49256	27.4286	274	
	31 cis-1,2-Dichloroethene	61	5.191	5.182	(0.847)	64807	26.6969	267	
	32 2-Butanone	43	5.214	5.200	(0.851)	27227	34.2727	343	
	35 Bromochloromethane	128	5.395	5.399	(0.880)	20700	25.2133	252	
	36 Chloroform +	83	5.454	5.446	(0.890)	61869	27.2074	272	
	37 Cyclohexane	56	5.583	5.575	(0.911)	73518	28.8455	288	8168
$	38 Dibromofluoromethane	111	5.595	5.587	(0.913)	81763	53.5895	536	7327
	39 1,1,1-Trichloroethane	97	5.583	5.575	(0.911)	44764	26.5423	265	
	40 Carbon Tetrachloride	117	5.700	5.687	(0.930)	37368	27.1945	272	
	41 1,1-Dichloropropene	75	5.718	5.716	(0.933)	51840	27.4882	275	
M	42 Total 1,2-Dichloroethene	61				119190	53.8866	539	
	44 Benzene	78	5.888	5.881	(0.961)	159996	27.1337	271	
$	45 1,2-Dichloroethane-d4	67	5.894	5.887	(0.962)	44156	53.0074	530	
	46 1,2-Dichloroethane	62	5.958	5.951	(0.972)	46740	26.8993	269	
*	47 FLUOROBENZENE	96	6.128	6.121	(1.000)	289637	50.0000		
	49 Trichloroethene	130	6.409	6.402	(1.046)	38377	25.2084	252	
	50 Methyl Cyclohexane	83	6.508	6.508	(1.062)	66121	28.8987	289	9112
	51 1,2-Dichloropropane +	63	6.614	6.608	(1.079)	48487	26.2417	262	
	55 Dibromomethane	93	6.713	6.707	(1.096)	27423	25.3129	253	
	56 Bromodichloromethane	83	6.813	6.813	(1.112)	43381	25.7418	257	
	57 2-Chloroethyl vinyl ether	63	7.035	7.024	(1.148)	9761	6.97658	69.8	(R)
	58 cis-1,3-Dichloropropene	75	7.158	7.147	(1.168)	71681	27.0045	270	
	59 4-methyl-2-pentanone	43	7.246	7.241	(1.182)	59379	29.3716	294	
$	60 Toluene-d8	98	7.328	7.324	(0.871)	267030	54.9186	549	
	61 Toluene +	91	7.381	7.371	(0.877)	223157	37.1611	372	(R)
	63 trans-1,3-Dichloropropene	75	7.574	7.576	(0.900)	66560	27.3012	273	
	64 1,1,2-Trichloroethane	97	7.721	7.717	(0.917)	38409	27.8899	279	
	65 Tetrachloroethene	164	7.774	7.770	(0.923)	27899	25.6193	256	
	66 1,3-Dichloropropane	76	7.850	7.846	(0.933)	73267	26.8944	269	
	67 2-Hexanone	43	7.862	7.858	(0.934)	43039	34.1485	341	
	68 Dibromochloromethane	129	8.002	7.999	(0.951)	41177	27.1328	271	
	69 1,2-Dibromoethane(EDB)	107	8.113	8.104	(0.964)	43802	27.1034	271	
*	70 CHLOROBENZENE-d5	82	8.418	8.415	(1.000)	123757	50.0000		
	71 Chlorobenzene ++	112	8.447	8.439	(1.004)	109836	26.9182	269	
	72 Ethylbenzene +	106	8.483	8.474	(1.008)	62004	30.5053	305	
	73 1,1,1,2-Tetrachloroethane	133	8.495	8.492	(1.009)	33287	26.4964	265	
	74 p,m-Xylene	106	8.565	8.563	(1.017)	508448	203.171	2030	(AR)
	75 o-Xylene	106	8.864	8.856	(1.053)	320996	129.631	1300	(R)
	76 Styrene	104	8.876	8.873	(1.054)	133242	29.8373	298	
	77 Bromoform ++	173	9.046	9.044	(1.075)	25503	27.1866	272	
	78 Isopropylbenzene	105	9.099	9.097	(1.081)	177187	29.1155	291	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 80 Bromofluorobenzene	174	9.251	9.249	(1.099)	78913	55.0668	551	
81 1,1,2,2-Tetrachloroethane++	83	9.339	9.338	(0.932)	56751	30.0296	300	
82 Bromobenzene	77	9.363	9.361	(0.934)	106558	28.2103	282	
84 trans-1,4-Dichloro-2-Butene	53	9.380	9.373	(0.936)	14649	30.4980	305	
85 n-Propylbenzene	91	9.380	9.373	(0.936)	228674	29.4414	294	
86 1,2,3-Trichloropropane	75	9.386	9.385	(0.937)	71665	29.4732	295	
87 2-Chlorotoluene	91	9.475	9.474	(0.945)	152386	30.5181	305	
88 1,3,5-Trimethylbenzene	105	9.487	9.485	(0.947)	334854	68.1721	682	(R)
89 4-Chlorotoluene	91	9.551	9.544	(0.953)	136708	28.4108	284	
91 tert-butylbenzene	91	9.710	9.703	(0.969)	142266	43.2453	432	(R)
92 1,2,4-Trimethylbenzene	105	9.745	9.744	(0.972)	641599	125.709	1260	(R)
96 sec-Butylbenzene	105	9.851	9.844	(0.983)	197665	29.4357	294	
97 p-Isopropyltoluene	119	9.933	9.927	(0.991)	166255	30.6917	307	
98 1,3-Dichlorobenzene	146	9.980	9.974	(0.996)	80629	27.6965	277	
* 99 1,4-DICHLOROBENZENE-D4	152	10.022	10.016	(1.000)	98360	50.0000		
100 1,4-Dichlorobenzene	146	10.034	10.033	(1.001)	84894	28.5004	285	
M 101 TOTAL XYLENE	106				829444	332.802	3330	
102 n-Butylbenzene	91	10.198	10.192	(1.018)	191737	35.8526	359	(R)
103 1,2-Dichlorobenzene	146	10.286	10.280	(1.026)	74613	28.2303	282	
104 1,2-Dibromo-3-Chloropropane	157	10.815	10.808	(1.079)	9562	29.9442	299	
106 1,2,4-Trichlorobenzene	180	11.349	11.341	(1.132)	48323	30.3847	304	
107 Hexachlorobutadiene	225	11.408	11.400	(1.138)	24557	31.4772	315	
108 Naphthalene	128	11.538	11.535	(1.151)	387806	82.5870	826	(R)
109 1,2,3-Trichlorobenzene	180	11.708	11.700	(1.168)	45333	30.1064	301	
140 1-Bromo-2-chloroethane	63	7.076	7.071	(1.155)	76661	26.6017	266	7323
M 139 1-3 Dichloropropene-Total	100				138241	54.3057	543	0

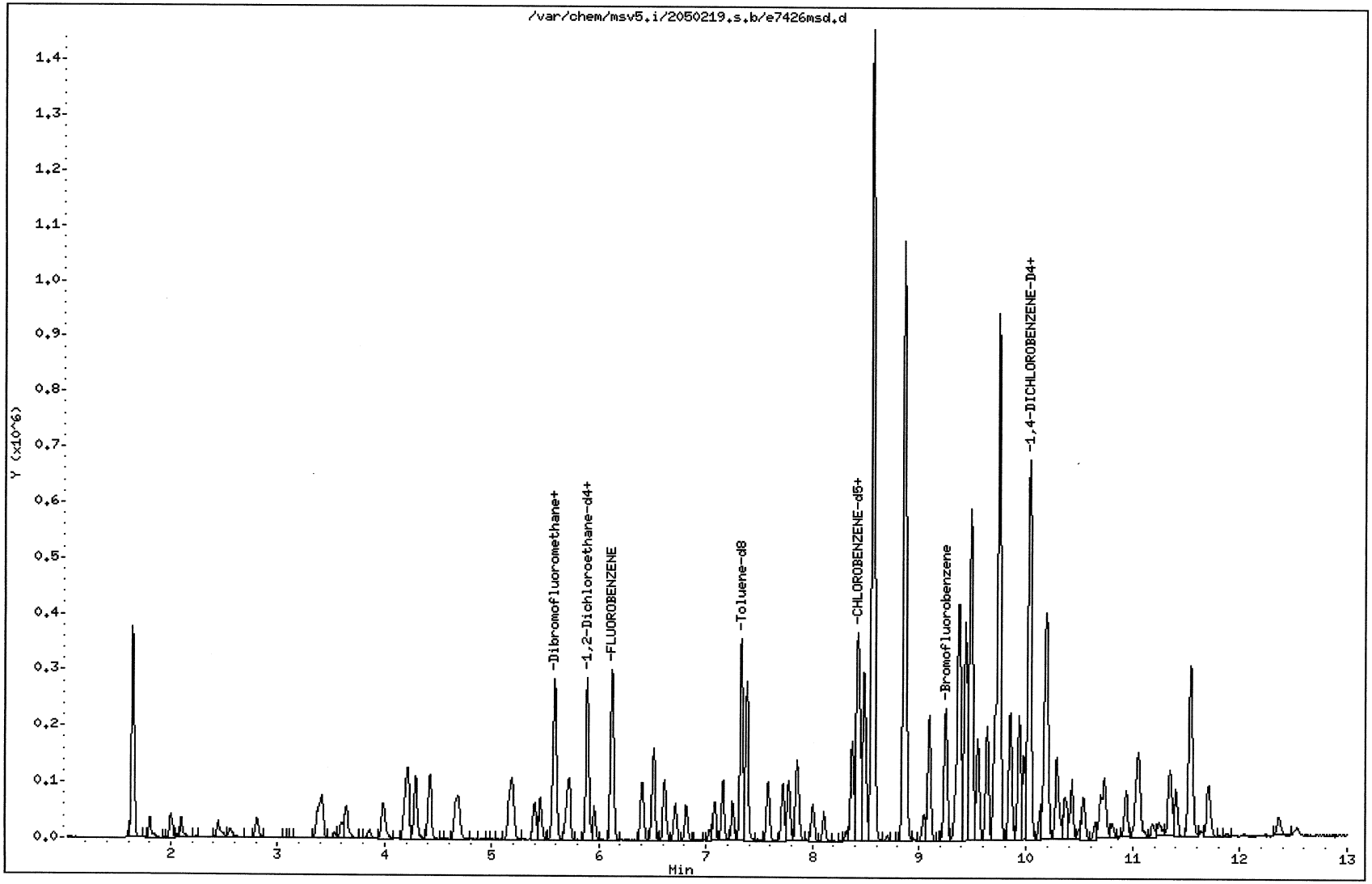
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv5.i/2050219.s.b/e7426msd.d
Date : 19-FEB-2005 16:42
Client ID: 086-271-MSD-Q1-05
Sample Info: 20502170406*086-271-MSD-Q1-05
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv5.i

Operator: JCK
Column diameter: 0.53

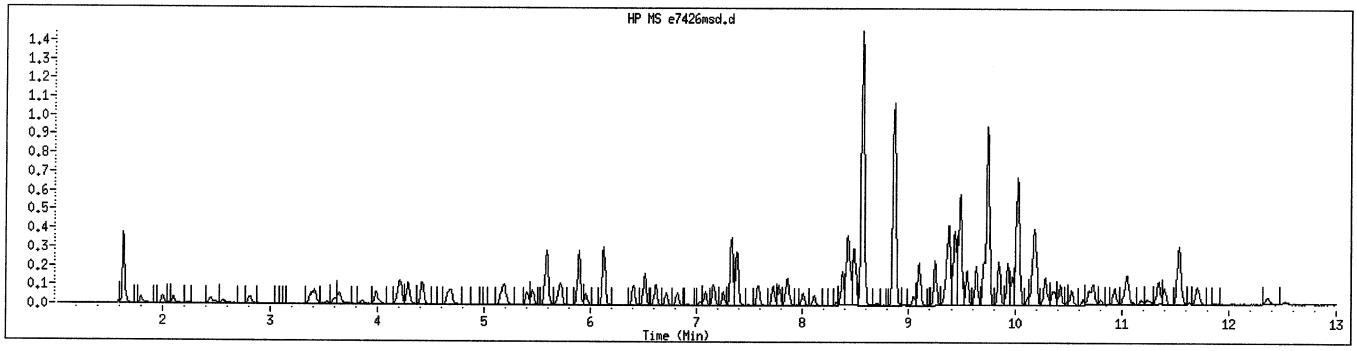


000129

Data file : /var/chem/msv5.i/2050219.s.b/e7426msd.d
Report Date: 02/19/2005 17:02

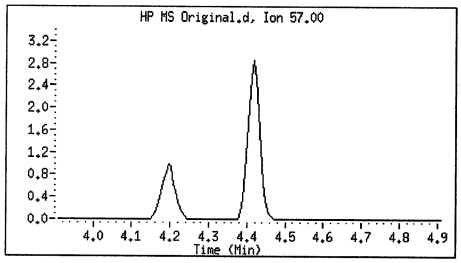
MANUAL INTEGRATION GRAPHIC REPORT

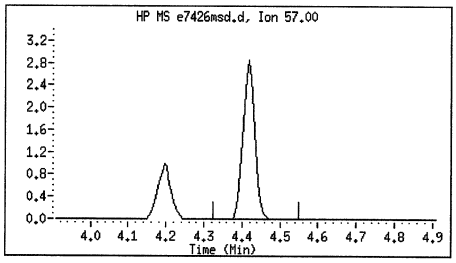
Lab ID	: 20502170406	SampleType	: MSD
Injection Date	: 19-FEB-2005 16:42	Instrument	: msv5.i
Operator	: JCK		
Sample Info	: 20502170406*086-271-MSD-Q1-05		
Misc Info	: MSV~5838~*10*JCK		
Method	: /var/chem/msv5.i/2050219.s.b/8260Bw5.m		
Dilution	: 10.0		
Matrix	: WATER		
Integrator	: HP RTE	Compound Sublist	: 8260b



Original Final

24 Hexane CAS#: 110-54-3





LABORATORY CHRONICLE: GC-MS DEPARTMENT

Date: 19-FEB-2005
Instrument: msv5.i
Analyst(s): JCK

Standard	Conc ppm	
Int. Standard	50	5-23-6
Surrogate	50	5-23-6
8260	50	5-25-4
Ac/Ac/VA	250/50	5-25-1
CVE	50	5-25-3

Sample ID	Status/Comments	DataFile	WT VOL	Injection Time	DilFactor	ALS
1000		e7410.d	0.00	19-FEB-2005 08:22	1.000	2
1210		e7411.d	5.00	19-FEB-2005 09:07	1.000	1
1206		e7412.d	5.00	19-FEB-2005 09:31	1.000	2
1201		e7413.d	5.00	19-FEB-2005 09:55	1.000	3
1202		e7414.d	5.00	19-FEB-2005 10:19	1.000	4
1203		e7415.d	5.00	19-FEB-2005 11:47	1.000	5
1204		e7416.d	5.00	19-FEB-2005 12:17	1.000	6
1205		e7417.d	5.00	19-FEB-2005 12:40	1.000	7
BLANK		e7418.d	5.00	19-FEB-2005 13:04	1.000	8
1600		e7419.d	5.00	19-FEB-2005 13:37	1.000	9
224391		e7420.d	5.00	19-FEB-2005 14:13	1.000	1
224390		e7421.d	5.00	19-FEB-2005 14:41	1.000	2
20502170401	POST	e7422.d	5.00	19-FEB-2005 15:07	10.000	3
20502170402	POST	e7423.d	5.00	19-FEB-2005 15:31	1.000	4
20502170403	POST	e7424.d	5.00	19-FEB-2005 15:55	1.000	5
20502170405	POST	e7425ms.d	5.00	19-FEB-2005 16:19	10.000	6
20502170406	POST	e7426msd.d	5.00	19-FEB-2005 16:42	10.000	7
BLANK		e7427.d	5.00	19-FEB-2005 17:12	1.000	8
20502170404	POST	e7428.d	5.00	19-FEB-2005 17:36	1.000	9
20502170407	POST	e7429.d	5.00	19-FEB-2005 18:00	1.000	10
20502170408	POST	e7430.d	5.00	19-FEB-2005 18:24	1.000	11
20502170409	POST	e7431.d	5.00	19-FEB-2005 18:48	1.000	12
20502180101	POST	e7432.d	5.00	19-FEB-2005 19:13	1.000	13
20502180102	POST	e7433.d	5.00	19-FEB-2005 19:37	1.000	14
20502180103	POST	e7434.d	5.00	19-FEB-2005 20:01	1.000	15
20502180104	OUT OF TUNE RR 1X	e7435.d	5.00	19-FEB-2005 20:25	1.000	16
20502180105	RR 1X	e7436.d	5.00	19-FEB-2005 20:50	1.000	1
BLANK		e7437.d	5.00	19-FEB-2005 21:14	1.000	2
BLANK		e7438.d	5.00	19-FEB-2005 21:38	1.000	3

REVISED 01/01/2000

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD	SUPPLIER	LOT# EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INITIAL	DATE PREPARED	EXP DATE
1,2 Dichloroethene	5-23-1	HB16443HB	Aldrich	HB16443HB	0.25g	25.0 ml	10,000ppm	12687LC CH_3OH	JCK	12-7-04	5-6-05
1,2 Dichloroethene	5-23-2	In House	Aldrich	5-23-1 5-6-05	10ml	100 ml	1,000ppm	12687LC CH_3OH	JCK	12-7-04	5-6-05
Ac/Ac	5-23-3	Q-2143	NSI	072104-04 Exp. 02/05	1.25mL	10mL	50ppm	DI H_2O	JCK	12-10-04	5-9-05
AC/AC	5-23-4	Q-2143	NSI	072104-04 EXP-02-05	1.25ml	10ml	50PPM	DI H_2O	RW	12-15-04	5-14-05 RW
2CVE	5-23-5	17-04-08	NSI 1000ppm	17-04-08 EXP-02-06	6.250ml	25ml	250PPM	MeOH 12687LC	RW	12-16-04	5-15-05
8260 IS/SS	5-23-6	C-440-06	NSI 2500 ppm	C-440-06 EXP-02-06	0.5ml	50ml	25PPM	MeOH 12687LC	RW	12-17-04	5-16-05
		C-441-05	NSI 2500ppm	C-441-05 EXP-12-06	0.5ml						
8260 IS	5-23-7	C-441-05	NSI 2500ppm	C-441-05 EXP-12-06	2.0ml	100ml	50PPM	MeOH 12687LC	MW RSP	12-17-04	5-16-05
624 STD Dupont	5-23-8	Q-3160	NSI	061404-06 12/30/04	1.25ml	10ml	250PPM	MeOH 043554	RPTS	12-19-04	12-31-04
624 LCS Dupont	5-23-9	92782	Absolute Stds	030104 030107	1.25ml	10ml	250PPM	MeOH 043554	RPTS	12-19-04	5 RSP 6-18-05
APP-mix-2	5-23-10	93015	ABS	120402 EXP-120405	2.5ml	10ml	50PPM	MeOH 043554	RSP	12-19-04	5 6-18-05 RSS
Dates 12-01-04 – 12-19-04 were received by QA/QC Dept. on 12/22/04 DLH											
1-3-butadiene	5-23-11	93016	ABS 2500ppm	051004 EXP-051007	1.0ml	10ml	250PPM	MeOH 043554	RSP	12-23-04	06-22-05
methacrylonitrile	5-23-12	Q 4406ml Neat	Aldrich	Q4406ml	0.109ml	10ml	10000PPM	MeOH 043554	RSP	12-23-04	6-22-05
methacrylonitrile	5-23-13	5-23-12	In house	5-23-12 EXP-6-22-05	250ul	10ml	250PPM	MeOH 043554	RSP	12-23-04	6-22-05
ICV-methacrylonitrile	5-23-14	Q-4406ml Neat	Aldrich	Q-4406 Aldrich	0.10gm	10ml	10000PPM	MeOH 043554	RW	12-23-04	6-22-05
ICV-methacrylonitrile	5-23-15	5-23-14	In house	5-23-13 EXP-6-22-05	250ul	10ml	250PPM	MeOH 043554	RSP	12-23-04	6-22-05
CLP 2.1 IS/SS	5-23-16				RJU	12-28-04					

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2E

WATER ORGANIC SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

GC Column (1): 201TP-0.15 ID: 2.1 (mm) GC Cloumn (2): ID: (mm)

Method: SW-846 8310

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	86-CEF271-7S-Q1-05	0	40	140	*													1
2 .	86-CEF271-9S-Q1-05	83	40	140														0
3 .	86-CEF271-10S-Q1-05	74	40	140														0
4 .	86-CEF271-12S-Q1-05	84	40	140														0
5 .	086-271-MS-Q1-05	0	40	140	*													1
6 .	086-271-MSD-Q1-05	0	40	140	*													1
7 .	086-271-DP-Q1-05	78	40	140														0
8 .	086-271-EB-Q1-05	74	40	140														0
9 .	MB223953	72	40	140														0
10 .	LCS223954	77	40	140														0
11 .	LCSD223955	56	40	140														0

SMC 1 : p-Terphenyl SMC 2 :

Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3E
WATER ORGANICS MS/MSD RECOVERY

Lab Name: GCAL
Sample ID: 86-CEF271-7S-Q1-05
Lab Code: LA024
Case No.:
SAS No.:
SDG No.: 205021704
Contract:
Method: SW-846 8310
Prep Batch: 287663
Analytical Batch: 287912

SAMPLE NO : 20502170405

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS % REC	MS % REC FLAG	QC. LIMITS
1-Methylnaphthalene	ug/L	5	93.4	158	1290	*	40 - 140
2-Methylnaphthalene	ug/L	5	83.6	132	968	*	40 - 140
Acenaphthene	ug/L	5	0	0	0	*	40 - 140
Acenaphthylene	ug/L	5	266	268	40		40 - 140
Anthracene	ug/L	5	0	0	0	*	40 - 140
Benzo(a)anthracene	ug/L	5	0	0	0	*	40 - 140
Benzo(a)pyrene	ug/L	5	0	0	0	*	40 - 140
Benzo(b)fluoranthene	ug/L	5	0	0	0	*	40 - 140
Benzo(g,h,i)perylene	ug/L	5	0	0	0	*	40 - 140
Benzo(k)fluoranthene	ug/L	5	0	0	0	*	40 - 140
Chrysene	ug/L	5	0	0	0	*	40 - 140
Dibenz(a,h)anthracene	ug/L	5	0	0	0	*	40 - 140
Fluoranthene	ug/L	5	0	0	0	*	40 - 140
Fluorene	ug/L	5	0	0	0	*	40 - 140
Indeno(1,2,3-cd)pyrene	ug/L	5	0	0	0	*	40 - 140
Naphthalene	ug/L	5	430	463	660	*	40 - 140
Phenanthrene	ug/L	5	0	0	0	*	40 - 140
Pyrene	ug/L	5	0	0	0	*	40 - 140

RPD : 2 out of 18 outside limits
Spike Recovery: 35 out of 36 outside limits

3E
WATER ORGANICS MS/MSD RECOVERY

Lab Name: GCAL
Sample ID: 86-CEF271-7S-Q1-05
Lab Code: LA024
Case No.:
SAS No.:
SDG No.: 205021704
Contract:
Method: SW-846 8310
Prep Batch: 287663
Analytical Batch: 287912

SAMPLE NO : ***20502170406***

COMPOUND	UNITS	SPIKE ADDED	MSD CONC.	MSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
1-Methylnaphthalene	ug/L	5	113	392	*	33	*	40 - 140	0 - 30
2-Methylnaphthalene	ug/L	5	80	-72	*	49	*	40 - 140	0 - 30
Acenaphthene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Acenaphthylene	ug/L	5	290	480	*	8		40 - 140	0 - 30
Anthracene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Benzo(a)anthracene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Benzo(a)pyrene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Benzo(b)fluoranthene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Benzo(g,h,i)perylene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Benzo(k)fluoranthene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Chrysene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Dibenz(a,h)anthracene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Fluoranthene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Fluorene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Indeno(1,2,3-cd)pyrene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Naphthalene	ug/L	5	481	1020	*	4		40 - 140	0 - 30
Phenanthrene	ug/L	5	0	0	*	0		40 - 140	0 - 30
Pyrene	ug/L	5	0	0	*	0		40 - 140	0 - 30

RPD : 2 out of 18 outside limits
Spike Recovery: 35 out of 36 outside limits

3E

WATER ORGANICS LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Contract: Method: SW-846 8310

Prep Batch: 287663 Analytical Batch: 287912

SAMPLE NO : 223954

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	LCS % REC FLAG	QC. LIMITS
1-Methylnaphthalene	ug/L	5	0	3.8	76		40 - 140
2-Methylnaphthalene	ug/L	5	0	3.92	78		40 - 140
Acenaphthene	ug/L	5	0	2.81	56		40 - 140
Acenaphthylene	ug/L	5	0	2.84	57		40 - 140
Anthracene	ug/L	5	0	3.99	80		40 - 140
Benzo(a)anthracene	ug/L	5	0	4.6	92		40 - 140
Benzo(a)pyrene	ug/L	5	0	4.51	90		40 - 140
Benzo(b)fluoranthene	ug/L	5	0	4.3	86		40 - 140
Benzo(g,h,i)perylene	ug/L	5	0	2.1	42		40 - 140
Benzo(k)fluoranthene	ug/L	5	0	4.26	85		40 - 140
Chrysene	ug/L	5	0	4.7	94		40 - 140
Dibenz(a,h)anthracene	ug/L	5	0	3.36	67		40 - 140
Fluoranthene	ug/L	5	0	3.75	75		40 - 140
Fluorene	ug/L	5	0	4.47	89		40 - 140
Indeno(1,2,3-cd)pyrene	ug/L	5	0	1.83	37	*	40 - 140
Naphthalene	ug/L	5	0	2.28	46		40 - 140
Phenanthrene	ug/L	5	0	4.21	84		40 - 140
Pyrene	ug/L	5	0	4.01	80		40 - 140

RPD : 4 out of 18 outside limits

Spike Recovery: 1 out of 36 outside limits

3E

WATER ORGANICS LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 205021704

Contract: Method: SW-846 8310

Prep Batch: 287663 Analytical Batch: 287912

SAMPLE NO : ***223955***

COMPOUND	UNITS	SPIKE ADDED	LCSD CONC.	LCSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
1-Methylnaphthalene	ug/L	5	7	140		59	*	40 - 140	0 - 30
2-Methylnaphthalene	ug/L	5	4.42	88		12		40 - 140	0 - 30
Acenaphthene	ug/L	5	4.3	86		42	*	40 - 140	0 - 30
Acenaphthylene	ug/L	5	2.56	51		10		40 - 140	0 - 30
Anthracene	ug/L	5	3.51	70		13		40 - 140	0 - 30
Benzo(a)anthracene	ug/L	5	4.59	92		.2		40 - 140	0 - 30
Benzo(a)pyrene	ug/L	5	4.84	97		7		40 - 140	0 - 30
Benzo(b)fluoranthene	ug/L	5	4.56	91		6		40 - 140	0 - 30
Benzo(g,h,i)perylene	ug/L	5	4.61	92		75	*	40 - 140	0 - 30
Benzo(k)fluoranthene	ug/L	5	4.64	93		9		40 - 140	0 - 30
Chrysene	ug/L	5	4.56	91		3		40 - 140	0 - 30
Dibenz(a,h)anthracene	ug/L	5	4.4	88		27		40 - 140	0 - 30
Fluoranthene	ug/L	5	3.65	73		3		40 - 140	0 - 30
Fluorene	ug/L	5	4.83	97		8		40 - 140	0 - 30
Indeno(1,2,3-cd)pyrene	ug/L	5	4.63	93		87	*	40 - 140	0 - 30
Naphthalene	ug/L	5	2.46	49		8		40 - 140	0 - 30
Phenanthrene	ug/L	5	4.21	84		0		40 - 140	0 - 30
Pyrene	ug/L	5	3.58	72		11		40 - 140	0 - 30

RPD : 4 out of 18 outside limits

Spike Recovery: 1 out of 36 outside limits

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB223953

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 223953

SAS No.: SDG No.: 205021704

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted: 02/17/05

Date Analyzed (1): 02/18/05 Time (1): 1423

Date Analyzed (2): Time (2):

Instrument ID (1): HPLC 1

Instrument ID (2):

GC Column (1): 201TP-0.15 ID: 2.1 (mm)

GC Column (2): ID: (mm)

Method: SW-846 8310

Prep Batch: 287663 Analytical Batch: 287912

Lab File ID: 050218/H000038

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS223954	223954	02/18/05	1430		
2.	LCSD223955	223955	02/18/05	1437		
3.	86-CEF271-9S-Q1-05	20502170402	02/18/05	1451		
4.	86-CEF271-10S-Q1-05	20502170403	02/18/05	1457		
5.	86-CEF271-12S-Q1-05	20502170404	02/18/05	1504		
6.	086-271-DP-Q1-05	20502170407	02/18/05	1525		
7.	086-271-EB-Q1-05	20502170408	02/18/05	1532		
8.	86-CEF271-7S-Q1-05	20502170401	02/18/05	1646		
9.	086-271-MS-Q1-05	20502170405	02/18/05	1653		
10.	086-271-MSD-Q1-05	20502170406	02/18/05	1700		

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 86-CEF271-7S-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170401
Date Collected: 02/15/05 Time: 1550
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1646
Dilution Factor: 100 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1
Lab File ID: 050218/H0000397

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	93.4	J	29.1	100
91-57-6	2-Methylnaphthalene	83.6	J	14.2	100
83-32-9	Acenaphthene	100	U	33.1	100
208-96-8	Acenaphthylene	266		15.3	100
120-12-7	Anthracene	10.0	U	2.40	10.0
56-55-3	Benzo(a)anthracene	10.0	U	3.20	10.0
50-32-8	Benzo(a)pyrene	10.0	U	3.30	10.0
205-99-2	Benzo(b)fluoranthene	10.0	U	1.60	10.0
191-24-2	Benzo(g,h,i)perylene	10.0	U	1.60	10.0
207-08-9	Benzo(k)fluoranthene	10.0	U	3.30	10.0
218-01-9	Chrysene	10.0	U	3.00	10.0
53-70-3	Dibenz(a,h)anthracene	10.0	U	2.90	10.0
206-44-0	Fluoranthene	10.0	U	4.40	10.0
86-73-7	Fluorene	50.0	U	9.90	50.0
193-39-5	Indeno(1,2,3-cd)pyrene	25.0	U	4.10	25.0
91-20-3	Naphthalene	430		12.4	25.0
85-01-8	Phenanthrene	10.0	U	2.50	10.0
129-00-0	Pyrene	10.0	U	3.40	10.0

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000397.d
Lab Smp Id: 20502170401
Inj Date : 18-FEB-2005 16:46
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170401
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 16:59 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	100.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

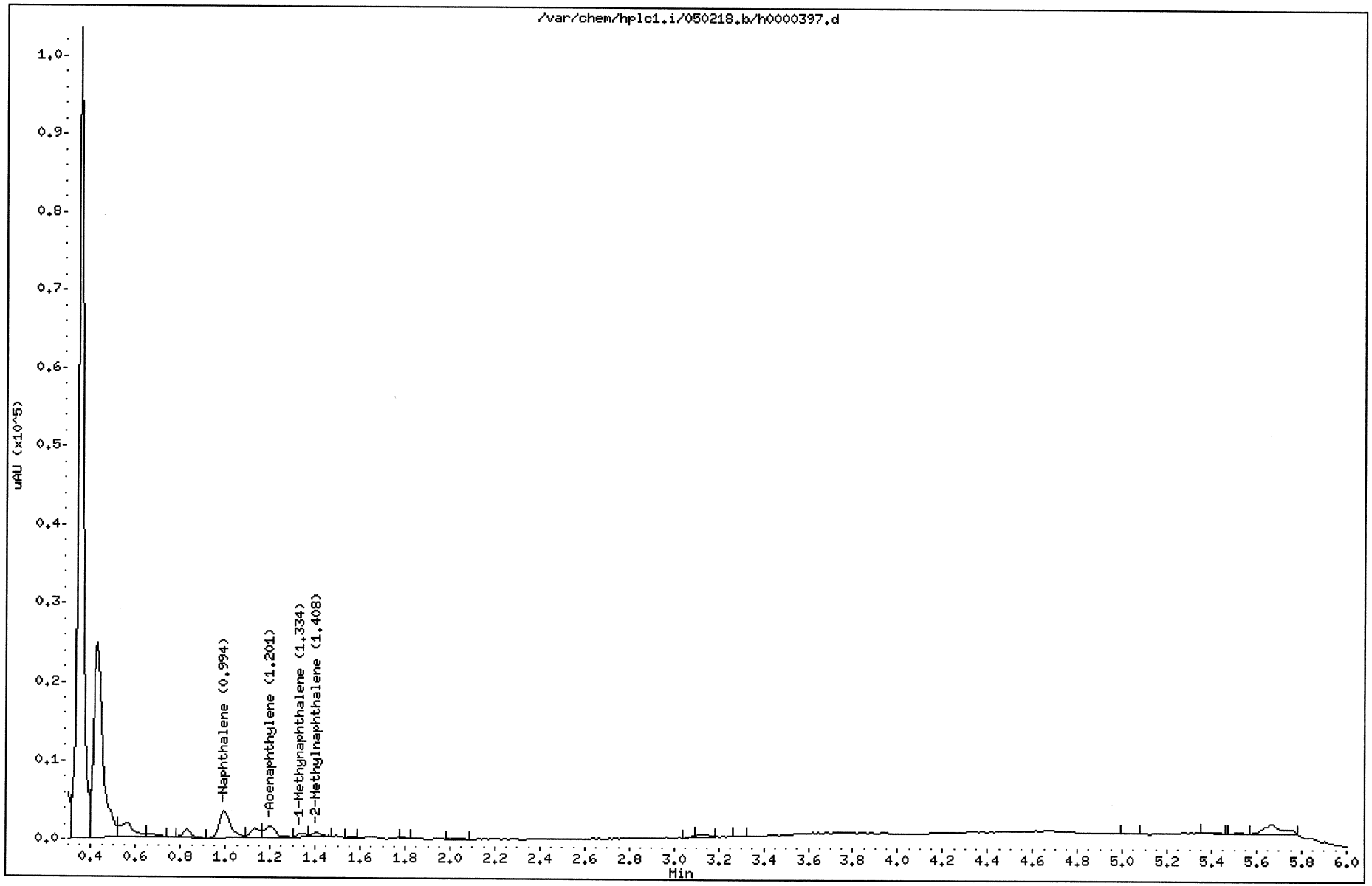
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	0.994	0.991	0.003	11664	4.30273	430
2 Acenaphthylene	1.201	1.198	0.003	4798	2.65823	266
3 1-Methynaphthalene	1.334	1.324	0.010	1353	0.93362	93.4
4 2-Methylnaphthalene	1.408	1.404	0.004	1673	0.83605	83.6

Data File: /var/chem/hplc1.i/050218.b/h0000397.d
Date : 18-FEB-2005 16:46
Client ID:
Sample Info: 20502170401
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000141



GCAL, Inc.

