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ANNUAL OPERATIONS AND MAINTENANCE STATUS REPORT FOR BIOVENTING AND BIOSPARGING SYSTEMS AT SOUTH FUEL FARM NAS CECIL FIELD FL

12/1/2003

CH2MHILL CONSTRUCTORS INC

Annual
Operations and Maintenance
Status Report

Bioventing and Biosparging Systems
South Fuel Farm
Naval Air Station Cecil Field
Jacksonville, Florida

June 1, 2002 – June 30, 2003

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

Submitted to:

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Acronyms

ABB-ES	ABB Environmental Services, Inc.
acfm	actual cubic feet per minute
AST	aboveground storage tank
BCT	BRAC Cleanup Team
BEI	Bechtel Environmental, Inc.
bls	below land surface
BRAC	Base Realignment and Closure
^{o}C	degrees Celsius
CCI	CH2M HILL Constructors, Inc.
CLEAN	Comprehensive Long-term Environmental Action Navy
CTO	Contract Task Order
EMT	earth-mounted tank
^{o}F	degrees Fahrenheit
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Residual Organic
GCTLs	Groundwater Cleanup Target Levels
in Hg	inches of mercury
JP-5	jet propellant 5
LNAPL	light non-aqueous phase liquid
µg/L	micrograms per liter
mg/L	milligrams per liter
mS/cm	milliSeimens per centimeter
mV	millivolts
NAS	Naval Air Station
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command
NM	not measured
NTU	nephelometric turbidity units
O&M	operations and maintenance
ORP	oxygen reduction potential
OVA	organic vapor analyzer
PAH	polycyclic aromatic hydrocarbons
ppm	parts per million
psig	pounds per square inch gauge
PVC	polyvinyl chloride
RAP	Remedial Action Plan
scfm	standard cubic feet per minute
SCTLs	Soil Cleanup Target Levels
SFF	South Fuel Farm
TRPH	total recoverable petroleum hydrocarbon
TtNUS	Tetra Tech NUS, Inc.

USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compounds

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) has been contracted by the Department of the Navy, Southern Division Naval Facilities Engineering Command (NAVFAC), to provide operation and maintenance (O&M) services at the South Fuel Farm (SFF), Former NAS Cecil Field, Jacksonville, Florida, under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0086.

Bioventing and biosparging systems were installed at SFF to reduce petroleum hydrocarbon contaminant concentrations in site groundwater and unsaturated soils. The purpose of this Annual Operations and Maintenance Status Report is to provide a summary of annual O & M activities performed at the site during the period of June 1, 2002, to June 30, 2003. This report includes the 2nd Quarter 2003 O&M activities and results, and therefore, replaces the 2nd Quarter 2003 Operations and Maintenance Status Report. The 3rd and 4th Quarter 2002 and 1st Quarter 2003 Operations and Maintenance Status Reports were previously submitted to the Navy.

Annual O&M activities included the following activities:

- Perform routine O&M checks of system (including recording meter and gauge measurements)
- Adjust and balance flow rates
- Collect water level measurements
- Collect soil and groundwater samples

1.1 Objective

The objective of the remedial action at the SFF is to reduce the concentrations of petroleum contaminants in the groundwater and unsaturated soils to Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs) and Soil Cleanup Target Levels (SCTLs), respectively, as specified in Tables I and II of Chapter 62-777, Florida Administrative Code (FAC). Bioventing and biosparging systems have been installed and are currently operational at the site to achieve this objective.

1.2 Site History

The SFF is located at the northern edge of the east-west runway at Former NAS Cecil Field in Jacksonville, Florida. The SFF was used as a fuel storage facility for leaded and unleaded gasoline, aviation gasoline, diesel fuel, and jet propellant 5 (JP-5). When fully operational, the facility contained three aboveground storage tanks (ASTs), four underground storage tanks (USTs), and four earth-mounded tanks (EMTs) (Bechtel Environmental, Inc. [BEI], 1998a).

In 1983, the three ASTs were removed. In July 1994, the four USTs and three of the four EMTs were excavated. Excessively contaminated soil excavated during the tank removals was returned to the excavations. A contamination assessment was conducted by ABB Environmental Services, Inc. (ABB-ES) to determine the nature and extent of contamination as required by Chapter 62-770, FAC. A Remedial Action Plan (RAP) was submitted by ABB-ES in 1996 specifying the recommended remedial action as enhanced intrinsic remediation through bioventing and biosparging combined with an oxygen barrier wall. Subsequent to RAP submittal, the Base Realignment and Closure (BRAC) Cleanup Team (BCT) agreed to implement remedial action activities for only the northern portion of the SFF site (BEI, 1998a). The southern portion of the bioventing and biosparging systems and the oxygen barrier were subsequently deleted from the RAP by the BCT. Soil excavation was chosen as the remedial alternative for the southern portion of the SFF site. CCI excavated 28,953 tons of petroleum-impacted soil from October 1998 to February 1999 (CCI, 2001).

BEI installed the approved bioventing and biosparging systems for the northern portion of the SFF site from December 1997 to March 1998. Startup of the bioventing and biosparging systems occurred on April 6, 1998 (BEI, 1998b). BEI performed O&M of the systems from April 1998 to April 1999. EnSafe, Inc. performed the O&M of the systems from April 1999 to May 2001. Since June 2001, CCI has conducted the system O&M.

1.3 Remediation System/Technology Description

1.3.1 Bioventing System

The bioventing system improves intrinsic bioremediation of the contaminated soil by delivering oxygen to the aerobic bacteria in the vadose zone. This is achieved via subgrade wells at a low flow rate to minimize volatilization and stimulate subgrade indigenous microbial activity (ABB-ES, 1996).

The SFF bioventing system consists of 9 two-inch diameter polyvinyl chloride (PVC) vertical bioventing wells (BV-1 through BV-9), a blower, inlet air filter, flow meter, pressure and temperature gauges, valving, piping, and system controls. The aboveground portion of the bioventing system is located in a fenced, canopy covered equipment area. The bioventing wells are screened from approximately 3 to 8 feet below land surface (bls). The bioventing system is designed to deliver air to each well at a flow rate of 4 actual cubic feet per minute (acfm) at a well head pressure of 20 inches of water (ABB-ES, 1996). The locations of the bioventing wells and equipment area are shown on Figure 1-1.

1.3.2 Biosparging System

The biosparging system is used to treat the contaminated groundwater plume at the SFF site. This treatment system promotes the optimum environment for microbial activity and growth by injecting controlled volumes of air into the groundwater below the deepest point of contamination at controlled pressures via subgrade wells (ABB-ES, 1996).

The SFF biosparging system consists of 23 two-inch diameter PVC vertical biosparging wells (BS-1 through BS-23), a rotary screw air compressor, receiver tank, air dryer, in-line moisture separator, in-line coalescing oil filter, pressure regulator/gauge, header piping, valves, flow gauge, and system controls. The aboveground portion of the biosparging

system is located in the same fenced canopy covered equipment area as the bioventing system. The biosparging wells are screened from approximately 27 to 30 feet bls. The biosparging system is designed for each well to operate at a flow rate of 1 acfm at an injection pressure of 15 pounds per square inch gauge (psig) (ABB-ES, 1996). The locations of the biosparging wells are shown on Figure 1-1.

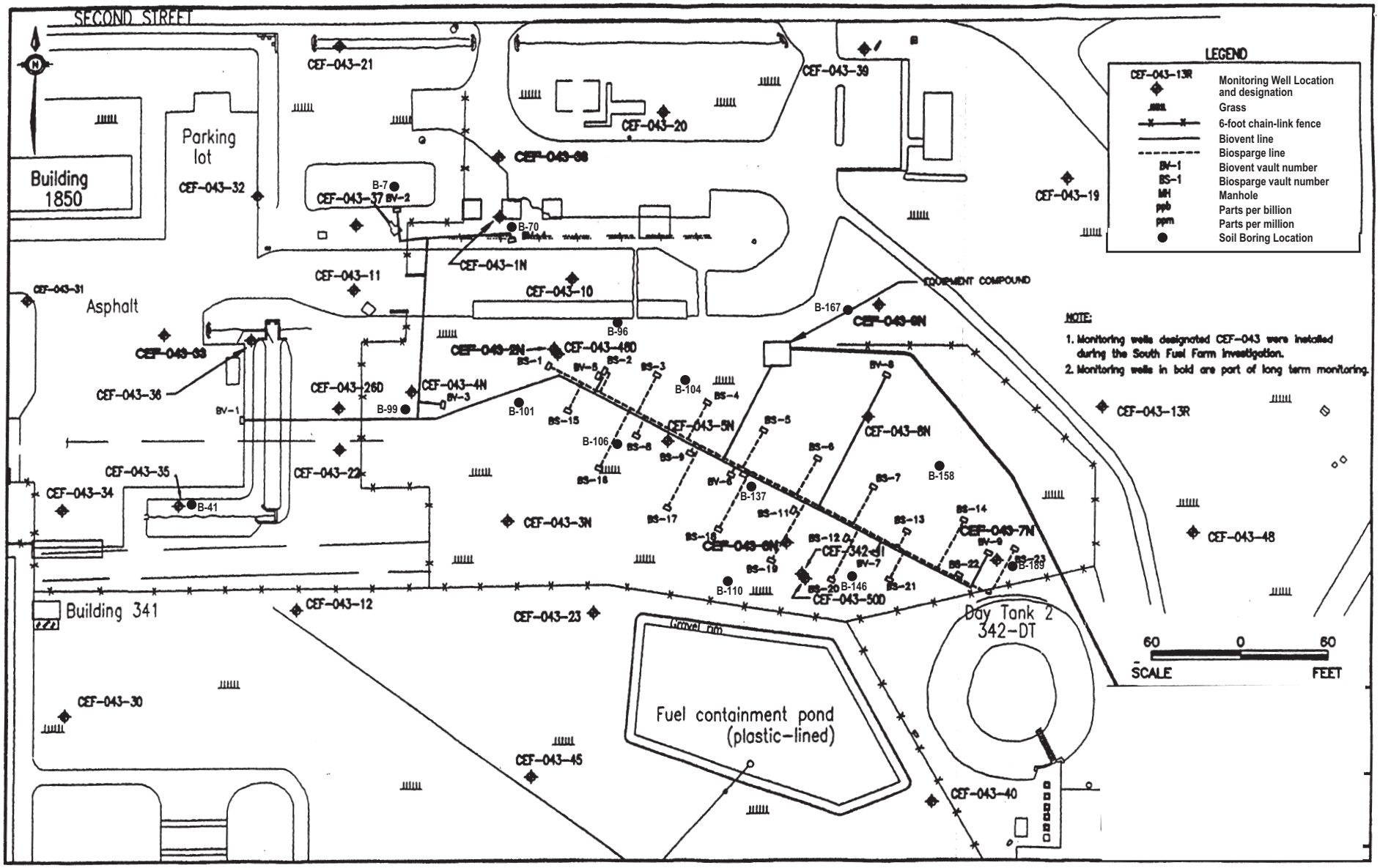

Figure 1-1
Site Plan
South Fuel Farm
NAS Cecil Field
Jacksonville, Florida

CH2MHILL

A072003003ATL\Figure1-1.ai

2.0 System Performance Monitoring

Routine O&M checks of the system were performed weekly. During an O&M check, a preventative maintenance checklist (based upon manufacturer's recommendations) was completed, and any required maintenance activity was performed. The meters and gauges in the equipment area were read and recorded during the O&M check on a weekly basis. The meters and gauges in the bioventing and biosparging well vaults were read and recorded during the O&M check on a monthly basis.

During the O&M activities, the injection pressures and individual well air flow rates were adjusted and balanced in attempt to achieve the design specifications. These adjustments will be evaluated during the 3rd Quarter of 2003.

2.1 Operational Efficiencies

2.1.1 Bioventing System

	Operational Period	To Date
Hours of Possible Operation	9480	45888
Hours of Actual Operation	9297.9	29727.4
Percent hours of Operation	98%	64.7%

2.1.2 Biosparging System

	Operational Period	To Date
Hours of Possible Operation	9480	45888
Hours of Actual Operation	8043.1	44127.6
Percent hours of Operation	84.8%	96.1%

2.2 Summary of Maintenance and System Downtime

2.2.1 Bioventing System

During the June 1, 2002, to June 30, 2003, monitoring period, the bioventing system ran a total of 387.4 days out of a possible 395 days, resulting in 182.1 hours of downtime. The bioventing system downtime is detailed as follows:

- Manual system shut down for a total of 34.2 hours for electrical safety while troubleshooting and installation of a biosparge air compressor electric motor
- Manual system shut down for a total of 142.4 hours for a bioventing well test performed by Tetra Tech NUS, Inc. (TtNUS)

- Electrical service discontinuation resulting in 4 hours of downtime
- Manual system shut down for a total of 1.5 hours to perform routine equipment maintenance

2.2.2 Biosparging System

During the June 1, 2002, to June 30, 2003, monitoring period, the biosparging system ran a total of 335.1 days out of a possible 395 days, resulting in 1436.9 hours of downtime. The biosparging system downtime is detailed as follows:

- Manual system shut down for a total of 142.4 hours for a bioventing well test performed by TtNUS
- Electrical service discontinuation resulting in 4 hours of downtime
- Electric motor failure on the biosparging air compressor and installation of a new motor resulting in a total of 120 hours of downtime
- 110-volt transformer failure and installation of a new transformer resulting in a total of 413 hours of downtime
- Electric motor failure on the biosparging air compressor and installation of a new motor under warranty resulting in a total of 536.7 hours downtime
- Manual system shut down for a total of 20.2 hours to perform routine equipment maintenance
- Down for a total of 200.6 hours due to high temperature shut down

2.3 Pressure/Flow Rate Monitoring

2.3.1 Bioventing System

During the June 1, 2002, to June 30, 2003, monitoring period, the blower discharge pressure averaged 28.5 inches of water compared to the design blower discharge pressure of 40 inches of water. The total air injection flow rate at the blower averaged 108 standard cubic feet per minute (scfm) compared to the design blower flow rate of 80 scfm. Bioventing system data is summarized in Table 2-1.

TABLE 2-1
Bioventing System Data

Date	Blower Discharge Pressure (inches of water)	Blower Discharge Temperature (^{o}F)	Blower Air Flow Rate (scfm)
06/03/2002	26	126	100
06/10/2002	28	110	102
06/17/2002	28	114	102
06/26/2002	26	110	105
07/01/2002	28	110	100
07/08/2002	26	115	102
07/15/2002	26	120	102

TABLE 2-1
Bioventing System Data

Date	Blower Discharge Pressure (inches of water)	Blower Discharge Temperature (^oF)	Blower Air Flow Rate (scfm)
07/23/2002	30	115	102
07/29/2002	30	120	97
08/01/2002	30	120	96
08/06/2002	30	116	115
08/12/2002	30	116	115
08/19/2002	28	126	115
08/26/2002	28	110	115
09/03/2002	29	120	118
09/09/2002	29	110	120
09/16/2002	32	126	115
09/26/2002	28	118	118
10/09/2002	29	112	119
10/10/2002	28	116	120
10/15/2002	27	106	118
10/24/2002	28	105	120
10/30/2002	26	114	120
11/12/2002	26	102	120
11/21/2002	28	97	120
11/26/2002	26	102	120
12/05/2002	28	95	120
12/12/2002	29	90	120
12/19/2002	26	110	120
12/23/2002	28	100	120
12/31/2002	30	98	120
01/07/2003	NR	NR	NR
01/15/2003	29	80	125
01/20/2003	28	100	125
01/22/2003	27	95	120
01/23/2003	29	80	90
01/30/2003	28	106	85
02/06/2003	29	93	90
02/13/2003	28	100	85
02/20/2003	30	100	125
02/25/2003	30	92	90
03/05/2003	30	116	80
03/12/2003	32	114	80
03/20/2003	31	122	100
03/26/2003	31	114	106
04/04/2003	30	90	107
04/09/2003	30	112	105
04/15/2003	30	110	110
04/23/2003	28	108	108
04/29/2003	28	112	108
05/07/2003	28	117	110
05/15/2003	30	116	108
05/21/2003	28	112	100
05/28/2003	28	110	105

TABLE 2-1
Bioventing System Data

Date	Blower Discharge Pressure (inches of water)	Blower Discharge Temperature (^oF)	Blower Air Flow Rate (scfm)
06/04/2003	28	108	105
06/10/2003	28	126	105
06/16/2003	28	116	105
06/18/2003	28	120	105
06/30/2003	30	120	105

^oF - degrees Fahrenheit
scfm - standard cubic feet per minute
NR = No Reading

The cause of the actual air flow rates being less than the design criteria is likely due to the screen intervals of select injection wells are located in low permeability zones as compared to the screen intervals of design/pilot test injection wells. Another potential reason for low actual flow rates maybe unavoidable well screen inefficiencies caused during installation activities associated with smearing of the borehole from slit/clay layers.

2.3.2 Biosparging System

During the June 1, 2002, to June 30, 2003, monitoring period, the injection header discharge pressure averaged 15.7 psig which is similar to the design injection pressure of 15 psig. The biosparging system data is tabulated in Table 2-2.

TABLE 2-2
Biosparging System Data

Date	Air Compressor Supply Pressure (psig)	Air Compressor Discharge Temperature (^oF)	Receiver Tank Supply Pressure (psig)	Header Discharge Pressure (psig)
06/03/2002	110	205	105	16
06/10/2002	110	185	105	17.5
06/17/2002	40	170	30	16.5
06/26/2002	45	170	38	17
07/01/2002	110	180	105	17
07/08/2002	108	185	100	16
07/15/2002	60	180	50	16
07/23/2002	74	175	68	16.5
07/29/2002	110	195	110	16
08/01/2002	105	195	100	16
08/06/2002	50	190	45	18
08/12/2002	110	190	105	17
08/19/2002	105	205	100	17
08/26/2002	105	180	100	17
09/03/2002	50	180	45	17
09/09/2002	95	190	90	17
09/16/2002	45	190	40	17
09/26/2002	NM	NM	NM	NM
10/09/2002	NM	NM	NM	NM
10/10/2002	110	190	110	17
10/15/2002	110	205	100	15
10/23/2002	NM	NM	NM	NM
10/24/2002	105	200	100	NM
10/25/2002	NM	NM	NM	NM
10/30/2002	45	190	40	17
11/01/2002	NM	NM	NM	NM

TABLE 2-2
Biosparging System Data

Date	Air Compressor Supply Pressure (psig)	Air Compressor Discharge Temperature (^oF)	Receiver Tank Supply Pressure (psig)	Header Discharge Pressure (psig)
11/07/2002	84	186	80	16.5
11/12/2002	40	175	35	16.5
11/21/2002	45	170	35	14
11/26/2002	90	190	90	13
12/05/2002	115	185	105	14
12/12/2002	110	175	100	15
12/19/2002	110	220	100	16
12/23/2002	40	180	30	15
12/31/2002	85	195	80	16
01/07/2003	NM	NM	NM	NM
01/15/2003	NM	NM	NM	NM
01/20/2003	48	190	40	17
01/23/2003	55	75	45	18
01/30/2003	55	190	50	16
02/06/2003	45	170	38	15
02/13/2003	45	180	40	15
02/20/2003	50	180	40	15
02/25/2003	40	170	30	15
03/05/2003	55	200	50	15
03/12/2003	55	195	45	15
03/20/2003	50	205	45	15
03/26/2003	50	190	45	15.5
04/04/2003	35	165	30	16
04/09/2003	60	190	50	15
04/15/2003	55	190	50	15
04/23/2003	58	180	50	15.5
04/29/2003	50	190	45	15
05/07/2003	47	195	40	15
05/15/2003	45	195	40	14
05/21/2003	75	200	65	14
05/28/2003	75	195	70	15
06/04/2003	70	195	65	14
06/10/2003	72	215	68	14
06/16/2003	65	210	60	14
06/18/2003	62	210	60	14
06/30/2003	100	225	97	14

psig - pounds per square inch gauge
^oF - degrees Fahrenheit
NM - Not Measured

2.4 Water Level Measurements

Depth to groundwater measurements were recorded on a monthly basis from 20 monitoring wells during the June 1, 2002, to June 30, 2003, monitoring period. The results of the groundwater level measurement surveys are provided in Table 2-3. Light non-aqueous phase liquid (LNAPL) was not detected in monitoring wells during the June 1, 2002, to June 30, 2003, monitoring period.

The potentiometric surface of the site groundwater based on June 18, 2003, water levels is depicted on Figure 2-1. In general, the groundwater flow in the vicinity of the bioventing and biosparging systems is to the southwest.

TABLE 2-3
Water Level Measurements

Well Identification	Date	Top of Casing Elevation (feet NAVD)	Depth to Water (feet bgs)	Water Level Elevation (feet NAVD)
CEF-043-1N	06/20/2002	78.15	8.61	69.54
	07/11/2002		8.01	70.14
	08/15/2002		6.52	71.63
	09/26/2002		5.95	72.20
	10/09/2002		6.64	71.51
	11/21/2002		7.16	70.99
	12/12/2002		7.51	70.64
	01/15/2003		6.36	71.79
	02/25/2003		6.31	71.84
	03/26/2003		5.68	72.47
	04/23/2003		6.61	71.54
	05/15/2003		7.10	71.05
	06/18/2003		6.47	71.68
CEF-043-2N	06/20/2002	78.00	8.72	69.28
	07/11/2002		8.12	69.88
	08/15/2002		6.55	71.45
	09/26/2002		6.10	71.90
	10/09/2002		6.78	71.22
	11/21/2002		7.33	70.67
	12/12/2002		7.65	70.35
	01/15/2003		7.22	70.78
	02/25/2003		6.37	71.63
	03/26/2003		5.71	72.29
	04/23/2003		7.01	70.99
	05/15/2003		7.22	70.78
	06/18/2003		6.59	71.41
CEF-043-3N	06/20/2002	78.26	9.35	68.91
	07/11/2002		8.81	69.45
	08/15/2002		7.59	70.67
	09/26/2002		7.30	70.96
	10/09/2002		7.76	70.50
	11/21/2002		8.16	70.10
	12/12/2002		8.41	69.85
	01/15/2003		8.03	70.23
	02/25/2003		7.42	70.84
	03/26/2003		4.48	73.78
	04/23/2003		7.77	70.49
	05/15/2003		8.11	70.15
	06/18/2003		7.60	70.66
CEF-043-4N	06/20/2002	78.07	8.71	69.36
	07/11/2002		8.24	69.83
	08/15/2002		6.86	71.21
	09/26/2002		6.23	71.84
	10/09/2002		7.02	71.05
	11/21/2002		7.49	70.58
	12/12/2002		7.94	70.13
	01/15/2003		7.39	70.68
	02/25/2003		6.64	71.43
	03/26/2003		6.15	71.92
	04/23/2003		7.03	71.04
	05/15/2003		7.41	70.66
	06/18/2003		6.77	71.30

TABLE 2-3
Water Level Measurements

Well Identification	Date	Top of Casing Elevation (feet NAVD)	Depth to Water (feet bgs)	Water Level Elevation (feet NAVD)
CEF-043-5N	06/20/2002	78.46	9.55	68.91
	07/11/2002		8.96	69.50
	08/15/2002		7.13	71.33
	09/26/2002		6.98	71.48
	10/09/2002		7.55	70.91
	11/21/2002		8.36	70.10
	12/12/2002		8.55	69.91
	01/15/2003		7.96	70.50
	02/25/2003		7.30	71.16
	03/26/2003		6.60	71.86
	04/23/2003		7.53	70.93
	05/15/2003		8.02	70.44
	06/18/2003		7.38	71.08
CEF-043-6N	06/20/2002	77.79	8.98	69.48
	07/11/2002		8.45	70.01
	08/15/2002		6.51	71.95
	09/26/2002		6.15	72.31
	10/09/2002		6.88	71.58
	11/21/2002		7.61	70.85
	12/12/2002		8.10	70.36
	01/15/2003		7.31	71.15
	02/25/2003		6.46	72.00
	03/26/2003		5.72	72.74
	04/23/2003		6.82	71.64
	05/15/2003		7.37	71.09
	06/18/2003		6.68	71.78
CEF-043-7N	06/20/2002	77.61	8.59	69.02
	07/11/2002		8.12	69.49
	08/15/2002		5.38	72.23
	09/26/2002		4.55	73.06
	10/09/2002		5.54	72.07
	11/21/2002		6.93	70.68
	12/12/2002		7.45	70.16
	01/15/2003		6.24	71.37
	02/25/2003		5.45	72.16
	03/26/2003		3.90	73.71
	04/23/2003		5.48	72.13
	05/15/2003		6.21	71.40
	06/18/2003		5.52	72.09
CEF-043-8N	06/20/2002	78.41	9.11	69.30
	07/11/2002		8.51	69.90
	08/15/2002		6.23	72.18
	09/26/2002		5.75	72.66
	10/09/2002		6.49	71.92
	11/21/2002		7.42	70.99
	12/12/2002		8.05	70.36
	01/15/2003		7.17	71.24
	02/25/2003		6.31	72.10
	03/26/2003		5.25	73.16
	04/23/2003		6.35	72.06
	05/15/2003		7.04	71.37
	06/18/2003		6.42	71.99

TABLE 2-3
Water Level Measurements

Well Identification	Date	Top of Casing Elevation (feet NAVD)	Depth to Water (feet bgs)	Water Level Elevation (feet NAVD)
CEF-043-9N	06/20/2002	77.50	7.82	69.68
	07/11/2002		7.16	70.34
	08/15/2002		4.85	72.65
	09/26/2002		4.17	73.33
	10/09/2002		4.98	72.52
	11/21/2002		5.85	71.65
	12/12/2002		6.31	71.19
	01/15/2003		5.71	71.79
	02/25/2003		4.87	72.63
	03/26/2003		3.88	73.62
	04/23/2003		4.85	72.65
	05/15/2003		5.81	71.69
	06/18/2003		5.05	72.45
CEF-043-10	06/20/2002	78.55	9.15	69.40
	07/11/2002		8.51	70.04
	08/15/2002		5.96	72.59
	09/26/2002		6.35	72.20
	10/09/2002		7.11	71.44
	11/21/2002		7.67	70.88
	12/12/2002		8.18	70.37
	01/15/2003		7.58	70.97
	02/25/2003		6.78	71.77
	03/26/2003		6.03	72.52
	04/23/2003		7.03	71.52
	05/15/2003		7.56	70.99
	06/18/2003		6.91	71.64
CEF-043-19	06/20/2002	78.47	8.44	70.03
	07/11/2002		7.83	70.64
	08/15/2002		5.51	72.96
	09/26/2002		4.78	73.69
	10/09/2002		5.51	72.96
	11/21/2002		6.44	72.03
	12/12/2002		7.38	71.09
	01/15/2003		6.26	72.21
	02/25/2003		5.68	72.79
	03/26/2003		4.68	73.79
	04/23/2003		5.31	73.16
	05/15/2003		6.15	72.32
	06/18/2003		5.77	72.70
CEF-043-20	06/20/2002	78.59	8.58	70.01
	07/11/2002		7.91	70.68
	08/15/2002		6.14	72.45
	09/26/2002		5.38	73.21
	10/09/2002		6.21	72.38
	11/21/2002		6.81	71.78
	12/12/2002		7.26	71.33
	01/15/2003		6.82	71.77
	02/25/2003		5.98	72.61
	03/26/2003		5.11	73.48
	04/23/2003		6.11	72.48
	05/15/2003		6.71	71.88
	06/18/2003		6.12	72.47

TABLE 2-3
Water Level Measurements

Well Identification	Date	Top of Casing Elevation (feet NAVD)	Depth to Water (feet bgs)	Water Level Elevation (feet NAVD)
CEF-043-21	06/20/2002	76.71	5.98	70.73
	07/11/2002		6.25	70.46
	08/15/2002		5.02	71.69
	09/26/2002		4.32	72.39
	10/09/2002		5.06	71.65
	11/21/2002		5.29	71.42
	12/12/2002		5.87	70.84
	01/15/2003		5.37	71.34
	02/25/2003		4.68	72.03
	03/26/2003		4.22	72.49
	04/23/2003		4.93	71.78
	05/15/2003		5.38	71.33
	06/18/2003		4.77	71.94
CEF-043-22	06/20/2002	77.24	7.77	69.47
	07/11/2002		7.31	69.93
	08/15/2002		6.12	71.12
	09/26/2002		5.50	71.74
	10/09/2002		6.62	70.62
	11/21/2002		6.60	70.64
	12/12/2002		7.06	70.18
	01/15/2003		6.57	70.67
	02/25/2003		5.85	71.39
	03/26/2003		5.43	71.81
	04/23/2003		6.28	70.96
	05/15/2003		6.67	70.57
	06/18/2003		4.97	72.27
CEF-043-32	06/20/2002	76.53	6.68	69.85
	07/11/2002		6.19	70.34
	08/15/2002		5.01	71.52
	09/26/2002		4.30	72.23
	10/09/2002		5.03	71.50
	11/26/2002		5.36	71.17
	12/12/2002		5.55	70.98
	01/15/2003		6.02	70.51
	02/25/2003		4.66	71.87
	03/26/2003		4.22	72.31
	04/23/2003		5.02	71.51
	05/15/2003		5.47	71.06
	06/18/2003		4.77	71.76
CEF-043-33	06/20/2002	76.97	7.04	69.93
	07/11/2002		6.73	70.24
	08/15/2002		5.54	71.43
	09/26/2002		4.30	72.67
	10/09/2002		5.64	71.33
	11/26/2002		5.91	71.06
	12/12/2002		6.17	70.80
	01/15/2003		6.02	70.95
	02/25/2003		5.21	71.76
	03/26/2003		4.89	72.08
	04/23/2003		5.67	71.30
	05/15/2003		6.06	70.91
	06/18/2003		5.33	71.64

TABLE 2-3
Water Level Measurements

Well Identification	Date	Top of Casing Elevation (feet NAVD)	Depth to Water (feet bgs)	Water Level Elevation (feet NAVD)
CEF-043-34	06/20/2002	76.84	NM	NM
	07/11/2002		6.55	70.29
	08/15/2002		5.32	71.52
	09/26/2002		NM	NM
	10/09/2002		5.63	71.21
	11/21/2002		5.68	71.16
	12/12/2002		6.13	70.71
	01/15/2003		5.98	70.86
	02/25/2003		5.28	71.56
	03/26/2003		4.91	71.93
	04/23/2003		5.68	71.16
	05/15/2003		6.02	70.82
	06/18/2003		5.21	71.63
CEF-043-38	06/20/2002	77.62	7.94	69.68
	07/11/2002		7.33	70.29
	08/15/2002		5.93	71.69
	09/26/2002		5.30	72.32
	10/09/2002		6.02	71.60
	11/21/2002		6.48	71.14
	12/12/2002		6.82	70.80
	01/15/2003		6.45	71.17
	02/25/2003		5.71	71.91
	03/26/2003		5.07	72.55
	04/23/2003		5.96	71.66
	05/15/2003		6.46	71.16
	06/18/2003		5.85	71.77
CEF-043-48	06/20/2002	77.10	8.27	68.83
	07/11/2002		7.74	69.36
	08/15/2002		4.95	72.15
	09/26/2002		4.11	72.99
	10/09/2002		5.14	71.96
	11/21/2002		6.37	70.73
	12/12/2002		7.10	70.00
	01/15/2003		6.03	71.07
	02/25/2003		5.18	71.92
	03/26/2003		3.87	73.23
	04/23/2003		5.16	71.94
	05/15/2003		6.11	70.99
	06/18/2003		5.46	71.64
CEF-043-50D	06/20/2002	77.23	11.74	65.49
	07/11/2002		10.61	66.62
	08/15/2002		8.77	68.46
	09/26/2002		8.25	68.98
	10/09/2002		8.10	69.13
	11/21/2002		7.91	69.32
	12/12/2002		7.79	69.44
	01/15/2003		7.86	69.37
	02/25/2003		8.03	69.20
	03/26/2003		7.57	69.66
	04/23/2003		8.20	69.03
	05/15/2003		8.41	68.82
	06/18/2003		7.21	70.02

bgs - below ground surface
NAVD - National Geodetic Vertical Datum 1929 (NGVD 1929)
NM - not measured

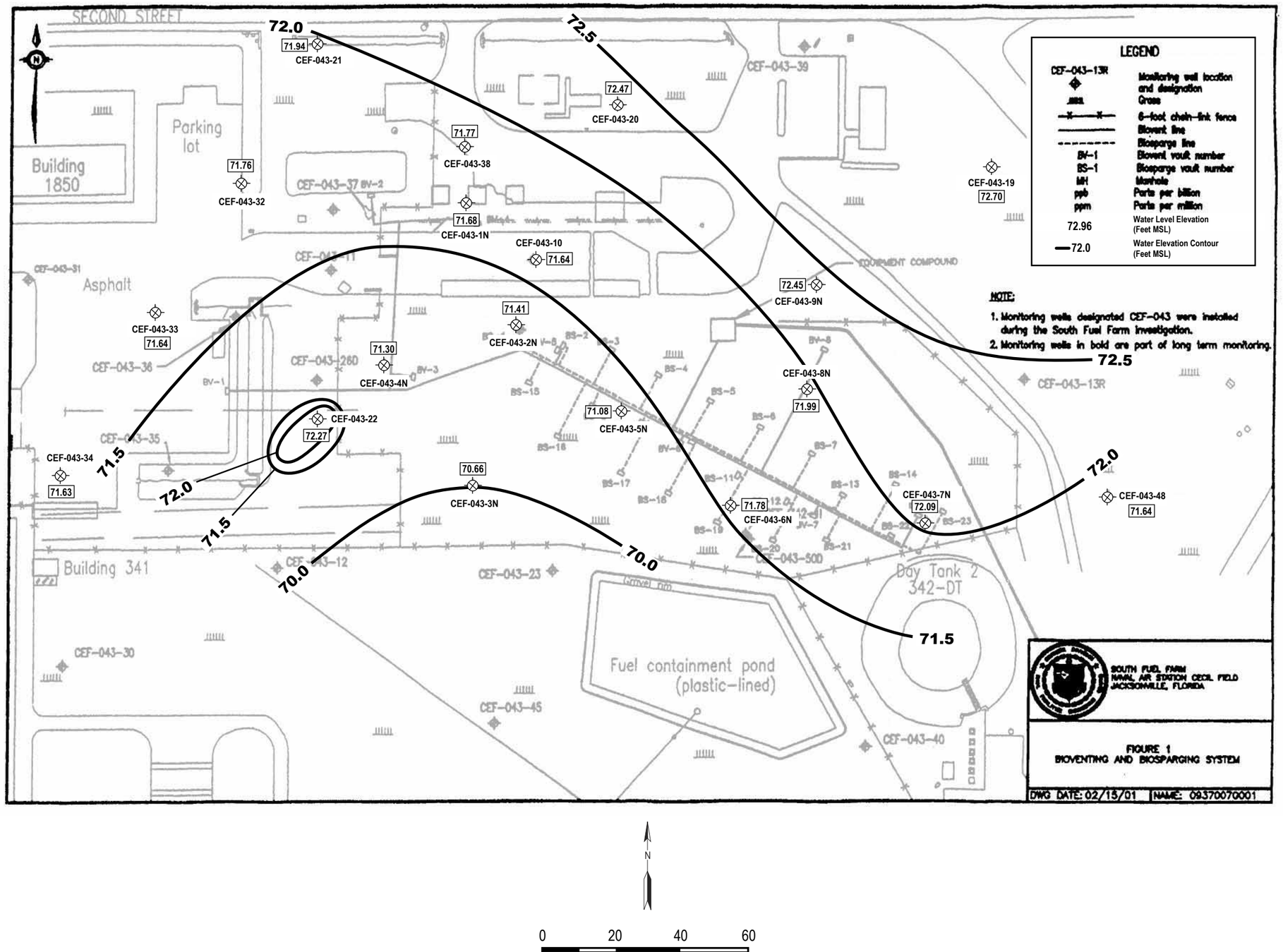

Figure 2-1
Potentiometric Surface Map - June 18, 2003
South Fuel Farm
NAS Cecil Field
Jacksonville, Florida

3.0 Summary of Sampling and Laboratory Analytical Results

3.1 Soil Monitoring

Soil screening and sampling is conducted on an annual basis in the 4th quarter of each year. The 2002/2003 annual soil screening and sampling event was performed on October 10, 2002. The 4th quarter 2002 soil sampling activities and results are discussed in detail in the 4th Quarter 2002 O&M Status Report (CCI, September 2003). The 4th quarter 2002 analytical results are summarized in Table 3-1. The soil boring locations are shown on Figure 1-1. Historical soil analytical results are presented in Table A-1 of Appendix A.

The 4th quarter 2002 analytical results indicated that total recoverable petroleum hydrocarbon (TRPH) was detected at concentrations that exceeded the Direct Exposure Residential SCTLs in samples from six boring locations (B-41, B-96, B-101, B-106, B-146, and B-167). In addition, ethylbenzene and xylenes (total) in boring B-146 and naphthalene, 1-methylnaphthalene, and 2-methynapthalene in boring B-167 exceeded the Leachability based on Groundwater Criteria SCTLs. In general, the concentrations of these parameters have decreased one to three orders of magnitude when compared to results from previous soil sampling events conducted in March 1999, September 2000, and October 2001 (See Table A-1 in Appendix A).

3.2 Groundwater Monitoring

CCI conducted the 2002/2003 annual groundwater sampling event on May 27, 2003; this sampling event is conducted on an annual basis in the 2nd quarter of each year. Groundwater samples were collected from six monitoring wells (CEF-43-2N, -6N, -7N, -9N, -33N, and -38N) and analyzed for the following parameters: volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Methods 624 and 8021B, polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8310, lead by USEPA Method 6010B, and TRPH by the Florida Petroleum Residual Organic (FL PRO) method. The 2002/2003 annual groundwater analytical results are summarized in Table 3-2. The historical groundwater analytical results are presented in Table A-2 of Appendix A. The analytical laboratory and data validation reports for the ground-water sampling event are provided in Appendix B.

Field tests were performed on the head space from selected monitoring wells on a monthly basis to evaluate indications of biological activity and influence of the bioventing and biosparging systems. The head space in each monitoring well was tested for percent methane, percent carbon dioxide, percent oxygen, pressure, and total hydrocarbons (using an organic vapor analyzer [OVA]). The groundwater in each monitoring well was tested for pH, conductivity, turbidity, dissolved oxygen, temperature, and eH. The results of the field tests are summarized in Table 3-3.

Samples from three wells (CEF43-2N, -6N, and -9N) detected one or more of the following parameters at concentrations above the GCTLs during the 2002/2003 annual sampling event: lead, naphthalene, xylenes (total), 1-methylnapthalene, 2-methylnapthalene, and TRPH. In general, parameter concentrations from the 2002/2003 annual event decreased one to three orders of magnitude when compared to the baseline and previous sampling events conducted from March 1998 to May 2001 (See Table A-2 in Appendix A). Based on an evaluation of historic groundwater data, it appears that the biosparging and bioventing systems are successful in reducing contaminant concentrations in groundwater.

Methane, carbon dioxide, and oxygen levels are measured as an indication of biological activity. Elevated levels of methane were not observed during the 2002/2003 sampling period. Elevated carbon dioxide levels and less than ambient oxygen levels were noted in most of the monitoring wells indicating biological activity is occurring. Pressure is measured as an indication of the influence of the bioventing and biosparging systems. Significant pressure readings above ambient atmospheric pressure were not noted in monitoring wells. OVA readings are measured as an indication of the levels of hydrocarbons still present. Elevated hydrocarbon levels (OVA readings greater than 50 parts per million [ppm]) were noted in monitoring wells CEF-043-2N and CEF-043-4N.

The basic water quality parameters pH, conductivity, temperature, and turbidity indicate conditions acceptable for biological activity. The dissolved oxygen levels were greater than 1 milligram per liter (mg/L), which indicates that sufficient oxygen is present for aerobic biological activity.

TABLE 3-1
Soil Analytical Results
South Fuel Farm; Annual 2002/2003

Sample Boring	Sample I.D.	Saple Depth (ft bgs)	Sample Date	Benzene	Ethylbenzene	Toluene	Xylene (total) mg/kg	tert-Butyl methyl ether (MTBE)	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Anthracene	Fluorene	Phenanthrene	Acenaphthene	Fluoranthene	Pyrene mg/kg	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	TRPH
Leachability from GW Criteria [1]				0.007	0.6	0.5	0.2	0.2	1.7	2.2	6.1	27	2500	160	250	2.1	1200	880	3.2	77	10	25	8	28	30	32000	340
Direct Exposure Residential [1]				1.1	1100	380	5900	3200	40	68	80	1100	18000	2200	2000	1900	2900	2200	1.4	140	1.4	15	0.1	1.5	0.1	2300	340
					milligrams per kilogram (mg/kg)																						
B-7	086-B7-S-1010-02	2	10/10/2002	0.00102 J	0.00141 J	0.00325 J	0.0119 =	0.00589 U	0.00884 U	0.0177 U	0.0177 U	0.0353 U	0.00353 U	0.0177 U	0.00353 U	0.0177 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	0.00353 U	9.42 U
B-31	086-B31-S-1010-02	3	10/10/2002	0.225 U	0.225 U	0.0506 J	0.45 U	0.225 U	0.00863 U	0.0173 U	0.0173 U	0.0345 U	0.00345 U	0.0173 U	0.00345 U	0.0173 U	0.0116 =	0.00345 U	0.00345 U	0.00345 U	0.00345 U	0.00345 U	0.00345 U	0.00345 U	0.00345 U	0.00345 U	8.38 J
B-41	086-B41-S-1010-02	4	10/10/2002	0.219 U	0.219 U	0.219 U	0.437 U	0.219 U	0.00859 U	0.0172 U	0.0172 U	0.0344 U	0.00344 U	0.0172 U	0.00344 U	0.0172 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	0.00344 U	**1640 =**
B-70	086-B70-S-1010-02	4	10/10/2002	0.00141 J	0.00104 J	0.00337 J	0.0102 =	0.00495 U	0.151 J	0.0161 U	0.0161 U	0.0322 U	0.00614 J	0.0161 U	0.0222 J	0.0161 U	0.168 J	0.0621 J	0.0554 J	0.0952 J	0.0795 J	0.0747 J	0.0847 J	0.0588 J	0.0616 J	0.0746 J	114 J
B-96	086-B96-S-1010-02	4	10/10/2002	0.269 U	0.269 U	0.269 U	0.538 U	0.269 U	0.0404 U	0.0807 U	0.0807 U	0.161 U	0.0161 U	0.0807 U	0.0161 U	0.0807 U	0.0274 J	0.142 J	0.0161 U	0.0161 U	0.0161 U	0.0161 U	0.0161 U	0.0161 U	0.0161 U	0.0161 U	**2710 J**
B-99	086-B99-S-1010-02	4	10/10/2002	0.00157 J	0.00156 J	0.00516 =	0.0154 =	0.00482 U	0.0235 J	0.0171 U	0.0171 U	0.0342 U	0.009 J	0.0171 U	0.0396 J	0.0171 U	0.223 J	0.147 J	0.165 J	0.117 J	0.0805 J	0.0357 J	0.0713 J	0.0351 J	0.00342 U	0.0418 J	33.7 J
B-101	086-B101-S-1010-02	4	10/10/2002	0.268 U	0.268 U	0.268 U	0.537 U	0.268 U	0.805 U	1.61 U	1.61 U	3.22 U	0.322 U	1.61 U	1.03 =	1.61 U	2.49 =	6.77 =	0.322 U	0.322 U	0.322 U	0.322 U	0.322 U	0.322 U	0.322 U	0.322 U	**13100 =**
B-104	086-B104-S-1010-02	4	10/10/2002	0.00169 J	0.00268 J	0.0107 =	0.029 =	0.00584 U	0.00864 U	0.0173 U	0.0173 U	0.0346 U	0.00346 U	0.0173 U	0.00346 U	0.0173 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	0.00346 U	10.3 =
B-106	086-B106-S-1010-02	4	10/10/2002	0.00479 U	0.00132 J	0.00494 =	0.0122 =	0.00479 U	0.125 =	0.0167 U	0.0167 U	0.0334 U	0.00334 U	0.0167 U	0.00334 U	0.0167 U	0.0781 =	0.0409 =	0.00334 U	0.0303 =	0.0309 =	0.00334 U	0.0197 =	0.00334 U	0.00334 U	0.0395 =	**483 =**
B-110	086-B110-S-1010-02	4	10/10/2002	0.248 U	0.248 U	0.248 U	0.495 U	0.248 U	0.00857 U	0.0171 U	0.0171 U	0.0343 U	0.00343 U	0.0171 U	0.00343 U	0.0171 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	0.00343 U	9.14 U
B-137	086-B137-S-1010-02	4	10/10/2002	0.00161 J	0.00108 J	0.00414 J	0.0111 =	0.00497 U	0.00811 U	0.0162 U	0.0162 U	0.0325 U	0.00325 U	0.0162 U	0.00325 U	0.0162 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	0.00325 U	127 =
B-146	086-B146-S-1010-02	4	10/10/2002	0.239 U	0.616 =	0.239 U	3.22 =	0.239 U	0.392 U	0.783 U	0.783 U	1.57 U	0.157 U	0.783 U	0.157 U	0.783 U	1.04 =	3.18 =	0.157 U	0.157 U	0.157 U	0.157 U	0.157 U	0.157 U	0.157 U	0.157 U	**4180 =**
B-158	086-B158-S-1010-02	2	10/10/2002	0.00341 J	0.00268 J	0.00622 =	0.0252 =	0.00189 J	0.00825 U	0.0165 U	0.0165 U	0.033 U	0.0033 U	0.0165 U	0.0033 U	0.0165 U	0.0129 =	0.0033 U	0.0033 U	0.0033 U	0.00766 =	0.00396 =	0.00678 =	0.0033 U	0.0033 U	0.0202 =	5.9 J
B-167	086-B167-S-1010-02	4	10/10/2002	0.219 U	0.219 U	0.219 U	0.439 U	0.219 U	9.05 =	21 =	34.9 =	3.34 U	0.334 U	1.67 U	0.334 U	1.67 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	0.334 U	**13800 =**
B-189	086-B189-S-1010-02	2	10/10/2002	0.285 U	0.285 U	0.285 U	0.57 U	0.285 U	0.00953 U	0.0191 U	0.0191 U	0.0381 U	0.00381 U	0.0191 U	0.00381 U	0.0191 U	0.014 =	0.00932 =	0.00381 U	0.00381 U	0.00593 =	0.00606 =	0.00686 =	0.00381 U	0.00381 U	0.00381 U	10.2 U

1 = Ch 62-777 FAC Soil Cleanup Target Level (SCTLs) reported in mg/kg
U - result is not detected
= - value equal to
J - result is estimated
Bold indicates concentration exceeds Residential Direct Exposure Limit.
Shaded values indicates the compounds that exceeds Leachability based on Groundwater Criteria value.

TABLE 3-2
Groundwater Analytical Results
South Fuel Farm; Annual 2002/2003

Well ID	Sample Date	Benzene	Ethylbenzene	Toluene	Xylene (total)	tert-Butyl methyl ether (MTBE)	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Lead	TRPH	Methylene chloride
	NADC[1]	10	300	400	200	500	200	200	200	2100	200	2800	2100	21000	2800	2100	20	480	20	50	20	20	20	2100	150	50000	500
	GCTL[1]	1	30	40	20	50	20	20	20	210	20	280	210	2100	280	210	0.2	4.8	0.2	0.5	0.2	0.2	0.2	210	15	5000	5
		micrograms per Liter (ug/L)																									
086-CEF43-2N	05/27/2003	5 U	2.29 J	5 U	7.09 J	5 U	0.25 U	1 U	1 U	1 U	1 U	0.5 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	0.25 U	0.1 U	0.1 U	15 U	**7930 =**	10 U
086-CEF43-6N	05/27/2003	5 U	1.58 J	5 U	6.89 J	5 U	0.25 U	1 U	1 U	1 U	1 U	0.5 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	0.25 U	0.1 U	0.1 U	**17 =**	84.8 U	10 U
086-CEF43-7N	05/27/2003	5 U	5 U	5 U	10 U	5 U	0.25 U	1 U	1 U	1 U	1 U	0.5 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	0.25 U	0.1 U	0.1 U	5.9 J	776 U	10 U
086-CEF43-9N	05/27/2003	5 U	16.8 =	5 U	**82.6 =**	5 U	**58.9 =**	**39 =**	**29.8 =**	5 U	5 U	2.5 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	1.25 U	0.5 U	0.5 U	15 U	**21500 =**	10 U
086-CEF43-33N	05/28/2003	5 U	5 U	5 U	10 U	5 U	0.25 U	1 U	1 U	1 U	1 U	0.5 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	0.25 U	0.1 U	0.1 U	15 U	211 U	3.85 J
086-CEF43-38N	05/28/2003	5 U	5 U	5 U	10 U	5 U	0.25 U	1 U	1 U	1 U	1 U	0.5 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	0.25 U	0.1 U	0.1 U	15 U	131 U	10 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.
= - value equal to
J - estimated value
Bold indicates concentration exceeds GCTL.

TABLE 3-3
Field Test Results
South Fuel Farm; Annual 2002/2003

		Air					Groundwater					
Well Identification	**Sample Date**	**Methane (%)**	**Carbon Dioxide (%)**	**Oxygen (%)**	**Pressure (in Hg)**	**OVA (ppm)**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (°C)**	**ORP (mV)**
CEF-043-1N	06/20/2002	0.2	4.4	15.1	30.2	2.24	6.08	0.351	6.5	3.62	24.2	-65
	07/11/2002	0	3.1	16.4	30	9.04	5.73	0.234	15	2.83	25.2	189
	08/15/2002	0	3.4	14.3	30.2	2.59	5.72	0.304	1	4.07	26.8	71
	09/26/2002	0	3.9	15.2	29.7	2	5.58	0.438	0	2.31	27	136
	10/09/2002	0	4.8	14	29.7	8	6.57	0.408	4.4	1.75	26.1	124
	11/21/2002	0.1	4.8	16.5	29.7	2.71	6.38	0.268	0	1.42	25.3	167
	12/12/2002	0	2.5	20.4	30.1	1.5	5.95	0.212	0	6.39	24	-59
	01/15/2003	0	3	17.1	29.6	0.1	6.01	0.241	0.9	3.22	20.77	233
	02/25/2003	0.2	2.3	16	30	1.84	6.13	0.389	34	4.22	20.1	222
	03/26/2003	0.1	2.7	17.9	29.8	0	6.54	0.435	0.8	2.87	20.6	234
	04/23/2003	0	7.7	16.8	29.4	0.1	6.54	0.355	1.1	4.82	21.4	105
	05/15/2003	0	10	16.2	29.2	0	5.9	0.329	9	4.34	24.2	-63
	06/18/2003	0	6	12.7	29.9	3	6.5	0.371	26.3	4.16	23.9	183
CEF-043-2N	06/20/2002	0.1	0	20.8	30.2	730	6.15	0.34	9	3.48	25	-69
	07/11/2002	0	7.6	11.7	30	394	5.9	0.243	13.5	3.26	25.8	-125
	08/15/2002	0	5.2	13.8	30.2	173	5.76	0.295	57.5	3.54	26.7	-12
	09/26/2002	0	3.3	15.7	29.7	330	5.5	0.274	0	1.59	27.5	72
	10/09/2002	0	3.9	16	29.8	5	6.4	0.184	0	2.45	27.1	70
	11/21/2002	0	6.9	14.9	29.8	0	6.07	0.398	123	0	26	-134
	12/12/2002	0	5.2	17.2	30.1	150	5.45	0.16	58	5.97	24.3	212
	01/15/2003	0	2.8	17.8	29.6	0	5.4	0.147	1.8	2.45	21.39	192
	02/25/2003	0.2	2.2	17.4	30	6.28	5.59	0.243	4	4.89	20.5	213
	03/26/2003	0.1	2.1	16.3	29.9	0.84	6.68	0.271	999	5.77	21.7	76
	04/23/2003	0	9.5	16.3	29.4	0	6.07	0.194	2.4	4.39	21.9	102
	05/15/2003	0	9.9	15.9	29.2	10.16	5.66	0.212	0	3.72	24.8	-68
	06/18/2003	0	4.7	14.3	29.9	701	6.59	0.176	0	3.86	24.4	97
CEF-043-3N	06/20/2002	0.1	0	20.8	30.2	2.3	5.04	0.052	10	2.7	24	64
	07/11/2002	0	4.5	14.1	30	3.22	4.65	0.031	10.7	2.62	25	227
	08/15/2002	0	1.8	17.7	30.2	0	5.67	0.65	22.5	6.21	26.1	150
	09/26/2002	0	4.9	14.5	29.7	3	5.12	0.073	28.9	3.9	26.1	186
	10/09/2002	0	0.3	0.2	29.8	3	5.51	0.055	357	4.38	26	258
	11/21/2002	0	2.5	18.5	29.8	0	5.31	0.045	999	1.79	25	102
	12/12/2002	0	2.3	19	30.1	0	5.21	0.061	228	1.91	24.1	126
	01/15/2003	0	0.8	20.6	29.6	0.16	4.27	0.48	42	5.56	21.1	343
	02/25/2003	0.1	2	18.6	30	1.3	4.8	0.076	43.2	7.4	20	364
	03/26/2003	0.1	2.1	17.8	29.8	1.6	5.51	0.063	554	6.36	20.6	289
	04/23/2003	0	0.4	21	29.5	1.19	5.21	0.043	140	7.28	21.2	225
	05/15/2003	0	1	20.5	29.3	0	4.71	0.033	864	3.46	23.9	239
	06/18/2003	0	0.7	19.4	29.9	1.83	5.45	0.041	29.8	6.12	23.6	255
CEF-043-4N	06/20/2002	0.1	0	20.9	30.2	3400	6.07	0.597	5	2.6	24	32
	07/11/2002	0.7	23.5	1.2	30	4000	5.86	0.42	30.8	1.99	25.1	3
	08/15/2002	0.3	15.6	0.1	30.2	245	5.78	0.501	4.9	2.91	26.3	35
	09/26/2002	0	7.1	10.1	29.7	1670	4.9	0.676	0	1.4	26.9	-15
	10/09/2002	0	0.5	19.8	29.8	29	6.16	0.523	15.8	2.49	26.4	14
	11/21/2002	2.4	18.3	0.2	29.8	1047	5.86	0.529	33.9	0.21	25	20
	12/12/2002	0.6	18.3	0.3	30.1	1800	5.72	0.423	21	5.31	23.5	69
	01/15/2003	0	12.1	2.2	29.5	3.2	5.7	0.428	72	3.08	20.5	71
	02/25/2003	0.1	14.7	0	30	63.18	5.43	0.73	4.2	3.41	19.7	86
	03/26/2003	0	11.7	1.4	29.9	0	6.11	0.745	17.1	3.22	20.4	-81
	04/23/2003	0	29	6.9	29.4	2.2	5.89	0.57	9.1	4.4	21.2	15
	05/15/2003	0	26.8	4	29.2	139	5.69	0.496	8.4	3	24.1	-2
	06/18/2003	0.9	14.5	2.1	29.9	1581	6.11	0.537	0	2.3	24	-35

TABLE 3-3
Field Test Results
South Fuel Farm; Annual 2002/2003

		Air					Groundwater					
Well Identification	**Sample Date**	**Methane (%)**	**Carbon Dioxide (%)**	**Oxygen (%)**	**Pressure (in Hg)**	**OVA (ppm)**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (°C)**	**ORP (mV)**
CEF-043-5N	06/20/2002	0.1	0	20.9	30.2	3.5	5.06	0.079	15.8	9.17	23.3	217
	07/11/2002	0	0	20.4	30	4.77	4.74	0.065	18.6	8.9	24.9	238
	08/15/2002	0	0	20.6	30.2	1.02	5.57	0.07	15	9.09	26.2	132
	09/26/2002	0	0.9	17.2	29.7	1.5	5.1	0.077	50	6.12	26.4	167
	10/09/2002	0	2.6	16.1	29.9	4	5.98	0.076	157	2.44	25.9	192
	11/21/2002	0	0	21.4	29.8	0	5.81	0.075	50	8.65	25.1	173
	12/12/2002	0	0	22.8	30.1	0	5.64	0.064	128	9.99	23.8	354
	01/15/2003	0	0.8	20.4	29.6	1	4.55	0.075	21	7.99	21.6	320
	02/25/2003	0	0	20.9	30	2.31	4.8	0.093	24.9	10	20.3	359
	03/26/2003	0.1	0	20.5	29.9	3.4	5.84	0.105	27	11.33	20.8	299
	04/23/2003	0	0.2	21.1	29.5	1.76	6	0.086	255	10.1	21.6	194
	05/15/2003	0	0.4	20.6	29.3	1.2	5.2	0.078	142	10	24.3	236
	06/18/2003	0	0	20.4	29.9	2.81	5.84	0.081	56	10.1	24.3	238
CEF-043-6N	06/20/2002	0	1.6	18.2	30.2	1.7	5.12	0.167	5.9	3.12	25.4	187
	07/11/2002	0	0.9	18.3	30	7.7	4.65	0.117	6.8	2.64	25.6	-6
	08/15/2002	0	0.2	19.3	30.2	4.74	5.78	0.169	9.1	7.07	27.5	104
	09/26/2002	0	1.9	14	29.7	8	4.87	0.24	40	4.61	27.4	178
	10/09/2002	0	6.9	2.8	29.9	40	5.46	0.234	29	0.85	26.6	200
	11/21/2002	0	0.9	20.2	29.8	7.63	4.92	0.251	999	6.1	25.78	21
	12/12/2002	0	1	20	30.2	3	5.02	0.261	316	6.51	23.5	33
	01/15/2003	0	2.1	15.7	29.6	1.2	4.92	0.305	0	6.7	21.8	319
	02/25/2003	0	0.6	20.4	30	4.34	4.92	0.375	5.6	8.24	20.5	351
	03/26/2003	0.1	0.7	19.2	29.9	10.3	5.83	0.428	17.2	9.3	21	314
	04/23/2003	0	1.5	19.7	29.5	0.64	5.5	0.421	19.3	9.56	21.5	184
	05/15/2003	0	1.4	19.6	29.3	2.4	5.5	0.418	637	5.56	24.5	216
	06/18/2003	0	0.8	19.9	29.9	3.16	5.9	0.354	12	8.89	24.6	218
CEF-043-7N	06/20/2002	0	0.9	18.9	30.2	8.5	6.23	0.191	15	1.79	23.7	51
	07/11/2002	0	0.3	19.8	30	8.91	6.56	0.13	16.8	7.55	25	312
	08/15/2002	0.2	0.2	20.6	30.2	4.47	5.27	0.198	12	8.03	27.3	2
	09/26/2002	0	0	18.9	29.7	3.7	5.15	0.307	17.7	2.42	27	163
	10/09/2002	0	1.8	18.5	29.9	4	5.91	0.376	26	2.17	25.8	275
	11/21/2002	0	0.5	20.9	29.8	3.46	6.02	0.126	15.4	5.22	24.7	193
	12/12/2002	0	0.3	22.1	30.3	NM	5.13	0.124	61	7.86	23.3	345
	01/15/2003	0	0.2	21	29.6	1.2	5.33	0.132	16	2.27	21.1	290
	02/25/2003	0	0.4	20.9	30	3.18	5.23	0.18	32	9.18	18.8	363
	03/26/2003	0	0.6	20	29.9	NM	5.96	0.275	16.3	9.55	20.3	224
	04/23/2003	0	0.7	20.5	29.6	1.52	5.6	0.166	14.2	8.75	21.1	199
	05/15/2003	0	0.9	20.3	29.4	3.6	5.44	0.118	8.7	7.01	23.8	237
	06/18/2003	0	0.4	19.9	29.9	4.51	5.88	0.098	25	9.08	24.8	253
CEF-043-8N	06/20/2002	0	3.6	17.8	30.2	1.67	5.61	0.121	7.4	7.45	24.5	137
	07/11/2002	0	0.1	18.1	30	5.06	5.45	0.088	16.2	8.16	25.1	200
	08/15/2002	0	1.7	17.5	30.2	0.16	5.66	0.091	48.5	6.52	26.3	110
	09/26/2002	0	2.1	16.7	29.7	1	5.72	0.138	0	4.76	27.1	156
	10/09/2002	0	3.1	16.4	29.9	1	5.62	0.111	10	3.09	25.8	178
	11/21/2002	0	4.2	18.2	29.8	0	5.45	1.03	999	6.26	24.9	379
	12/12/2002	0	2.1	21.5	30.3	0	5.17	0.101	10.4	9.79	24.1	369
	01/15/2003	0	0.2	21.1	29.6	0	4.72	0.091	7	6.91	21	301
	02/25/2003	0	1.2	19.9	30	1.25	4.91	0.107	75	7.77	19.7	322
	03/26/2003	0	1.8	16.4	29.9	1.05	6.12	0.127	17.3	7.59	20.6	282
	04/23/2003	0	3.6	18.7	29.6	0	5.23	0.106	6.7	7.55	21.1	144
	05/15/2003	0	3.2	18.4	29.4	0	5.18	0.097	7	7.93	24.1	171
	06/18/2003	0	1.3	18.6	29.9	1.2	5.82	0.094	20	7.94	24.1	154

TABLE 3-3
Field Test Results
South Fuel Farm; Annual 2002/2003

		Air					Groundwater					
Well Identification	**Sample Date**	**Methane (%)**	**Carbon Dioxide (%)**	**Oxygen (%)**	**Pressure (in Hg)**	**OVA (ppm)**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (°C)**	**ORP (mV)**
CEF-043-9N	06/20/2002	0	4.9	15.6	30.2	0	5.86	0.194	34.2	2.38	24.8	-19
	07/11/2002	0	5.3	15	30	4.19	5.46	0.146	33.9	2.79	25.4	-88
	08/15/2002	0	0.9	19.5	30.2	0.08	5.61	0.178	2	3.85	26.6	72
	09/26/2002	0	1.2	19.1	29.7	3	5.02	0.178	0	3.18	27.4	157
	10/09/2002	0	0.2	20.4	29.9	3	5.93	0.163	7.9	2.13	26.2	-49
	11/21/2002	0	2.1	19.4	29.9	0	5.83	0.153	0	0	24.9	-31
	12/12/2002	0	2.3	20	30	0	5.76	0.171	0	0	23.1	102
	01/15/2003	0	1.5	20.4	29.6	0.1	5.33	0.114	14.2	2.2	21.2	227
	02/25/2003	0	1.2	20.4	30	0.34	4.72	0.17	7.3	7.42	19.9	295
	03/26/2003	0	0.9	19.6	29.9	1.2	6.2	0.183	10.4	8.41	20.6	273
	04/23/2003	0	0.4	20.8	29.6	0.43	5.45	0.176	1.9	2.11	21.3	-15
	05/15/2003	0	1.2	20.1	29.4	0	5.92	0.138	11.4	3.32	26	-74
	06/18/2003	0	0	20.2	29.9	2.5	5.84	0.13	0	1.07	24.3	-47
CEF-043-10	06/20/2002	0.1	0	20.9	30.2	5.1	6.02	0.38	106	3.2	27.6	95
	07/11/2002	0	7.9	10.5	30	16.35	5.52	0.289	69	5.2	28.9	194
	08/15/2002	0	9	6.7	30.2	2.56	5.57	0.198	38.6	5.33	30.3	70
	09/26/2002	0	9.7	5.9	29.7	2	5.51	0.31	16	2.31	27.8	190
	10/9//2	0	9.8	5.5	29.8	0	5.68	0.322	27.8	1.89	29.5	165
	11/21/2002	0.1	9.1	6.5	29.8	4.24	6.25	0.271	0	0.81	25.5	165
	12/12/2002	0	8.6	20.8	30.1	6	6.38	0.256	0	0.95	23.6	152
	01/15/2003	0	4.4	15.3	29.6	0	5.12	0.273	9.5	3.61	24	243
	02/25/2003	0.1	3.5	15.5	30	3.8	5.29	0.314	28.5	1.66	22.2	268
	03/26/2003	0.1	4.2	12.8	29.9	0	6.2	0.381	84.4	6.23	23.3	195
	04/23/2003	0	17.1	10.4	29.4	0	5.57	0.38	5.4	4.09	23.8	165
	05/15/2003	0	3.1	18.3	29.2	0	4.94	0.376	0.7	4.59	26.6	165
	06/18/2003	0	9.6	7.4	29.9	10.21	5.75	0.249	5.8	1.26	27.9	158
CEF-043-19	06/20/2002	0	0.2	20.8	30.2	3.6	4.74	0.042	0.6	2.78	23.8	235
	07/11/2002	0	0.9	19	30	4.23	4.7	0.03	5	3.35	24.8	350
	08/15/2002	0	3.1	17.7	30.1	0	5	0.038	3.6	1.85	25.2	204
	09/26/2002	0	0	19.9	29.7	5	5.1	0.039	0	1.68	26.1	155
	10/09/2002	0	3.1	18.2	29.9	4	4.67	0.035	0	1.51	25.4	337
	11/21/2002	0	0.9	20.4	29.9	0	4.94	0.04	0	0.35	24.8	182
	12/12/2002	0	0.7	21.8	30.3	0	4.4	0.029	52	4.46	23.7	374
	01/15/2003	0	1.1	20.9	29.7	0.1	3.93	0.027	1	6.08	21.3	397
	02/25/2003	0	1.2	20.6	30	1.2	4.63	0.038	13.6	6.01	20	382
	03/26/2003	0.2	2.1	18.6	29.9	1.4	5.28	0.037	2	6.17	21	286
	04/23/2003	0	0.8	20.6	29.6	1.18	4.6	0.03	65.3	2.84	21.3	268
	05/15/2003	0	1.3	20.1	29.4	0	4.49	0.026	0	4.31	23.8	270
	06/18/2003	0	0.5	19.7	29.9	2.37	4.96	0.028	36	2.25	23.2	281
CEF-043-20	06/20/2002	0.2	0	20.8	30.2	12.9	5.4	0.036	99	5.6	25	149
	07/11/2002	0	0	20	30	11.75	5.53	0.027	47.8	6.12	26.4	178
	08/15/2002	0	0	20.4	30.2	0.27	5.83	0.027	56.8	6.27	27.8	69
	09/26/2002	0	0	20.4	29.7	10	5.47	0.031	12	2.92	27.2	206
	10/09/2002	0	0	20.5	29.7	4	5.51	0.025	9.7	3.1	27	230
	11/21/2002	0	0.5	20.8	29.8	4.34	5.71	0.033	82	2.9	25.3	217
	12/12/2002	0	0.4	20.7	30.1	5	5.76	0.136	59	2.8	23.9	208
	01/15/2003	0	0.7	20.6	29.6	0.2	4.48	0.026	6.2	5.78	21	319
	02/25/2003	0.1	0.3	20.8	30	3.05	4.99	0.035	4.2	3.14	21.2	314
	03/26/2003	0.1	0	20.7	29.8	1.95	6	0.044	15.7	5	20.9	239
	04/23/2003	0	1.1	20.8	29.4	0	5.77	0.03	0.7	7.48	21.7	194
	05/15/2003	0	1.7	20.6	29.2	0.2	4.6	0.029	23.4	4.13	24.3	192
	06/18/2003	0	0	20.4	29.9	7.28	5.36	0.027	0	1.37	23.8	207

TABLE 3-3
Field Test Results
South Fuel Farm; Annual 2002/2003

		Air					Groundwater					
Well Identification	**Sample Date**	**Methane (%)**	**Carbon Dioxide (%)**	**Oxygen (%)**	**Pressure (in Hg)**	**OVA (ppm)**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (°C)**	**ORP (mV)**
CEF-043-21	06/20/2002	0.2	0.3	20.1	30.2	5.31	6.19	0.131	600	7.49	25	136
	07/11/2002	0	1	18.6	30	10.97	6.13	0.118	290	4.75	27.5	131
	08/15/2002	0	0	20.1	30.2	2.01	5.76	0.117	5.7	4.78	25.6	65
	09/26/2002	0	0	20.5	29.7	9	5.75	0.182	96	3.44	27.5	123
	10/09/2002	0	0	20.5	29.7	5	5.84	0.093	0	2.63	26.4	209
	11/21/2002	0.1	1.4	20.6	29.8	3.61	5.82	0.123	0	2.17	24.7	201
	12/12/2002	0	0	18.6	30.1	7	5.92	0.075	0	2.12	23.6	195
	01/15/2003	0	1.7	19.6	29.6	0	5.43	0.1	2.7	2.93	19.9	269
	02/25/2003	0.1	0.4	20.8	30	1.92	5.45	0.152	7.1	2.04	20.1	307
	03/26/2003	0.1	0	20.6	29.8	0.83	6.02	0.131	2.5	5.7	20.6	241
	04/23/2003	0	0.9	20.8	29.4	2.94	6.31	0.111	115	5.06	21.2	157
	05/15/2003	0	0.8	21.2	29.2	1.6	5.27	0.113	0.6	4.4	23.9	212
	06/18/2003	0	1.3	19.4	29.9	5.2	5.85	0.103	18	1.53	23.7	184
CEF-043-22	06/20/2002	0.1	0	20.8	30.2	0	5.81	0.171	106	3.7	24.6	36
	07/11/2002	0	4.5	14.8	30	3.45	5.06	0.054	180	4.43	26	211
	08/15/2002	0	6.1	10.7	30.2	0	5.81	0.067	82.5	5.53	27.9	136
	09/26/2002	0	8.2	9.5	29.7	1	5.11	0.81	225	3.28	26.9	261
	10/09/2002	0	8.2	11.6	29.8	1	5.03	0.06	249	3.11	26.4	293
	11/21/2002	0.1	3.8	18.1	29.8	0	5.15	0.061	35	3.1	24.7	223
	12/12/2002	0	3.2	18.3	30.1	0	5.19	0.073	42	3.61	24.2	219
	01/15/2003	0	4.2	16.5	29.6	0	4.27	0.046	61	4.98	21	354
	02/25/2003	0.1	3.8	16.3	30	0	4.41	0.064	30.8	20.8	2.6	387
	03/26/2003	0.1	2.5	14.9	29.9	0	5.41	0.062	25.3	7.29	20.7	296
	04/23/2003	0	10.3	16.1	29.4	0	5.05	0.059	95.2	4.27	21.3	238
	05/15/2003	0	9.5	16.5	29.3	0	4.72	0.053	75	4.09	23.8	258
	06/18/2003	0	0.3	19.7	29.9	0	5.2	0.046	23.3	4.97	24.1	283
CEF-043-32	06/20/2002	0.2	3.4	17.1	30.2	5.6	6.03	0.202	3.8	5.34	27	81
	07/11/2002	0	2.5	17.7	30	7.68	5.45	0.187	13.8	3.61	28.9	198
	08/15/2002	0	0	20.6	30.2	1.37	5.61	0.409	0	4.68	29.3	114
	09/26/2002	0	0.8	19.9	29.7	0	5.47	0.574	0	3.08	30	140
	10/09/2002	0	1.2	18.7	29.7	2	6.47	0.438	102	2.92	29	150
	11/21/2002	0.2	0.1	21.2	29.7	2.57	6.45	0.422	0	4.1	27	157
	12/12/2002	0	0.4	22.3	30.1	3	6.06	0.362	999	7.55	25.4	128
	01/15/2003	0	0.4	20.8	29.7	0	5.81	0.303	3.3	4.51	23	241
	02/25/2003	0.2	0.2	20.8	30	3.34	6.06	0.38	45.5	5.2	21.8	2.3
	03/26/2003	0.1	0.2	20.4	29.9	2.36	6.61	0.476	15.3	8.63	22.4	230
	04/23/2003	0	0.7	21.1	29.4	0.81	6.82	0.357	1.1	6.53	23.3	125
	05/15/2003	0	1.3	20.9	29.1	0	5.85	0.335	0	4.07	26.3	116
	06/18/2003	0	0.2	19.9	29.9	2.5	6.67	0.37	0	4.19	26.1	191
CEF-043-33	06/20/2002	0.2	4.5	16	30.2	2	5.4	0.189	8.5	2.72	27.2	137
	07/11/2002	0	0.1	20.4	24.4	8.31	5.35	0.161	10.2	2.44	28	96
	08/15/2002	0	0	20.8	30.2	1.78	5.62	0.138	0	5.89	29.5	120
	09/26/2002	0	1.4	18.2	29.7	2	5.6	0.27	0.7	1.96	29.4	154
	10/09/2002	0	0.2	20	29.7	3	6	0.211	62	2.12	29.5	181
	11/21/2002	0.2	0.5	20.9	29.7	3.81	5.92	0.197	10	0.3	27.8	189
	12/12/2002	0	5.7	18.3	30.1	0	5.55	0.138	249	7.14	26.1	180
	01/15/2003	0	0.3	21.1	29.4	0	5.33	0.144	12.5	5.76	23.2	264
	02/25/2003	0.1	1	20	30	2.44	5.71	0.071	23	5.82	18.4	279
	03/26/2003	0	0.1	20.5	29.9	20	6.23	0.408	0.1	6.48	23.2	243
	04/23/2003	0	4.4	19.3	29.4	0.36	6.34	0.264	0	4.3	23.9	155
	05/15/2003	0	1.3	20.6	29.1	0	5.33	0.229	0	3.2	26.6	186
	06/18/2003	0	0.2	19.9	29.9	3.77	6.14	0.168	0	3.72	26.7	214

TABLE 3-3
Field Test Results
South Fuel Farm; Annual 2002/2003

		Air					Groundwater					
Well Identification	**Sample Date**	**Methane (%)**	**Carbon Dioxide (%)**	**Oxygen (%)**	**Pressure (in Hg)**	**OVA (ppm)**	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temperature (°C)**	**ORP (mV)**
CEF-043-34	06/20/2002	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	07/11/2002	0	0.1	19.4	30	2.76	5.44	0.065	8	3.42	26.5	159
	08/15/2002	0	0	20.9	30.2	4.01	5.52	0.057	3	3.86	26.7	80
	09/26/2002	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/09/2002	0	0.2	19.8	29.7	2	6.16	0.088	0	1.21	26.9	190
	11/21/2002	0.1	2.9	17.7	29.7	1.7	6.04	0.076	0	0.08	24.7	175
	12/12/2002	0	3.1	19	30.1	0	5.74	0.058	0	6.99	21.9	189
	01/15/2003	0	2.5	19.1	29.4	0	5.5	0.051	18.8	5.43	19.2	263
	02/25/2003	0	0.5	20.5	30	2.28	5.45	0.183	41.6	3.89	21.9	299
	03/26/2003	0.1	0	20.9	29.9	1.1	6.41	0.06	17.8	3.78	20.3	220
	04/23/2003	0	1.7	20.7	29.4	0.49	6.23	0.076	0	2.1	21.2	158
	05/15/2003	0	1.1	20.8	29.1	0	5.61	0.08	0	2.2	24.1	170
	06/18/2003	0	0	20.6	29.9	3.89	6.12	0.063	0	2.79	24.6	161
CEF-043-38	06/20/2002	0.2	2.7	17.9	30.2	7	5.37	0.067	0.7	3.1	25.3	165
	07/11/2002	0	3.6	17.2	24.7	5.01	5.87	0.138	5	6.57	25.6	180
	08/15/2002	0	0	20.9	30.2	0.62	5.74	0.21	0	5.98	27.5	65
	09/26/2002	0	0	20.1	29.7	7	5.62	0.322	11	2.49	27.8	133
	10/09/2002	0	0	20.4	29.7	3	6.38	0.196	0	2.48	26.8	189
	11/21/2002	0.2	2.3	18.6	29.7	0	6.13	0.243	999	3.13	25.7	167
	12/12/2002	0	1.9	21	30.1	4	5.88	0.177	999	6.72	23.9	256
	01/15/2003	0	1.9	20.2	29.6	0.17	5.9	0.17	9	5.61	21	249
	02/25/2003	0.1	1.4	18.9	30	2.35	6.07	0.288	9.5	5.75	20.1	206
	03/26/2003	0.1	0.8	18.8	29.9	0.82	6.4	0.303	13.4	6.8	21	237
	04/23/2003	0	4.3	19.3	29.4	0.91	6.36	0.204	0	6.27	21.6	169
	05/15/2003	0	2.5	20.3	29.2	0	5.85	0.169	999	5.08	24.7	208
	06/18/2003	0	0	20.2	29.9	3.42	6.25	0.198	28.2	3.93	24.8	188
CEF-043-48	06/20/2002	0	0.3	20.7	30.2	7	5.37	0.67	0.7	3.1	25.3	165
	07/11/2002	0	1	19.2	30	2.85	5.7	0.05	77	3.13	24.3	232
	08/15/2002	0	0	20.8	30.2	0.79	5.01	0.09	9.7	6.64	26.74	174
	09/26/2002	0	0	20.6	29.7	2.3	5.25	0.13	0	5.8	27	135
	10/09/2002	0	0	20.3	29.7	1	6.44	0.074	129	4.5	26.1	175
	11/21/2002	0	0.9	20.7	29.9	0	5.2	0.076	1000	1.04	24.2	83
	12/12/2002	0	0.5	20	29.8	0	5.61	0.059	127	0.98	24.1	96
	01/15/2003	0	0.7	21	297	NM	4.52	0.029	25	7.49	20	329
	02/25/2003	0	0.1	21.2	30	NM	5.45	0.072	16.6	8.61	18.6	336
	03/26/2003	0	0	20.5	29.9	1.45	6.52	0.159	63	9.09	20.3	231
	04/23/2003	0	0.2	20.9	29.6	0.6	6.03	0.082	2.4	8.2	20.6	188
	05/15/2003	0	0.8	20.2	29.4	0.8	5.61	0.046	25.9	6.45	23.5	239
	06/18/2003	0	0.1	20.1	29.9	2.02	6.08	0.55	38.5	6.4	23.7	263
CEF-043-50D	06/20/2002	0	0.2	20.8	30.2	6.5	5.62	0.156	1.4	4.53	24.3	170
	07/11/2002	0	0	20.1	30	6.81	5.25	0.118	3.6	5.07	25	237
	08/15/2002	0	0.8	19.2	30.2	1.62	5.66	0.124	0	5.02	25.8	130
	09/26/2002	0	0	20.1	29.7	5	5.28	0.144	0	3.83	26.6	NM
	10/09/2002	0	0.1	20.5	29.9	5	5.5	0.12	0	2.96	25.6	227
	11/21/2002	0	0.2	21.3	29.8	1.1	5.57	0.139	10	2.28	24.1	223
	12/12/2002	0	0.8	22.3	30.2	0	5.37	0.122	0	7.56	24	328
	01/15/2003	0	0.9	20.8	29.6	2	4.91	0.116	0	7.21	22.6	314
	02/25/2003	0	2.2	19.5	30	3.13	4.95	0.16	1.2	7.39	22.2	343
	03/26/2003	0	0.6	20	29.9	2.65	5.87	0.15	0.3	7.52	22.2	313
	04/23/2003	0	0.3	20.9	29.5	0.59	5.51	0.13	0	7.56	22.1	169
	05/15/2003	0	1	20.2	29.3	1.85	5.29	0.124	0.2	6.09	24.8	208
	06/18/2003	0	0	20.2	29.9	3.11	5.75	0.117	0	5.78	23.8	223

Note: All measurements taken using direct reading instruments in the field.

% -percent
OVA - organic vapor analyzer
mS/cm - milliSiemens per centimeter
mg/L - milligrams per liter
ORP - oxygen reducing potential
in Hg -inches of mercury
ppm - parts per million
NTU - nephelometric turbidity units
°C - degrees Celsius
mV - millivolts

4.0 Conclusions and Recommendations

CCI recommends continuing the operation of the bioventing and biosparging remediation systems. The Navy Comprehensive Long-term Environmental Action Navy (CLEAN) contractor is currently evaluating remedial alternatives to supplement and/or modify the existing bioventing and biosparging systems. Operation of the current bioventing and biosparging systems will continue until implementation of the remedial alternative.

The bioventing and biosparging systems operated continuously during the June 1, 2002, to June 30, 2003, monitoring period. The resulting operational efficiency of the bioventing and biosparging systems was 98 percent and 84.8 percent, respectively. Based on the field parameter testing it appears that biological activity is occurring at the site. The biosparging injection continues to provide sufficient oxygen as indicated by the dissolved oxygen readings being greater than 1 mg/L.

The annual soil screening and sampling event indicated that 6 of the 15 soil boring locations continue to exhibit soil contaminant concentrations in excess of either one or both leachability based on Groundwater Criteria and the Direct Exposure Residential SCTLs. In general, the concentrations of these parameters have decreased one to three orders of magnitude when compared to results from previous soil sampling events conducted in March 1999, September 2000, and October 2001 (See Table A-1 in Appendix A).

The annual groundwater sampling event indicated that three monitoring wells continue to exhibit groundwater contaminant concentrations in excess of the FDEP GCTLs but are below the natural attenuation default source criteria. In general, parameter concentrations from the 2002/2003 annual event have decreased one to three orders of magnitude when compared to the baseline and previous sampling events conducted from March 1998 to May 2001 (See Table A-2 in Appendix A).

Based on an evaluation of historic soil and groundwater data, the biosparging and bioventing systems are having success in reducing contaminant concentrations in groundwater. CCI recommends continuing the operation of the bioventing and biosparging remediation systems. The Navy CLEAN contractor is currently evaluating remedial alternatives to supplement and/or modify the existing bioventing and biosparging systems. Operation of the current bioventing and biosparging system will continue until implementation of the remedial alternative.

5.0 References

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Appendix A

Historical Data

TABLE A-1
Historical Soil Analytical Results
South Fuel Farm

Soil Boring Number	Sample Date	Sample Depth (ft bgs)	Benzene	Ethyl Benzene	Toluene	Xylene	Methyl tert-butyl ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	TRPH (mg/kg)
Direct Exposure Residential [1]			1.1	1100	380	5900	3200	40	68	80	1100	1900	2200	2000	18000	2900	2200	1.4	140	1.4	15	0.1	1.5	0.1	2300	340
Leachability from GW Criteria [1]			0.007	0.6	0.5	0.2	0.2	1.7	2.2	6.1	27	2.1	160	250	2500	1200	880	3.2	77	10	25	8	28	30	32000	340
B-7	03/22/99	N/A	<0.11	<0.11	<0.11	<0.33	<0.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	84
	09/13/00	N/A	<0.001	<0.001	<0.001	<0.003	<0.002	<0.018	<0.037	<0.037	<0.037	<0.019	<0.003	<0.037	<0.0018	<0.0037	<0.0018	<0.0018	<0.0018	<0.0037	<0.0018	<0.002	<0.0018	<0.0036	<0.003	8
	10/18/01	2	<0.001	<0.001	<0.001	<0.0031	<0.001	<0.597	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<18
B-31	03/22/99	N/A	<0.012	<0.012	<0.012	<0.036	<0.071	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170
	09/13/00	N/A	<0.0011	<0.0011	<0.0011	<0.0031	<0.002	<0.02	<0.04	<0.04	<0.04	<0.02	<0.004	<0.04	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	0.002	0.0028	0.01	0.01	180
	10/18/01	4	<0.0011	<0.0011	<0.0011	<0.0033	<0.0011	<0.604	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	0.010 J	<0.060	<0.060	<0.060	<18
B-41	03/22/99	N/A	<0.013	<0.013	<0.013	<0.038	<0.076	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	30
	09/13/00	N/A	<0.55	<0.55	<0.55	24.9	<1.1	3.3	22	14	<2	<1	0.21	<0.2	<0.098	0.88	<0.098	<0.098	<0.098	<0.2	<0.098	<0.099	<0.098	<0.19	<0.2	460
	10/18/01	4	<0.0011	<0.0011	<0.0011	<0.0033	<0.0011	<0.579	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<17
B-70	03/22/99	N/A	<0.13	<0.13	<0.13	<0.4	<0.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	830
	09/13/00	N/A	0.0014	<0.001	0.002	0.019	<0.002	<0.021	<0.041	<0.041	0.109	0.094	<0.004	<0.041	<0.0021	0.091	0.148	0.016	0.043	0.014	0.012	0.005	0.0025	<0.004	<0.004	100
	10/18/01	4	<0.0012	<0.0012	<0.0012	<0.0036	<0.0012	<0.565	<0.056	0.035 J	>0.056	<0.056	<0.056	0.0049 J	<0.056	<0.056	0.0057J	0.0053J	0.008J	0.015J	<0.056	0.007J	0.010J	<0.056	0.016J	64
B-96	03/22/99	N/A	<0.1	0.25	<0.1	5.8	<.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7600
	09/13/00	N/A	<0.22	<0.22	<0.22	<0.65	<0.43	0.074	0.48	0.58	0.058	0.032	0.11	0.26	0.039	<0.004	<0.002	0.015	0.021	0.02	0.011	0.012	0.0063	0.0087	0.005	1800
	10/18/01	4	0.024	0.017	0.0017	0.0141	<0.0014	0.562	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	0.128	0.016	0.018	0.033	0.015	<0.056	0.014	<0.056	0.016	969
B-99	03/22/99	N/A	<0.11	<0.11	<0.11	<0.33	<0.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	570
	09/13/00	N/A	0.001	<0.001	0.0018	0.0017	<0.002	<0.02	<0.04	0.073	<0.04	0.14	<0.004	<0.04	0.004	0.052	0.028	0.0076	0.02	0.025	0.0057	0.016	0.013	0.019	0.024	<8.1
	10/18/01	4	<0.0012	<0.0012	<0.0012	<0.0035	<0.0012	<0.593	<0.059	<0.059	<0.059	<0.059	<0.059	0.024J	<0.059	0.046J	0.015J	0.027J	0.040J	0.040J	0.017J	0.032J	0.024J	<0.059	0.029J	36
B-101	03/22/99	N/A	<0.12	<0.12	<0.12	<0.36	<0.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	320
	09/13/00	N/A	<0.0011	<0.0011	<0.0011	<0.0031	<0.002	<0.021	<0.042	<0.042	<0.042	<0.021	<0.004	<0.042	<0.0021	<0.0042	<0.0021	<0.0021	0.0046	0.0066	0.0029	0.006	0.009	0.0084	0.018	<8.4
	10/18/01	4	0.00088	<0.001	0.0012	<0.003	<0.001	<0.572	0.206	1.09	1.25	0.17	0.321	0.912	<0.057	1.84	0.201	<0.057	1.14	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	7510
B-104	03/22/99	N/A	<0.11	<0.11	<0.11	<0.33	<0.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	28
	09/13/00	N/A	<0.001	<0.001	0.0018	0.0084	<0.002	<0.021	<0.041	<0.041	<0.041	<0.021	<0.004	<0.041	<0.0021	<0.0041	<0.0021	<0.0021	<0.0021	<0.0041	<0.0021	<0.002	<0.0021	<0.0041	<0.004	<8.3
	10/18/01	4	<0.0012	<0.0012	<0.0012	<0.0035	<0.0012	<0.569	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	0.0049J	0.014J	<0.057	<0.057	0.011J	<0.057	<0.057	<0.057	<0.057	0.0041J	80
B-106	03/22/99	N/A	<0.12	<0.12	<0.12	<0.37	<0.75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3200
	09/13/00	N/A	<0.001	0.001	0.002	0.0145	<0.002	<0.19	2.4	<0.38	<0.38	0.47	<0.038	<0.38	<0.019	0.93	2.8	0.62	0.89	0.97	0.62	0.68	0.31	0.34	0.5	1000
	10/18/01	4	<0.0011	<0.0011	<0.0011	<0.0033	<0.0011	<0.550	<0.055	<0.055	<0.055	<0.055	<0.055	0.023J	<0.055	<0.055	0.019J	0.023J	0.034J	0.037J	<0.055	0.040J	0.038J	<0.055	0.040J	37
B-110	03/22/99	N/A	<0.13	<0.13	<0.13	<0.39	<0.78	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000
	09/13/00	N/A	<0.097	<0.097	<0.097	<0.286	<0.2	<0.97	<1.9	<1.9	4.3	3.7	0.23	<1.9	<0.097	<0.19	<0.097	<0.097	1.6	<0.19	<0.097	<0.098	<0.097	<0.19	<0.19	530
	10/18/01	4	<0.001	<0.001	<0.001	<0.003	<0.001	<0.575	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<17
B-137	03/22/99	N/A	<0.1	<0.1	<0.1	0.52	<0.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1200
	09/13/00	N/A	<0.0013	<0.0013	<0.0013	0.008	<0.002	<0.02	<0.04	<0.04	<0.04	<0.02	<0.004	<0.04	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.0039	<0.004	8
	10/18/01	2	<0.0012	<0.0012	<0.0012	<0.0037	<0.0012	<0.563	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<17
B-146	03/22/99	N/A	<0.1	<0.1	<0.1	<0.31	<0.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000
	09/13/00	N/A	<0.0013	<0.0013	0.002	0.006	<0.002	0.028	<0.041	<0.041	<0.041	<0.021	0.005	<0.041	<0.002	<0.0041	<0.002	<0.002	<0.002	<0.0041	<0.002	0.008	<0.002	<0.004	<0.004	13
	10/18/01	4	<0.0012	<0.0012	<0.0012	<0.0037	<0.0012	<0.541	<0.054	<0.054	<0.054	<0.054	0.012	<0.054	<0.054	0.185	0.029	<0.054	0.184	0.0099	0.017	0.0059	0.0092	<0.054	<0.054	1640

TABLE A-1
Historical Soil Analytical Results
South Fuel Farm

Soil Boring Number	Sample Date	Sample Depth (ft bgs)	Benzene	Ethyl Benzene	Toluene	Xylene	Methyl tert-butyl ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	TRPH (mg/kg)
Direct Exposure Residential [1]			1.1	1100	380	5900	3200	40	68	80	1100	1900	2200	2000	18000	2900	2200	1.4	140	1.4	15	0.1	1.5	0.1	2300	340
Leachability from GW Criteria [1]			0.007	0.6	0.5	0.2	0.2	1.7	2.2	6.1	27	2.1	160	250	2500	1200	880	3.2	77	10	25	8	28	30	32000	340
B-158	03/22/99	N/A	<0.12	<0.12	<0.12	<0.36	<0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.5
	09/13/00	N/A	0.0016	0.003	0.002	0.0342	<0.002	0.13	<0.041	<0.041	<0.041	<0.021	0.01	<0.041	<0.002	<0.0041	<0.002	<0.002	<0.002	<0.0041	0.0028	0.004	<0.002	0.005	0.01	<8.2
	10/18/01	4	<0.0012	<0.0012	<0.0012	<0.0037	<0.0012	<0.596	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<18
B-167	03/22/99	N/A	<0.12	0.45	0.29	2.8	<0.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4200
	09/13/00	N/A	<0.0011	<0.0011	<0.0011	<0.0031	<0.002	<0.02	<0.04	<0.04	<0.040	<0.02	<0.004	<0.04	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.004	<8.1
	10/18/01	4	0.029	3.84	0.019	5.334	0.0034	10.3	22.3	26.3	<0.573	0.188	1.71	2.37	<0.573	2.07	<0.573	<0.573	0.351	<0.573	<0.573	<0.573	<0.573	<0.573	<0.573	11400
B-189	03/22/99	N/A	<0.11	<0.11	<0.11	<0.33	<0.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<7.4
	09/13/00	N/A	0.0018	<0.0011	0.0038	0.0061	<0.002	<0.02	<0.041	<0.041	<0.041	<0.021	0.006	<0.041	<0.002	<0.0041	0.004	<0.002	<0.002	<0.0041	0.0021	0.004	0.002	<0.004	0.005	<8.2
	10/18/01	4	<0.0012	0.00062J	<0.0012	0.0042	<0.0012	<0.570	<0.057	0.013J	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	18

All values reported in milligram per kilogram (mg/kg)
1 = Ch 62-777 FAC Soil cleanup Target Level (SCTLs) reported in mg/kg
bgs = below ground surface
BTEX = sum of benzene, toluene, ethylbenzene, and xylene
N/A = not available
N/S = not sampled for compound
J = concentration is less than the reporting limit but greater than the method detection limit
Shaded values indicate the compounds that exceed the SCTLs.
Sampling events dated prior to 10/18/01 were performed by previous contractors.

TABLE A-2
Groundwater Analytical Results

Well Identification	Sample Date	Benzene	Ethyl Benzene	Toluene	Total Xylenes	BTEX	Methyl tert-butyl ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	Lead	TRPH
CEF-043-2N	03/09/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	3,500
	05/19/1998	6	300	**4,900**	**1,320**	6,526	7	**230**	45	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	900
	08/25/1998	<1	24	70	72	166	<2	<10	11	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	9,000
	12/14/1998	2.2	86	**830**	**240**	1,158	<2	<10	35	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	4,200
	04/10/2000	<5	100	380	**290**	770	<10	56	14	28	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	19	30,000
	05/09/2002	0.32	20.5	26.3	63	110.1	<1	3.8	3.7	5.7	3.6	<0.22	0.55	0.44 B	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	4.0 B	24,600
CEF-043-6N	03/09/1998	**730**	**930**	**1,500**	**5,500**	8,660	<100	<100	<100	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51	15,000
	05/19/1998	**230**	**1,300**	**1,700**	**10,000**	13,230	15	82	24	38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120	19,000
	08/25/1998	60	**400**	360	**1,820**	2,640	8	<10	11	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	3,900
	12/14/1998	24	280	85	**2,580**	2,969	2.4	<10	30	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78	18,000
	04/10/2000	11	190	80	**880**	1,161	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	48	14,000
	05/09/2002	<1	15.6	0.66	67.7	83.96	<1	1.1	0.88	1.9	0.24	<0.21	0.28	0.35 B	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	20	3,600
CEF-043-7N	03/09/1998	39	**320**	62	**1,560**	1,981	<10	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76	14,000
	05/19/1998	<50	**2,300**	300	**10,200**	12,800	<100	54	<10	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120	12,000
	08/25/1998	<1	90	10	**1,050**	1,150	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	61	1,800
	12/14/1998	<1	**320**	24	**5,400**	5,744	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	19,000
	04/10/2000	<1	3	2.2	12.6	18	<2	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13	600
	05/09/2002	<1	<1	<1	<3	<6	<1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	4.2 B	2,600
CEF-043-9N	03/09/1998	<2	1.2	<1	11.3	12.5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	1,300
	05/19/1998	<2	18	1.3	68	87.3	<2	62	26	76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	1,300
	08/25/1998	<2	1	<1	8	9	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	<200
	12/14/1998	<2	18	<1	24	42	<2	24	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	300
	04/10/2000	<1	23	4.2	78	105.2	<2	18	<10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	1,500
	05/09/2002	<1	18	0.4	71.4	89.8	<1	30	7.7	9.7	1.2	<0.21	0.33	0.36 B	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	10.5	5,300
Groundwater Criteria [1]		1	30	40	20	n/a	50	20	20	20	210	20	280	210	2100	280	210	0.2	4.8	0.2	0.5	0.2	0.2	0.2	210	15	5000
Natural Attenuation Default Source [1]		100	300	400	200	n/a	500	200	200	200	2100	200	2800	2100	21000	2800	2100	20	480	20	50	20	20	20	2100	150	50000
CEF-043-33N	03/09/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	<200
	05/19/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	<200
	08/25/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	<200
	12/14/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	<200
	04/10/2000	<1	<1	<1	<2	<5	<2	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<200
	05/09/2002	<1	<1	<1	<3	<6	<1	0.21 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<5	<370
CEF-043-38N	03/09/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	140	<200
	05/19/1998	<1	<1	<1	<2	<5	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78	<200
	08/25/1998	<1	<1	<1	1	1	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46	<200
	12/14/1998	<1	<1	<1	8.8	8.8	<2	<10	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54	<200
	04/10/2000	<1	<1	<1	<2	<5	<2	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	49	<200
	05/09/2002	<1	<1	<1	<3	<6	<1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	2.5 B	<380

TABLE A-2
Groundwater Analytical Results

Well Identification	Sample Date	Benzene	Ethyl Benzene	Toluene	Total Xylenes	BTEX	Methyl tert-butyl ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	Lead	TRPH
Groundwater Criteria [1]		1	30	40	20	n/a	50	20	20	20	210	20	280	210	2100	280	210	0.2	4.8	0.2	0.5	0.2	0.2	0.2	210	15	5000
Natural Attenuation Default Source [1]		100	300	400	200	n/a	500	200	200	200	2100	200	2800	2100	21000	2800	2100	20	480	20	50	20	20	20	2100	150	50000

All values reported in µg/L
1 = Ch 62-777 FAC Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
BTEX = sum of benzene, toluene, ethylbenzene, and xylene
N/A = not analyzed for this compound
Shaded values indicate the compounds that exceed the GCTLs
Bolded values indicate the compounds that exceed the natural attenuation default source criteria
B = compound is present in the method blank
J = concentration is less than the reporting limit but greater than the method detection limit
Sampling events dated prior to 5/9/02 were performed by previous contractors.
Sampling event dated 3/9/98 is the baseline sampling event.

Appendix B

Laboratory Analytical Reports for Groundwater Samples (provided on CD)

VALIDATA

Chemical Services, Inc.

4070 Balleycastle Lane, Duluth, GA 30097

RECEIVED
JUL 14 2003
CH2M HILL CONSTRUCTORS, INC.

DATA VALIDATION SUMMARY
REPORT

COMPANY:	CH2M HILL
SITE NAME:	CTO-86 Fuel Farm Annual Groundwater
CONTRACTED LAB:	Gulf Coast Analytical Laboratories, Inc.
PROJECT NUMBER:	203052911
QA/QC LEVEL:	EPA Level IV
EPA SOW/METHOD:	EPA 1990 SOW
VALIDATION GUIDELINES:	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 1999; *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* 1994
SAMPLE MATRIX:	Water
TYPES OF ANALYSES:	Volatile Organics (VOA); Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and MTBE; Polynuclear Aromatic Hydrocarbons (PAH); Total Petroleum Hydrocarbons (TPH); Total Lead
SDG NUMBER:	203052911
SAMPLING DATES:	May 27-28, 2003

Approved for Quality Assurance Release by:
Rev. 0 Date 7/17/03

OVERVIEW

SAMPLES:

Client Sample #	Lab Sample #	Matrix	BTEX/ VOA	MTBE	PAH
086-CEF43-2N-Q2-03-61	20305291101	Water	X	X	X
086-CEF43-6N-Q2-03-61	20305291102	Water	X	X	X
086-CEF43-7N-Q2-03-61	20305291103	Water	X	X	X
086-CEF43-9N-Q2-03-61	20305291104	Water	X	X	X
086-CEF43-33N-Q2-03-61	20305291105	Water	X	X	X
086-CEF43-33N-Q2-03-61MS	20305291106	Water	X	X	X
086-CEF43-33N-Q2-03-61MSD	20305291107	Water	X	X	X
086-CEF43-38N-Q2-03-61	20305291109	Water	X	X	X
086-DUP-Q2-03-61	20305291110	Water	X	X	X
086-EQB-Q2-03-61	20305291111	Water	X	X	X
086-TB-Q2-03-61	20305291112	Water	X		

Client Sample #	Lab Sample #	Matrix	TPH	Total Lead
086-CEF43-2N-Q2-03-61	20305291101	Water	X	X
086-CEF43-6N-Q2-03-61	20305291102	Water	X	X

Client Sample #	Lab Sample #	Matrix	TPH	Total Lead
086-CEF43-7N-Q2-03-61	20305291103	Water	X	X
086-CEF43-9N-Q2-03-61	20305291104	Water	X	X
086-CEF43-33N-Q2-03-61	20305291105	Water	X	X
086-CEF43-33N-Q2-03-61MS	20305291106	Water	X	X
086-CEF43-33N-Q2-03-61MSD	20305291107	Water	X	X
086-CEF43-38N-Q2-03-61	20305291109	Water	X	X
086-DUP-Q2-03-61	20305291110	Water	X	X
086-EQB-Q2-03-61	20305291111	Water	X	X

Sample ID Codes: DUP = FIELD DUPLICATE, EQB = EQUIPMENT RINSATE BLANK,
MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, TB = TRIP BLANK

DATA REVIEWERS: Amy L. Hogan, Jean M. Delashmit

RELEASE SIGNATURE: Jean M Delashmit

Data Qualifier Definitions

J	-	The associated numerical value is an estimated quantity.
R	-	The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
U	-	The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
UJ	-	The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Gulf Coast Analytical Laboratories, Inc. - 203052911 - Organics

SAMPLES: 086-CEF43-2N-Q2-03-61, 086-CEF43-6N-Q2-03-61, 086-CEF43-7N-Q2-03-61, 086-CEF43-9N-Q2-03-61, 086-CEF43-33N-Q2-03-61, 086-CEF43-38N-Q2-03-61, 086-DUP-Q2-03-61, 086-EQB-Q2-03-61

VOLATILE ORGANICS (VOA)

SUMMARY

I.) General:

The analyses for Volatile Organics were performed using method 8260.

II.) Overall Assessment of Data:

All laboratory data were acceptable with one qualification.

MAJOR ISSUES

There were no major problems associated with this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/ MS Performance:

All GC / MS Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections in the method, equipment or trip blanks for the SDG. No action was required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 was 114% for sample 086-CEF43-33N-Q2-03-61, which

exceeded the 83-112% QC limits. The one positive result in this sample was flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

One LCS was analyzed with this fraction of the SDG. All criteria were met. No action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed on SDG sample 0486-CEF43-33N-Q2-03-61. The Percent Recovery (%R) was 0% for 2-chloroethyl vinyl ether in both samples. Data qualification based on MS / MSD criteria was not required. No action was taken.

VIII.) Field Duplicates:

One set of field duplicate samples (086-CEF43-6N-Q2-03-61 / 086-DUP-Q2-03-61) was identified in this SDG. There were no calculable Relative Percent Differences (RPDs). No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No action was required.

XII.) System Performance:

All System Performance criteria were met. No action was required.

BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX), MTBE

SUMMARY

I.) General:

The analyses for BTEX and MTBE were performed using method 8021.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

There were no major problems associated with this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections in the method or equipment blanks associated with this fraction of the SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed on SDG sample 086-CEF43-33N-Q2-03-61. All MS / MSD criteria were met. No action was required.

VIII.) Field Duplicates:

One set of field duplicate samples (086-CEF43-6N-Q2-03-61 / 086-DUP-Q2-03-61) was identified in this SDG. The Relative Percent Differences (RPDs) were:

Compound	086-CEF-43-6N-Q2-03-61	086-DUP-Q2-03-61	RPD
ethylbenzene	1.58 ug/L	1.12 ug/L	34%
total xylenes	6.89 ug/L	4.34 ug/L	45%

Both RPDs exceeded the 20% QC limit. The concentrations of these compounds were less than the PQL in both samples. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No action was required.

XI.) System Performance:

All System Performance criteria were met. No action was required.

POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)

SUMMARY

I.) General:

The analyses for PAH were performed using Standards Method 8310.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

There were no major problems associated with this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections in the method or equipment blanks associated with this fraction of the SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed on SDG sample 086-CEF43-33N-Q2-03-61. All MS / MSD criteria were met. No action was required.

VIII.) Field Duplicates:

One set of field duplicate samples (086-CEF43-62-Q2-03-61 / 086-DUP-Q2-03-61) was identified for this fraction of the SDG. There were no calculable Relative Percent Differences (RPDs). No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No action was required.

XI.) System Performance:

All System Performance criteria were met. No action was required.

TOTAL PETROLEUM HYDROCARBONS (TPH)

SUMMARY

I.) General:

The analyses for TPH were performed using Standards Method FL-PRO.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no major problems associated with this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no detections in the method blanks for this fraction of the SDG. No action was required.

Field Blanks:

TPH was detected 215 ug/L in equipment rinsate blank 086-EQB-Q2-03-61. All positive results for TPH in the SDG samples less than 5X the blank amount were flagged as non-detects (U).

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) for o-terphenyl and nonatriacontane were outside their respective QC limits of 35-116% and 40-131% for the following samples:

Sample ID	o-terphenyl, %R	nonatricontane, %R
086-CEF43-6N-Q2-03-61	11%	20%
086-DUP-Q2-03-61	149%	

The positive result for sample 086-DUP-Q2-03-61 was flagged as estimated (J). The result for sample 086-CEF43-6N-Q2-03-61 was previously flagged based on suspected blank contamination, so no further action was taken.

VI.) Laboratory Control Samples (LCS):

One LCS (blank spike) was analyzed with this fraction of the SDG. All LCS criteria were met. No action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed on SDG sample 086-CEF43-33N-Q2-06-61. All MS / MSD criteria were met. No action was required.

VIII.) Field Duplicates:

One set of field duplicate samples (086-CEF43-6N-Q2-03-61 / 086-DUP-Q2-03-61) was identified in this SDG. The Relative Percent Difference (RPD) was:

Compound	086-CEF-43-6N-Q2-03-61	086-DUP-Q2-03-61	RPD
TPH	84.8 ug/L	3410 ug/L	190%

The RPD exceeded the 20% QC limit. The results for TPH in the two field duplicate samples were previously flagged based on other criteria, so no further action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met. No action was required.

XI.) System Performance:

All System Performance criteria were met. No action was required.

TOTAL LEAD

SUMMARY

I.) General:

The analyses for Total Lead were performed using SW-846 Methods 6010B.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

There were no major problems for this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

III.) CRDL Standards for ICP:

CRDL criteria were not required. No action was taken.

IV.) Blanks:

There were no detections in the blanks for this fraction of the SDG. No action was required.

IV.) ICP Interference Check Sample Results:

All Interference Percent Recovery criteria were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was required.

VII.) Duplicate Sample Analysis:

All MD criteria were met. No action was required.

VIII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were performed on SDG sample 086-CEF43-33N-Q2-03-61. All MS / MSD criteria were met. No action was required.

IX.) Field Duplicates:

One set of field duplicate samples (086-CEF43-6N-Q2-03-61 / 086-DUP-Q2-03-61) was identified for this fraction of the SDG. There was no calculated Relative Percent Difference. No action was required.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was taken.

XI.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

TECHNICAL VALIDITY AND USABILITY OF THE DATA

Some data were qualified due to field blank contamination or surrogate exceedance. Estimated data are usable for limited purposes. Rejected data are considered unusable. Overall usability, based on the number of QC flags applied, is considered high.

Table 1

SUMMARY OF QUALIFIED DATA

Sample(s) Affected	Target Compound	Qualifier	Qualification Code
086-CEF43-33N-Q2-03-61	methylene chloride	J+	S
086-CEF43-6N-Q2-03-61, 086-CEF43-7N-Q2-03-61, 086-CEF43-33N-Q2-03-61, 086-CEF43-38N-Q2-03-61	TPH	U+	F
086-DUP-Q2-06-61	TPH	J+	S

- Original analytical result was non-detect.
+ Original analytical result was positive for this analyte.

Appendix A

Qualified Form I's

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-2N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291101

Level: (low/med) LOW Lab File ID: 2030530/S9381

% Moisture: not dec. Date Collected: 05/27/03 Time: 1640

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1915

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-6N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291102

Level: (low/med) LOW Lab File ID: 2030530/S9382

% Moisture: not dec. Date Collected: 05/27/03 Time: 1600

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1936

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-7N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291103

Level: (low/med) LOW Lab File ID: 2030530/S9383

% Moisture: not dec. Date Collected: 05/27/03 Time: 1505

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1956

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-9N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291104

Level: (low/med) LOW Lab File ID: 2030530/S9387

% Moisture: not dec. Date Collected: 05/27/03 Time: 1430

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/31/03 Time: 0809

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291105

Level: (low/med) LOW Lab File ID: 2030530/S9374

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1709

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	Qual Code
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00	
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00	
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00	
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00	
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00	
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00	
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00	
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00	
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00	
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00	
71-43-2	Benzene	5.00	U	0.116	5.00	
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00	
75-25-2	Bromoform	5.00	U	0.248	5.00	
74-83-9	Bromomethane	5.00	U	0.439	5.00	
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00	
108-90-7	Chlorobenzene	5.00	U	0.206	5.00	
75-00-3	Chloroethane	5.00	U	0.172	5.00	
67-66-3	Chloroform	5.00	U	0.118	5.00	
74-87-3	Chloromethane	5.00	U	0.159	5.00	
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00	
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00	
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00	
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00	
75-09-2	Methylene chloride	3.85	~~U~~ J	3.64	10.0	S
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00	
108-88-3	Toluene	5.00	U	0.113	5.00	
79-01-6	Trichloroethene	5.00	U	0.298	5.00	
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00	
75-01-4	Vinyl chloride	5.00	U	0.184	5.00	
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00	

LLH 7/03/03

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61MS

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291106

Level: (low/med) LOW Lab File ID: 2030530/S9376

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1730

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	23.2		0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	21.8		0.368	5.00
79-00-5	1,1,2-Trichloroethane	21.4		0.469	5.00
75-35-4	1,1-Dichloroethene	23.2		0.104	5.00
95-50-1	1,2-Dichlorobenzene	21.7		0.249	5.00
107-06-2	1,2-Dichloroethane	22.4		0.696	5.00
78-87-5	1,2-Dichloropropane	21.6		0.252	5.00
541-73-1	1,3-Dichlorobenzene	21.6		0.265	5.00
106-46-7	1,4-Dichlorobenzene	21.4		0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	21.1		0.116	5.00
75-27-4	Bromodichloromethane	22.2		0.175	5.00
75-25-2	Bromoform	22.3		0.248	5.00
74-83-9	Bromomethane	24.7		0.439	5.00
56-23-5	Carbon tetrachloride	23.8		0.068	5.00
108-90-7	Chlorobenzene	21.3		0.206	5.00
75-00-3	Chloroethane	21.8		0.172	5.00
67-66-3	Chloroform	22.2		0.118	5.00
74-87-3	Chloromethane	20.8		0.159	5.00
124-48-1	Dibromochloromethane	22.2		0.163	5.00
75-71-8	Dichlorodifluoromethane	22.1		0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	19.7		0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	20.5		0.150	5.00
75-09-2	Methylene chloride	21.9		3.64	10.0
127-18-4	Tetrachloroethene	22.2		0.251	5.00
108-88-3	Toluene	20.3		0.113	5.00
79-01-6	Trichloroethene	21.3		0.298	5.00
75-69-4	Trichlorofluoromethane	23.4		0.167	5.00
75-01-4	Vinyl chloride	21.5		0.184	5.00
156-60-5	trans-1,2-Dichloroethene	22.2		0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61MSD

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291107

Level: (low/med) LOW Lab File ID: 2030530/S9377

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1751

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	23.0		0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	21.7		0.368	5.00
79-00-5	1,1,2-Trichloroethane	20.6		0.469	5.00
75-35-4	1,1-Dichloroethene	22.0		0.104	5.00
95-50-1	1,2-Dichlorobenzene	21.0		0.249	5.00
107-06-2	1,2-Dichloroethane	21.8		0.696	5.00
78-87-5	1,2-Dichloropropane	20.6		0.252	5.00
541-73-1	1,3-Dichlorobenzene	21.0		0.265	5.00
106-46-7	1,4-Dichlorobenzene	20.7		0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	21.2		0.116	5.00
75-27-4	Bromodichloromethane	22.0		0.175	5.00
75-25-2	Bromoform	22.5		0.248	5.00
74-83-9	Bromomethane	23.8		0.439	5.00
56-23-5	Carbon tetrachloride	22.9		0.068	5.00
108-90-7	Chlorobenzene	20.7		0.206	5.00
75-00-3	Chloroethane	21.3		0.172	5.00
67-66-3	Chloroform	21.6		0.118	5.00
74-87-3	Chloromethane	20.5		0.159	5.00
124-48-1	Dibromochloromethane	22.2		0.163	5.00
75-71-8	Dichlorodifluoromethane	21.3		0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	20.9		0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	20.4		0.150	5.00
75-09-2	Methylene chloride	19.7		3.64	10.0
127-18-4	Tetrachloroethene	20.9		0.251	5.00
108-88-3	Toluene	20.5		0.113	5.00
79-01-6	Trichloroethene	21.0		0.298	5.00
75-69-4	Trichlorofluoromethane	23.4		0.167	5.00
75-01-4	Vinyl chloride	21.5		0.184	5.00
156-60-5	trans-1,2-Dichloroethene	21.4		0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-38N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291109

Level: (low/med) LOW Lab File ID: 2030530/S9385

% Moisture: not dec. Date Collected: 05/28/03 Time: 1545

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 2038

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-DUP-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20305291110

Level: (low/med) LOW

Lab File ID: 2030530/S9386

% Moisture: not dec.

Date Collected: 05/27/03 Time: 0000

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

Date Received: 05/29/03

Instrument ID: MSV3

Date Analyzed: 05/30/03 Time: 2059

Soil Extract Volume: (µL)

Dilution Factor: 1 Analyst: RJO

Soil Aliquot Volume: (µL)

Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-EQB-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291111

Level: (low/med) LOW Lab File ID: 2030530/S9379

% Moisture: not dec. Date Collected: 05/27/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1833

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-TB-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20305291112

Level: (low/med) LOW

Lab File ID: 2030530/S9380

% Moisture: not dec.

Date Collected: Time:

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

Date Received: 05/29/03

Instrument ID: MSV3

Date Analyzed: 05/30/03 Time: 1854

Soil Extract Volume: (µL)

Dilution Factor: 1 Analyst: RJO

Soil Aliquot Volume: (µL)

Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291101	086-CEF43-2N-Q2-03-61	Water	5/27/03 16:40	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 16:24	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	2.29J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	7.09J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

20305291102	086-CEF43-6N-Q2-03-61	Water	5/27/03 16:00	5/29/03 09:30

8021B, Volatiles

1	6/3/03 16:42	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	1.58J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	6.89J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.4 ug/L	103	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291103	086-CEF43-7N-Q2-03-61	Water	5/27/03 15:05	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:01	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	52 ug/L	104	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291104	086-CEF43-9N-Q2-03-61	Water	5/27/03 14:30	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:20	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	**Ethylbenzene**	**16.8**	**5.00**	**0.370**	**ug/L**
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	**Xylene (total)**	**82.6**	**10.0**	**1.06**	**ug/L**
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	68.2 ug/L	136	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291105	086-CEF43-33N-Q2-03-61	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:16	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	50.5 ug/L	101	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291106	086-CEF43-33N-Q2-03-61MS	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:34	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	21.3	5.00	0.370	ug/L
100-41-4	Ethylbenzene	21.6	5.00	0.370	ug/L
108-88-3	Toluene	21.0	5.00	0.380	ug/L
1330-20-7	Xylene (total)	63.1	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	106	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	50.1 ug/L	100	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291107	086-CEF43-33N-Q2-03-61MSD	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:53	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	21.4	5.00	0.370	ug/L
100-41-4	Ethylbenzene	21.8	5.00	0.370	ug/L
108-88-3	Toluene	21.3	5.00	0.380	ug/L
1330-20-7	Xylene (total)	63.6	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	99.9	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291109	086-CEF43-38N-Q2-03-61	Water	5/28/03 15:45	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:40	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291110	086-DUP-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:59	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	1.12J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	4.34J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.6 ug/L	103	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291111	086-EQB-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 18:18	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.9 ug/L	104	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291101	086-CEF43-2N-Q2-03-61	Water	5/27/03 16:40	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:25	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.89 ug/L	95	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291102	086-CEF43-6N-Q2-03-61	Water	5/27/03 16:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:32	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.84 ug/L	92	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291103	086-CEF43-7N-Q2-03-61	Water	5/27/03 15:05	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:39	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.65 ug/L	83	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291104	086-CEF43-9N-Q2-03-61	Water	5/27/03 14:30	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH #	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	5	6/3/03 12:04	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	**1-Methylnaphthalene**	**39.0**	**5.00**	**1.46**	**ug/L**
91-57-6	**2-Methylnaphthalene**	**29.8**	**5.00**	**0.710**	**ug/L**
83-32-9	Acenaphthene	5.00 U	5.00	1.66	ug/L
208-96-8	Acenaphthylene	5.00 U	5.00	0.765	ug/L
120-12-7	Anthracene	0.500 U	0.500	0.120	ug/L
56-55-3	Benzo(a)anthracene	0.500 U	0.500	0.160	ug/L
50-32-8	Benzo(a)pyrene	0.500 U	0.500	0.165	ug/L
205-99-2	Benzo(b)fluoranthene	0.500 U	0.500	0.080	ug/L
191-24-2	Benzo(g,h,i)perylene	0.500 U	0.500	0.080	ug/L
207-08-9	Benzo(k)fluoranthene	0.500 U	0.500	0.165	ug/L
218-01-9	Chrysene	0.500 U	0.500	0.150	ug/L
53-70-3	Dibenz(a,h)anthracene	0.500 U	0.500	0.145	ug/L
206-44-0	Fluoranthene	0.500 U	0.500	0.220	ug/L
86-73-7	Fluorene	2.50 U	2.50	0.495	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	1.25 U	1.25	0.205	ug/L
91-20-3	**Naphthalene**	**58.9**	**1.25**	**0.620**	**ug/L**
85-01-8	Phenanthrene	0.500 U	0.500	0.125	ug/L
129-00-0	Pyrene	0.500 U	0.500	0.170	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.67 ug/L	84	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291105	086-CEF43-33N-Q2-03-61	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:53	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.67 ug/L	84	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291106	086-CEF43-33N-Q2-03-61MS	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:20	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	8.17	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	7.26	1.00	0.142	ug/L
83-32-9	Acenaphthene	6.89	1.00	0.331	ug/L
208-96-8	Acenaphthylene	3.58	1.00	0.153	ug/L
120-12-7	Anthracene	0.153	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.429	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.382	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.154	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.544	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.163	0.100	0.033	ug/L
218-01-9	Chrysene	0.343	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	1.56	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.355	0.100	0.044	ug/L
86-73-7	Fluorene	0.761	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.365	0.250	0.041	ug/L
91-20-3	Naphthalene	3.95	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.373	0.100	0.025	ug/L
129-00-0	Pyrene	0.832	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291107	086-CEF43-33N-Q2-03-61MSD	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:27	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	8.22	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	7.96	1.00	0.142	ug/L
83-32-9	Acenaphthene	7.67	1.00	0.331	ug/L
208-96-8	Acenaphthylene	3.58	1.00	0.153	ug/L
120-12-7	Anthracene	0.164	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.426	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.420	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.171	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.602	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.197	0.100	0.033	ug/L
218-01-9	Chrysene	0.335	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	1.66	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.365	0.100	0.044	ug/L
86-73-7	Fluorene	0.817	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.379	0.250	0.041	ug/L
91-20-3	Naphthalene	3.98	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.325	0.100	0.025	ug/L
129-00-0	Pyrene	0.829	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291109	086-CEF43-38N-Q2-03-61	Water	5/28/03 15:45	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:35	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.82 ug/L	91	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291110	086-DUP-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 11:12	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.72 ug/L	86	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291111	086-EQB-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 11:19	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-2N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291101

Date Collected: 05/27/03 Time: 1640

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1612

Dilution Factor: 10 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	7930		407	1000

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-CEF43-6N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291102

Date Collected: 05/27/03 Time: 1600

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1400

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	Qual
FLPRO-01	Petroleum Hydrocarbons	84.8	~~J~~ Q	40.7	100	F

FORM I ORG-1

000405 LLH 7/03/03

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-CEF43-7N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291103

Date Collected: 05/27/03 Time: 1505

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1536

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	Qual
FLPRO-01	Petroleum Hydrocarbons	776	[illegible]	40.7	100	F

FORM I ORG-1

000406

LLH 7/03/03

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-CEF43-9N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291104

Date Collected: 05/27/03 Time: 1430

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1710

Dilution Factor: 50 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	21500		2040	5000

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-33N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291105

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1732

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	Qual Code
FLPRO-01	Petroleum Hydrocarbons	211	B	40.7	100	F

FORM I ORG-1

 MLH 4/03/03

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-CEF43-33N-Q2-03-61MS

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291106

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1830

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1500		40.7	100

FORM I ORG-1

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-CEF43-33N-Q2-03-61MSD

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291107

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1927

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1580		40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-38N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291109

Date Collected: 05/28/03 Time: 1545

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 2023

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	
FLPRO-01	Petroleum Hydrocarbons	131	[redacted]	40.7	100	Quan F

FORM I ORG-1

7/03/03

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-DUP-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291110

Date Collected: 05/27/03 Time: 0000

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1807

Dilution Factor: 5 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL	Q4QR
FLPRO-01	Petroleum Hydrocarbons	3410	J	204	500	S

FORM I ORG-1

AH 7/03/03

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

CONCENTRATION UNITS: ug/L

Sample ID: 086-EQB-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291111

Date Collected: 05/27/03 Time: 0000

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 2310

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	215		40.7	100

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: (soil / water) Water

Level: (low / med) % Solids:

Date Received: 05/29/03 Time: 0930

Sample ID: 086-CEF43-2N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291101

Date Collected: 05/27/03 Time: 1640

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-CEF43-6N-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291102

Date Received: 05/29/03 Time: 0930

Date Collected: 05/27/03 Time: 1600

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.017	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: (soil / water) Water

Level: (low / med) % Solids:

Date Received: 05/29/03 Time: 0930

Sample ID: 086-CEF43-7N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291103

Date Collected: 05/27/03 Time: 1505

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.0059	mg/L	~~B~~ J	0.0016	0.015	SW-846 6010B	P

7-11-03

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: (soil / water) Water

Level: (low / med) % Solids:

Date Received: 05/29/03 Time: 0930

Sample ID: 086-CEF43-9N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291104

Date Collected: 05/27/03 Time: 1430

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291105

Date Received: 05/29/03 Time: 0930

Date Collected: 05/28/03 Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-03-61MS

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291106

Date Received: 05/29/03 Time: 0930

Date Collected: 05/28/03 Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1.05	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: (soil / water) Water

Level: (low / med) % Solids:

Date Received: 05/29/03 Time: 0930

Sample ID: 086-CEF43-33N-Q2-03-61MSD

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291107

Date Collected: 05/28/03 Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1.07	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: (soil / water) Water

Level: (low / med) % Solids:

Date Received: 05/29/03 Time: 0930

Sample ID: 086-CEF43-33N-Q2-03-61DUP

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291108

Date Collected: 05/28/03 Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-CEF43-38N-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291109

Date Received: 05/29/03 Time: 0930

Date Collected: 05/28/03 Time: 1545

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-DUP-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291110

Date Received: 05/29/03 Time: 0930

Date Collected: 05/27/03 Time: 0000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.017	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-EQB-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291111

Date Received: 05/29/03 Time: 0930

Date Collected: 05/27/03 Time: 0000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date: 6/17/03

GCAL REPORT NO.: 203052911

Deliver To:	CH2M HILL Constructors Inc. 115 Perimeter Center Place Suite 700 Atlanta, GA 30346 770-604-9182 Ext. 614
Attn:	Melissa Aycock

CUSTOMER NAME: CH2M HILL Constructors Inc.

PROJECT NAME: Cecil Field - South Fuel Farm

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402 • Phone 225.769.4900 • Fax 225.767.5717

CASE NARRATIVE

Client: CH2M HILL Constructors Inc. **Report:** 203052911

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 EPA 624 analysis of sample 20305291105 (086-CEF43-33N-Q2-03-61), the recovery for the surrogate Toluene d8 was above the upper control limit. The remaining surrogates were all within control limits.

In QC batch 257869, the MS/MSD exhibited sporadic recovery failures. These recoveries were within limits in the LCS. This is attributed to matrix interference.

SEMI-VOLATILES GAS CHROMATOGRAPHY

In the Florida PRO analysis, samples 20305291101 (086-CEF43-2N-Q2-03-61), 20305291104 (086-CEF43-9N-Q2-03-61) and 20305291110 (086-DUP-Q2-03-61) had to be diluted due to compounds that were detected above the linear range of the calibration.

Sample 20305291102 (086-CEF43-6N-Q2-03-61) exhibited low surrogate recoveries in the primary analysis. The sample was re-extracted and re-analyzed with similar surrogate recoveries obtained. This is attributed to matrix interference.

In the analysis of samples 20305291110 (086-DUP-Q2-03-61), 101498 (MB) for HBN 257848 and 101499 (LCS) for HBN 257848, the surrogate recovery for o-Terphenyl was above QC limits, however this can be attributed to matrix interference.

In the analysis of samples 20305291101 (086-CEF43-2N-Q2-03-61) and 20305291104 (086-CEF43-9N-Q2-03-61), the surrogate recoveries for o-Terphenyl and Nonatriacontane is reported as DO (diluted out), due to the dilution performed on the sample.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Sample 20305291104 (086-CEF43-9N-Q2-03-61) had to be diluted due to compounds that were detected above the linear range of the calibration.

In the 8310 analysis for 20305291105-07 (086-CEF43-33N-Q2-03-61MSD), Pyrene, Benzo(a)anthracene and Chrysene were reported from the confirmation analysis because of the co-elution of non-target analytes.

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 of in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND-Indicates that the parameter was not detected at the specified detection limit
DO-Indicates that the result was diluted out
MI-Indicates that the result was subject to Matrix Interference
TNTC-Indicates that the result was Too Numerous to Count
SUBC-Indicates that the analysis was subcontracted
FLD-Indicates that the parameter was performed in the field
PQL-Practical Quantitation Limit
MDL-Method Detection Limit
RDL-Reporting Detection Limit

Reporting Flags Utilized in this Report

J-Indicates that the result was detected between the PQL and MDL
U-Indicates that the result was not detected at the referenced detection limit
B-Organics Indicates that the compound was detected in the associated Method Blank
B-Inorganics Indicates that the compound was detected between the PQL 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 Sample Cross-Reference 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 condition detailed above. 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.

Scott A. Bailey / CAE

SCOTT A. BAILEY
OPERATIONS MANAGER
GCAL REPORT NO.: 203052911

SAMPLE CROSS-REFERENCE

GCAL ID	CLIENT ID	MATRIX	SAMPLE DATE/TIME	RECEIVE DATE/TIME
20305291101	086-CEF43-2N-Q2-03-61	Water	5/27/03 16:40	5/29/03 9:30
20305291102	086-CEF43-6N-Q2-03-61	Water	5/27/03 16:00	5/29/03 9:30
20305291103	086-CEF43-7N-Q2-03-61	Water	5/27/03 15:05	5/29/03 9:30
20305291104	086-CEF43-9N-Q2-03-61	Water	5/27/03 14:30	5/29/03 9:30
20305291105	086-CEF43-33N-Q2-03-61	Water	5/28/03 14:50	5/29/03 9:30
20305291106	086-CEF43-33N-Q2-03-61MS	Water	5/28/03 14:50	5/29/03 9:30
20305291107	086-CEF43-33N-Q2-03-61MSD	Water	5/28/03 14:50	5/29/03 9:30
20305291108	086-CEF43-33N-Q2-03-61DUP	Water	5/28/03 14:50	5/29/03 9:30
20305291109	086-CEF43-38N-Q2-03-61	Water	5/28/03 15:45	5/29/03 9:30
20305291110	086-DUP-Q2-03-61	Water	5/27/03 0:00	5/29/03 9:30
20305291111	086-EQB-Q2-03-61	Water	5/27/03 0:00	5/29/03 9:30
20305291112	086-TB-Q2-03-61	Water		5/29/03 9:30

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-2N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291101

Level: (low/med) LOW Lab File ID: 2030530/S9381

% Moisture: not dec. Date Collected: 05/27/03 Time: 1640

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1915

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-6N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291102

Level: (low/med) LOW Lab File ID: 2030530/S9382

% Moisture: not dec. Date Collected: 05/27/03 Time: 1600

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1936

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-7N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291103

Level: (low/med) LOW Lab File ID: 2030530/S9383

% Moisture: not dec. Date Collected: 05/27/03 Time: 1505

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1956

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-9N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291104

Level: (low/med) LOW Lab File ID: 2030530/S9387

% Moisture: not dec. Date Collected: 05/27/03 Time: 1430

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/31/03 Time: 0809

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291105

Level: (low/med) LOW Lab File ID: 2030530/S9374

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1709

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	3.85	J	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61MS

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291106

Level: (low/med) LOW Lab File ID: 2030530/S9376

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1730

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	23.2		0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	21.8		0.368	5.00
79-00-5	1,1,2-Trichloroethane	21.4		0.469	5.00
75-35-4	1,1-Dichloroethene	23.2		0.104	5.00
95-50-1	1,2-Dichlorobenzene	21.7		0.249	5.00
107-06-2	1,2-Dichloroethane	22.4		0.696	5.00
78-87-5	1,2-Dichloropropane	21.6		0.252	5.00
541-73-1	1,3-Dichlorobenzene	21.6		0.265	5.00
106-46-7	1,4-Dichlorobenzene	21.4		0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	21.1		0.116	5.00
75-27-4	Bromodichloromethane	22.2		0.175	5.00
75-25-2	Bromoform	22.3		0.248	5.00
74-83-9	Bromomethane	24.7		0.439	5.00
56-23-5	Carbon tetrachloride	23.8		0.068	5.00
108-90-7	Chlorobenzene	21.3		0.206	5.00
75-00-3	Chloroethane	21.8		0.172	5.00
67-66-3	Chloroform	22.2		0.118	5.00
74-87-3	Chloromethane	20.8		0.159	5.00
124-48-1	Dibromochloromethane	22.2		0.163	5.00
75-71-8	Dichlorodifluoromethane	22.1		0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	19.7		0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	20.5		0.150	5.00
75-09-2	Methylene chloride	21.9		3.64	10.0
127-18-4	Tetrachloroethene	22.2		0.251	5.00
108-88-3	Toluene	20.3		0.113	5.00
79-01-6	Trichloroethene	21.3		0.298	5.00
75-69-4	Trichlorofluoromethane	23.4		0.167	5.00
75-01-4	Vinyl chloride	21.5		0.184	5.00
156-60-5	trans-1,2-Dichloroethene	22.2		0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-33N-Q2-03-61MSD

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291107

Level: (low/med) LOW Lab File ID: 2030530/S9377

% Moisture: not dec. Date Collected: 05/28/03 Time: 1450

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1751

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	23.0		0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	21.7		0.368	5.00
79-00-5	1,1,2-Trichloroethane	20.6		0.469	5.00
75-35-4	1,1-Dichloroethene	22.0		0.104	5.00
95-50-1	1,2-Dichlorobenzene	21.0		0.249	5.00
107-06-2	1,2-Dichloroethane	21.8		0.696	5.00
78-87-5	1,2-Dichloropropane	20.6		0.252	5.00
541-73-1	1,3-Dichlorobenzene	21.0		0.265	5.00
106-46-7	1,4-Dichlorobenzene	20.7		0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	21.2		0.116	5.00
75-27-4	Bromodichloromethane	22.0		0.175	5.00
75-25-2	Bromoform	22.5		0.248	5.00
74-83-9	Bromomethane	23.8		0.439	5.00
56-23-5	Carbon tetrachloride	22.9		0.068	5.00
108-90-7	Chlorobenzene	20.7		0.206	5.00
75-00-3	Chloroethane	21.3		0.172	5.00
67-66-3	Chloroform	21.6		0.118	5.00
74-87-3	Chloromethane	20.5		0.159	5.00
124-48-1	Dibromochloromethane	22.2		0.163	5.00
75-71-8	Dichlorodifluoromethane	21.3		0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	20.9		0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	20.4		0.150	5.00
75-09-2	Methylene chloride	19.7		3.64	10.0
127-18-4	Tetrachloroethene	20.9		0.251	5.00
108-88-3	Toluene	20.5		0.113	5.00
79-01-6	Trichloroethene	21.0		0.298	5.00
75-69-4	Trichlorofluoromethane	23.4		0.167	5.00
75-01-4	Vinyl chloride	21.5		0.184	5.00
156-60-5	trans-1,2-Dichloroethene	21.4		0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-CEF43-38N-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291109

Level: (low/med) LOW Lab File ID: 2030530/S9385

% Moisture: not dec. Date Collected: 05/28/03 Time: 1545

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 2038

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-DUP-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291110

Level: (low/med) LOW Lab File ID: 2030530/S9386

% Moisture: not dec. Date Collected: 05/27/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 2059

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-EQB-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291111

Level: (low/med) LOW Lab File ID: 2030530/S9379

% Moisture: not dec. Date Collected: 05/27/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1833

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

086-TB-Q2-03-61

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20305291112

Level: (low/med) LOW Lab File ID: 2030530/S9380

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received: 05/29/03

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1854

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB101683

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 101683

Level: (low/med) LOW Lab File ID: 2030530/S9365

% Moisture: not dec. Date Collected: Time:

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

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1341

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	5.00	U	0.368	5.00
79-00-5	1,1,2-Trichloroethane	5.00	U	0.469	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.104	5.00
95-50-1	1,2-Dichlorobenzene	5.00	U	0.249	5.00
107-06-2	1,2-Dichloroethane	5.00	U	0.696	5.00
78-87-5	1,2-Dichloropropane	5.00	U	0.252	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.265	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.328	5.00
110-75-8	2-Chloroethylvinyl ether	5.00	U	0.298	5.00
71-43-2	Benzene	5.00	U	0.116	5.00
75-27-4	Bromodichloromethane	5.00	U	0.175	5.00
75-25-2	Bromoform	5.00	U	0.248	5.00
74-83-9	Bromomethane	5.00	U	0.439	5.00
56-23-5	Carbon tetrachloride	5.00	U	0.068	5.00
108-90-7	Chlorobenzene	5.00	U	0.206	5.00
75-00-3	Chloroethane	5.00	U	0.172	5.00
67-66-3	Chloroform	5.00	U	0.118	5.00
74-87-3	Chloromethane	5.00	U	0.159	5.00
124-48-1	Dibromochloromethane	5.00	U	0.163	5.00
75-71-8	Dichlorodifluoromethane	5.00	U	0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.150	5.00
75-09-2	Methylene chloride	10.0	U	3.64	10.0
127-18-4	Tetrachloroethene	5.00	U	0.251	5.00
108-88-3	Toluene	5.00	U	0.113	5.00
79-01-6	Trichloroethene	5.00	U	0.298	5.00
75-69-4	Trichlorofluoromethane	5.00	U	0.167	5.00
75-01-4	Vinyl chloride	5.00	U	0.184	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.232	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS101546

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 101546

Level: (low/med) LOW Lab File ID: 2030530/S9363

% Moisture: not dec. Date Collected: Time:

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

Instrument ID: MSV3 Date Analyzed: 05/30/03 Time: 1259

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

Soil Aliquot Volume: (µL) Prep Batch: Analytical Batch: 257869

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	19.9		0.185	5.00
79-34-5	1,1,2,2-Tetrachloroethane	19.7		0.368	5.00
79-00-5	1,1,2-Trichloroethane	18.9		0.469	5.00
75-35-4	1,1-Dichloroethene	19.9		0.104	5.00
95-50-1	1,2-Dichlorobenzene	20.0		0.249	5.00
107-06-2	1,2-Dichloroethane	19.9		0.696	5.00
78-87-5	1,2-Dichloropropane	19.3		0.252	5.00
541-73-1	1,3-Dichlorobenzene	19.8		0.265	5.00
106-46-7	1,4-Dichlorobenzene	20.1		0.328	5.00
110-75-8	2-Chloroethylvinyl ether	16.0		0.298	5.00
71-43-2	Benzene	19.1		0.116	5.00
75-27-4	Bromodichloromethane	19.5		0.175	5.00
75-25-2	Bromoform	20.4		0.248	5.00
74-83-9	Bromomethane	15.0		0.439	5.00
56-23-5	Carbon tetrachloride	19.7		0.068	5.00
108-90-7	Chlorobenzene	18.9		0.206	5.00
75-00-3	Chloroethane	18.5		0.172	5.00
67-66-3	Chloroform	19.6		0.118	5.00
74-87-3	Chloromethane	19.7		0.159	5.00
124-48-1	Dibromochloromethane	20.1		0.163	5.00
75-71-8	Dichlorodifluoromethane	18.3		0.132	5.00
10061-01-5	cis-1,3-Dichloropropene	18.7		0.182	5.00
10061-02-6	trans-1,3-Dichloropropene	19.6		0.150	5.00
75-09-2	Methylene chloride	18.4		3.64	10.0
127-18-4	Tetrachloroethene	19.3		0.251	5.00
108-88-3	Toluene	18.1		0.113	5.00
79-01-6	Trichloroethene	19.3		0.298	5.00
75-69-4	Trichlorofluoromethane	19.1		0.167	5.00
75-01-4	Vinyl chloride	18.6		0.184	5.00
156-60-5	trans-1,2-Dichloroethene	19.4		0.232	5.00

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1.	086-CEF43-2N-Q2-03-61	99		111		94		104		0
2.	086-TB-Q2-03-61	93		105		96		101		0
3.	LCS101546	101		106		96		99		0
4.	MB101683	94		104		95		98		0
5.	086-CEF43-6N-Q2-03-61	97		111		95		106		0
6.	086-CEF43-7N-Q2-03-61	95		108		97		102		0
7.	086-CEF43-9N-Q2-03-61	99		103		99		89		0
8.	086-CEF43-33N-Q2-03-61	93		108		114	*	102		1
9.	086-CEF43-33N-Q2-03-61MS	102		107		97		101		0
10.	086-CEF43-38N-Q2-03-61	97		106		100		103		0
11.	086-DUP-Q2-03-61	97		105		95		98		0
12.	086-EQB-Q2-03-61	94		104		96		103		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	78 - 115
SMC 2	Dibromofluoromethane	70 - 130
SMC 3	Toluene-d8	83 - 112
SMC 4	1,2-Dichloroethane-d4	76 - 128

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix Spike - EPA Sample No: 086-CEF43-33N-Q2-03-61

SAMPLE NO. : 20305291106

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*MS CONCENTRATION*	*MS % REC*	*#*	*QC. LIMITS*
1,1,1-Trichloroethane	ug/L	20	0	23.2	116		52 - 162
1,1,2,2-Tetrachloroethane	ug/L	20	0	21.8	109		46 - 157
1,1,2-Trichloroethane	ug/L	20	0	21.4	107		52 - 150
1,1-Dichloroethene	ug/L	20	0	23.2	116		1 - 234
1,2-Dichlorobenzene	ug/L	20	0	21.7	109		18 - 190
1,2-Dichloroethane	ug/L	20	0	22.4	112		49 - 155
1,2-Dichloropropane	ug/L	20	0	21.6	108		1 - 210
1,3-Dichlorobenzene	ug/L	20	0	21.6	108		59 - 156
1,4-Dichlorobenzene	ug/L	20	0	21.4	107		18 - 190
2-Chloroethylvinyl ether	ug/L	20	0	0	0	*	1 - 200
Benzene	ug/L	20	0	21.1	106		37 - 151
Bromodichloromethane	ug/L	20	0	22.2	111		35 - 155
Bromoform	ug/L	20	0	22.3	112		45 - 169
Bromomethane	ug/L	20	0	24.7	124		1 - 242
Carbon tetrachloride	ug/L	20	0	23.8	119		70 - 140
Chlorobenzene	ug/L	20	0	21.3	107		37 - 160
Chloroethane	ug/L	20	0	21.8	109		14 - 230
Chloroform	ug/L	20	0	22.2	111		51 - 138
Chloromethane	ug/L	20	0	20.8	104		1 - 273
Dibromochloromethane	ug/L	20	0	22.2	111		53 - 149
Dichlorodifluoromethane	ug/L	20	0	22.1	111		40 - 170
Methylene chloride	ug/L	20	3.85	21.9	90		1 - 221
Tetrachloroethene	ug/L	20	0	22.2	111		64 - 148
Toluene	ug/L	20	0	20.3	102		47 - 150
Trichloroethene	ug/L	20	0	21.3	107		71 - 157
Trichlorofluoromethane	ug/L	20	0	23.4	117		17 - 181
Vinyl chloride	ug/L	20	0	21.5	108		1 - 251
cis-1,3-Dichloropropene	ug/L	20	0	19.7	99		1 - 227
trans-1,2-Dichloroethene	ug/L	20	0	22.2	111		54 - 156
trans-1,3-Dichloropropene	ug/L	20	0	20.5	103		17 - 183

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

* Values outside of QC limits

RPD : 0 out of 30 outside limits

Spike Recovery: 2 out of 60 outside limits

3A

WATER VOLATILE MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Matrix Spike - EPA Sample No: 086-CEF43-33N-Q2-03-61

SAMPLE NO. : 20305291107

COMPOUND	UNITS	SPIKE ADDED	MSD CONC.	MSD % REC	#	% RPD	#	QC. LIMITS REC	QC. LIMITS RPD
1,1,1-Trichloroethane	ug/L	20	23	115		.9		52 - 162	0 - 30
1,1,2,2-Tetrachloroethane	ug/L	20	21.7	109		0		46 - 157	0 - 30
1,1,2-Trichloroethane	ug/L	20	20.6	103		4		52 - 150	0 - 30
1,1-Dichloroethene	ug/L	20	22	110		5		1 - 234	0 - 14
1,2-Dichlorobenzene	ug/L	20	21	105		4		18 - 190	0 - 30
1,2-Dichloroethane	ug/L	20	21.8	109		3		49 - 155	0 - 30
1,2-Dichloropropane	ug/L	20	20.6	103		5		1 - 210	0 - 30
1,3-Dichlorobenzene	ug/L	20	21	105		3		59 - 156	0 - 30
1,4-Dichlorobenzene	ug/L	20	20.7	104		3		18 - 190	0 - 30
2-Chloroethylvinyl ether	ug/L	20	0	0	*	0		1 - 200	0 - 30
Benzene	ug/L	20	21.2	106		0		37 - 151	0 - 11
Bromodichloromethane	ug/L	20	22	110		.9		35 - 155	0 - 30
Bromoform	ug/L	20	22.5	113		.9		45 - 169	0 - 30
Bromomethane	ug/L	20	23.8	119		4		1 - 242	0 - 30
Carbon tetrachloride	ug/L	20	22.9	115		3		70 - 140	0 - 30
Chlorobenzene	ug/L	20	20.7	104		3		37 - 160	0 - 13
Chloroethane	ug/L	20	21.3	107		2		14 - 230	0 - 30
Chloroform	ug/L	20	21.6	108		3		51 - 138	0 - 30
Chloromethane	ug/L	20	20.5	103		1		1 - 273	0 - 30
Dibromochloromethane	ug/L	20	22.2	111		0		53 - 149	0 - 30
Dichlorodifluoromethane	ug/L	20	21.3	107		4		40 - 170	0 - 30
Methylene chloride	ug/L	20	19.7	79		13		1 - 221	0 - 30
Tetrachloroethene	ug/L	20	20.9	105		6		64 - 148	0 - 30
Toluene	ug/L	20	20.5	103		1		47 - 150	0 - 13
Trichloroethene	ug/L	20	21	105		2		71 - 157	0 - 14
Trichlorofluoromethane	ug/L	20	23.4	117		0		17 - 181	0 - 30
Vinyl chloride	ug/L	20	21.5	108		0		1 - 251	0 - 30
cis-1,3-Dichloropropene	ug/L	20	20.9	105		6		1 - 227	0 - 30
trans-1,2-Dichloroethene	ug/L	20	21.4	107		4		54 - 156	0 - 30
trans-1,3-Dichloropropene	ug/L	20	20.4	102		1		17 - 183	0 - 30