Data file : /var/chem/hplc1.i/050218F.b/h0000397.d
Lab Smp Id: 20502170401
Inj Date : 18-FEB-2005 16:46
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170401
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218F.b/flpnafld.m
Meth Date : 18-Feb-2005 14:03 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	100.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

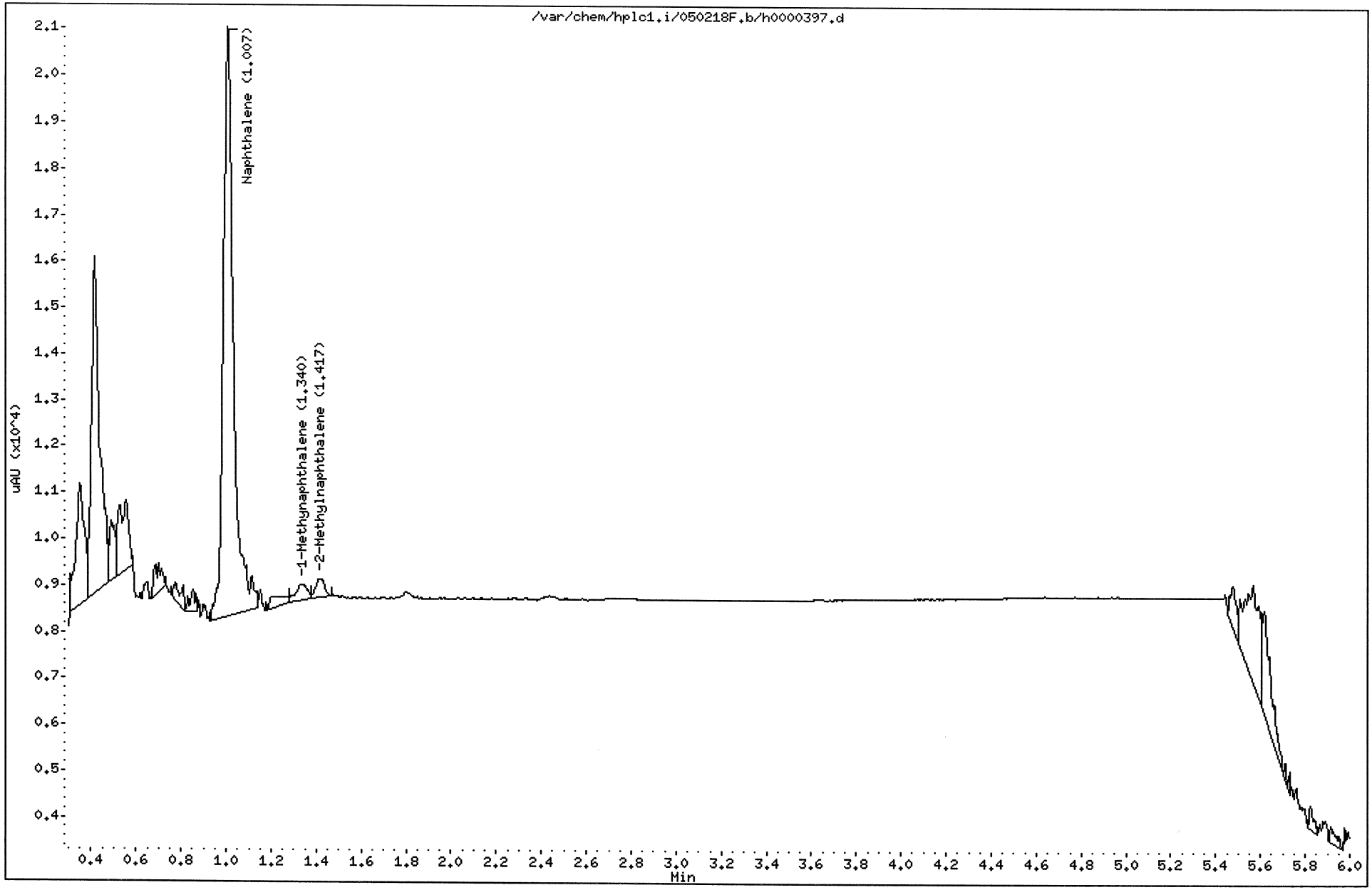
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
1 Naphthalene	1.007	1.007	0.000	40204	4.08890	409
3 1-Methynaphthalene	1.340	1.343	-0.003	1261	0.65662	65.7
4 2-Methylnaphthalene	1.417	1.427	-0.010	1145	0.76016	76.0

Data File: /var/chem/hplc1.i/050218F.b/h0000397.d
Date : 18-FEB-2005 16:46
Client ID:
Sample Info: 20502170401
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000143



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 86-CEF271-9S-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170402
Date Collected: 02/15/05 Time: 1645
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1451
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1
Lab File ID: 050218/H0000388

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000388.d
Lab Smp Id: 20502170402 Client Smp ID: 20502170402
Inj Date : 18-FEB-2005 14:51
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170402
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 15:43 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.768	2.877	-0.109	11997	1.65859	1.66(M)

QC Flag Legend

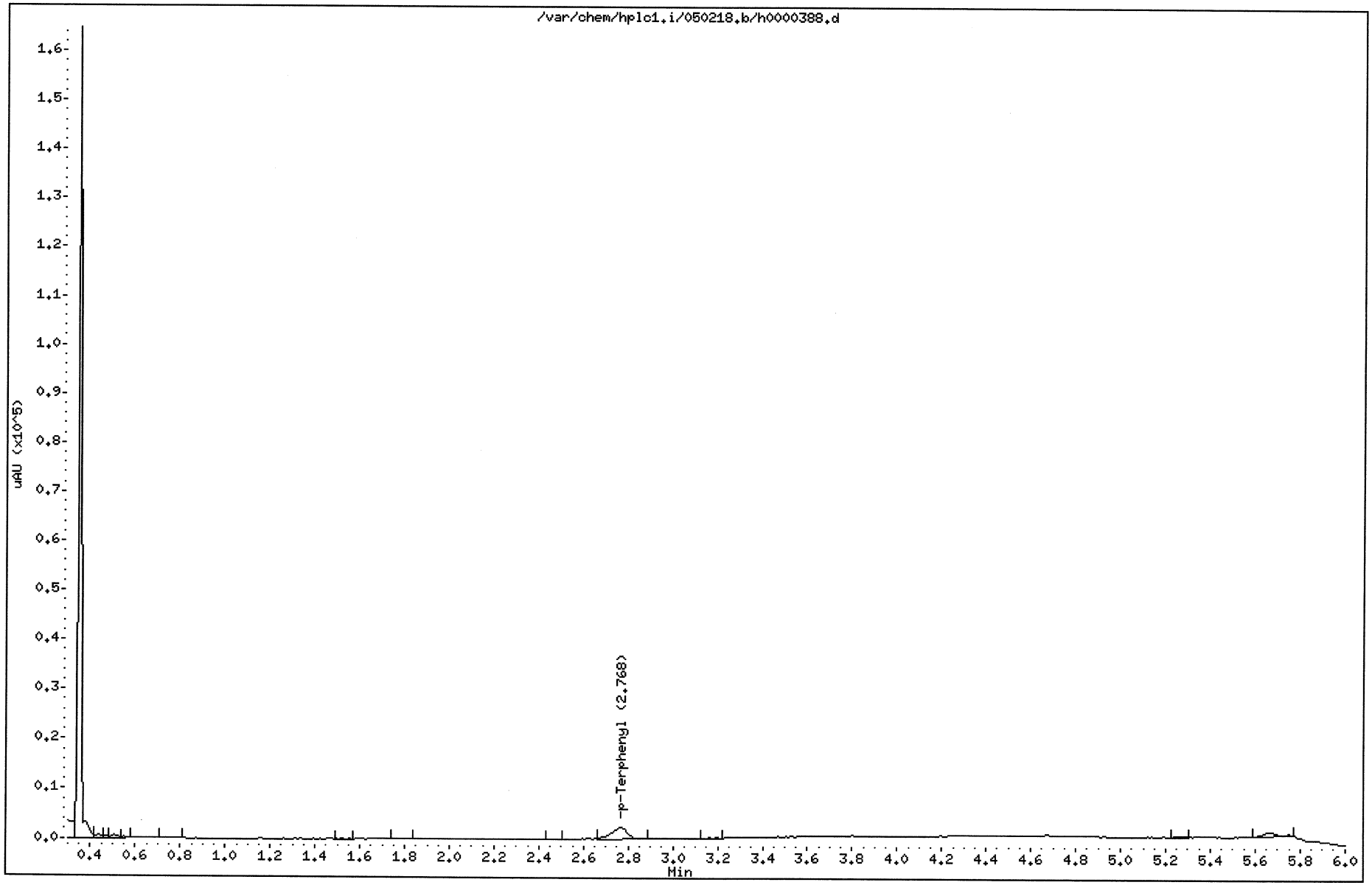
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000388.d
Date : 18-FEB-2005 14:51
Client ID: 20502170402
Sample Info: 20502170402
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000146



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 86-CEF271-10S-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170403
Date Collected: 02/15/05 Time: 1500
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1457
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1
Lab File ID: 050218/H0000389

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000389.d
Lab Smp Id: 20502170403 Client Smp ID: 20502170403
Inj Date : 18-FEB-2005 14:57
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170403
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 15:43 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.833	2.877	-0.044	10620	1.46814	1.47(M)

QC Flag Legend

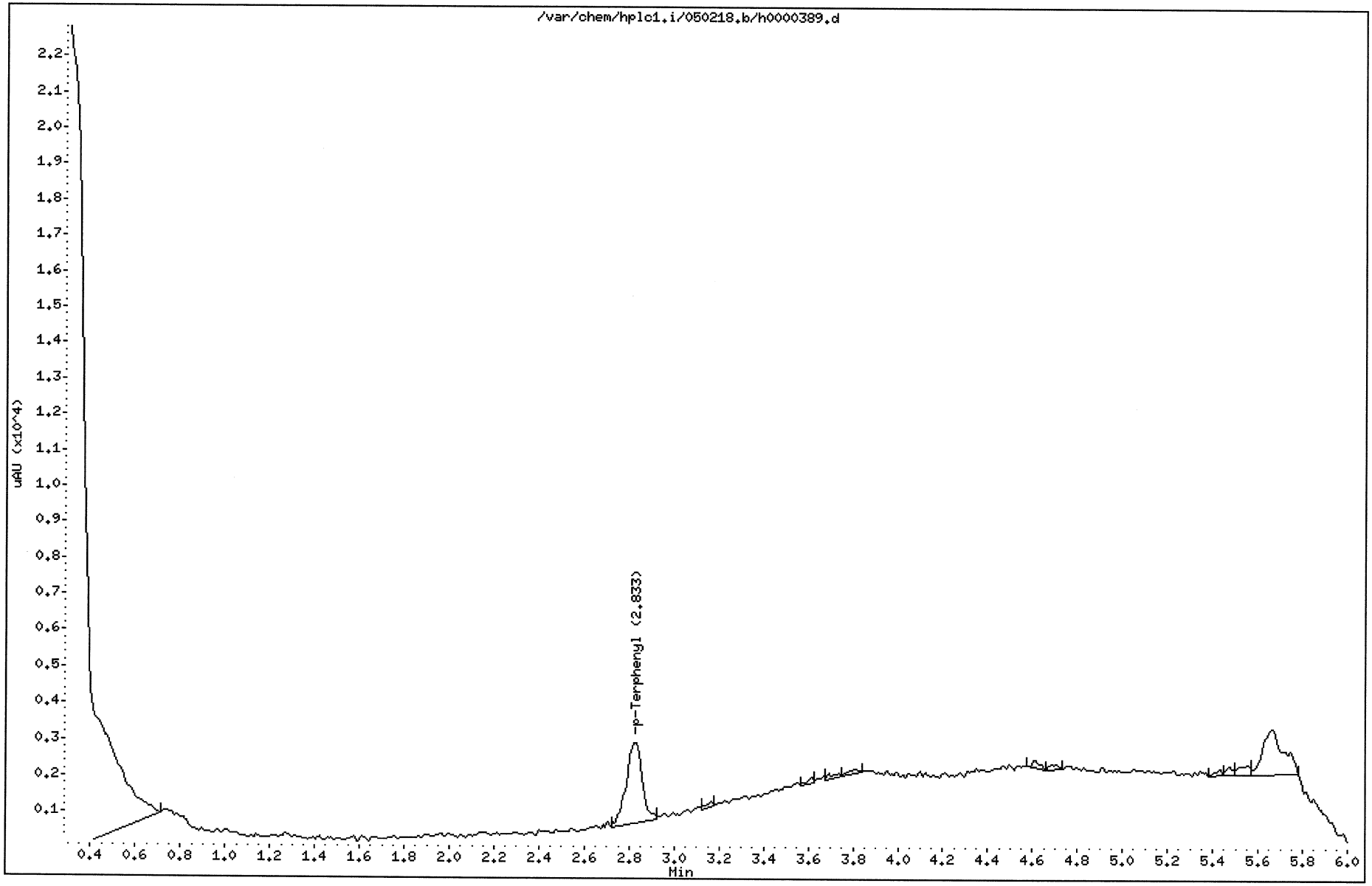
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000389.d
Date : 18-FEB-2005 14:57
Client ID: 20502170403
Sample Info: 20502170403
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000149



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 86-CEF271-12S-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170404
Date Collected: 02/15/05 Time: 1410
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1504
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1
Lab File ID: 050218/H0000390

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000390.d
Lab Smp Id: 20502170404 Client Smp ID: 20502170404
Inj Date : 18-FEB-2005 15:04
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170404
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 15:43 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.797	2.877	-0.080	12083	1.67045	1.67 (M)

QC Flag Legend

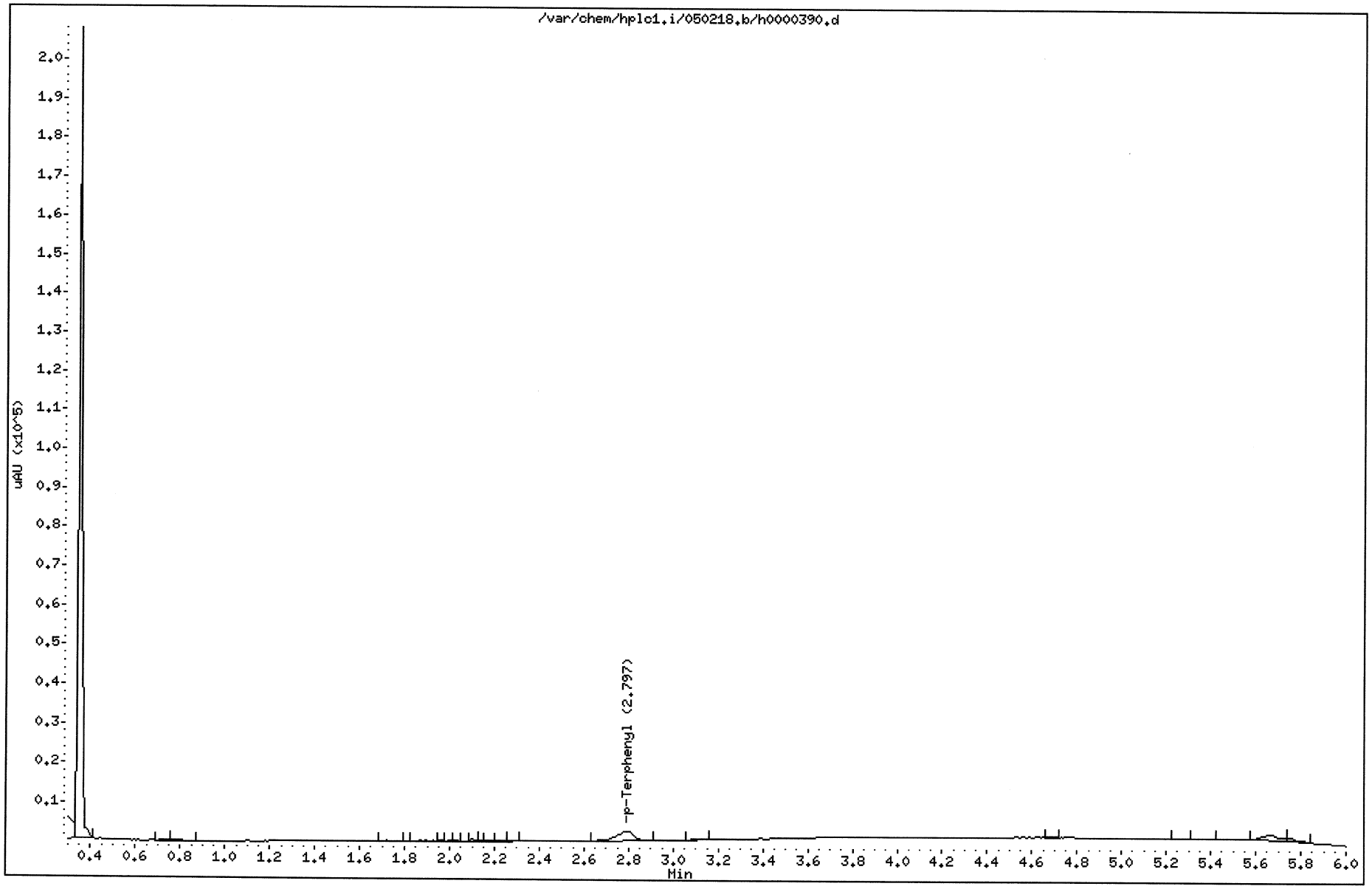
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000390.d
Date : 18-FEB-2005 15:04
Client ID: 20502170404
Sample Info: 20502170404
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000152



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 086-271-DP-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170407
Date Collected: Time:
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1525
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1
Lab File ID: 050218/H0000393

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000393.d
Lab Smp Id: 20502170407 Client Smp ID: 20502170407
Inj Date : 18-FEB-2005 15:25
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170407
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 15:43 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

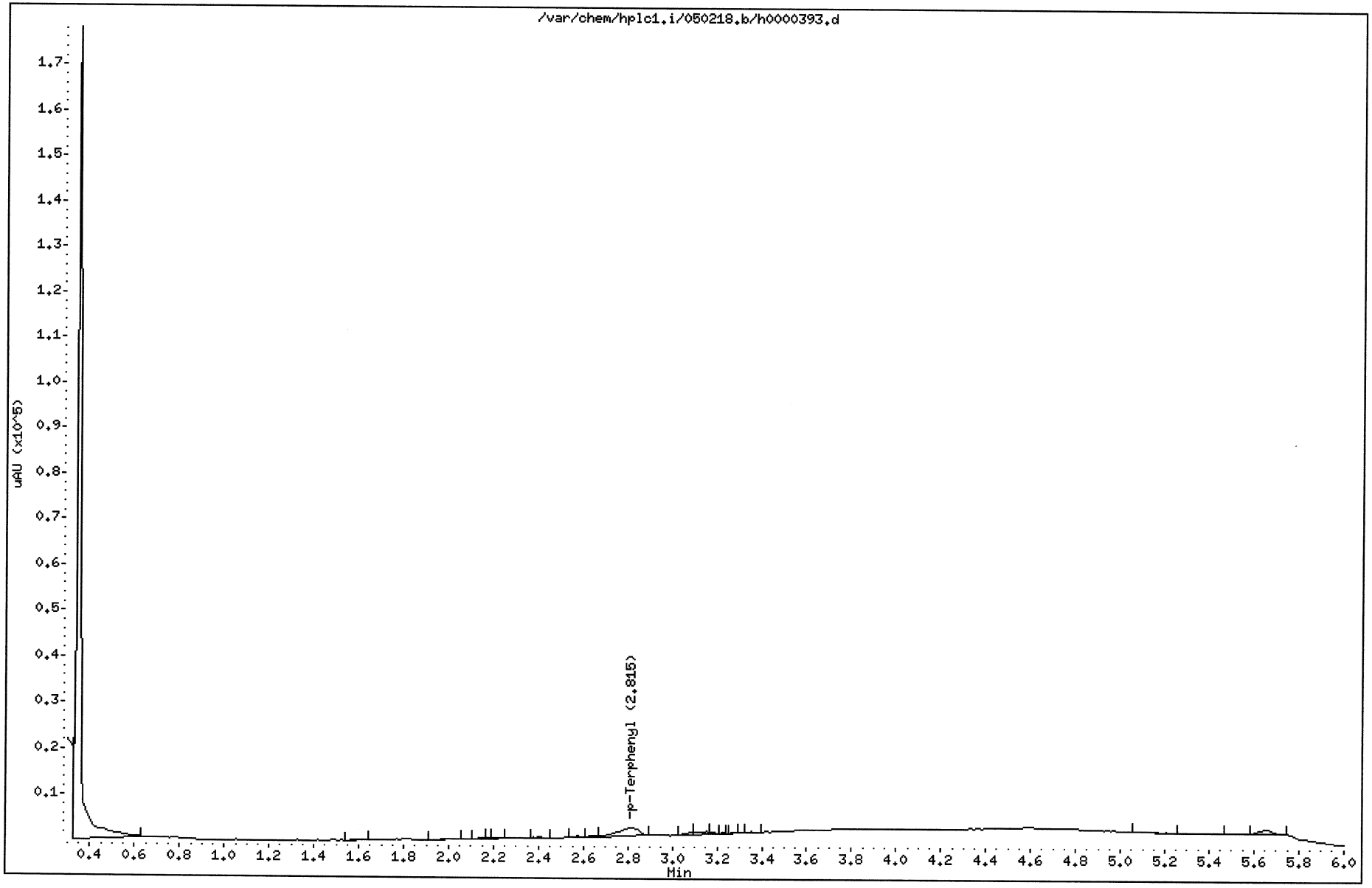
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.815	2.877	-0.062	11241	1.55399	1.55

Data File: /var/chem/hplc1.i/050218.b/h0000393.d
Date : 18-FEB-2005 15:25
Client ID: 20502170407
Sample Info: 20502170407
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000155



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 086-271-EB-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170408
Date Collected: 02/15/05 Time: 1700
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1532
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L
Lab File ID: 050218/H0000394

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000394.d
Lab Smp Id: 20502170408 Client Smp ID: 20502170408
Inj Date : 18-FEB-2005 15:32
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170408
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 15:43 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.777	2.877	-0.100	10679	1.47638	1.48 (M)

QC Flag Legend

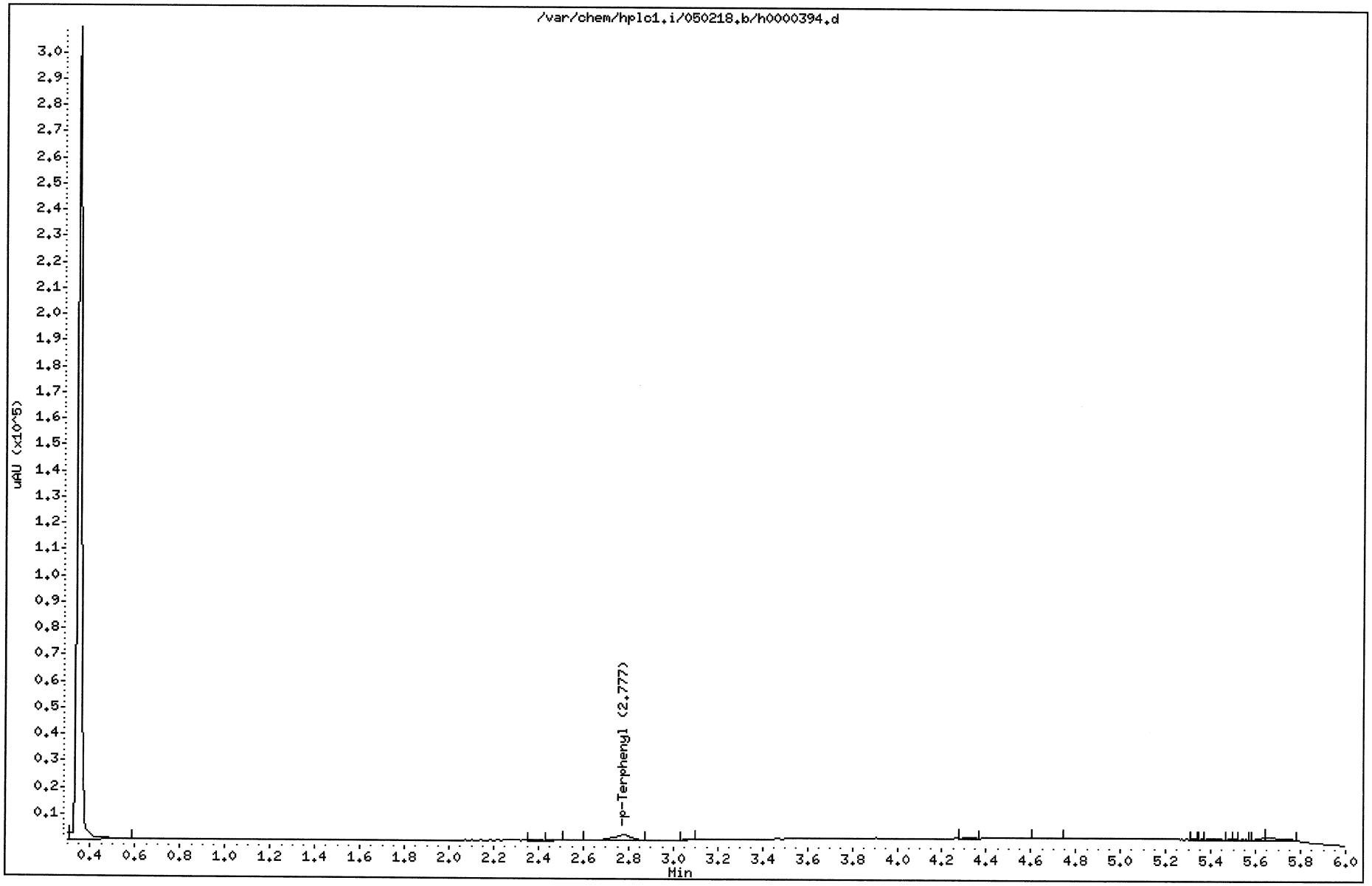
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000394.d
Date : 18-FEB-2005 15:32
Client ID: 20502170408
Sample Info: 20502170408
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000158



GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218.b/flpnauv.m
Cal Date : 18-Feb-2005 16:59 rlw
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/hplc1.i/041007.b/h0008223.d
Level 2: /var/chem/hplc1.i/041007.b/h0008224.d
Level 3: /var/chem/hplc1.i/041007.b/h0008225.d
Level 4: /var/chem/hplc1.i/041007.b/h0008226.d
Level 5: /var/chem/hplc1.i/041007.b/h0008227.d
Level 6: /var/chem/hplc1.i/041007.b/h0008228.d
Level 7: /var/chem/hplc1.i/041007.b/h0008229.d
Level 8: /var/chem/hplc1.i/041007.b/h0008230.d

Compound	0.10000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8						
1 Naphthalene	+++++	2844	2936	2870	2836	2351		
	2599	2540					2711	7.979
2 Acenaphthylene	+++++	+++++	+++++	2006	2001	1571		
	1748	1699					1805	10.652
3 1-Methynaphthalene	+++++	+++++	+++++	1490	1540	1329		
	1454	1433					1449	5.411
4 2-Methylnaphthalene	+++++	+++++	1888	1910	2116	1954		
	2084	2054					2001	4.809
5 Acenaphthene	+++++	+++++	+++++	901	1025	861		
	984	934					941	6.912
6 Fluorene	+++++	+++++	10994	11392	11684	11255		
	11499	11304					11355	2.058
7 Phenanthrene	26540	27128	25354	27948	27711	26767		
	27072	26509					26879	2.991

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218.b/flpnauv.m
Cal Date : 18-Feb-2005 16:59 rlw
Curve Type : Average

Compound	0.10000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8						
8 Anthracene	59260	55860	55392	60023	58325	56587		
	55280	51527					56532	4.785
9 Fluoranthene	6490	5688	6476	7693	7406	6885		
	7117	6853					6826	9.111
10 Pyrene	6580	5876	5008	6390	6865	6015		
	6210	5918					6108	9.167
12 Benzo(a)Anthracene	15930	15676	16226	16966	16552	16503		
	16562	16421					16354	2.467
13 Chrysene	28000	29716	25970	27349	27093	26839		
	26894	26490					27294	4.194
14 Benzo(b)Fluoranthene	19520	17904	22182	23192	20300	20102		
	20044	19774					20377	7.997
15 Benzo(k)Fluoranthene	11240	12932	13184	13623	12096	12580		
	12545	12370					12571	5.745
16 Benzo(a)Pyrene	17730	17492	16248	18568	16523	18340		
	18105	17941					17618	4.735
17 Dibenzo(a,h)Anthracene	3790	3760	4456	4802	4336	4272		
	4023	4006					4181	8.477
18 Benzo(g,h,i)Perylene	5250	5780	6924	8101	6876	6953		
	6786	6699					6671	12.742

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218.b/flpnauv.m
Cal Date : 18-Feb-2005 16:59 rlw
Curve Type : Average

Compound	0.10000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8						
19 Indeno(1,2,3-c,d)Pyrene	+++++	12784	12530	15380	14411	14828		
	14371	14363					14095	7.443
$ 11 p-Terphenyl	+++++	7116	7066	7532	7360	7229		
	7205	7128					7234	2.251

GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008223.d
Lab Smp Id: 8310STD00.1 Client Smp ID: 8310STD00.1
Inj Date : 07-OCT-2004 11:19
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD00.1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
6 Fluorene	1.597	1.597	0.000	1351	0.10000	0.119
7 Phenanthrene	1.837	1.837	0.000	2654	0.10000	0.0987
8 Anthracene	2.078	2.078	0.000	5926	0.10000	0.105
9 Fluoranthene	2.311	2.311	0.000	649	0.10000	0.0951
10 Pyrene	2.491	2.491	0.000	658	0.10000	0.108(M)
$ 11 p-Terphenyl	2.951	2.951	0.000	829	0.10000	0.115
12 Benzo(a)Anthracene	3.138	3.138	0.000	1593	0.10000	0.0974
13 Chrysene	3.291	3.291	0.000	2800	0.10000	0.103
14 Benzo(b)Fluoranthene	3.777	3.777	0.000	1952	0.10000	0.0958(M)
15 Benzo(k)Fluoranthene	4.024	4.024	0.000	1124	0.10000	0.0894(M)
16 Benzo(a)Pyrene	4.211	4.211	0.000	1773	0.10000	0.101
17 Dibenzo(a,h)Anthracene	4.537	4.537	0.000	379	0.10000	0.0907(M)
18 Benzo(g,h,i)Perylene	4.671	4.671	0.000	525	0.10000	0.0787(M)
19 Indeno(1,2,3-c,d)Pyrene	4.844	4.844	0.000	1121	0.10000	0.0795

QC Flag Legend

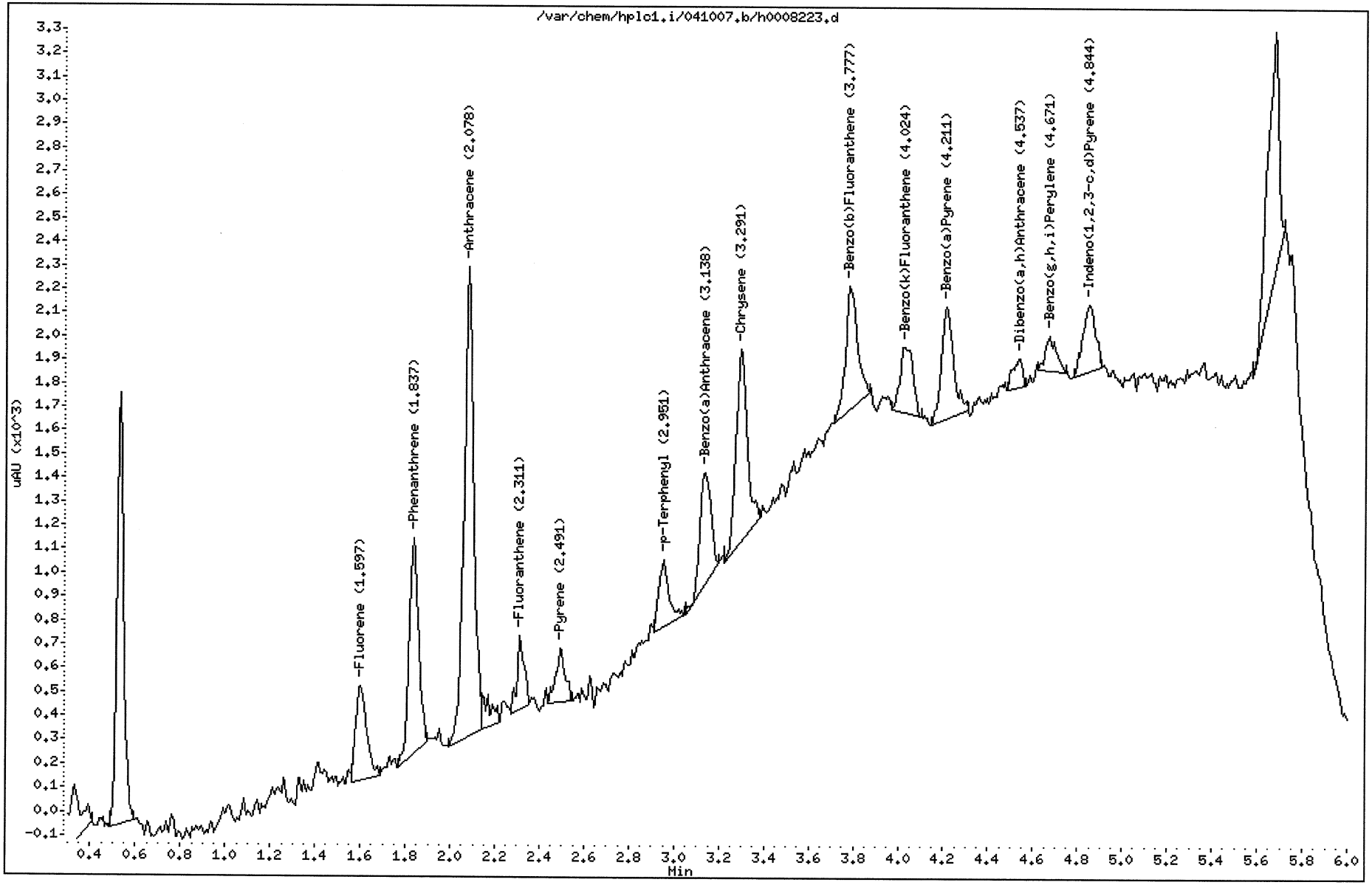
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007.b/h0008223.d
Date : 07-OCT-2004 11:19
Client ID: 8310STD00.1
Sample Info: 8310STD00.1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000164



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008224.d
Lab Smp Id: 8310STD0.25 Client Smp ID: 8310STD0.25
Inj Date : 07-OCT-2004 11:26
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD0.25
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:26 Cal File: h0008224.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
	1 Naphthalene	1.000	1.003	-0.003	711	0.25000	0.262
	4 2-Methylnaphthalene	1.420	1.423	-0.003	503	0.25000	0.249
	6 Fluorene	1.600	1.597	0.003	2704	0.25000	0.238
	7 Phenanthrene	1.833	1.837	-0.004	6782	0.25000	0.252
	8 Anthracene	2.073	2.078	-0.005	13965	0.25000	0.247
	9 Fluoranthene	2.313	2.311	0.002	1422	0.25000	0.208
	10 Pyrene	2.493	2.491	0.002	1469	0.25000	0.241
$	11 p-Terphenyl	2.940	2.951	-0.011	1779	0.25000	0.246
	12 Benzo(a)Anthracene	3.127	3.138	-0.011	3919	0.25000	0.240
	13 Chrysene	3.280	3.291	-0.011	7429	0.25000	0.272
	14 Benzo(b)Fluoranthene	3.773	3.777	-0.004	4476	0.25000	0.220
	15 Benzo(k)Fluoranthene	4.020	4.024	-0.004	3233	0.25000	0.257
	16 Benzo(a)Pyrene	4.200	4.211	-0.011	4373	0.25000	0.248
	17 Dibenzo(a,h)Anthracene	4.513	4.537	-0.024	940	0.25000	0.222

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
18 Benzo(g,h,i)Perylene	4.667	4.671	-0.004	1445	0.25000	0.217(M)
19 Indeno(1,2,3-c,d)Pyrene	4.833	4.844	-0.011	3196	0.25000	0.227

QC Flag Legend

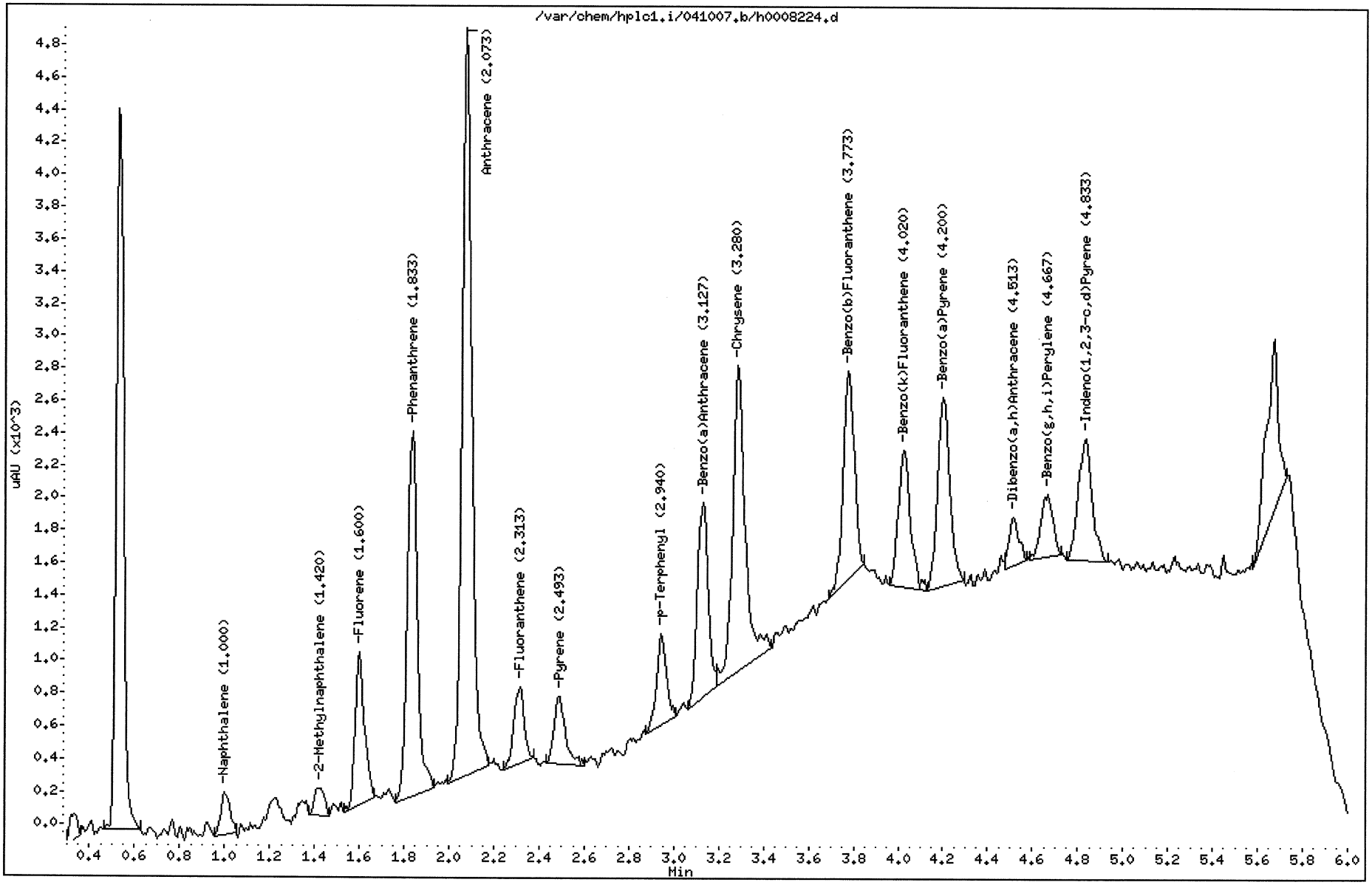
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007.b/h0008224.d
Date : 07-OCT-2004 11:26
Client ID: 8310STD0.25
Sample Info: 8310STD0.25
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000167



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008225.d
Lab Smp Id: 8310STD0.50 Client Smp ID: 8310STD0.50
Inj Date : 07-OCT-2004 11:33
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD0.50
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:33 Cal File: h0008225.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

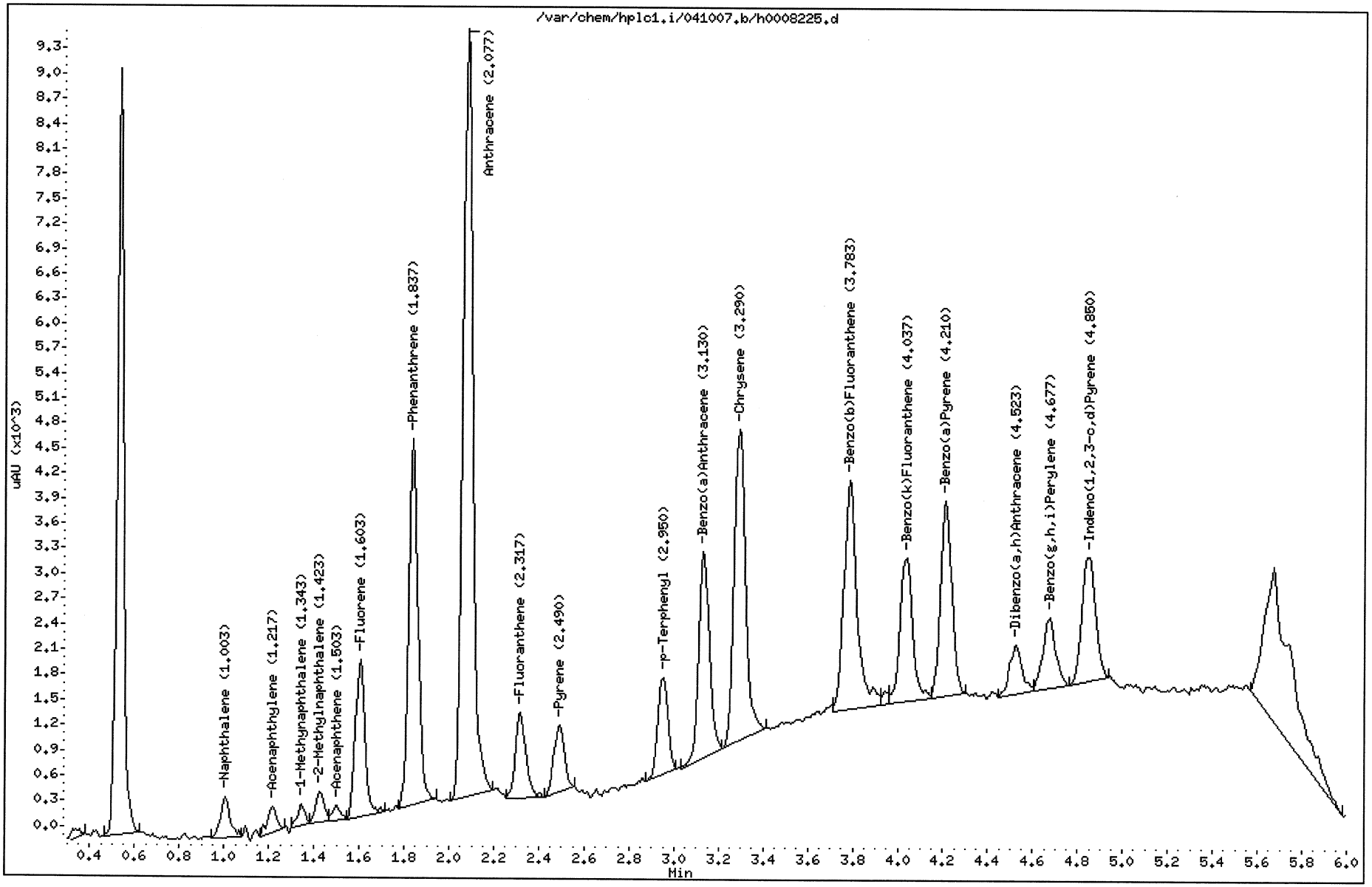
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.003	1.003	0.000	1468	0.50000	0.542
2 Acenaphthylene	1.217	1.217	0.000	892	0.50000	0.494
3 1-Methynaphthalene	1.343	1.343	0.000	588	0.50000	0.406
4 2-Methylnaphthalene	1.423	1.423	0.000	944	0.50000	0.466
5 Acenaphthene	1.503	1.497	0.006	414	0.50000	0.440
6 Fluorene	1.603	1.597	0.006	5497	0.50000	0.484
7 Phenanthrene	1.837	1.837	0.000	12677	0.50000	0.472
8 Anthracene	2.077	2.078	-0.001	27696	0.50000	0.490
9 Fluoranthene	2.317	2.311	0.006	3238	0.50000	0.474
10 Pyrene	2.490	2.491	-0.001	2504	0.50000	0.410
$ 11 p-Terphenyl	2.950	2.951	-0.001	3533	0.50000	0.488
12 Benzo(a)Anthracene	3.130	3.138	-0.008	8113	0.50000	0.496
13 Chrysene	3.290	3.291	-0.001	12985	0.50000	0.476
14 Benzo(b)Fluoranthene	3.783	3.777	0.006	11091	0.50000	0.544

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.037	4.024	0.013	6592	0.50000	0.524
16 Benzo(a)Pyrene	4.210	4.211	-0.001	8124	0.50000	0.461
17 Dibenzo(a,h)Anthracene	4.523	4.537	-0.014	2228	0.50000	0.526
18 Benzo(g,h,i)Perylene	4.677	4.671	0.006	3462	0.50000	0.519
19 Indeno(1,2,3-c,d)Pyrene	4.850	4.844	0.006	6265	0.50000	0.444

000170

Data File: /var/chem/hplc1.i/041007.b/h0008225.d
Date : 07-OCT-2004 11:33
Client ID: 8310STD0.50
Sample Info: 8310STD0.50
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008226.d
Lab Smp Id: 8310SATD001 Client Smp ID: 8310SATD001
Inj Date : 07-OCT-2004 11:40
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310SATD001
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:40 Cal File: h0008226.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.007	1.003	0.004	2870	1.00000	1.06
2 Acenaphthylene	1.220	1.217	0.003	2006	1.00000	1.11
3 1-Methynaphthalene	1.340	1.343	-0.003	1490	1.00000	1.03
4 2-Methylnaphthalene	1.427	1.423	0.004	1910	1.00000	0.944
5 Acenaphthene	1.500	1.497	0.003	901	1.00000	0.957
6 Fluorene	1.600	1.597	0.003	11392	1.00000	1.00
7 Phenanthrene	1.833	1.837	-0.004	27948	1.00000	1.04
8 Anthracene	2.080	2.078	0.002	60023	1.00000	1.06
9 Fluoranthene	2.313	2.311	0.002	7693	1.00000	1.13
10 Pyrene	2.487	2.491	-0.004	6390	1.00000	1.05
$ 11 p-Terphenyl	2.947	2.951	-0.004	7532	1.00000	1.04
12 Benzo(a)Anthracene	3.127	3.138	-0.011	16966	1.00000	1.04
13 Chrysene	3.287	3.291	-0.004	27349	1.00000	1.00
14 Benzo(b)Fluoranthene	3.773	3.777	-0.004	23192	1.00000	1.14

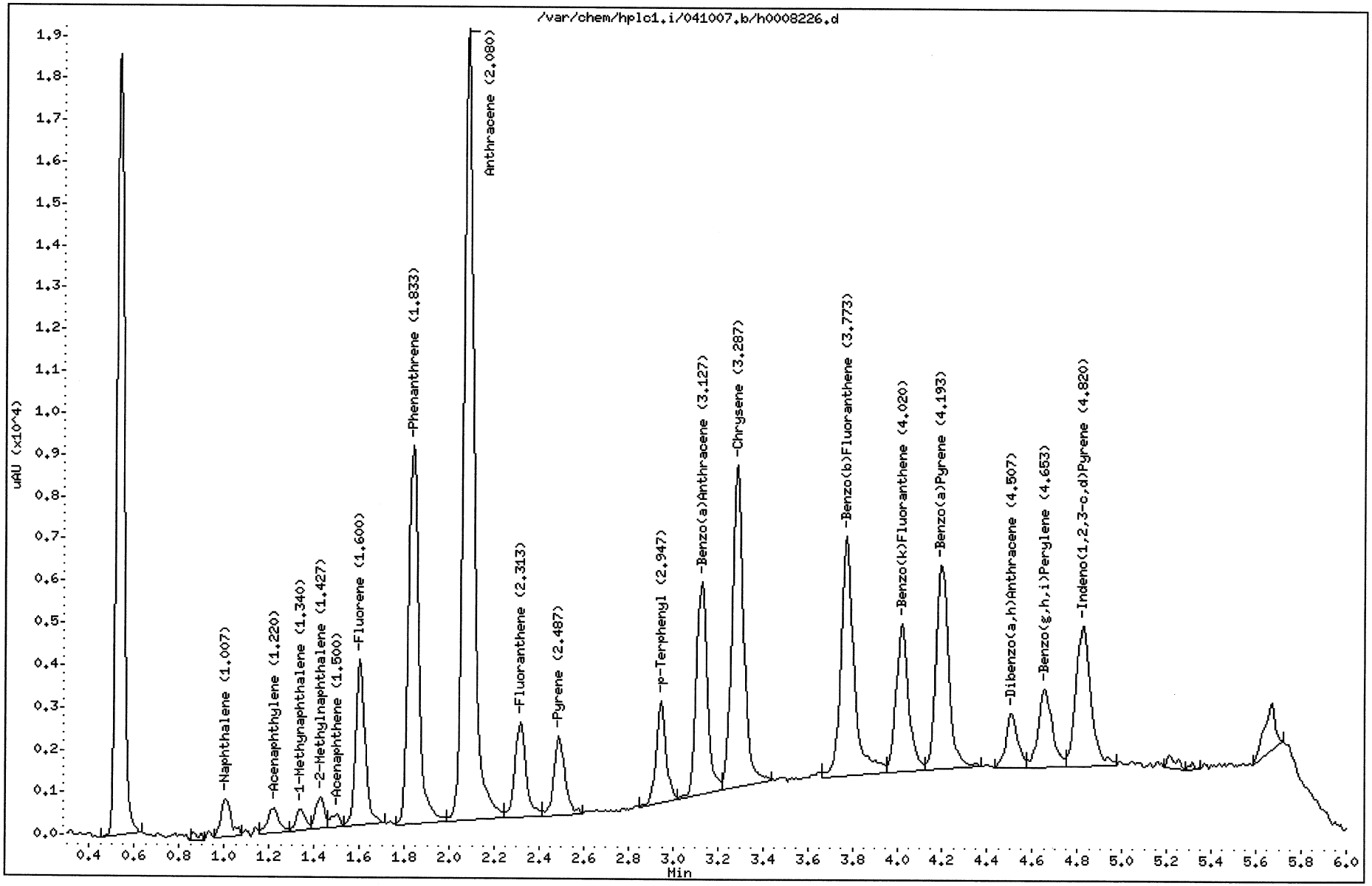
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.020	4.024	-0.004	13623	1.00000	1.08
16 Benzo(a)Pyrene	4.193	4.211	-0.018	18568	1.00000	1.05
17 Dibenzo(a,h)Anthracene	4.507	4.537	-0.030	4802	1.00000	1.13
18 Benzo(g,h,i)Perylene	4.653	4.671	-0.018	8101	1.00000	1.21
19 Indeno(1,2,3-c,d)Pyrene	4.820	4.844	-0.024	15380	1.00000	1.09

Data File: /var/chem/hplc1.i/041007.b/h0008226.d
Date : 07-OCT-2004 11:40
Client ID: 8310SATD001
Sample Info: 8310SATD001
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000173



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008227.d
Lab Smp Id: 8310STD02.5 Client Smp ID: 8310STD02.5
Inj Date : 07-OCT-2004 11:47
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD02.5
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:47 Cal File: h0008227.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

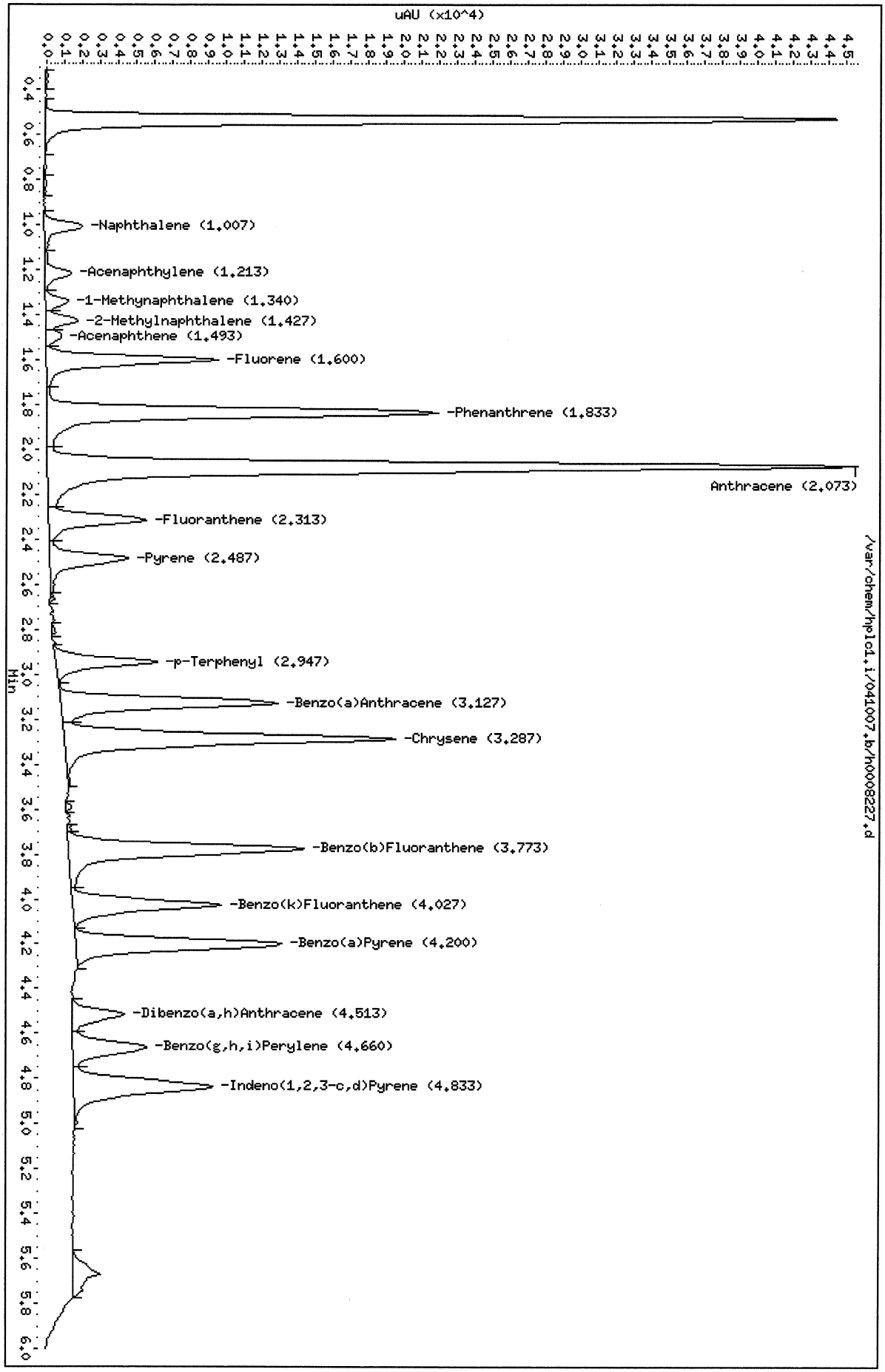
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.007	1.003	0.004	7090	2.50000	2.62
2 Acenaphthylene	1.213	1.217	-0.004	5002	2.50000	2.77
3 1-Methynaphthalene	1.340	1.343	-0.003	3850	2.50000	2.66
4 2-Methylnaphthalene	1.427	1.423	0.004	5291	2.50000	2.61
5 Acenaphthene	1.493	1.497	-0.004	2562	2.50000	2.72
6 Fluorene	1.600	1.597	0.003	29210	2.50000	2.57
7 Phenanthrene	1.833	1.837	-0.004	69278	2.50000	2.58
8 Anthracene	2.073	2.078	-0.005	145812	2.50000	2.58
9 Fluoranthene	2.313	2.311	0.002	18515	2.50000	2.71
10 Pyrene	2.487	2.491	-0.004	17162	2.50000	2.81
$ 11 p-Terphenyl	2.947	2.951	-0.004	18400	2.50000	2.54
12 Benzo(a)Anthracene	3.127	3.138	-0.011	41380	2.50000	2.53
13 Chrysene	3.287	3.291	-0.004	67732	2.50000	2.48
14 Benzo(b)Fluoranthene	3.773	3.777	-0.004	50750	2.50000	2.49

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.027	4.024	0.003	30241	2.50000	2.41
16 Benzo(a)Pyrene	4.200	4.211	-0.011	41307	2.50000	2.34
17 Dibenzo(a,h)Anthracene	4.513	4.537	-0.024	10840	2.50000	2.56
18 Benzo(g,h,i)Perylene	4.660	4.671	-0.011	17191	2.50000	2.58
19 Indeno(1,2,3-c,d)Pyrene	4.833	4.844	-0.011	36027	2.50000	2.56