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

* Values outside of QC limits

RPD : 0 out of 30 outside limits

Spike Recovery: 2 out of 60 outside limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

SAMPLE NO. : 101546

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	#	QC. LIMITS
1,1,1-Trichloroethane	ug/L	20	0	19.9	100		52 - 162
1,1,2,2-Tetrachloroethane	ug/L	20	0	19.7	99		46 - 157
1,1,2-Trichloroethane	ug/L	20	0	18.9	95		52 - 150
1,1-Dichloroethene	ug/L	20	0	19.9	100		1 - 234
1,2-Dichlorobenzene	ug/L	20	0	20	100		18 - 190
1,2-Dichloroethane	ug/L	20	0	19.9	100		49 - 155
1,2-Dichloropropane	ug/L	20	0	19.3	97		1 - 210
1,3-Dichlorobenzene	ug/L	20	0	19.8	99		59 - 156
1,4-Dichlorobenzene	ug/L	20	0	20.1	101		18 - 190
2-Chloroethylvinyl ether	ug/L	20	0	16	80		1 - 200
Benzene	ug/L	20	0	19.1	96		37 - 151
Bromodichloromethane	ug/L	20	0	19.5	98		35 - 155
Bromoform	ug/L	20	0	20.4	102		45 - 169
Bromomethane	ug/L	20	0	15	75		1 - 242
Carbon tetrachloride	ug/L	20	0	19.7	99		70 - 140
Chlorobenzene	ug/L	20	0	18.9	95		37 - 160
Chloroethane	ug/L	20	0	18.5	93		14 - 230
Chloroform	ug/L	20	0	19.6	98		51 - 138
Chloromethane	ug/L	20	0	19.7	99		1 - 273
Dibromochloromethane	ug/L	20	0	20.1	101		53 - 149
Dichlorodifluoromethane	ug/L	20	0	18.3	92		40 - 170
Methylene chloride	ug/L	20	0	18.4	92		1 - 221
Tetrachloroethene	ug/L	20	0	19.3	97		64 - 148
Toluene	ug/L	20	0	18.1	91		47 - 150
Trichloroethene	ug/L	20	0	19.3	97		71 - 157
Trichlorofluoromethane	ug/L	20	0	19.1	96		17 - 181
Vinyl chloride	ug/L	20	0	18.6	93		1 - 251
cis-1,3-Dichloropropene	ug/L	20	0	18.7	94		1 - 227
trans-1,2-Dichloroethene	ug/L	20	0	19.4	97		54 - 156
trans-1,3-Dichloropropene	ug/L	20	0	19.6	98		17 - 183

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 30 outside limits

FORM III VOA-1

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB101683

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab File ID: 2030530/S9365

Lab Sample ID: 101683 Date Extracted:

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

Date Analyzed: 05/30/03 Time: 1341

Instrument ID: MSV3 Matrix: Water

Heated Purge: N

Level: LOW

Prep Batch: Analytical Batch: 257869

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS101546	101546	2030530/S9363	05/30/03	1259
2.	086-CEF43-33N-Q2-03-61	20305291105	2030530/S9374	05/30/03	1709
3.	086-CEF43-33N-Q2-03-61MS	20305291106	2030530/S9376	05/30/03	1730
4.	086-CEF43-33N-Q2-03-61MSD	20305291107	2030530/S9377	05/30/03	1751
5.	086-EQB-Q2-03-61	20305291111	2030530/S9379	05/30/03	1833
6.	086-TB-Q2-03-61	20305291112	2030530/S9380	05/30/03	1854
7.	086-CEF43-2N-Q2-03-61	20305291101	2030530/S9381	05/30/03	1915
8.	086-CEF43-6N-Q2-03-61	20305291102	2030530/S9382	05/30/03	1936
9.	086-CEF43-7N-Q2-03-61	20305291103	2030530/S9383	05/30/03	1956
10.	086-CEF43-38N-Q2-03-61	20305291109	2030530/S9385	05/30/03	2038
11.	086-DUP-Q2-03-61	20305291110	2030530/S9386	05/30/03	2059
12.	086-CEF43-9N-Q2-03-61	20305291104	2030530/S9387	05/31/03	0809

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Lab File ID: S9354 BFB Injection Date: 05/30/03

Instrument ID: MSV3 BFB Injection Time: 0852

GC Column: DB-624-30M ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.4
75	30.0 - 60.0% of mass 95	56.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 99.9% of mass 95	99.1
175	5.0 - 9.0% of mass 174	7.6 (7.7)1
176	95.0 - 101.0% of mass 174	94.5 (95.4)1
177	5.0 - 9.0% of mass 176	7.0 (7.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V3STD020	1202	S9355	05/30/03	0923
02	V3STD005	1201	S9357	05/30/03	1035
03	V3STD050	1203	S9358	05/30/03	1057
04	V3STD100	1204	S9359	05/30/03	1128
05	V3LCS01	101546	S9363	05/30/03	1259
06	V3BLK01	101683	S9365	05/30/03	1341
07	086-CEF43-33	20305291105	S9374	05/30/03	1709
08	086-CEF43-33	20305291106	S9376	05/30/03	1730
09	086-CEF43-33	20305291107	S9377	05/30/03	1751
10	086-EQB-Q2-0	20305291111	S9379	05/30/03	1833
11	086-TB-Q2-03	20305291112	S9380	05/30/03	1854
12	086-CEF43-2N	20305291101	S9381	05/30/03	1915
13	086-CEF43-6N	20305291102	S9382	05/30/03	1936
14	086-CEF43-7N	20305291103	S9383	05/30/03	1956
15	086-CEF43-38	20305291109	S9385	05/30/03	2038
16	086-DUP-Q2-0	20305291110	S9386	05/30/03	2059
17	086-CEF43-9N	20305291104	S9387	05/31/03	0809
18					
19					
20					
21					
22					

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: MSV3 Calibration Date(s): 05/01/03 05/30/03

Heated Purge: (Y/N) N Calibration Time(s): 1512 1128

GC Column: DB-624-30M ID: 0.53 (mm)

LAB FILE ID: RRF5 =S9357 RRF20 =S9355
RRF50 =S9358 RRF100=S9359

COMPOUND	RRF5	RRF20	RRF50	RRF100		$\overline{RRF}$	% RSD
Bromochloromethane *	0.188	0.180	0.167	0.174		0.177	5.0*
Chloromethane ++ *	0.223	0.227	0.193	0.201		0.211	7.9*
Bromomethane *	0.168	0.176	0.148	0.086		0.144	28.1*
Vinyl Chloride + *	0.258	0.267	0.239	0.248		0.253	4.9*
Chloroethane *	0.170	0.174	0.157	0.155		0.164	5.7*
Methylene Chloride *	0.488	0.338	0.287	0.292		0.351	26.8*
1,1-Dichloroethene + *	0.264	0.247	0.236	0.232		0.245	5.9*
1,1-Dichloroethane ++ *	0.479	0.441	0.426	0.432		0.444	5.4*
cis-1,2-Dichloroethene *	0.446	0.426	0.410	0.417		0.425	3.7*
Chloroform + *	0.611	0.538	0.506	0.516		0.543	8.7*
1,2-Dichloroethane *	0.557	0.508	0.480	0.460		0.501	8.4*
1,1,1-Trichloroethane *	0.504	0.451	0.445	0.457		0.464	5.8*
Carbon Tetrachloride *	0.437	0.366	0.381	0.380		0.391	8.1*
Bromodichloromethane *	0.490	0.416	0.458	0.470		0.458	6.8*
1,2-Dichloropropane + *	0.254	0.234	0.251	0.259		0.250	4.2*
cis-1,3-Dichloropropene *	0.425	0.353	0.384	0.408		0.392	7.9*
Trichloroethene *	0.357	0.326	0.311	0.322		0.329	6.1*
1,1,2-Trichloroethane *	0.270	0.233	0.236	0.256		0.249	6.9*
Benzene *	0.970	0.963	0.898	0.915		0.936	3.8*
trans-1,3-Dichloropropene *	0.404	0.359	0.401	0.432		0.399	7.5*
Bromoform ++ *	0.760	0.712	0.734	0.764		0.742	3.2*
Tetrachloroethene *	0.307	0.269	0.278	0.289		0.286	5.7*
1,1,2,2-Tetrachloroethane++ *	0.786	0.695	0.702	0.698		0.720	6.1*
Toluene + *	3.038	2.594	2.401	2.481		2.628	10.8*
Chlorobenzene ++ *	1.869	1.812	1.668	1.746		1.774	4.9*
Ethylbenzene + *	0.882	0.865	0.842	0.892		0.870	2.5*
Styrene *	1.722	1.772	1.719	1.844		1.764	3.3*
p,m-Xylene *	1.061	1.031	1.011	1.081		1.046	2.9*
Trichlorofluoromethane *	0.467	0.424	0.406	0.409		0.426	6.7*
trans-1,2-Dichloroethene *	0.363	0.355	0.334	0.337		0.347	4.1*
1,2-Dibromoethane(EDB) *	0.726	0.704	0.703	0.732		0.716	2.0*
1,3-Dichlorobenzene *	1.687	1.635	1.540	1.486		1.587	5.7*
1,4-Dichlorobenzene *	1.675	1.628	1.550	1.535		1.597	4.1*
1,2-Dichlorobenzene *	1.623	1.587	1.489	1.489		1.547	4.4*
1,2-Dibromo-3-Chloropropane *	0.207	0.188	0.206	0.206		0.202	4.5*
o-Xylene *	0.982	1.027	0.987	1.071		1.017	4.1*
sec-Butylbenzene *	3.036	3.042	3.004	2.912		2.998	2.0*

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

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: MSV3 Calibration Date(s): 05/01/03 05/30/03

Heated Purge: (Y/N) N Calibration Time(s): 1512 1128

GC Column: DB-624-30M ID: 0.53 (mm)

LAB FILE ID: RRF5 =S9357 RRF20 =S9355
RRF50 =S9358 RRF100=S9359

COMPOUND	RRF5	RRF20	RRF50	RRF100		$\overline{RRF}$	% RSD
2-Chlorotoluene *	2.097	2.327	2.258	2.207		2.222	4.4*
Dibromomethane *	0.224	0.188	0.203	0.210		0.206	7.1*
Isopropylbenzene *	2.847	2.950	2.878	3.001		2.919	2.4*
n-Propylbenzene *	3.291	3.252	3.187	3.033		3.191	3.6*
1,2,3-Trichloropropane *	0.955	0.916	0.941	0.896		0.927	2.8*
4-Chlorotoluene *	2.369	2.354	2.240	2.148		2.278	4.6*
1,2,4-Trimethylbenzene *	2.653	2.624	2.544	2.494		2.579	2.8*
tert-butylbenzene *	2.056	2.025	2.029	1.931		2.010	2.7*
Bromobenzene *	1.515	1.423	1.396	1.320		1.414	5.7*
1,3,5-Trimethylbenzene *	2.646	2.612	2.553	2.484		2.574	2.8*
Dibromochloromethane *	1.016	0.970	0.991	1.029		1.002	2.6*
Acrolein *	0.018	0.017	0.018	0.020		0.018	6.9*
Acrylonitrile *	0.083	0.079	0.079	0.082		0.081	2.3*
1,1,1,2-Tetrachloroethane *	0.879	0.833	0.802	0.816		0.832	4.0*
Acetone *	0.127	0.114	0.096	0.095		0.108	14.2*
Carbon Disulfide *	0.859	0.808	0.808	0.816		0.823	3.0*
2-Butanone *	0.122	0.106	0.105	0.104		0.109	8.1*
4-methyl-2-pentanone *	0.205	0.158	0.183	0.187		0.183	10.5*
2-Hexanone *	0.353	0.309	0.338	0.341		0.335	5.5*
Vinyl Acetate *	0.199	0.192	0.186	0.196		0.193	2.8*
Methyl Iodide *	0.551	0.530	0.490	0.495		0.516	5.6*
TOTAL XYLENE *	1.035	1.030	1.003	1.077		1.036	3.0*
trans-1,4-Dichloro-2-Butene *	0.213	0.197	0.224	0.213		0.212	5.3*
Dichlorodifluoromethane *	0.939	0.994	0.856	0.766		0.889	11.2*
2,2-Dichloropropane *	0.413	0.380	0.376	0.388		0.389	4.3*
1,1-Dichloropropene *	0.382	0.361	0.349	0.358		0.362	3.8*
1,3-Dichloropropane *	0.404	0.367	0.379	0.404		0.388	4.7*
n-Butylbenzene *	2.342	2.388	2.399	2.388		2.379	1.1*
p-Isopropyltoluene *	2.674	2.724	2.677	2.657		2.683	1.1*
2-Chloroethyl vinyl ether *	0.144	0.128	0.130	0.138		0.135	5.7*
1,2,4-Trichlorobenzene *	0.994	1.057	1.035	1.108		1.048	4.5*
Hexachlorobutadiene *	1.003	0.936	0.884	0.889		0.928	6.0*
1,2,3-Trichlorobenzene *	0.999	0.992	0.956	1.016		0.991	2.6*
Naphthalene *	1.530	1.543	1.652	1.730		1.614	5.9*
1,1,2Trichlotrifluoroethane *	0.329	0.277	0.263	0.256		0.281	11.7*
Total 1,2-Dichloroethene *	0.405	0.391	0.372	0.377		0.386	3.8*
MTBE *	0.782	0.721	0.707	0.696		0.726	5.3*

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

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: MSV3 Calibration Date(s): 05/01/03 05/30/03

Heated Purge: (Y/N) N Calibration Time(s): 1512 1128

GC Column: DB-624-30M ID: 0.53 (mm)

LAB FILE ID: RRF5 =S9357 RRF20 =S9355
RRF50 =S9358 RRF100=S9359

COMPOUND	RRF5	RRF20	RRF50	RRF100		$\overline{RRF}$	% RSD
Hexane *	0.348	0.334	0.326	0.348		0.339	3.3*
Methyl Acetate *	0.104	0.085	0.085	0.092		0.092	9.9*
Cyclohexane *	0.389	0.375	0.380	0.393		0.384	2.1*
Methyl Cyclohexane *	0.449	0.420	0.444	0.455		0.442	3.5*
1,3 Dichloropropene *	0.414	0.356	0.392	0.420		0.396	7.3*
Toluene-d8 *	2.402	2.187	2.136	2.124		2.212	5.8*
Bromofluorobenzene *	0.870	0.875	0.874	0.921		0.885	2.7*
1,2-Dichloroethane-d4 *	0.198	0.196	0.195	0.196		0.196	0.7*
Dibromofluoromethane *	0.325	0.318	0.320	0.324		0.322	1.0*

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

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Lab File ID (Standard): S9359 Date Analyzed: 05/30/03

Instrument ID: MSV3 Time Analyzed: 1128

GC Column: DB-624-30M ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2 AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	789109	7.52	1975862	5.05	878569	10.15
	UPPER LIMIT	1578218	8.02	3951724	5.55	1757138	10.65
	LOWER LIMIT	394554	7.02	987931	4.55	439284	9.65
	EPA SAMPLE NO.						
01	V3LCS01	773384	7.53	1974145	5.06	814103	10.16
02	V3BLK01	739386	7.52	1981654	5.05	699511	10.15
03	086-CEF43-33	646458	7.52	1781389	5.05	616885	10.15
04	086-CEF43-33	652561	7.52	1694044	5.06	699766	10.15
05	086-CEF43-33	696549	7.53	1855795	5.06	754260	10.16
06	086-EQB-Q2-0	744648	7.52	1983386	5.06	719542	10.16
07	086-TB-Q2-03	697340	7.53	1837973	5.06	673641	10.16
08	086-CEF43-2N	693906	7.53	1781925	5.06	682218	10.16
09	086-CEF43-6N	716431	7.53	1820124	5.06	705531	10.16
10	086-CEF43-7N	703288	7.53	1884854	5.06	679964	10.16
11	086-CEF43-38	743717	7.53	1965096	5.06	748115	10.16
12	086-DUP-Q2-0	725477	7.53	1897298	5.06	717021	10.15
13	086-CEF43-9N	791943	7.52	2175097	5.05	803296	10.15
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (CBZ) = CHLOROBENZENE-d5
IS2 = FLUOROBENZENE
IS3 (DCB) = 1,4-DICHLOROBENZENE-D4

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

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

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9381.d
Lab Smp Id: 20305291101 Client Smp ID: 086-CEF43-2N-Q2-03-
Inj Date : 30-MAY-2003 19:15
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291101*086-CEF43-2N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.406	3.396	(0.673)	24359	1.16753	1.17	5140(a)
$ 27 Dibromofluoromethane	111	4.585	4.580	(0.906)	634513	33.2093	33.2	1155
29 Cyclohexane	56	4.682	4.683	(0.925)	23534	1.03184	1.03	3362(a)
$ 32 1,2-Dichloroethane-d4	67	4.831	4.820	(0.955)	364746	31.2602	31.3	8011
* 35 FLUOROBENZENE	96	5.060	5.055	(1.000)	1781925	30.0000		9261
$ 44 Toluene-d8	98	6.233	6.222	(0.828)	1449974	28.3334	28.3	8792
* 54 CHLOROBENZENE-d5	82	7.526	7.521	(1.000)	693906	30.0000		8826
57 Ethylbenzene +	106	7.640	7.630	(1.015)	26150	1.29877	1.30	(a)
58 p,m-Xylene	106	7.749	7.744	(1.030)	43042	1.77887	1.78	(a)
59 o-Xylene	106	8.172	8.168	(1.086)	47069	2.00113	2.00	(a)
M 61 TOTAL XYLENE	106				90111	3.77999	3.78	0(a)
$ 64 Bromofluorobenzene	174	8.750	8.740	(1.163)	607038	29.6534	29.7	8712
74 1,3,5-Trimethylbenzene	105	9.689	9.684	(0.954)	84519	1.44401	1.44	8666(a)
* 78 1,4-DICHLOROBENZENE-D4	152	10.158	10.153	(1.000)	682218	30.0000		9582

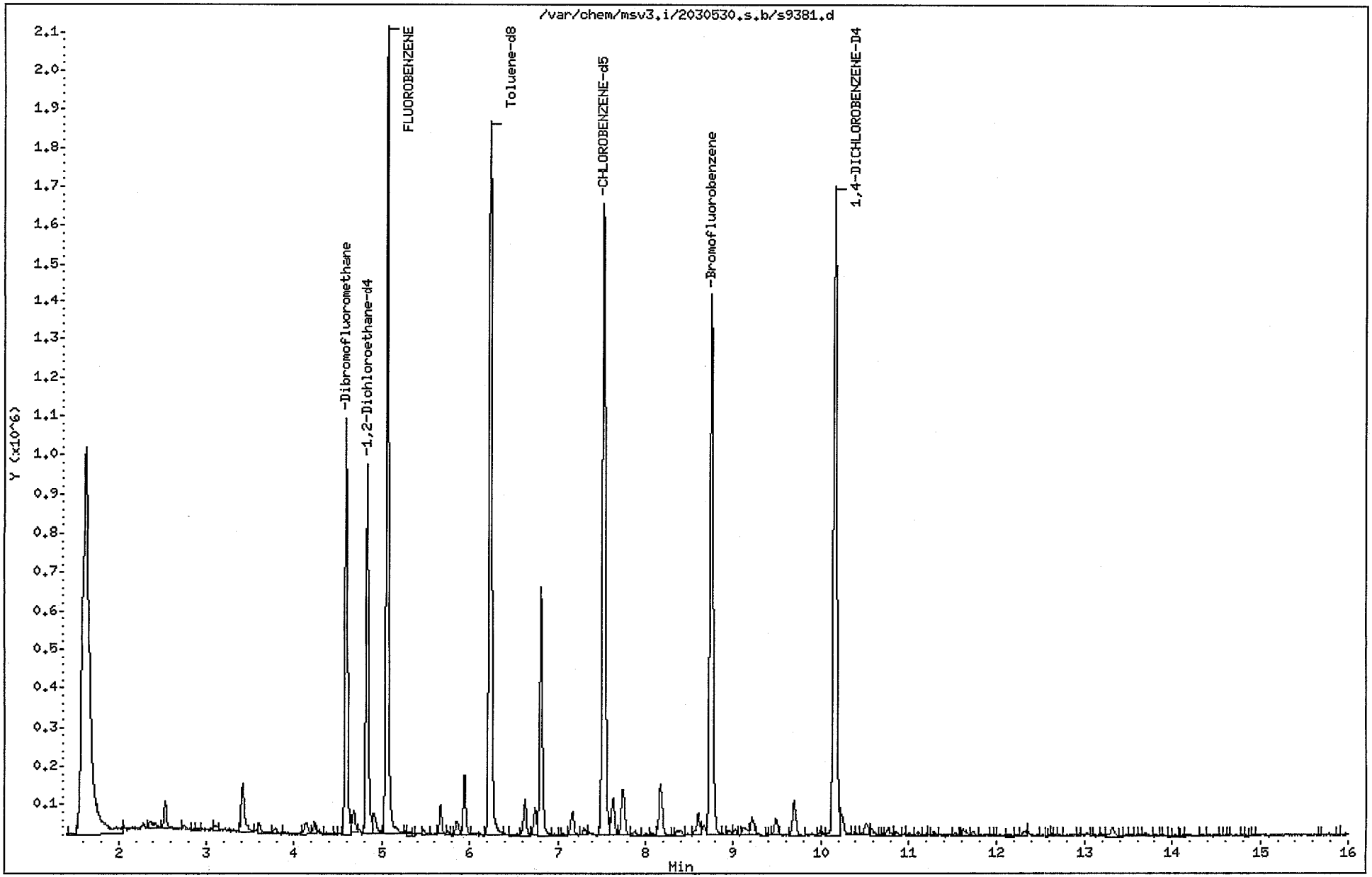
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

000030

Data File: /var/chem/msv3.i/2030530.s.b/s9381.d
Date : 30-MAY-2003 19:15
Client ID: 086-CEF43-2N-Q2-03-
Sample Info: 20305291101*086-CEF43-2N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

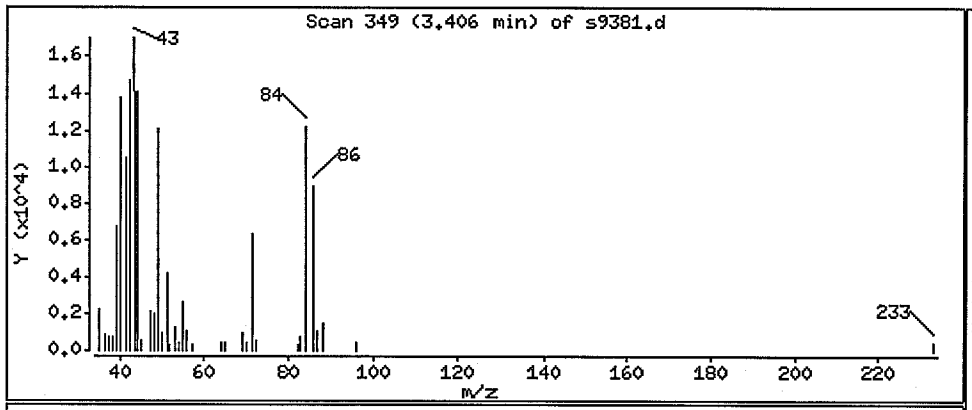
Operator: RJO

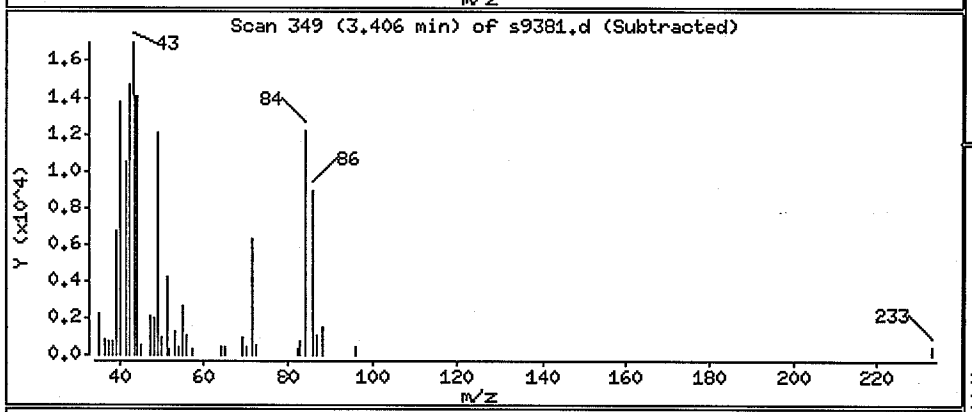
Column phase: DB-624-30M

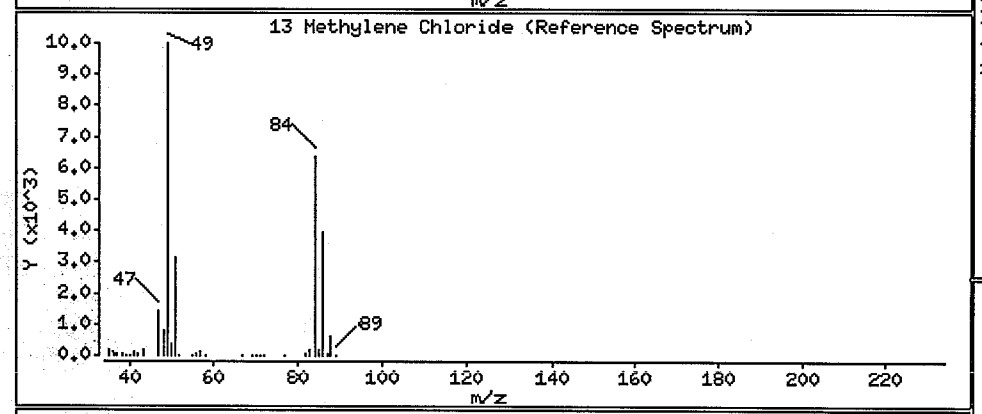
Column diameter: 0.53

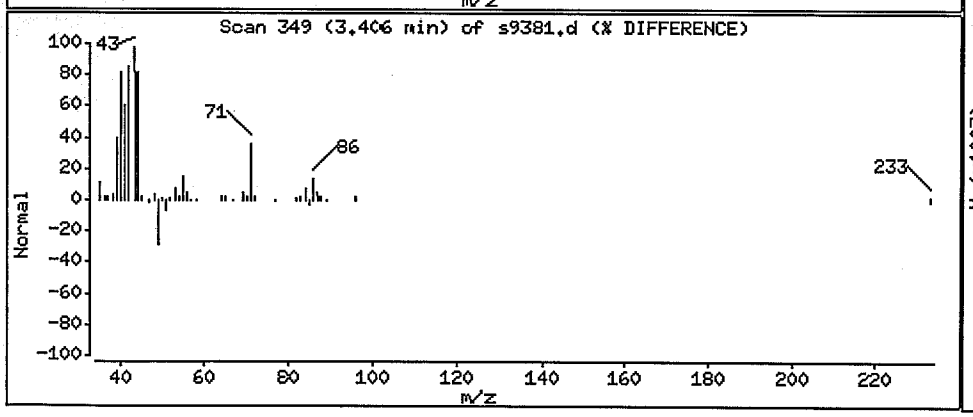
13 Methylene Chloride

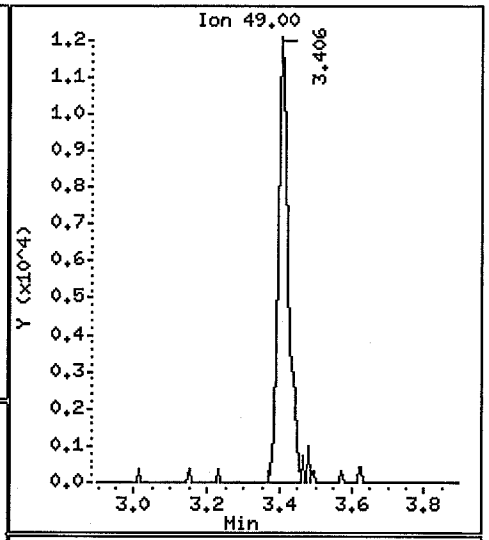
Concentration: 1.17 ug/L

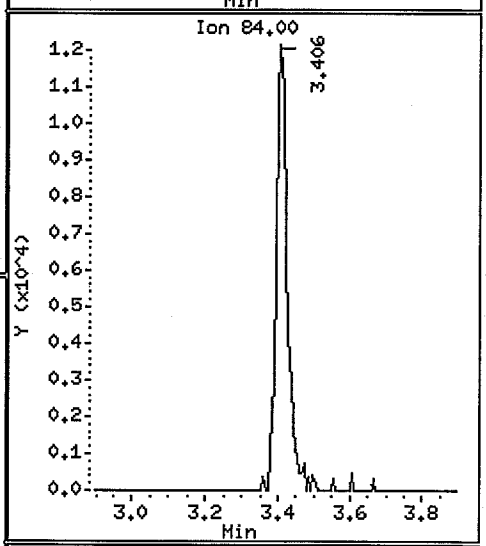


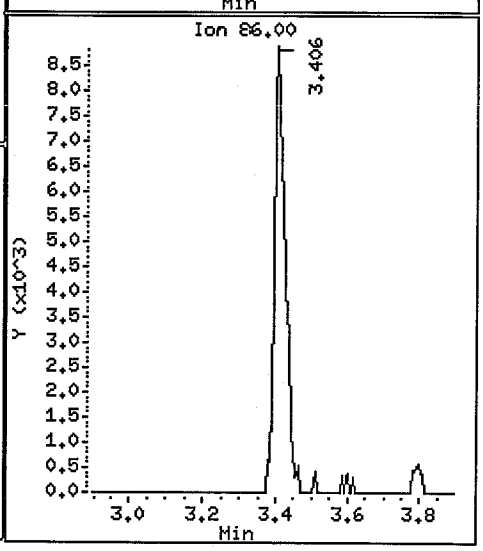












Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

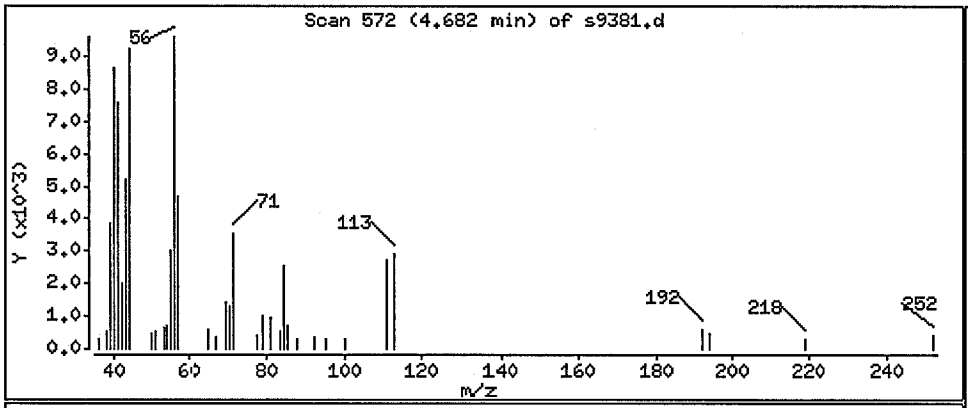
Operator: RJO

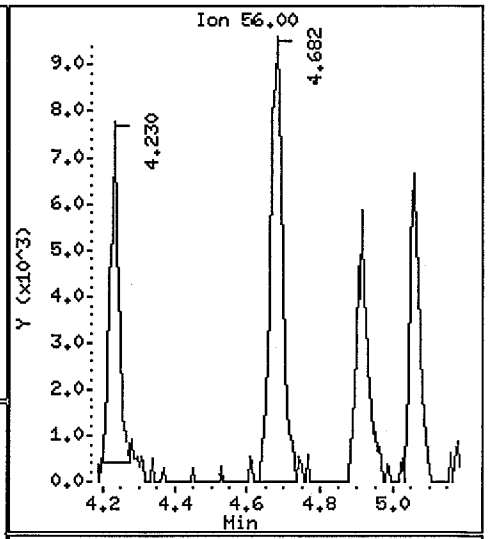
Column phase: DB-624-30M

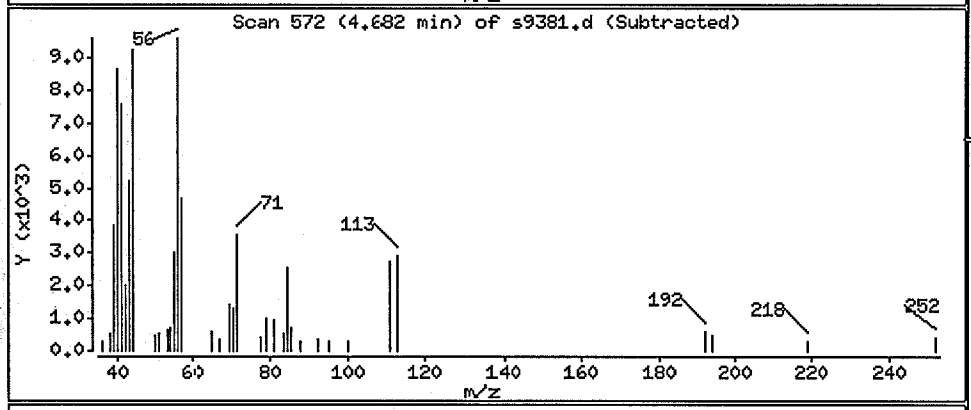
Column diameter: 0.53

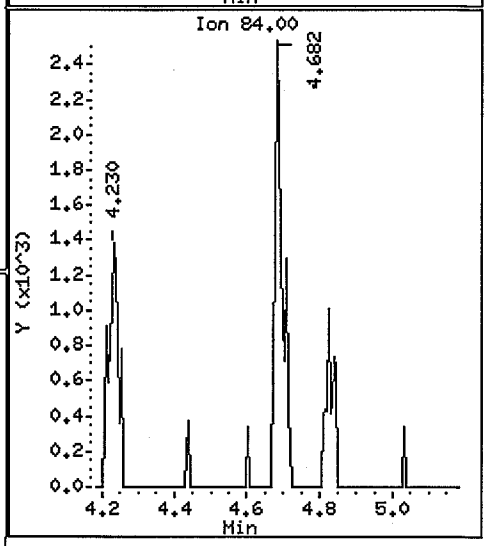
29 Cyclohexane

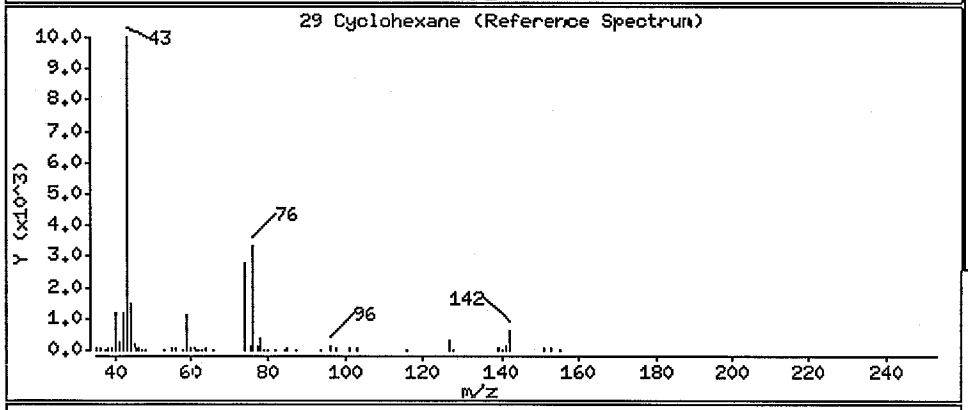
Concentration: 1.03 ug/L

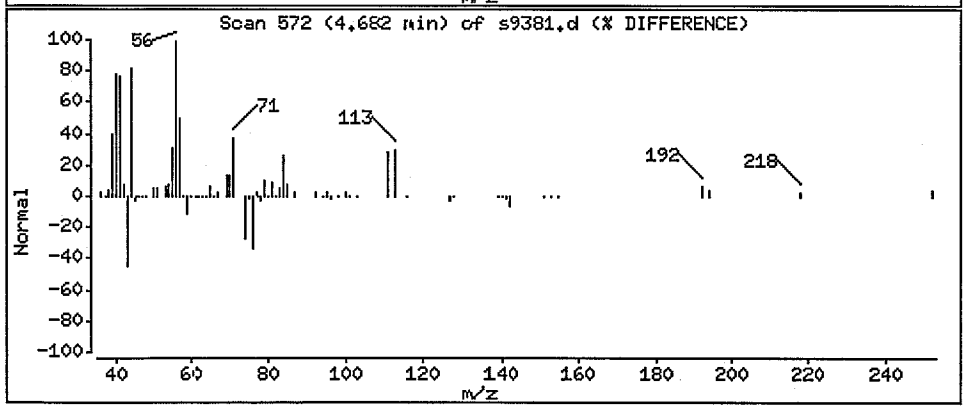












Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

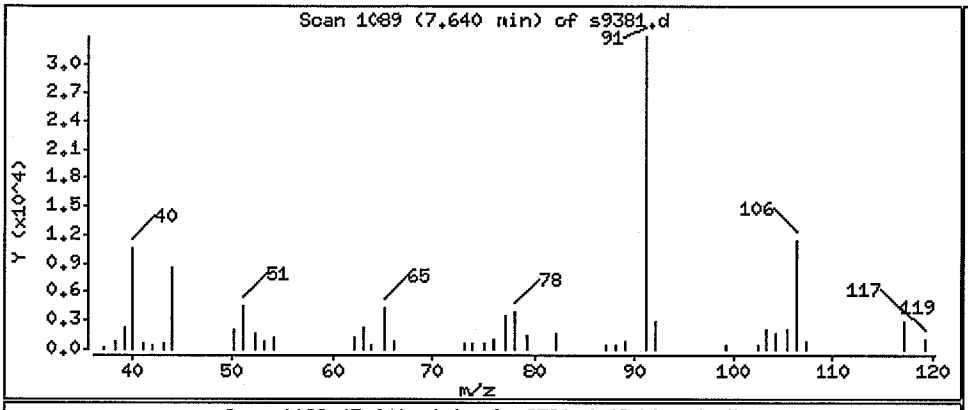
Operator: RJO

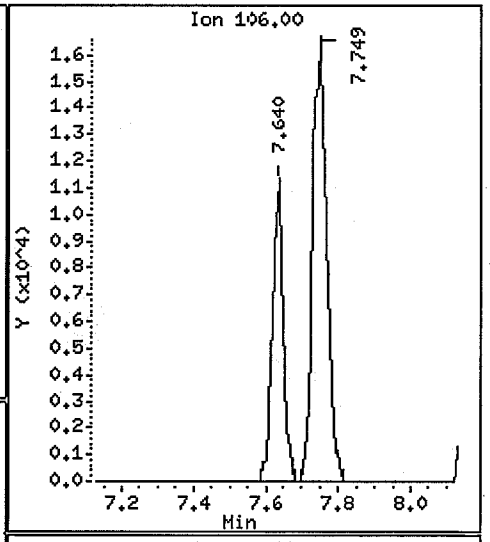
Column phase: DB-624-30M

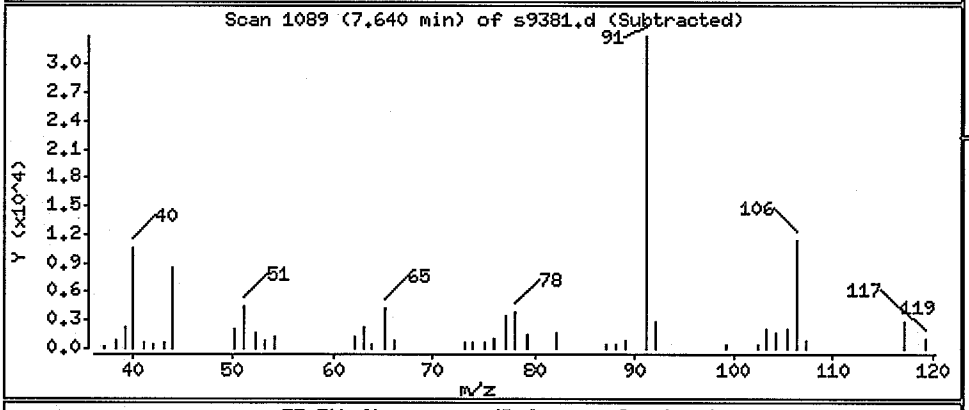
Column diameter: 0.53

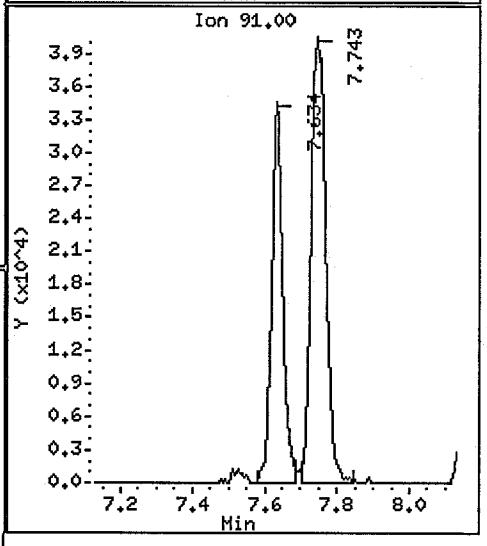
57 Ethylbenzene +

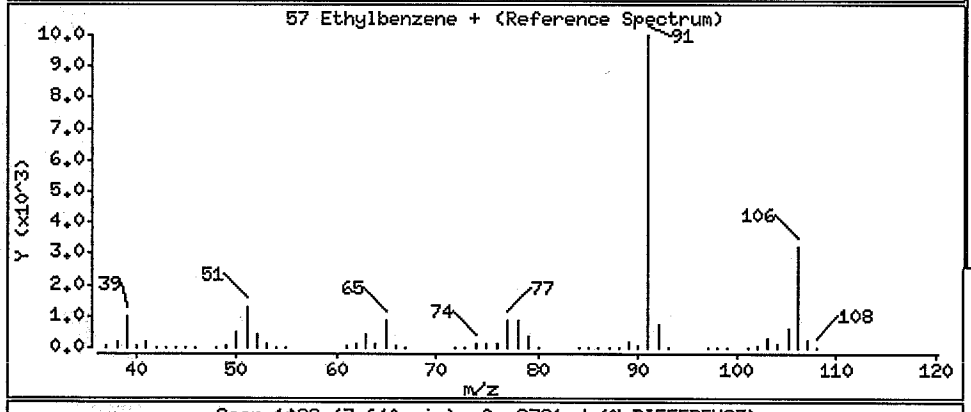
Concentration: 1.30 ug/L

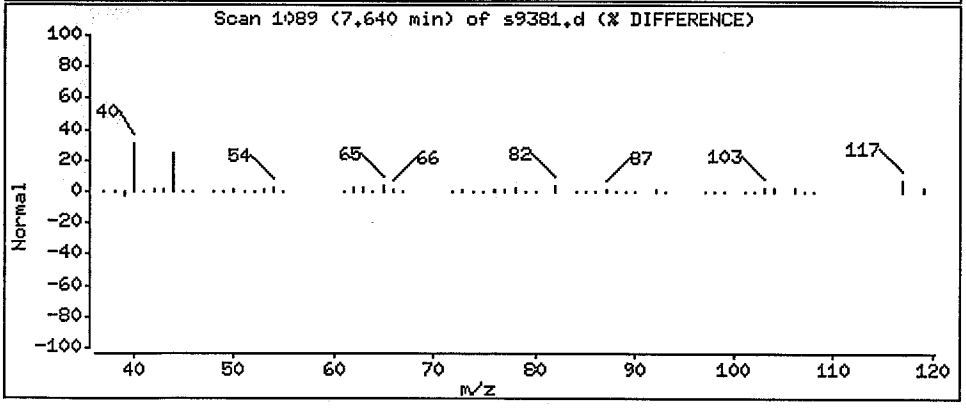












Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

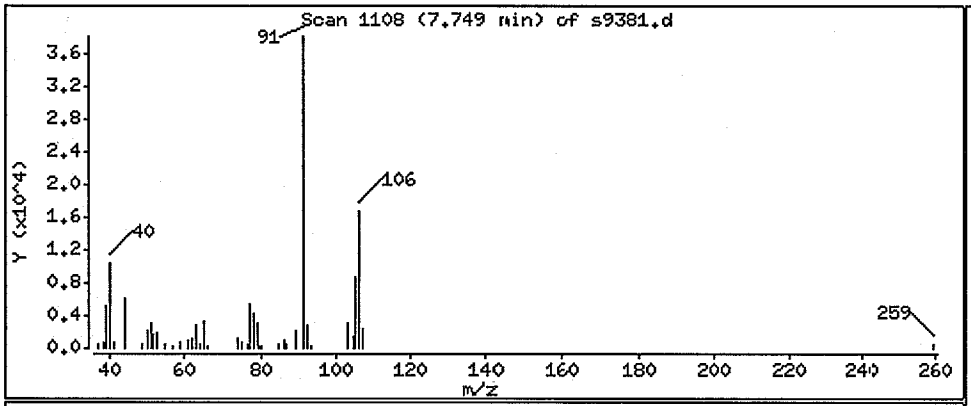
Operator: RJO

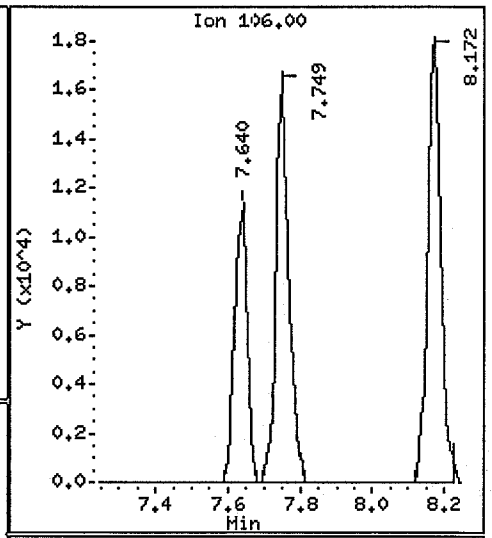
Column phase: DB-624-30M

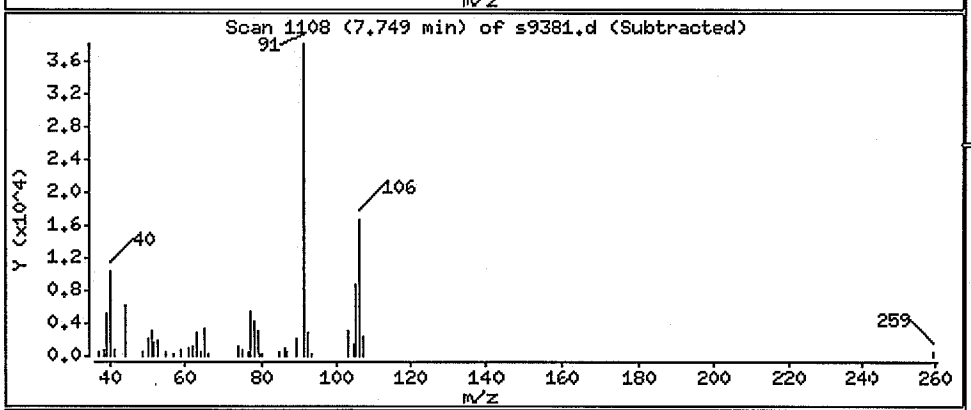
Column diameter: 0.53

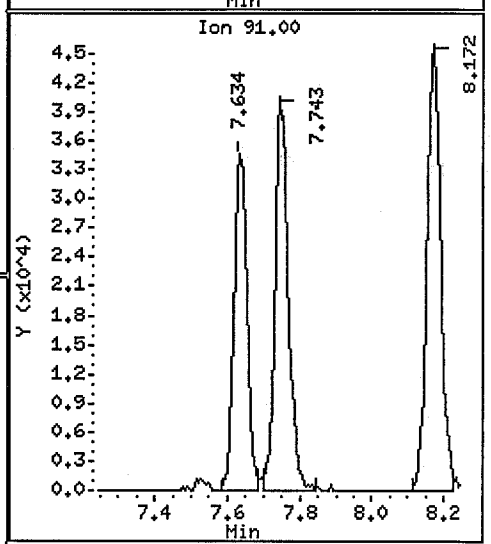
58 p,m-Xylene

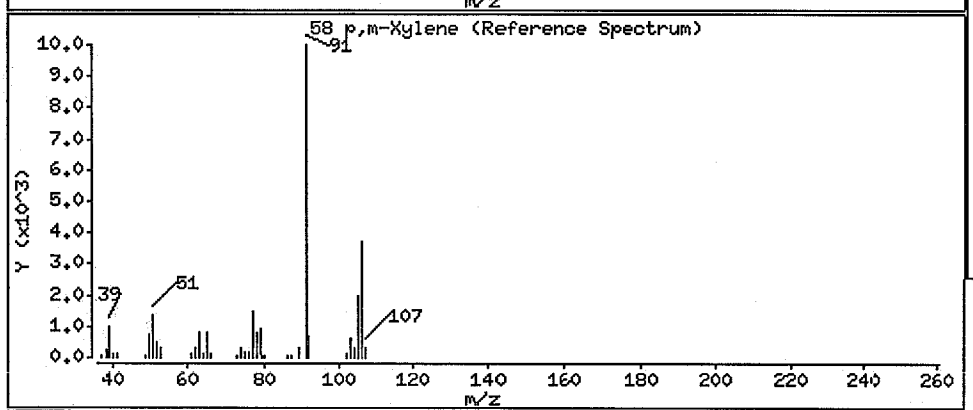
Concentration: 1.78 ug/L

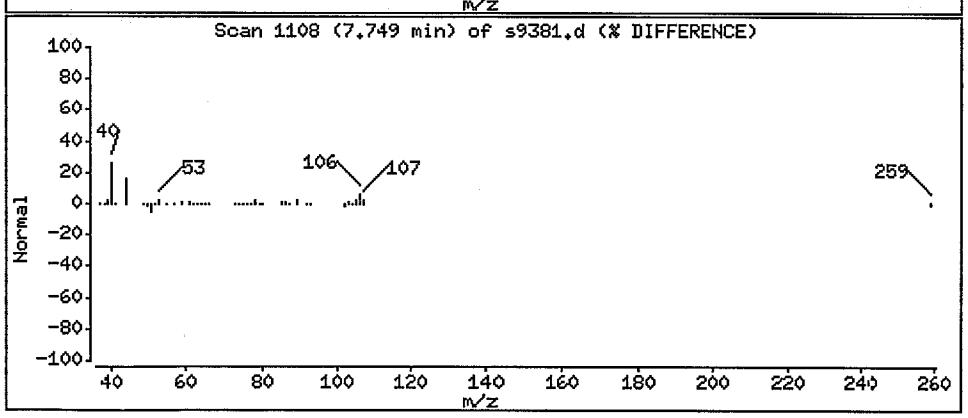












Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

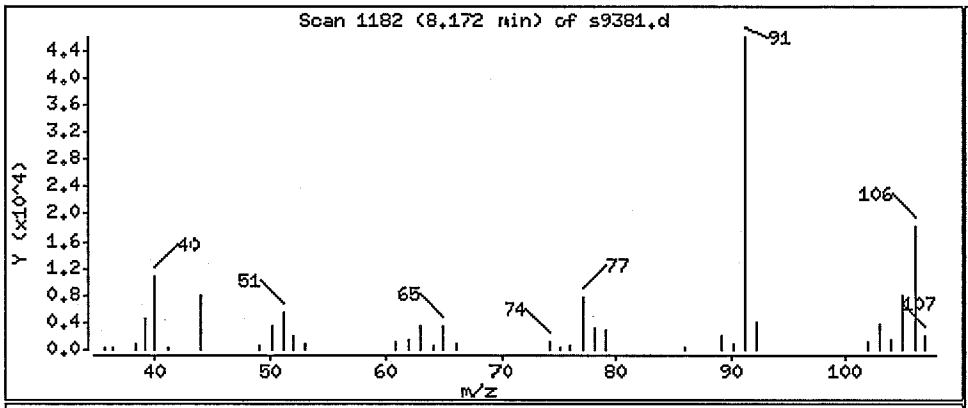
Operator: RJO

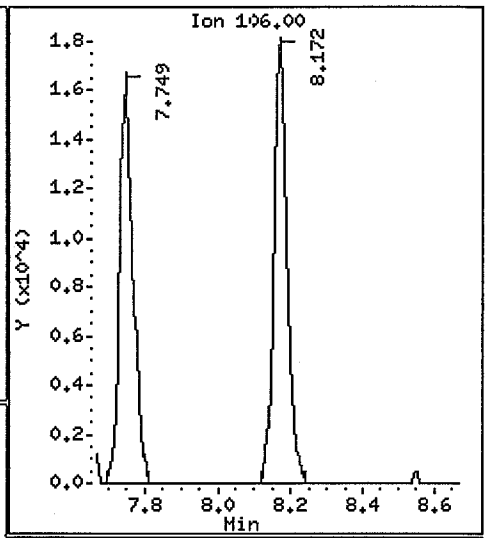
Column phase: DB-624-30M

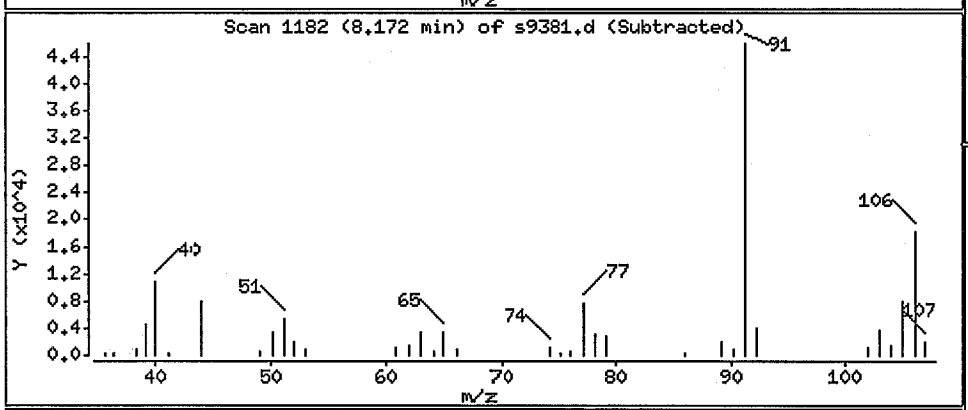
Column diameter: 0.53

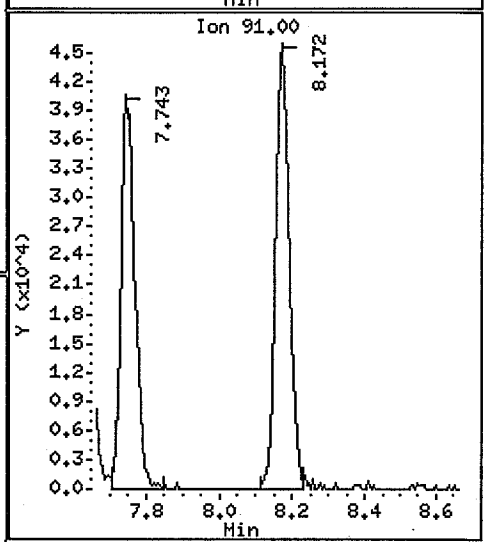
59 o-Xylene

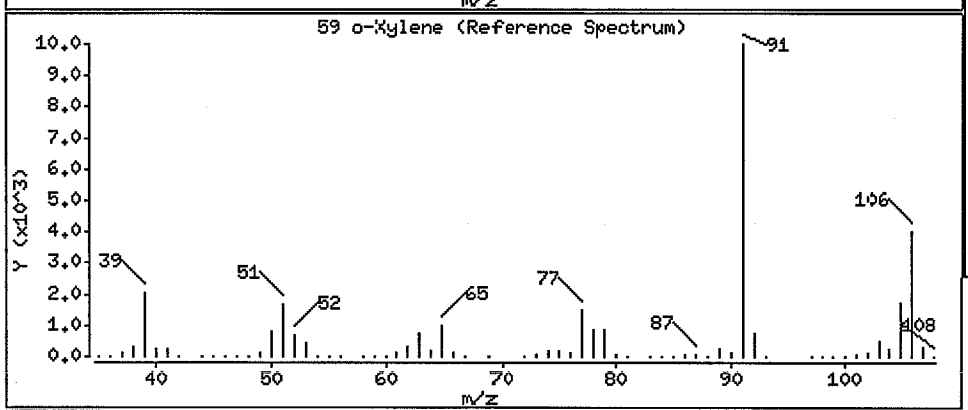
Concentration: 2.00 ug/L

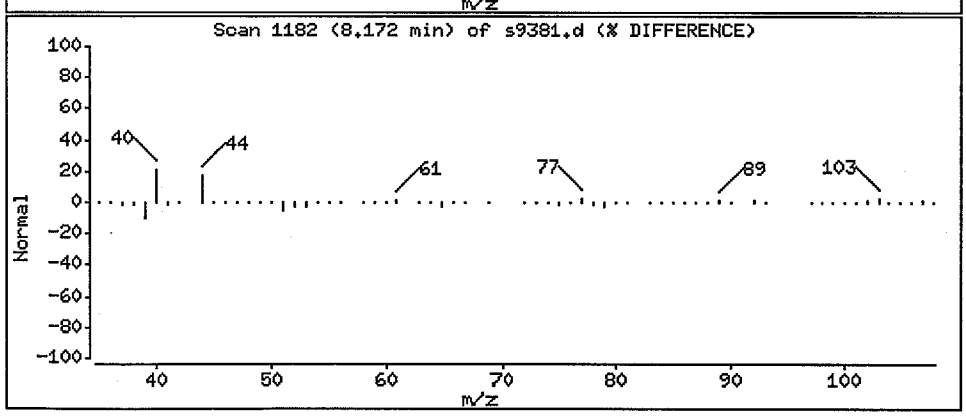












Data File: /var/chem/msv3.i/2030530.s.b/s9381.d

Date : 30-MAY-2003 19:15

Client ID: 086-CEF43-2N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291101*086-CEF43-2N-Q2-03-61

Purge Volume: 5.0

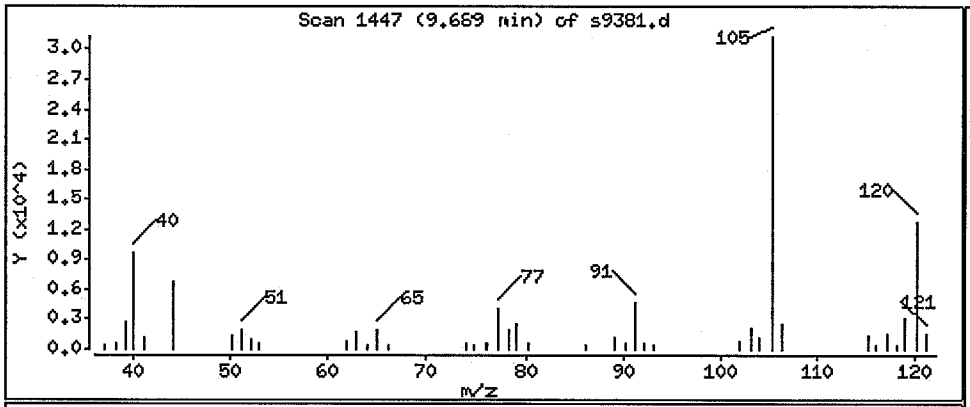
Operator: RJO

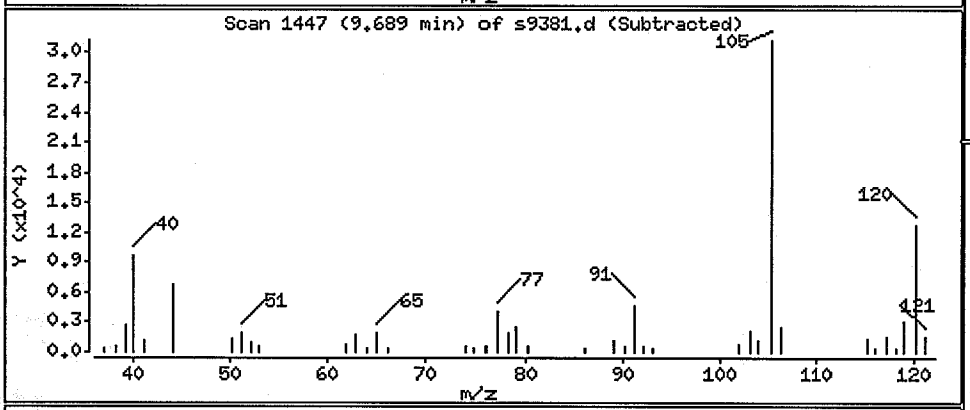
Column phase: DB-624-30M

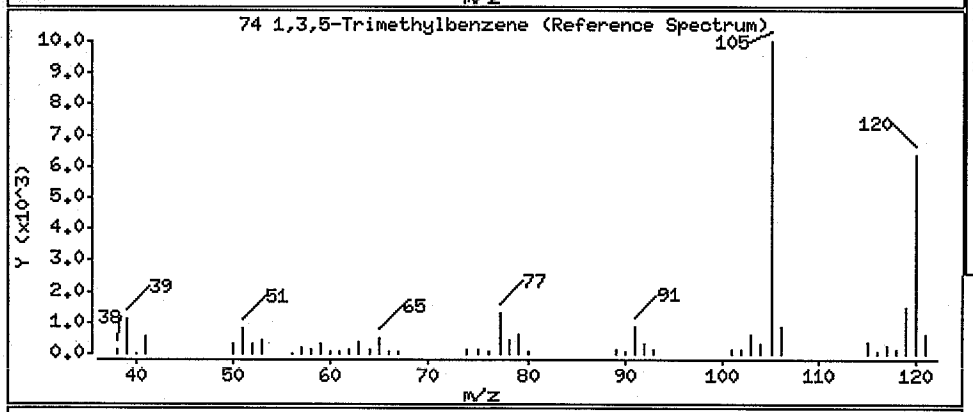
Column diameter: 0.53

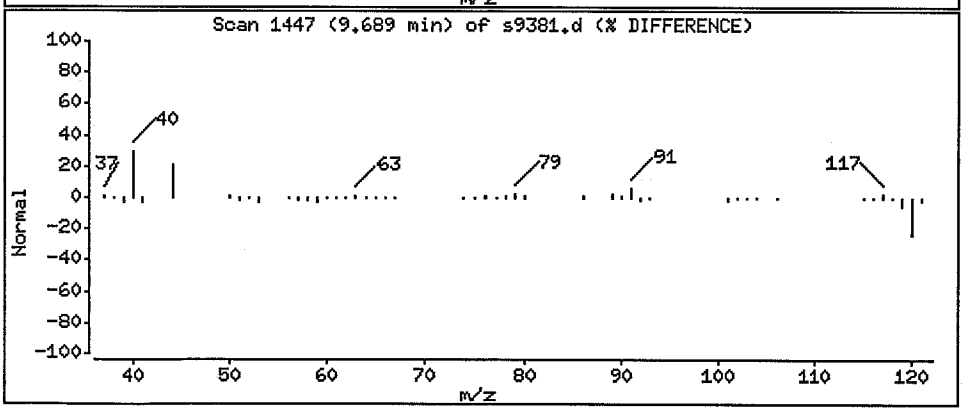
74 1,3,5-Trimethylbenzene

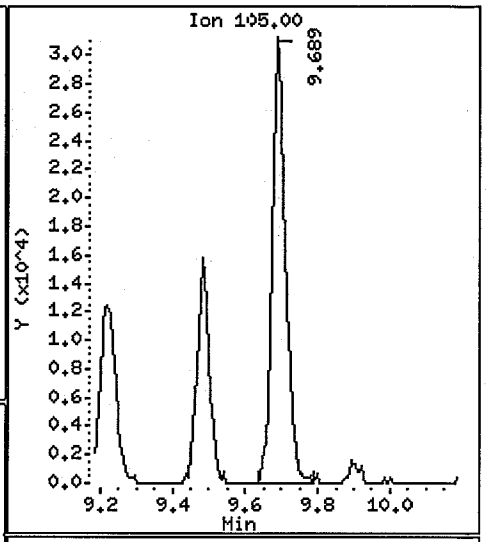
Concentration: 1.44 ug/L

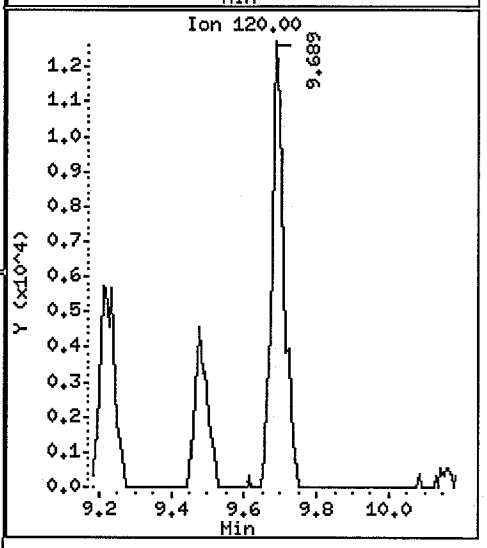












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9382.d
Lab Smp Id: 20305291102 Client Smp ID: 086-CEF43-6N-Q2-03-
Inj Date : 30-MAY-2003 19:36
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291102*086-CEF43-6N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.409	3.396	(0.673)	29700	1.39364	1.39	5339 (a)
$ 27 Dibromofluoromethane	111	4.588	4.580	(0.906)	652002	33.4085	33.4	1210
29 Cyclohexane	56	4.691	4.683	(0.927)	53000	2.27500	2.27	3467 (aH)
$ 32 1,2-Dichloroethane-d4	67	4.828	4.820	(0.954)	378527	31.7605	31.8	8097
* 35 FLUOROBENZENE	96	5.063	5.055	(1.000)	1820124	30.0000		9268
$ 44 Toluene-d8	98	6.230	6.222	(0.827)	1509206	28.5636	28.6	8829
* 54 CHLOROBENZENE-d5	82	7.529	7.521	(1.000)	716431	30.0000		8786
57 Ethylbenzene +	106	7.638	7.630	(1.014)	28245	1.35872	1.36	(a)
58 p,m-Xylene	106	7.752	7.744	(1.030)	77209	3.09062	3.09	(a)
59 o-Xylene	106	8.176	8.168	(1.086)	57338	2.36107	2.36	(a)
M 61 TOTAL XYLENE	106				134547	5.45169	5.45	0
63 Isopropylbenzene	105	8.559	8.551	(1.137)	179081	2.56880	2.57	8796 (a)
$ 64 Bromofluorobenzene	174	8.754	8.740	(1.163)	617749	29.2278	29.2	8816
71 1,2,4-Trimethylbenzene	105	9.223	9.215	(0.908)	65517	1.08026	1.08	(a)
74 1,3,5-Trimethylbenzene	105	9.698	9.684	(0.954)	219953	3.63374	3.63	8544 (a)
* 78 1,4-DICHLOROBENZENE-D4	152	10.161	10.153	(1.000)	705531	30.0000		9577

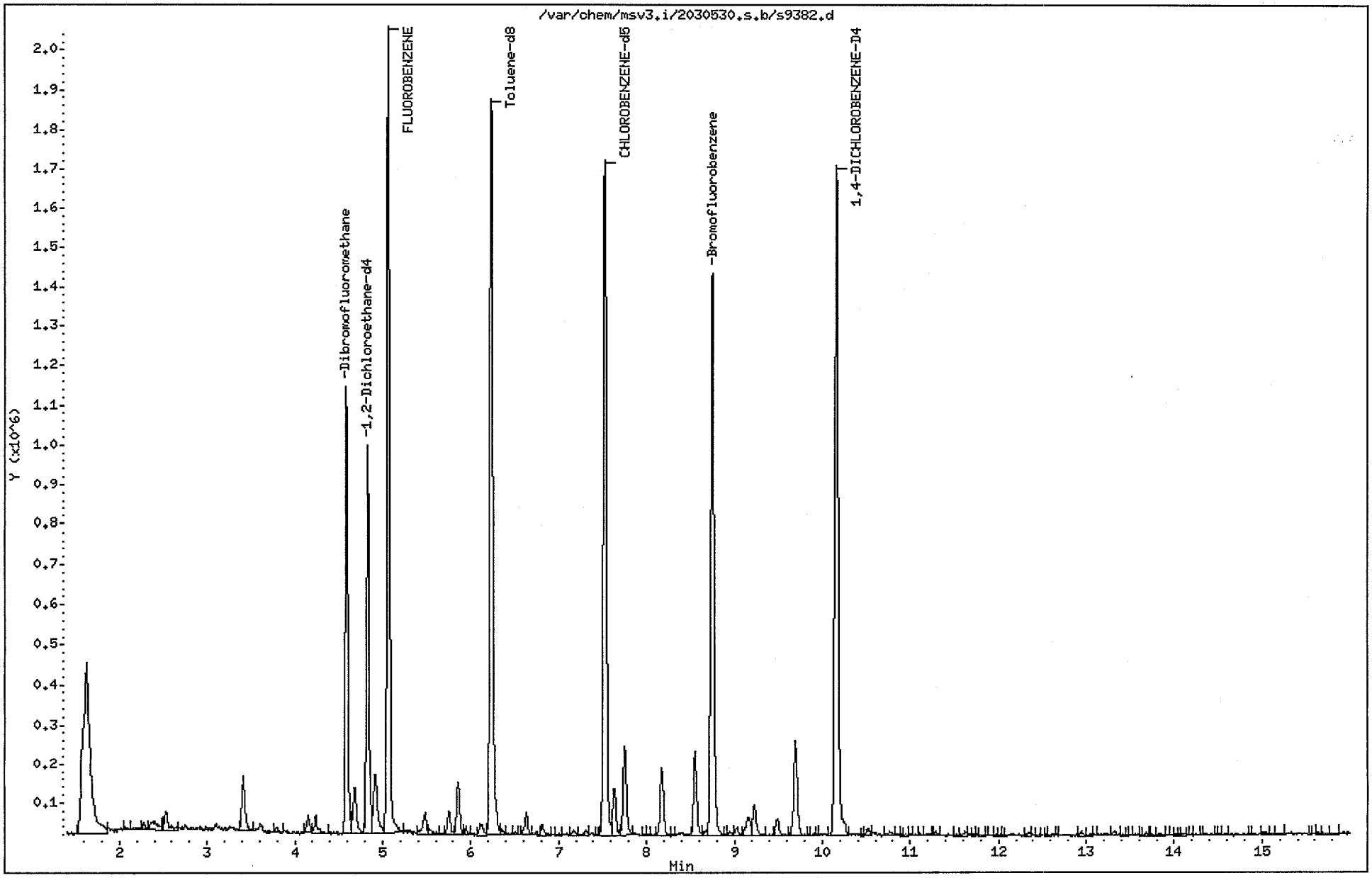
QC Flag Legend

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

Data File: /var/chem/msv3.i/2030530.s.b/s9382.d
Date : 30-MAY-2003 19:36
Client ID: 086-CEF43-6N-Q2-03-
Sample Info: 20305291102*086-CEF43-6N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53

000039



Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

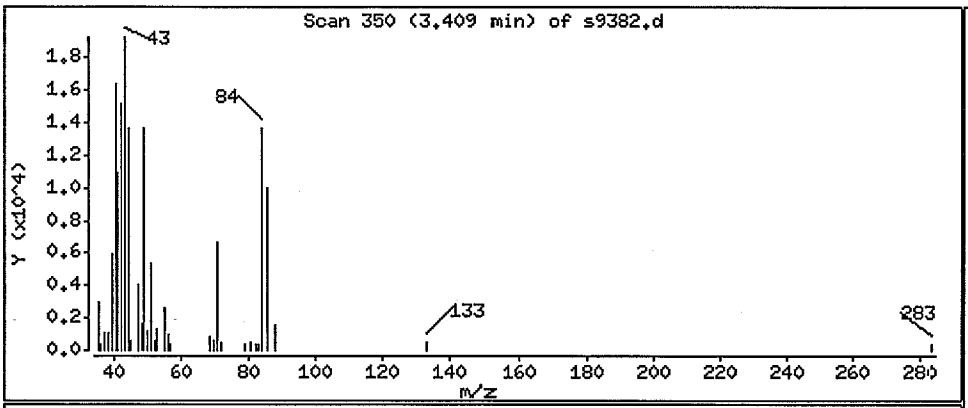
Operator: RJO

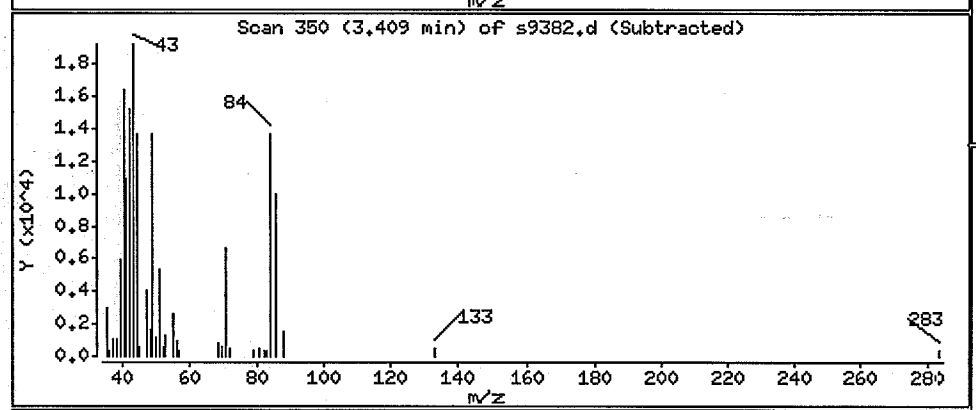
Column phase: DB-624-30M

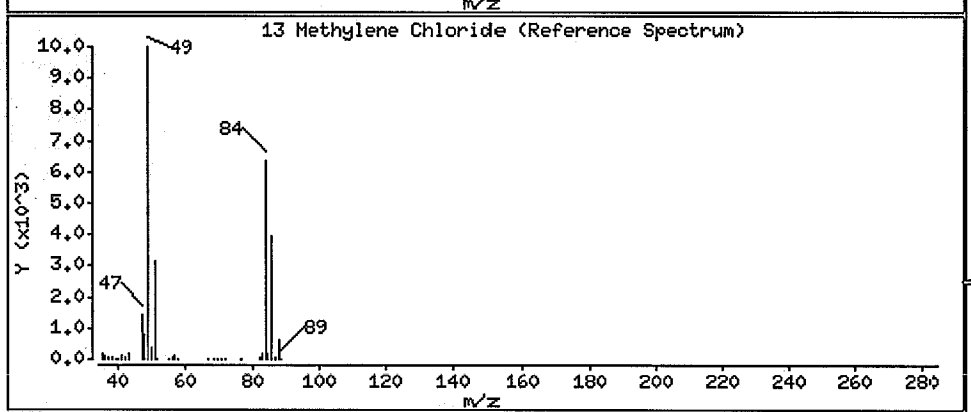
Column diameter: 0.53

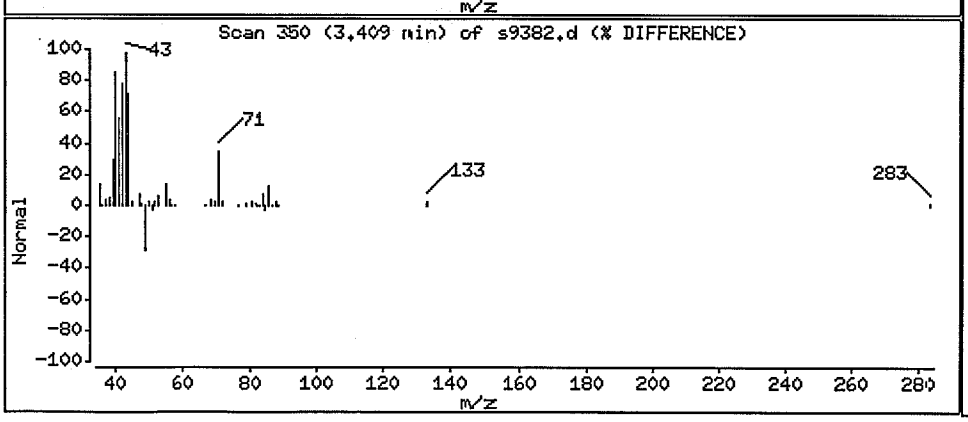
13 Methylene Chloride

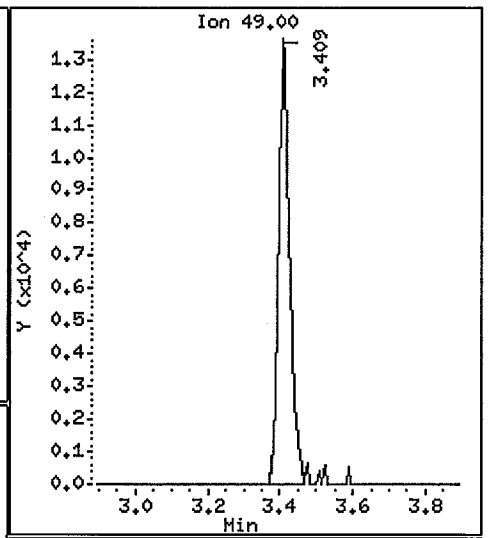
Concentration: 1.39 ug/L

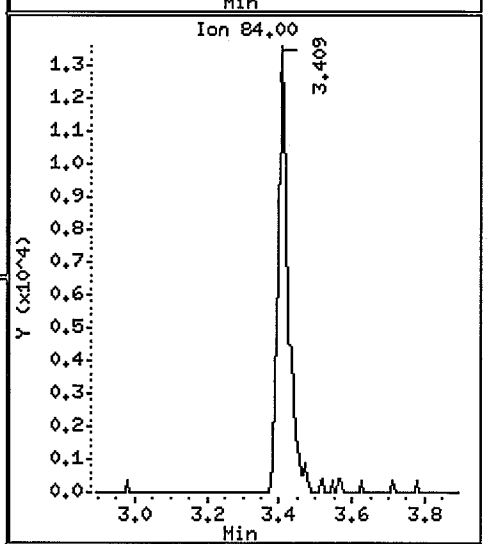


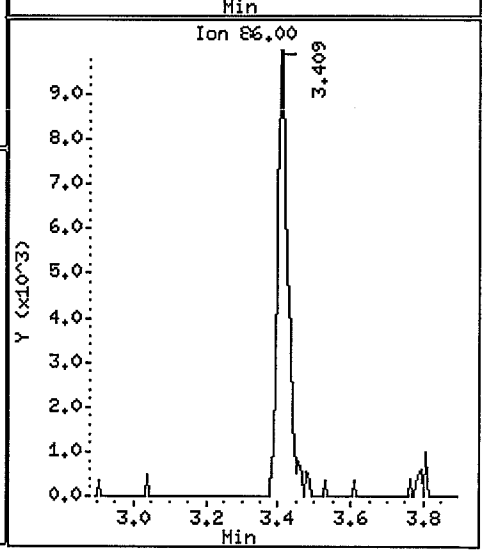












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

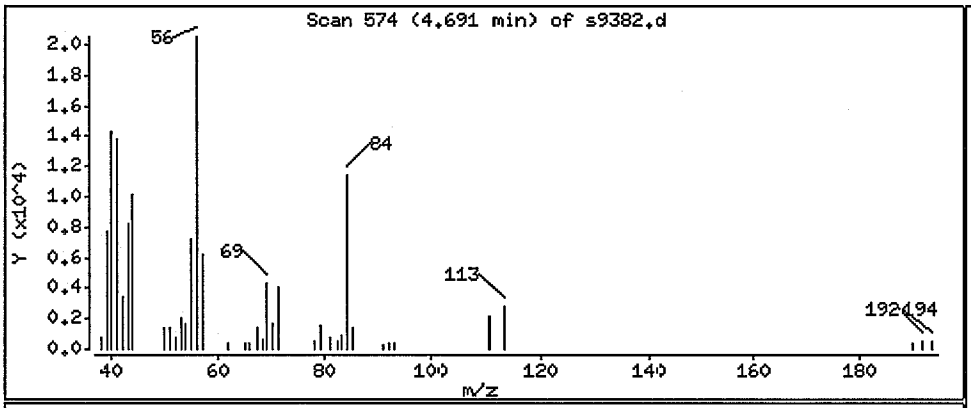
Operator: RJO

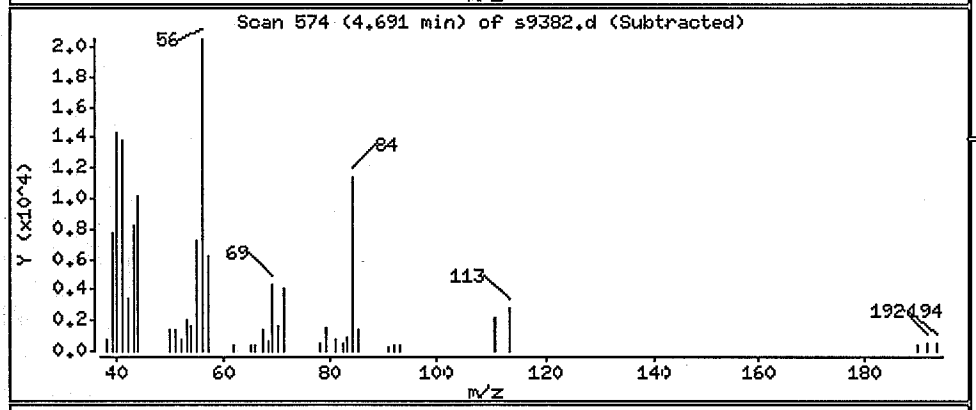
Column phase: DB-624-30M

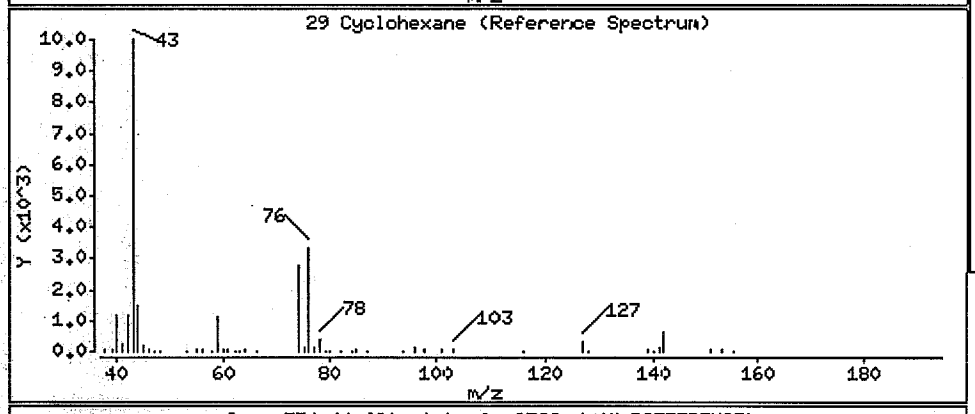
Column diameter: 0.53

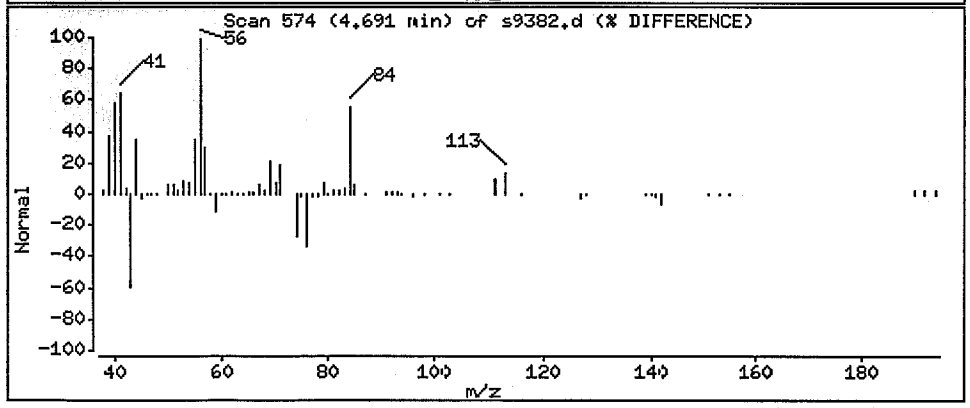
29 Cyclohexane

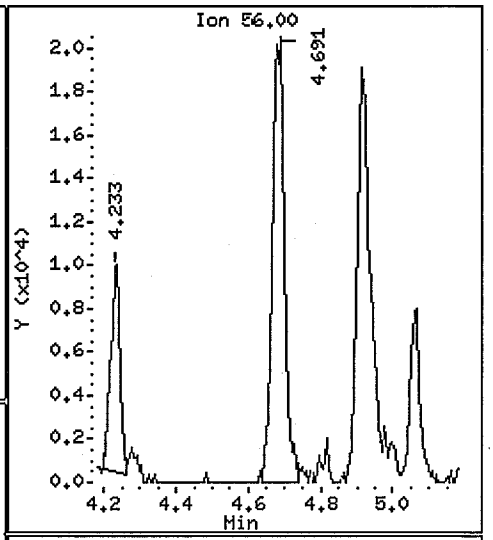
Concentration: 2.27 ug/L

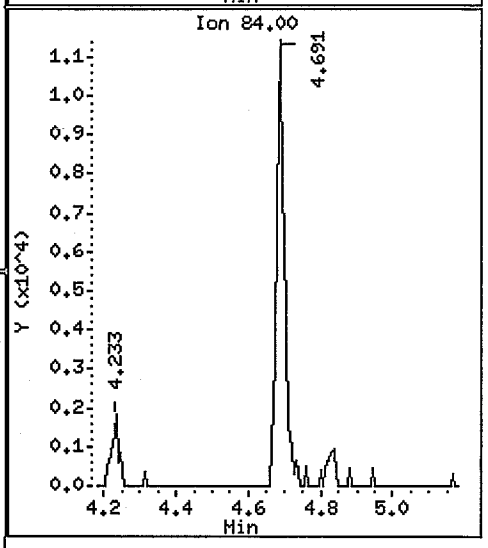












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

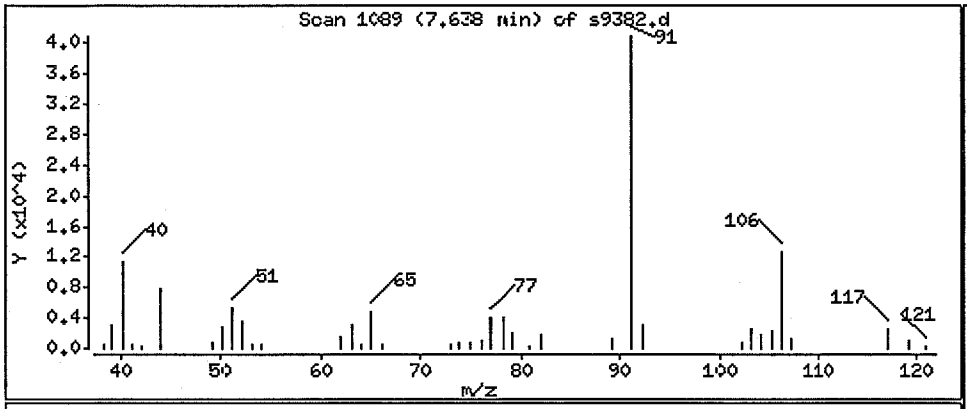
Operator: RJO

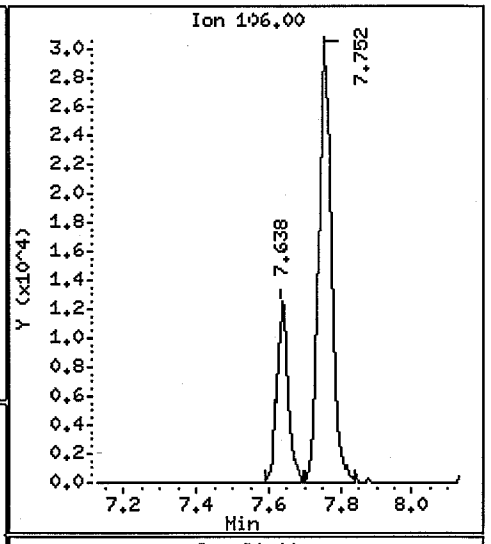
Column phase: DB-624-30M

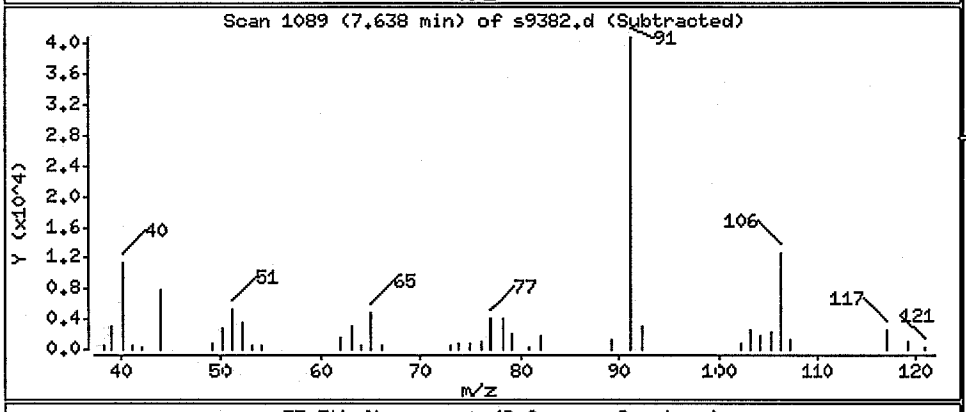
Column diameter: 0.53

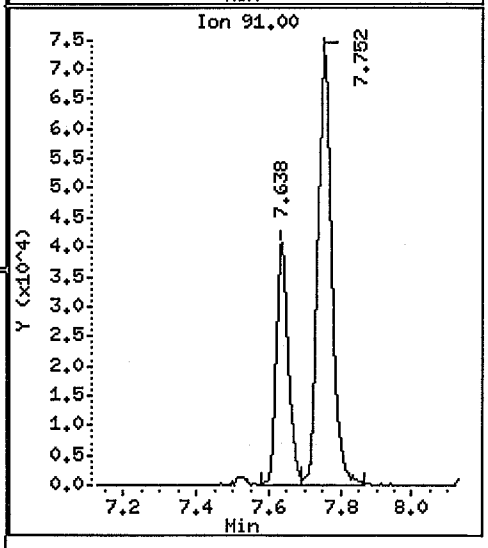
57 Ethylbenzene +

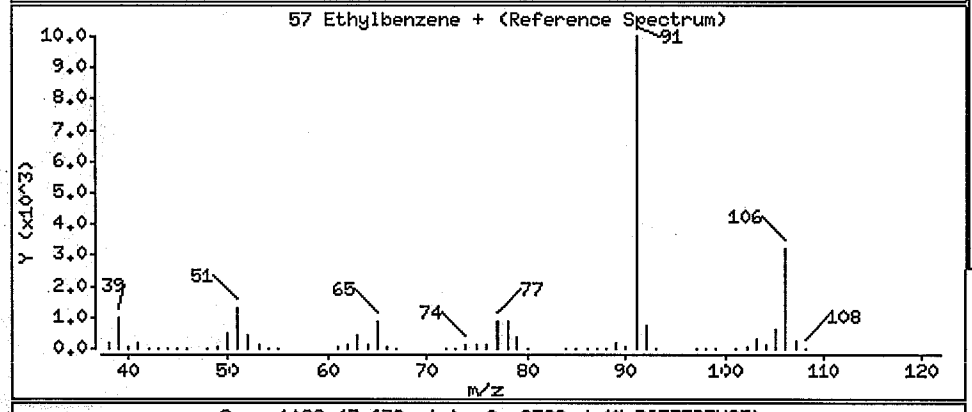
Concentration: 1.36 ug/L

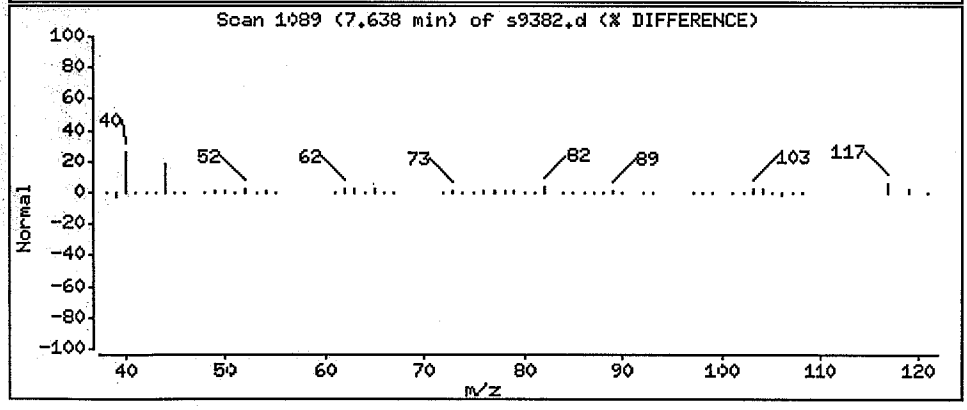












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

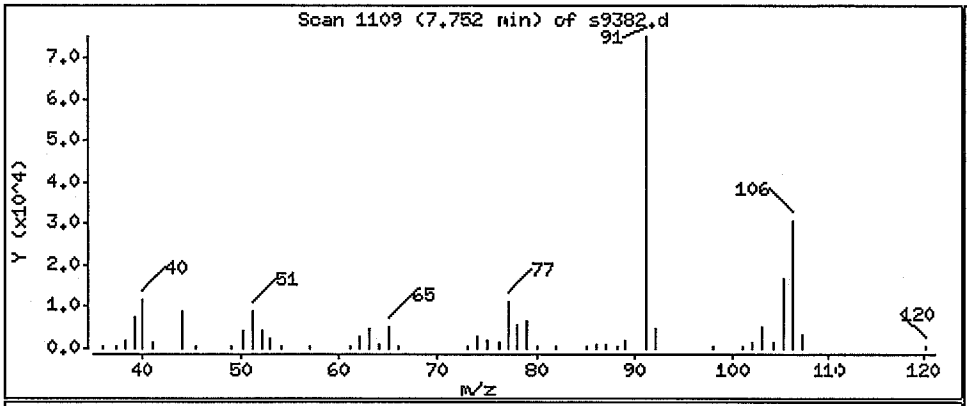
Operator: RJO

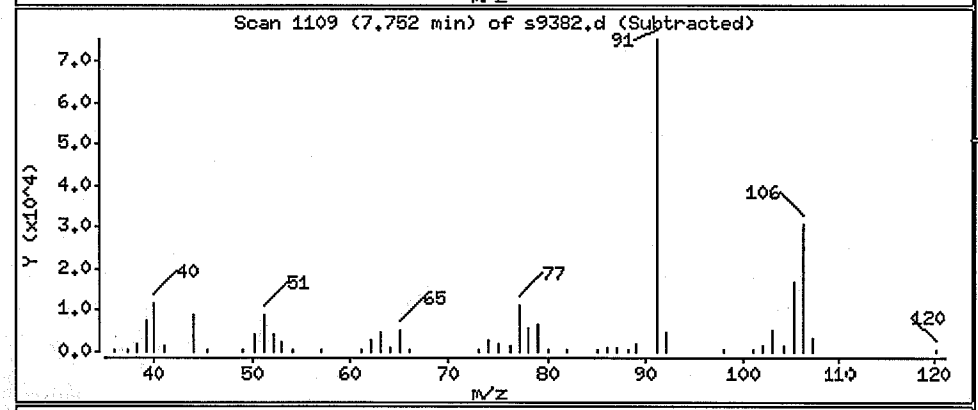
Column phase: DB-624-30M

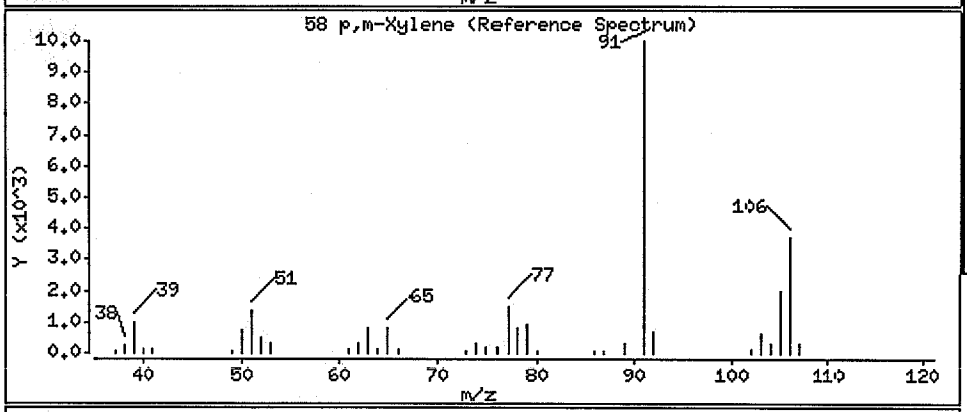
Column diameter: 0.53

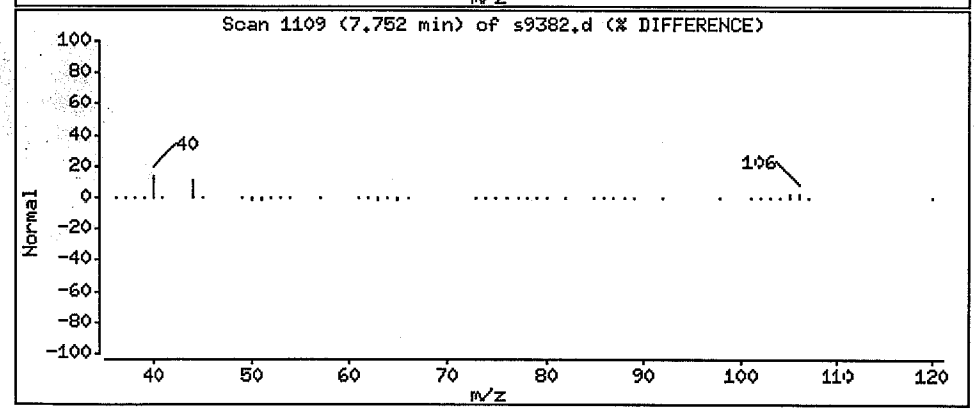
58 p,m-Xylene

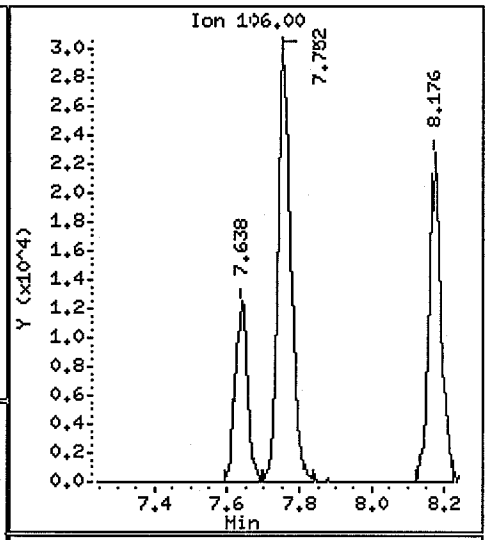
Concentration: 3.09 ug/L

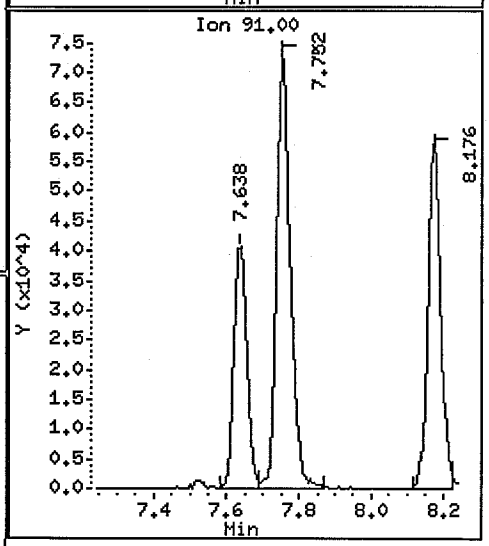












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

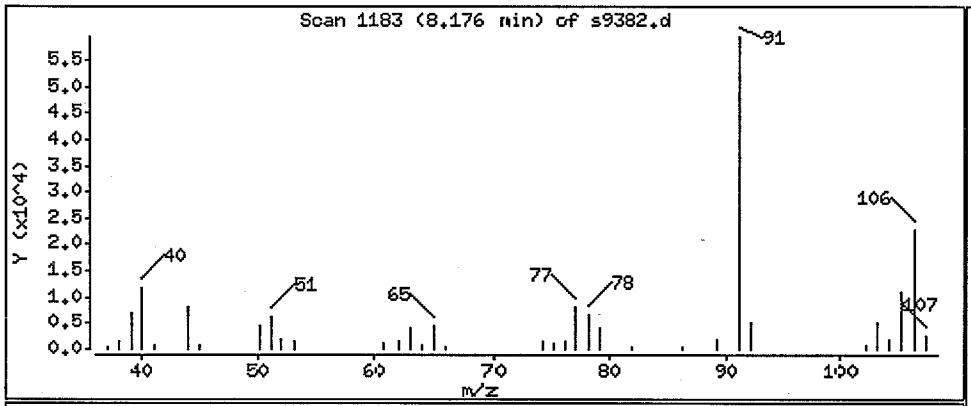
Operator: RJO

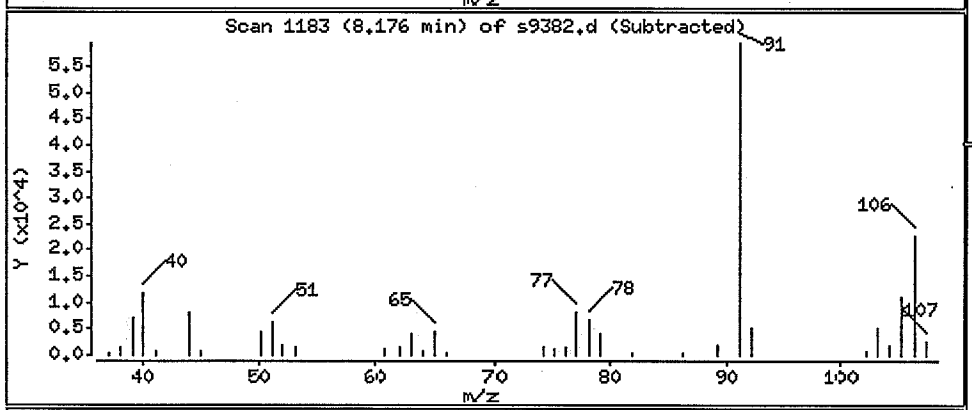
Column phase: DB-624-30M

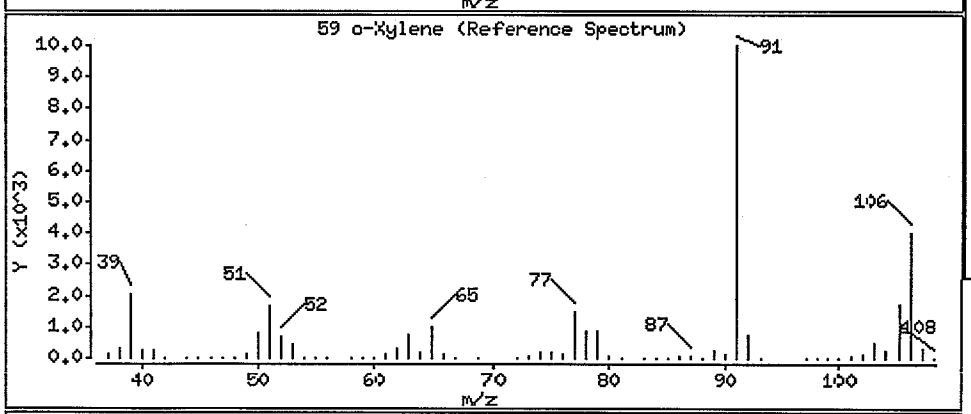
Column diameter: 0.53

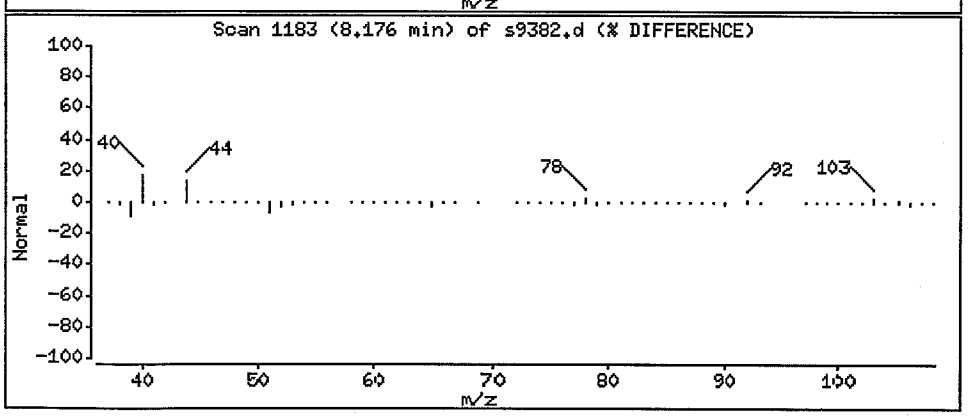
59 o-Xylene

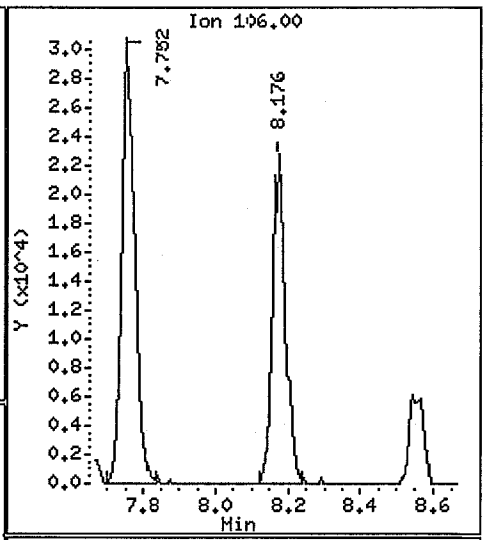
Concentration: 2.36 ug/L

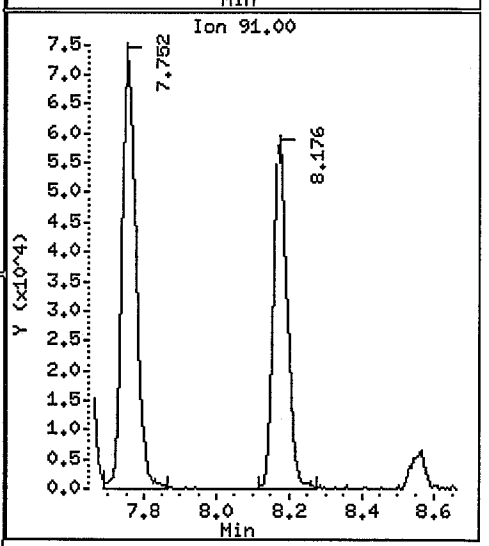












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

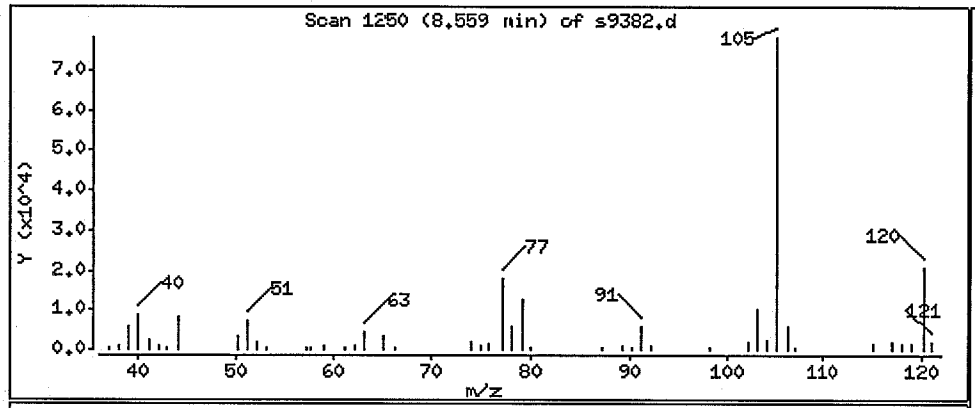
Operator: RJO

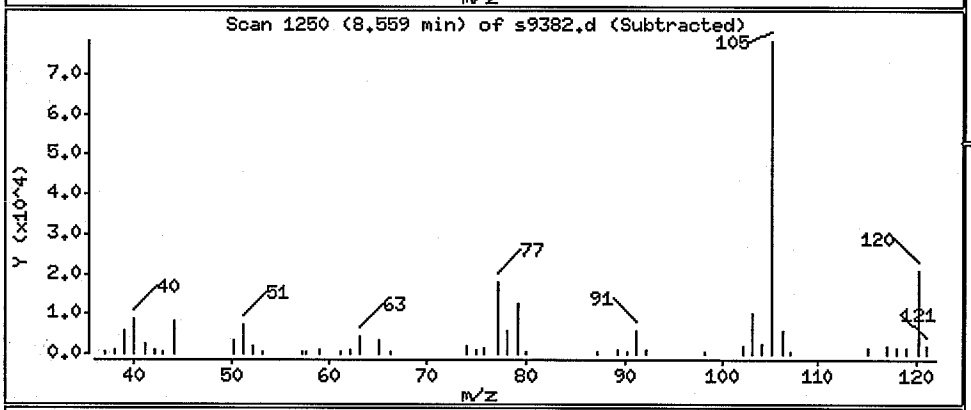
Column phase: DB-624-30M

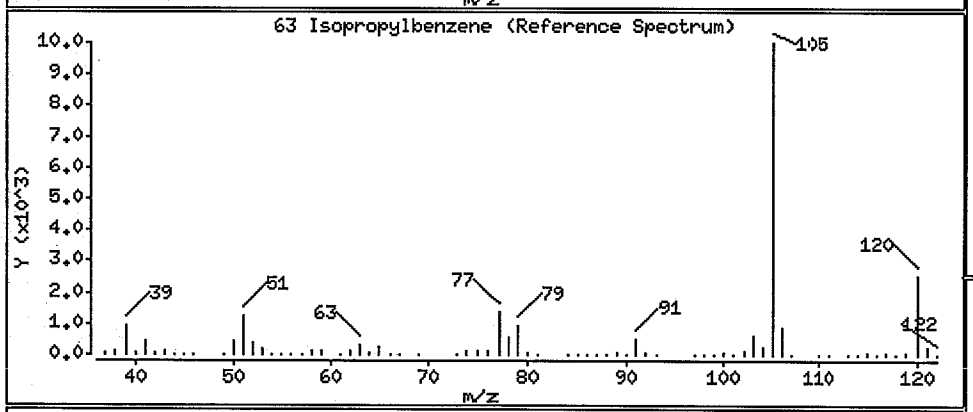
Column diameter: 0.53

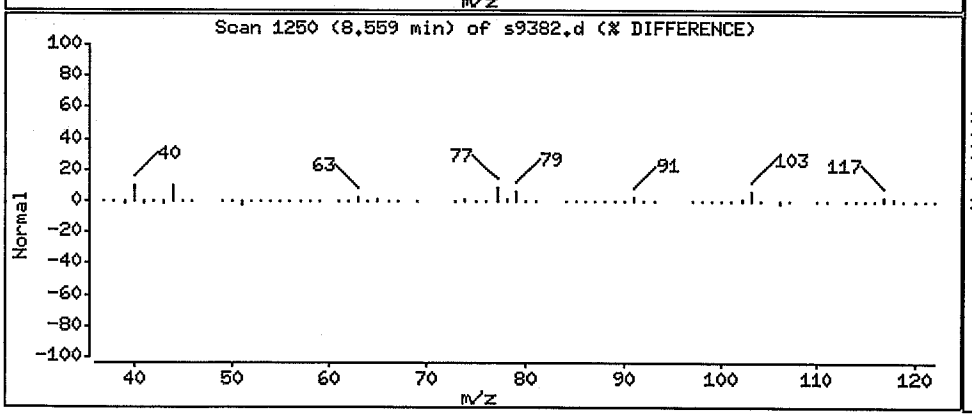
63 Isopropylbenzene

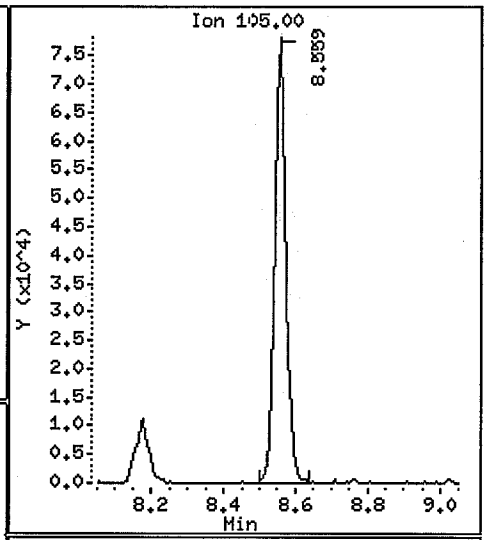
Concentration: 2.57 ug/L

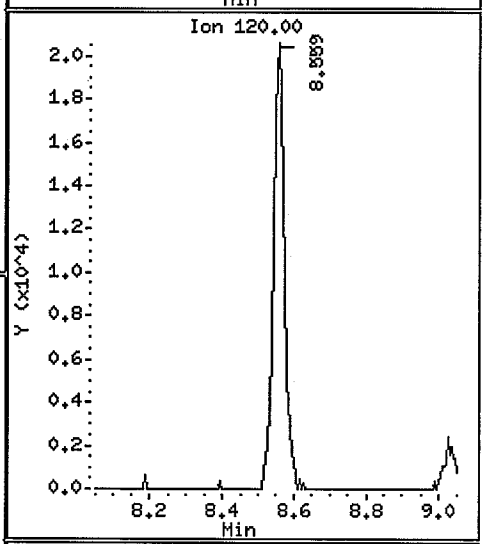


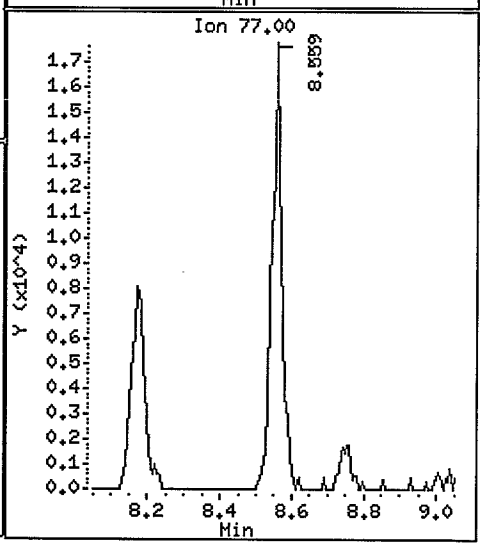












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102×086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

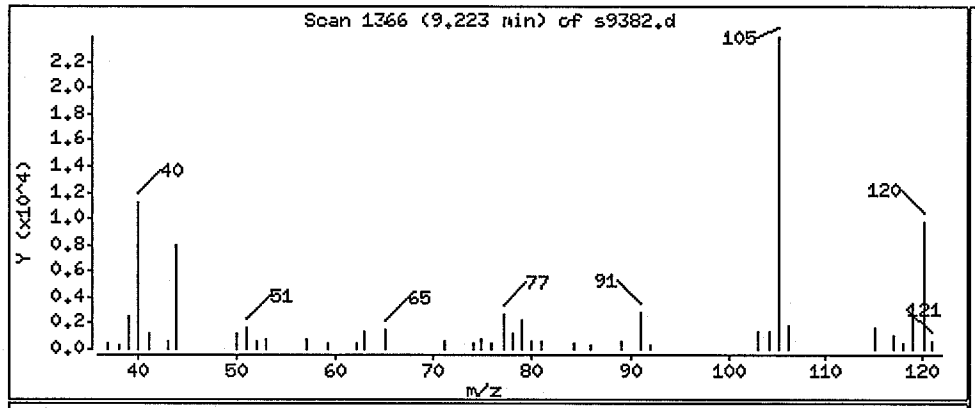
Operator: RJO

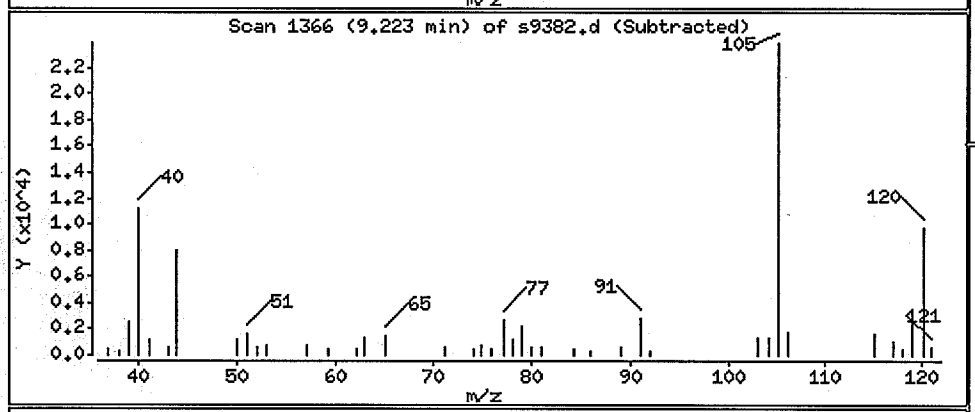
Column phase: DB-624-30M

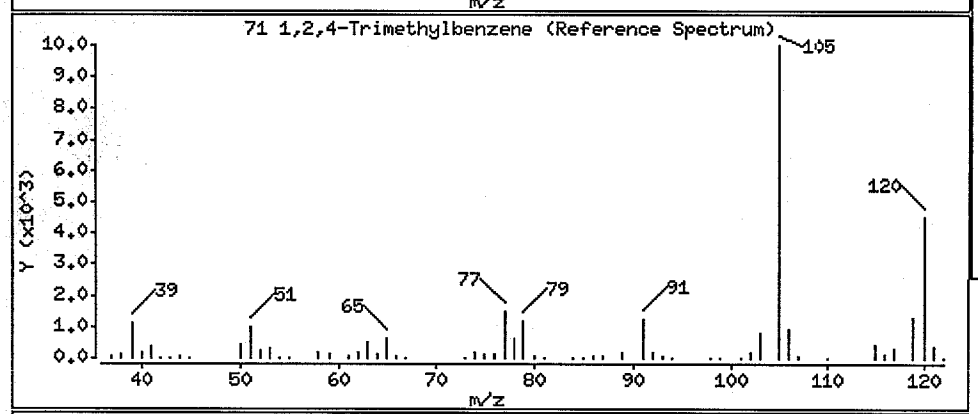
Column diameter: 0.53

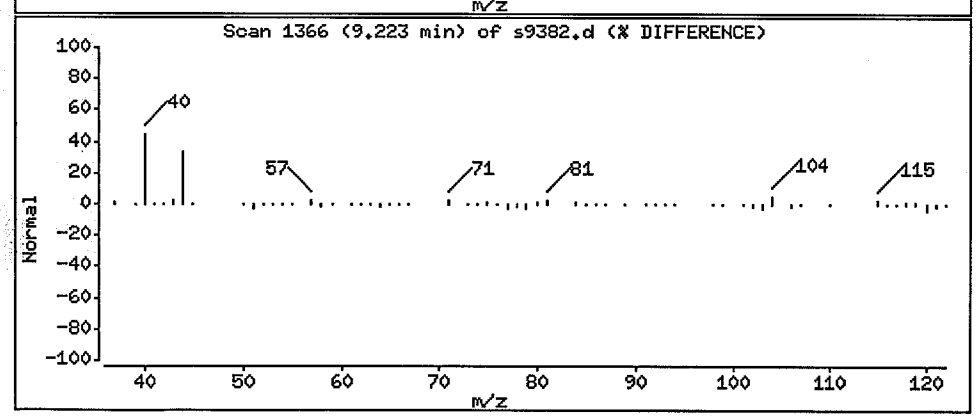
71 1,2,4-Trimethylbenzene

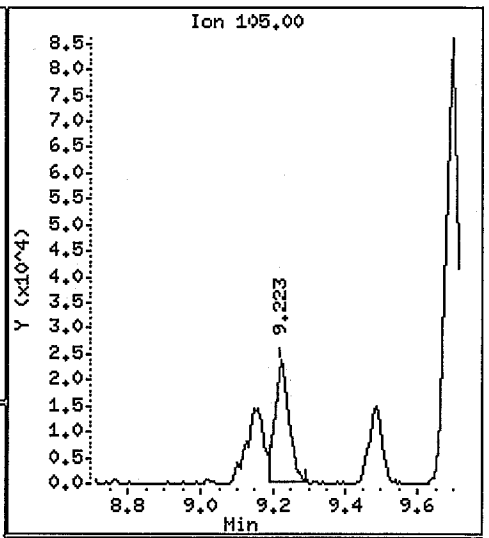
Concentration: 1.08 ug/L

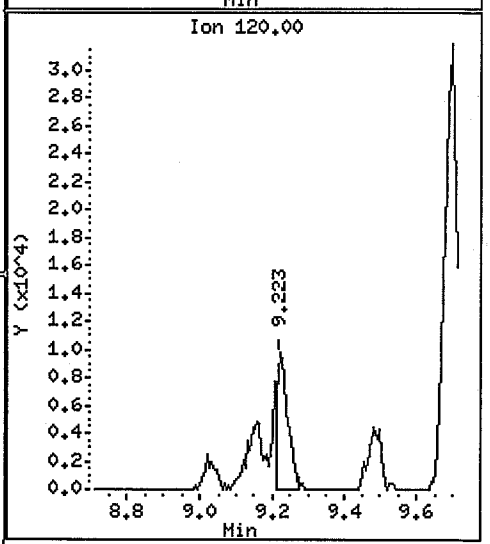












Data File: /var/chem/msv3.i/2030530.s.b/s9382.d

Date : 30-MAY-2003 19:36

Client ID: 086-CEF43-6N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291102*086-CEF43-6N-Q2-03-61

Purge Volume: 5.0

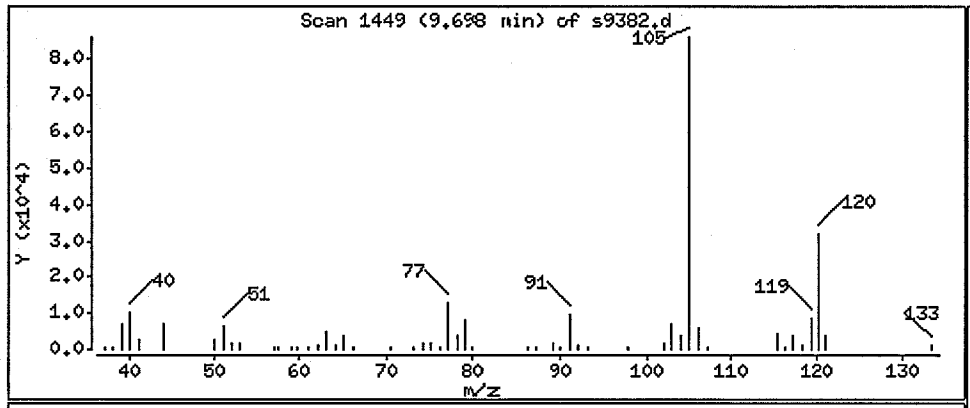
Operator: RJO

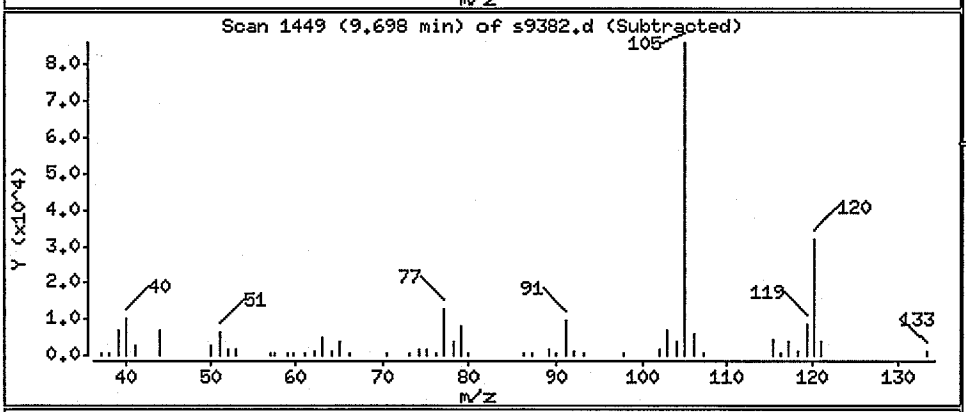
Column phase: DB-624-30M

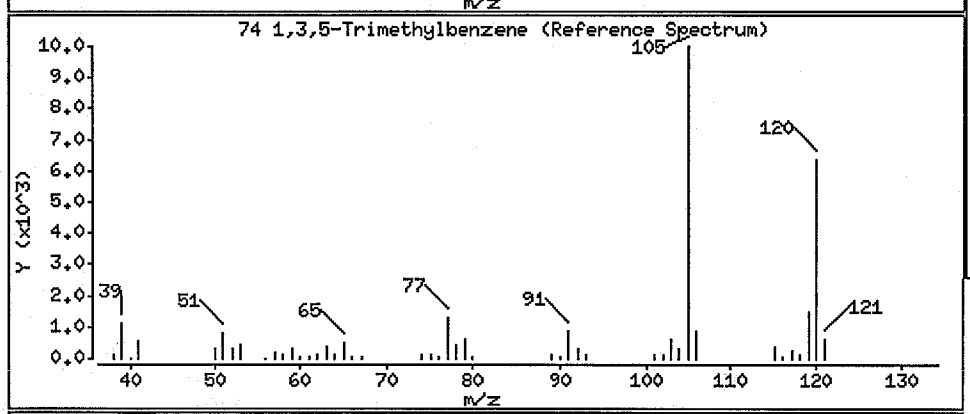
Column diameter: 0.53

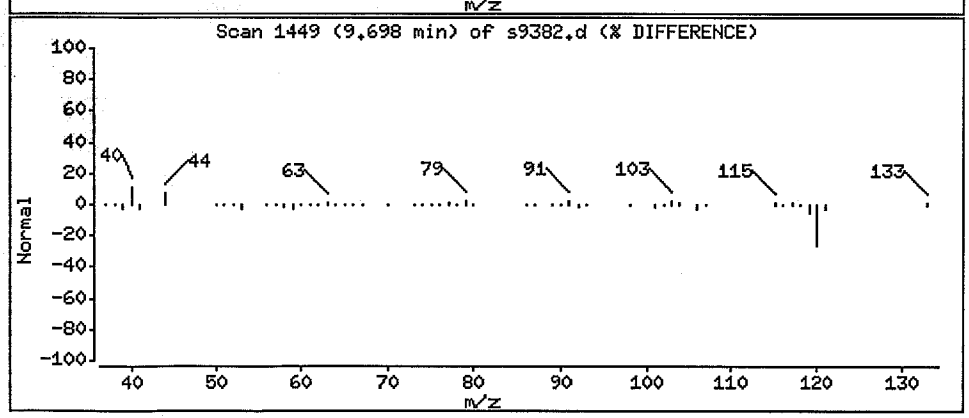
74 1,3,5-Trimethylbenzene

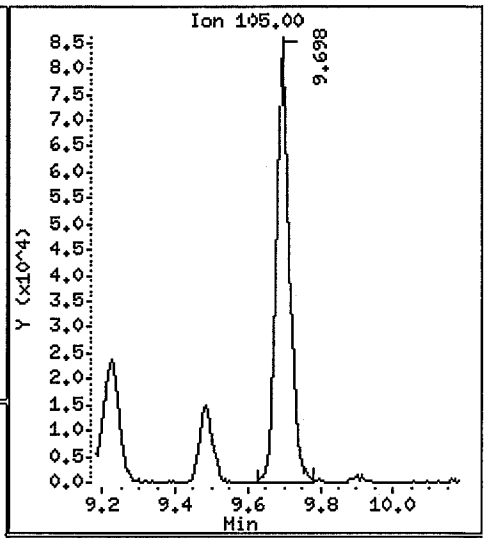
Concentration: 3.63 ug/L

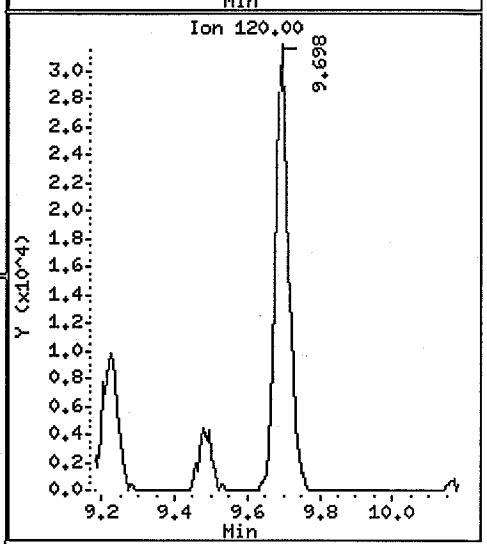












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9383.d
Lab Smp Id: 20305291103 Client Smp ID: 086-CEF43-7N-Q2-03-
Inj Date : 30-MAY-2003 19:56
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291103*086-CEF43-7N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.411	3.396	(0.674)	32292	1.46323	1.46	8653(a)
$ 27 Dibromofluoromethane	111	4.590	4.580	(0.906)	652937	32.3074	32.3	1374
$ 32 1,2-Dichloroethane-d4	67	4.830	4.820	(0.954)	377753	30.6070	30.6	8234
* 35 FLUOROBENZENE	96	5.065	5.055	(1.000)	1884854	30.0000		9141
$ 44 Toluene-d8	98	6.232	6.222	(0.828)	1504318	29.0032	29.0	8834
* 54 CHLOROBENZENE-d5	82	7.525	7.521	(1.000)	703288	30.0000		8906
$ 64 Bromofluorobenzene	174	8.755	8.740	(1.163)	593982	28.6285	28.6	8739
* 78 1,4-DICHLOROBENZENE-D4	152	10.163	10.153	(1.000)	679964	30.0000		9520

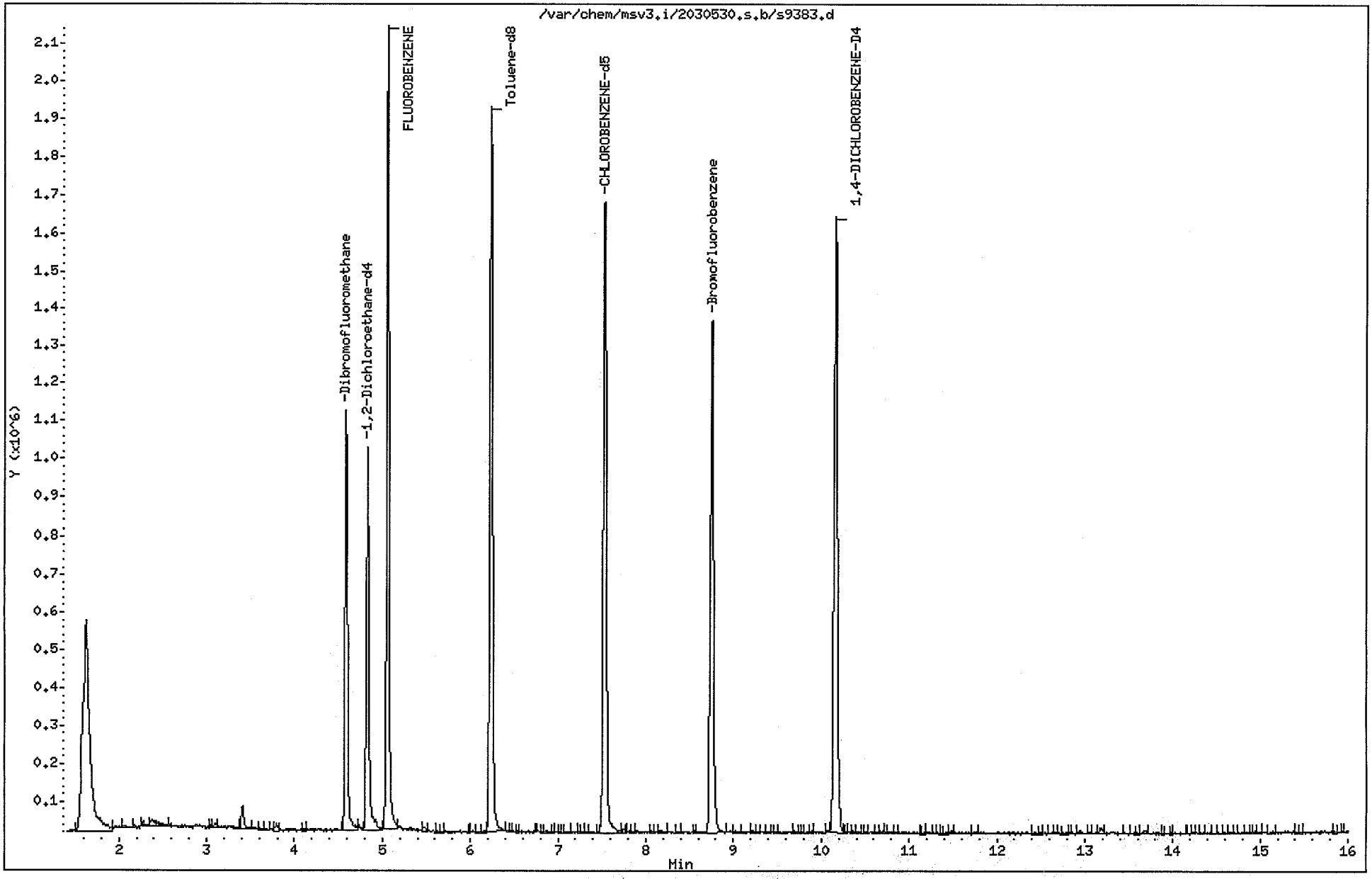
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

000049

Data File: /var/chem/msv3.i/2030530.s.b/s9383.d
Date : 30-MAY-2003 19:56
Client ID: 086-CEF43-7N-Q2-03-
Sample Info: 20305291103*086-CEF43-7N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/20305 30.s.b/s9383.d

Date : 30-MAY-2003 19:56

Client ID: 086-CEF43-7N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291103×086-CEF43-7N-Q2-03-61

Purge Volume: 5.0

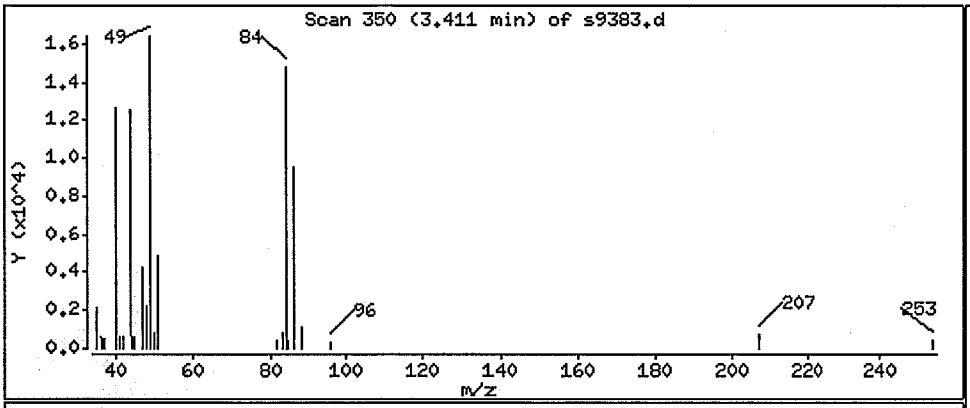
Operator: RJO

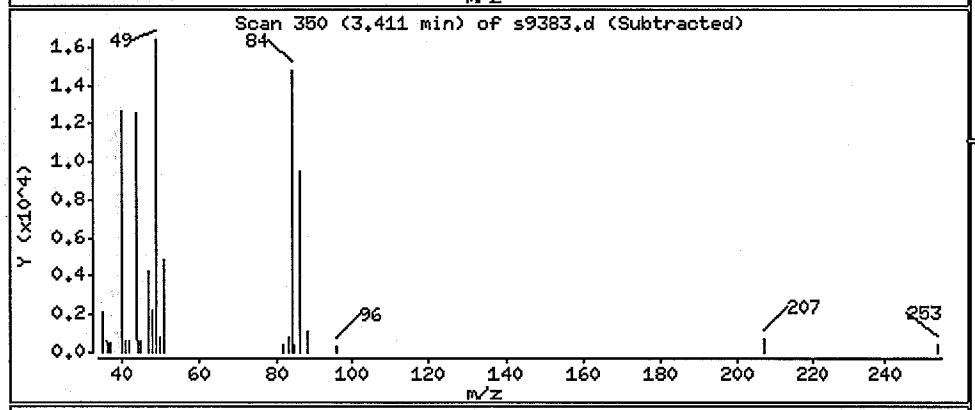
Column phase: DB-624-30M

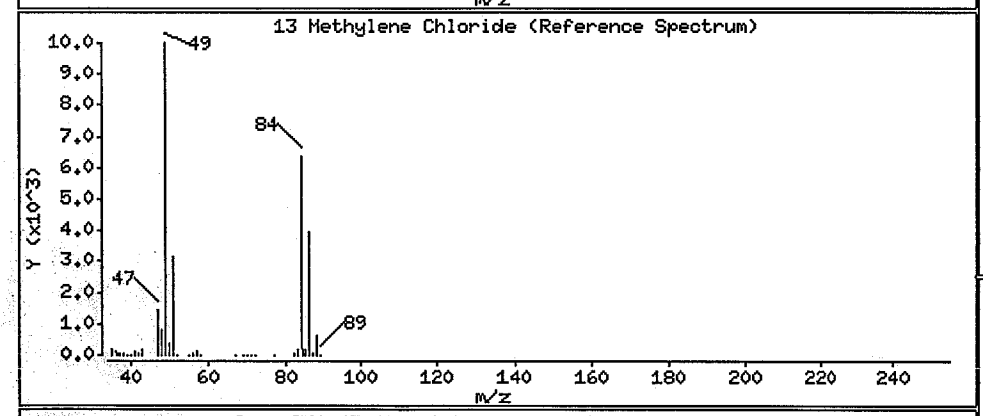
Column diameter: 0.53

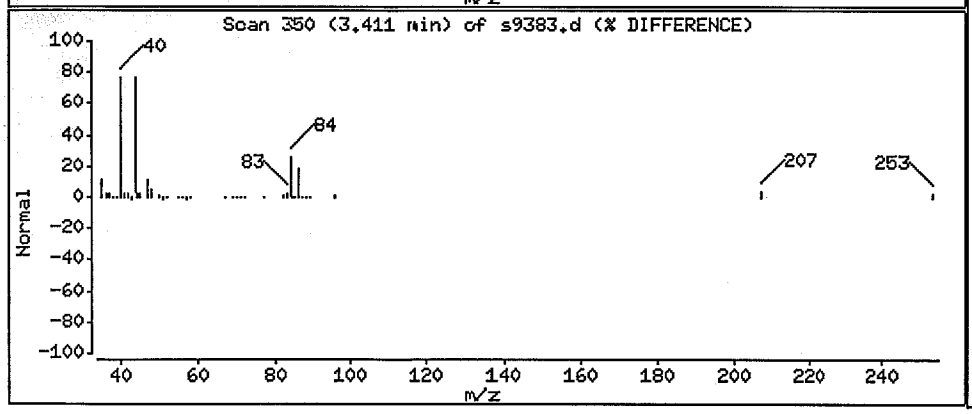
13 Methylene Chloride

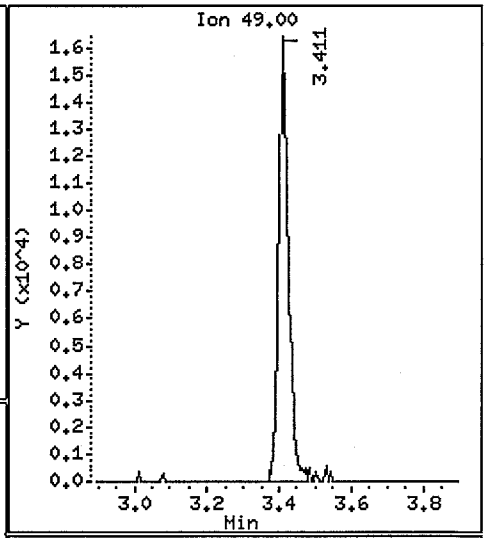
Concentration: 1.46 ug/L

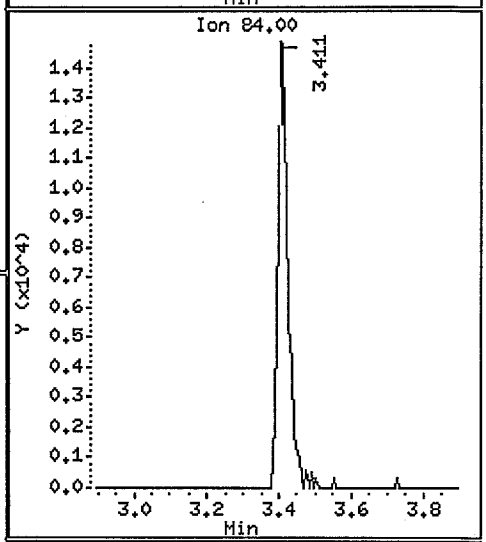


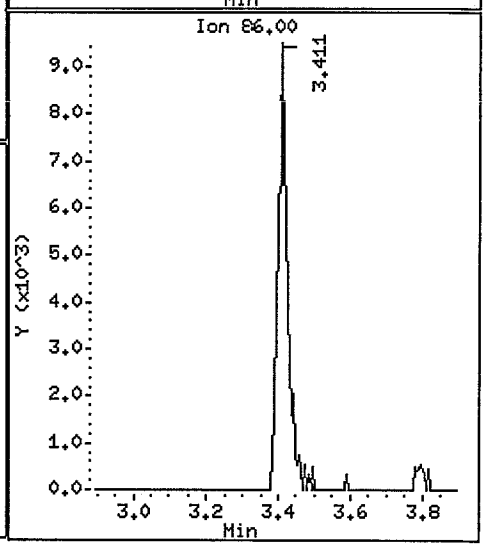












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9387.d
Lab Smp Id: 20305291104 Client Smp ID: 086-CEF43-9N-Q2-03-
Inj Date : 31-MAY-2003 08:09
Operator : HJL Inst ID: msv3.i
Smp Info : 20305291104*086-CEF43-9N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.407	3.396	(0.674)	71102	2.79190	2.79	8533(a)
$ 27 Dibromofluoromethane	111	4.585	4.580	(0.907)	717822	30.7784	30.8	1610
$ 32 1,2-Dichloroethane-d4	67	4.826	4.820	(0.955)	380442	26.7117	26.7	8350
* 35 FLUOROBENZENE	96	5.055	5.055	(1.000)	2175097	30.0000		9211
$ 44 Toluene-d8	98	6.228	6.222	(0.828)	1726249	29.5562	29.6	8730
* 54 CHLOROBENZENE-d5	82	7.521	7.521	(1.000)	791943	30.0000		8791
57 Ethylbenzene +	106	7.629	7.630	(1.014)	408464	17.7755	17.8	
58 p,m-Xylene	106	7.744	7.744	(1.030)	1321469	47.8536	47.9	
59 o-Xylene	106	8.167	8.168	(1.086)	1102241	41.0604	41.1	
60 Styrene	104	8.167	8.168	(1.086)	68318	1.46658	1.47	5812(a)
M 61 TOTAL XYLENE	106				2423710	88.9140	88.9	0
63 Isopropylbenzene	105	8.556	8.551	(1.138)	411861	5.34456	5.34	8908
$ 64 Bromofluorobenzene	174	8.745	8.740	(1.163)	697170	29.8403	29.8	8771
69 n-Propylbenzene	91	9.025	9.020	(0.889)	650232	7.61044	7.61	
71 1,2,4-Trimethylbenzene	105	9.226	9.215	(0.909)	2296672	33.2594	33.3	
74 1,3,5-Trimethylbenzene	105	9.689	9.684	(0.954)	5633309	81.7387	81.7	8765(H)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
76 p-Isopropyltoluene	119	10.073	10.073	(0.992)	367719	5.11800	5.12	8687
* 78 1,4-DICHLOROBENZENE-D4	152	10.153	10.153	(1.000)	803296	30.0000		9523
85 Naphthalene	128	13.317	13.311	(1.312)	3354067	77.6157	77.6	9166