Data File: /var/chem/hplc1.i/041007.b/h0008227.d
Date : 07-OCT-2004 11:47
Client ID: 8310STD02.5
Sample Info: 8310STD02.5
Volume Injected (uL): 10.0
Column phase: 2%TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008228.d
Lab Smp Id: 8310STD005 Client Smp ID: 8310STD005
Inj Date : 07-OCT-2004 11:54
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD005
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:54 Cal File: h0008228.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.002	1.003	-0.001	11754	5.00000	4.34 (M)
2 Acenaphthylene	1.216	1.217	-0.001	7857	5.00000	4.35
3 1-Methynaphthalene	1.342	1.343	-0.001	6646	5.00000	4.59
4 2-Methylnaphthalene	1.429	1.423	0.006	9770	5.00000	4.83
5 Acenaphthene	1.496	1.497	-0.001	4306	5.00000	4.58
6 Fluorene	1.602	1.597	0.005	56276	5.00000	4.96
7 Phenanthrene	1.836	1.837	-0.001	133837	5.00000	4.98
8 Anthracene	2.083	2.078	0.005	282933	5.00000	5.00
9 Fluoranthene	2.316	2.311	0.005	34426	5.00000	5.04
10 Pyrene	2.489	2.491	-0.002	30073	5.00000	4.92
$ 11 p-Terphenyl	2.949	2.951	-0.002	36146	5.00000	5.00
12 Benzo(a)Anthracene	3.136	3.138	-0.002	82514	5.00000	5.05
13 Chrysene	3.296	3.291	0.005	134197	5.00000	4.92
14 Benzo(b)Fluoranthene	3.783	3.777	0.006	100512	5.00000	4.93

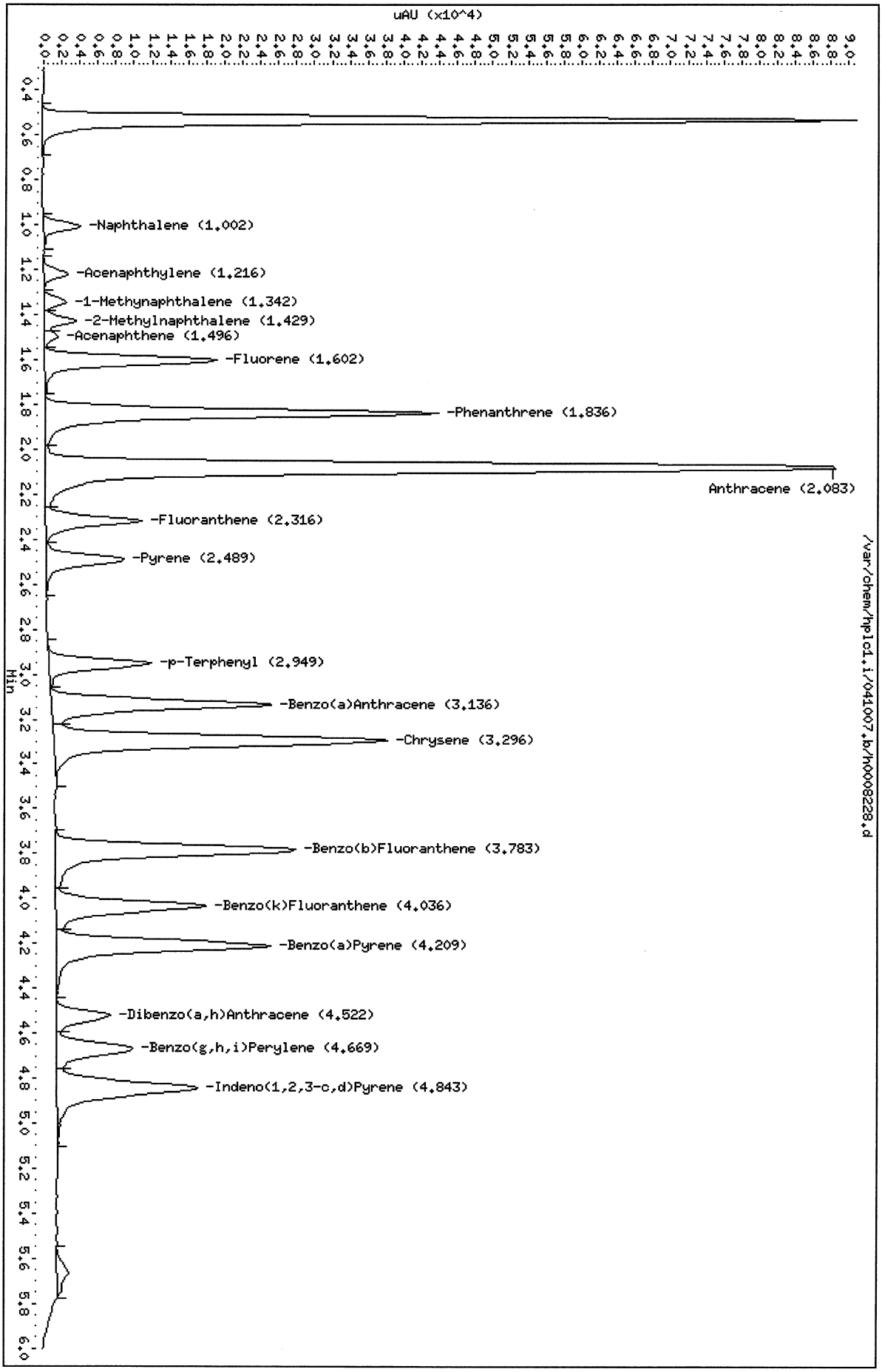
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.036	4.024	0.012	62899	5.00000	5.00
16 Benzo(a)Pyrene	4.209	4.211	-0.002	91701	5.00000	5.20
17 Dibenzo(a,h)Anthracene	4.522	4.537	-0.015	21360	5.00000	5.04
18 Benzo(g,h,i)Perylene	4.669	4.671	-0.002	34763	5.00000	5.21
19 Indeno(1,2,3-c,d)Pyrene	4.843	4.844	-0.001	74138	5.00000	5.26

QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007.b/h0008228.d
Date : 07-OCT-2004 11:54
Client ID: 8310STD005
Sample Info: 8310STD005
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008229.d
Lab Smp Id: 8310STD010 Client Smp ID: 8310STD010
Inj Date : 07-OCT-2004 12:01
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310STD010
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:01 Cal File: h0008229.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

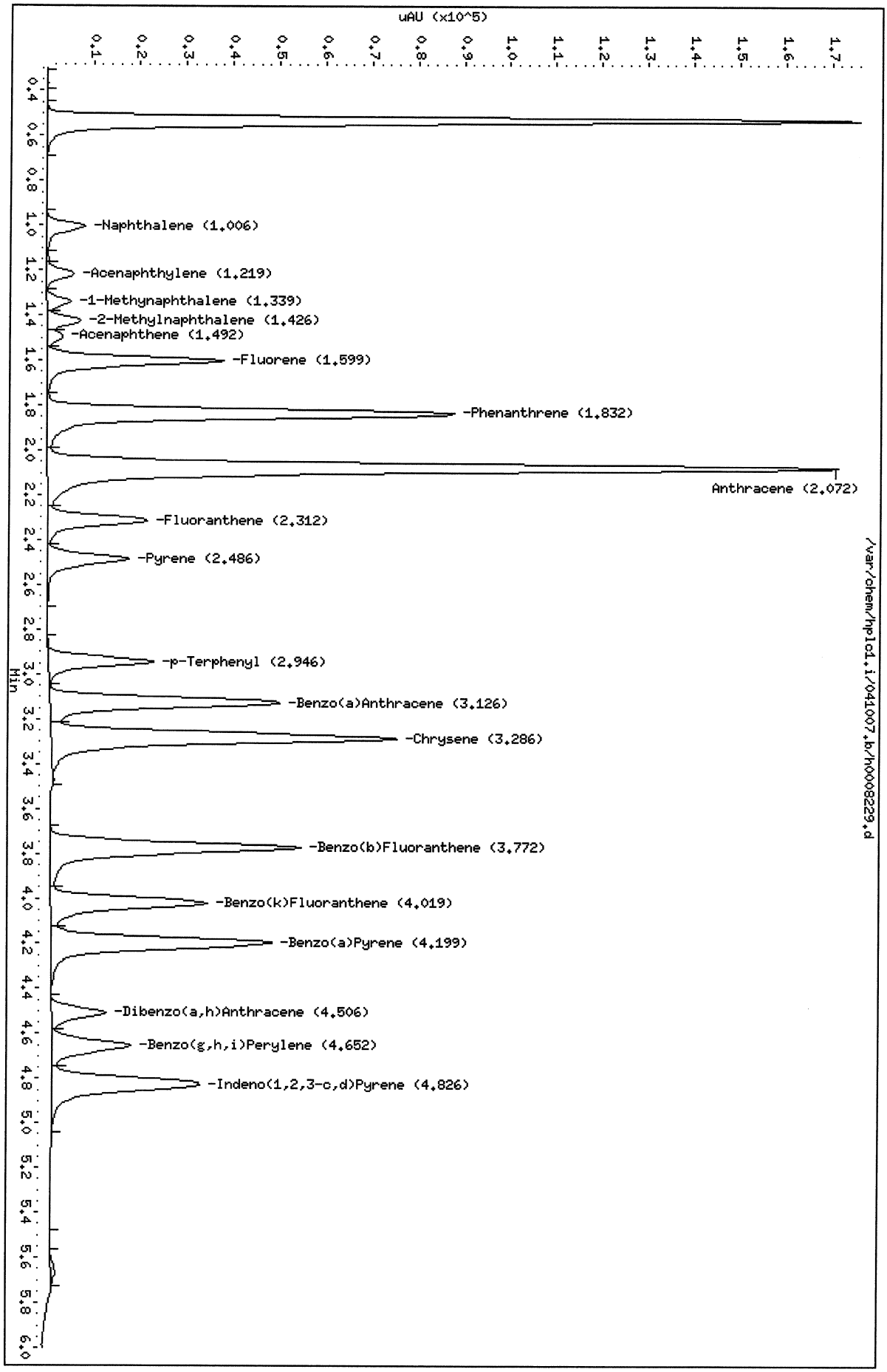
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.006	1.003	0.003	25989	10.0000	9.59
2 Acenaphthylene	1.219	1.217	0.002	17478	10.0000	9.68
3 1-Methynaphthalene	1.339	1.343	-0.004	14539	10.0000	10.0
4 2-Methylnaphthalene	1.426	1.423	0.003	20843	10.0000	10.3
5 Acenaphthene	1.492	1.497	-0.005	9844	10.0000	10.5
6 Fluorene	1.599	1.597	0.002	114986	10.0000	10.1
7 Phenanthrene	1.832	1.837	-0.005	270718	10.0000	10.1
8 Anthracene	2.072	2.078	-0.006	552800	10.0000	9.78
9 Fluoranthene	2.312	2.311	0.001	71173	10.0000	10.4
10 Pyrene	2.486	2.491	-0.005	62096	10.0000	10.2
$ 11 p-Terphenyl	2.946	2.951	-0.005	72047	10.0000	9.96
12 Benzo(a)Anthracene	3.126	3.138	-0.012	165618	10.0000	10.1
13 Chrysene	3.286	3.291	-0.005	268941	10.0000	9.85
14 Benzo(b)Fluoranthene	3.772	3.777	-0.005	200441	10.0000	9.84

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.019	4.024	-0.005	125446	10.0000	9.98
16 Benzo(a)Pyrene	4.199	4.211	-0.012	181052	10.0000	10.3
17 Dibenzo(a,h)Anthracene	4.506	4.537	-0.031	40228	10.0000	9.50
18 Benzo(g,h,i)Perylene	4.652	4.671	-0.019	67865	10.0000	10.2
19 Indeno(1,2,3-c,d)Pyrene	4.826	4.844	-0.018	143711	10.0000	10.2

Data File: /var/chem/hplc1.i/041007.b/h0008229.d
Date : 07-OCT-2004 12:01
Client ID: 8310STD010
Sample Info: 8310STD010
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007.b/h0008230.d
Lab Smp Id: 8310DTD020 Client Smp ID: 8310DTD020
Inj Date : 07-OCT-2004 12:08
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310DTD020
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007.b/flpnauv.m
Meth Date : 08-Nov-2004 15:49 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

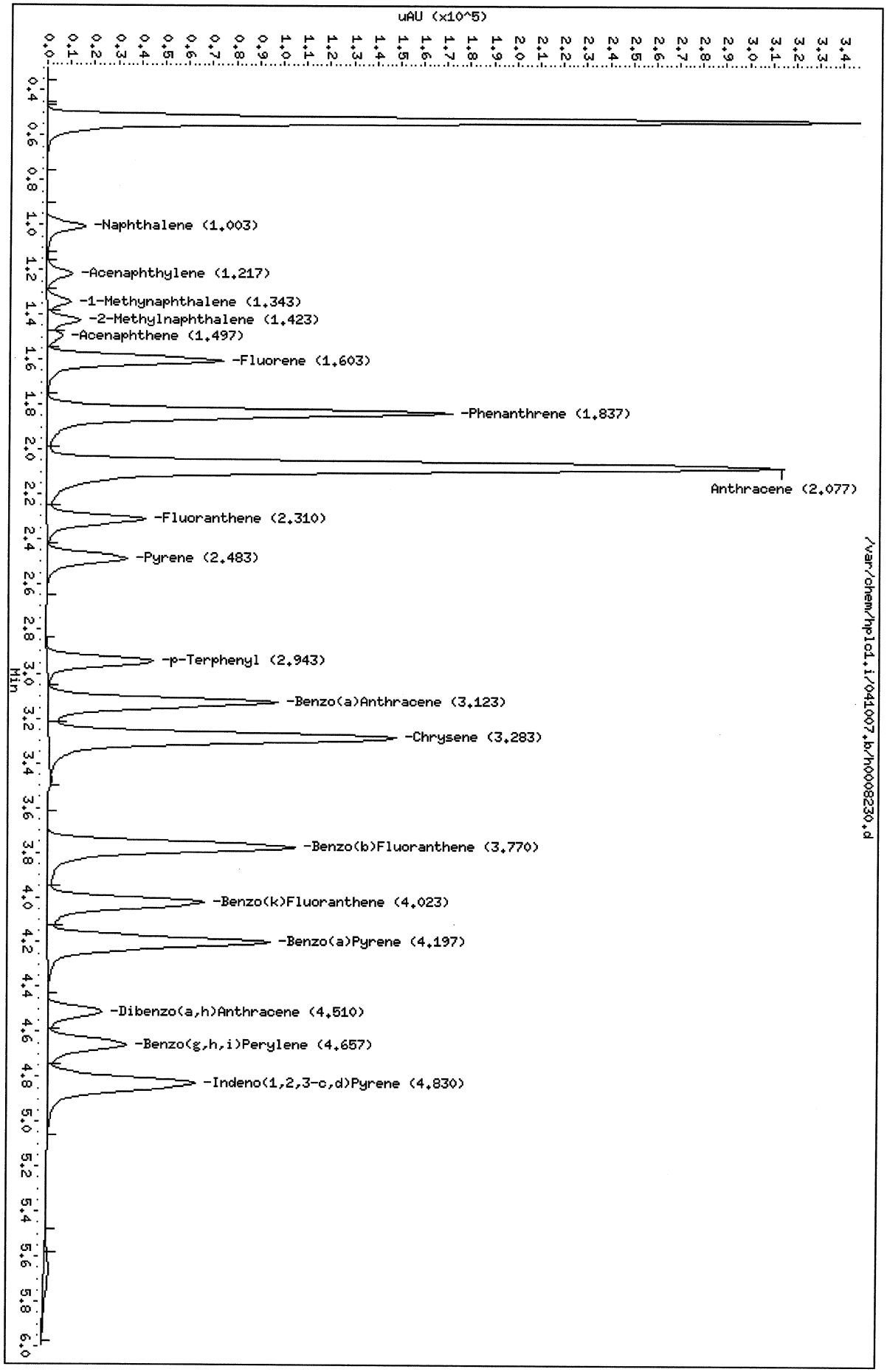
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.003	1.003	0.000	50803	20.0000	18.7
2 Acenaphthylene	1.217	1.217	0.000	33976	20.0000	18.8
3 1-Methynaphthalene	1.343	1.343	0.000	28658	20.0000	19.8
4 2-Methylnaphthalene	1.423	1.423	0.000	41076	20.0000	20.3
5 Acenaphthene	1.497	1.497	0.000	18680	20.0000	19.8
6 Fluorene	1.603	1.597	0.006	226083	20.0000	19.9
7 Phenanthrene	1.837	1.837	0.000	530172	20.0000	19.7
8 Anthracene	2.077	2.078	-0.001	1030545	20.0000	18.2
9 Fluoranthene	2.310	2.311	-0.001	137054	20.0000	20.1
10 Pyrene	2.483	2.491	-0.008	118358	20.0000	19.4
$ 11 p-Terphenyl	2.943	2.951	-0.008	142550	20.0000	19.7
12 Benzo(a)Anthracene	3.123	3.138	-0.015	328421	20.0000	20.1
13 Chrysene	3.283	3.291	-0.008	529796	20.0000	19.4
14 Benzo(b)Fluoranthene	3.770	3.777	-0.007	395475	20.0000	19.4

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.023	4.024	-0.001	247406	20.0000	19.7
16 Benzo(a)Pyrene	4.197	4.211	-0.014	358828	20.0000	20.4
17 Dibenzo(a,h)Anthracene	4.510	4.537	-0.027	80128	20.0000	18.9
18 Benzo(g,h,i)Perylene	4.657	4.671	-0.014	133981	20.0000	20.1
19 Indeno(1,2,3-c,d)Pyrene	4.830	4.844	-0.014	287252	20.0000	20.4

Data File: /var/chem/hplc1.i/041007.b/h0008230.d
Date : 07-OCT-2004 12:08
Client ID: 8310DTD020
Sample Info: 8310DTD020
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



Data File: /var/chem/hplc1.i/041012.b/h0008171.d
Report Date: 12-Oct-2004 13:32

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id:
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/041012.b/flpnauv.m
Misc Info:

Client SDG: 041012
Fraction: OTHER

Operator: rlw
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	2.50	2.10	83.86	80-120
2 Acenaphthylene	2.50	2.16	86.27	80-120
3 1-Methynaphthalene	2.50	2.41	96.49	80-120
4 2-Methylnaphthalen	2.50	2.44	97.56	80-120
5 Acenaphthene	2.50	2.46	98.48	80-120
6 Fluorene	2.50	2.51	100.24	80-120
7 Phenanthrene	2.50	2.55	101.88	80-120
8 Anthracene	2.50	2.55	102.12	80-120
9 Fluoranthene	2.50	2.57	102.61	80-120
10 Pyrene	2.50	2.58	103.17	80-120
12 Benzo(a)Anthracene	2.50	2.47	98.78	80-120
13 Chrysene	2.50	2.39	95.45	80-120
14 Benzo(b)Fluoranthe	2.50	2.54	101.62	80-120
15 Benzo(k)Fluoranthe	2.50	2.49	99.68	80-120
16 Benzo(a)Pyrene	2.50	2.40	96.18	80-120
17 Dibenzo(a,h)Anthra	2.50	2.40	95.96	80-120
18 Benzo(g,h,i)Peryle	2.50	2.47	98.91	80-120
19 Indeno(1,2,3-c,d)P	2.50	2.50	99.92	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	2.00	2.33	116.74	40-140

GCAL, Inc.

Data file : /var/chem/hplc1.i/041012.b/h0008171.d
Lab Smp Id:
Inj Date : 12-OCT-2004 12:30
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310ICV
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041012.b/flpnauv.m
Meth Date : 12-Oct-2004 13:30 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	0.998	0.992	0.006	5683	2.09640	2.10(M)
2 Acenaphthylene	1.211	1.199	0.012	3893	2.15683	2.16
3 1-Methynaphthalene	1.331	1.326	0.005	3496	2.41237	2.41
4 2-Methylnaphthalene	1.418	1.406	0.012	4936	2.43910	2.44
5 Acenaphthene	1.491	1.479	0.012	2317	2.46206	2.46
6 Fluorene	1.597	1.579	0.018	28454	2.50593	2.51
7 Phenanthrene	1.831	1.806	0.025	68462	2.54708	2.55
8 Anthracene	2.071	2.039	0.032	144328	2.55305	2.55
9 Fluoranthene	2.304	2.272	0.032	17510	2.56518	2.57
10 Pyrene	2.478	2.439	0.039	15753	2.57924	2.58
$ 11 p-Terphenyl	2.938	2.886	0.052	16889	2.33487	2.33(M)
12 Benzo(a)Anthracene	3.118	3.066	0.052	40389	2.46960	2.47
13 Chrysene	3.277	3.219	0.058	65128	2.38618	2.39

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
14 Benzo(b)Fluoranthene	3.771	3.706	0.065	51766	2.54038	2.54
15 Benzo(k)Fluoranthene	4.024	3.953	0.071	31327	2.49195	2.49
16 Benzo(a)Pyrene	4.197	4.133	0.064	42363	2.40447	2.40
17 Dibenzo(a,h)Anthracene	4.511	4.446	0.065	10029	2.39891	2.40
18 Benzo(g,h,i)Perylene	4.657	4.593	0.064	16496	2.47272	2.47
19 Indeno(1,2,3-c,d)Pyrene	4.831	4.746	0.085	35208	2.49788	2.50

QC Flag Legend

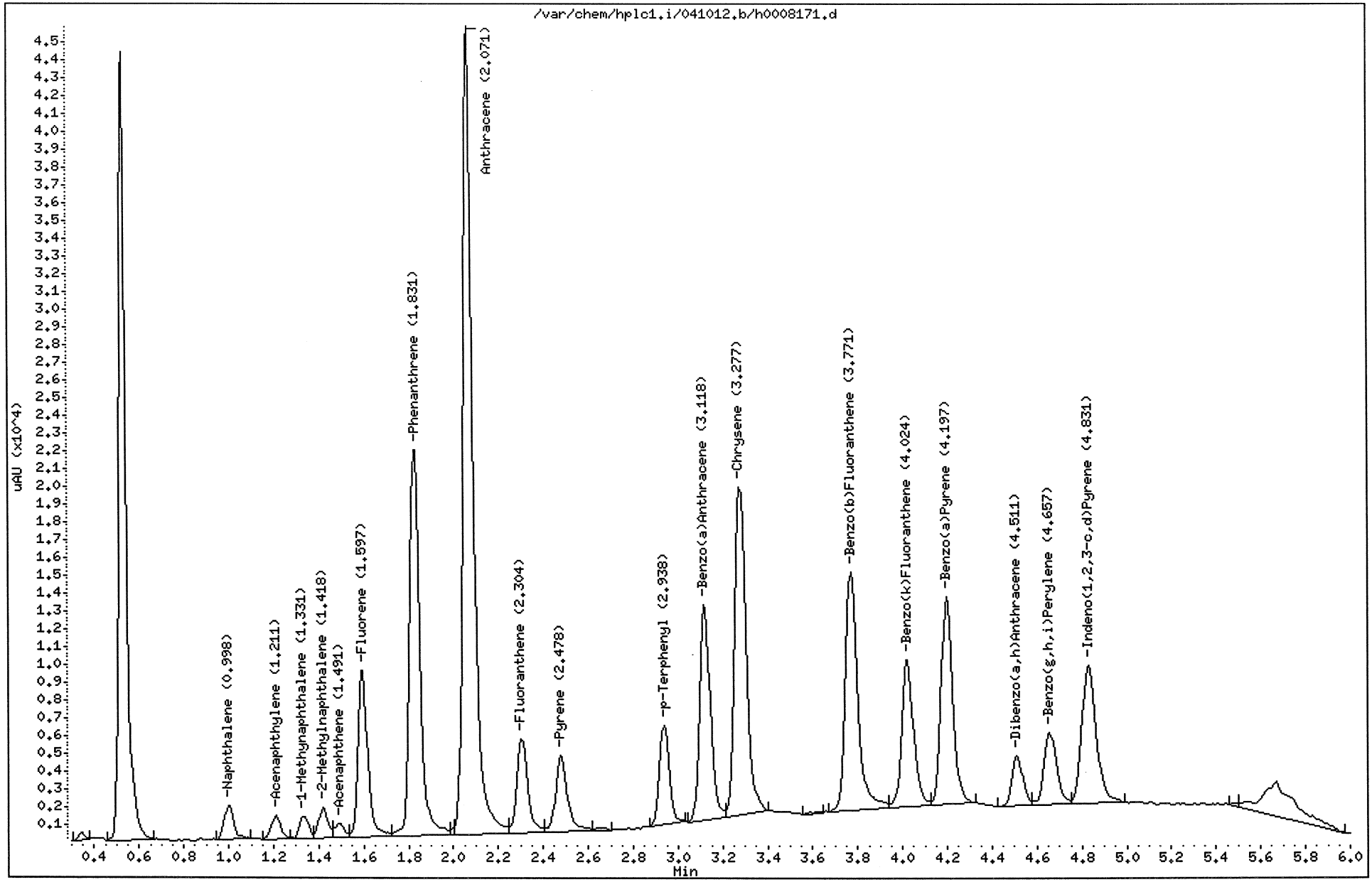
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041012.b/h0008171.d
Date : 12-OCT-2004 12:30
Client ID:
Sample Info: 8310ICV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000189



Data File: /var/chem/hplc1.i/050218.b/h0000383.d
Report Date: 18-Feb-2005 14:00

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0000383.d
Analysis Type: WATER
Lab Sample ID: 8310CCV
Method: /var/chem/hplc1.i/050218.b/flpnauv.m

Injection Date: 18-FEB-2005 13:48
Init. Cal. Date(s): 14-JAN-2004 07-OCT-2004
Init. Cal. Times: 15:08 12:08
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	2711	2589	0.010	4.49587	15.00000	Averaged
	2 Acenaphthylene	1805	1742	0.010	3.47930	15.00000	Averaged
	3 1-Methynaphthalene	1449	1383	0.010	4.55424	15.00000	Averaged
	4 2-Methylnaphthalene	2001	2092	0.010	-4.51939	15.00000	Averaged
	5 Acenaphthene	941	1032	0.010	-9.64424	15.00000	Averaged
	6 Fluorene	11355	11300	0.010	0.48419	15.00000	Averaged
	7 Phenanthrene	26879	25418	0.010	5.43296	15.00000	Averaged
	8 Anthracene	56532	50691	0.010	10.33138	15.00000	Averaged
	9 Fluoranthene	6826	7054	0.010	-3.34682	15.00000	Averaged
	10 Pyrene	6108	6091	0.010	0.26741	15.00000	Averaged
$	11 p-Terphenyl	7234	7273	0.010	-0.54262	15.00000	Averaged
	12 Benzo(a)Anthracene	16354	16100	0.010	1.55637	15.00000	Averaged
	13 Chrysene	27294	27494	0.010	-0.73318	15.00000	Averaged
	14 Benzo(b)Fluoranthene	20377	19302	0.010	5.27490	15.00000	Averaged
	15 Benzo(k)Fluoranthene	12571	11492	0.010	8.58579	15.00000	Averaged
	16 Benzo(a)Pyrene	17618	16127	0.010	8.46414	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	4181	4120	0.010	1.44308	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	6671	6701	0.010	-0.45219	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	14095	14461	0.010	-2.59354	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 4.01061
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000383.d
Lab Smp Id: 8310CCV
Client Smp ID: 8310CCV
Inj Date : 18-FEB-2005 13:48
Operator : rlw
Inst ID: hplc1.i
Smp Info : 8310CCV
Misc Info : 4-14-1
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 14:00 rlw
Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19
Cal File: h0008223.d
Als bottle: 1
Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon
Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	0.990	0.990	0.000	6472	2.50000	2.39
2 Acenaphthylene	1.203	1.203	0.000	4355	2.50000	2.41
3 1-Methynaphthalene	1.330	1.330	0.000	3458	2.50000	2.39
4 2-Methylnaphthalene	1.410	1.410	0.000	5228	2.50000	2.61
5 Acenaphthene	1.470	1.470	0.000	2579	2.50000	2.74
6 Fluorene	1.583	1.583	0.000	28249	2.50000	2.49
7 Phenanthrene	1.810	1.810	0.000	63545	2.50000	2.36
8 Anthracene	2.037	2.037	0.000	126728	2.50000	2.24
9 Fluoranthene	2.270	2.270	0.000	17636	2.50000	2.58
10 Pyrene	2.443	2.443	0.000	15228	2.50000	2.49
$ 11 p-Terphenyl	2.877	2.877	0.000	18182	2.50000	2.51
12 Benzo(a)Anthracene	3.057	3.057	0.000	40249	2.50000	2.46
13 Chrysene	3.203	3.203	0.000	68735	2.50000	2.52

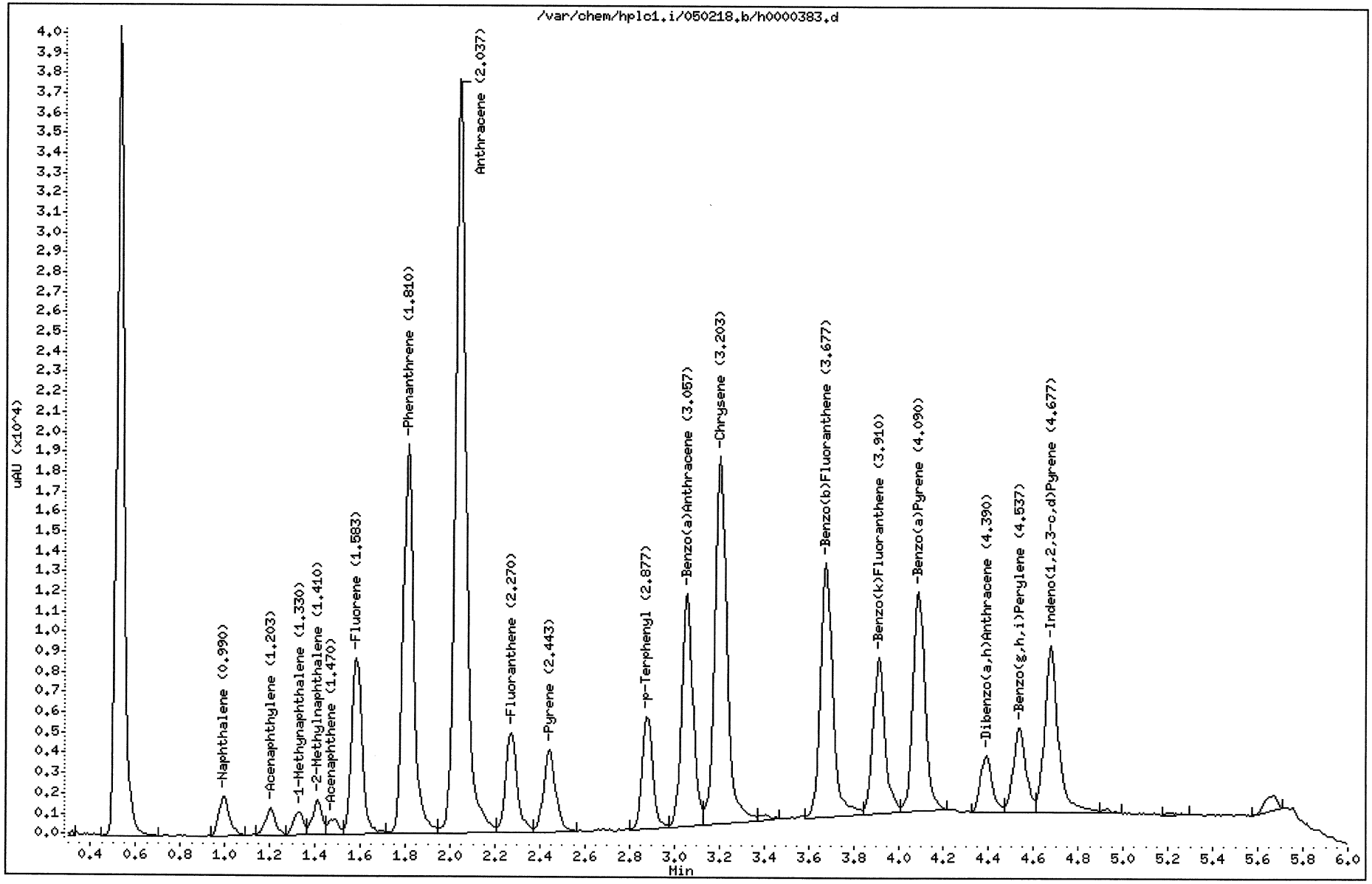
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.677	3.677	0.000	48256	2.50000	2.37
15 Benzo(k)Fluoranthene	3.910	3.910	0.000	28729	2.50000	2.29
16 Benzo(a)Pyrene	4.090	4.090	0.000	40318	2.50000	2.29
17 Dibenzo(a,h)Anthracene	4.390	4.390	0.000	10300	2.50000	2.46
18 Benzo(g,h,i)Perylene	4.537	4.537	0.000	16753	2.50000	2.51
19 Indeno(1,2,3-c,d)Pyrene	4.677	4.677	0.000	36151	2.50000	2.56

Data File: /var/chem/hplc1.i/050218.b/h0000383.d
Date : 18-FEB-2005 13:48
Client ID: 8310CCV
Sample Info: 8310CCV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000193



GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218F.b/flpnafld.m
Cal Date : 18-Feb-2005 14:03 rlw

Calibration File Names:
Level 1: /var/chem/hplc1.i/041007F.b/h0008223.d
Level 2: /var/chem/hplc1.i/041007F.b/h0008224.d
Level 3: /var/chem/hplc1.i/041007F.b/h0008225.d
Level 4: /var/chem/hplc1.i/041007F.b/h0008226.d
Level 5: /var/chem/hplc1.i/041007F.b/h0008227.d
Level 6: /var/chem/hplc1.i/041007F.b/h0008228.d
Level 7: /var/chem/hplc1.i/041007F.b/h0008229.d
Level 8: /var/chem/hplc1.i/041007F.b/h0008230.d

Compound	0.1000 Level 1 / 10 Level 7	0.2500 Level 2 / 20 Level 8	0.5000 Level 3	1 Level 4	2 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
1 Naphthalene	+++++	7748	11554	10548	10004	9985					
	9464	9525					AVRG		9833		11.81943
3 1-Methynaphthalene	+++++	+++++	+++++	1793	2044	1998					
	1812	1959					AVRG		1921		5.84952
4 2-Methylnaphthalene	+++++	+++++	1322	1384	1652	1569					
	1548	1566					AVRG		1507		8.36795
5 Acenaphthene	+++++	+++++	+++++	3231	3659	3619					
	3557	3692					AVRG		3551		5.23733
7 Phenanthrene	13230	14124	13532	14453	14133	14421					
	14374	14260					AVRG		14066		3.17950

000194

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218F.b/flpnafld.m
Cal Date : 18-Feb-2005 14:03 rlw

Compound	0.1000 Level 1 / 10 Level 7	0.2500 Level 2 / 20 Level 8	0.5000 Level 3	1 Level 4	2 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
8 Anthracene	5660	5180	5594	5424	5580	5682					
	5622	5446					AVRG		5524		3.02620
9 Fluoranthene	5040	4180	4556	4609	4589	4581					
	4611	4535					AVRG		4588		5.04901
10 Pyrene	31760	30116	29040	30266	30141	29604					
	29570	+++++					AVRG		30071		2.85720
12 Benzo(a)Anthracene	20850	22136	23398	24735	24531	24386					
	24141	+++++					AVRG		23454		6.19414
13 Chrysene	203	482	1184	2709	8307	16453					
	34739	69036					LINR	0.13830	3481		0.99985
14 Benzo(b)Fluoranthene	17840	18028	19040	19545	20164	20155					
	20180	+++++					AVRG		19279		5.24106
15 Benzo(k)Fluoranthene	44150	43340	43962	44950	44441	44340					
	40294	+++++					AVRG		43640		3.56157
16 Benzo(a)Pyrene	35280	35880	36984	38198	38877	38535					
	37770	+++++					AVRG		37361		3.65876
17 Dibenzo(a,h)Anthracene	13270	14208	14662	15001	14354	14414					
	14564	14118					AVRG		14324		3.54602

000195

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-JAN-2004 15:08
End Cal Date : 07-OCT-2004 12:08
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/050218F.b/flpnafld.m
Cal Date : 18-Feb-2005 14:03 rlw

Compound	0.1000 Level 1 / 10 Level 7	0.2500 Level 2 / 20 Level 8	0.5000 Level 3	1 Level 4	2 Level 5	5 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
18 Benzo(g,h,i)Perylene	11340	11004	12346	12612	12266	12258					
	12542	12260					AVRG		12078		4.81845
19 Indeno(1,2,3-c,d)Pyrene	+++++	2620	3092	3408	3367	3513					
	4050	4006					AVRG		3437		14.54009
$ 11 p-Terphenyl	+++++	5156	6232	7276	7462	7630					
	7712	7540					AVRG		7001		13.64363

000196

GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008223.d
Lab Smp Id: 8310STD00.1 Client Smp ID: 8310STD00.1
Inj Date : 07-OCT-2004 11:19
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD00.1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.020	1.017	0.003	1579	0.10000	0.161
7 Phenanthrene	1.853	1.847	0.006	1323	0.10000	0.0941
8 Anthracene	2.093	2.087	0.006	566	0.10000	0.102 (M)
9 Fluoranthene	2.330	2.323	0.007	504	0.10000	0.110 (M)
10 Pyrene	2.503	2.520	-0.017	3176	0.10000	0.106
12 Benzo(a)Anthracene	3.147	3.153	-0.006	2085	0.10000	0.0889 (M)
13 Chrysene	3.303	3.293	0.010	203	0.10000	0.0719 (M)
14 Benzo(b)Fluoranthene	3.803	3.797	0.006	1784	0.10000	0.0925
15 Benzo(k)Fluoranthene	4.047	4.067	-0.020	4415	0.10000	0.101
16 Benzo(a)Pyrene	4.223	4.240	-0.017	3528	0.10000	0.0944
17 Dibenzo(a,h)Anthracene	4.540	4.523	0.017	1327	0.10000	0.0926
18 Benzo(g,h,i)Perylene	4.690	4.667	0.023	1134	0.10000	0.0939 (M)
19 Indeno(1,2,3-c,d)Pyrene	4.847	4.840	0.007	189	0.10000	0.0550 (M)

QC Flag Legend

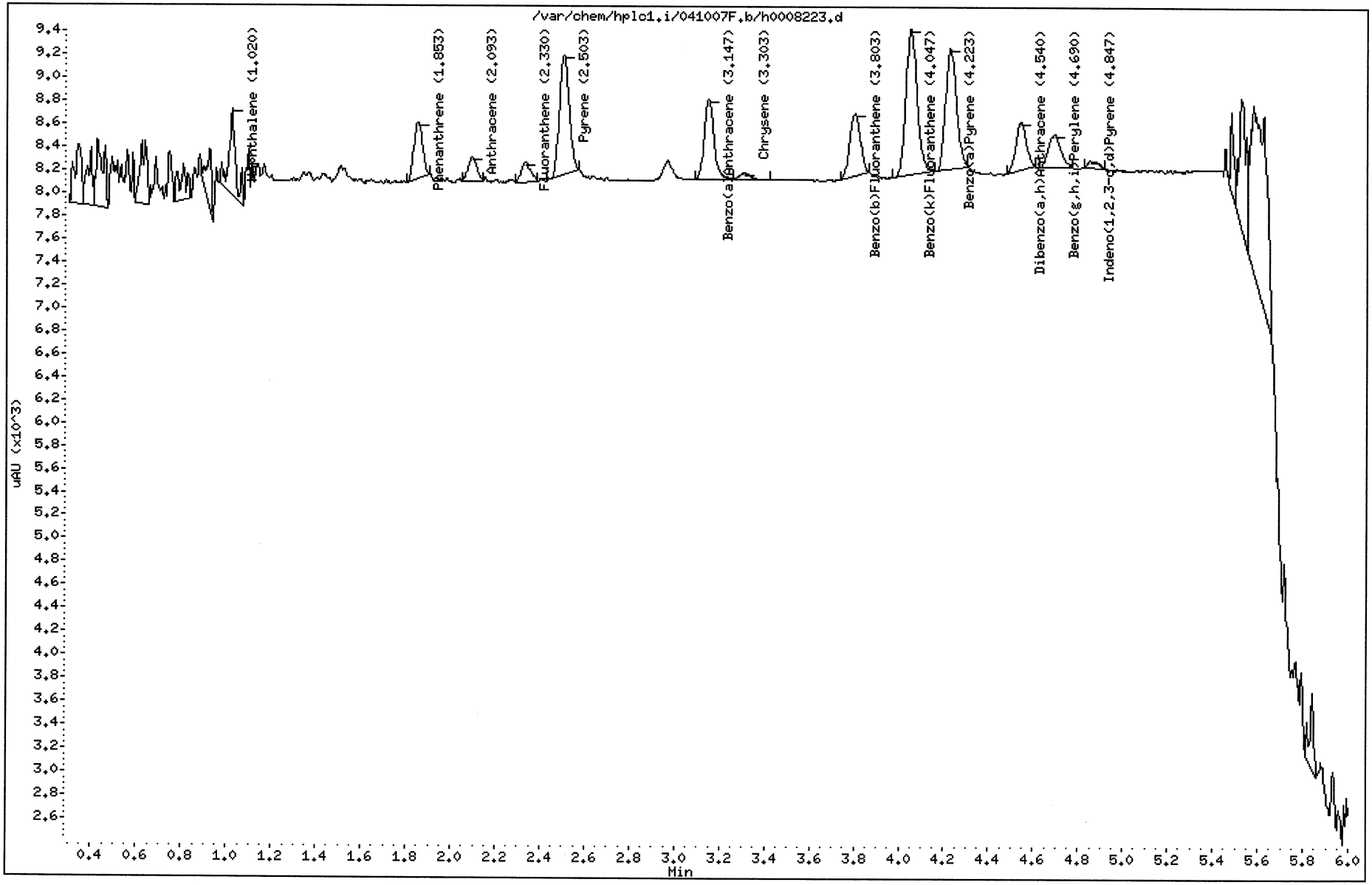
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007F.b/h0008223.d
Date : 07-OCT-2004 11:19
Client ID: 8310STD00.1
Sample Info: 8310STD00.1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000199



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008224.d
Lab Smp Id: 8310STD0.25 Client Smp ID: 8310STD0.25
Inj Date : 07-OCT-2004 11:26
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD0.25
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:26 Cal File: h0008224.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.013	1.017	-0.004	1937	0.25000	0.197
5 Acenaphthene	1.503	1.507	-0.004	699	0.25000	0.197
7 Phenanthrene	1.850	1.847	0.003	3531	0.25000	0.251
8 Anthracene	2.087	2.087	0.000	1295	0.25000	0.234
9 Fluoranthene	2.323	2.323	0.000	1045	0.25000	0.228
10 Pyrene	2.497	2.520	-0.023	7529	0.25000	0.250
$ 11 p-Terphenyl	2.957	2.953	0.004	1289	0.25000	0.184
12 Benzo(a)Anthracene	3.137	3.153	-0.016	5534	0.25000	0.236 (M)
13 Chrysene	3.297	3.293	0.004	482	0.25000	0.171 (M)
14 Benzo(b)Fluoranthene	3.787	3.797	-0.010	4507	0.25000	0.234
15 Benzo(k)Fluoranthene	4.037	4.067	-0.030	10835	0.25000	0.248
16 Benzo(a)Pyrene	4.213	4.240	-0.027	8970	0.25000	0.240
17 Dibenzo(a,h)Anthracene	4.530	4.523	0.007	3552	0.25000	0.248
18 Benzo(g,h,i)Perylene	4.670	4.667	0.003	2751	0.25000	0.228

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
19 Indeno(1,2,3-c,d)Pyrene	4.840	4.840	0.000	655	0.25000	0.191 (M)

QC Flag Legend

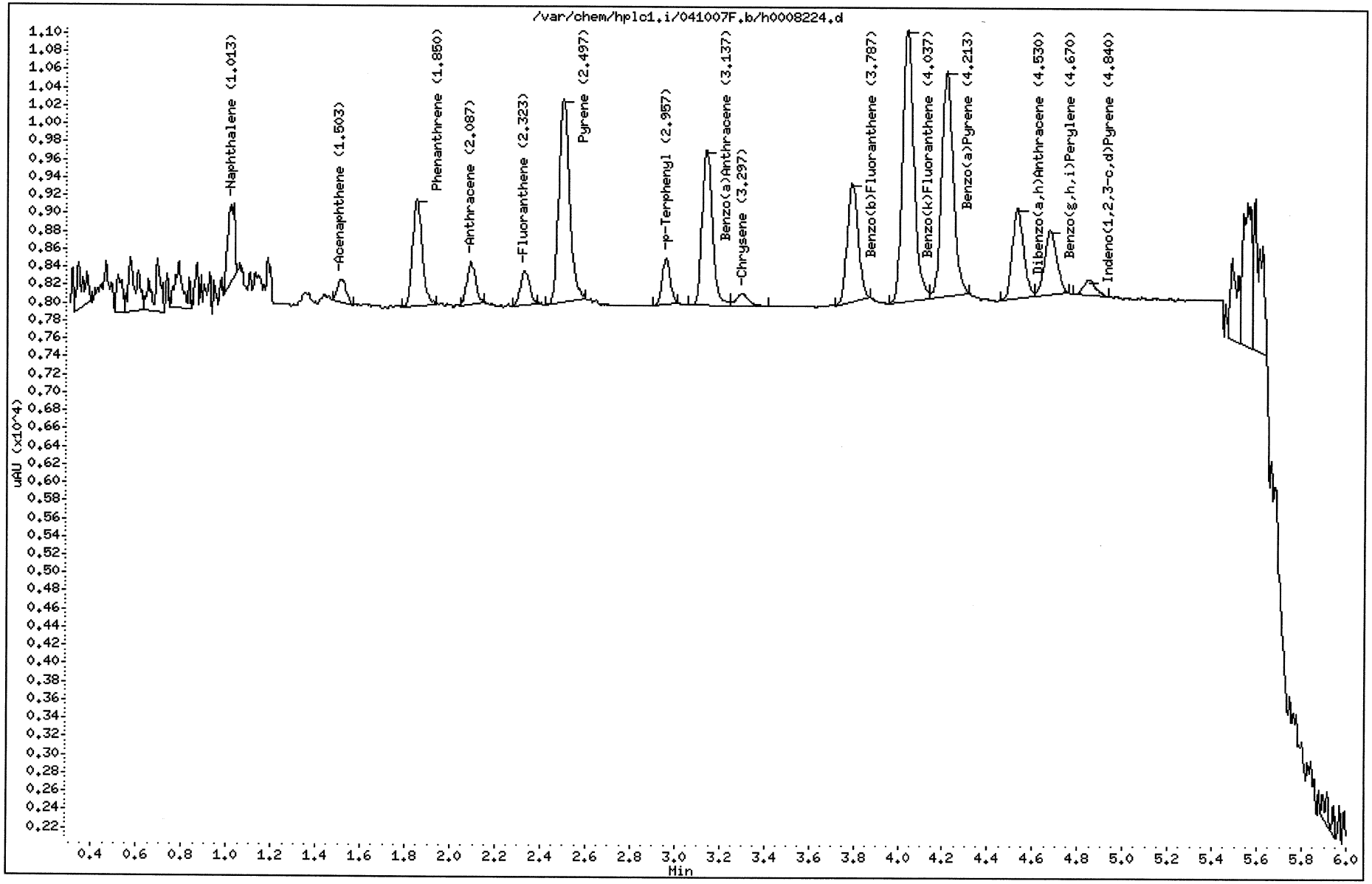
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007F.b/h0008224.d
Date : 07-OCT-2004 11:26
Client ID: 8310STD0.25
Sample Info: 8310STD0.25
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000202



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008225.d
Lab Smp Id: 8310STD0.50 Client Smp ID: 8310STD0.50
Inj Date : 07-OCT-2004 11:33
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD0.50
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:33 Cal File: h0008225.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.017	1.017	0.000	5777	0.50000	0.588
3 1-Methynaphthalene	1.353	1.353	0.000	843	0.50000	0.439
4 2-Methylnaphthalene	1.443	1.437	0.006	661	0.50000	0.428
5 Acenaphthene	1.513	1.507	0.006	1658	0.50000	0.467
7 Phenanthrene	1.850	1.847	0.003	6766	0.50000	0.481
8 Anthracene	2.093	2.087	0.006	2797	0.50000	0.506
9 Fluoranthene	2.333	2.323	0.010	2278	0.50000	0.497
10 Pyrene	2.503	2.520	-0.017	14520	0.50000	0.483
$ 11 p-Terphenyl	2.963	2.953	0.010	3116	0.50000	0.445
12 Benzo(a)Anthracene	3.147	3.153	-0.006	11699	0.50000	0.499(M)
13 Chrysene	3.307	3.293	0.014	1184	0.50000	0.420(M)
14 Benzo(b)Fluoranthene	3.800	3.797	0.003	9520	0.50000	0.494
15 Benzo(k)Fluoranthene	4.047	4.067	-0.020	21981	0.50000	0.504
16 Benzo(a)Pyrene	4.223	4.240	-0.017	18492	0.50000	0.495

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.540	4.523	0.017	7331	0.50000	0.512
18 Benzo(g,h,i)Perylene	4.687	4.667	0.020	6173	0.50000	0.511
19 Indeno(1,2,3-c,d)Pyrene	4.860	4.840	0.020	1546	0.50000	0.450

QC Flag Legend

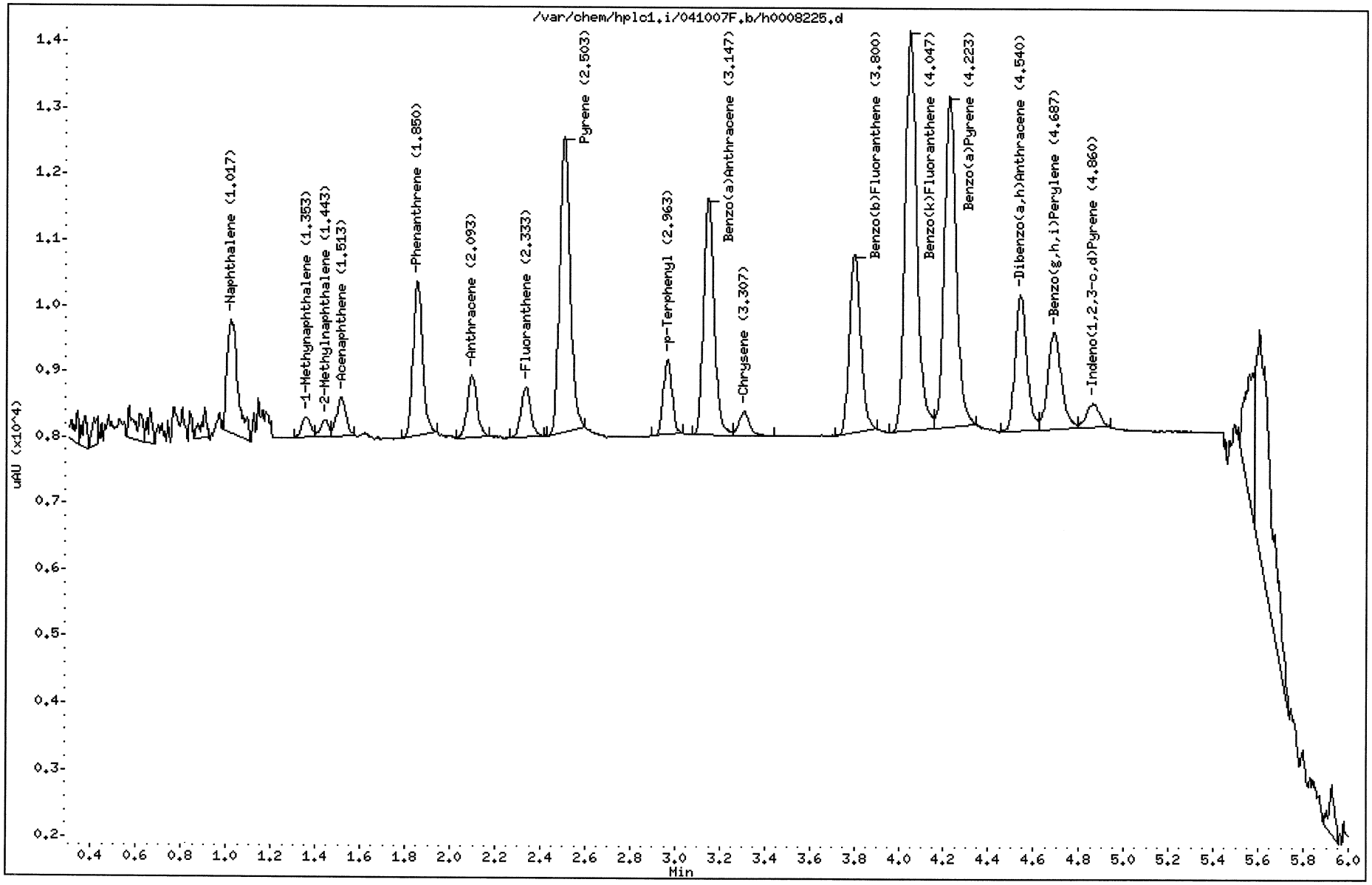
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007F.b/h0008225.d
Date : 07-OCT-2004 11:33
Client ID: 8310STD0.50
Sample Info: 8310STD0.50
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

0002205



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008226.d
Lab Smp Id: 8310SATD001 Client Smp ID: 8310SATD001
Inj Date : 07-OCT-2004 11:40
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310SATD001
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:40 Cal File: h0008226.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.020	1.017	0.003	10548	1.00000	1.07
3 1-Methynaphthalene	1.357	1.353	0.004	1793	1.00000	0.933
4 2-Methylnaphthalene	1.440	1.437	0.003	1384	1.00000	0.896
5 Acenaphthene	1.510	1.507	0.003	3231	1.00000	0.910
7 Phenanthrene	1.850	1.847	0.003	14453	1.00000	1.03
8 Anthracene	2.093	2.087	0.006	5424	1.00000	0.982
9 Fluoranthene	2.327	2.323	0.004	4609	1.00000	1.00
10 Pyrene	2.500	2.520	-0.020	30266	1.00000	1.01
$ 11 p-Terphenyl	2.960	2.953	0.007	7276	1.00000	1.04
12 Benzo(a)Anthracene	3.140	3.153	-0.013	24735	1.00000	1.05
13 Chrysene	3.297	3.293	0.004	2709	1.00000	0.960
14 Benzo(b)Fluoranthene	3.787	3.797	-0.010	19545	1.00000	1.01
15 Benzo(k)Fluoranthene	4.033	4.067	-0.034	44950	1.00000	1.03
16 Benzo(a)Pyrene	4.210	4.240	-0.030	38198	1.00000	1.02

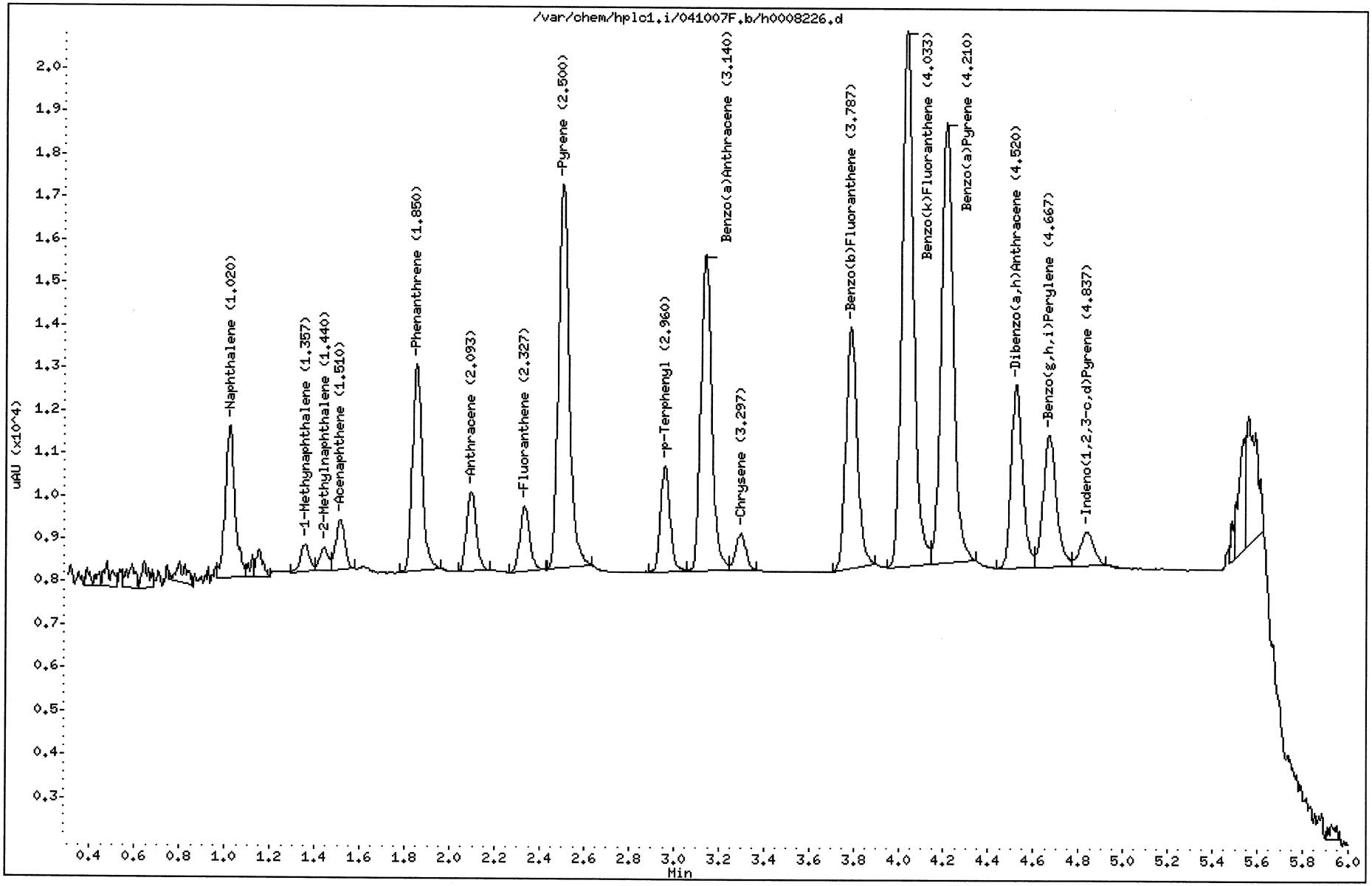
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.520	4.523	-0.003	15001	1.00000	1.05
18 Benzo(g,h,i)Perylene	4.667	4.667	0.000	12612	1.00000	1.04
19 Indeno(1,2,3-c,d)Pyrene	4.837	4.840	-0.003	3408	1.00000	0.992

Data File: /var/chem/hplc1.i/041007F.b/h0008226.d
Date : 07-OCT-2004 11:40
Client ID: 8310SATD001
Sample Info: 8310SATD001
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000208



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008227.d
Lab Smp Id: 8310STD02.5 Client Smp ID: 8310STD02.5
Inj Date : 07-OCT-2004 11:47
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD02.5
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:47 Cal File: h0008227.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.017	1.017	0.000	25010	2.50000	2.54
3 1-Methynaphthalene	1.353	1.353	0.000	5109	2.50000	2.66
4 2-Methylnaphthalene	1.437	1.437	0.000	4131	2.50000	2.68
5 Acenaphthene	1.507	1.507	0.000	9147	2.50000	2.58
7 Phenanthrene	1.847	1.847	0.000	35333	2.50000	2.51
8 Anthracene	2.087	2.087	0.000	13950	2.50000	2.53
9 Fluoranthene	2.323	2.323	0.000	11473	2.50000	2.50
10 Pyrene	2.497	2.520	-0.023	75353	2.50000	2.51
$ 11 p-Terphenyl	2.957	2.953	0.004	18654	2.50000	2.66(M)
12 Benzo(a)Anthracene	3.140	3.153	-0.013	61328	2.50000	2.61(M)
13 Chrysene	3.297	3.293	0.004	8307	2.50000	2.94(M)
14 Benzo(b)Fluoranthene	3.790	3.797	-0.007	50410	2.50000	2.61
15 Benzo(k)Fluoranthene	4.037	4.067	-0.030	111103	2.50000	2.55
16 Benzo(a)Pyrene	4.213	4.240	-0.027	97192	2.50000	2.60