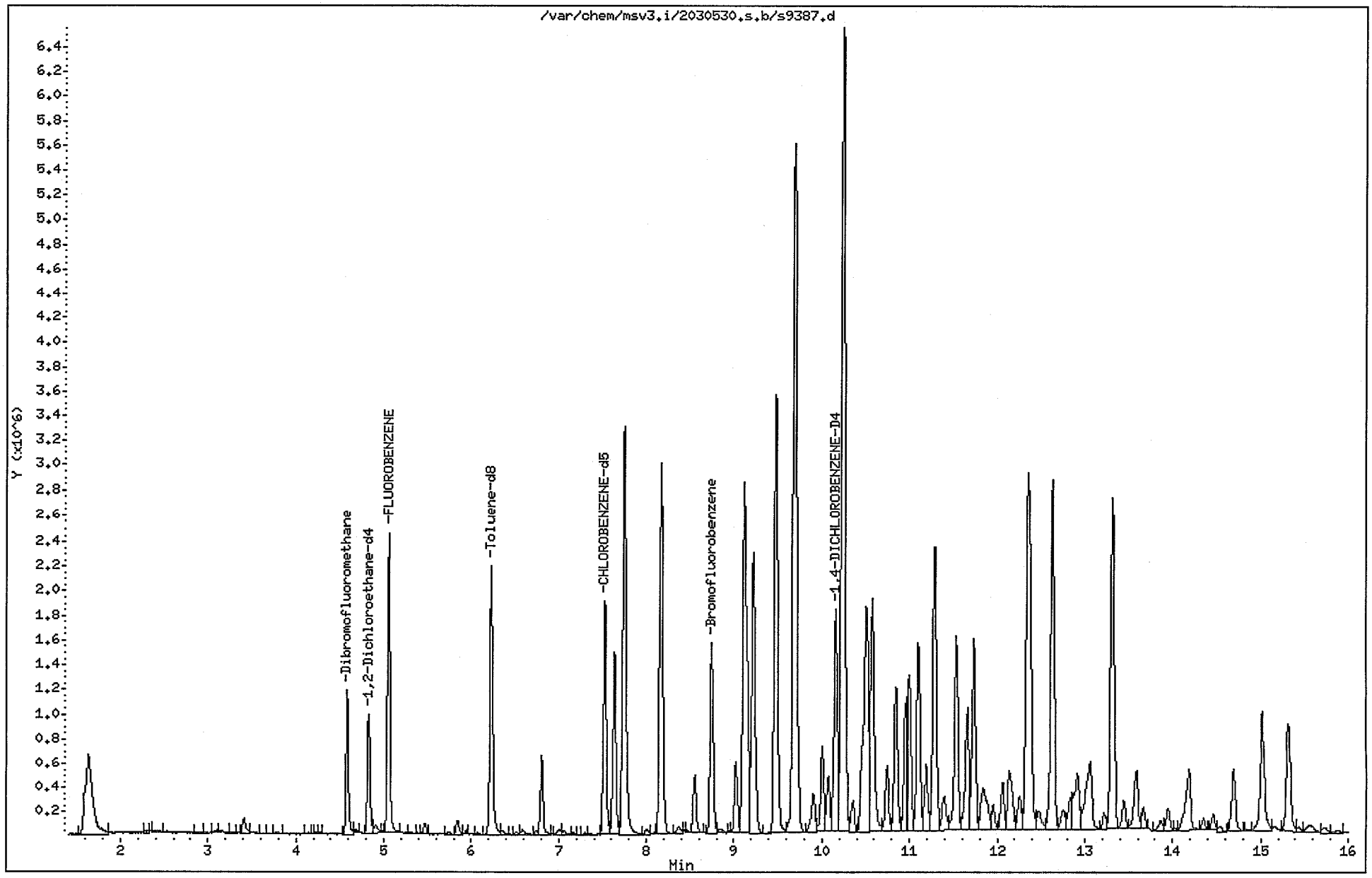
QC Flag Legend

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

000053

Data File: /var/chem/msv3.i/2030530.s.b/s9387.d
Date : 31-MAY-2003 08:09
Client ID: 086-CEF43-9N-Q2-03-
Sample Info: 20305291104*086-CEF43-9N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: HJL
Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