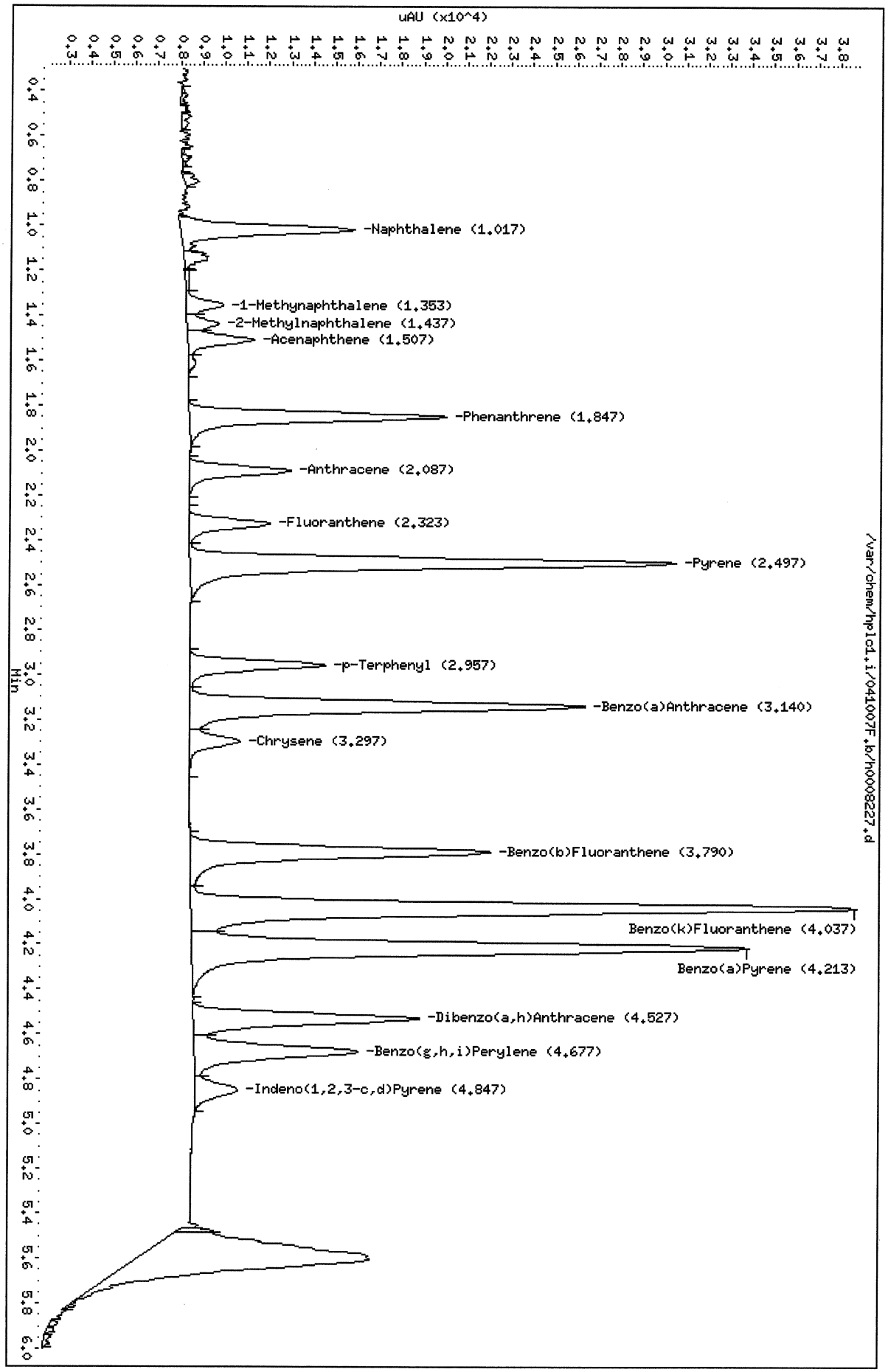
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.527	4.523	0.004	35885	2.50000	2.51
18 Benzo(g,h,i)Perylene	4.677	4.667	0.010	30664	2.50000	2.54
19 Indeno(1,2,3-c,d)Pyrene	4.847	4.840	0.007	8417	2.50000	2.45

QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/041007F.b/h0008227.d
Date : 07-OCT-2004 11:47
Client ID: 8310STD02.5
Sample Info: 8310STD02.5
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: RLW
Column diameter: 2.10



000211

GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008228.d
Lab Smp Id: 8310STD005 Client Smp ID: 8310STD005
Inj Date : 07-OCT-2004 11:54
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD005
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:54 Cal File: h0008228.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

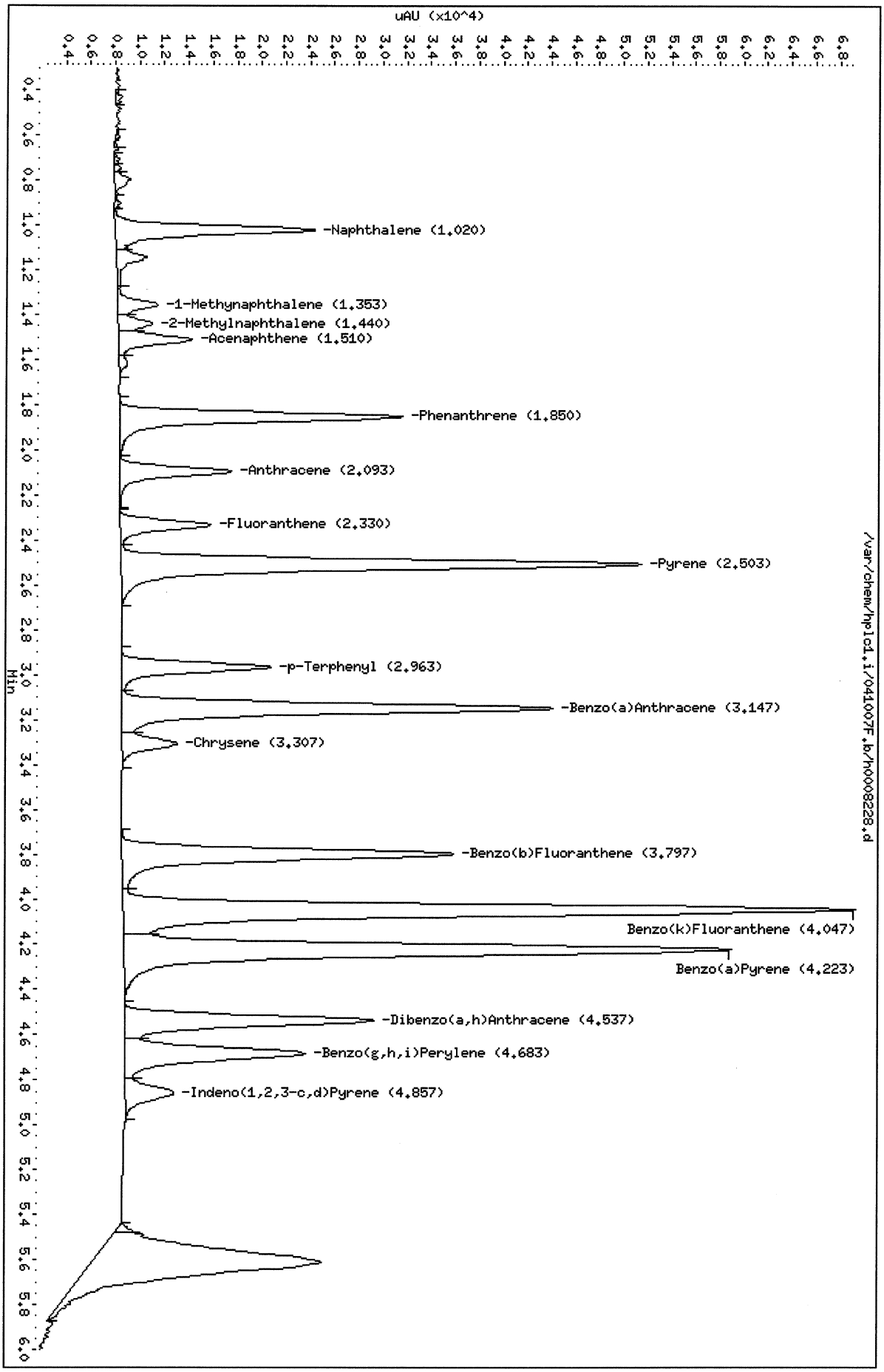
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.020	1.017	0.003	49926	5.00000	5.08
3 1-Methynaphthalene	1.353	1.353	0.000	9988	5.00000	5.20
4 2-Methylnaphthalene	1.440	1.437	0.003	7843	5.00000	5.08
5 Acenaphthene	1.510	1.507	0.003	18093	5.00000	5.09
7 Phenanthrene	1.850	1.847	0.003	72105	5.00000	5.13
8 Anthracene	2.093	2.087	0.006	28412	5.00000	5.14
9 Fluoranthene	2.330	2.323	0.007	22907	5.00000	4.99
10 Pyrene	2.503	2.520	-0.017	148020	5.00000	4.92
$ 11 p-Terphenyl	2.963	2.953	0.010	38148	5.00000	5.45
12 Benzo(a)Anthracene	3.147	3.153	-0.006	121932	5.00000	5.20
13 Chrysene	3.307	3.293	0.014	16453	5.00000	5.83
14 Benzo(b)Fluoranthene	3.797	3.797	0.000	100775	5.00000	5.23
15 Benzo(k)Fluoranthene	4.047	4.067	-0.020	221698	5.00000	5.08
16 Benzo(a)Pyrene	4.223	4.240	-0.017	192677	5.00000	5.16

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.537	4.523	0.014	72072	5.00000	5.03
18 Benzo(g,h,i)Perylene	4.683	4.667	0.016	61290	5.00000	5.07
19 Indeno(1,2,3-c,d)Pyrene	4.857	4.840	0.017	17566	5.00000	5.11

Data File: /var/chem/hplc1.i/041007F.b/h0008228.d
Date : 07-OCT-2004 11:54
Client ID: 8310STD005
Sample Info: 8310STD005
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: RLW
Column diameter: 2.10



000214

GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008229.d
Lab Smp Id: 8310STD010 Client Smp ID: 8310STD010
Inj Date : 07-OCT-2004 12:01
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310STD010
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:01 Cal File: h0008229.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.017	1.017	0.000	94638	10.0000	9.62
3 1-Methynaphthalene	1.353	1.353	0.000	18125	10.0000	9.43
4 2-Methylnaphthalene	1.437	1.437	0.000	15482	10.0000	10.0
5 Acenaphthene	1.510	1.507	0.003	35568	10.0000	10.0
7 Phenanthrene	1.847	1.847	0.000	143739	10.0000	10.2
8 Anthracene	2.087	2.087	0.000	56218	10.0000	10.2
9 Fluoranthene	2.327	2.323	0.004	46110	10.0000	10.1
10 Pyrene	2.497	2.520	-0.023	295705	10.0000	9.83
$ 11 p-Terphenyl	2.957	2.953	0.004	77121	10.0000	11.0
12 Benzo(a)Anthracene	3.137	3.153	-0.016	241406	10.0000	10.3
13 Chrysene	3.293	3.293	0.000	34739	10.0000	12.3
14 Benzo(b)Fluoranthene	3.787	3.797	-0.010	201798	10.0000	10.5
15 Benzo(k)Fluoranthene	4.050	4.067	-0.017	402944	10.0000	9.23
16 Benzo(a)Pyrene	4.217	4.240	-0.023	377704	10.0000	10.1

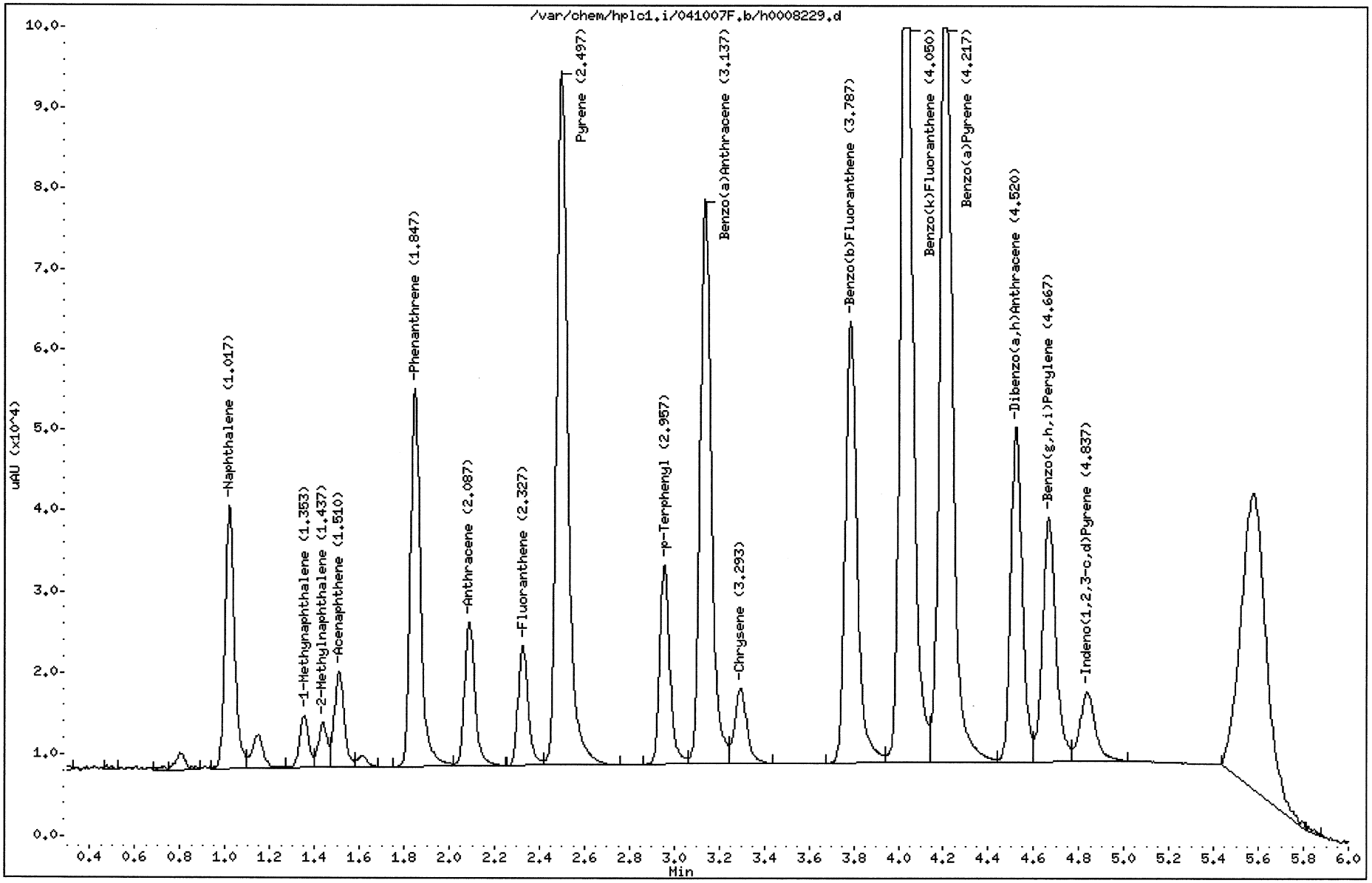
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.520	4.523	-0.003	145635	10.0000	10.2
18 Benzo(g,h,i)Perylene	4.667	4.667	0.000	125418	10.0000	10.4
19 Indeno(1,2,3-c,d)Pyrene	4.837	4.840	-0.003	40501	10.0000	11.8

Data File: /var/chem/hplc1.i/041007F.b/h0008229.d
Date : 07-OCT-2004 12:01
Client ID: 8310STD010
Sample Info: 8310STD010
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000217



GCAL, Inc.

Data file : /var/chem/hplc1.i/041007F.b/h0008230.d
Lab Smp Id: 8310DTD020 Client Smp ID: 8310DTD020
Inj Date : 07-OCT-2004 12:08
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310DTD020
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041007F.b/flpnafld.m
Meth Date : 05-Jan-2005 10:34 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.017	1.017	0.000	190506	20.0000	19.4
3 1-Methynaphthalene	1.353	1.353	0.000	39185	20.0000	20.4
4 2-Methylnaphthalene	1.437	1.437	0.000	31326	20.0000	20.3
5 Acenaphthene	1.507	1.507	0.000	73831	20.0000	20.8
7 Phenanthrene	1.847	1.847	0.000	285195	20.0000	20.3
8 Anthracene	2.087	2.087	0.000	108923	20.0000	19.7
9 Fluoranthene	2.323	2.323	0.000	90706	20.0000	19.8
10 Pyrene	2.520	2.520	0.000	443454	20.0000	14.7
$ 11 p-Terphenyl	2.953	2.953	0.000	150798	20.0000	21.5
12 Benzo(a)Anthracene	3.153	3.153	0.000	401354	20.0000	17.1
13 Chrysene	3.293	3.293	0.000	69036	20.0000	24.5
14 Benzo(b)Fluoranthene	3.797	3.797	0.000	377612	20.0000	19.6
15 Benzo(k)Fluoranthene	4.067	4.067	0.000	529337	20.0000	12.1
16 Benzo(a)Pyrene	4.240	4.240	0.000	524501	20.0000	14.0

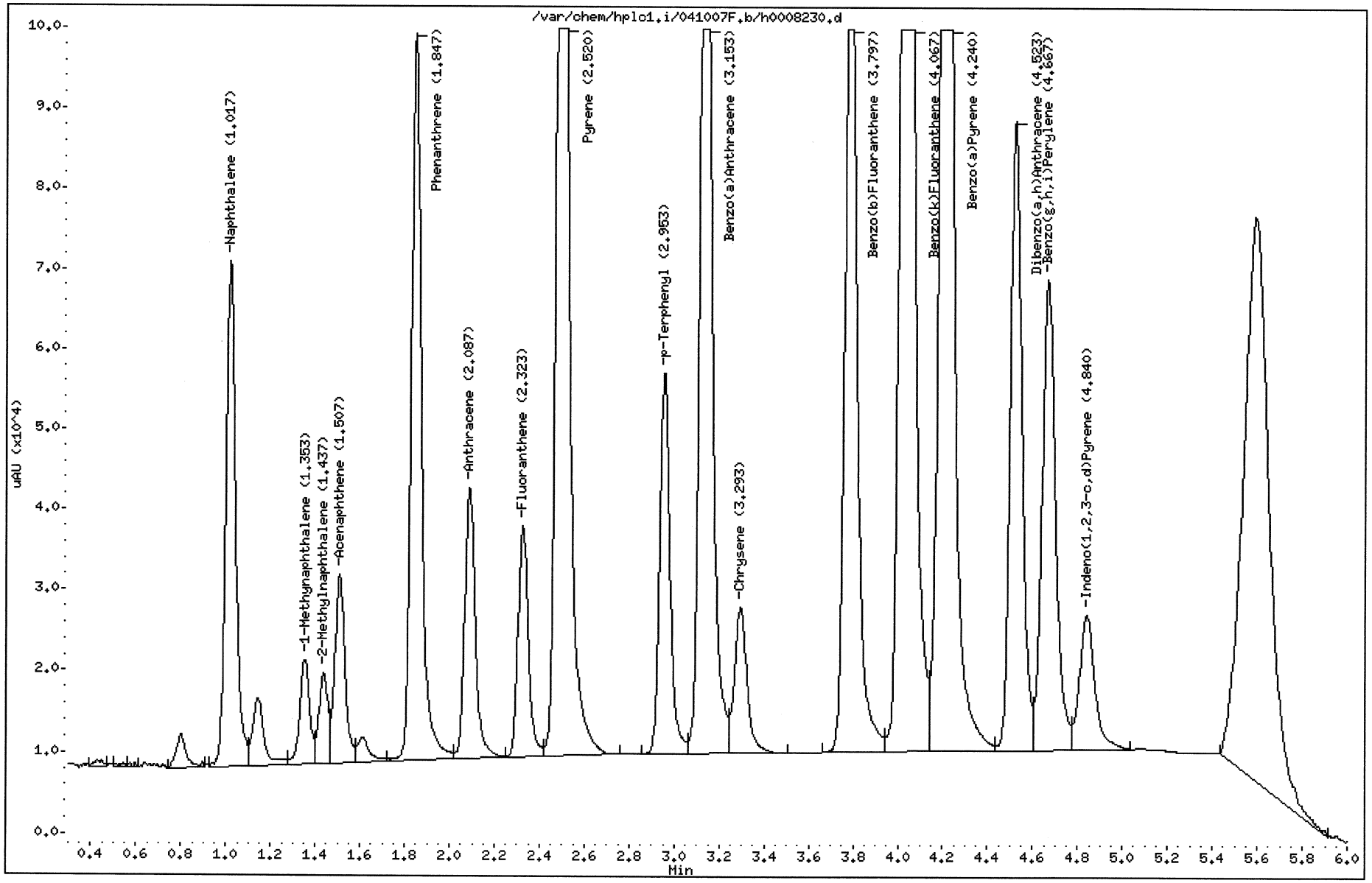
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
17 Dibenzo(a,h)Anthracene	4.523	4.523	0.000	282355	20.0000	19.7
18 Benzo(g,h,i)Perylene	4.667	4.667	0.000	245205	20.0000	20.3
19 Indeno(1,2,3-c,d)Pyrene	4.840	4.840	0.000	80127	20.0000	23.3

Data File: /var/chem/hplc1.i/041007F.b/h0008230.d
Date : 07-OCT-2004 12:08
Client ID: 8310DTD020
Sample Info: 8310DTD020
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000220



Data File: /var/chem/hplc1.i/041012F.b/h0008171.d
Report Date: 12-Oct-2004 13:36

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id:
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/041012F.b/flpnafld.m
Misc Info:

Client SDG: 041012
Fraction: OTHER

Operator: rlw
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	2.50	2.47	98.81	80-120
3 1-Methynaphthalene	2.50	2.40	96.19	80-120
4 2-Methylnaphthalen	2.50	2.47	98.69	80-120
5 Acenaphthene	2.50	2.56	102.25	80-120
7 Phenanthrene	2.50	2.52	100.83	80-120
8 Anthracene	2.50	2.44	97.77	80-120
9 Fluoranthene	2.50	2.35	94.19	80-120
10 Pyrene	2.50	2.65	105.98	80-120
12 Benzo(a)Anthracene	2.50	2.59	103.64	80-120
13 Chrysene	2.50	2.37	94.62	80-120
14 Benzo(b)Fluoranthe	2.50	2.65	105.94	80-120
15 Benzo(k)Fluoranthe	2.50	2.58	103.01	80-120
16 Benzo(a)Pyrene	2.50	2.68	107.26	80-120
17 Dibenzo(a,h)Anthra	2.50	2.58	103.10	80-120
18 Benzo(g,h,i)Peryle	2.50	2.67	106.88	80-120
19 Indeno(1,2,3-c,d)P	2.50	2.51	100.51	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	2.00	2.69	134.35	40-140

GCAL, Inc.

Data file : /var/chem/hplc1.i/041012F.b/h0008171.d
Lab Smp Id:
Inj Date : 12-OCT-2004 12:30
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310ICV
Misc Info :
Comment :
Method : /var/chem/hplc1.i/041012F.b/flpnafld.m
Meth Date : 12-Oct-2004 13:36 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	1.013	1.003	0.010	24289	2.47025	2.47
3 1-Methynaphthalene	1.347	1.337	0.010	4620	2.40476	2.40
4 2-Methylnaphthalene	1.430	1.420	0.010	3809	2.46713	2.47
5 Acenaphthene	1.503	1.490	0.013	9078	2.55621	2.56
7 Phenanthrene	1.840	1.817	0.023	35456	2.52071	2.52
8 Anthracene	2.083	2.050	0.033	13501	2.44426	2.44
9 Fluoranthene	2.320	2.283	0.037	10803	2.35476	2.35
10 Pyrene	2.493	2.453	0.040	79677	2.64962	2.65
$ 11 p-Terphenyl	2.953	2.903	0.050	18812	2.68703	2.69
12 Benzo(a)Anthracene	3.133	3.077	0.056	60771	2.59108	2.59
13 Chrysene	3.293	3.230	0.063	7752	2.36546	2.37
14 Benzo(b)Fluoranthene	3.787	3.720	0.067	51059	2.64845	2.65
15 Benzo(k)Fluoranthene	4.033	3.963	0.070	112386	2.57532	2.58

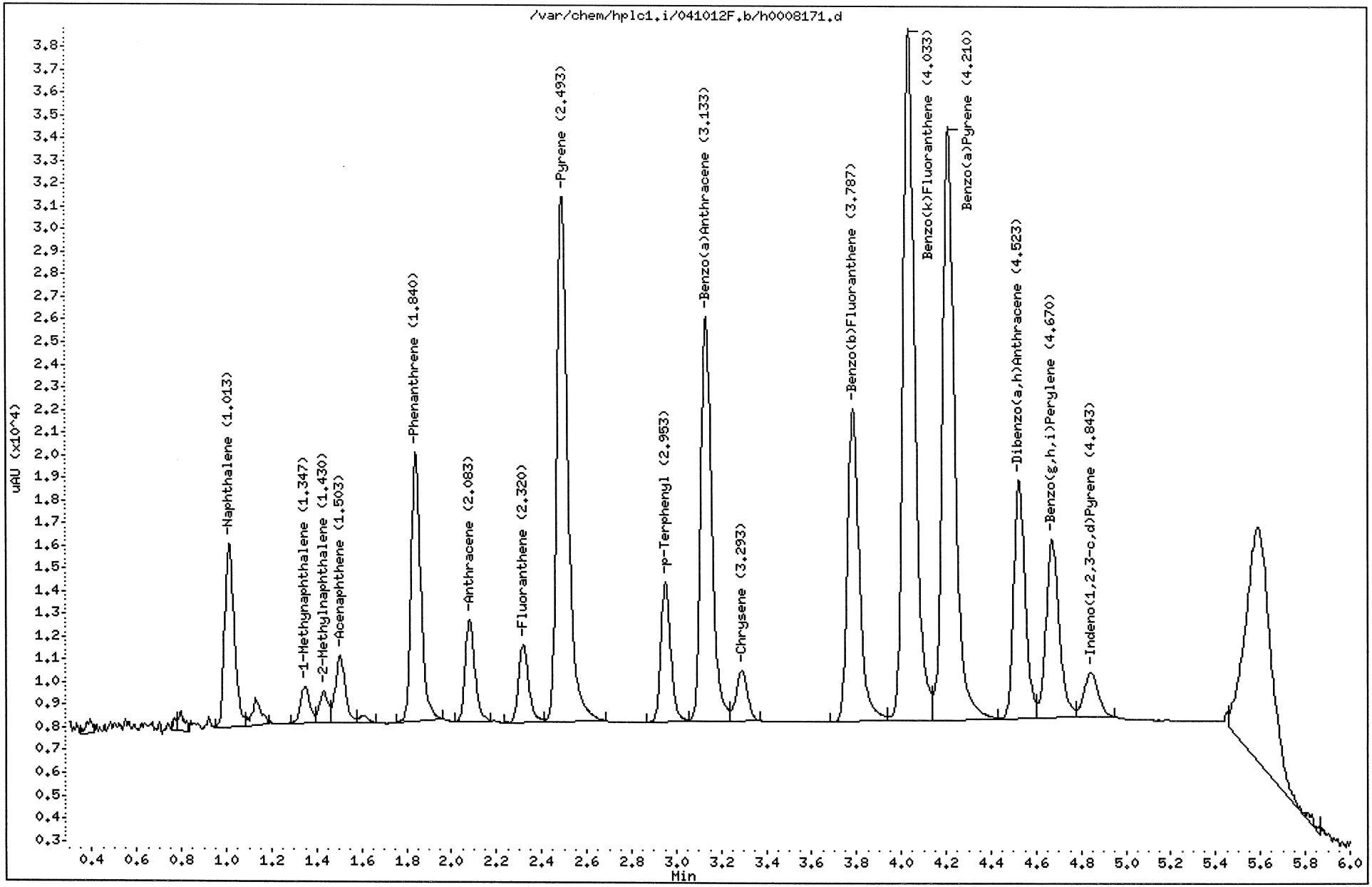
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
16 Benzo(a)Pyrene	4.210	4.143	0.067	100187	2.68162	2.68
17 Dibenzo(a,h)Anthracene	4.523	4.457	0.066	36921	2.57759	2.58
18 Benzo(g,h,i)Perylene	4.670	4.603	0.067	32273	2.67195	2.67
19 Indeno(1,2,3-c,d)Pyrene	4.843	4.757	0.086	8635	2.51263	2.51

Data File: /var/chem/hplc1.i/041012F.b/h0008171.d
Date : 12-OCT-2004 12:30
Client ID:
Sample Info: 8310ICV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000224



Data File: /var/chem/hplc1.i/050218F.b/h0000383.d
Report Date: 18-Feb-2005 14:03

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0000383.d
Analysis Type: WATER
Lab Sample ID: 8310CCV
Method: /var/chem/hplc1.i/050218F.b/flpnafld.m

Injection Date: 18-FEB-2005 13:48
Init. Cal. Date(s): 14-JAN-2004 07-OCT-2004
Init. Cal. Times: 15:08 12:08
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	CCAL RRF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	9833	9948	9948	0.010	-1.16943	15.00000	Averaged
	3 1-Methynaphthalene	1921	1702	1702	0.010	11.42990	15.00000	Averaged
	4 2-Methylnaphthalene	1507	1509	1509	0.010	-0.12498	15.00000	Averaged
	5 Acenaphthene	3551	3456	3456	0.010	2.68489	15.00000	Averaged
	7 Phenanthrene	14066	13649	13649	0.010	2.96218	15.00000	Averaged
	8 Anthracene	5524	5538	5538	0.010	-0.26172	15.00000	Averaged
	9 Fluoranthene	4588	3949	3949	0.010	13.91835	15.00000	Averaged
	10 Pyrene	30071	28570	28570	0.010	4.99184	15.00000	Averaged
$	11 p-Terphenyl	7001	6864	6864	0.010	1.95726	15.00000	Averaged
	12 Benzo(a)Anthracene	23454	21148	21148	0.010	9.83157	15.00000	Averaged
	13 Chrysene	2.13217	2.50000	2776	0.010	14.71301	15.00000	Linear
	14 Benzo(b)Fluoranthene	19279	18674	18674	0.010	3.13727	15.00000	Averaged
	15 Benzo(k)Fluoranthene	43640	41749	41749	0.010	4.33276	15.00000	Averaged
	16 Benzo(a)Pyrene	37361	35945	35945	0.010	3.78970	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	14324	13723	13723	0.010	4.19323	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	12078	11604	11604	0.010	3.93143	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	3437	3460	3460	0.010	-0.69150	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 4.94830
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218F.b/h0000383.d
Lab Smp Id: 8310CCV Client Smp ID: 8310CCV
Inj Date : 18-FEB-2005 13:48
Operator : RLW Inst ID: hplc1.i
Smp Info : 8310CCV
Misc Info : 4-14-1
Comment :
Method : /var/chem/hplc1.i/050218F.b/flpnafld.m
Meth Date : 18-Feb-2005 14:03 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.007	1.007	0.000	24869	2.50000	2.53
3 1-Methynaphthalene	1.343	1.343	0.000	4254	2.50000	2.21 (M)
4 2-Methylnaphthalene	1.427	1.427	0.000	3772	2.50000	2.50 (M)
5 Acenaphthene	1.497	1.497	0.000	8640	2.50000	2.43 (M)
7 Phenanthrene	1.823	1.823	0.000	34123	2.50000	2.43 (M)
8 Anthracene	2.057	2.057	0.000	13845	2.50000	2.51 (M)
9 Fluoranthene	2.283	2.283	0.000	9873	2.50000	2.15 (M)
10 Pyrene	2.457	2.457	0.000	71425	2.50000	2.38 (M)
$ 11 p-Terphenyl	2.893	2.893	0.000	17160	2.50000	2.45
12 Benzo(a)Anthracene	3.070	3.070	0.000	52870	2.50000	2.25
13 Chrysene	3.217	3.217	0.000	6940	2.50000	2.13
14 Benzo(b)Fluoranthene	3.690	3.690	0.000	46685	2.50000	2.42
15 Benzo(k)Fluoranthene	3.923	3.923	0.000	104372	2.50000	2.39

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.103	4.103	0.000	89862	2.50000	2.41
17 Dibenzo(a,h)Anthracene	4.400	4.400	0.000	34308	2.50000	2.40
18 Benzo(g,h,i)Perylene	4.550	4.550	0.000	29009	2.50000	2.40
19 Indeno(1,2,3-c,d)Pyrene	4.687	4.687	0.000	8651	2.50000	2.52

QC Flag Legend

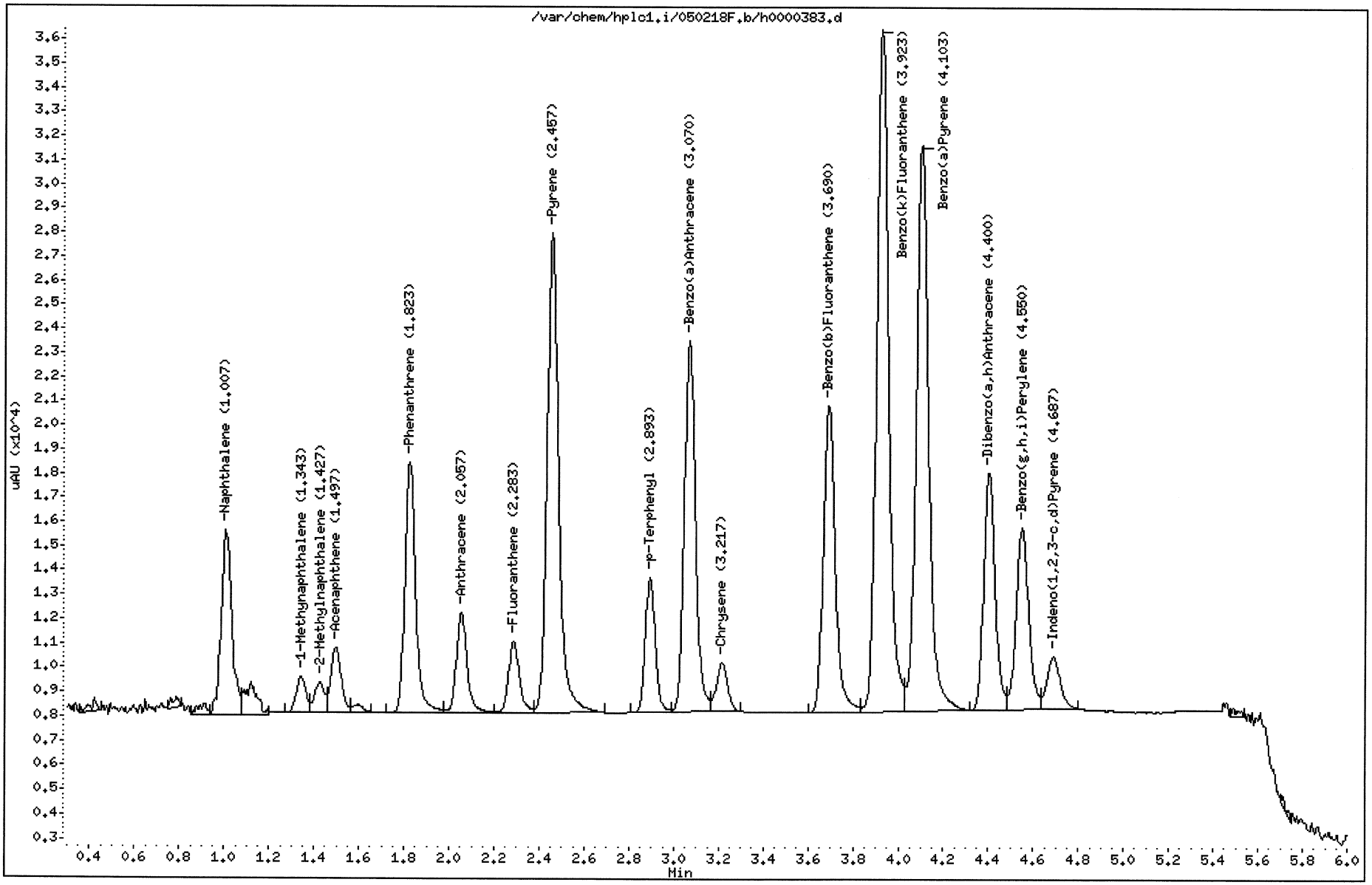
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218F.b/h0000383.d
Date : 18-FEB-2005 13:48
Client ID: 8310CCV
Sample Info: 8310CCV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: RLW
Column diameter: 2.10

000228



Data File: /var/chem/hplc1.i/050218F.b/h0000400.d
Report Date: 02-Mar-2005 11:30

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0000400.d
Analysis Type: WATER
Lab Sample ID: 8310CCV
Method: /var/chem/hplc1.i/050218F.b/flpnafld.m

Injection Date: 18-FEB-2005 17:07
Init. Cal. Date(s): 14-JAN-2004 07-OCT-2004
Init. Cal. Times: 15:08 12:08
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	CCAL RRF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	1 Naphthalene	9833	9748	9748	0.010	0.86055	15.00000	Averaged	
	3 1-Methynaphthalene	1921	1637	1637	0.010	14.78198	15.00000	Averaged	
	4 2-Methylnaphthalene	1507	1431	1431	0.010	5.05115	15.00000	Averaged	
	5 Acenaphthene	3551	3304	3304	0.010	6.95369	15.00000	Averaged	
	7 Phenanthrene	14066	13036	13036	0.010	7.32452	15.00000	Averaged	
	8 Anthracene	5524	4972	4972	0.010	9.97808	15.00000	Averaged	
	9 Fluoranthene	4588	3757	3757	0.010	18.10342	15.00000	Averaged	<-
	10 Pyrene	30071	26704	26704	0.010	11.19713	15.00000	Averaged	
$	11 p-Terphenyl	7001	6815	6815	0.010	2.66002	15.00000	Averaged	
	12 Benzo(a)Anthracene	23454	20668	20668	0.010	11.87985	15.00000	Averaged	
	13 Chrysene	2.12873	2.50000	2771	0.010	14.85092	15.00000	Linear	
	14 Benzo(b)Fluoranthene	19279	14592	14592	0.010	24.30868	15.00000	Averaged	<-
	15 Benzo(k)Fluoranthene	43640	40236	40236	0.010	7.79934	15.00000	Averaged	
	16 Benzo(a)Pyrene	37361	34544	34544	0.010	7.54017	15.00000	Averaged	
	17 Dibenzo(a,h)Anthracene	14324	13194	13194	0.010	7.88498	15.00000	Averaged	
	18 Benzo(g,h,i)Perylene	12078	10922	10922	0.010	9.57785	15.00000	Averaged	
	19 Indeno(1,2,3-c,d)Pyrene	3437	3276	3276	0.010	4.67421	15.00000	Averaged	

Average %D / Drift Results.

Calculated Average %D/Drift = 9.73097
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218F.b/h0000400.d
Lab Smp Id: 8310CCV Client Smp ID: 8310CCV
Inj Date : 18-FEB-2005 17:07
Operator : rlw Inst ID: hplc1.i
Smp Info : 8310CCV
Misc Info : 4*141
Comment :
Method : /var/chem/hplc1.i/050218F.b/flpnafld.m
Meth Date : 02-Mar-2005 11:30 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 12:08 Cal File: h0008230.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.010	1.010	0.000	24370	2.50000	2.48
3 1-Methynaphthalene	1.337	1.337	0.000	4093	2.50000	2.13(M)
4 2-Methylnaphthalene	1.417	1.417	0.000	3577	2.50000	2.37(M)
5 Acenaphthene	1.490	1.490	0.000	8261	2.50000	2.33(M)
7 Phenanthrene	1.813	1.813	0.000	32589	2.50000	2.32
8 Anthracene	2.037	2.037	0.000	12431	2.50000	2.25
9 Fluoranthene	2.267	2.267	0.000	9393	2.50000	2.05(M)
10 Pyrene	2.433	2.433	0.000	66760	2.50000	2.22(M)
$ 11 p-Terphenyl	2.867	2.867	0.000	17037	2.50000	2.43
12 Benzo(a)Anthracene	3.037	3.037	0.000	51669	2.50000	2.20
13 Chrysene	3.180	3.180	0.000	6928	2.50000	2.13
14 Benzo(b)Fluoranthene	3.647	3.647	0.000	36481	2.50000	1.89
15 Benzo(k)Fluoranthene	3.877	3.877	0.000	100590	2.50000	2.31

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.060	4.060	0.000	86359	2.50000	2.31
17 Dibenzo(a,h)Anthracene	4.357	4.357	0.000	32986	2.50000	2.30
18 Benzo(g,h,i)Perylene	4.507	4.507	0.000	27304	2.50000	2.26
19 Indeno(1,2,3-c,d)Pyrene	4.640	4.640	0.000	8190	2.50000	2.38

QC Flag Legend

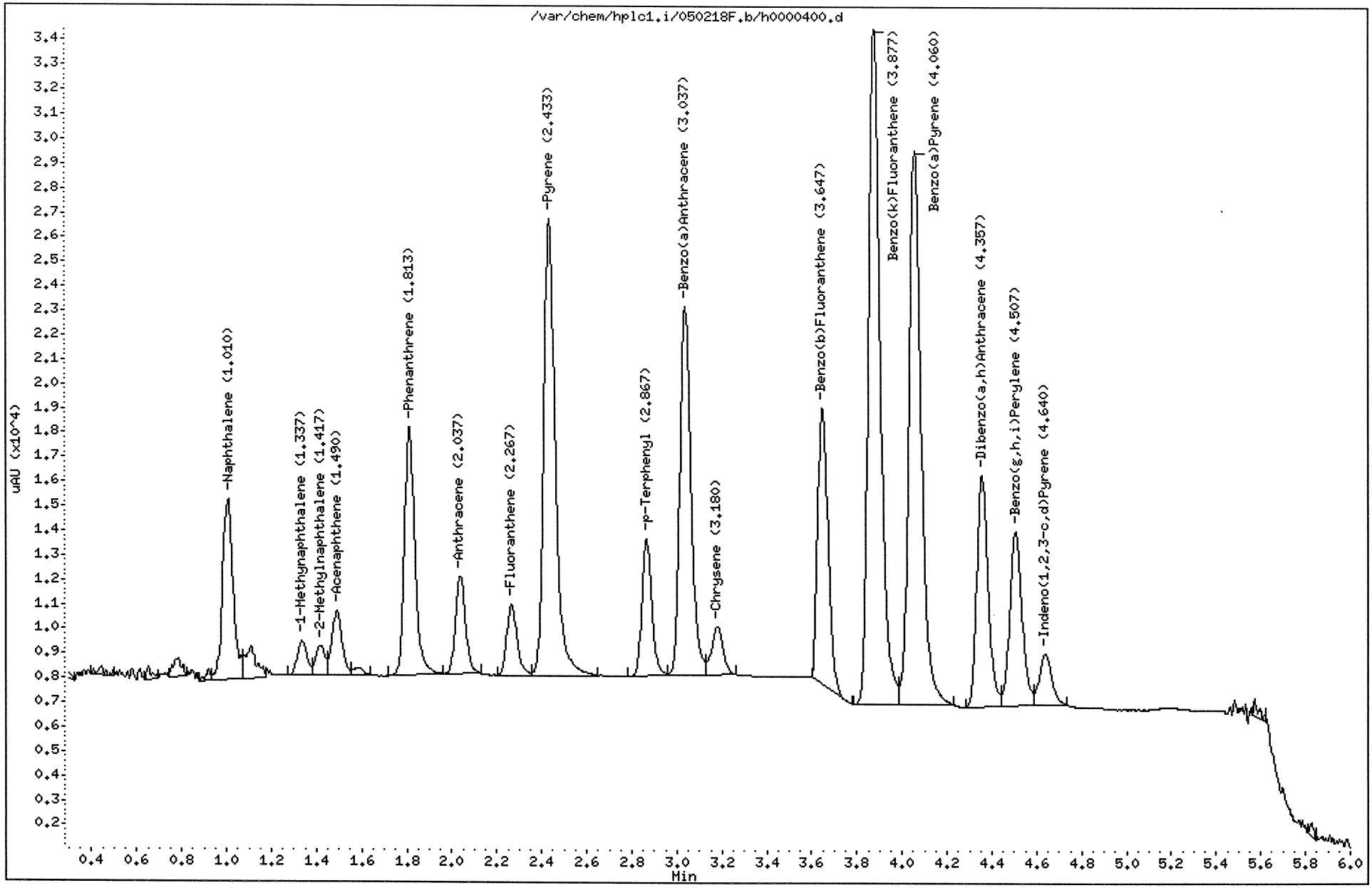
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218F.b/h0000400.d
Date : 18-FEB-2005 17:07
Client ID: 8310CCV
Sample Info: 8310CCV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000232



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: MB223953
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 223953
Date Collected: Time:
Date Received:
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1423
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L

Lab File ID: 050218/H0000384

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	1.00	U	0.291	1.00
91-57-6	2-Methylnaphthalene	1.00	U	0.142	1.00
83-32-9	Acenaphthene	1.00	U	0.331	1.00
208-96-8	Acenaphthylene	1.00	U	0.153	1.00
120-12-7	Anthracene	0.100	U	0.024	0.100
56-55-3	Benzo(a)anthracene	0.100	U	0.032	0.100
50-32-8	Benzo(a)pyrene	0.100	U	0.033	0.100
205-99-2	Benzo(b)fluoranthene	0.100	U	0.016	0.100
191-24-2	Benzo(g,h,i)perylene	0.100	U	0.016	0.100
207-08-9	Benzo(k)fluoranthene	0.100	U	0.033	0.100
218-01-9	Chrysene	0.100	U	0.030	0.100
53-70-3	Dibenz(a,h)anthracene	0.100	U	0.029	0.100
206-44-0	Fluoranthene	0.100	U	0.044	0.100
86-73-7	Fluorene	0.500	U	0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	0.250	U	0.041	0.250
91-20-3	Naphthalene	0.250	U	0.124	0.250
85-01-8	Phenanthrene	0.100	U	0.025	0.100
129-00-0	Pyrene	0.100	U	0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000384.d
Lab Smp Id: 223953 Client Smp ID: 223953
Inj Date : 18-FEB-2005 14:23
Operator : rlw Inst ID: hplc1.i
Smp Info : 223953
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 14:00 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.770	2.877	-0.107	10315	1.42601	1.43(M)

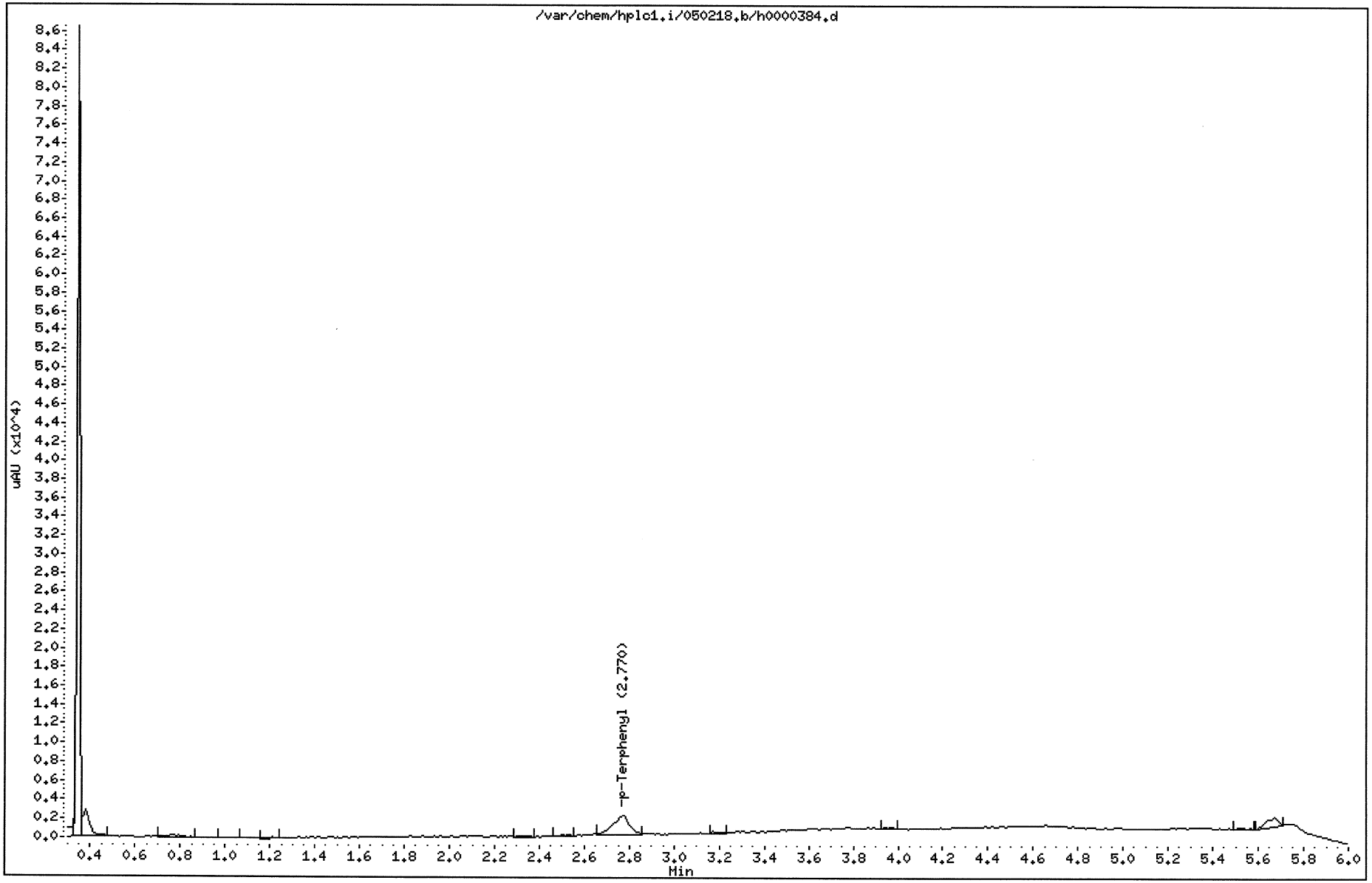
QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000384.d
Date : 18-FEB-2005 14:23
Client ID: 223953
Sample Info: 223953
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10

000235



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: LCS223954
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 223954
Date Collected: Time:
Date Received:
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1430
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L

Lab File ID: 050218/H0000385

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	3.80		0.291	1.00
91-57-6	2-Methylnaphthalene	3.92		0.142	1.00
83-32-9	Acenaphthene	2.81		0.331	1.00
208-96-8	Acenaphthylene	2.84		0.153	1.00
120-12-7	Anthracene	3.99		0.024	0.100
56-55-3	Benzo(a)anthracene	4.60		0.032	0.100
50-32-8	Benzo(a)pyrene	4.51		0.033	0.100
205-99-2	Benzo(b)fluoranthene	4.30		0.016	0.100
191-24-2	Benzo(g,h,i)perylene	2.10		0.016	0.100
207-08-9	Benzo(k)fluoranthene	4.26		0.033	0.100
218-01-9	Chrysene	4.70		0.030	0.100
53-70-3	Dibenz(a,h)anthracene	3.36		0.029	0.100
206-44-0	Fluoranthene	3.75		0.044	0.100
86-73-7	Fluorene	4.47		0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	1.83		0.041	0.250
91-20-3	Naphthalene	2.28		0.124	0.250
85-01-8	Phenanthrene	4.21		0.025	0.100
129-00-0	Pyrene	4.01		0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000385.d
Lab Smp Id: 223954 Client Smp ID: 223954
Inj Date : 18-FEB-2005 14:30
Operator : rlw Inst ID: hplc1.i
Smp Info : 223954
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 14:00 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	0.996	0.990	0.006	6173	2.27716	2.28
2 Acenaphthylene	1.202	1.203	-0.001	5123	2.83829	2.84
3 1-Methynaphthalene	1.336	1.330	0.006	5501	3.79589	3.80
4 2-Methylnaphthalene	1.416	1.410	0.006	7847	3.92188	3.92(M)
5 Acenaphthene	1.423	1.470	-0.047	2644	2.81039	2.81(M)
6 Fluorene	1.576	1.583	-0.007	50707	4.46574	4.47
7 Phenanthrene	1.809	1.810	-0.001	113163	4.21015	4.21
8 Anthracene	2.042	2.037	0.005	225362	3.98647	3.99
9 Fluoranthene	2.276	2.270	0.006	25614	3.75240	3.75
10 Pyrene	2.449	2.443	0.006	24491	4.00991	4.01
$ 11 p-Terphenyl	2.822	2.877	-0.055	11170	1.54418	1.54
12 Benzo(a)Anthracene	3.089	3.057	0.032	75172	4.59642	4.60
13 Chrysene	3.243	3.203	0.040	128180	4.69629	4.70

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
14 Benzo(b)Fluoranthene	3.736	3.677	0.059	87529	4.29542	4.30
15 Benzo(k)Fluoranthene	3.989	3.910	0.079	53530	4.25812	4.26
16 Benzo(a)Pyrene	4.162	4.090	0.072	79494	4.51197	4.51
17 Dibenzo(a,h)Anthracene	4.476	4.390	0.086	14034	3.35694	3.36(M)
18 Benzo(g,h,i)Perylene	4.476	4.537	-0.061	14034	2.10367	2.10
19 Indeno(1,2,3-c,d)Pyrene	4.622	4.677	-0.055	25794	1.82999	1.83(R)

QC Flag Legend

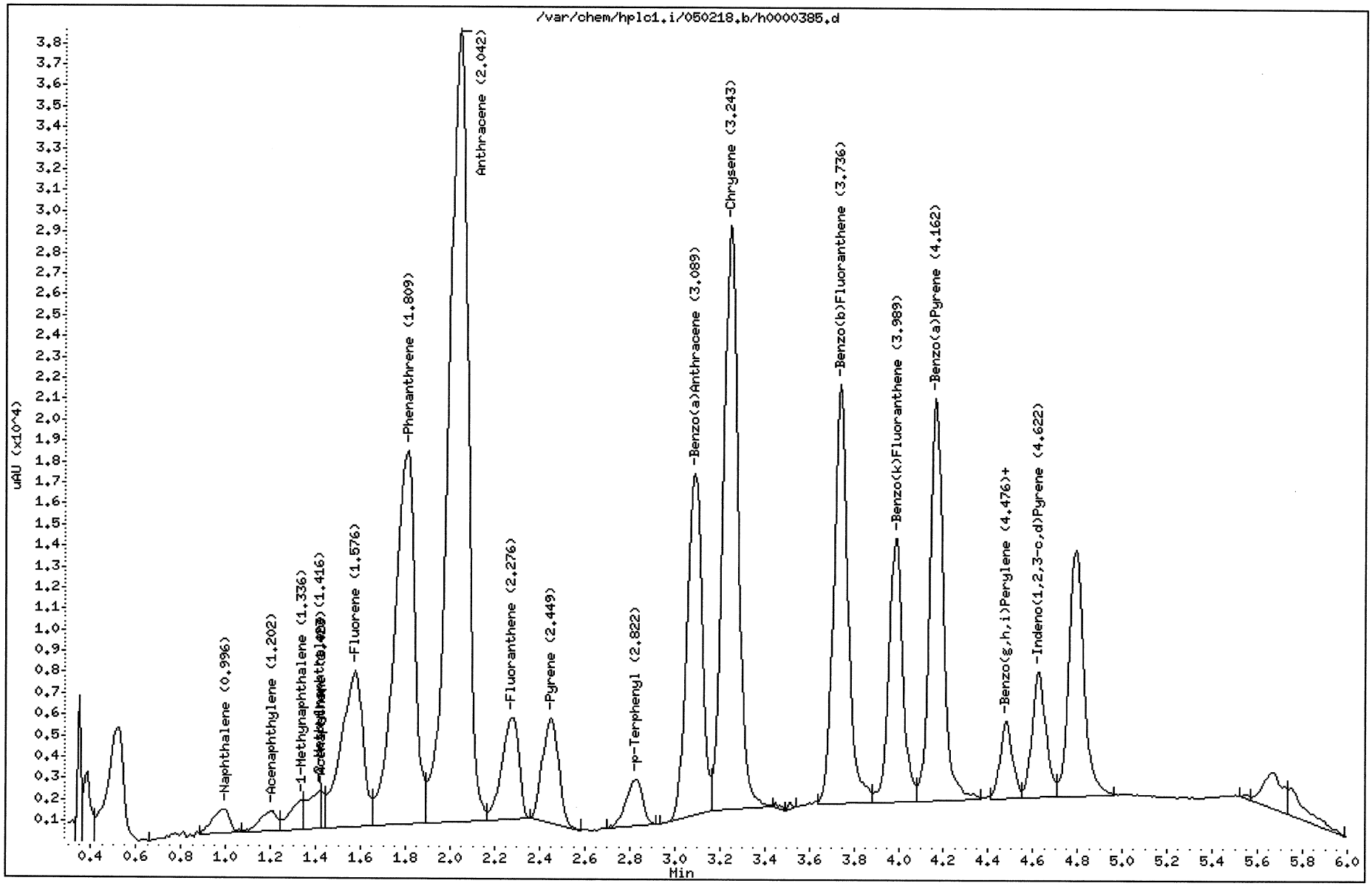
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000385.d
Date : 18-FEB-2005 14:30
Client ID: 223954
Sample Info: 223954
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000239



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: LCSD223955
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 223955
Date Collected: Time:
Date Received:
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1437
Dilution Factor: 1 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L

Lab File ID: 050218/H0000386

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	7.00		0.291	1.00
91-57-6	2-Methylnaphthalene	4.42		0.142	1.00
83-32-9	Acenaphthene	4.30		0.331	1.00
208-96-8	Acenaphthylene	2.56		0.153	1.00
120-12-7	Anthracene	3.51		0.024	0.100
56-55-3	Benzo(a)anthracene	4.59		0.032	0.100
50-32-8	Benzo(a)pyrene	4.84		0.033	0.100
205-99-2	Benzo(b)fluoranthene	4.56		0.016	0.100
191-24-2	Benzo(g,h,i)perylene	4.61		0.016	0.100
207-08-9	Benzo(k)fluoranthene	4.64		0.033	0.100
218-01-9	Chrysene	4.56		0.030	0.100
53-70-3	Dibenz(a,h)anthracene	4.40		0.029	0.100
206-44-0	Fluoranthene	3.65		0.044	0.100
86-73-7	Fluorene	4.83		0.099	0.500
193-39-5	Indeno(1,2,3-cd)pyrene	4.63		0.041	0.250
91-20-3	Naphthalene	2.46		0.124	0.250
85-01-8	Phenanthrene	4.21		0.025	0.100
129-00-0	Pyrene	3.58		0.034	0.100

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000386.d
Lab Smp Id: 223955 Client Smp ID: 223955
Inj Date : 18-FEB-2005 14:37
Operator : rlw Inst ID: hplc1.i
Smp Info : 223955
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 16:59 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	0.988	0.991	-0.003	6666	2.45902	2.46
2 Acenaphthylene	1.201	1.198	0.003	4624	2.56183	2.56
3 1-Methynaphthalene	1.334	1.324	0.010	10147	7.00179	7.00(R)
4 2-Methylnaphthalene	1.408	1.404	0.004	8838	4.41661	4.42(M)
5 Acenaphthene	1.421	1.478	-0.057	4042	4.29507	4.30(M)
6 Fluorene	1.567	1.571	-0.004	54796	4.82586	4.83
7 Phenanthrene	1.794	1.798	-0.004	113222	4.21234	4.21
8 Anthracene	2.027	2.024	0.003	198205	3.50609	3.51
9 Fluoranthene	2.261	2.251	0.010	24886	3.64575	3.65
10 Pyrene	2.428	2.418	0.010	21874	3.58143	3.58
$ 11 p-Terphenyl	2.794	2.851	-0.057	8089	1.11825	1.12(M)
12 Benzo(a)Anthracene	3.041	3.024	0.017	75052	4.58909	4.59
13 Chrysene	3.188	3.164	0.024	124580	4.56439	4.56

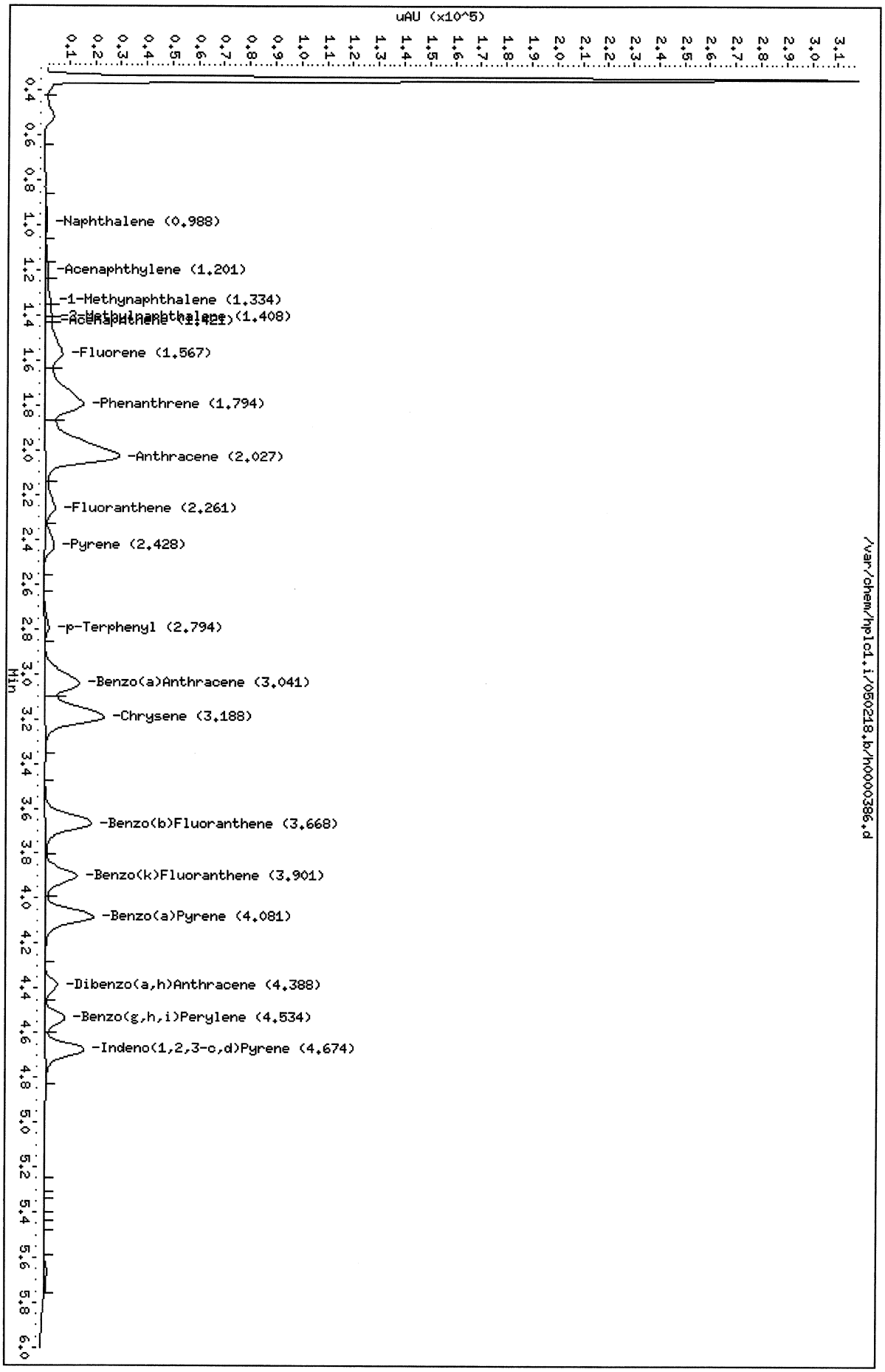
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
14 Benzo(b)Fluoranthene	3.668	3.631	0.037	92992	4.56351	4.56
15 Benzo(k)Fluoranthene	3.901	3.864	0.037	58276	4.63565	4.64
16 Benzo(a)Pyrene	4.081	4.044	0.037	85248	4.83856	4.84
17 Dibenzo(a,h)Anthracene	4.388	4.344	0.044	18402	4.40171	4.40
18 Benzo(g,h,i)Perylene	4.534	4.491	0.043	30782	4.61417	4.61
19 Indeno(1,2,3-c,d)Pyrene	4.674	4.624	0.050	65294	4.63237	4.63