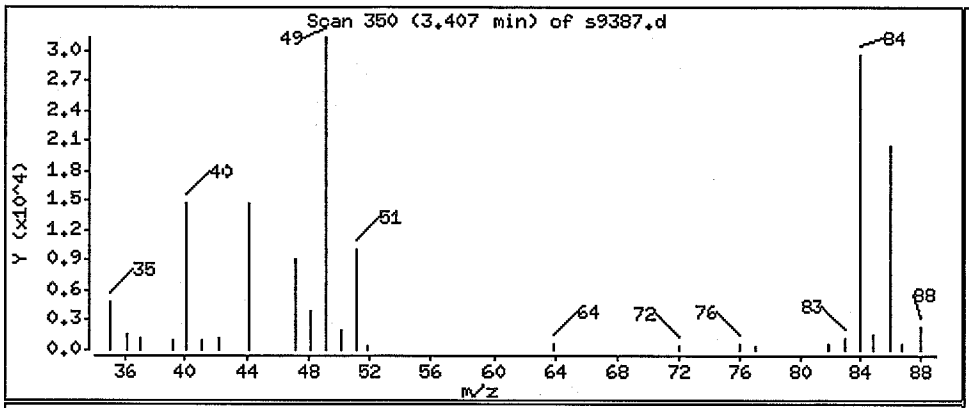
Operator: HJL

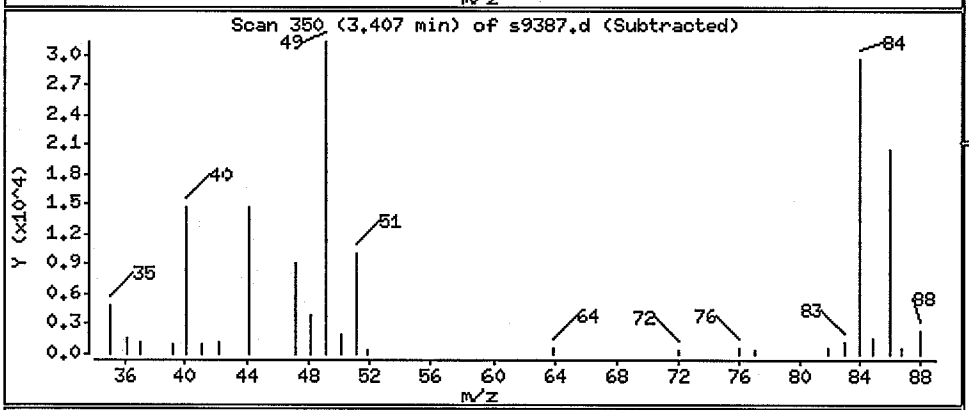
Column phase: DB-624-30M

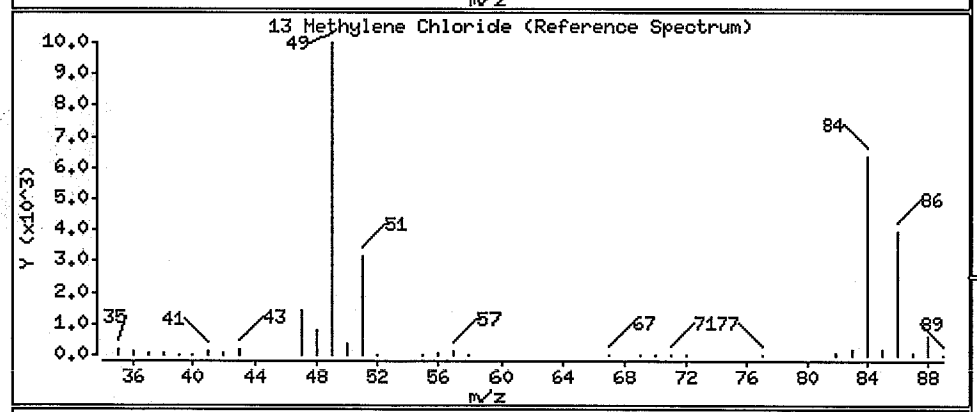
Column diameter: 0.53

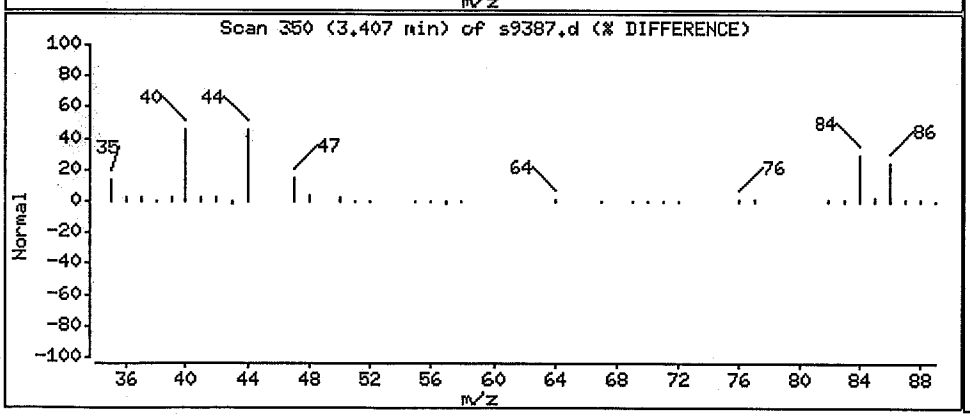
13 Methylene Chloride

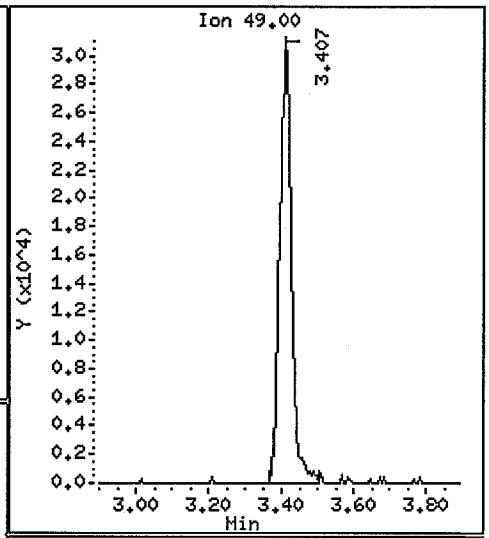
Concentration: 2.79 ug/L

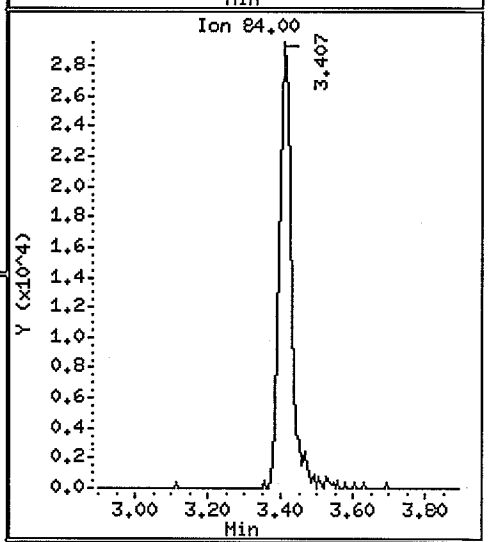


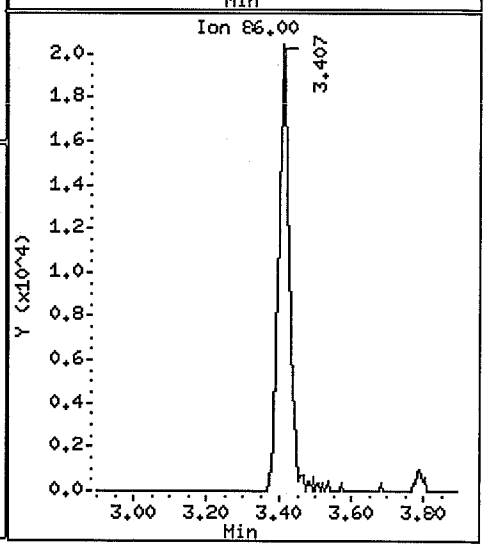












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

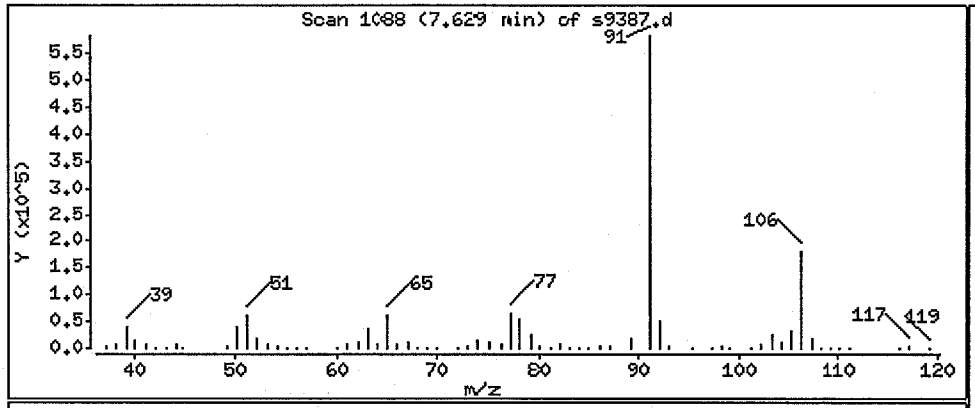
Operator: HJL

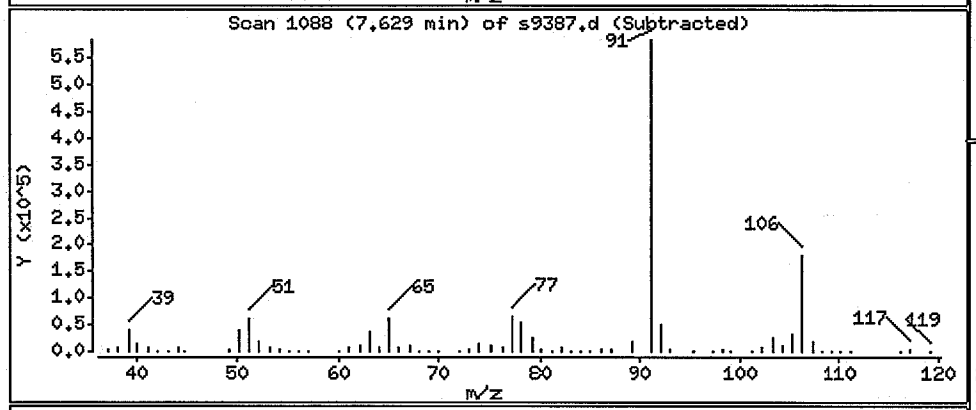
Column phase: DB-624-30M

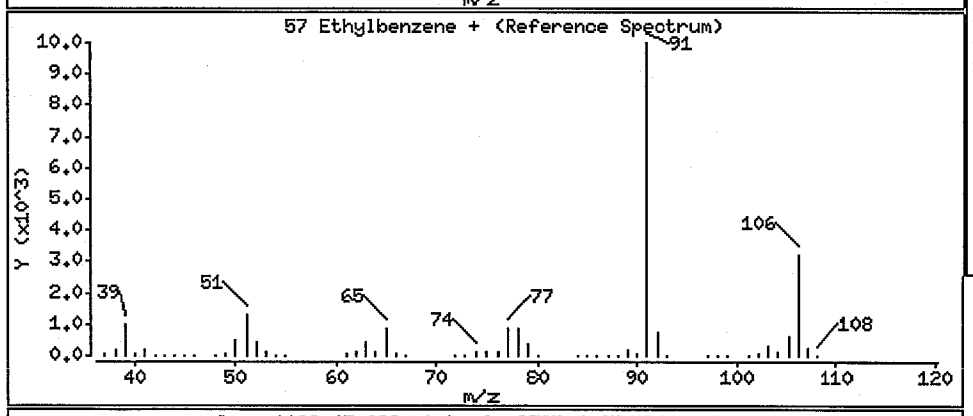
Column diameter: 0.53

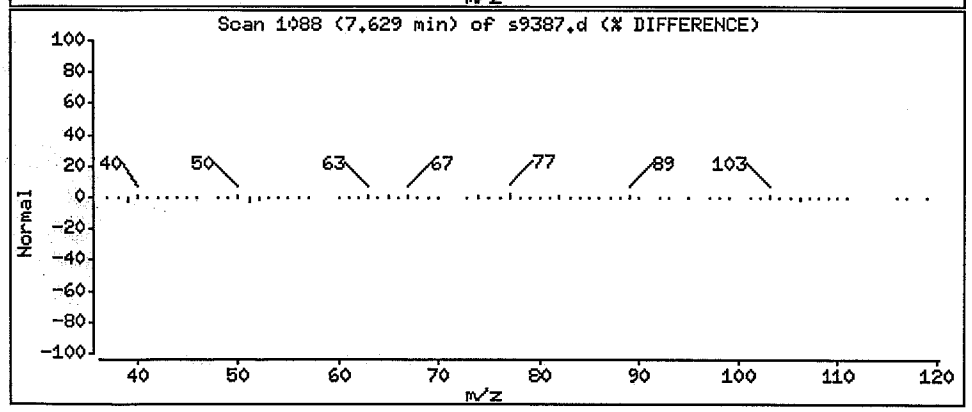
57 Ethylbenzene +

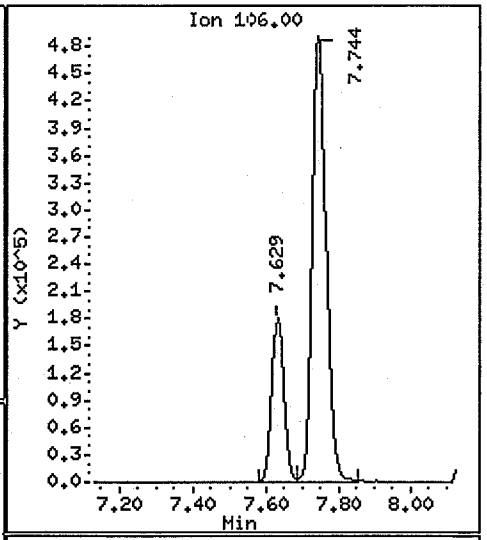
Concentration: 17.8 ug/L

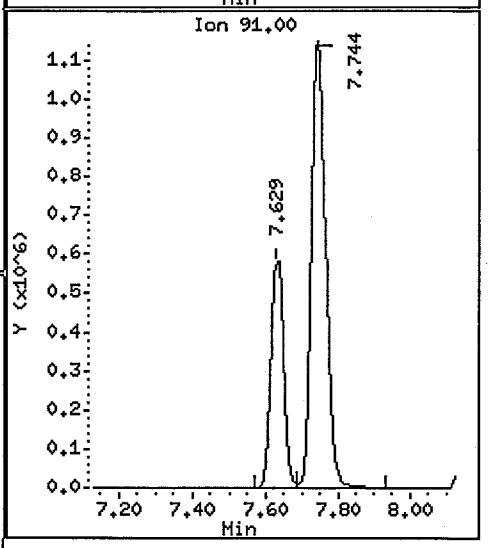












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

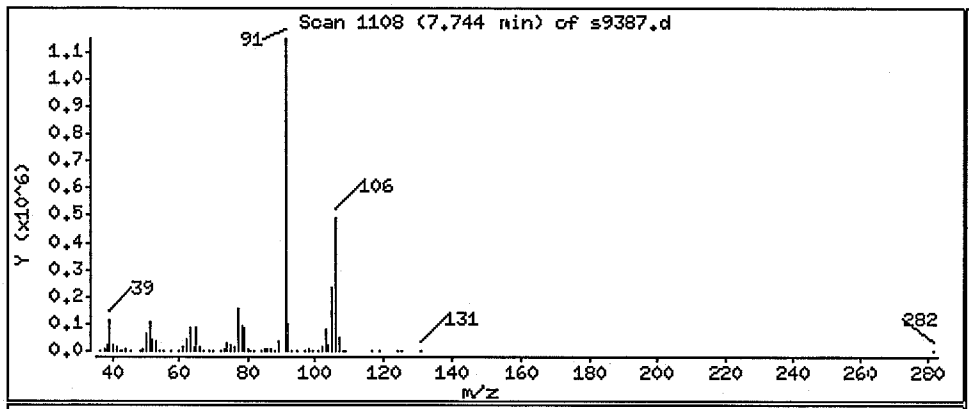
Operator: HJL

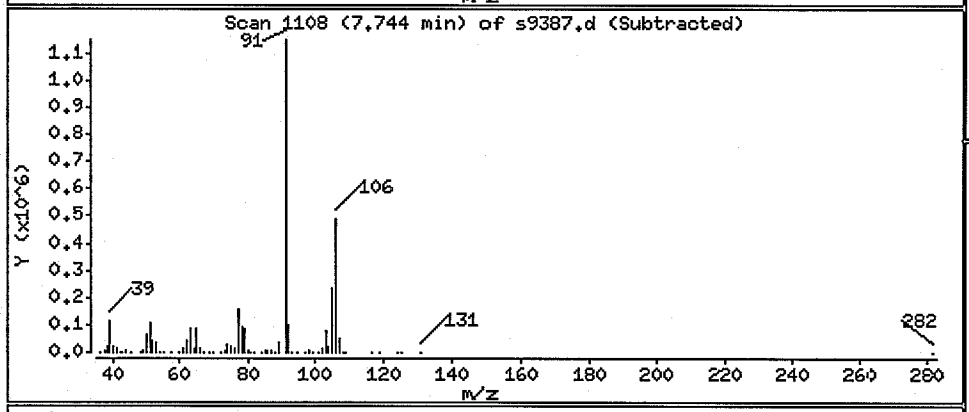
Column phase: DB-624-30M

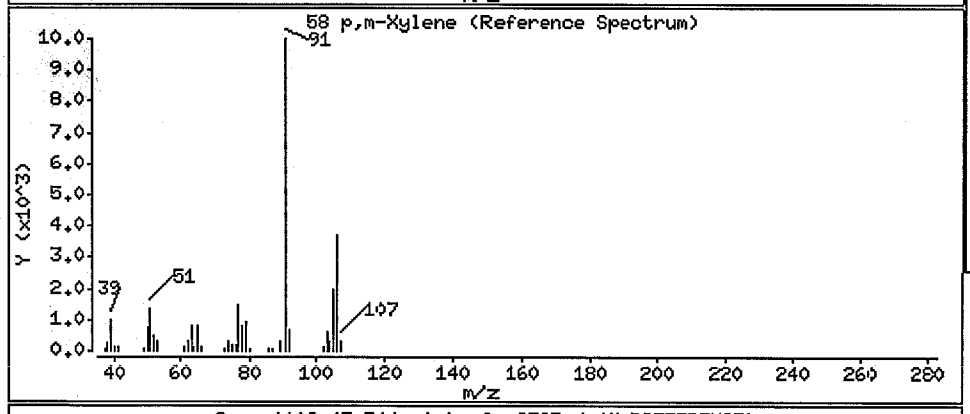
Column diameter: 0.53

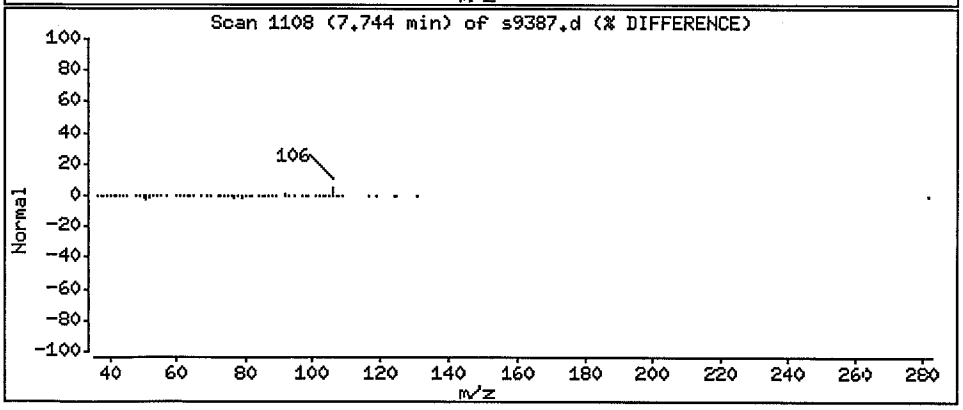
58 p,m-Xylene

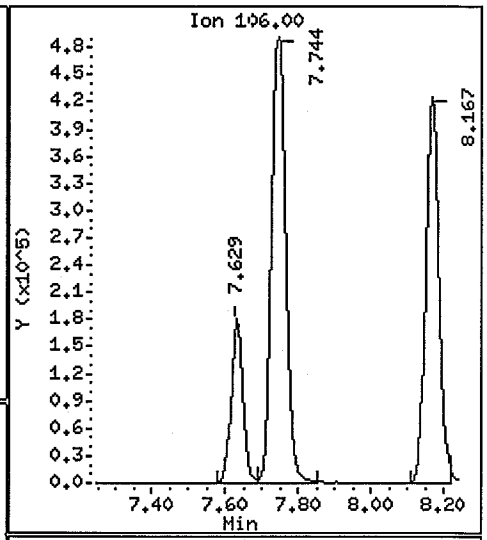
Concentration: 47.9 ug/L

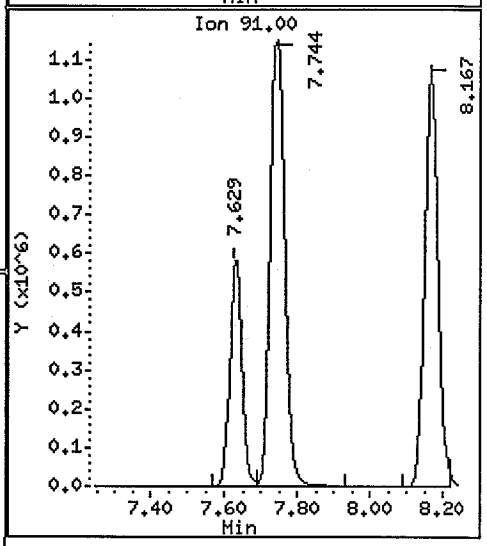












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

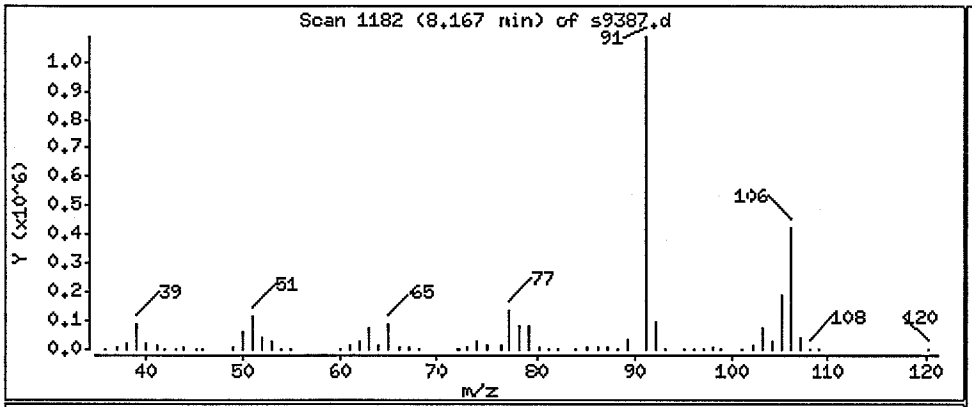
Operator: HJL

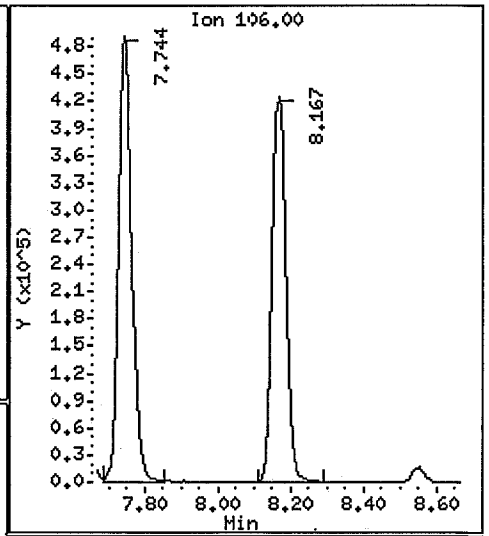
Column phase: DB-624-30M

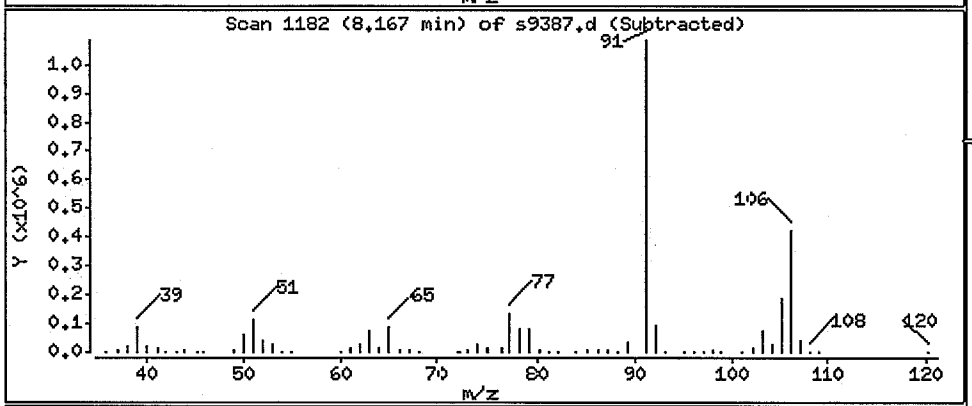
Column diameter: 0.53

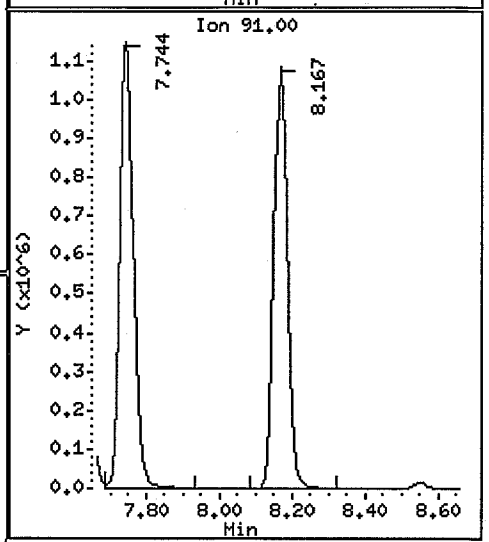
59 o-Xylene

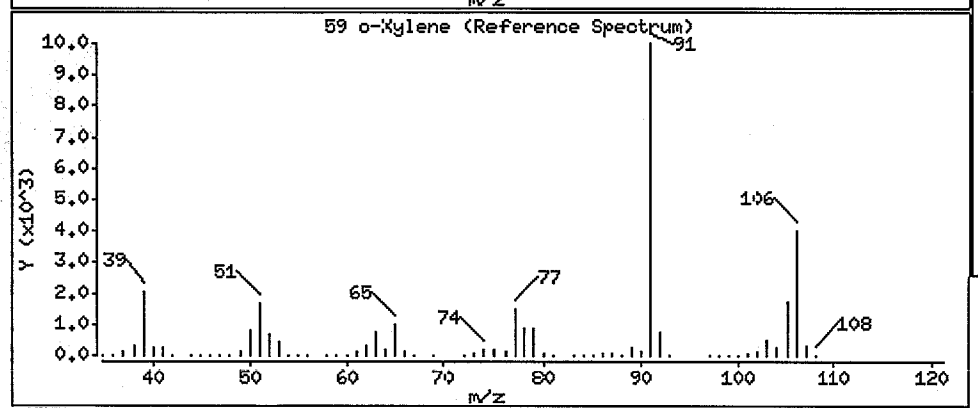
Concentration: 41.1 ug/L

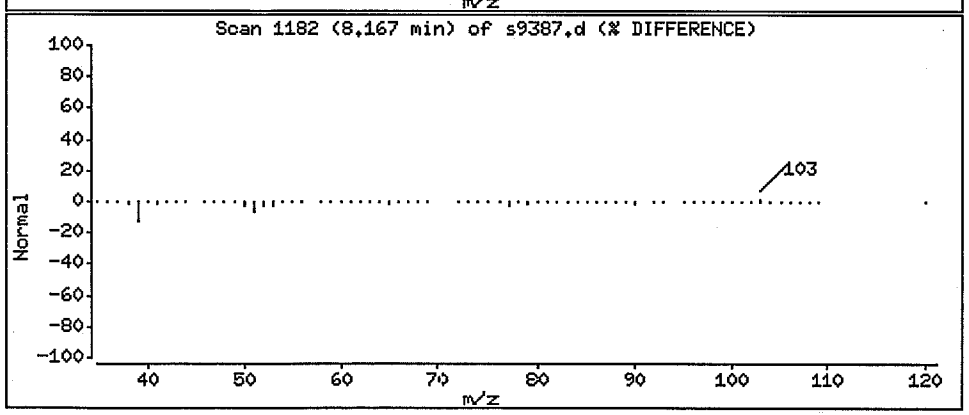












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

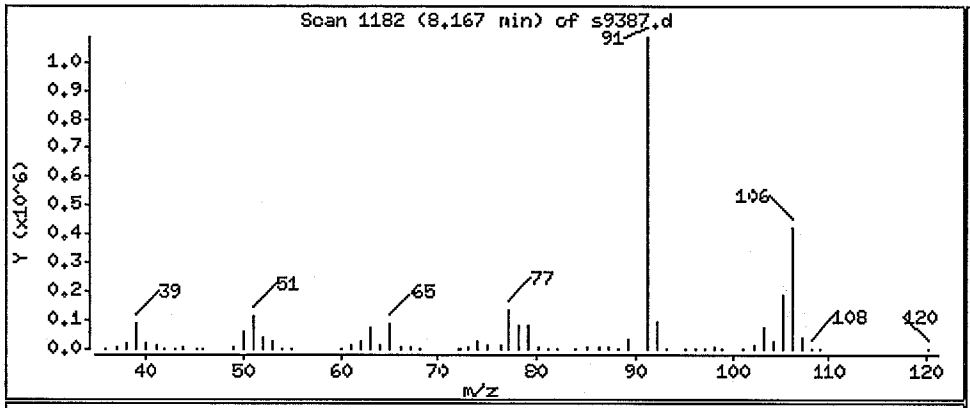
Operator: HJL

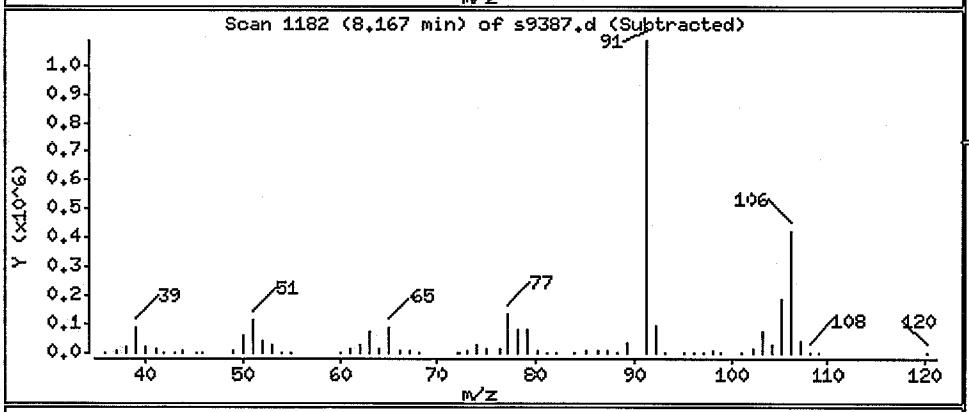
Column phase: DB-624-30M

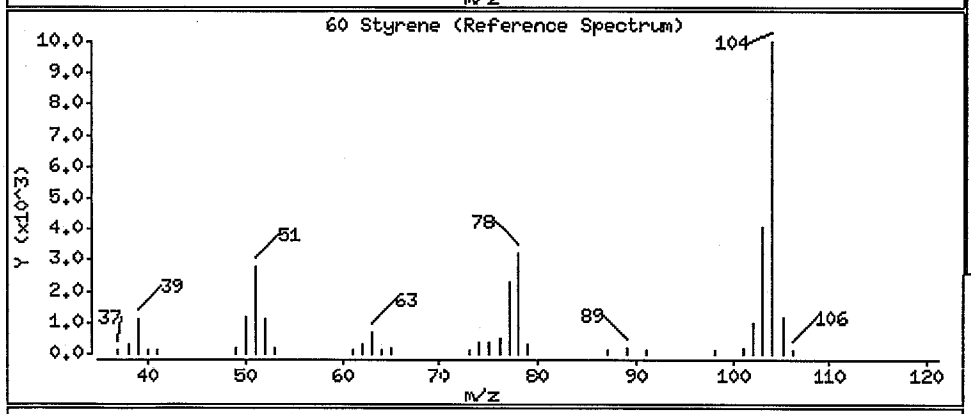
Column diameter: 0.53

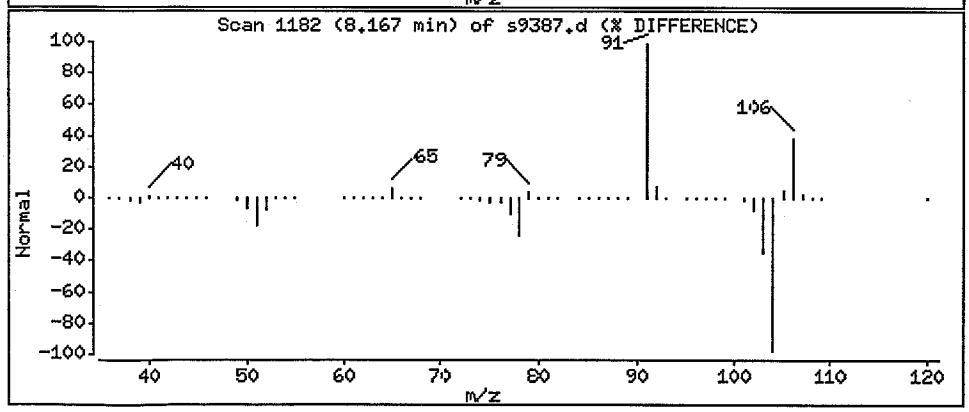
60 Styrene

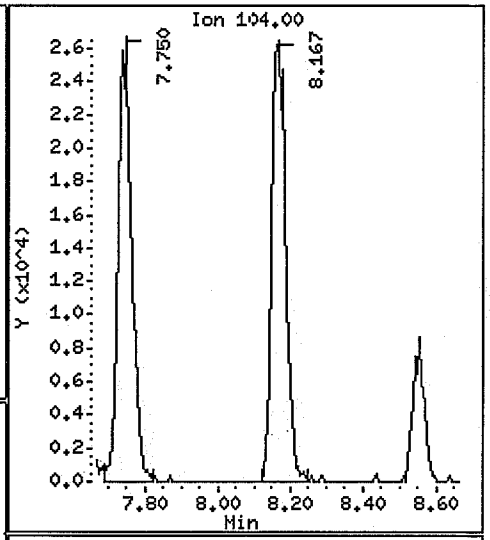
Concentration: 1.47 ug/L

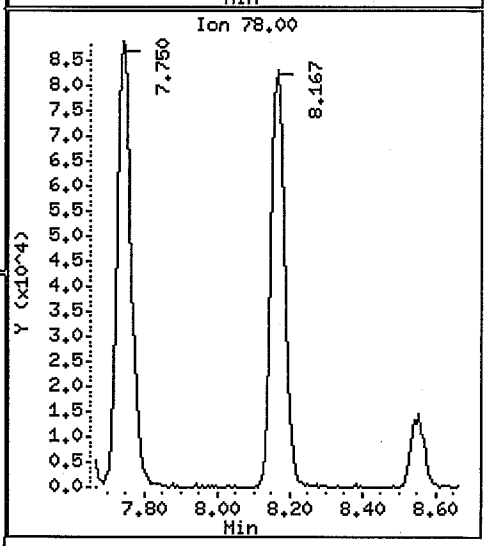












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

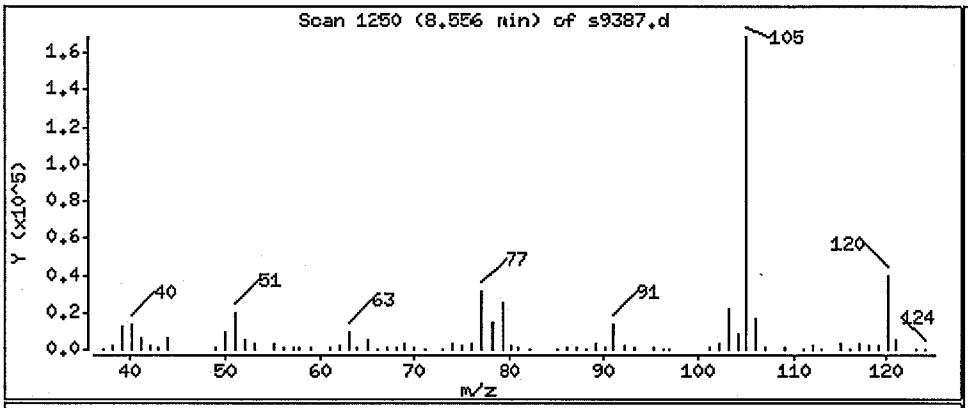
Operator: HJL

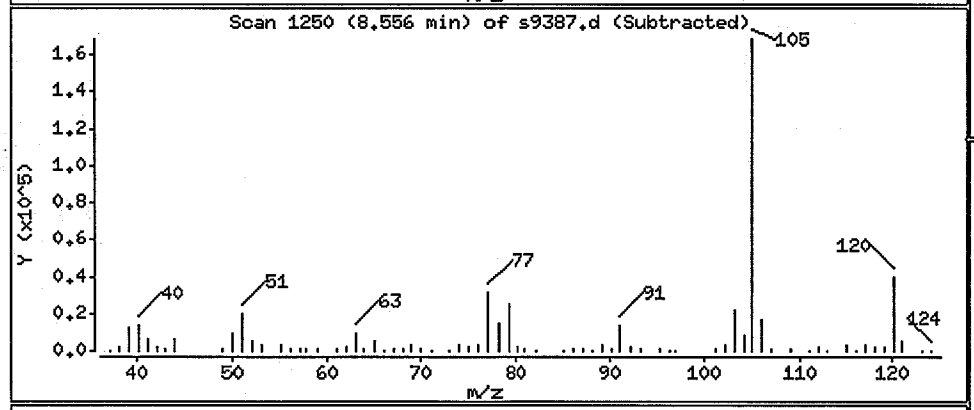
Column phase: DB-624-30M

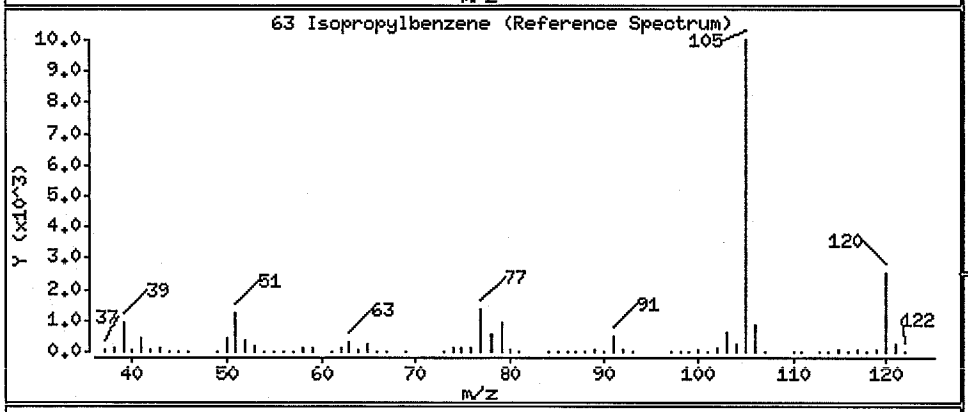
Column diameter: 0.53

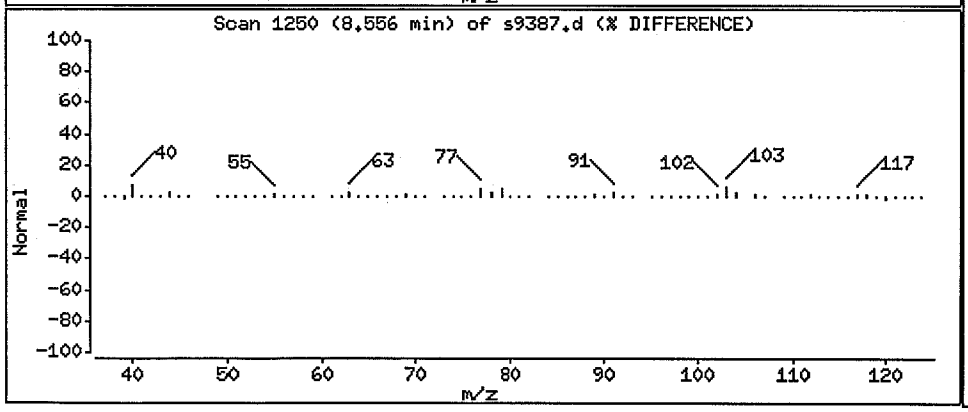
63 Isopropylbenzene

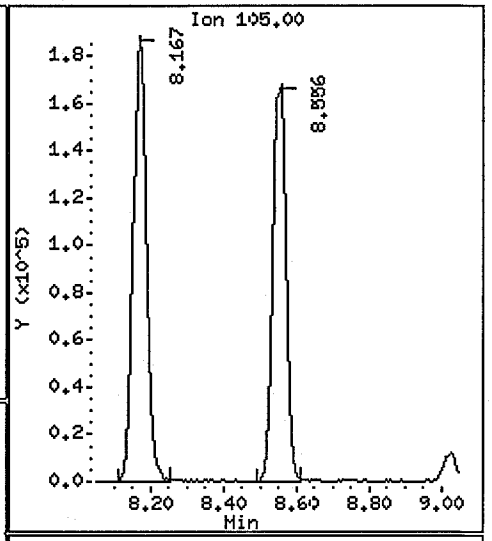
Concentration: 5.34 ug/L

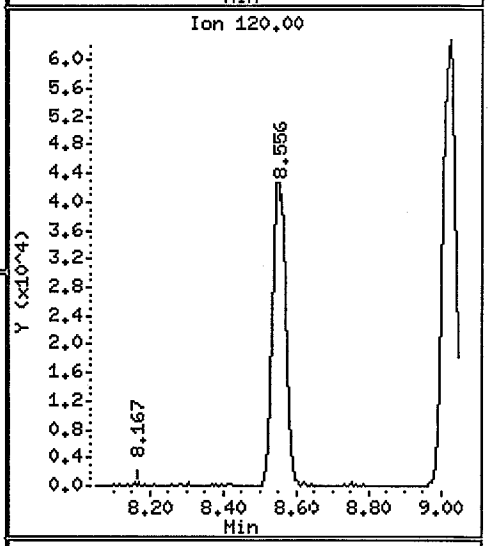


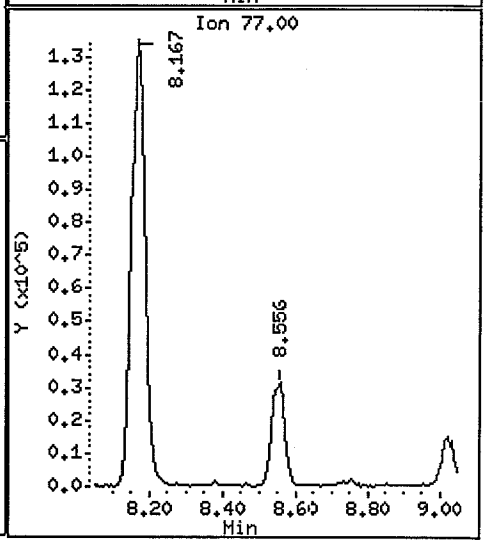












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

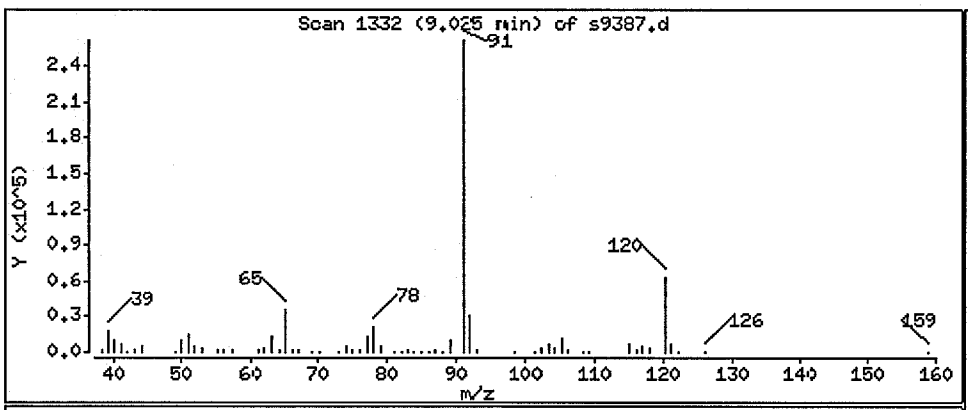
Operator: HJL

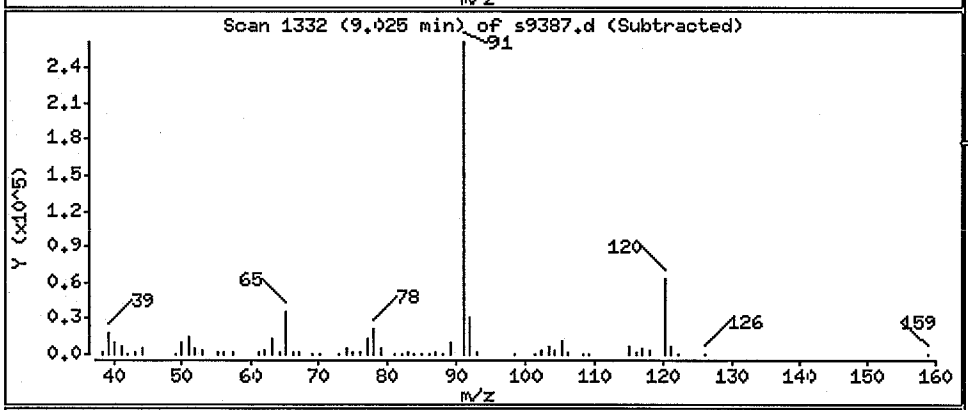
Column phase: DB-624-30M

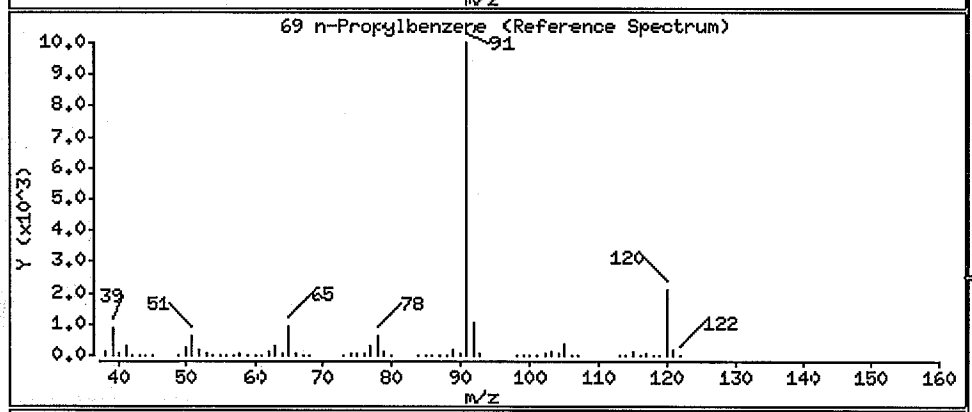
Column diameter: 0.53

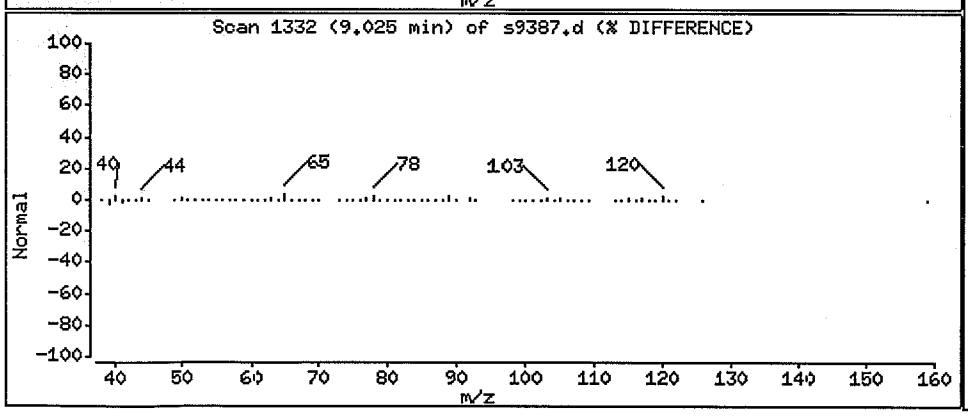
69 n-Propylbenzene

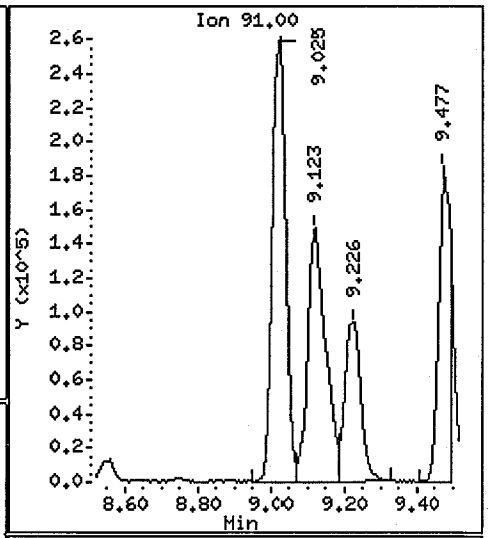
Concentration: 7.61 ug/L

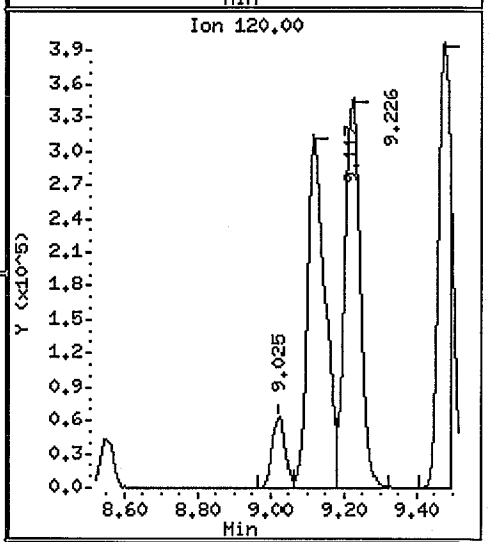


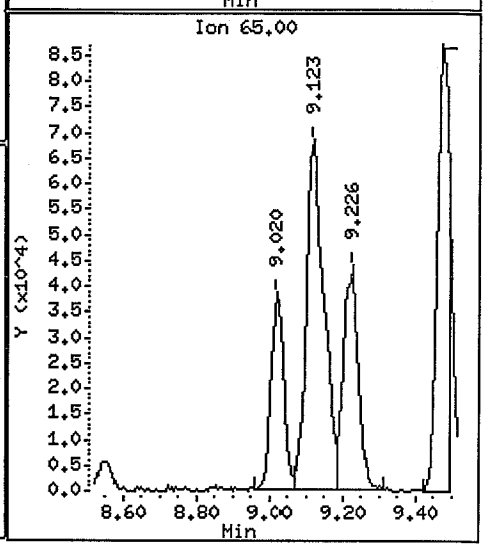












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

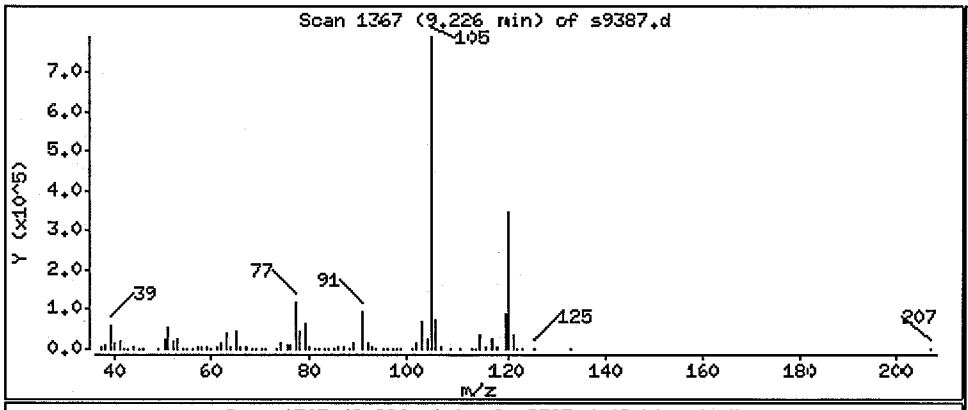
Operator: HJL

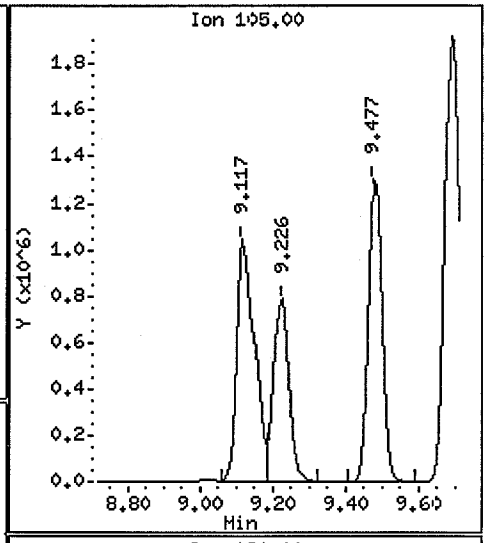
Column phase: DB-624-30M

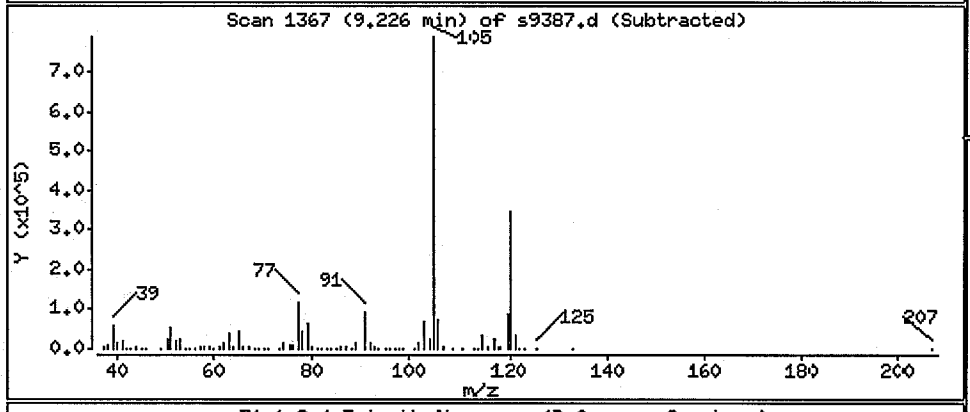
Column diameter: 0.53

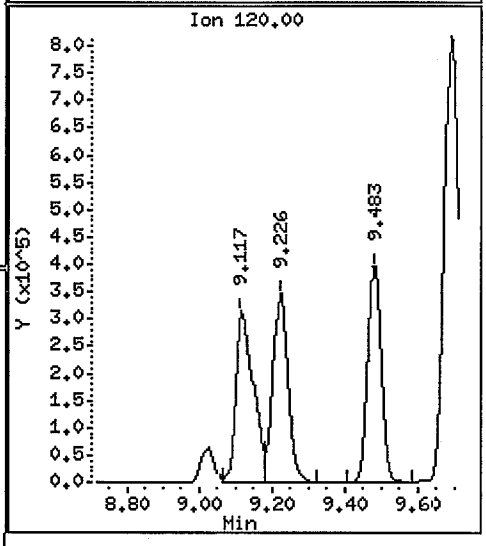
71 1,2,4-Trimethylbenzene

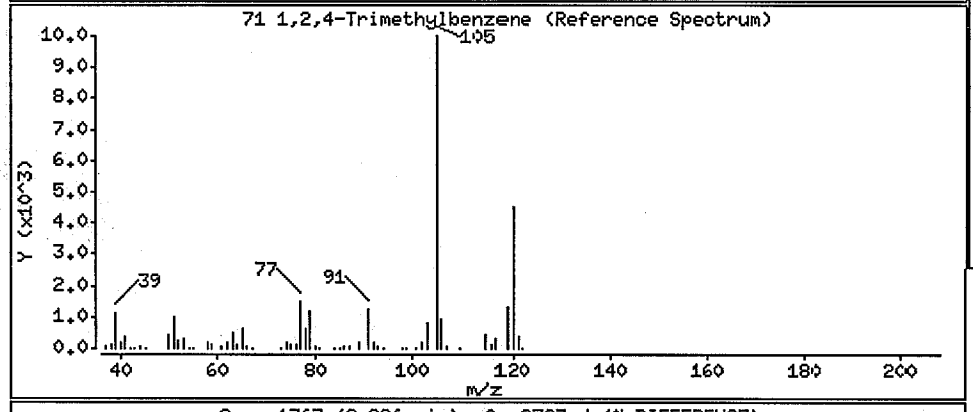
Concentration: 33.3 ug/L

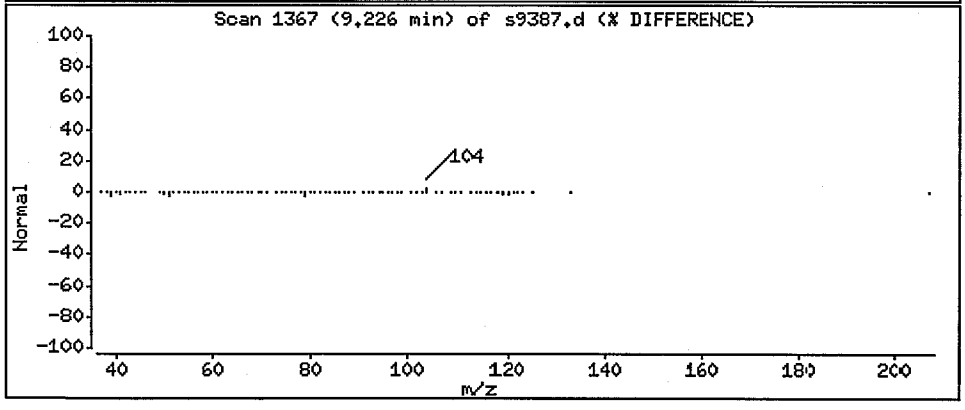












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

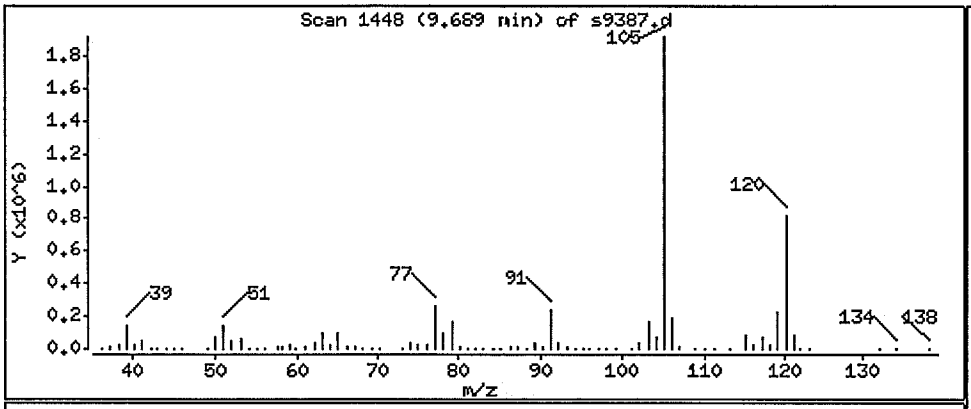
Operator: HJL

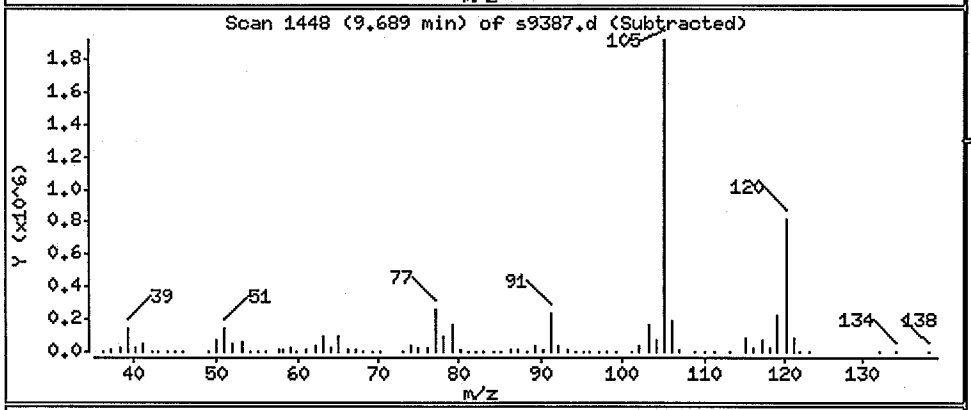
Column phase: DB-624-30M

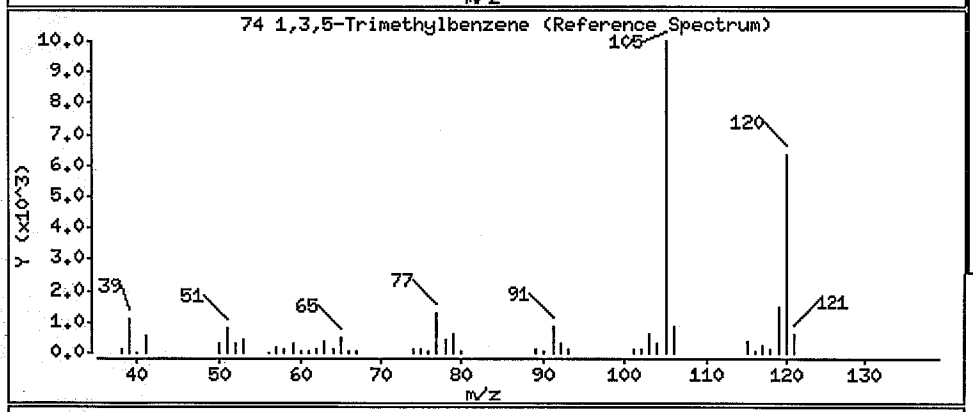
Column diameter: 0.53

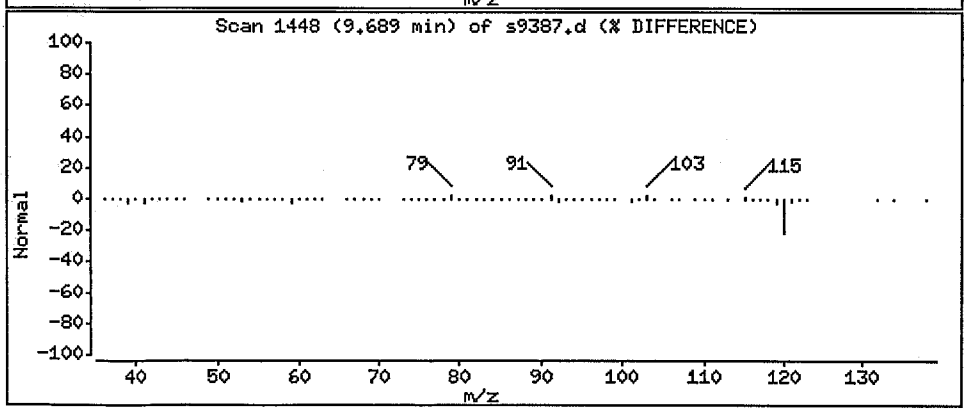
74 1,3,5-Trimethylkenzene

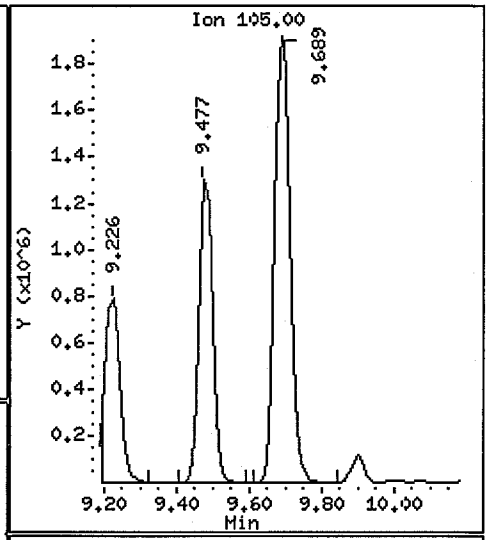
Concentration: 81.7 ug/L

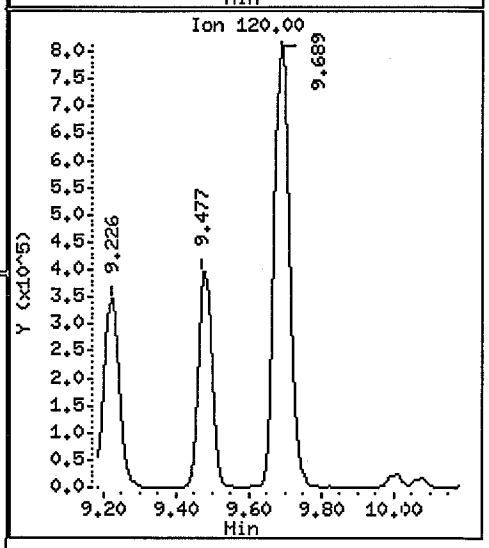












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

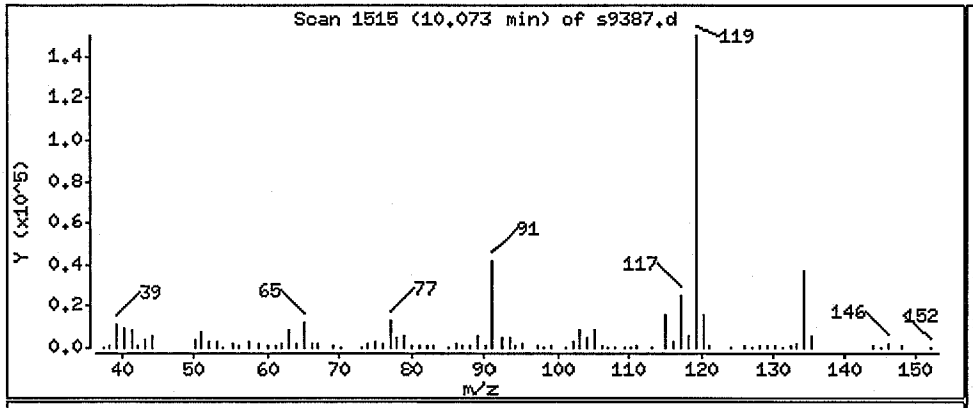
Operator: HJL

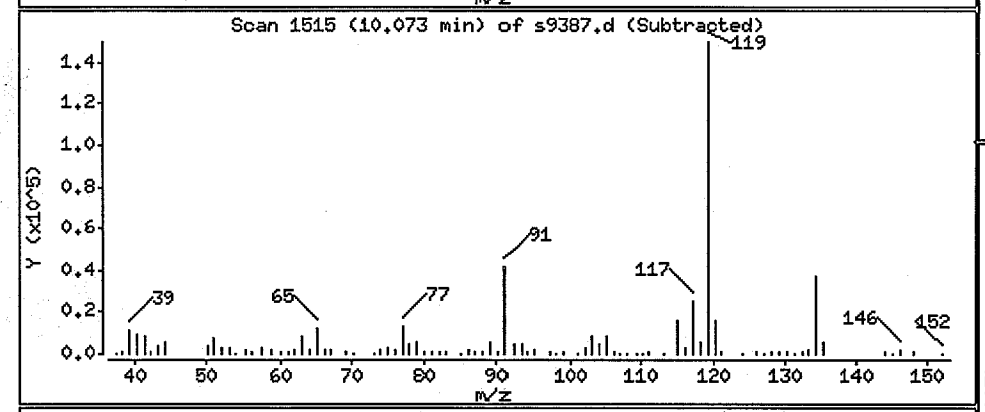
Column phase: DB-624-30M

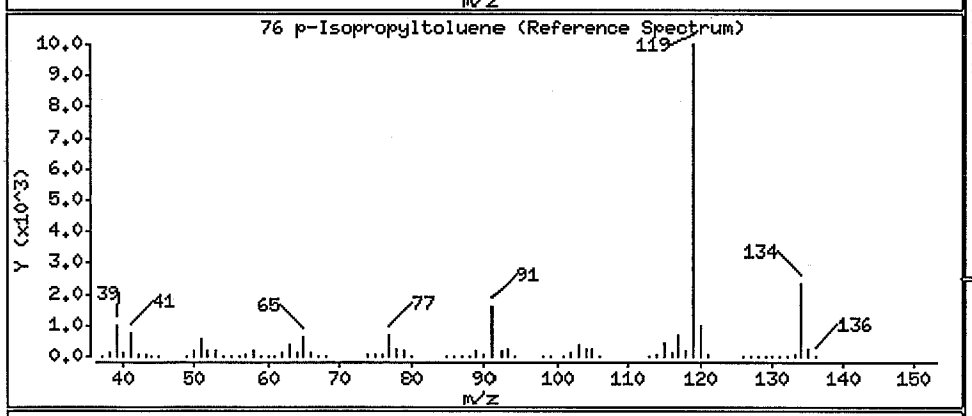
Column diameter: 0.53

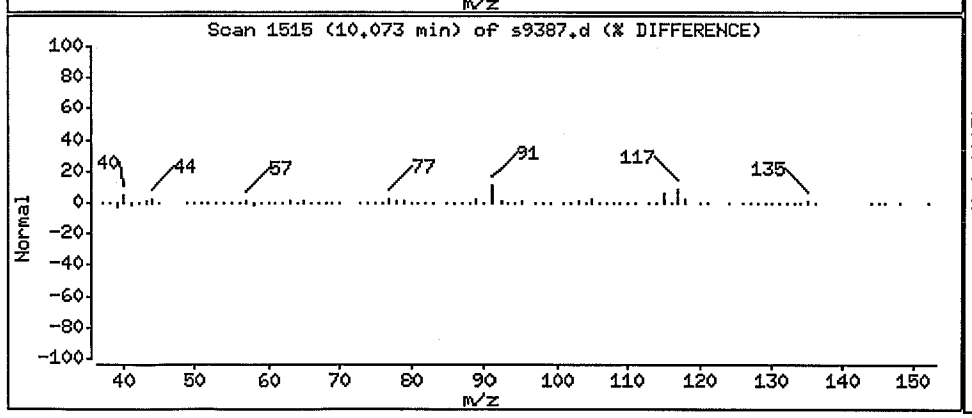
76 p-Isoprcpyltoluene

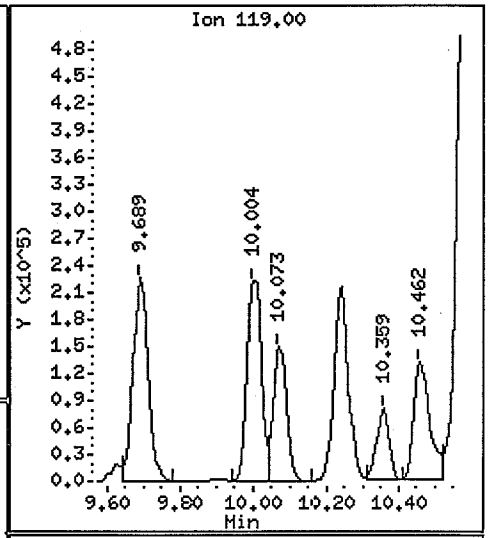
Concentration: 5.12 ug/L

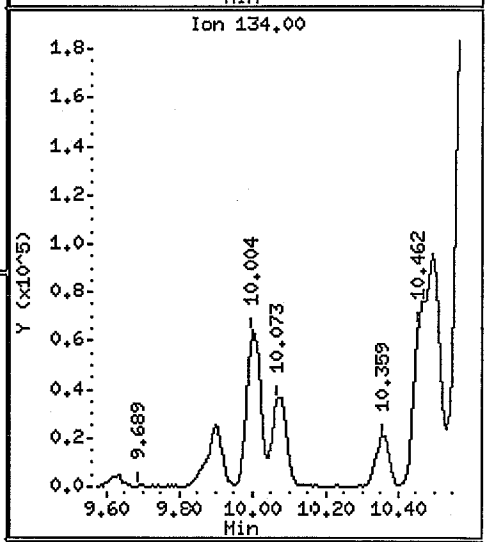


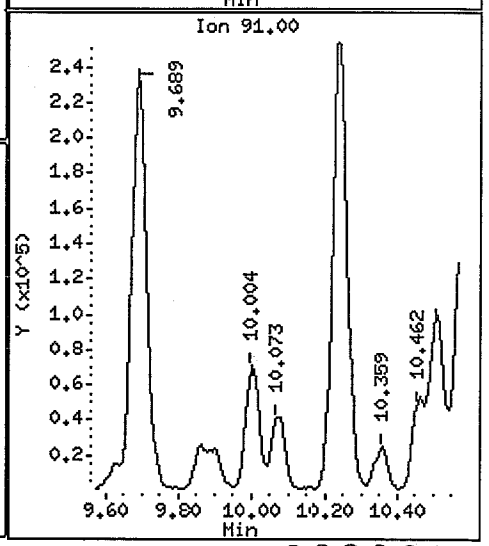












Data File: /var/chem/msv3.i/2030530.s.b/s9387.d

Date : 31-MAY-2003 08:09

Client ID: 086-CEF43-9N-Q2-03-

Instrument: msv3.i

Sample Info: 20305291104*086-CEF43-9N-Q2-03-61

Purge Volume: 5.0

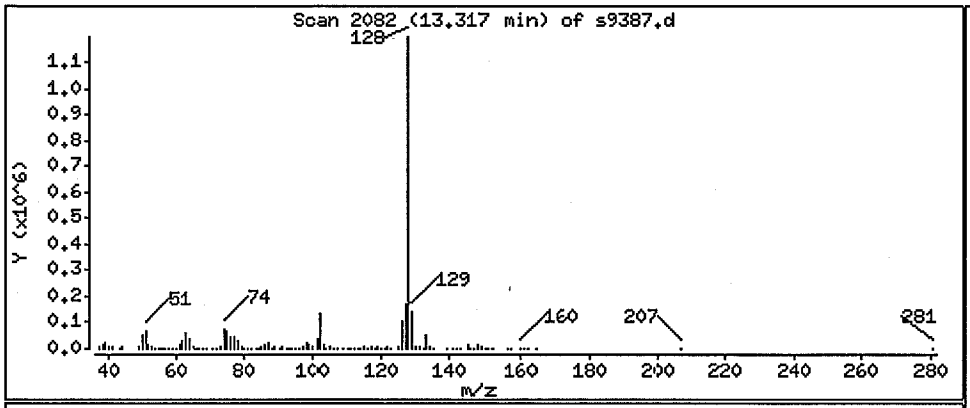
Operator: HJL

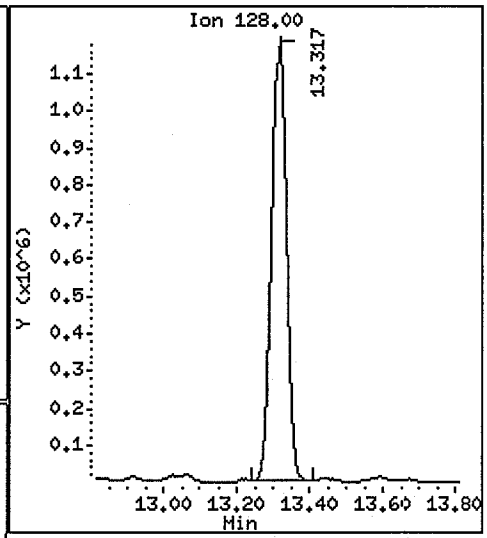
Column phase: DB-624-30M

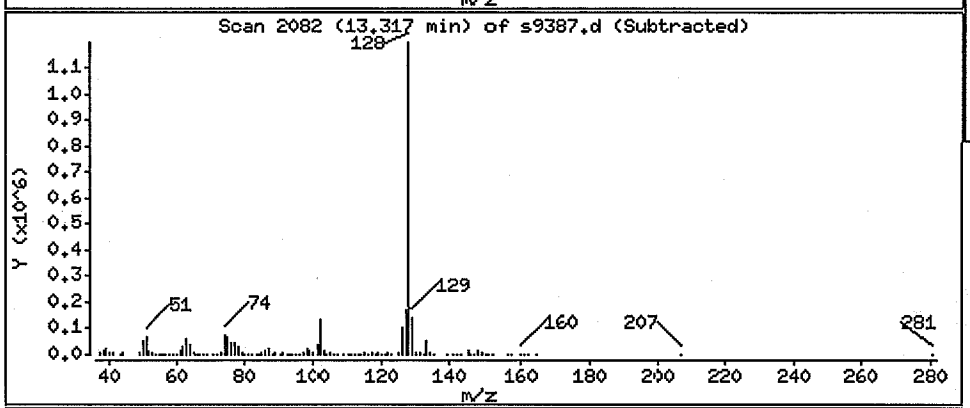
Column diameter: 0.53

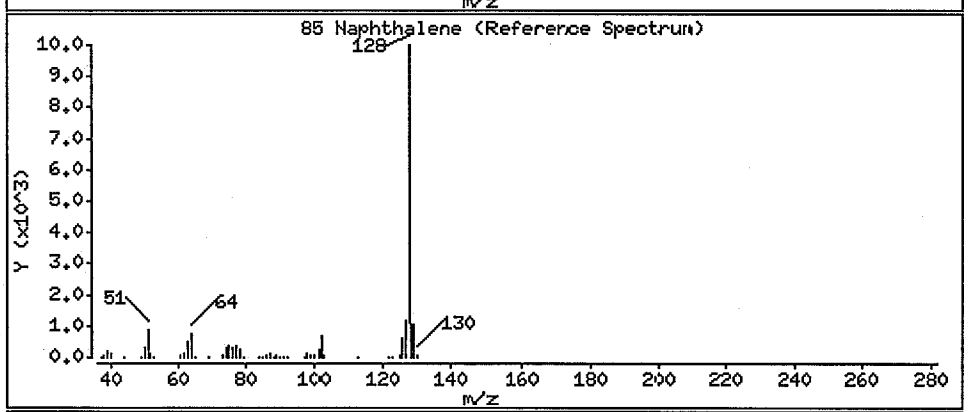
85 Naphthalene

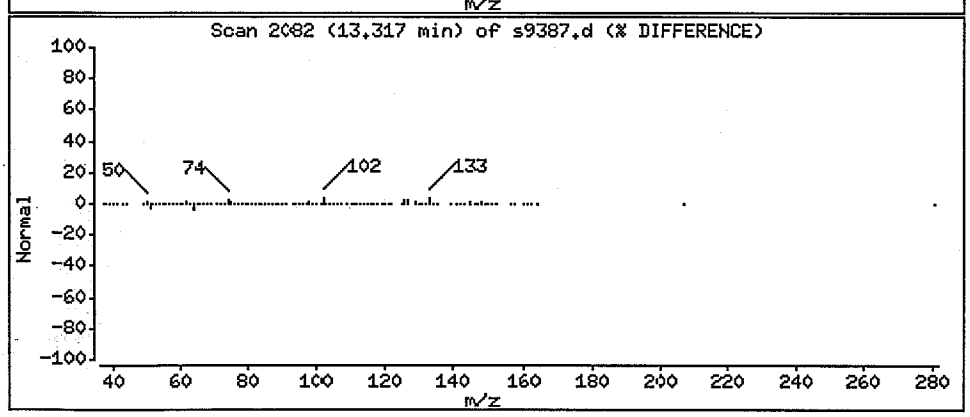
Concentration: 77.6 ug/L











Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9374.d
Lab Smp Id: 20305291105 Client Smp ID: 086-CEF43-33N-Q2-03
Inj Date : 30-MAY-2003 17:09
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291105*086-CEF43-33N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.389	3.396	(0.671)	80246	3.84735	3.85	8616(a)
$ 27 Dibromofluoromethane	111	4.574	4.580	(0.906)	616534	32.2780	32.3	1180
$ 32 1,2-Dichloroethane-d4	67	4.820	4.820	(0.955)	356068	30.5257	30.5	8182
* 35 FLUOROBENZENE	96	5.049	5.055	(1.000)	1781389	30.0000		9173
$ 44 Toluene-d8	98	6.227	6.222	(0.828)	1628982	34.1677	34.2	8625(R)
* 54 CHLOROBENZENE-d5	82	7.520	7.521	(1.000)	646458	30.0000		8899
$ 64 Bromofluorobenzene	174	8.745	8.740	(1.163)	530725	27.8284	27.8	8613
* 78 1,4-DICHLOROBENZENE-D4	152	10.152	10.153	(1.000)	616885	30.0000		9491

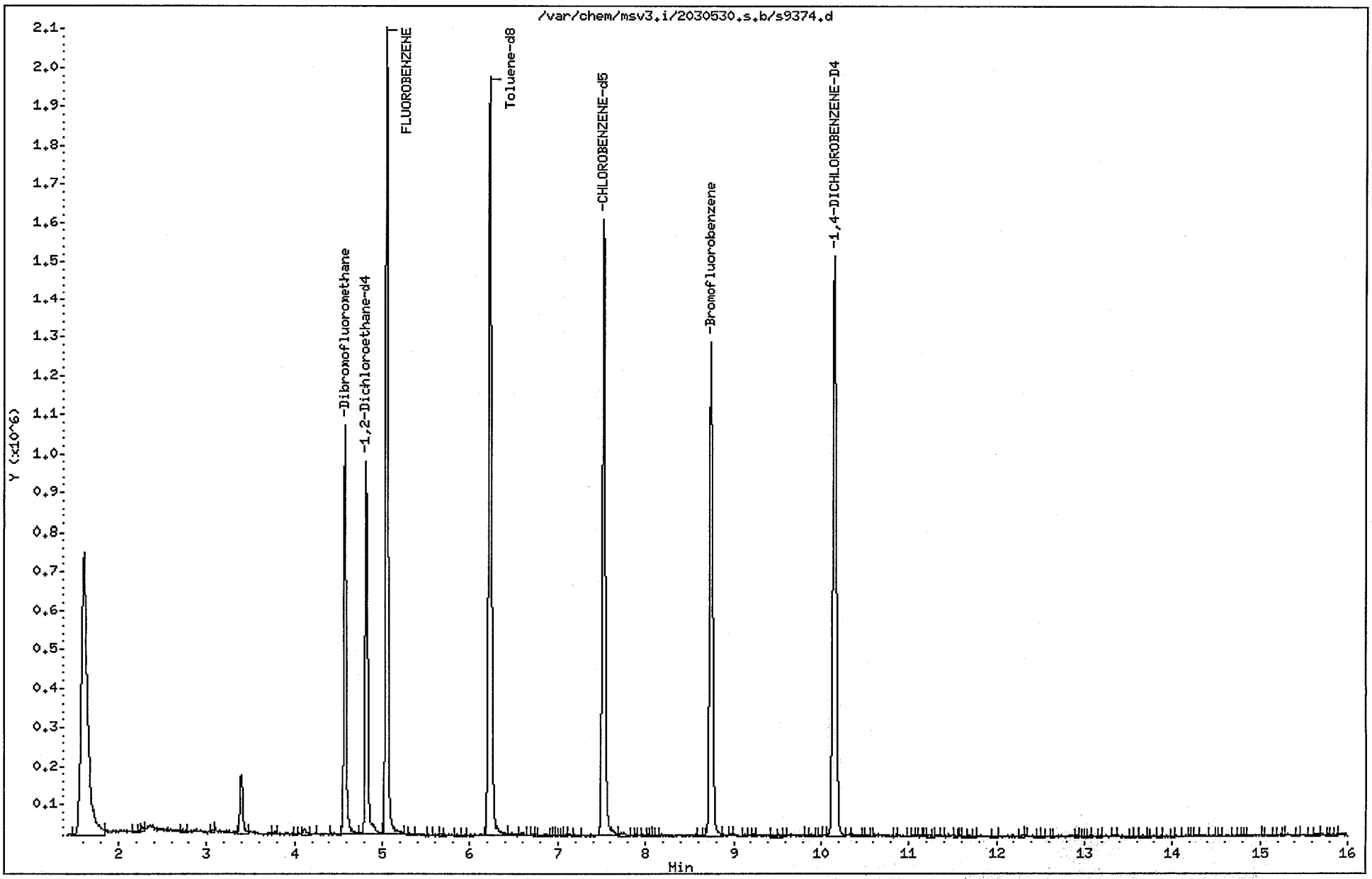
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

000066

Data File: /var/chem/msv3.i/2030530.s.b/s9374.d
Date : 30-MAY-2003 17:09
Client ID: 086-CEF43-33N-Q2-03
Sample Info: 20305291105*086-CEF43-33N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/20305 30.s.b/s9374.d

Date : 30-MAY-2003 17:09

Client ID: 086-CEF43-33N-Q2-03

Instrument: msv3.i

Sample Info: 20305291105*086-CEF43-33N-Q2-03-61

Purge Volume: 5.0

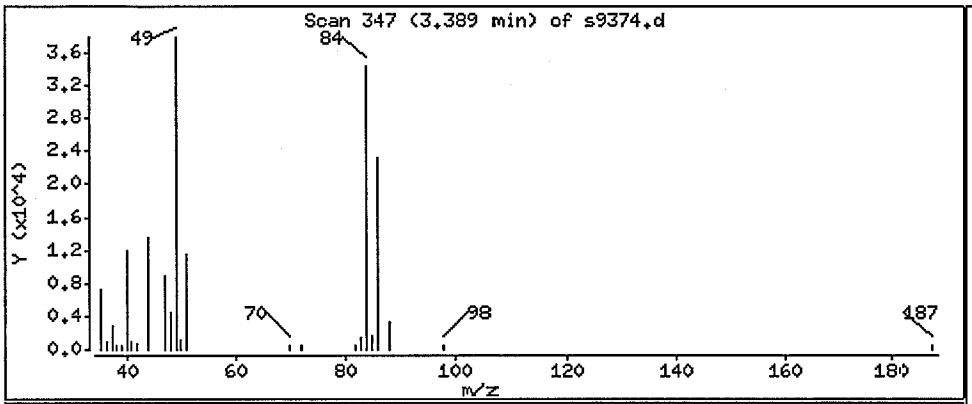
Operator: RJO

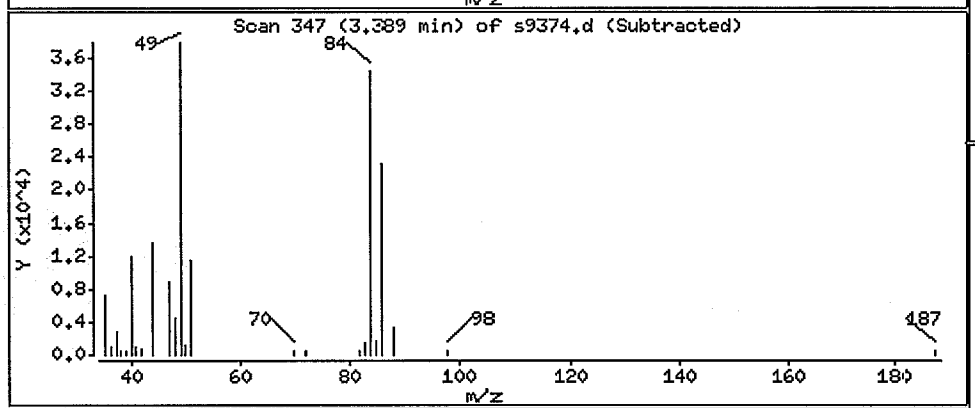
Column phase: DB-624-30M

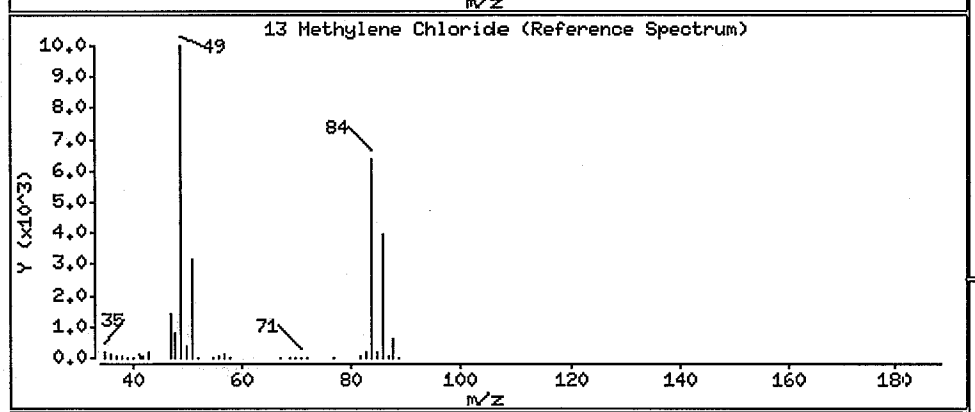
Column diameter: 0.53

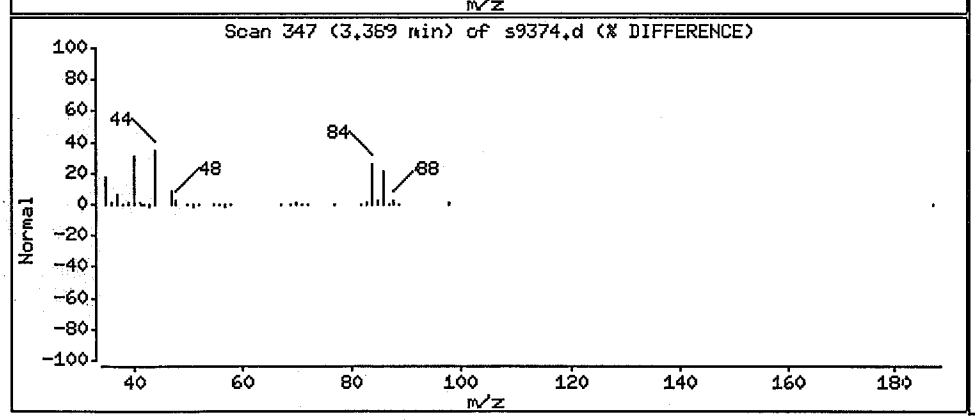
13 Methylene Chloride

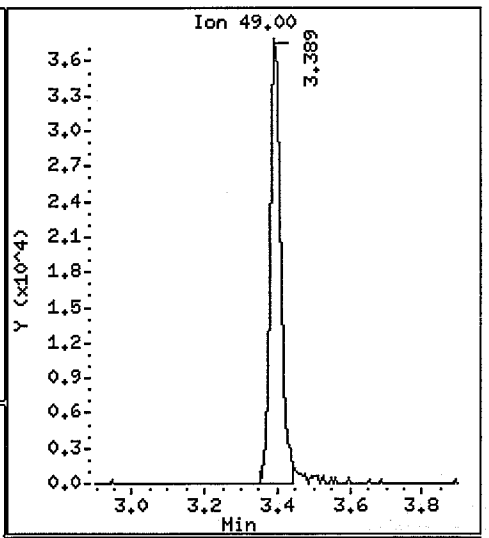
Concentration: 3.85 ug/L

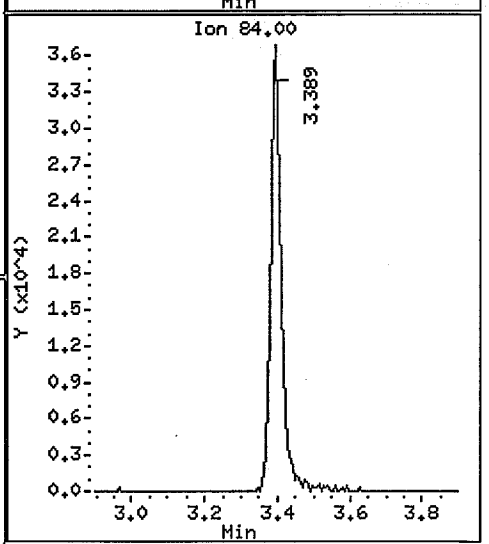


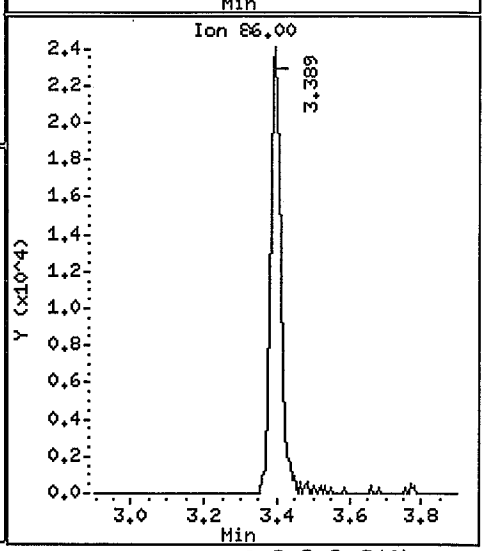












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9385.d
Lab Smp Id: 20305291109 Client Smp ID: 086-CEF43-38N-Q2-03
Inj Date : 30-MAY-2003 20:38
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291109*086-CEF43-38N-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.411	3.396	(0.674)	35124	1.52657	1.53	8679(a)
$ 27 Dibromofluoromethane	111	4.589	4.580	(0.907)	670095	31.8025	31.8	1155
$ 32 1,2-Dichloroethane-d4	67	4.830	4.820	(0.955)	399380	31.0380	31.0	8090
* 35 FLUOROBENZENE	96	5.059	5.055	(1.000)	1965096	30.0000		9257
$ 44 Toluene-d8	98	6.232	6.222	(0.828)	1644260	29.9780	30.0	8755
* 54 CHLOROBENZENE-d5	82	7.530	7.521	(1.000)	743717	30.0000		8836
$ 64 Bromofluorobenzene	174	8.749	8.740	(1.162)	637843	29.0714	29.1	8741
* 78 1,4-DICHLOROBENZENE-D4	152	10.162	10.153	(1.000)	748115	30.0000		9522
85 Naphthalene	128	13.315	13.311	(1.310)	44210	1.09851	1.10	7243(a)

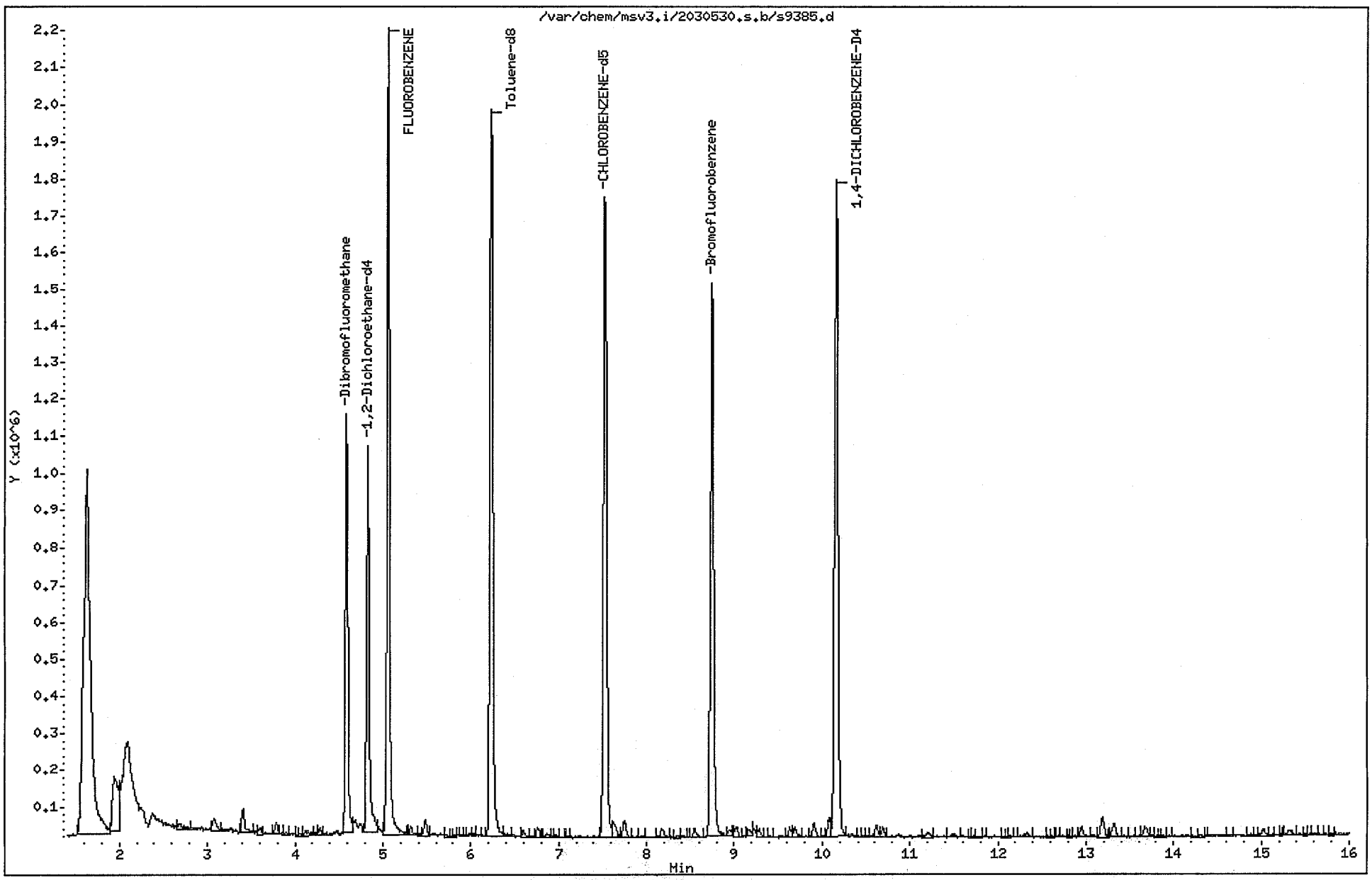
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

000069

Data File: /var/chem/msv3.i/2030530.s.b/s9385.d
Date : 30-MAY-2003 20:38
Client ID: 086-CEF43-38N-Q2-03
Sample Info: 20305291109*086-CEF43-38N-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9385.d

Date : 30-MAY-2003 20:38

Client ID: 086-CEF43-38N-Q2-03

Instrument: msv3.i

Sample Info: 20305291109*086-CEF43-38N-Q2-03-61

Purge Volume: 5.0

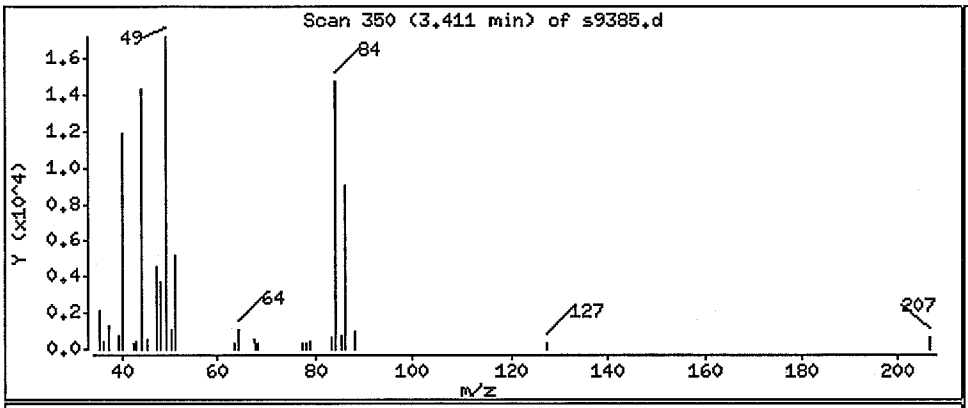
Operator: RJO

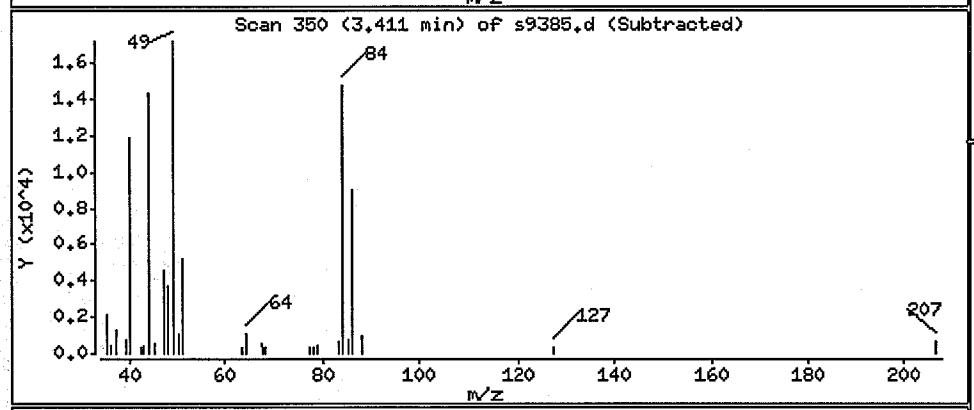
Column phase: DB-624-30M

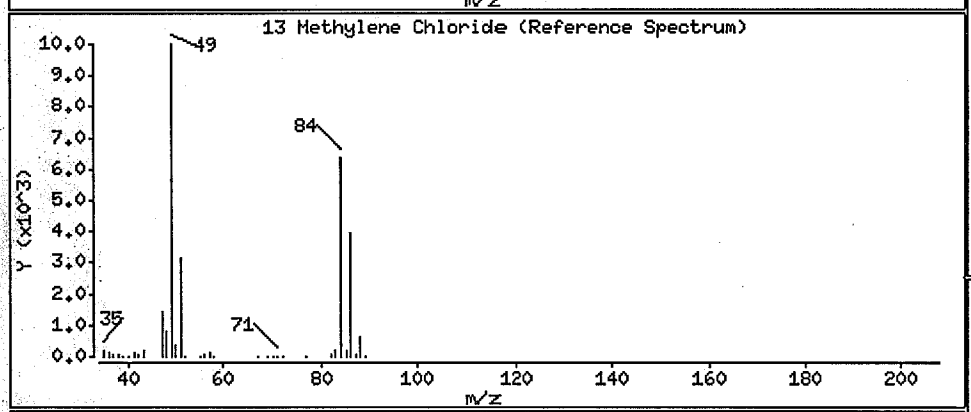
Column diameter: 0.53

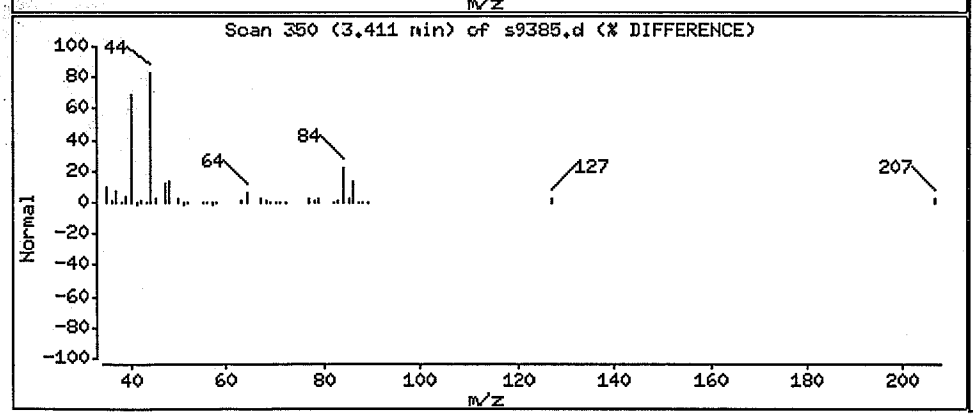
13 Methylene Chloride

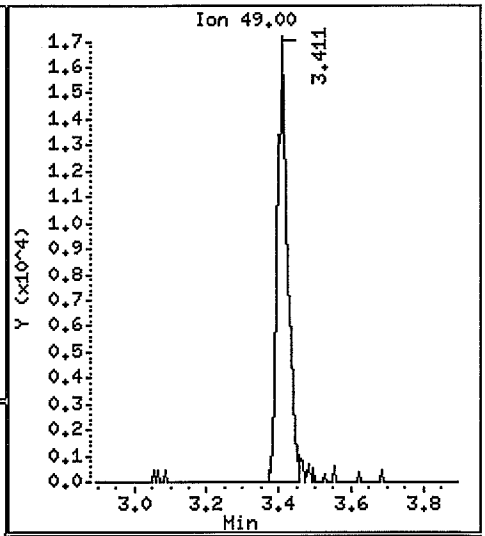
Concentration: 1.53 ug/L

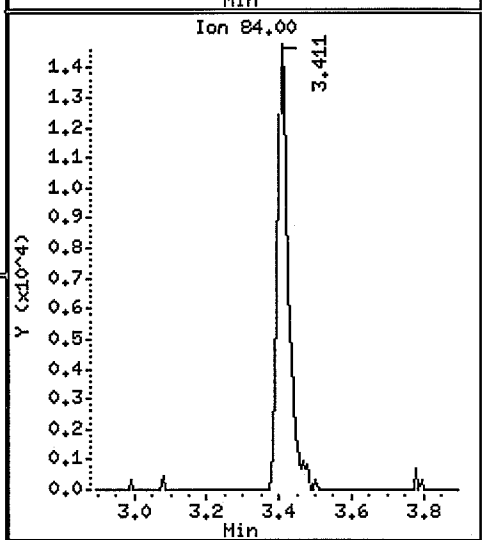


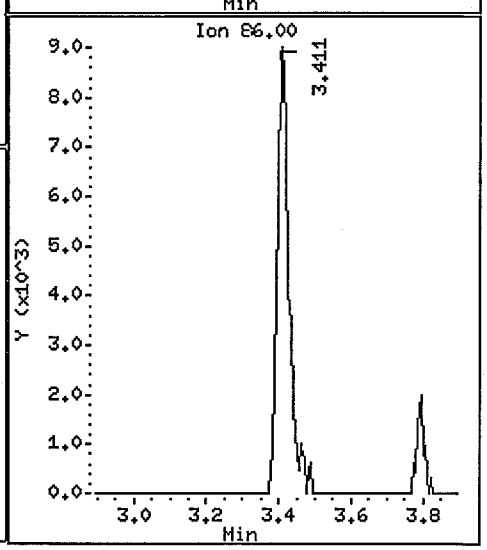












Data File: /var/chem/msv3.i/2030530.s.b/s9385.d

Date : 30-MAY-2003 20:38

Client ID: 086-CEF43-38N-Q2-03

Instrument: msv3.i

Sample Info: 20305291109*086-CEF43-38N-Q2-03-61

Purge Volume: 5.0

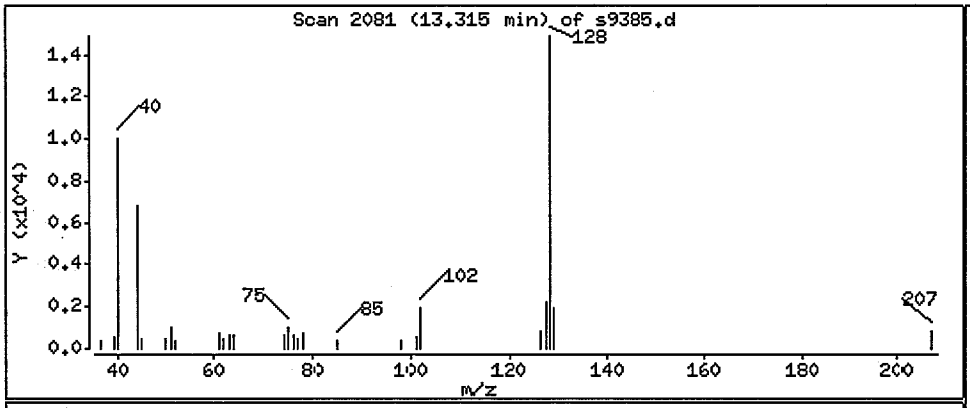
Operator: RJO

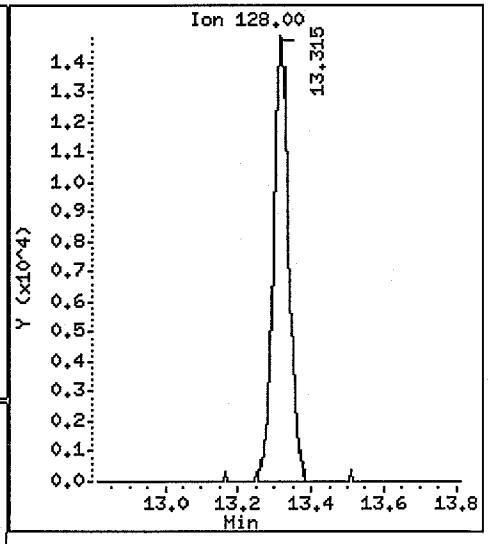
Column phase: DB-624-30M

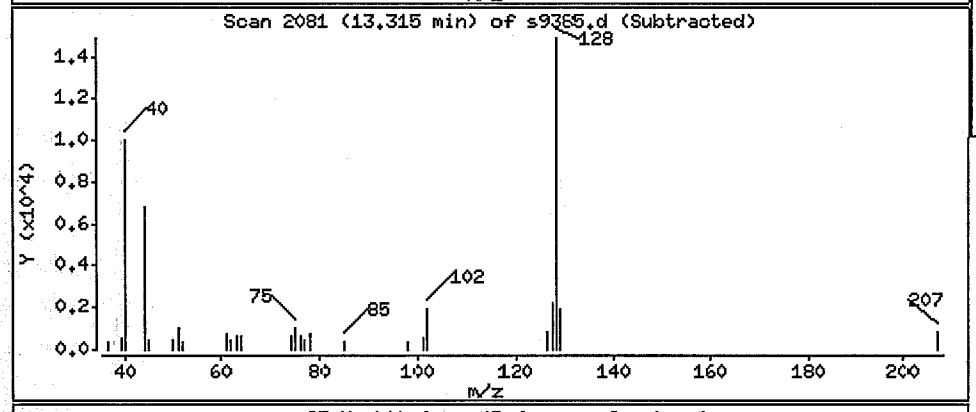
Column diameter: 0.53

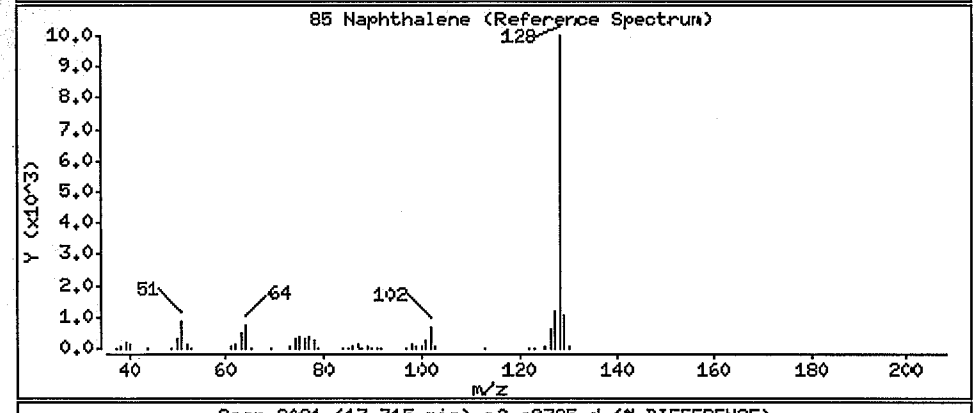
85 Naphthalene

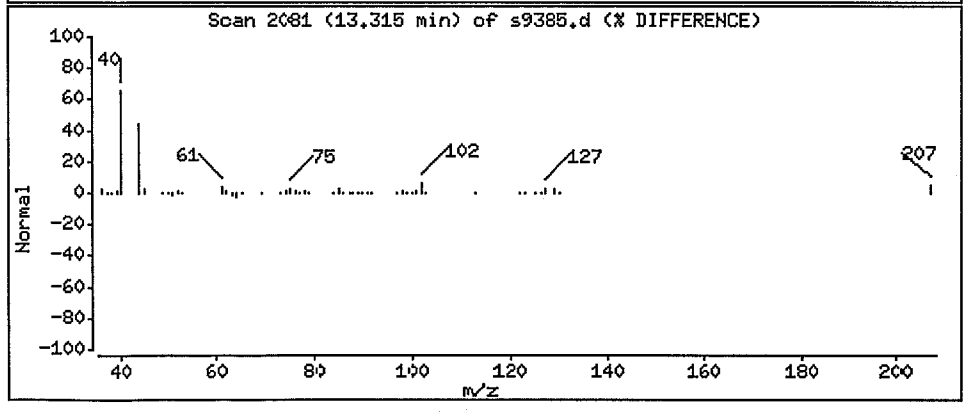
Concentration: 1.10 ug/L











Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9386.d
Lab Smp Id: 20305291110 Client Smp ID: 086-DUP-Q2-03-61
Inj Date : 30-MAY-2003 20:59
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291110*086-DUP-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.400	3.396	(0.672)	31186	1.40385	1.40	6356 (a)
$ 27 Dibromofluoromethane	111	4.585	4.580	(0.906)	642129	31.5642	31.6	1288
$ 32 1,2-Dichloroethane-d4	67	4.825	4.820	(0.954)	364968	29.3772	29.4	8267
* 35 FLUOROBENZENE	96	5.059	5.055	(1.000)	1897298	30.0000		9174
$ 44 Toluene-d8	98	6.227	6.222	(0.827)	1524041	28.4848	28.5	8777
* 54 CHLOROBENZENE-d5	82	7.526	7.521	(1.000)	725477	30.0000		8800
58 p,m-Xylene	106	7.749	7.744	(1.030)	48100	1.90140	1.90	(aH)
59 o-Xylene	106	8.172	8.168	(1.086)	38476	1.56461	1.56	(a)
M 61 TOTAL XYLENE	106				86576	3.46601	3.47	0 (a)
63 Isopropylbenzene	105	8.550	8.551	(1.136)	112301	1.59080	1.59	8694 (aH)
$ 64 Bromofluorobenzene	174	8.750	8.740	(1.163)	621129	29.0213	29.0	8771
74 1,3,5-Trimethylbenzene	105	9.694	9.684	(0.955)	136173	2.21360	2.21	8555 (a)
* 78 1,4-DICHLOROBENZENE-D4	152	10.152	10.153	(1.000)	717021	30.0000		9526

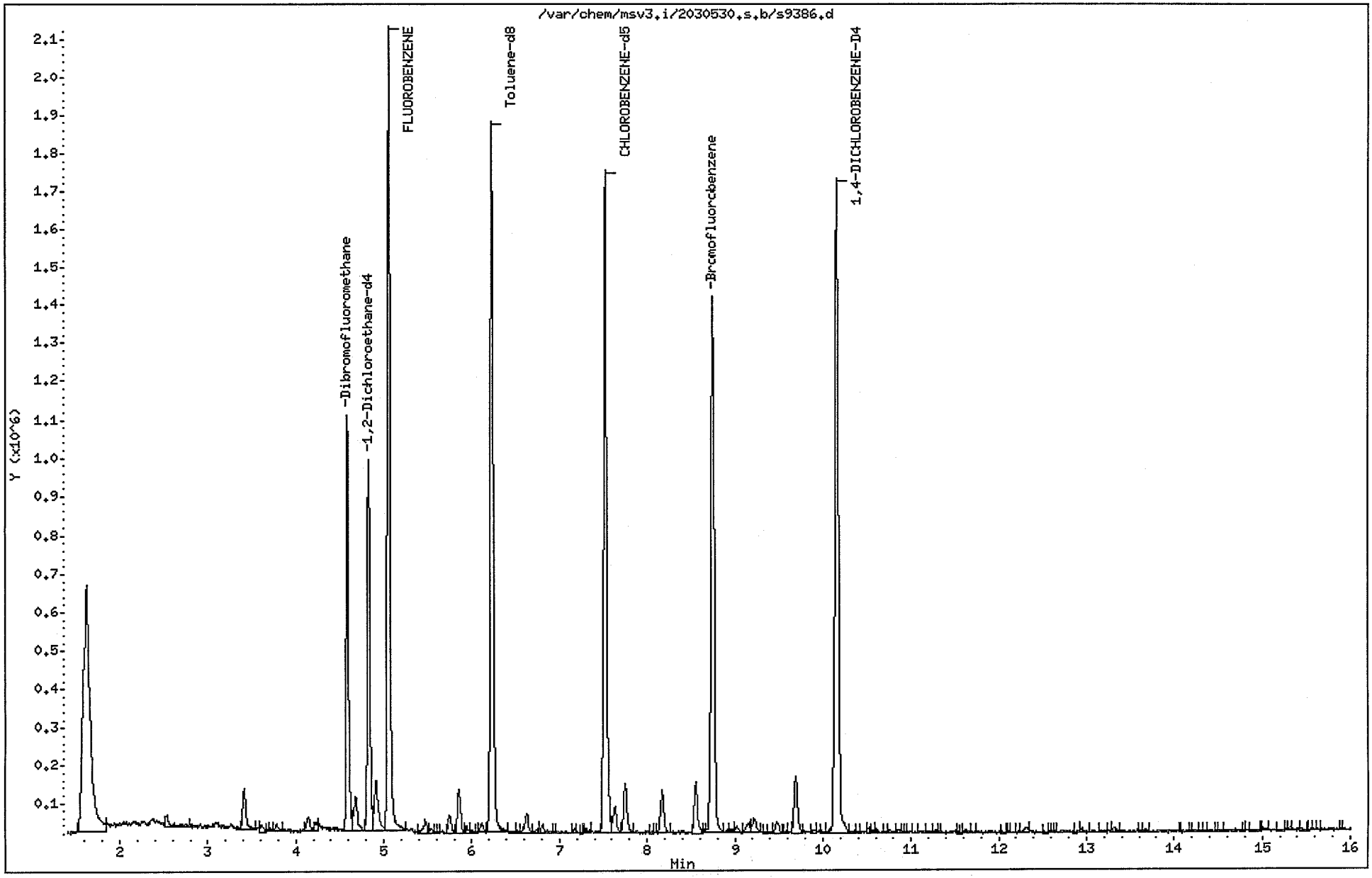
QC Flag Legend

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

000074

Data File: /var/chem/msv3.i/2030530.s.b/s9386.d
Date : 30-MAY-2003 20:59
Client ID: 086-DUP-Q2-03-61
Sample Info: 20305291110*086-DUP-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9386.d

Date : 30-MAY-2003 20:59

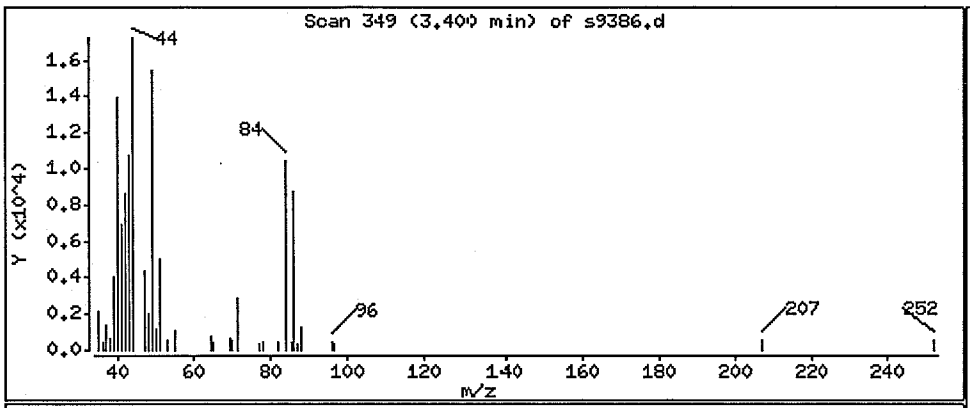
Client ID: 086-DUP-Q2-03-61 Instrument: msv3.i

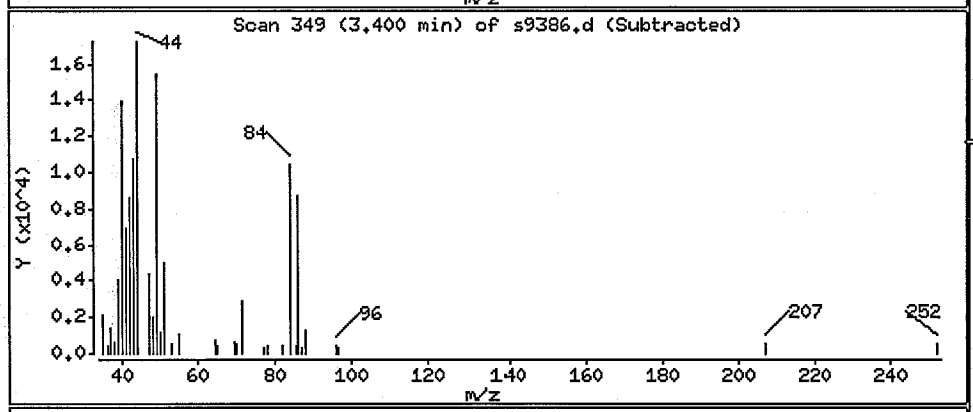
Sample Info: 20305291110*086-DUP-Q2-03-61

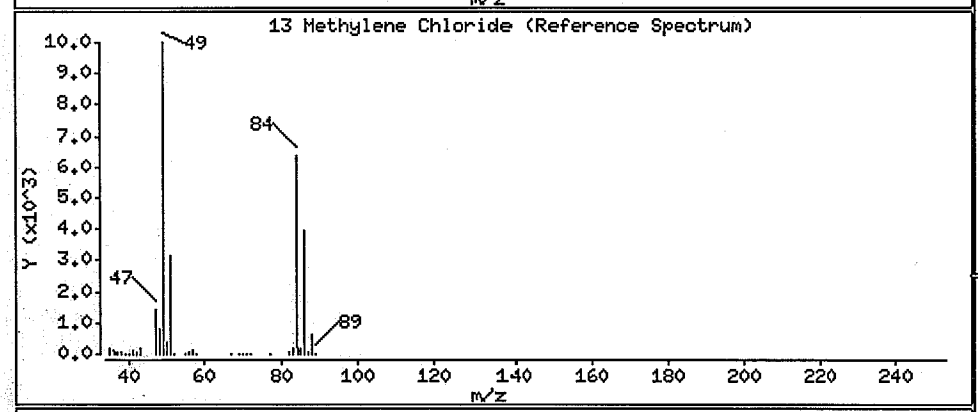
Purge Volume: 5.0 Operator: RJO

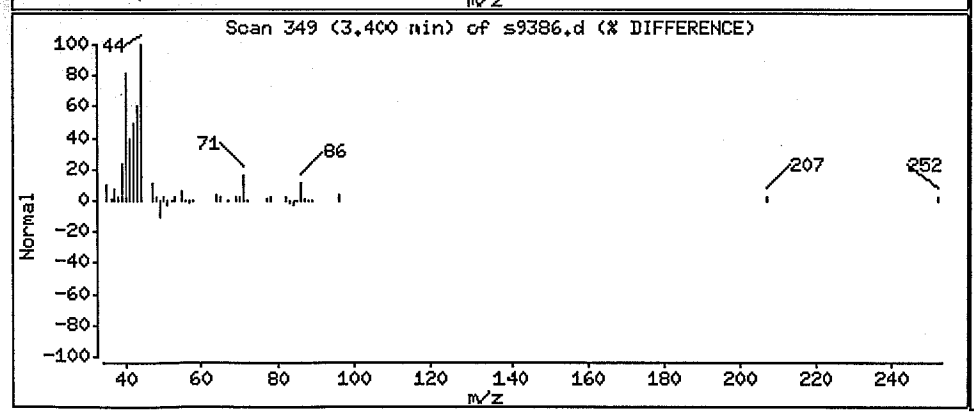
Column phase: DB-624-30M Column diameter: 0.53

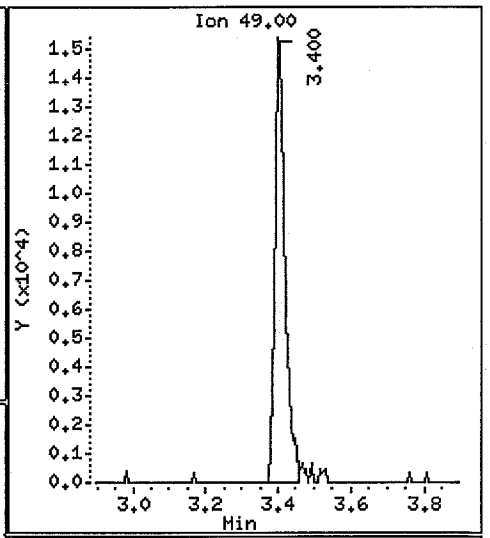
13 Methylene Chloride Concentration: 1.40 ug/L

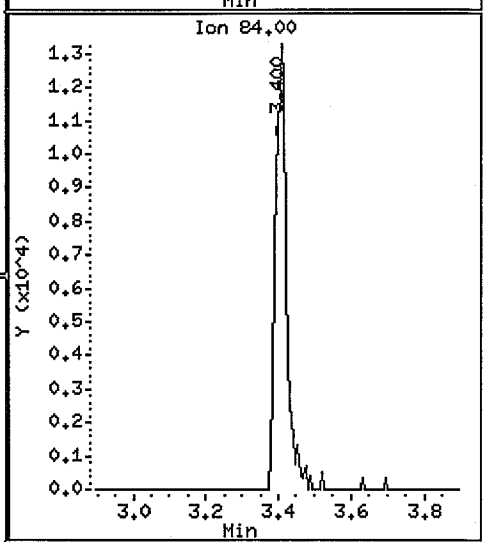


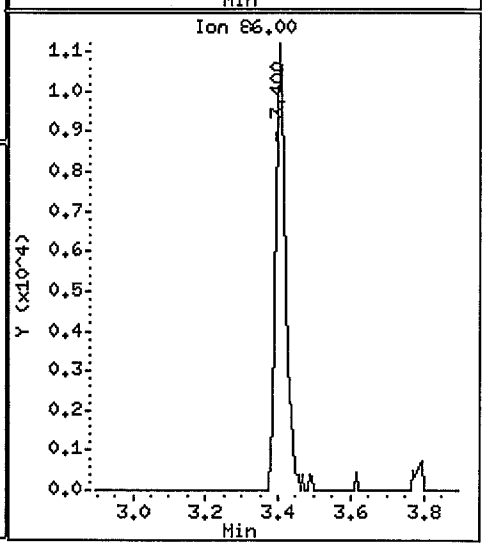












Data File: /var/chem/msv3.i/2030530.s.b/s9386.d

Date : 30-MAY-2003 20:59

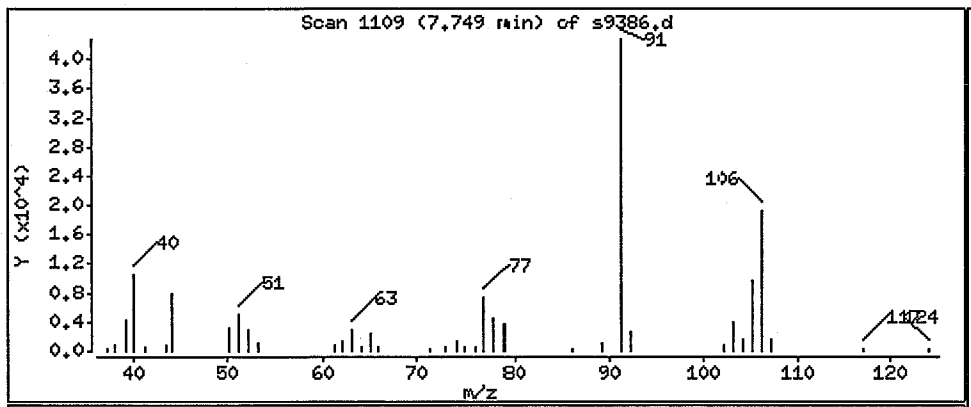
Client ID: 086-DUP-Q2-03-61 Instrument: msv3.i

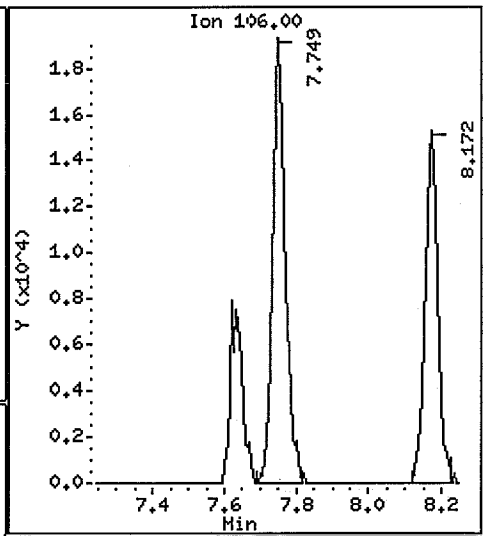
Sample Info: 20305291110*086-DUP-Q2-03-61

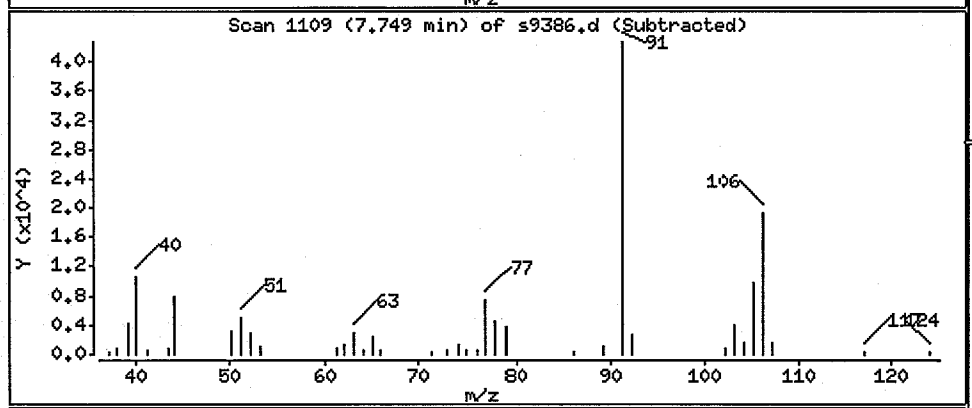
Purge Volume: 5.0 Operator: RJO

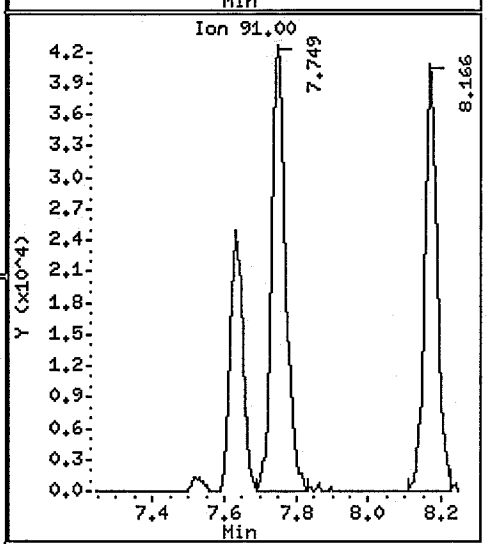
Column phase: DB-624-30M Column diameter: 0.53