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/050218.b/h0000386.d
Date : 18-FEB-2005 14:37
Client ID: 223955
Sample Info: 223955
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 086-271-MS-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170405
Date Collected: 02/15/05 Time: 1550
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1653
Dilution Factor: 100 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L
Lab File ID: 050218/H0000398

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	158		29.1	100
91-57-6	2-Methylnaphthalene	132		14.2	100
83-32-9	Acenaphthene	100	U	33.1	100
208-96-8	Acenaphthylene	268		15.3	100
120-12-7	Anthracene	10.0	U	2.40	10.0
56-55-3	Benzo(a)anthracene	10.0	U	3.20	10.0
50-32-8	Benzo(a)pyrene	10.0	U	3.30	10.0
205-99-2	Benzo(b)fluoranthene	10.0	U	1.60	10.0
191-24-2	Benzo(g,h,i)perylene	10.0	U	1.60	10.0
207-08-9	Benzo(k)fluoranthene	10.0	U	3.30	10.0
218-01-9	Chrysene	10.0	U	3.00	10.0
53-70-3	Dibenz(a,h)anthracene	10.0	U	2.90	10.0
206-44-0	Fluoranthene	10.0	U	4.40	10.0
86-73-7	Fluorene	50.0	U	9.90	50.0
193-39-5	Indeno(1,2,3-cd)pyrene	25.0	U	4.10	25.0
91-20-3	Naphthalene	463		12.4	25.0
85-01-8	Phenanthrene	10.0	U	2.50	10.0
129-00-0	Pyrene	10.0	U	3.40	10.0

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000398.d
Lab Smp Id: 20502170405 Client Smp ID: 20502170405
Inj Date : 18-FEB-2005 16:53
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170405
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 16:59 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	100.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

Cpnd Variable Local Compound Variable

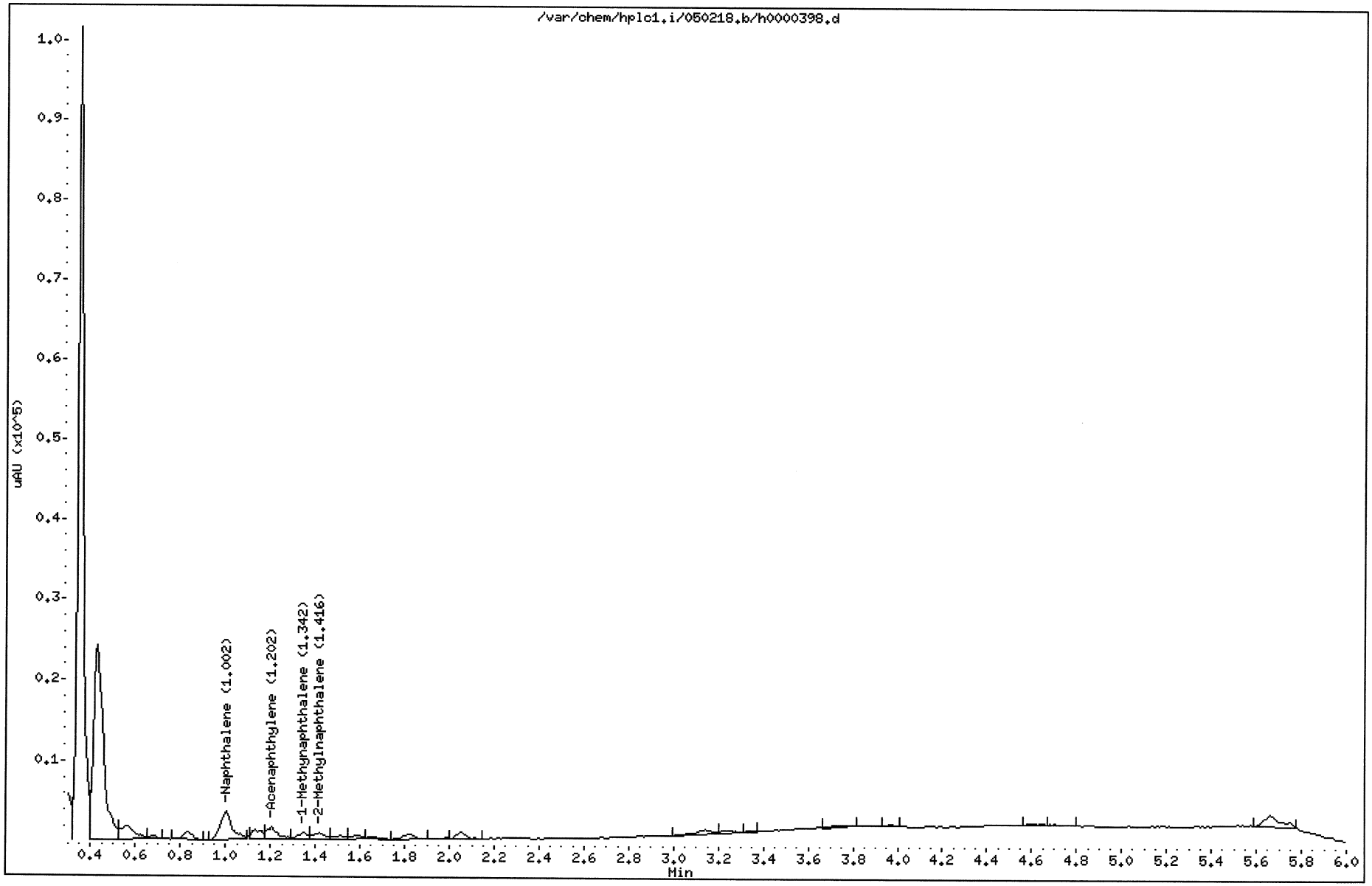
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
1 Naphthalene	1.002	0.991	0.011	12557	4.63215	463
2 Acenaphthylene	1.202	1.198	0.004	4843	2.68316	268
3 1-Methynaphthalene	1.342	1.324	0.018	2290	1.58018	158
4 2-Methylnaphthalene	1.416	1.404	0.012	2640	1.31929	132

Data File: /var/chem/hplc1.i/050218.b/h0000398.d
Date : 18-FEB-2005 16:53
Client ID: 20502170405
Sample Info: 20502170405
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: rlw
Column diameter: 2.10

000246



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Water
Sample wt/vol: 1000 Units: mL
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: 201TP-0.15 ID: 2.1 (mm)
Concentrated Extract Volume: 1000 (µL)
Soil Aliquot Volume: (µL)
Injection Volume: 1 (µL)
GPC Cleanup: (Y/N) N pH:
Prep Batch: 287663 Analytical Batch: 287912

Sample ID: 086-271-MSD-Q1-05
Contract:
SAS No.: SDG No.: 205021704
Lab Sample ID: 20502170406
Date Collected: 02/15/05 Time: 1550
Date Received: 02/16/05
Date Extracted: 02/17/05
Date Analyzed: 02/18/05 Time: 1700
Dilution Factor: 100 Analyst: RLW
Prep Method: SW-846 8310
Analytical Method: SW-846 8310
Sulfur Cleanup: (Y/N) N Instrument ID: HPLC 1

CONCENTRATION UNITS: ug/L

Lab File ID: 050218/H0000399

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
90-12-0	1-Methylnaphthalene	113		29.1	100
91-57-6	2-Methylnaphthalene	80.0	J	14.2	100
83-32-9	Acenaphthene	100	U	33.1	100
208-96-8	Acenaphthylene	290		15.3	100
120-12-7	Anthracene	10.0	U	2.40	10.0
56-55-3	Benzo(a)anthracene	10.0	U	3.20	10.0
50-32-8	Benzo(a)pyrene	10.0	U	3.30	10.0
205-99-2	Benzo(b)fluoranthene	10.0	U	1.60	10.0
191-24-2	Benzo(g,h,i)perylene	10.0	U	1.60	10.0
207-08-9	Benzo(k)fluoranthene	10.0	U	3.30	10.0
218-01-9	Chrysene	10.0	U	3.00	10.0
53-70-3	Dibenz(a,h)anthracene	10.0	U	2.90	10.0
206-44-0	Fluoranthene	10.0	U	4.40	10.0
86-73-7	Fluorene	50.0	U	9.90	50.0
193-39-5	Indeno(1,2,3-cd)pyrene	25.0	U	4.10	25.0
91-20-3	Naphthalene	481		12.4	25.0
85-01-8	Phenanthrene	10.0	U	2.50	10.0
129-00-0	Pyrene	10.0	U	3.40	10.0

GCAL, Inc.

Data file : /var/chem/hplc1.i/050218.b/h0000399.d
Lab Smp Id: 20502170406 Client Smp ID: 20502170406
Inj Date : 18-FEB-2005 17:00
Operator : rlw Inst ID: hplc1.i
Smp Info : 20502170406
Misc Info :
Comment :
Method : /var/chem/hplc1.i/050218.b/flpnauv.m
Meth Date : 18-Feb-2005 16:59 rlw Quant Type: ESTD
Cal Date : 07-OCT-2004 11:19 Cal File: h0008223.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpcs2

Concentration Formula: Amt * DF * Uf*Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	100.00000	Dilution Factor
Uf	10.00000	unit correction factor
Vt	1000.00000	Sample Final Volume
Vo	1000.00000	Initial Sample Volume
Vi	10.00000	Injection Volume

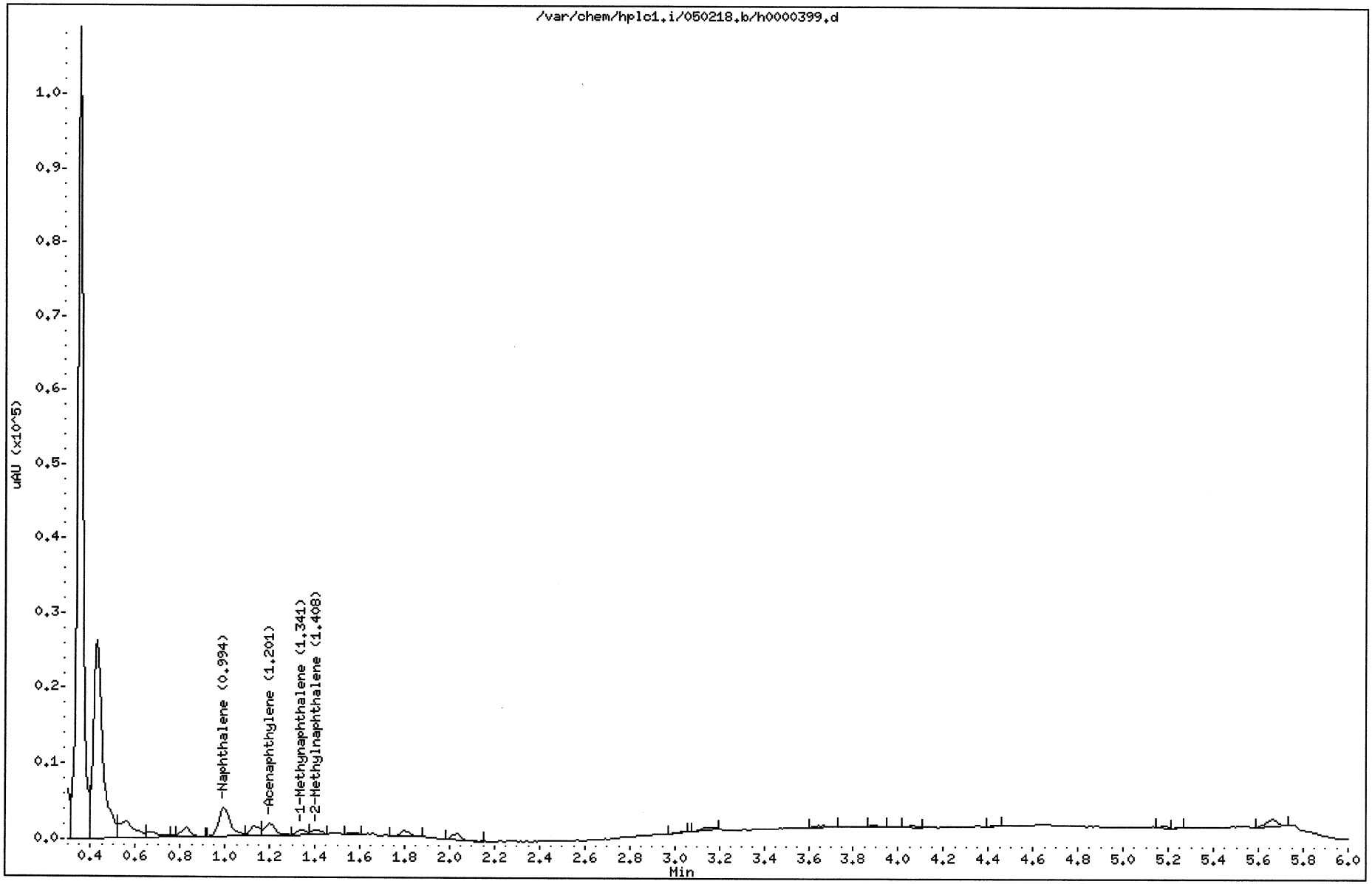
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
1 Naphthalene	0.994	0.991	0.003	13028	4.80590	481
2 Acenaphthylene	1.201	1.198	0.003	5243	2.90477	290
3 1-Methynaphthalene	1.341	1.324	0.017	1642	1.13304	113
4 2-Methylnaphthalene	1.408	1.404	0.004	1601	0.80007	80.0

Data File: /var/chem/hplc1.i/050218.b/h0000399.d
Date : 18-FEB-2005 17:00
Client ID: 20502170406
Sample Info: 20502170406
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i
Operator: rlw
Column diameter: 2.10

000249



PAH SAMPLE PREPARATION FORM

EXTRACTION DATE/TIME:	2-17-05 11:00	BATCH NO:	287663
MATRIX:	WATER ☑ SOIL ☐ OTHER ☐	LEVEL:	LOW ☑ MEDIUM ☐

	CLIENT	CLIENT ID	GCAL ID	INITIAL VOL/WT mL g	FINAL VOLUME (mL)	Init pH	COMMENTS	METHOD
1	QC ACCOUNT	MB for HBN 287663 [EXTO/7083]	223953	1000	1.0	7		LIQUID LIQUID/3520
2	QC ACCOUNT	LCS for HBN 287663 [EXTO/7083]	223954	1000	1.0	7		
3	QC ACCOUNT	LCSD for HBN 287663 [EXTO/7083	223955	1000	1.0	7		SEPARATORY FUNNEL/3510
4	4380	86-CEF271-7S-Q1-05	20502170401	1000	1.0	7		
5	4380	86-CEF271-9S-Q1-05	20502170402	1000	1.0	7		
6	4380	86-CEF271-10S-Q1-05	20502170403	1000	1.0	7		
7	4380	86-CEF271-12S-Q1-05	20502170404	1000	1.0	7		SONICATOR/3550
8	4380	086-271-MS-Q1-05	20502170405	1000	1.0	7		
9	4380	086-271-MSD-Q1-05	20502170406	1000	1.0	7		SOXHLET/3540
10	4380	086-271-DP-Q1-05	20502170407	1000	1.0	7		
11	4380	086-271-EB-Q1-05	20502170408	1000	1.0	7		
12								
13								
14								
15								
16								
17								
18								
19								Sodium Sulfate Lot No:
20				SKB 02/17/05				044031
21								ACETONITRILE:
22								044266
23								MeCL2 Lot No:
24								044236
25								
26								
27								
28								

COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME

SURROGATE ID	9-10-7			SPIKE ID	9-10-6	TECHNICIAN	DATE
VOLUME	0.5 mL			VOLUME	1.0 mL		2-17-05
CONCENTRATION	4.0 ug/mL			CONCENTRATION	5.0 ug/mL	John Bailey	02/17/05
NaOH		ACID				SUPERVISOR	DATE
SPIKE WITNESS	DWB					John Bailey	02/17/05

LABORATORY CHRONICLE: GC-MS DEPARTMENT

Date: 07-OCT-2004
Instrument: hplc1.i

Standard	Conc ppm	Lot No.
DFTPP	50	
Int. Standard	4000	

Inst. Conditions: _____

MISC: _____

Sample ID	ClientName	DataFile	WT VOL	Injection Time	DilFactor	ALS	Comments
8310STD00.1		h0008223.d	1000.00 ml	07-OCT-2004 11:19	1.000	1	
8310STD0.25		h0008224.d	1000.00 ml	07-OCT-2004 11:26	1.000	1	
8310STD0.50		h0008225.d	1000.00 ml	07-OCT-2004 11:33	1.000	1	
8310SATD001		h0008226.d	1000.00 ml	07-OCT-2004 11:40	1.000	1	
8310STD02.5		h0008227.d	1000.00 ml	07-OCT-2004 11:47	1.000	1	
8310STD005		h0008228.d	1000.00 ml	07-OCT-2004 11:54	1.000	1	
8310STD010		h0008229.d	1000.00 ml	07-OCT-2004 12:01	1.000	1	
8310DTD020		h0008230.d	1000.00 ml	07-OCT-2004 12:08	1.000	1	

REVISED 6-1-95 Supervisor Review: QA Review:

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INITIAL	DATE PREPARED	EXP DATE
~~BZ-LL~~ TETRA	4-13-1	NA	ULTRA	T1366 12/2005	100.0	NA	NA	NA	CPB	NA	12/2005
BZ-170 HEPTA	4-13-2	NA	ULTRA	T0334 04/2007	100.0	NA	NA	NA	CPB	NA	04/2007
BZ 180 HEXA	4-13-3	NA	ULTRA	R690B 03/2008	100.0	NA	NA	NA	CPB	NA	03/2008
BZ-44 TETRA	4-13-4	NA	ULTRA	R690B 03/2008	100.0	NA	NA	NA	CPB	NA	03/2008
BZ 187 HEPTA	4-13-5	NA	ULTRA	U0020 02/2007	100.0	NA	NA	NA	CPB	NA	02/2007
BZ128 T0478 Hex	4-13-6	NA	ULTRA	T0478 05/2007	100.0	NA	NA	NA	CPB	NA	05/2007
CHRYSENE D12	4-13-7	NA	ULTRA	W0097 03/2008	2000.0	NA	NA	NA	CPB	NA	03/2008
TCMX	4-13-8	NA	ULTRA	T0490 11/2007	2000.0	NA	NA	NA	CPB	NA	11/2007
PCBCONG010	4-13-9	4-11-5	Inhouse	4-11-5/05-01-05	100ul	1.0ml	10ppm	Hexane/036801	TLW	06-11-04	05-01-05
ApQ 10	4-13-10	200 ug/mL G2423	NSI	111103-03 01/05	50 uL	pr3 061104 ~~10~~ 10.0ml	10 ppm	Dcm 030609	pr3	061104	010105
20	4-13-11				100	~~20~~	20				
40	4-13-12				200	~~40~~	40				
60	4-13-13				300	~~60~~	60				
80	4-13-14				400	~~80~~	80				
100	4-13-15				500	~~100~~	100				
Dates 5-5-04 — 6-11-04 were reviewed by QA/QC on 6-24-04 DLH											
~~4-13-16~~			RLW	06-25-04							
PNA Cal 8	4-13-16	2.0 mg/ml PAH Mix 2000 ug/ml P-Terphenyl	Accustd Ultra	B4060037 06-04-06 4-0559 05-01-07	500ul	50.0ml	20ppm	Acetonitrile/031168	TLW	06-25-04	06-25-05

000252

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INITIAL	DATE PREPARED	EXP DATE
DOA CAL 5	4-14-1	4-13-16	In house	4-13-16 / 06-25-05	6.25 ml	50.0 ml	2.5 ppm	Acetonitrile / 031168	RLW	06-25-04	06-25-05
SKL BA 200	4-14-2	Skinner 200 Q-4235 B	NSI	041304-02/4-13-05	1.0 mL	5.0 mL	200 ppm	CH_2Cl_2			
10	4-14-3				50 uL	1.0 mL	10	DCM 030609	Jar 3	063004	123004
50	4-14-4				250		50				
80	4-14-5				400		80				
120	4-14-6				600		120				
160	4-14-7				800		160				
SKLBNA Jar3 063004 ~~SKL ICV 050~~	4-14-8	M-005A-10X M-005B-10X 200 ppm	ACCU ACCU	B0010103-3C/9-14-4 B3110139/111303	1.0 mL 1.0 mL	1 mL	2000	NA	Jar3	063004	091404
SKL ICV 050	4-14-9	4-14-8	4-14-8	4-14-8 / 091404	250 ul 250 ul	~~250~~ Jar3 063004 ~~250~~ mL	500	DCM 030609			
Dates 6-25-04 — 6-30-04 were renewed by QA/QC on 7-29-04 DLH —											
ICV 050	4-14-10	6.25 Spike BNA Surry	NSI NSI	9-1-2 / 7/8/05 9-2-5 / 7/21/05	0.5 mL 0.5 mL	1.0 mL	50 ppm 50/100	DCM 036929	Jar3	080204	070805
APP9 200	4-14-11	Q4113 C-411-04 323-03-02 847-02-05	NSI	06030402 / 12-03-04 C-411-04 / 02-05 323-03-02 / 03-05 847-02-05 / 12-05	5.0 mL 1.0 0.8 1.0	10.0 mLs	200 ppm 200 400 200	DCM 030609	Jar3	081804	120305
10	4-14-12	4-14-11	In-House	4-14-11 / 12-3-04	50 uL	1.0 mL	10 ppm				
50	4-14-13				250 uL		50				
80	4-14-14				400 uL		80				
120	4-14-15				600 uL		120				
160	4-14-16				800 uL		160				

000253

LABORATORY CHRONICLE: GC-MS DEPARTMENT

Date: 18-FEB-2005
Instrument: hplc1.i

Standard	Conc ppm	Lot No.
DFTPP	50	
Int. Standard	4000	

Inst. Conditions: _____

MISC: _____

Sample ID	ClientName	DataFile	WT VOL	Injection Time	DilFactor	ALS	Comments
8310CCV		h0000383.d	1000.00 ml	18-FEB-2005 13:48	1.000	1	
223953		h0000384.d	1000.00 ml	18-FEB-2005 14:23	1.000	1	
223954		h0000385.d	1000.00 ml	18-FEB-2005 14:30	1.000	1	
223955		h0000386.d	1000.00 ml	18-FEB-2005 14:37	1.000	1	
20502170401		h0000387.d	1000.00 ml	18-FEB-2005 14:44	1.000	1	
20502170402		h0000388.d	1000.00 ml	18-FEB-2005 14:51	1.000	1	
20502170403		h0000389.d	1000.00 ml	18-FEB-2005 14:57	1.000	1	
20502170404		h0000390.d	1000.00 ml	18-FEB-2005 15:04	1.000	1	
20502170405		h0000391.d	1000.00 ml	18-FEB-2005 15:11	10.000	1	
20502170406		h0000392.d	1000.00 ml	18-FEB-2005 15:18	10.000	1	
20502170407		h0000393.d	1000.00 ml	18-FEB-2005 15:25	1.000	1	
20502170408		h0000394.d	1000.00 ml	18-FEB-2005 15:32	1.000	1	
		h0000395.d	1000.00 ml	18-FEB-2005 15:39	1.000	1	
20502170401		h0000396.d	1000.00 ml	18-FEB-2005 15:46	10.000	1	
		h0000397.d	1000.00 ml	18-FEB-2005 16:46	1.000	1	
		h0000398.d	1000.00 ml	18-FEB-2005 16:53	1.000	1	
		h0000399.d	1000.00 ml	18-FEB-2005 17:00	1.000	1	
8310CCV		h0000400.d	1000.00 ml	18-FEB-2005 17:07	1.000	1	

REVISED 6-1-95 Supervisor Review: QA Review:

CH2MHill/4380/20502170 7/2-23-05

CH2MHILL Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER: 171591-036

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
Former N.A.S. Cecil Field Building 271	171591	Gulf Coast Labs. Dano Merril	Jeff Marks / CH2M Hill Constuctors, Inc.	6219 Authority Ave. Jacksonville, FL 32221 (904) 7774812,FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 271 Quarterly GW Sampling Event	0086	6421	Russel Henderson / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 (770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Jeff Marks CH2M Hill Constuctors, Inc.	Ph:(904)777-4812 Fax:(904) 777-4262	Ph:(225) 769-4900		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	BTEX & MTBE by 8260B.	16 listed PAHs (incl 1- & 2-Methylnaphthalene) by 8310								SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	86-CEF271-7S-Q1-05	CEF-271-7S	W	02/15/05	1550	III/C	14	3	2								Grab	MS/MSD	-1
2	86-CEF271-9S-Q1-05	CEF-271-9S	W	02/15/05	1645	III/C	14	3	2								Grab		-2
3	86-CEF271-10S-Q1-05	CEF-271-10S	W	02/15/05	1500	III/C	14	3	2								Grab		-3
4	86-CEF271-12S-Q1-05	CEF-271-12S	W	02/15/05	1410	III/C	14	3	2								Grab		-4
5	086-271-MS-Q1-05	MS	W	02/15/05	1550	III/C	14	3	2								Grab	CEF-271-7S	-5
6	086-271-MSD-Q1-05	MSD	W	02/15/05	1550	III/C	14	3	2								Grab	CEF-271-7S	-6
7	086-271-DP-Q1-05	Field Duplicate	W	NA	NA	III/C	14	3	2								Grab		-7
8	086-271-EB-Q1-05	Equipment Blank	W	02/15/05	1700	III/C	14	3	2								Grab		-8
9	086-271-TB-Q1-05	Trip Blank	W	NA	NA	III/C	14	3									Grab	Prepared by Lab	-9
10																			

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
Randy Dumaop / Greg Ramey AGVIQ Environmental Services / CH2M HILL	Federal Express Tracking Numbers:7909 2021 7807, 7909 2021 7818.	3°

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	2/15/2005	18:00	Federal Express Tracking Numbers:7909 2021 7807, 7909 2021 7818.	2/15/2005	18:00
Printed Name and Signature:			Printed Name and Signature:		
Fedex 7909 2021 7807 7909 2021 7818	2-16-05 1640	1640	Michelle Raborn	2-16-05	1640
Printed Name and Signature:			Printed Name and Signature:		

000255

Distribution: [ ] **Original** - Laboratory (To be returned with Analytical Report);[ ] **Copy 1** - Project File; [ ] **Copy 2** - PMO

Form CCI001, Rev 02/00

PRESERVATION CHECKLIST / COOLER RECEIPT

Gulf Coast Analytical Laboratories, Inc.

WO:	205021704	**Type:**	D
Desc:		**Report:**	REVIEW_RPT
Work ID:	CTO 86 Cecil Field - South Fue	**Status:**	WP
Project Seq:	27639	**Created:**	2/17/2005 8:26
Client:	4380 - CH2M Hill Constructors	**QA:**	
Profile:	42891 - CTO 0086 - CTO 86 Cecil Field - South Fuel Farm	**PO:**	6421

WORKORDER SAMPLES

			pH PRESERVATIVE			VOA HEADSPACE			
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20502170401-1	40	HCL+STS			✓	✓			OK
20502170401-2	40	HCL+STS			✓	✓			OK
20502170401-3	LA	NONE			X			X	OK
20502170401-4	LA	NONE			X			X	OK
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20502170402-1	40	HCL+STS			✓	✓			OK
20502170402-2	40	HCL+STS			✓	✓			OK
20502170402-3	LA	NONE			X			X	OK
20502170402-4	LA	NONE			X			X	OK
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20502170403-1	40	HCL+STS			✓	✓			OK
20502170403-2	40	HCL+STS			✓	✓			OK
20502170403-3	LA	NONE			X			X	OK
20502170403-4	LA	NONE			X			X	OK
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20502170404-1	40	HCL+STS			✓	✓			OK
20502170404-2	40	HCL+STS			✓	✓			OK
20502170404-3	LA	NONE			X			X	OK
20502170404-4	LA	NONE			X			X	OK
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20502170405-1	40	HCL+STS			✓	✓			OK
20502170405-2	40	HCL+STS			✓	✓			OK
20502170405-3	LA	NONE			X			X	OK
20502170405-4	LA	NONE			X			X	OK

Container ID	Type	Preservative	pH PRESERVATIVE A	pH PRESERVATIVE U	pH PRESERVATIVE N\A	VOA HEADSPACE A	VOA HEADSPACE U	VOA HEADSPACE N\A	CONTAINER CONDITION
20502170406-1	40	HCL+STS			✓	✓			OK
20502170406-2	40	HCL+STS			✓	✓			OK
20502170406-3	LA	NONE			X			X	OK
20502170406-4	LA	NONE			X			X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20502170407-1	40	HCL+STS			✓	✓			OK
20502170407-2	40	HCL+STS			✓	✓			OK
20502170407-3	LA	NONE			X			X	OK
20502170407-4	LA	NONE			X			X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20502170408-1	40	HCL+STS			✓	✓			OK
20502170408-2	40	HCL+STS			✓	✓			OK
20502170408-3	LA	NONE			X			X	OK
20502170408-4	LA	NONE			X			X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20502170409-1	40	HCL+STS			✓	✓			OK
20502170409-2	40	HCL+STS			✓	✓			OK

A = ACCEPTABLE
U = UNACCEPTABLE
N\A = NOT APPLICABLE

COOLER (S) TEMPERATURE (A) U LIMIT = 4C + \ - 2C

MAXIMUM VOLATILE HEADSPACE BUBBLE 6MM

Custody Seal
used [✓] Yes [ ] No
in tact [✓] Yes [ ] No

LABEL(S) VERIFIED_____ CUSTODIAN MN