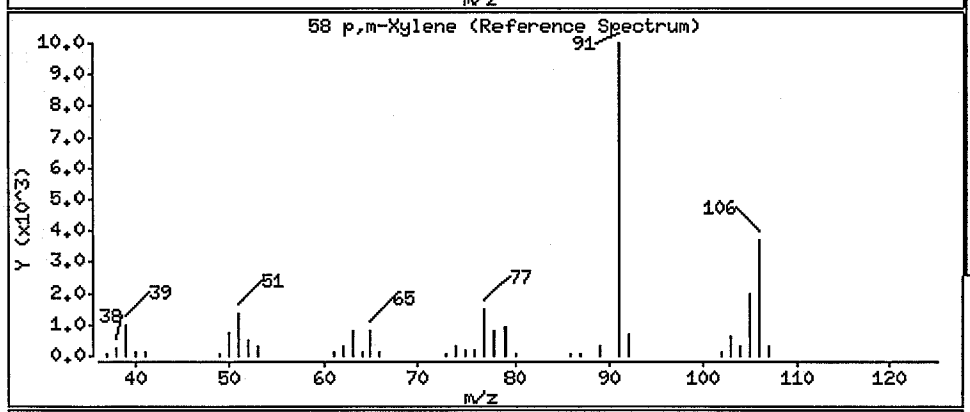
58 p,m-Xylene Concentration: 1.90 ug/L

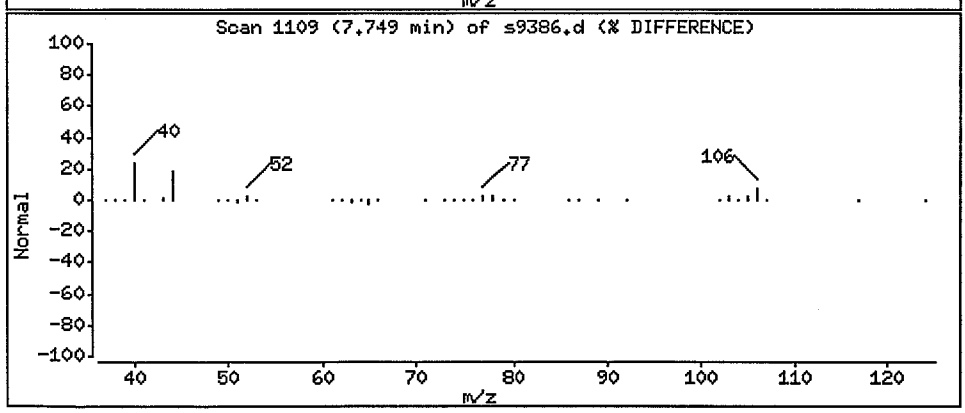












Data File: /var/chem/msv3.i/2030530.s.b/s9386.d

Date : 30-MAY-2003 20:59

Client ID: 086-DUP-Q2-03-61

Instrument: msv3.i

Sample Info: 20305291110*086-DUP-Q2-03-61

Purge Volume: 5.0

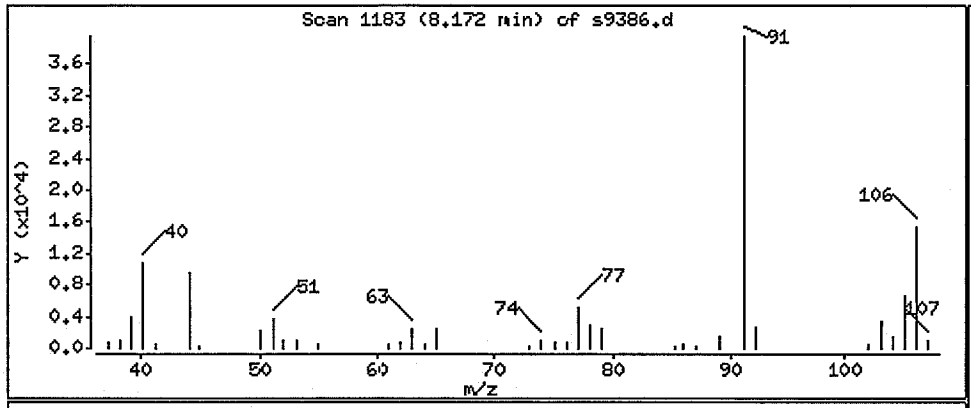
Operator: RJO

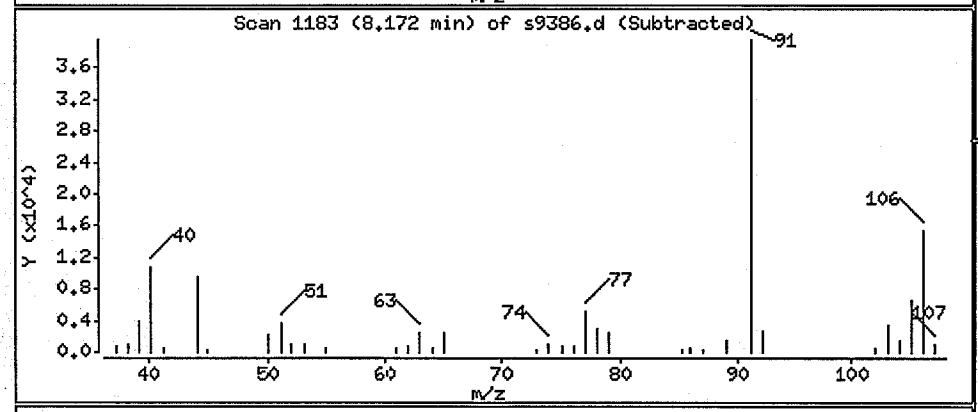
Column phase: DB-624-30M

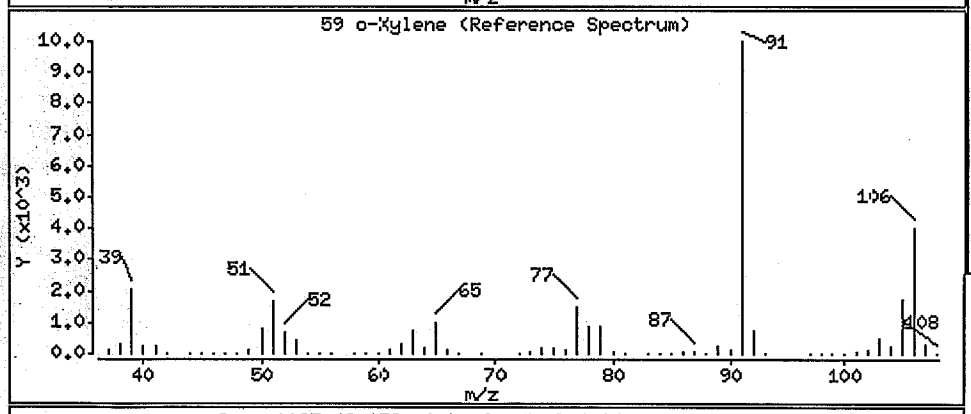
Column diameter: 0.53

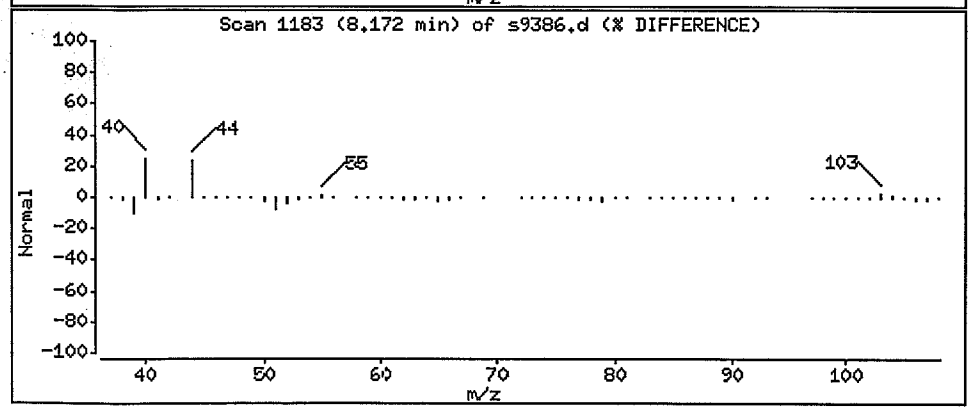
59 o-Xylene

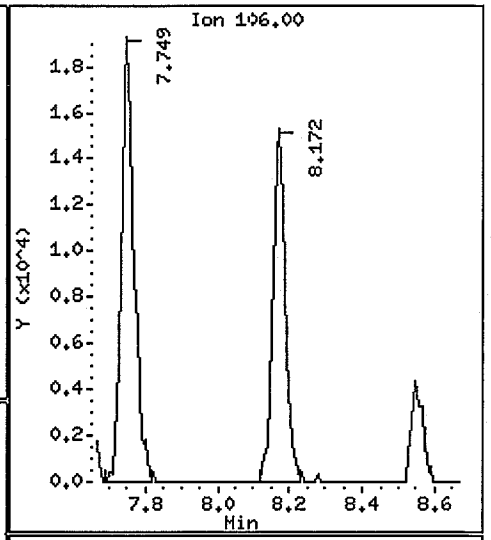
Concentration: 1.56 ug/L

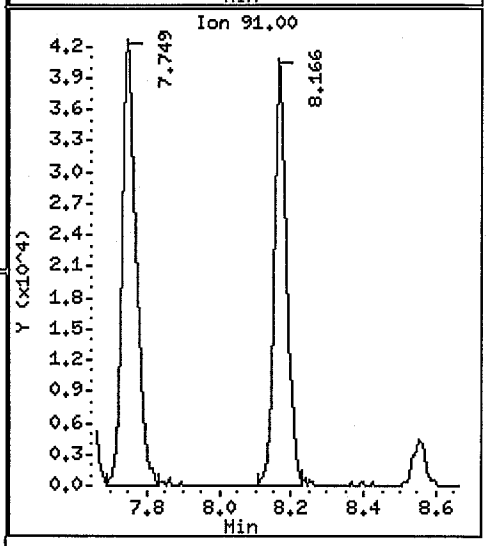












Data File: /var/chem/msv3.i/2030530.s.b/s9386.d

Date : 30-MAY-2003 20:59

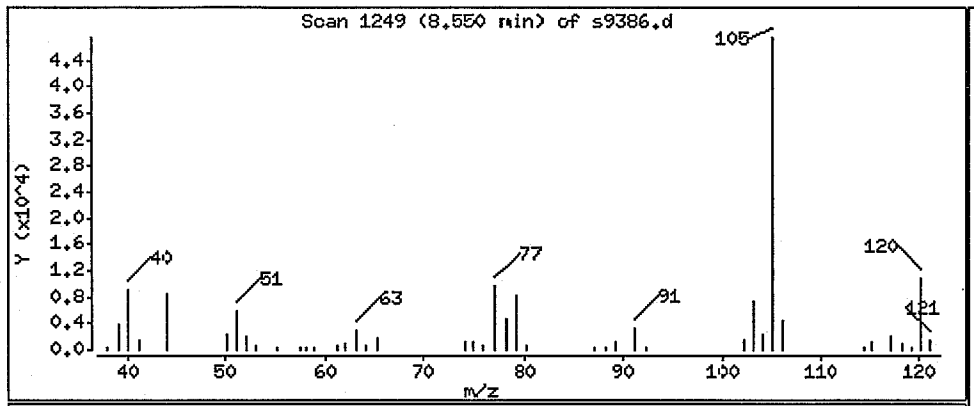
Client ID: 086-DUP-Q2-03-61 Instrument: msv3.i

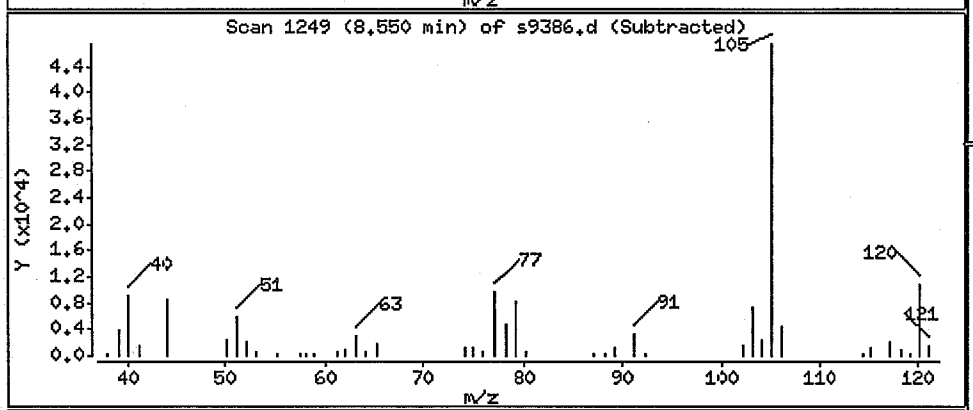
Sample Info: 20305291110*086-DUP-Q2-03-61

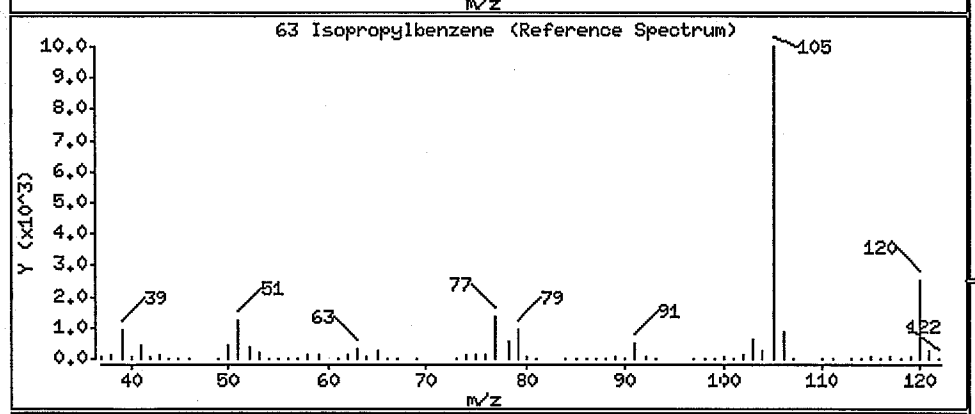
Purge Volume: 5.0 Operator: RJO

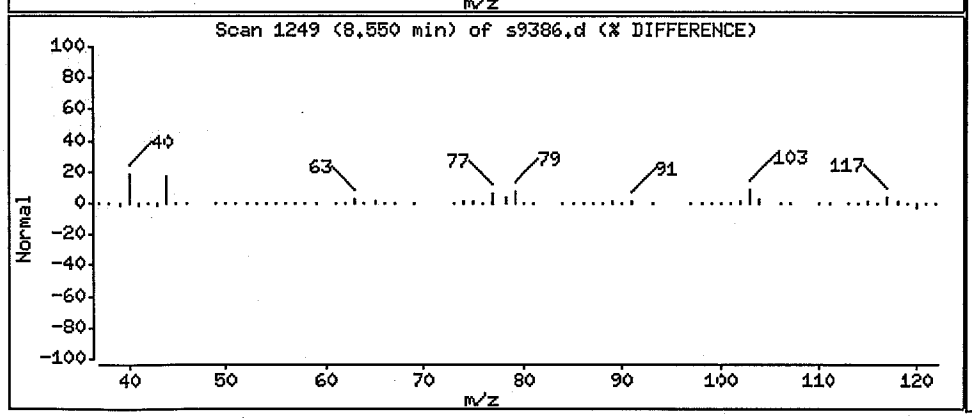
Column phase: DB-624-30M Column diameter: 0.53

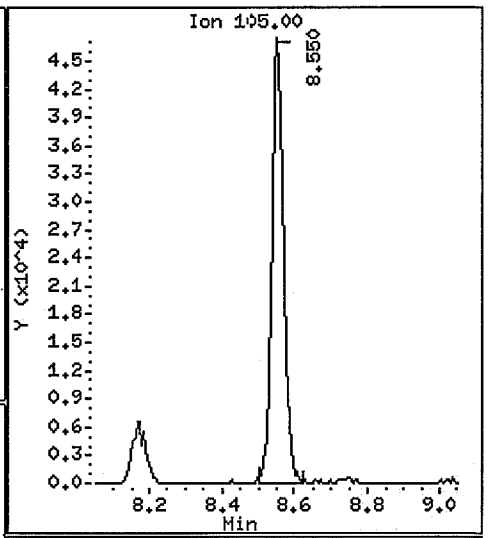
63 Isopropylbenzene Concentration: 1.59 ug/L

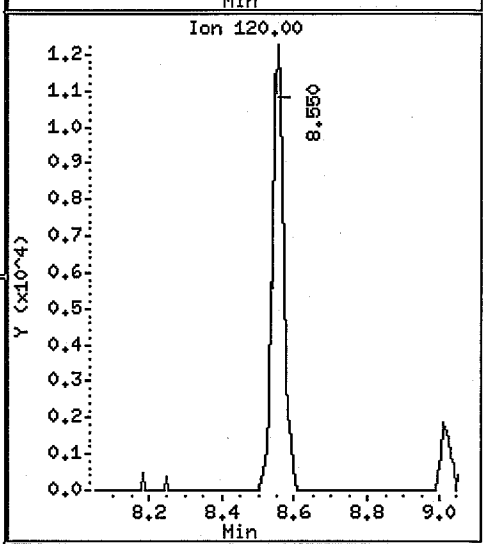


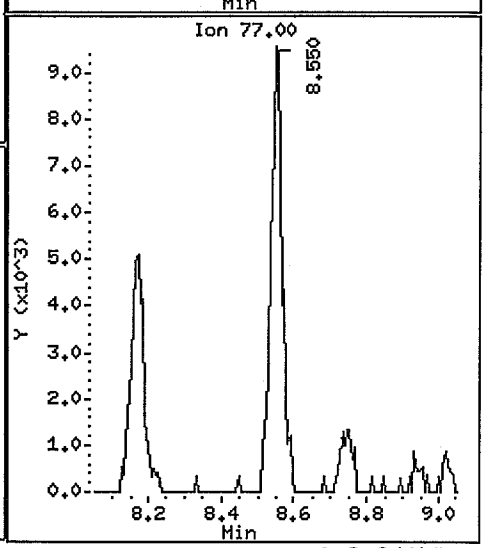












Data File: /var/chem/msv3.i/2030530.s.b/s9386.d

Date : 30-MAY-2003 20:59

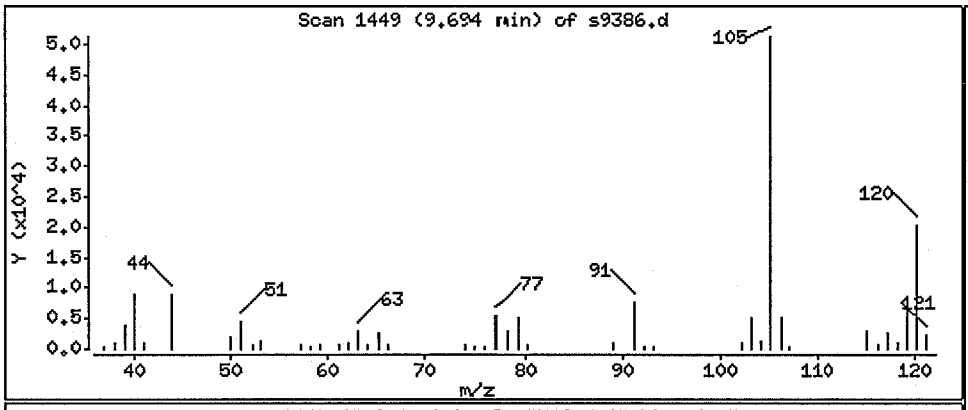
Client ID: 086-DUP-Q2-03-61 Instrument: msv3.i

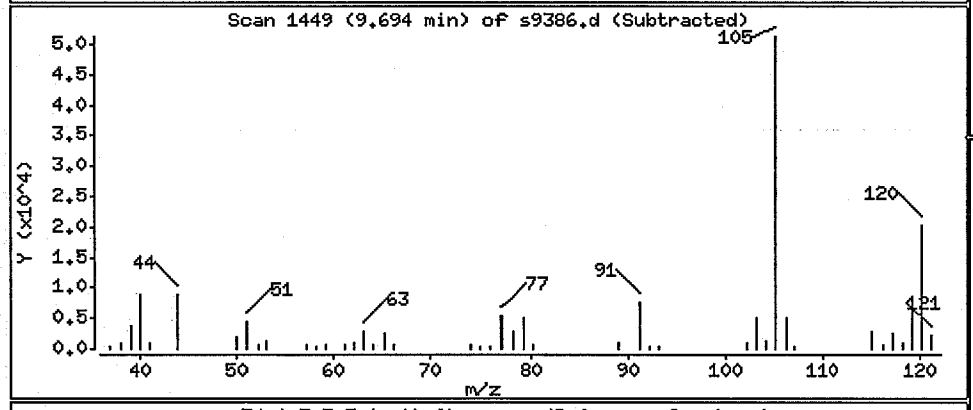
Sample Info: 20305291110*086-DUP-Q2-03-61

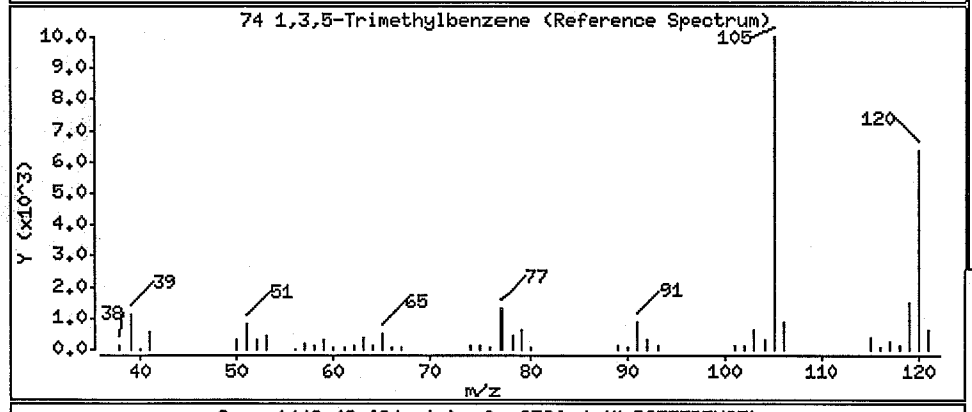
Purge Volume: 5.0 Operator: RJO

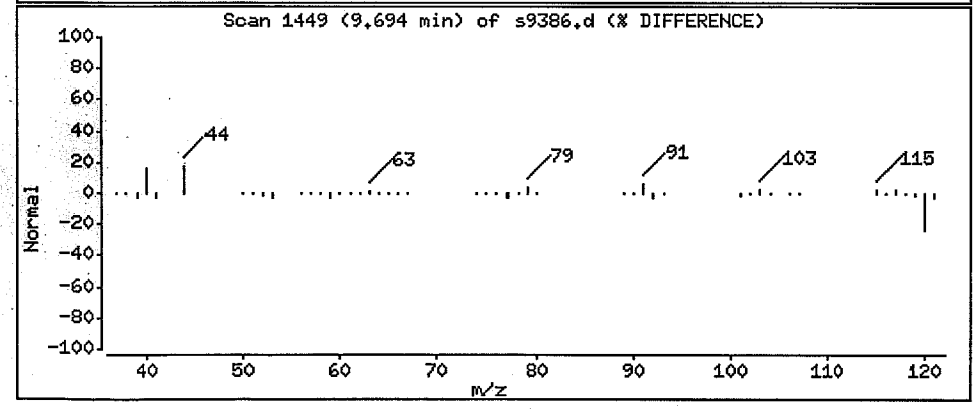
Column phase: DB-624-30M Column diameter: 0.53

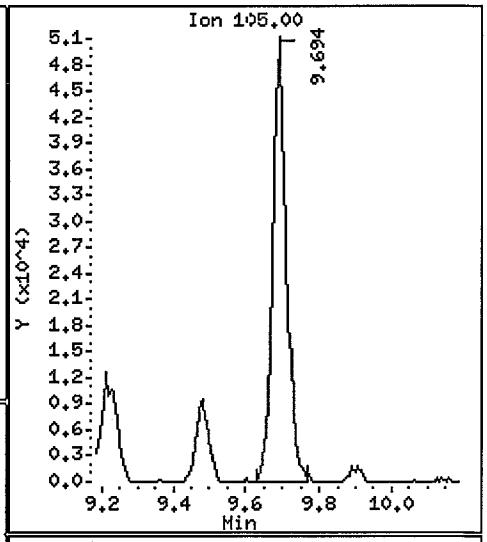
74 1,3,5-Trimethylbenzene Concentration: 2.21 ug/L

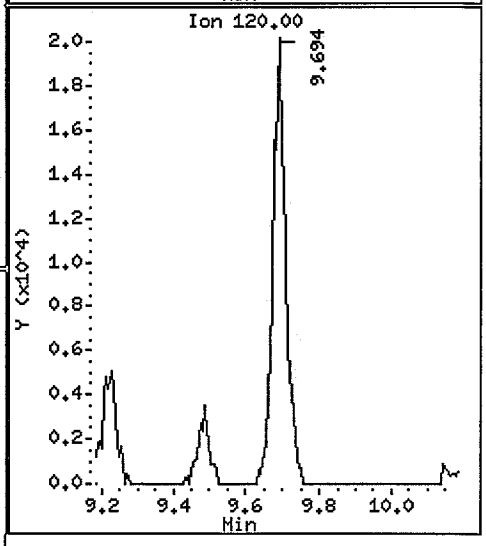












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9379.d
Lab Smp Id: 20305291111 Client Smp ID: 086-EQB-Q2-03-61
Inj Date : 30-MAY-2003 18:33
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291111*086-EQB-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.411	3.396	(0.674)	32976	1.42000	1.42	8779(a)
$ 27 Dibromofluoromethane	111	4.584	4.580	(0.906)	663599	31.2038	31.2	1522
$ 32 1,2-Dichloroethane-d4	67	4.824	4.820	(0.954)	401677	30.9286	30.9	8256
* 35 FLUOROBENZENE	96	5.059	5.055	(1.000)	1983386	30.0000		9234
$ 44 Toluene-d8	98	6.232	6.222	(0.828)	1585997	28.8796	28.9	8746
* 54 CHLOROBENZENE-d5	82	7.525	7.521	(1.000)	744648	30.0000		8895
$ 64 Bromofluorobenzene	174	8.749	8.740	(1.163)	617884	28.1265	28.1	8705
* 78 1,4-DICHLOROBENZENE-D4	152	10.157	10.153	(1.000)	719542	30.0000		9617

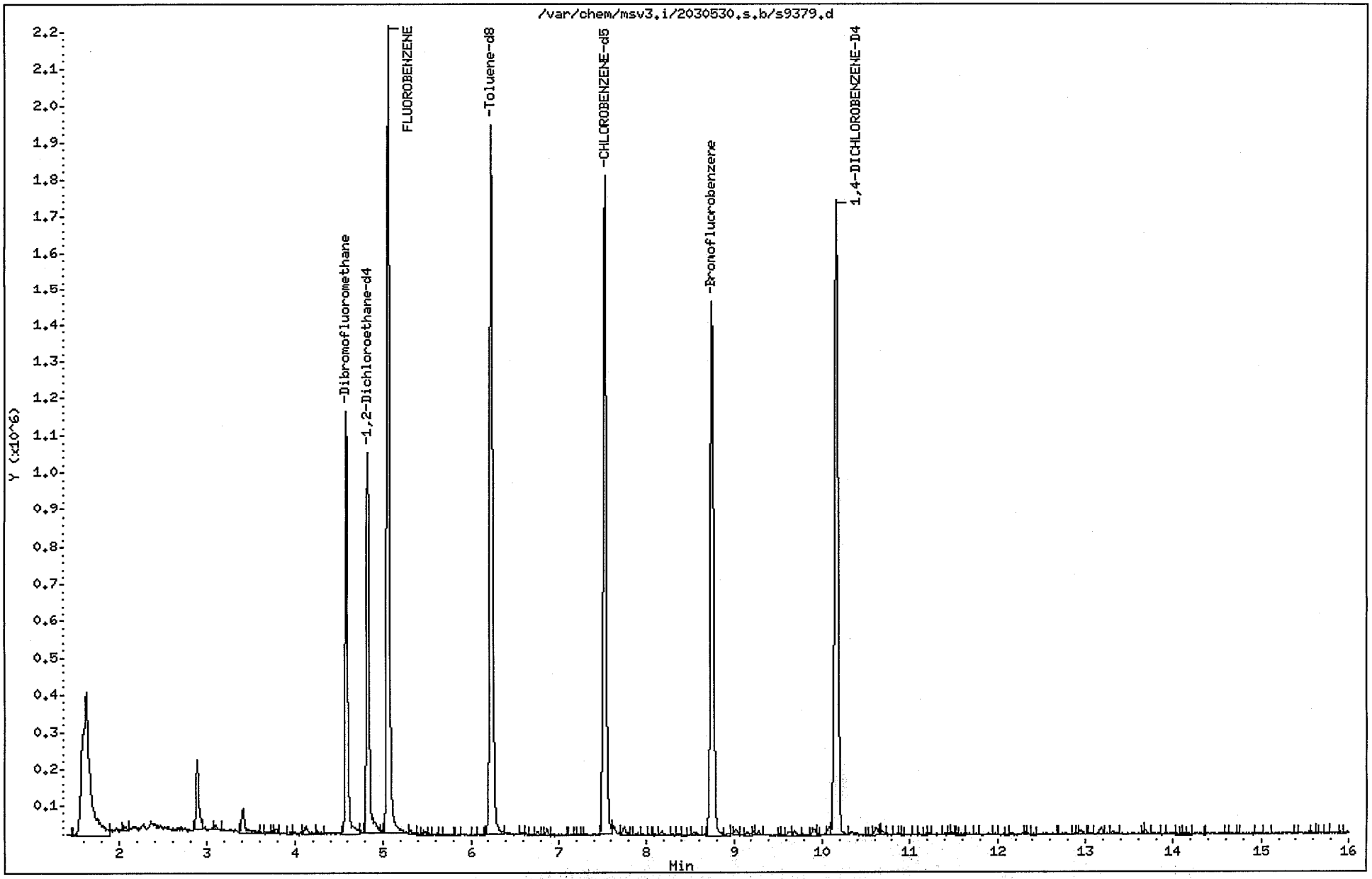
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

000081

Data File: /var/chem/msv3.i/2030530.s.b/s9379.d
Date : 30-MAY-2003 18:33
Client ID: 086-EQB-Q2-03-61
Sample Info: 20305291111*086-EQB-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9379.d

Date : 30-MAY-2003 18:33

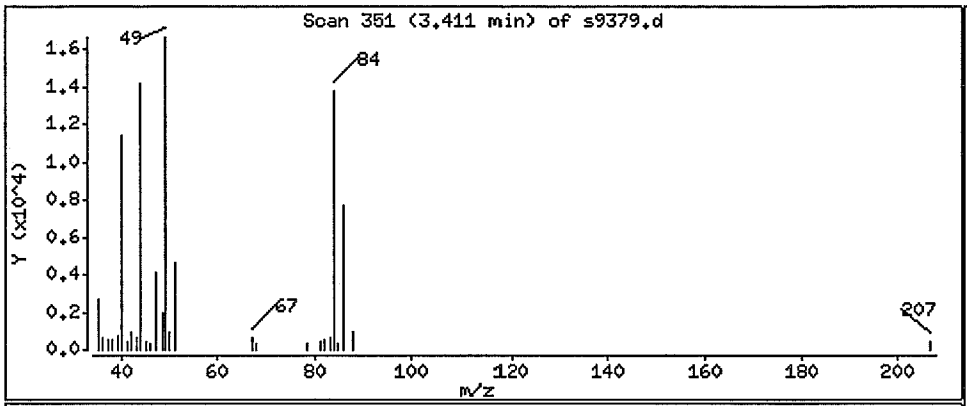
Client ID: 086-EQB-Q2-03-61 Instrument: msv3.i

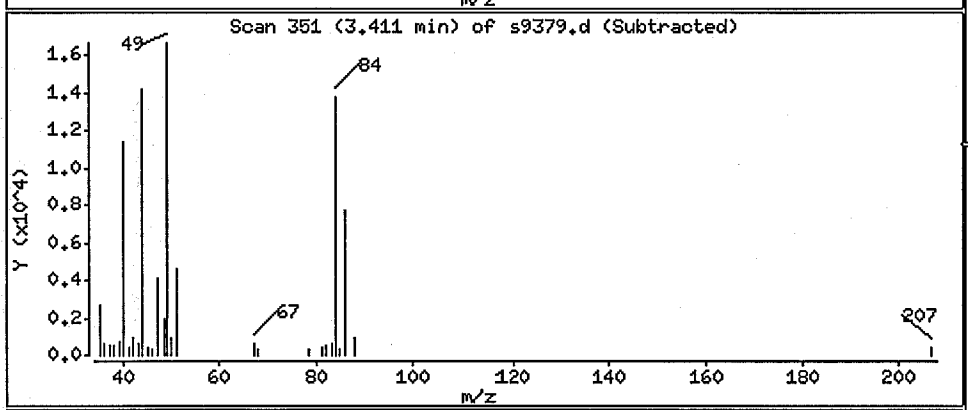
Sample Info: 20305291111*086-EQB-Q2-03-61

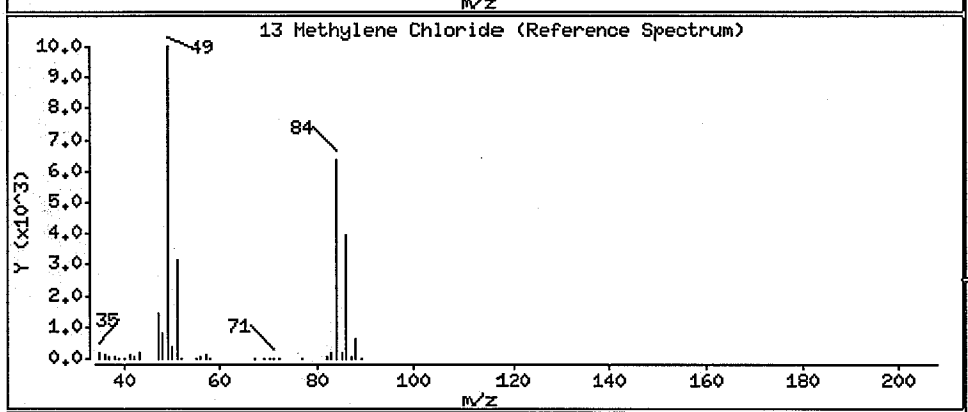
Purge Volume: 5.0 Operator: RJO

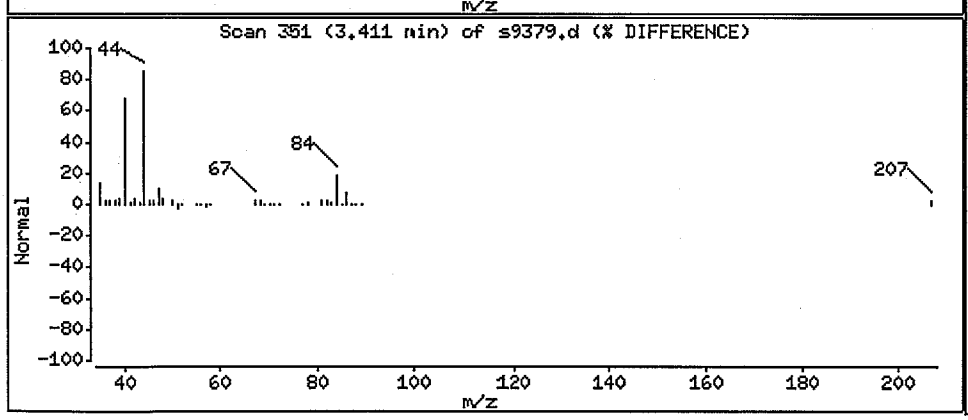
Column phase: DB-624-30M Column diameter: 0.53

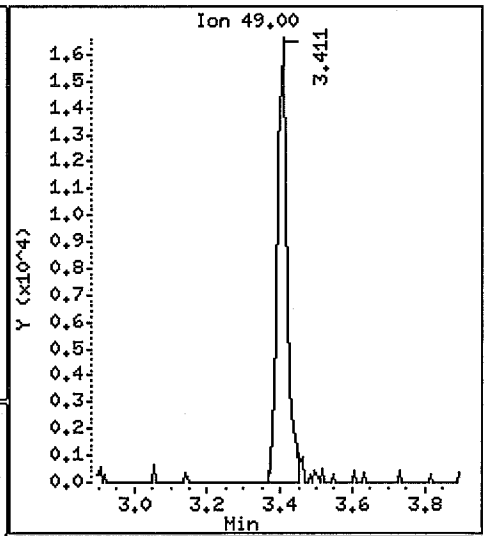
13 Methylene Chloride Concentration: 1.42 ug/L

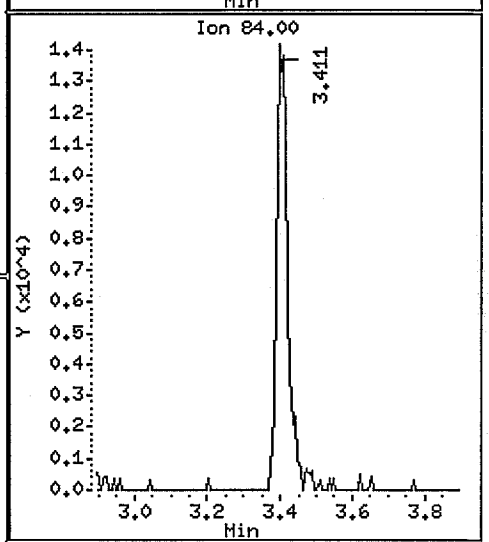


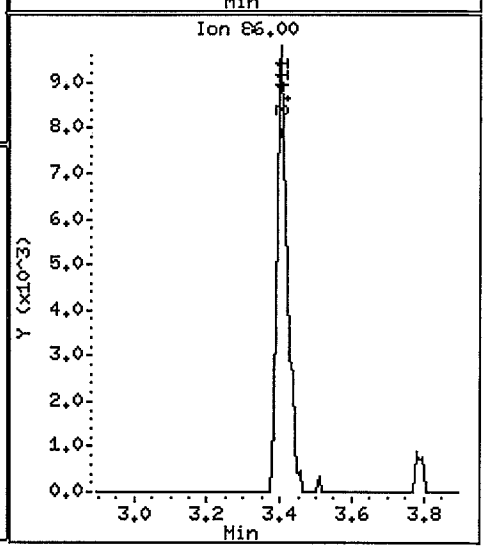












Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9380.d
Lab Smp Id: 20305291112 Client Smp ID: 086-TB-Q2-03-61
Inj Date : 30-MAY-2003 18:54
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291112*086-TB-Q2-03-61
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
13 Methylene Chloride	49	3.406	3.396	(0.673)	22855	1.06203	1.06	8797(a)
$ 27 Dibromofluoromethane	111	4.584	4.580	(0.906)	622284	31.5761	31.6	1556
$ 32 1,2-Dichloroethane-d4	67	4.831	4.820	(0.955)	366450	30.4486	30.4	8146
* 35 FLUOROBENZENE	96	5.059	5.055	(1.000)	1837973	30.0000		9254
$ 44 Toluene-d8	98	6.227	6.222	(0.827)	1473590	28.6531	28.7	8785
* 54 CHLOROBENZENE-d5	82	7.525	7.521	(1.000)	697340	30.0000		8910
$ 64 Bromofluorobenzene	174	8.750	8.740	(1.163)	573711	27.8874	27.9	8670
* 78 1,4-DICHLOROBENZENE-D4	152	10.163	10.153	(1.000)	673641	30.0000		9522

QC Flag Legend

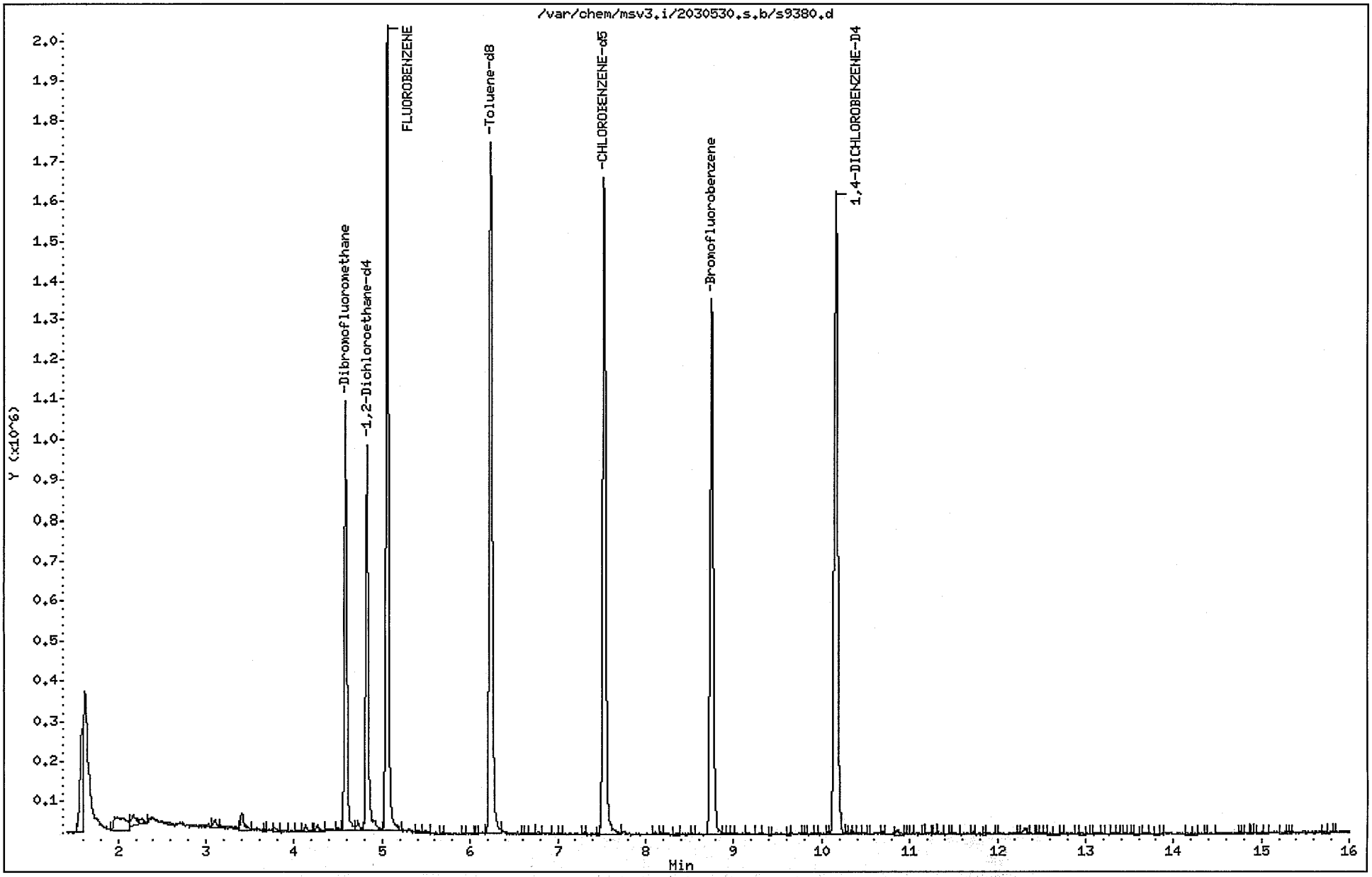
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/msv3.i/2030530.s.b/s9380.d
Date : 30-MAY-2003 18:54
Client ID: 086-TB-Q2-03-61
Sample Info: 20305291112*086-TB-Q2-03-61
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

000084



Data File: /var/chem/msv3.i/2030530.s.b/s9380.d

Date : 30-MAY-2003 18:54

Client ID: 086-TB-Q2-03-61

Instrument: msv3.i

Sample Info: 20305291112*086-TB-Q2-03-61

Purge Volume: 5.0

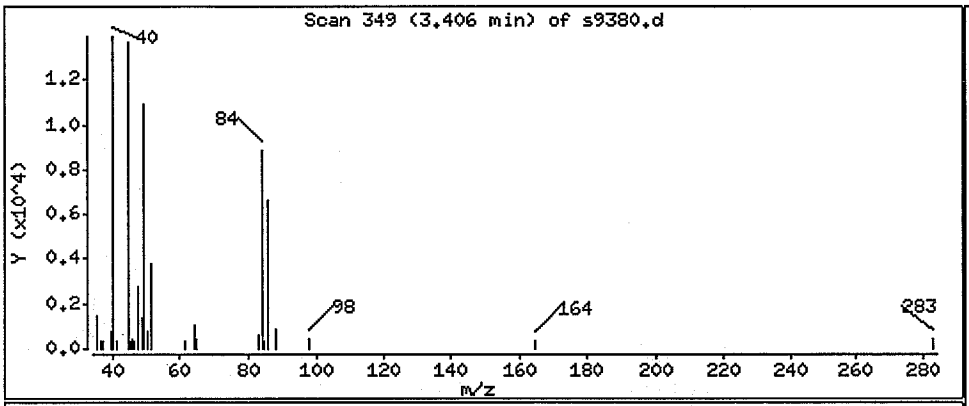
Operator: RJO

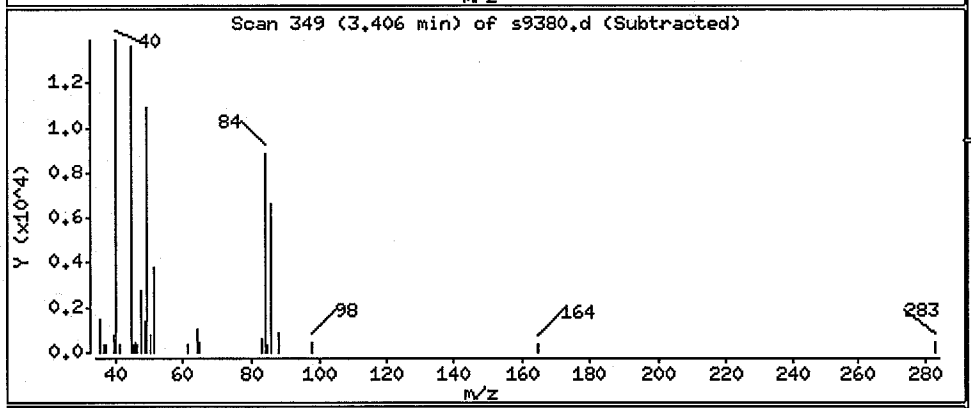
Column phase: DB-624-30M

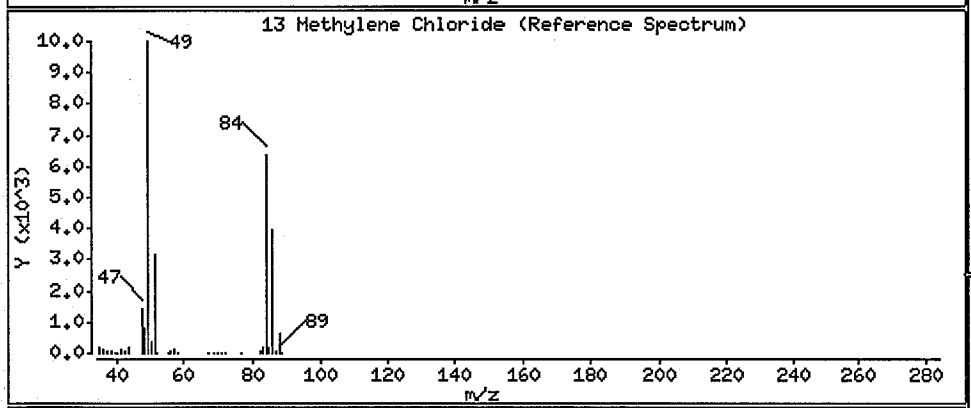
Column diameter: 0.53

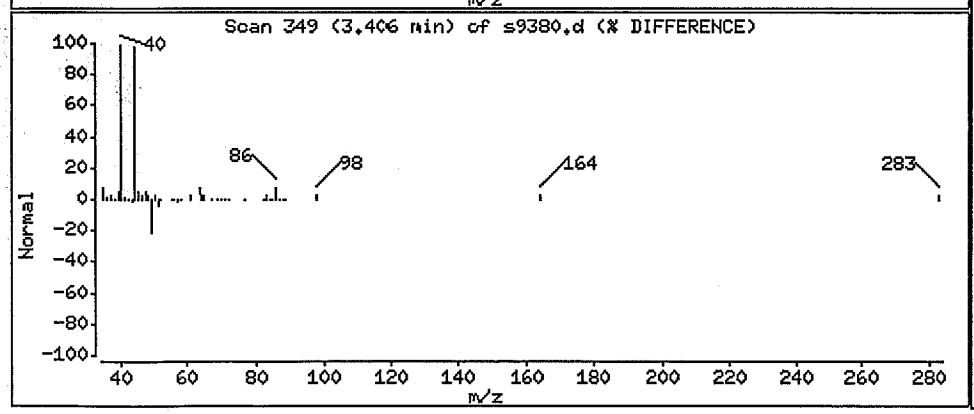
13 Methylene Chloride

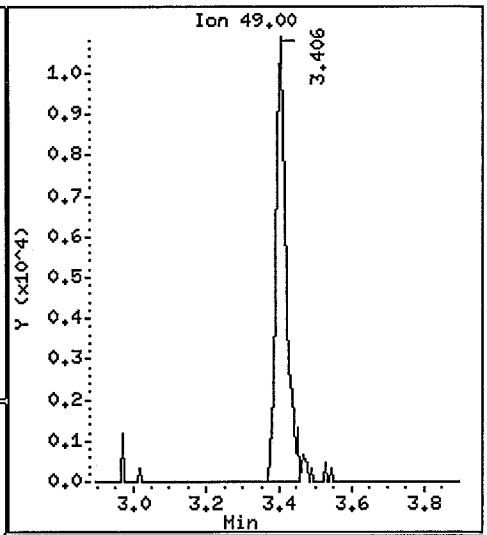
Concentration: 1.06 ug/L

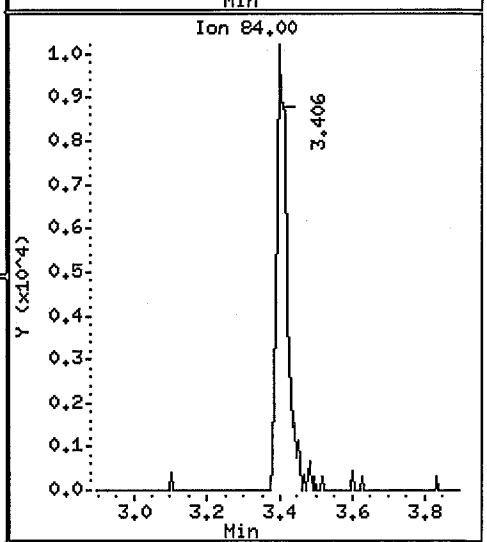


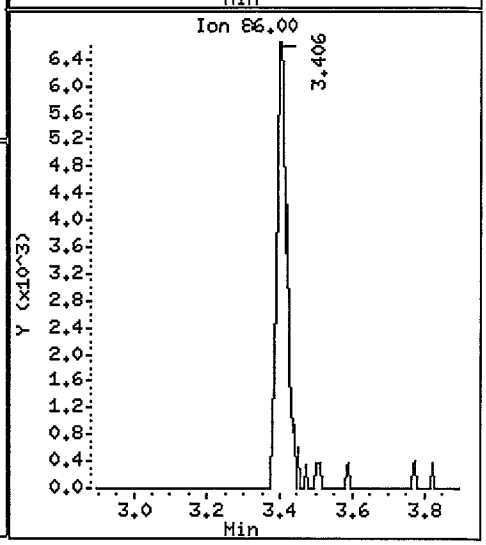












Data File: /var/chem/msv3.i/2030530.s.b/s9354.d

Date : 30-MAY-2003 08:52

Client ID: V3BFB01

Instrument: msv3.i

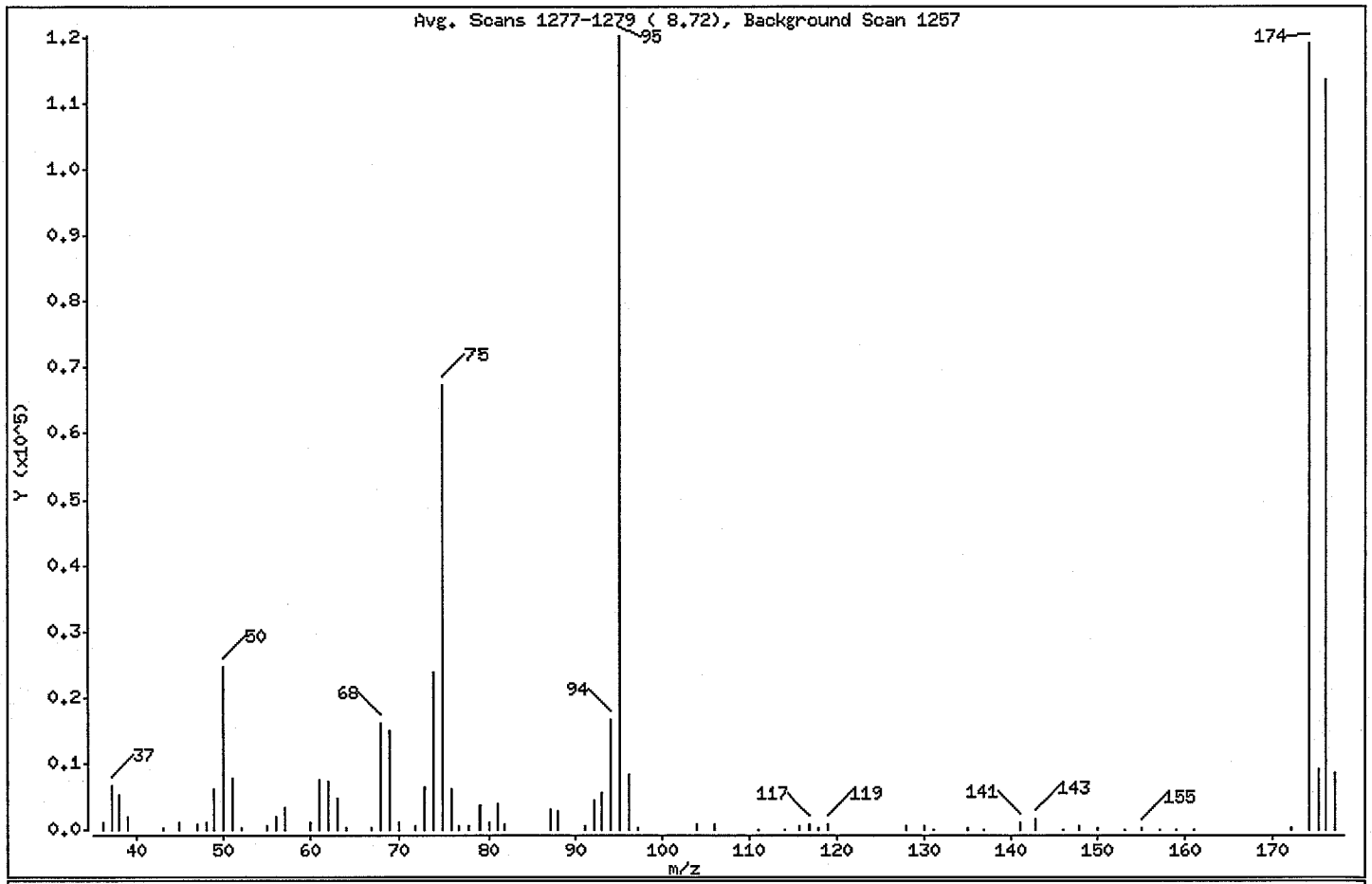
Sample Info: 1000*V3BFB01

Operator: RJO

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	20.40
75	30.00 - 60.00% of mass 95	55.96
96	5.00 - 9.00% of mass 95	6.94
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 99.99% of mass 95	99.08
175	5.00 - 9.00% of mass 174	7.59 (7.66)
176	95.00 - 101.00% of mass 174	94.54 (95.42)
177	5.00 - 9.00% of mass 176	7.03 (7.44)

Data File: /var/chem/msv3.i/2030530.s.b/s9354.d

Date : 30-MAY-2003 08:52

Client ID: V3BFB01

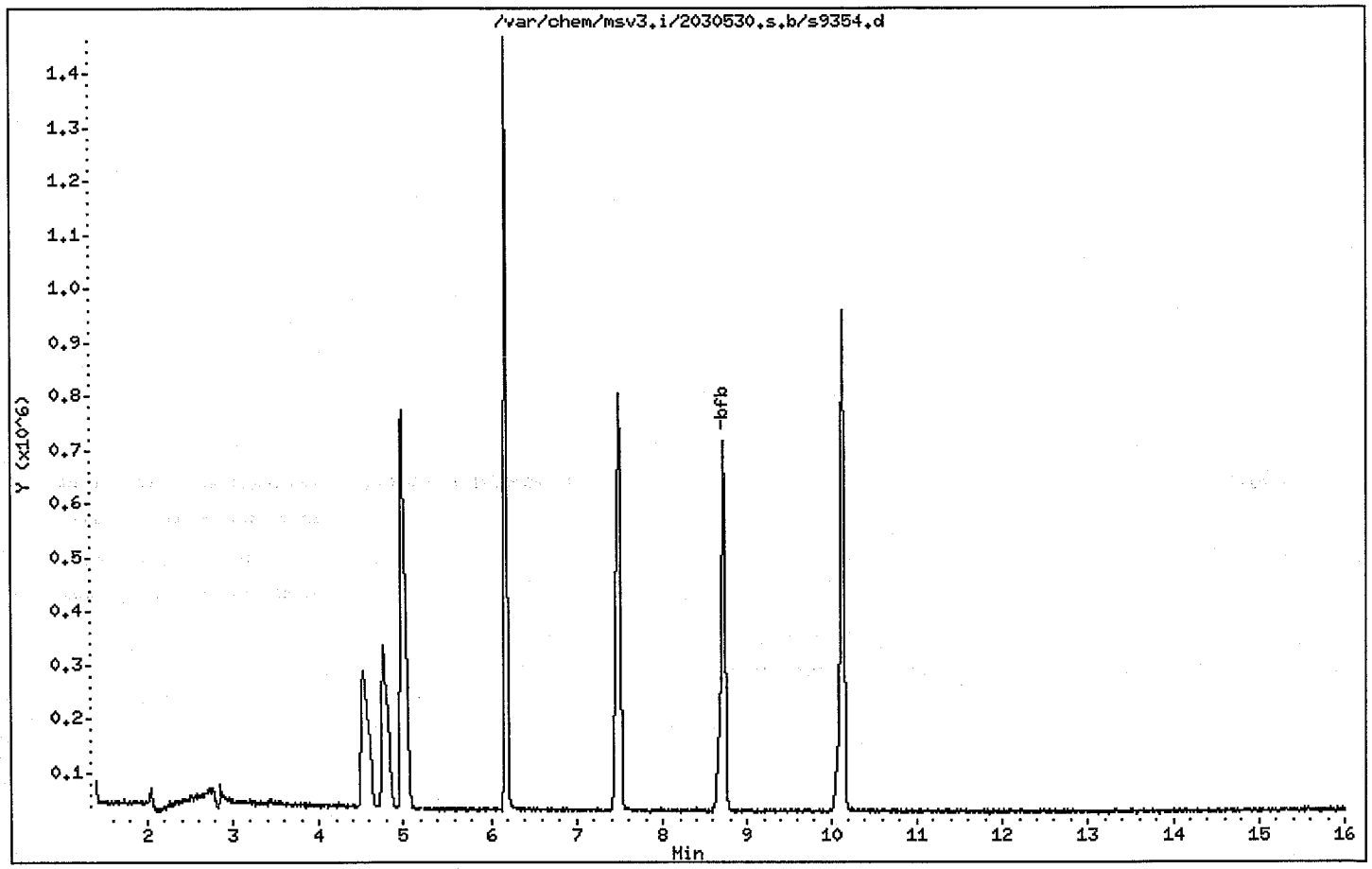
Instrument: msv3.i

Sample Info: 1000*V3BFB01

Operator: RJO

Column phase: DB-624-30M

Column diameter: 0.53



Data File: /var/chem/msv3.i/2030530.s.b/s9354.d

Date : 30-MAY-2003 08:52

Client ID: V3BFB01

Instrument: msv3.i

Sample Info: 1000*V3BFB01

Operator: RJO

Column phase: DB-624-30M

Column diameter: 0.53

Data File: s9354.d
Spectrum: Avg. Scans 1277-1279 (8.72), Background Scan 1257
Location of Maximum: 95.00
Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1085	64.00	345	92.00	4347	141.00	983
37.00	6512	67.00	403	93.00	5524	143.00	1613
38.00	5346	68.00	15964	94.00	16488	146.00	117
39.00	2025	69.00	15062	95.00	120256	148.00	492
43.00	153	70.00	1125	96.00	8348	150.00	152
45.00	1244	72.00	641	97.00	145	153.00	108
47.00	944	73.00	6418	104.00	908	155.00	244
48.00	1035	74.00	23776	106.00	711	157.00	133
49.00	6176	75.00	67288	111.00	113	159.00	122
50.00	24536	76.00	6181	114.00	115	161.00	126
51.00	7682	77.00	570	116.00	597	172.00	224
52.00	359	78.00	667	117.00	937	174.00	119152
55.00	607	79.00	3523	118.00	370	175.00	9129
56.00	2072	80.00	1078	119.00	788	176.00	113688
57.00	3323	81.00	3793	128.00	451	177.00	8458
60.00	1010	82.00	731	130.00	655		
61.00	7578	87.00	3035	131.00	119		
62.00	7188	88.00	2697	135.00	146		
63.00	4721	91.00	665	137.00	133		

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9357.d
Lab Smp Id: 1201 Client Smp ID: V3STD005
Inj Date : 30-MAY-2003 10:35
Operator : RJO Inst ID: msv3.i
Smp Info : 1201*V3STD005*4-24-7
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 10:35 Cal File: s9357.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.793	1.793	(0.177)	130164	5.00000	5.28	702
2 Chloromethane ++	50	1.988	1.988	(0.394)	77967	5.00000	5.29	6479
3 Vinyl Chloride +	62	2.068	2.068	(0.410)	90115	5.00000	5.11	4808
4 Bromomethane	94	2.371	2.371	(0.470)	58773	5.00000	5.82	7319
5 Chloroethane	64	2.440	2.440	(0.483)	59299	5.00000	5.18	4053
6 Trichlorofluoromethane	101	2.663	2.663	(0.527)	163040	5.00000	5.48	8489 (H)
7 Acrolein	56	2.972	2.972	(0.589)	32019	25.0000	24.9	3404 (a)
8 1,1,2Trichlotrifluoroethane	101	3.052	3.052	(0.604)	114707	5.00000	5.85	2889
9 Acetone	43	3.086	3.086	(0.611)	44232	5.00000	5.87	(a)
10 Methyl Iodide	142	3.189	3.189	(0.632)	192124	5.00000	5.33	9328
11 Carbon Disulfide	76	3.252	3.252	(0.644)	299824	5.00000	5.22	8603
12 Methyl Acetate	43	3.309	3.309	(0.655)	36409	5.00000	5.70	1863 (H)
13 Methylene Chloride	49	3.395	3.395	(0.672)	170356	5.00000	6.95	8705 (a)
14 Acrylonitrile	53	3.550	3.550	(0.703)	144190	25.0000	25.5	6875
15 MTBE	73	3.578	3.578	(0.709)	272893	5.00000	5.38	5903

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.595	3.595	(0.712)	92151	5.00000	5.40	8813
	17 trans-1,2-Dichloroethene	61	3.590	3.590	(0.711)	126641	5.00000	5.23	
	18 Vinyl Acetate	43	3.773	3.773	(0.747)	69366	5.00000	5.14	
	19 Hexane	57	3.773	3.773	(0.747)	121600	5.00000	5.14	4484 (H)
	20 1,1-Dichloroethane ++	63	3.881	3.881	(0.769)	167230	5.00000	5.39	6593
	21 2-Butanone	43	4.259	4.259	(0.844)	42759	5.00000	5.60	(a)
M	22 Total 1,2-Dichloroethene	61				282443	10.0000	10.5	0
	23 cis-1,2-Dichloroethene	61	4.270	4.270	(0.846)	155802	5.00000	5.25	
	24 2,2-Dichloropropane	77	4.276	4.276	(0.847)	144247	5.00000	5.31	7172
	25 Bromochloromethane	128	4.431	4.431	(0.878)	65644	5.00000	5.31	8829
	26 Chloroform +	83	4.471	4.471	(0.886)	213160	5.00000	5.63	9056
$	27 Dibromofluoromethane	111	4.579	4.579	(0.907)	680358	30.0000	30.3	1541
	28 1,1,1-Trichloroethane	97	4.625	4.625	(0.916)	175833	5.00000	5.43	9031
	29 Cyclohexane	56	4.677	4.677	(0.926)	135625	5.00000	5.06	5620
	30 1,1-Dichloropropene	75	4.728	4.728	(0.937)	133215	5.00000	5.27	6843
	31 Carbon Tetrachloride	117	4.745	4.745	(0.940)	152599	5.00000	5.59	9286
$	32 1,2-Dichloroethane-d4	67	4.820	4.820	(0.955)	415385	30.0000	30.3	8177
	33 1,2-Dichloroethane	62	4.871	4.871	(0.965)	194270	5.00000	5.56	6241
	34 Benzene	78	4.883	4.883	(0.967)	338381	5.00000	5.18	7825
*	35 FLUOROBENZENE	96	5.049	5.049	(1.000)	2093567	30.0000		9244
	36 Trichloroethene	130	5.312	5.312	(1.052)	124705	5.00000	5.43	9341
	37 Methyl Cyclohexane	83	5.466	5.466	(1.083)	156566	5.00000	5.08	9195
	38 1,2-Dichloropropane +	63	5.472	5.472	(1.084)	88504	5.00000	5.08	6708
	39 Dibromomethane	93	5.564	5.564	(1.102)	78146	5.00000	5.43	8824
	40 Bromodichloromethane	83	5.655	5.655	(1.120)	170893	5.00000	5.34	9354
	41 2-Chloroethyl vinyl ether	63	5.838	5.838	(1.156)	50337	5.00000	5.34	6916
	42 cis-1,3-Dichloropropene	75	5.987	5.987	(1.186)	148212	5.00000	5.41	
	43 4-methyl-2-pentanone	43	6.078	6.078	(1.204)	71532	5.00000	5.59	
$	44 Toluene-d8	98	6.222	6.222	(0.827)	1957370	30.0000	32.6	8722
	45 Toluene +	91	6.279	6.279	(0.835)	412576	5.00000	5.78	8742
	46 trans-1,3-Dichloropropene	75	6.410	6.410	(1.270)	140962	5.00000	5.06	
M	47 1,3 Dichloropropene	100				289174	10.0000	10.5	0
	48 1,1,2-Trichloroethane	97	6.582	6.582	(1.304)	94055	5.00000	5.42	8799
	49 1,3-Dichloropropane	76	6.742	6.742	(1.335)	141028	5.00000	5.20	8009
	50 Tetrachloroethene	164	6.754	6.754	(1.338)	107045	5.00000	5.37	9223
	51 2-Hexanone	43	6.765	6.765	(0.900)	47918	5.00000	5.26	
	52 Dibromochloromethane	129	6.960	6.960	(0.925)	137980	5.00000	5.07	8927
	53 1,2-Dibromoethane(EDB)	107	7.097	7.097	(0.944)	98536	5.00000	5.07	5533
*	54 CHLOROBENZENE-d5	82	7.520	7.520	(1.000)	814832	30.0000		8914
	55 Chlorobenzene ++	112	7.549	7.549	(1.004)	253801	5.00000	5.27	8083
	56 1,1,1,2-Tetrachloroethane	133	7.606	7.606	(1.011)	119351	5.00000	5.28	8901
	57 Ethylbenzene +	106	7.629	7.629	(1.014)	119820	5.00000	5.07	
	58 p,m-Xylene	106	7.738	7.738	(1.029)	288218	10.0000	10.1	
	59 o-Xylene	106	8.161	8.161	(1.085)	133395	5.00000	4.83	(a)
	60 Styrene	104	8.173	8.173	(1.087)	233907	5.00000	4.88	8483 (a)
M	61 TOTAL XYLENE	106				421613	15.0000	15.0	0
	62 Bromoform ++	173	8.396	8.396	(1.116)	103183	5.00000	5.12	8465

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
63 Isopropylbenzene	105	8.545	8.545	(1.136)	386587	5.00000	4.88	8900 (a)
$ 64 Bromofluorobenzene	174	8.739	8.739	(1.162)	708567	30.0000	29.5	8684
65 1,1,2,2-Tetrachloroethane++	83	8.853	8.853	(0.872)	108879	5.00000	5.46	8230
66 trans-1,4-Dichloro-2-Butene	53	8.916	8.916	(0.878)	29503	5.00000	5.03	6698
67 1,2,3-Trichloropropane	75	8.934	8.934	(0.880)	132298	5.00000	5.15	6923
68 Bromobenzene	77	8.939	8.939	(0.881)	209896	5.00000	5.36	7703
69 n-Propylbenzene	91	9.019	9.019	(0.888)	456006	5.00000	5.16	
70 2-Chlorotoluene	91	9.157	9.157	(0.902)	290607	5.00000	4.72	(a)
71 1,2,4-Trimethylbenzene	105	9.214	9.214	(0.908)	367597	5.00000	5.14	
72 4-Chlorotoluene	91	9.271	9.271	(0.913)	328307	5.00000	5.20	
73 tert-butylbenzene	91	9.620	9.620	(0.948)	284855	5.00000	5.11	8488
74 1,3,5-Trimethylbenzene	105	9.683	9.683	(0.954)	366644	5.00000	5.14	8603 (MH)
75 sec-Butylbenzene	105	9.895	9.895	(0.975)	420756	5.00000	5.06	
76 p-Isopropyltoluene	119	10.072	10.072	(0.992)	370537	5.00000	4.98	8284 (a)
77 1,3-Dichlorobenzene	146	10.072	10.072	(0.992)	233783	5.00000	5.31	
* 78 1,4-DICHLOROBENZENE-D4	152	10.152	10.152	(1.000)	831397	30.0000		9537
79 1,4-Dichlorobenzene	146	10.181	10.181	(1.003)	232109	5.00000	5.24	
80 n-Butylbenzene	91	10.610	10.610	(1.045)	324530	5.00000	4.92	8983 (a)
81 1,2-Dichlorobenzene	146	10.684	10.684	(1.052)	224891	5.00000	5.25	
82 1,2-Dibromo-3-Chloropropane	157	11.737	11.737	(1.156)	28651	5.00000	5.13	5274
83 1,2,4-Trichlorobenzene	180	12.939	12.939	(1.274)	137783	5.00000	4.74	(a)
84 Hexachlorobutadiene	225	13.179	13.179	(1.298)	139018	5.00000	5.41	9510
85 Naphthalene	128	13.311	13.311	(1.311)	211957	5.00000	4.74	8307 (a)
86 1,2,3-Trichlorobenzene	180	13.671	13.671	(1.347)	138494	5.00000	5.04	

QC Flag Legend

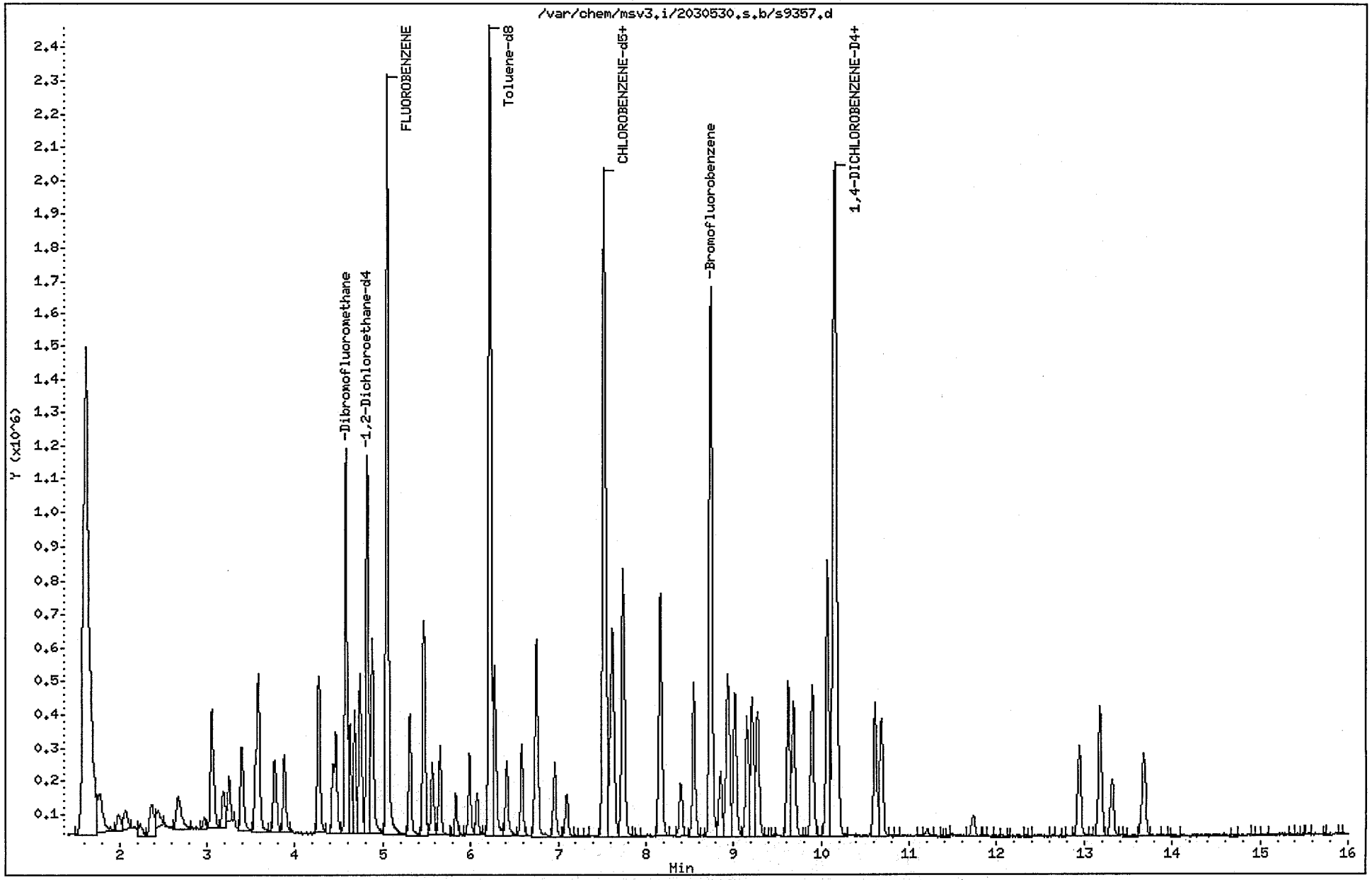
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv3.i/2030530.s.b/s9357.d
Date : 30-MAY-2003 10:35
Client ID: V3STD005
Sample Info: 1201*V3STD005*4-24-7
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

000092



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9355.d
Lab Smp Id: 1202 Client Smp ID: V3STD020
Inj Date : 30-MAY-2003 09:23
Operator : RJO Inst ID: msv3.i
Smp Info : 1202*V3STD020*4-24-7
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 09:23 Cal File: s9355.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.792	1.792	(0.177)	600996	20.0000	22.4	1372
2 Chloromethane ++	50	1.992	1.992	(0.394)	364552	20.0000	21.5	6479
3 Vinyl Chloride +	62	2.078	2.078	(0.411)	428410	20.0000	21.1	4830
4 Bromomethane	94	2.370	2.370	(0.469)	281819	20.0000	24.3	7478
5 Chloroethane	64	2.444	2.444	(0.484)	279554	20.0000	21.2	4082
6 Trichlorofluoromethane	101	2.673	2.673	(0.529)	680416	20.0000	19.9	8452(H)
7 Acrolein	56	2.971	2.971	(0.588)	137688	100.000	93.3	3544
8 1,1,2Trichlotrifluoroethane	101	3.057	3.057	(0.605)	444224	20.0000	19.7	3036
9 Acetone	43	3.079	3.079	(0.609)	182818	20.0000	21.1	(a)
10 Methyl Iodide	142	3.188	3.188	(0.631)	851268	20.0000	20.5	9422
11 Carbon Disulfide	76	3.257	3.257	(0.644)	1296669	20.0000	19.6	8665
12 Methyl Acetate	43	3.308	3.308	(0.655)	136315	20.0000	18.6	2087(H)
13 Methylene Chloride	49	3.394	3.394	(0.672)	542926	20.0000	19.3	8775
14 Acrylonitrile	53	3.554	3.554	(0.703)	636265	100.000	98.0	6875
15 MTBE	73	3.589	3.589	(0.710)	1157294	20.0000	19.8	5674

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.600	3.600	(0.712)	395876	20.0000	20.2	8903
	17 trans-1,2-Dichloroethene	61	3.600	3.600	(0.712)	570259	20.0000	20.5	
	18 Vinyl Acetate	43	3.778	3.778	(0.748)	309061	20.0000	19.9	
	19 Hexane	57	3.778	3.778	(0.748)	535779	20.0000	19.7	4469(H)
	20 1,1-Dichloroethane ++	63	3.881	3.881	(0.768)	707672	20.0000	19.8	6581
	21 2-Butanone	43	4.252	4.252	(0.841)	170575	20.0000	19.4	(a)
M	22 Total 1,2-Dichloroethene	61				1254305	40.0000	40.5	0
	23 cis-1,2-Dichloroethene	61	4.270	4.270	(0.845)	684046	20.0000	20.1	
	24 2,2-Dichloropropane	77	4.281	4.281	(0.847)	609969	20.0000	19.5	7620
	25 Bromochloromethane	128	4.436	4.436	(0.878)	288788	20.0000	20.3	8888
	26 Chloroform +	83	4.470	4.470	(0.884)	864110	20.0000	19.8	9255
$	27 Dibromofluoromethane	111	4.579	4.579	(0.906)	765505	30.0000	29.7	2186(H)
	28 1,1,1-Trichloroethane	97	4.624	4.624	(0.915)	723755	20.0000	19.4	9049
	29 Cyclohexane	56	4.682	4.682	(0.926)	601802	20.0000	19.5	5533
	30 1,1-Dichloropropene	75	4.733	4.733	(0.937)	579017	20.0000	19.9	6827
	31 Carbon Tetrachloride	117	4.750	4.750	(0.940)	587970	20.0000	18.7	9409
$	32 1,2-Dichloroethane-d4	67	4.819	4.819	(0.954)	472662	30.0000	30.0	8287
	33 1,2-Dichloroethane	62	4.870	4.870	(0.964)	815389	20.0000	20.3	6390
	34 Benzene	78	4.882	4.882	(0.966)	1546061	20.0000	20.6	7844
*	35 FLUOROBENZENE	96	5.053	5.053	(1.000)	2407338	30.0000		9250
	36 Trichloroethene	130	5.311	5.311	(1.051)	522721	20.0000	19.8	9361
	37 Methyl Cyclohexane	83	5.465	5.465	(1.082)	673771	20.0000	19.0	8925
	38 1,2-Dichloropropane +	63	5.471	5.471	(1.083)	376275	20.0000	18.8	7123
	39 Dibromomethane	93	5.563	5.563	(1.101)	302588	20.0000	18.3	8977
	40 Bromodichloromethane	83	5.654	5.654	(1.119)	667700	20.0000	18.2	9459
	41 2-Chloroethyl vinyl ether	63	5.837	5.837	(1.155)	204881	20.0000	18.9	6919
	42 cis-1,3-Dichloropropene	75	5.986	5.986	(1.185)	567315	20.0000	18.0	
	43 4-methyl-2-pentanone	43	6.072	6.072	(1.202)	253959	20.0000	17.3	
$	44 Toluene-d8	98	6.221	6.221	(0.827)	1931587	30.0000	29.7	8763
	45 Toluene +	91	6.278	6.278	(0.835)	1527366	20.0000	19.7	8733
	46 trans-1,3-Dichloropropene	75	6.415	6.415	(1.269)	576548	20.0000	18.0	
M	47 1,3 Dichloropropene	100				1143863	40.0000	36.0	0
	48 1,1,2-Trichloroethane	97	6.587	6.587	(1.303)	374614	20.0000	18.8	8711
	49 1,3-Dichloropropane	76	6.736	6.736	(1.333)	589338	20.0000	18.9	8335
	50 Tetrachloroethene	164	6.759	6.759	(1.337)	431447	20.0000	18.8	9399
	51 2-Hexanone	43	6.764	6.764	(0.900)	182003	20.0000	18.4	
	52 Dibromochloromethane	129	6.959	6.959	(0.925)	571173	20.0000	19.4	8887
	53 1,2-Dibromoethane(EDB)	107	7.096	7.096	(0.944)	414523	20.0000	19.7	5533
*	54 CHLOROBENZENE-d5	82	7.519	7.519	(1.000)	883060	30.0000		8797
	55 Chlorobenzene ++	112	7.548	7.548	(1.004)	1066805	20.0000	20.4	8852
	56 1,1,1,2-Tetrachloroethane	133	7.605	7.605	(1.011)	490415	20.0000	20.0	8985
	57 Ethylbenzene +	106	7.628	7.628	(1.014)	509175	20.0000	19.9	
	58 p,m-Xylene	106	7.737	7.737	(1.029)	1214169	40.0000	39.4	
	59 o-Xylene	106	8.166	8.166	(1.086)	604538	20.0000	20.2	
	60 Styrene	104	8.166	8.166	(1.086)	1043296	20.0000	20.1	8387
M	61 TOTAL XYLENE	106				1818707	60.0000	59.6	0
	62 Bromoform ++	173	8.395	8.395	(1.116)	419311	20.0000	19.2	8506

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
63 Isopropylbenzene	105	8.549	8.549	(1.137)	1736973	20.0000	20.2	8957
$ 64 Bromofluorobenzene	174	8.744	8.744	(1.163)	772864	30.0000	29.7	8847
65 1,1,2,2-Tetrachloroethane++	83	8.853	8.853	(0.873)	419977	20.0000	19.3	8361
66 trans-1,4-Dichloro-2-Butene	53	8.910	8.910	(0.878)	118868	20.0000	18.6	7347
67 1,2,3-Trichloropropane	75	8.933	8.933	(0.880)	553882	20.0000	19.8	6895
68 Bromobenzene	77	8.938	8.938	(0.881)	860078	20.0000	20.1	7982
69 n-Propylbenzene	91	9.019	9.019	(0.889)	1965820	20.0000	20.4	
70 2-Chlorotoluene	91	9.150	9.150	(0.902)	1406431	20.0000	20.9	
71 1,2,4-Trimethylbenzene	105	9.213	9.213	(0.908)	1586371	20.0000	20.4	
72 4-Chlorotoluene	91	9.276	9.276	(0.914)	1423098	20.0000	20.7	
73 tert-butylbenzene	91	9.619	9.619	(0.948)	1223813	20.0000	20.1	8375
74 1,3,5-Trimethylbenzene	105	9.682	9.682	(0.954)	1578778	20.0000	20.3	8719(MH)
75 sec-Butylbenzene	105	9.894	9.894	(0.975)	1838847	20.0000	20.3	
76 p-Isopropyltoluene	119	10.071	10.071	(0.993)	1646932	20.0000	20.3	8504
77 1,3-Dichlorobenzene	146	10.077	10.077	(0.993)	988456	20.0000	20.6	
* 78 1,4-DICHLOROBENZENE-D4	152	10.146	10.146	(1.000)	906705	30.0000		9514
79 1,4-Dichlorobenzene	146	10.186	10.186	(1.004)	983994	20.0000	20.4	
80 n-Butylbenzene	91	10.609	10.609	(1.046)	1443631	20.0000	20.1	9099
81 1,2-Dichlorobenzene	146	10.684	10.684	(1.053)	959136	20.0000	20.5	
82 1,2-Dibromo-3-Chloropropane	157	11.731	11.731	(1.156)	113604	20.0000	18.6	5544
83 1,2,4-Trichlorobenzene	180	12.938	12.938	(1.275)	638859	20.0000	20.2	
84 Hexachlorobutadiene	225	13.178	13.178	(1.299)	565512	20.0000	20.2	9568
85 Naphthalene	128	13.310	13.310	(1.312)	932720	20.0000	19.1	8966
86 1,2,3-Trichlorobenzene	180	13.670	13.670	(1.347)	599675	20.0000	20.0	

QC Flag Legend

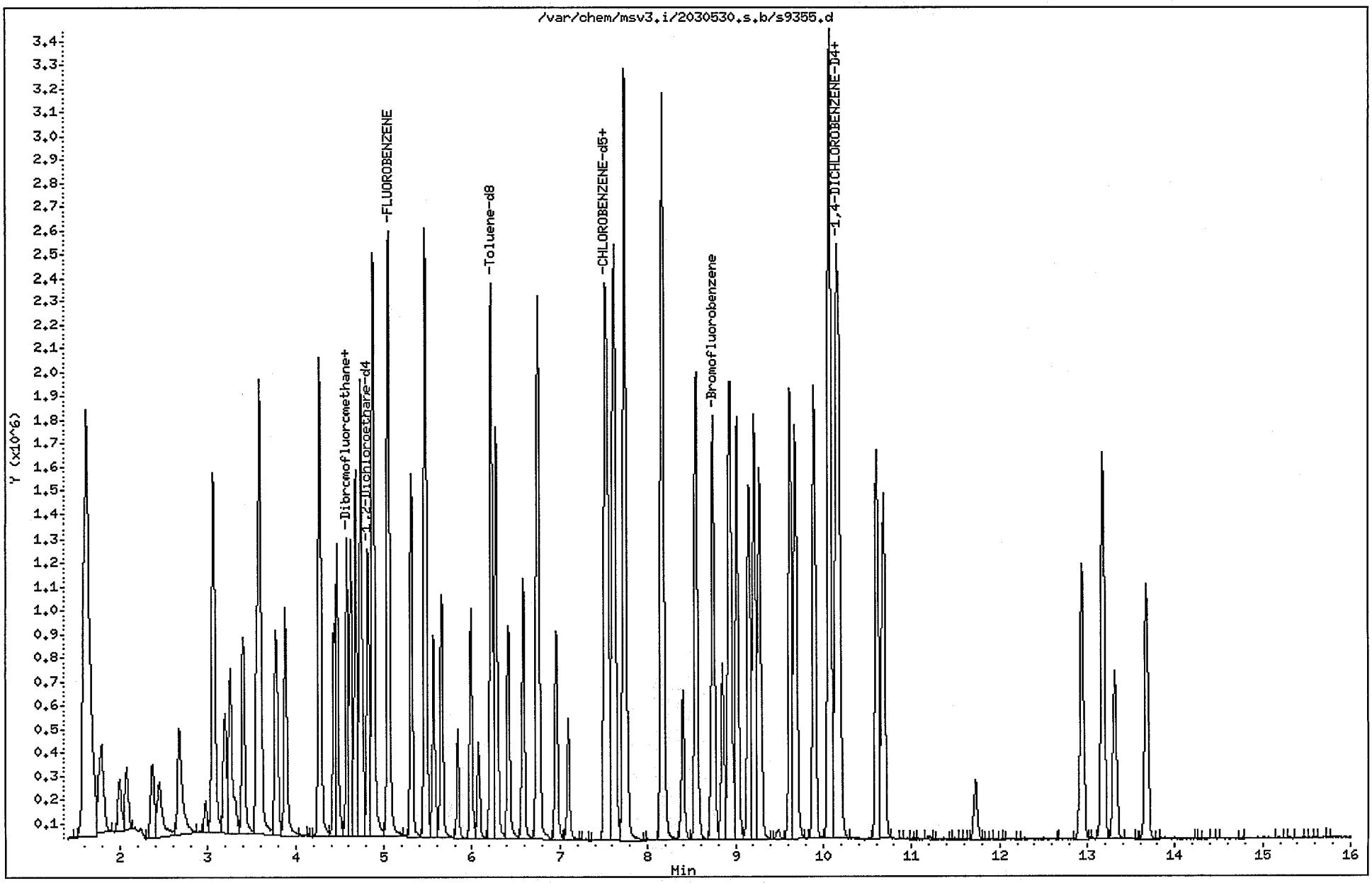
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv3.i/2030530.s.b/s9355.d
Date : 30-MAY-2003 09:23
Client ID: V3STD020
Sample Info: 1202*V3STD020*4-24-7
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

960000



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9358.d
Lab Smp Id: 1203 Client Smp ID: V3STD050
Inj Date : 30-MAY-2003 10:57
Operator : RJO Inst ID: msv3.i
Smp Info : 1203*V3STD050*4-24-7
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 10:57 Cal File: s9358.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.787	1.787	(0.176)	1240029	50.0000	48.2	1530
2 Chloromethane ++	50	1.987	1.987	(0.394)	701123	50.0000	45.6	6479
3 Vinyl Chloride +	62	2.067	2.067	(0.409)	867868	50.0000	47.2	4830
4 Bromomethane	94	2.359	2.359	(0.467)	540096	50.0000	51.3	7501
5 Chloroethane	64	2.439	2.439	(0.483)	572718	50.0000	48.0	4082
6 Trichlorofluoromethane	101	2.674	2.674	(0.530)	1475001	50.0000	47.6	8405(H)
7 Acrolein	56	2.965	2.965	(0.587)	325769	250.000	244	3521(A)
8 1,1,2Trichlotrifluoroethane	101	3.051	3.051	(0.604)	957455	50.0000	46.8	3119
9 Acetone	43	3.080	3.080	(0.610)	349304	50.0000	44.5	
10 Methyl Iodide	142	3.189	3.189	(0.632)	1782036	50.0000	47.4	9338
11 Carbon Disulfide	76	3.246	3.246	(0.643)	2939413	50.0000	49.1	8668
12 Methyl Acetate	43	3.309	3.309	(0.655)	309531	50.0000	46.5	2242(H)
13 Methylene Chloride	49	3.395	3.395	(0.672)	1042932	50.0000	40.8	8745
14 Acrylonitrile	53	3.549	3.549	(0.703)	1441256	250.000	245	6875(A)
15 MTBE	73	3.578	3.578	(0.709)	2571623	50.0000	48.7	5961

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.595	3.595	(0.712)	858892	50.0000	48.3	8965
	17 trans-1,2-Dichloroethene	61	3.595	3.595	(0.712)	1214211	50.0000	48.1	
	18 Vinyl Acetate	43	3.767	3.767	(0.746)	677005	50.0000	48.1	
	19 Hexane	57	3.767	3.767	(0.746)	1185297	50.0000	48.0	4418(H)
	20 1,1-Dichloroethane ++	63	3.881	3.881	(0.769)	1548904	50.0000	47.9	6543
	21 2-Butanone	43	4.253	4.253	(0.842)	381960	50.0000	48.0	
M	22 Total 1,2-Dichloroethene	61				2706185	100.000	96.4	0
	23 cis-1,2-Dichloroethene	61	4.270	4.270	(0.846)	1491974	50.0000	48.3	
	24 2,2-Dichloropropane	77	4.276	4.276	(0.847)	1367477	50.0000	48.3	7751
	25 Bromochloromethane	128	4.436	4.436	(0.879)	608142	50.0000	47.2	8818
	26 Chloroform +	83	4.465	4.465	(0.884)	1838962	50.0000	46.6	9241
$	27 Dibromofluoromethane	111	4.573	4.573	(0.906)	697493	30.0000	29.8	2731(H)
	28 1,1,1-Trichloroethane	97	4.625	4.625	(0.916)	1617203	50.0000	47.9	9065
	29 Cyclohexane	56	4.676	4.676	(0.926)	1380398	50.0000	49.4	5346
	30 1,1-Dichloropropene	75	4.733	4.733	(0.938)	1268483	50.0000	48.1	6882
	31 Carbon Tetrachloride	117	4.745	4.745	(0.940)	1386205	50.0000	48.7	9292
$	32 1,2-Dichloroethane-d4	67	4.819	4.819	(0.955)	425244	30.0000	29.8	8380
	33 1,2-Dichloroethane	62	4.871	4.871	(0.965)	1744844	50.0000	47.9	6373
	34 Benzene	78	4.882	4.882	(0.967)	3267470	50.0000	48.0	7933
*	35 FLUOROBENZENE	96	5.048	5.048	(1.000)	2181872	30.0000		9232
	36 Trichloroethene	130	5.311	5.311	(1.052)	1130476	50.0000	47.2	9364
	37 Methyl Cyclohexane	83	5.466	5.466	(1.083)	1614162	50.0000	50.2	8893
	38 1,2-Dichloropropane +	63	5.472	5.472	(1.084)	911693	50.0000	50.2	7178
	39 Dibromomethane	93	5.563	5.563	(1.102)	739176	50.0000	49.2	8985
	40 Bromodichloromethane	83	5.655	5.655	(1.120)	1664673	50.0000	49.9	9518
	41 2-Chloroethyl vinyl ether	63	5.832	5.832	(1.155)	472025	50.0000	48.0	6919
	42 cis-1,3-Dichloropropene	75	5.987	5.987	(1.186)	1395820	50.0000	48.9	
	43 4-methyl-2-pentanone	43	6.072	6.072	(1.203)	666704	50.0000	50.0	
$	44 Toluene-d8	98	6.221	6.221	(0.827)	1827119	30.0000	29.0	8719
	45 Toluene +	91	6.278	6.278	(0.835)	3422457	50.0000	45.7	8829
	46 trans-1,3-Dichloropropene	75	6.416	6.416	(1.271)	1458206	50.0000	50.2	
M	47 1,3 Dichloropropene	100				2854026	100.000	99.1	0
	48 1,1,2-Trichloroethane	97	6.587	6.587	(1.305)	858852	50.0000	47.5	8777
	49 1,3-Dichloropropane	76	6.742	6.742	(1.335)	1377928	50.0000	48.8	8383
	50 Tetrachloroethene	164	6.753	6.753	(1.338)	1010530	50.0000	48.7	9264
	51 2-Hexanone	43	6.765	6.765	(0.900)	482607	50.0000	50.5	
	52 Dibromochloromethane	129	6.959	6.959	(0.925)	1412767	50.0000	49.5	8863
	53 1,2-Dibromoethane(EDB)	107	7.097	7.097	(0.944)	1002329	50.0000	49.1	5533
*	54 CHLOROBENZENE-d5	82	7.520	7.520	(1.000)	855224	30.0000		8782
	55 Chlorobenzene ++	112	7.549	7.549	(1.004)	2377650	50.0000	47.0	8949
	56 1,1,1,2-Tetrachloroethane	133	7.606	7.606	(1.011)	1143825	50.0000	48.2	9083
	57 Ethylbenzene +	106	7.629	7.629	(1.014)	1200924	50.0000	48.4	
	58 p,m-Xylene	106	7.743	7.743	(1.030)	2883187	100.000	96.7	
	59 o-Xylene	106	8.161	8.161	(1.085)	1407506	50.0000	48.6	
	60 Styrene	104	8.166	8.166	(1.086)	2450896	50.0000	48.7	8333
M	61 TOTAL XYLENE	106				4290693	150.000	145	0
	62 Bromoform ++	173	8.395	8.395	(1.116)	1046758	50.0000	49.4	8459

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
63 Isopropylbenzene	105	8.544	8.544	(1.136)	4102669	50.0000	49.3	8990
$ 64 Bromofluorobenzene	174	8.739	8.739	(1.162)	747582	30.0000	29.6	8693
65 1,1,2,2-Tetrachloroethane++	83	8.853	8.853	(0.872)	1016108	50.0000	48.7	8312
66 trans-1,4-Dichloro-2-Butene	53	8.916	8.916	(0.878)	323831	50.0000	52.9	7124
67 1,2,3-Trichloropropane	75	8.927	8.927	(0.879)	1362844	50.0000	50.8	7504
68 Bromobenzene	77	8.939	8.939	(0.880)	2021210	50.0000	49.4	7787
69 n-Propylbenzene	91	9.019	9.019	(0.888)	4613435	50.0000	49.9	
70 2-Chlorotoluene	91	9.151	9.151	(0.901)	3269479	50.0000	50.8	
71 1,2,4-Trimethylbenzene	105	9.219	9.219	(0.908)	3683614	50.0000	49.3	
72 4-Chlorotoluene	91	9.276	9.276	(0.914)	3242994	50.0000	49.2	
73 tert-butylbenzene	91	9.620	9.620	(0.948)	2936682	50.0000	50.5	8495
74 1,3,5-Trimethylbenzene	105	9.683	9.683	(0.954)	3695920	50.0000	49.6	8688 (MH)
75 sec-Butylbenzene	105	9.900	9.900	(0.975)	4348262	50.0000	50.1	
76 p-Isopropyltoluene	119	10.072	10.072	(0.992)	3875791	50.0000	49.9	8497
77 1,3-Dichlorobenzene	146	10.078	10.078	(0.993)	2230119	50.0000	48.5	
* 78 1,4-DICHLOROBENZENE-D4	152	10.152	10.152	(1.000)	868576	30.0000		9233
79 1,4-Dichlorobenzene	146	10.180	10.180	(1.003)	2244058	50.0000	48.5	
80 n-Butylbenzene	91	10.604	10.604	(1.045)	3472394	50.0000	50.4	9060
81 1,2-Dichlorobenzene	146	10.678	10.678	(1.052)	2155106	50.0000	48.1	
82 1,2-Dibromo-3-Chloropropane	157	11.731	11.731	(1.156)	297743	50.0000	51.0	5617
83 1,2,4-Trichlorobenzene	180	12.944	12.944	(1.275)	1498539	50.0000	49.4	
84 Hexachlorobutadiene	225	13.179	13.179	(1.298)	1279458	50.0000	47.6	9569
85 Naphthalene	128	13.310	13.310	(1.311)	2391803	50.0000	51.2	9066
86 1,2,3-Trichlorobenzene	180	13.671	13.671	(1.347)	1384104	50.0000	48.2	

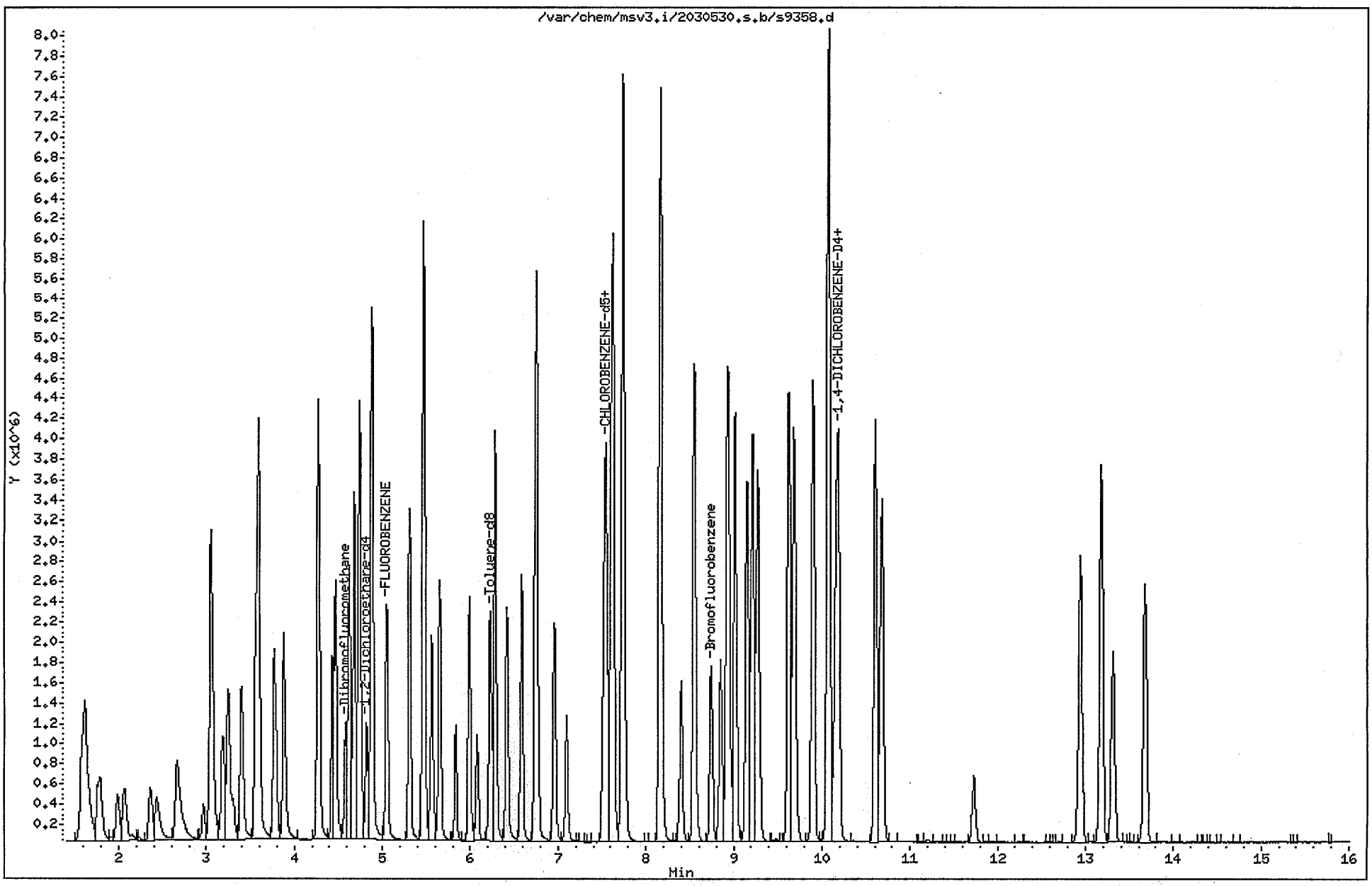
QC Flag Legend

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/msv3.i/2030530.s.b/s9358.d
Date : 30-MAY-2003 10:57
Client ID: V3STD050
Sample Info: 1203*V3STD050*4-24-7
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53

000100



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9359.d
Lab Smp Id: 1204 Client Smp ID: V3STD100
Inj Date : 30-MAY-2003 11:28
Operator : RJO Inst ID: msv3.i
Smp Info : 1204*V3STD100*4-24-7
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)	SIMILARITY
1 Dichlorodifluoromethane	85	1.782	1.782	(0.176)	2243249	100.000	86.2	1901
2 Chloromethane ++	50	1.988	1.988	(0.393)	1326220	100.000	95.3	6479
3 Vinyl Chloride +	62	2.068	2.068	(0.409)	1632751	100.000	98.0	4830
4 Bromomethane	94	2.366	2.366	(0.468)	566938	100.000	59.5	7601
5 Chloroethane	64	2.440	2.440	(0.483)	1021748	100.000	94.5	4082
6 Trichlorofluoromethane	101	2.669	2.669	(0.528)	2691433	100.000	95.8	8487(H)
7 Acrolein	56	2.972	2.972	(0.588)	662998	500.000	547	3527(A)
8 1,1,2Trichlotrifluoroethane	101	3.058	3.058	(0.605)	1684921	100.000	91.0	2796
9 Acetone	43	3.092	3.092	(0.612)	625288	100.000	88.0	
10 Methyl Iodide	142	3.190	3.190	(0.631)	3259658	100.000	95.8	9359
11 Carbon Disulfide	76	3.258	3.258	(0.645)	5376957	100.000	99.2	8660
12 Methyl Acetate	43	3.316	3.316	(0.656)	605161	100.000	100	2702(H)
13 Methylene Chloride	49	3.396	3.396	(0.672)	1921238	100.000	83.0	8996
14 Acrylonitrile	53	3.556	3.556	(0.703)	2711631	500.000	509	6875(A)
15 MTBE	73	3.584	3.584	(0.709)	4583518	100.000	95.8	5896

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.602	3.602	(0.712)	1526052	100.000	94.7	8943
	17 trans-1,2-Dichloroethene	61	3.596	3.596	(0.711)	2217484	100.000	97.0	
	18 Vinyl Acetate	43	3.773	3.773	(0.746)	1290194	100.000	101	
	19 Hexane	57	3.779	3.779	(0.748)	2295043	100.000	103	4257(AH)
	20 1,1-Dichloroethane ++	63	3.888	3.888	(0.769)	2847743	100.000	97.2	6534
	21 2-Butanone	43	4.260	4.260	(0.843)	683032	100.000	94.8	
M	22 Total 1,2-Dichloroethene	61				4963512	200.000	195	0
	23 cis-1,2-Dichloroethene	61	4.271	4.271	(0.845)	2746028	100.000	98.1	
	24 2,2-Dichloropropane	77	4.283	4.283	(0.847)	2557445	100.000	99.7	8100
	25 Bromochloromethane	128	4.437	4.437	(0.878)	1144847	100.000	98.0	8929
	26 Chloroform +	83	4.471	4.471	(0.885)	3397504	100.000	95.0	9183
$	27 Dibromofluoromethane	111	4.580	4.580	(0.906)	640271	30.0000	30.2	3283(H)
	28 1,1,1-Trichloroethane	97	4.626	4.626	(0.915)	3009375	100.000	98.4	9053
	29 Cyclohexane	56	4.683	4.683	(0.926)	2586221	100.000	102	5248
	30 1,1-Dichloropropene	75	4.735	4.735	(0.937)	2358430	100.000	98.8	6797
	31 Carbon Tetrachloride	117	4.746	4.746	(0.939)	2500340	100.000	97.1	9312
$	32 1,2-Dichloroethane-d4	67	4.820	4.820	(0.954)	387485	30.0000	29.9	8382
	33 1,2-Dichloroethane	62	4.872	4.872	(0.964)	3028862	100.000	91.8	6432
	34 Benzene	78	4.883	4.883	(0.966)	6029324	100.000	97.7	8018
*	35 FLUOROBENZENE	96	5.055	5.055	(1.000)	1975862	30.0000		9328
	36 Trichloroethene	130	5.312	5.312	(1.051)	2122362	100.000	97.9	9339
	37 Methyl Cyclohexane	83	5.473	5.473	(1.083)	2994553	100.000	103	8936
	38 1,2-Dichloropropane +	63	5.473	5.473	(1.083)	1706129	100.000	104	7263
	39 Dibromomethane	93	5.564	5.564	(1.101)	1381256	100.000	102	8975
	40 Bromodichloromethane	83	5.656	5.656	(1.119)	3096767	100.000	103	9541
	41 2-Chloroethyl vinyl ether	63	5.839	5.839	(1.155)	912589	100.000	103	6919
	42 cis-1,3-Dichloropropene	75	5.988	5.988	(1.184)	2686104	100.000	104	
	43 4-methyl-2-pentanone	43	6.079	6.079	(1.203)	1233308	100.000	102	
$	44 Toluene-d8	98	6.222	6.222	(0.827)	1676062	30.0000	28.8	8773
	45 Toluene +	91	6.279	6.279	(0.835)	6525722	100.000	94.4	8971
	46 trans-1,3-Dichloropropene	75	6.417	6.417	(1.269)	2845674	100.000	108	
M	47 1,3 Dichloropropene	100				5531778	200.000	212	0
	48 1,1,2-Trichloroethane	97	6.588	6.588	(1.303)	1684507	100.000	103	8768
	49 1,3-Dichloropropane	76	6.743	6.743	(1.334)	2658338	100.000	104	8319
	50 Tetrachloroethene	164	6.760	6.760	(1.337)	1902381	100.000	101	9410
	51 2-Hexanone	43	6.760	6.760	(0.899)	896848	100.000	102	
	52 Dibromochloromethane	129	6.960	6.960	(0.925)	2706149	100.000	103	8967
	53 1,2-Dibromoethane(EDB)	107	7.098	7.098	(0.944)	1924503	100.000	102	5533
*	54 CHLOROBENZENE-d5	82	7.521	7.521	(1.000)	789109	30.0000		8685
	55 Chlorobenzene ++	112	7.550	7.550	(1.004)	4591569	100.000	98.4	9009
	56 1,1,1,2-Tetrachloroethane	133	7.607	7.607	(1.011)	2145544	100.000	98.0	9160
	57 Ethylbenzene +	106	7.630	7.630	(1.014)	2346791	100.000	102	
	58 p,m-Xylene	106	7.744	7.744	(1.030)	5684884	200.000	207	
	59 o-Xylene	106	8.168	8.168	(1.086)	2817154	100.000	105	
	60 Styrene	104	8.168	8.168	(1.086)	4851840	100.000	105	8445
M	61 TOTAL XYLENE	106				8502038	300.000	312	0
	62 Bromoform ++	173	8.396	8.396	(1.116)	2009113	100.000	103	8499

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)	SIMILARITY
63 Isopropylbenzene	105	8.551	8.551	(1.137)	7894853	100.000	103	8912
$ 64 Bromofluorobenzene	174	8.740	8.740	(1.162)	726943	30.0000	31.2	8781
65 1,1,2,2-Tetrachloroethane++	83	8.854	8.854	(0.872)	2045137	100.000	97.0	8436
66 trans-1,4-Dichloro-2-Butene	53	8.917	8.917	(0.878)	623423	100.000	101	7161
67 1,2,3-Trichloropropane	75	8.928	8.928	(0.879)	2623690	100.000	96.6	7400
68 Bromobenzene	77	8.940	8.940	(0.881)	3865362	100.000	93.4	7898
69 n-Propylbenzene	91	9.020	9.020	(0.888)	8883526	100.000	95.1	
70 2-Chlorotoluene	91	9.157	9.157	(0.902)	6464127	100.000	99.3	
71 1,2,4-Trimethylbenzene	105	9.215	9.215	(0.908)	7302829	100.000	96.7	
72 4-Chlorotoluene	91	9.278	9.278	(0.914)	6292098	100.000	94.3	
73 tert-butylbenzene	91	9.627	9.627	(0.948)	5655178	100.000	96.1	8457
74 1,3,5-Trimethylbenzene	105	9.684	9.684	(0.954)	7275863	100.000	96.5	8696 (MH)
75 sec-Butylbenzene	105	9.895	9.895	(0.975)	8526673	100.000	97.1	
76 p-Isopropyltoluene	119	10.073	10.073	(0.992)	7781196	100.000	99.0	8529
77 1,3-Dichlorobenzene	146	10.079	10.079	(0.993)	4351750	100.000	93.6	
* 78 1,4-DICHLOROBENZENE-D4	152	10.153	10.153	(1.000)	878569	30.0000		8920
79 1,4-Dichlorobenzene	146	10.187	10.187	(1.003)	4494569	100.000	96.1	
80 n-Butylbenzene	91	10.611	10.611	(1.045)	6992961	100.000	100	9115
81 1,2-Dichlorobenzene	146	10.685	10.685	(1.052)	4360805	100.000	96.3	
82 1,2-Dibromo-3-Chloropropane	157	11.732	11.732	(1.156)	604204	100.000	102	5571
83 1,2,4-Trichlorobenzene	180	12.939	12.939	(1.274)	3245501	100.000	106	
84 Hexachlorobutadiene	225	13.180	13.180	(1.298)	2604210	100.000	95.8	9539
85 Naphthalene	128	13.311	13.311	(1.311)	5068071	100.000	107	9104
86 1,2,3-Trichlorobenzene	180	13.677	13.677	(1.347)	2975475	100.000	103	

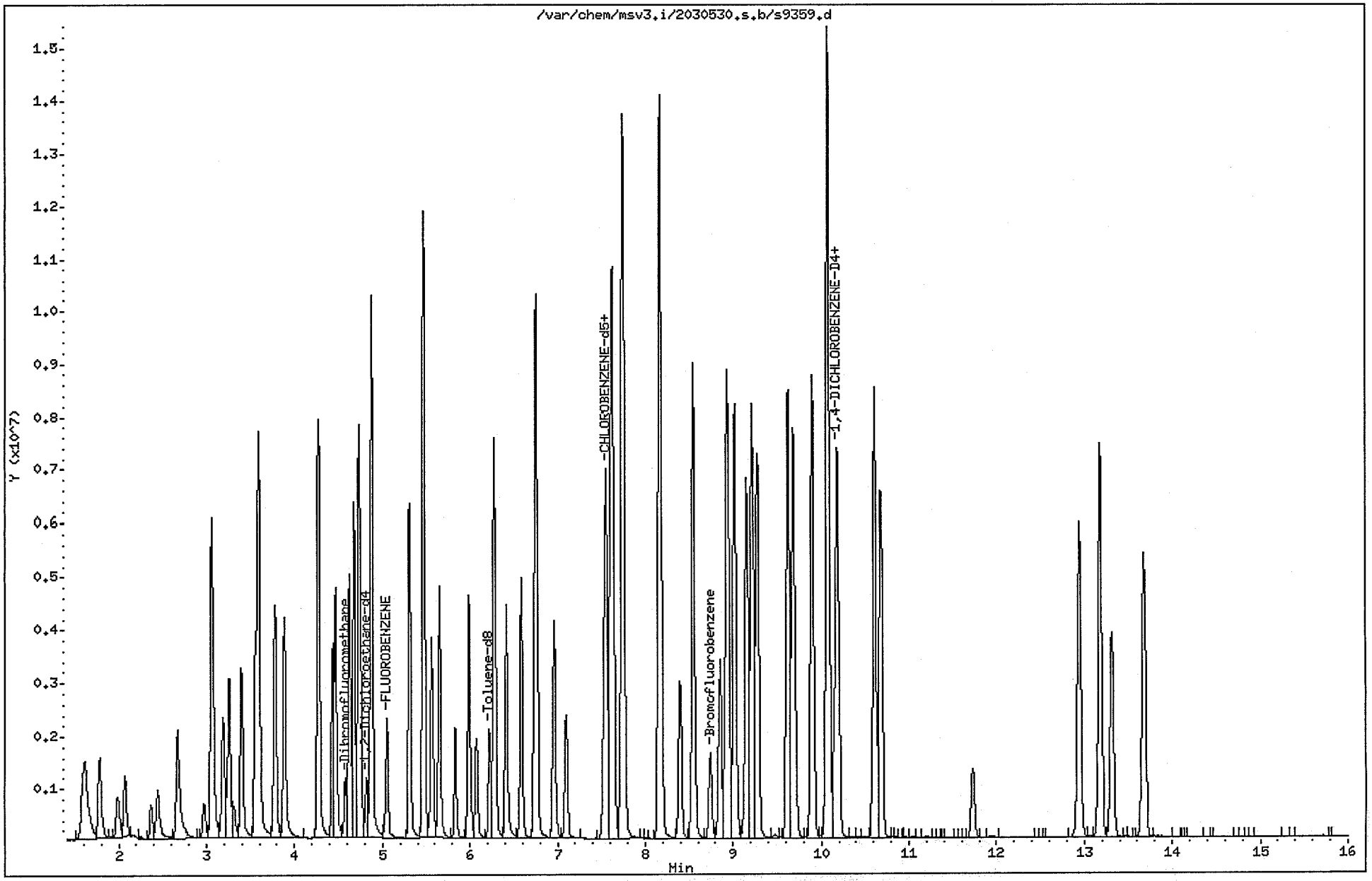
QC Flag Legend

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/msv3.i/2030530.s.b/s9359.d
Date : 30-MAY-2003 11:28
Client ID: V3STD100
Sample Info: 1204*V3STD100*4-24-7
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53

000104



Gulf Coast Analytical Laboratories, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: MS DATA
SpikeList File: 624EXsp.spk
Sublist File: all.sub
Method File: /var/chem/msv3.i/2030530.s.b/624w3.m
Misc Info: MSV~3302~*1*RJO

Client SDG: 2030530.s
Fraction: VOA
Client Smp ID: ICV
Operator: RJO
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	1 Dichlorodifluorome	20.0	18.4	91.84	44-148
	2 Chloromethane ++	20.0	20.1	100.45	0-273
	3 Vinyl Chloride +	20.0	19.6	97.90	0-251
	4 Bromomethane	20.0	17.1	85.66	0-242
	5 Chloroethane	20.0	20.2	101.16	14-230
	6 Trichlorofluoromet	20.0	19.8	98.88	17-181
	7 Acrolein	100	109	108.90	49-155
	16 1,1-Dichloroethene	20.0	20.6	102.92	0-234
	8 1,1,2Trichlotriflu	20.0	19.5	97.61	53-136
	9 Acetone	20.0	18.7	93.30	58-165
	10 Methyl Iodide	20.0	20.7	103.65	64-144
	11 Carbon Disulfide	20.0	20.2	101.05	45-134
	13 Methylene Chloride	20.0	17.4	86.89	0-221
	14 Acrylonitrile	100	99.5	99.51	53-144
	17 trans-1,2-Dichloro	20.0	19.9	99.71	54-156
	20 1,1-Dichloroethane	20.0	19.6	97.75	59-155
	18 Vinyl Acetate	20.0	19.4	96.83	39-173
	23 cis-1,2-Dichloroet	20.0	19.3	96.51	77-122
	24 2,2-Dichloropropan	20.0	20.5	102.37	75-133
	21 2-Butanone	20.0	20.3	101.63	31-139
	25 Bromochloromethane	20.0	20.0	99.77	77-133
	26 Chloroform +	20.0	20.3	101.43	51-138
	28 1,1,1-Trichloroeth	20.0	20.3	101.34	52-162
	30 1,1-Dichloropropen	20.0	20.2	100.80	75-124
	31 Carbon Tetrachlori	20.0	20.8	103.82	70-140
M	22 Total 1,2-Dichloro	40.0	39.2	98.11	40-150
	34 Benzene	20.0	20.2	101.24	37-151
	33 1,2-Dichloroethane	20.0	20.2	101.02	49-155
	36 Trichloroethene	20.0	20.3	101.25	71-157
	38 1,2-Dichloropropan	20.0	20.3	101.50	75-121
	39 Dibromomethane	20.0	20.7	103.51	77-129
	40 Bromodichlorometha	20.0	20.5	102.55	35-155
	41 2-Chloroethyl viny	20.0	17.4	87.21	0-200

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
42 cis-1,3-Dichloropr	20.0	19.2	96.22	0-227
43 4-methyl-2-pentano	20.0	20.3	101.36	47-125
45 Toluene +	20.0	19.0	95.04	47-150
46 trans-1,3-Dichloro	20.0	19.5	97.43	17-183
48 1,1,2-Trichloroeth	20.0	20.1	100.48	52-150
49 1,3-Dichloropropan	20.0	20.3	101.45	78-122
50 Tetrachloroethene	20.0	20.3	101.40	64-148
51 2-Hexanone	20.0	21.3	106.28	47-146
52 Dibromochlorometha	20.0	20.8	103.94	53-149
53 1,2-Dibromoethane(	20.0	19.8	98.91	77-133
55 Chlorobenzene ++	20.0	19.9	99.65	37-160
56 1,1,1,2-Tetrachlor	20.0	20.3	101.69	70-130
57 Ethylbenzene +	20.0	19.9	99.54	37-162
58 p,m-Xylene	40.0	40.6	101.48	40-170
59 o-Xylene	20.0	20.3	101.51	40-170
60 Styrene	20.0	20.4	102.25	75-126
62 Bromoform ++	20.0	21.0	105.03	45-169
63 Isopropylbenzene	20.0	20.9	104.47	79-123
M 61 TOTAL XYLENE	60.0	60.9	101.49	68-143
65 1,1,2,2-Tetrachlor	20.0	19.9	99.37	46-157
66 trans-1,4-Dichloro	20.0	20.1	100.44	47-134
68 Bromobenzene	20.0	19.9	99.32	54-134
67 1,2,3-Trichloropro	20.0	19.9	99.46	59-136
69 n-Propylbenzene	20.0	20.3	101.47	69-129
70 2-Chlorotoluene	20.0	21.0	104.98	60-129
74 1,3,5-Trimethylben	20.0	20.3	101.51	58-129
72 4-Chlorotoluene	20.0	20.5	102.55	55-137
73 tert-butylbenzene	20.0	20.7	103.34	62-125
76 p-Isopropyltoluene	20.0	20.6	103.04	63-123
71 1,2,4-Trimethylben	20.0	20.4	102.11	65-127
75 sec-Butylbenzene	20.0	20.2	101.12	58-125
77 1,3-Dichlorobenzen	20.0	20.2	101.15	59-156
79 1,4-Dichlorobenzen	20.0	20.4	101.96	18-190
80 n-Butylbenzene	20.0	20.6	103.25	58-125
81 1,2-Dichlorobenzen	20.0	20.6	102.93	18-190
82 1,2-Dibromo-3-Chlo	20.0	21.5	107.30	40-134
83 1,2,4-Trichloroben	20.0	21.3	106.28	56-129
84 Hexachlorobutadien	20.0	21.1	105.34	36-152
86 1,2,3-Trichloroben	20.0	21.4	107.03	48-134

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	30.0	30.6	102.03	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 32 1,2-Dichloroethane	30.0	29.2	97.29	76-128
$ 44 Toluene-d8	30.0	29.3	97.69	83-112
$ 64 Bromofluorobenzene	30.0	30.0	100.02	78-115

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9361.d
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-MAY-2003 12:17
Operator : RJO Inst ID: msv3.i
Smp Info : ICV
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.790	1.782	(0.176)	454649	18.3675	18.4	1311
2 Chloromethane ++	50	1.985	1.988	(0.393)	281232	20.0908	20.1	6479
3 Vinyl Chloride +	62	2.076	2.068	(0.411)	328248	19.5791	19.6	4830
4 Bromomethane	94	2.374	2.366	(0.470)	164262	17.1316	17.1	7694
5 Chloroethane	64	2.454	2.440	(0.486)	220188	20.2327	20.2	4082
6 Trichlorofluoromethane	101	2.677	2.669	(0.530)	558864	19.7755	19.8	8418(H)
7 Acrolein	56	2.980	2.972	(0.590)	132742	108.900	109	3544
8 1,1,2Trichlotrifluoroethane	101	3.066	3.058	(0.607)	363814	19.5222	19.5	1661
9 Acetone	43	3.089	3.092	(0.611)	133477	18.6604	18.7	(a)
10 Methyl Iodide	142	3.198	3.190	(0.633)	709669	20.7298	20.7	9409
11 Carbon Disulfide	76	3.261	3.258	(0.645)	1102397	20.2095	20.2	8642
12 Methyl Acetate	43	3.318	3.316	(0.657)	116249	19.1531	19.2	7895
13 Methylene Chloride	49	3.404	3.396	(0.674)	404608	17.3788	17.4	8619
14 Acrylonitrile	53	3.558	3.556	(0.704)	533516	99.5126	99.5	6876
15 MTBE	73	3.592	3.584	(0.711)	963076	19.9981	20.0	3699

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.604	3.602	(0.713)	333809	20.5843	20.6	8934
	17 trans-1,2-Dichloroethene	61	3.598	3.596	(0.712)	458922	19.9412	19.9	
	18 Vinyl Acetate	43	3.781	3.773	(0.749)	248205	19.3667	19.4	
	19 Hexane	57	3.781	3.779	(0.749)	440430	19.5906	19.6	4540
	20 1,1-Dichloroethane ++	63	3.884	3.888	(0.769)	576156	19.5500	19.6	6594
	21 2-Butanone	43	4.262	4.260	(0.844)	147374	20.3255	20.3	(a)
M	22 Total 1,2-Dichloroethene	61				1002646	39.2435	39.2	0
	23 cis-1,2-Dichloroethene	61	4.273	4.271	(0.846)	543724	19.3023	19.3	
	24 2,2-Dichloropropane	77	4.279	4.283	(0.847)	528500	20.4737	20.5	7441
	25 Bromochloromethane	128	4.439	4.437	(0.879)	234473	19.9542	20.0	8797
	26 Chloroform +	83	4.474	4.471	(0.886)	729759	20.2868	20.3	9207
$	27 Dibromofluoromethane	111	4.582	4.580	(0.907)	652640	30.6105	30.6	1378
	28 1,1,1-Trichloroethane	97	4.628	4.626	(0.916)	623494	20.2675	20.3	9058
	29 Cyclohexane	56	4.685	4.683	(0.928)	501670	19.7112	19.7	2580
	30 1,1-Dichloropropene	75	4.737	4.735	(0.938)	484230	20.1609	20.2	6798
	31 Carbon Tetrachloride	117	4.754	4.746	(0.941)	538319	20.7647	20.8	9359
$	32 1,2-Dichloroethane-d4	67	4.823	4.820	(0.955)	380008	29.1858	29.2	8256
	33 1,2-Dichloroethane	62	4.874	4.872	(0.965)	671064	20.2033	20.2	6349
	34 Benzene	78	4.886	4.883	(0.967)	1257240	20.2485	20.2	7837
*	35 FLUOROBENZENE	96	5.051	5.055	(1.000)	1988437	30.0000		9221
	36 Trichloroethene	130	5.315	5.312	(1.052)	441657	20.2501	20.3	9308
	37 Methyl Cyclohexane	83	5.469	5.473	(1.083)	604084	20.6305	20.6	3300
	38 1,2-Dichloropropane +	63	5.475	5.473	(1.084)	335651	20.2997	20.3	7024
	39 Dibromomethane	93	5.566	5.564	(1.102)	283166	20.7014	20.7	8994
	40 Bromodichloromethane	83	5.658	5.656	(1.120)	623218	20.5099	20.5	9513
	41 2-Chloroethyl vinyl ether	63	5.835	5.839	(1.155)	156151	17.4417	17.4	6919
	42 cis-1,3-Dichloropropene	75	5.990	5.988	(1.186)	500607	19.2435	19.2	
	43 4-methyl-2-pentanone	43	6.076	6.079	(1.203)	246511	20.2723	20.3	
$	44 Toluene-d8	98	6.224	6.222	(0.827)	1674056	29.3074	29.3	8764
	45 Toluene +	91	6.282	6.279	(0.835)	1289953	19.0080	19.0	8767
	46 trans-1,3-Dichloropropene	75	6.419	6.417	(1.271)	515440	19.4866	19.5	
M	47 1,3 Dichloropropene	100				1016047	38.7301	38.7	0
	48 1,1,2-Trichloroethane	97	6.585	6.588	(1.304)	331313	20.0966	20.1	8771
	49 1,3-Dichloropropane	76	6.745	6.743	(1.335)	522432	20.2893	20.3	8266
	50 Tetrachloroethene	164	6.757	6.760	(1.338)	383874	20.2796	20.3	9269
	51 2-Hexanone	43	6.762	6.760	(0.899)	184051	21.2561	21.3	
	52 Dibromochloromethane	129	6.963	6.960	(0.925)	537543	20.7888	20.8	8835
	53 1,2-Dibromoethane(EDB)	107	7.094	7.098	(0.943)	365729	19.7812	19.8	5533
*	54 CHLOROBENZENE-d5	82	7.523	7.521	(1.000)	774519	30.0000		8900
	55 Chlorobenzene ++	112	7.552	7.550	(1.004)	912643	19.9305	19.9	8826
	56 1,1,1,2-Tetrachloroethane	133	7.609	7.607	(1.011)	437125	20.3379	20.3	8992
	57 Ethylbenzene +	106	7.632	7.630	(1.014)	447411	19.9084	19.9	
	58 p,m-Xylene	106	7.741	7.744	(1.029)	1096296	40.5926	40.6	
	59 o-Xylene	106	8.164	8.168	(1.085)	532993	20.3016	20.3	
	60 Styrene	104	8.170	8.168	(1.086)	931645	20.4495	20.4	8337
M	61 TOTAL XYLENE	106				1629289	60.8942	60.9	0
	62 Bromoform ++	173	8.399	8.396	(1.116)	402722	21.0070	21.0	8472

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	63 Isopropylbenzene	105	8.547	8.551	(1.136)	1574724	20.8943	20.9	8908
$	64 Bromofluorobenzene	174	8.742	8.740	(1.162)	685605	30.0055	30.0	8801
	65 1,1,2,2-Tetrachloroethane++	83	8.851	8.854	(0.872)	398502	19.8737	19.9	8348
	66 trans-1,4-Dichloro-2-Butene	53	8.919	8.917	(0.878)	118311	20.0883	20.1	6828
	67 1,2,3-Trichloropropane	75	8.925	8.928	(0.879)	513461	19.8921	19.9	7741
	68 Bromobenzene	77	8.942	8.940	(0.881)	781699	19.8639	19.9	7905
	69 n-Propylbenzene	91	9.017	9.020	(0.888)	1802852	20.2935	20.3	
	70 2-Chlorotoluene	91	9.154	9.157	(0.901)	1299164	20.9959	21.0	
	71 1,2,4-Trimethylbenzene	105	9.217	9.215	(0.908)	1466253	20.4211	20.4	
	72 4-Chlorotoluene	91	9.274	9.278	(0.913)	1300906	20.5105	20.5	
	73 tert-butylbenzene	91	9.623	9.627	(0.948)	1156650	20.6684	20.7	8423
	74 1,3,5-Trimethylbenzene	105	9.686	9.684	(0.954)	1454810	20.3014	20.3	8687(MH)
	75 sec-Butylbenzene	105	9.898	9.895	(0.975)	1688364	20.2240	20.2	
	76 p-Isopropyltoluene	119	10.069	10.073	(0.992)	1539520	20.6075	20.6	8360
	77 1,3-Dichlorobenzene	146	10.081	10.079	(0.993)	893953	20.2291	20.2	
*	78 1,4-DICHLOROBENZENE-D4	152	10.155	10.153	(1.000)	835258	30.0000		9465
	79 1,4-Dichlorobenzene	146	10.184	10.187	(1.003)	906681	20.3921	20.4	
	80 n-Butylbenzene	91	10.607	10.611	(1.044)	1367833	20.6491	20.6	9073
	81 1,2-Dichlorobenzene	146	10.682	10.685	(1.052)	886613	20.5864	20.6	
	82 1,2-Dibromo-3-Chloropropane	157	11.729	11.732	(1.155)	120495	21.4594	21.5	5478
	83 1,2,4-Trichlorobenzene	180	12.947	12.939	(1.275)	620589	21.2555	21.3	
	84 Hexachlorobutadiene	225	13.182	13.180	(1.298)	544326	21.0681	21.1	9582
	85 Naphthalene	128	13.319	13.311	(1.312)	975654	21.7134	21.7	9018
	86 1,2,3-Trichlorobenzene	180	13.674	13.677	(1.347)	590583	21.4063	21.4	

QC Flag Legend

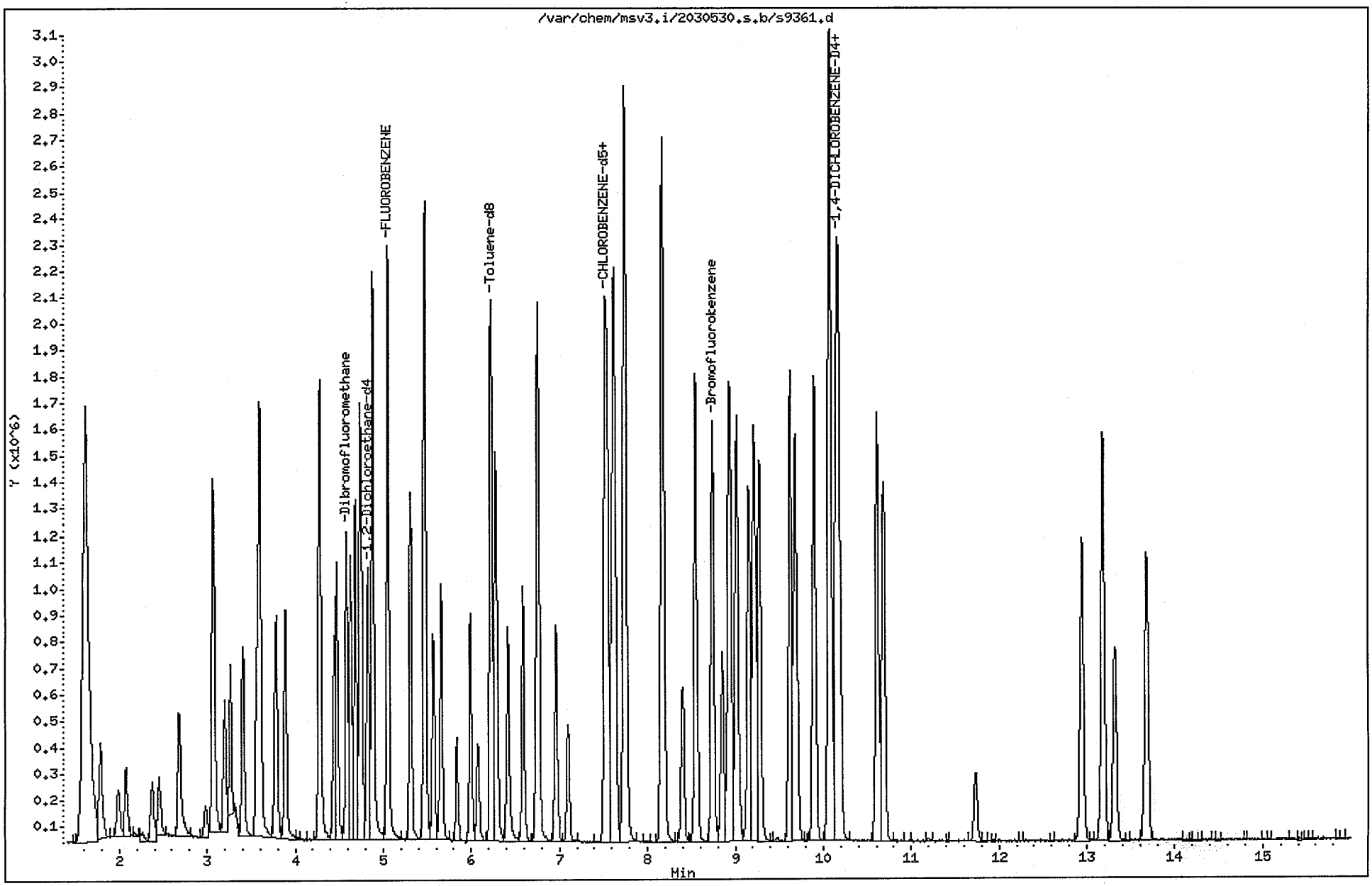
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv3.i/2030530.s.b/s9361.d
Date : 30-MAY-2003 12:17
Client ID: ICV
Sample Info: ICV
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

000111



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9365.d
Lab Smp Id: 101683 Client Smp ID: V3BLK01
Inj Date : 30-MAY-2003 13:41
Operator : RJO Inst ID: msv3.i
Smp Info : 101683*MB FOR HBN 257869[MSV/3302]
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

Cpnd Variable Local Compound Variable

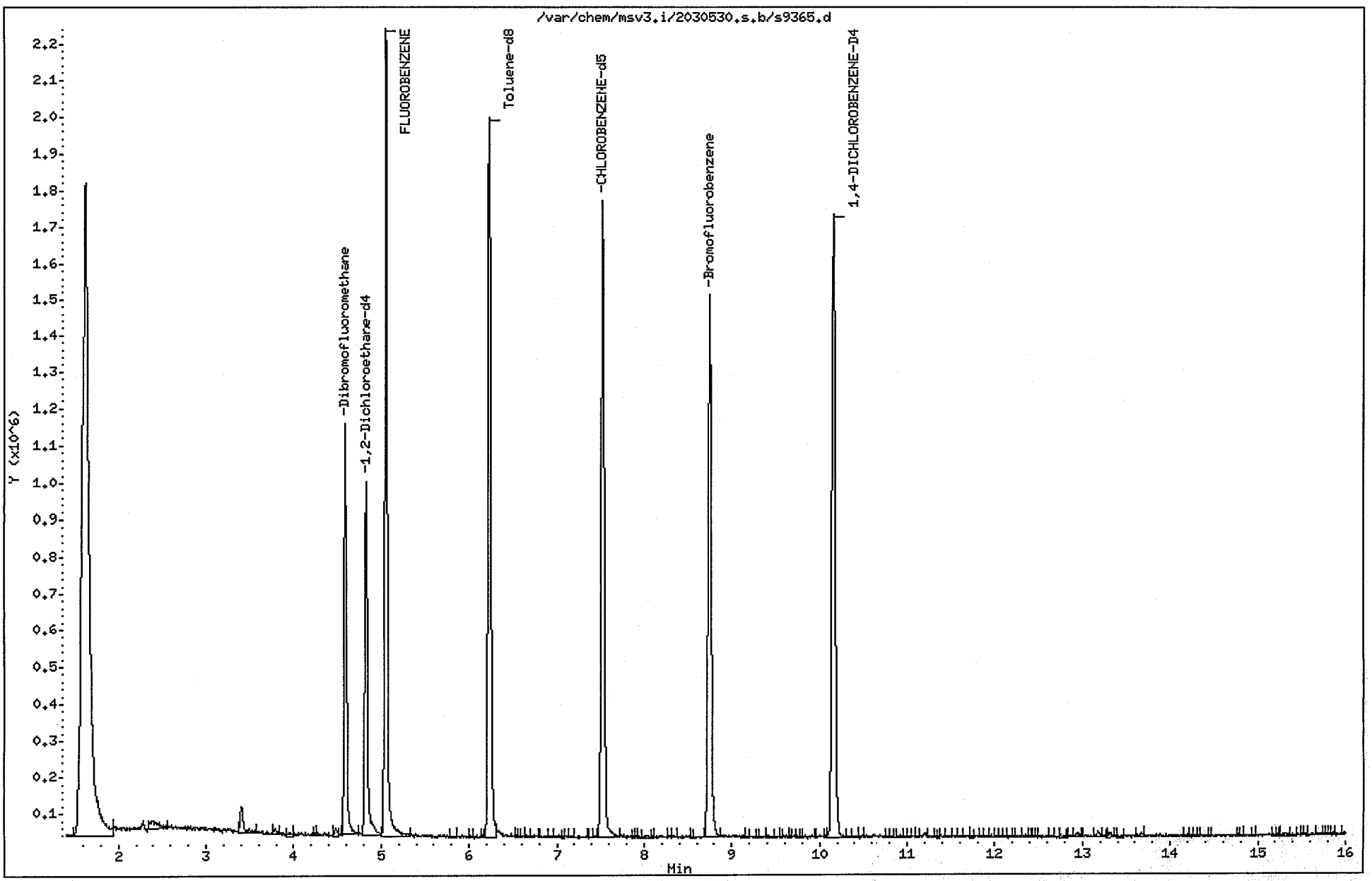
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 27 Dibromofluoromethane	111	4.585	4.580	(0.907)	661660	31.1398	31.1	1123
$ 32 1,2-Dichloroethane-d4	67	4.831	4.820	(0.956)	381188	29.3767	29.4	8141
* 35 FLUOROBENZENE	96	5.054	5.055	(1.000)	1981654	30.0000		9254
$ 44 Toluene-d8	98	6.227	6.222	(0.828)	1549171	28.4098	28.4	8773
* 54 CHLOROBENZENE-d5	82	7.520	7.521	(1.000)	739386	30.0000		9015
$ 64 Bromofluorobenzene	174	8.745	8.740	(1.163)	615647	28.2241	28.2	8732
* 78 1,4-DICHLOROBENZENE-D4	152	10.152	10.153	(1.000)	699511	30.0000		9509

Data File: /var/chem/msv3.i/2030530.s.b/s9365.d
Date : 30-MAY-2003 13:41
Client ID: V3BLK01
Sample Info: 101683*MB FOR HBN 257869[MSV/3302]
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

000113



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9363.d
Lab Smp Id: 101546 Client Smp ID: V3LCS01
Inj Date : 30-MAY-2003 12:59
Operator : RJO Inst ID: msv3.i
Smp Info : 101546*LCS FOR HBN 257869[MSV/3302]
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.792	1.782	(0.176)	442180	18.3280	18.3	1333
2 Chloromethane ++	50	1.993	1.988	(0.394)	273489	19.6791	19.7	6479
3 Vinyl Chloride +	62	2.084	2.068	(0.412)	310156	18.6339	18.6	4830
4 Bromomethane	94	2.382	2.366	(0.471)	142584	14.9783	15.0	7593
5 Chloroethane	64	2.462	2.440	(0.487)	199537	18.4679	18.5	4081
6 Trichlorofluoromethane	101	2.685	2.669	(0.531)	536421	19.1188	19.1	8458(H)
7 Acrolein	56	2.982	2.972	(0.589)	124236	102.660	103	3544
8 1,1,2Trichlotrifluoroethane	101	3.063	3.058	(0.605)	341605	18.4632	18.5	1737
9 Acetone	43	3.103	3.092	(0.613)	122245	17.2138	17.2	(a)
10 Methyl Iodide	142	3.200	3.190	(0.632)	668656	19.6732	19.7	9426
11 Carbon Disulfide	76	3.263	3.258	(0.645)	1047168	19.3360	19.3	8672
12 Methyl Acetate	43	3.326	3.316	(0.657)	116519	19.3366	19.3	7614
13 Methylene Chloride	49	3.406	3.396	(0.673)	400100	17.3096	17.3	8586
14 Acrylonitrile	53	3.566	3.556	(0.705)	507780	95.3980	95.4	6875
15 MTBE	73	3.595	3.584	(0.710)	920387	19.2501	19.3	3785

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.606	3.602	(0.713)	320836	19.9275	19.9	8981
	17 trans-1,2-Dichloroethene	61	3.606	3.596	(0.713)	443882	19.4273	19.4	
	18 Vinyl Acetate	43	3.783	3.773	(0.748)	237842	18.6924	18.7	
	19 Hexane	57	3.783	3.779	(0.748)	408857	18.3178	18.3	4529
	20 1,1-Dichloroethane ++	63	3.892	3.888	(0.769)	552289	18.8759	18.9	6553
	21 2-Butanone	43	4.264	4.260	(0.843)	134170	18.6384	18.6	(a)
M	22 Total 1,2-Dichloroethene	61				979579	38.5823	38.6	0
	23 cis-1,2-Dichloroethene	61	4.276	4.271	(0.845)	535697	19.1550	19.2	
	24 2,2-Dichloropropane	77	4.287	4.283	(0.847)	513041	20.0188	20.0	7667
	25 Bromochloromethane	128	4.441	4.437	(0.878)	225105	19.2957	19.3	8812
	26 Chloroform +	83	4.476	4.471	(0.885)	699091	19.5750	19.6	9116
$	27 Dibromofluoromethane	111	4.585	4.580	(0.906)	671767	31.7357	31.7	1531
	28 1,1,1-Trichloroethane	97	4.636	4.626	(0.916)	609043	19.9410	19.9	9045
	29 Cyclohexane	56	4.688	4.683	(0.926)	466285	18.4535	18.5	2649
	30 1,1-Dichloropropene	75	4.739	4.735	(0.937)	452760	18.9871	19.0	6851
	31 Carbon Tetrachloride	117	4.756	4.746	(0.940)	507650	19.7235	19.7	9382
$	32 1,2-Dichloroethane-d4	67	4.831	4.820	(0.955)	384257	29.7258	29.7	8244
	33 1,2-Dichloroethane	62	4.882	4.872	(0.965)	655176	19.8677	19.9	6300
	34 Benzene	78	4.888	4.883	(0.966)	1176317	19.0823	19.1	7864
*	35 FLUOROBENZENE	96	5.059	5.055	(1.000)	1974145	30.0000		9234
	36 Trichloroethene	130	5.317	5.312	(1.051)	416861	19.2516	19.3	9381
	37 Methyl Cyclohexane	83	5.477	5.473	(1.083)	572576	19.6960	19.7	3364
	38 1,2-Dichloropropane +	63	5.477	5.473	(1.083)	316033	19.2516	19.3	7083
	39 Dibromomethane	93	5.569	5.564	(1.101)	267004	19.6611	19.7	8815
	40 Bromodichloromethane	83	5.660	5.656	(1.119)	587081	19.4606	19.5	9442
	41 2-Chloroethyl vinyl ether	63	5.838	5.839	(1.154)	142146	15.9924	16.0	6919
	42 cis-1,3-Dichloropropene	75	5.992	5.988	(1.184)	483357	18.7150	18.7	
	43 4-methyl-2-pentanone	43	6.078	6.079	(1.201)	239649	19.8507	19.9	
$	44 Toluene-d8	98	6.232	6.222	(0.828)	1636731	28.6960	28.7	8795
	45 Toluene +	91	6.284	6.279	(0.835)	1228726	18.1324	18.1	8919
	46 trans-1,3-Dichloropropene	75	6.421	6.417	(1.269)	513775	19.5642	19.6	
M	47 1,3 Dichloropropene	100				997132	38.2792	38.3	0
	48 1,1,2-Trichloroethane	97	6.593	6.588	(1.303)	309797	18.9275	18.9	8781
	49 1,3-Dichloropropane	76	6.747	6.743	(1.334)	481197	18.8232	18.8	8416
	50 Tetrachloroethene	164	6.764	6.760	(1.337)	362243	19.2754	19.3	9328
	51 2-Hexanone	43	6.770	6.760	(0.900)	170554	19.7262	19.7	
	52 Dibromochloromethane	129	6.965	6.960	(0.925)	519009	20.1015	20.1	8795
	53 1,2-Dibromoethane(EDB)	107	7.102	7.098	(0.944)	350390	18.9794	19.0	5533
*	54 CHLOROBENZENE-d5	82	7.525	7.521	(1.000)	773384	30.0000		8876
	55 Chlorobenzene ++	112	7.554	7.550	(1.004)	862088	18.8541	18.9	8739
	56 1,1,1,2-Tetrachloroethane	133	7.606	7.607	(1.011)	421271	19.6290	19.6	9078
	57 Ethylbenzene +	106	7.634	7.630	(1.014)	429077	19.1206	19.1	
	58 p,m-Xylene	106	7.743	7.744	(1.029)	1034436	38.3583	38.4	
	59 o-Xylene	106	8.166	8.168	(1.085)	510111	19.4585	19.5	
	60 Styrene	104	8.172	8.168	(1.086)	879147	19.3255	19.3	8320
M	61 TOTAL XYLENE	106				1544547	57.8169	57.8	0
	62 Bromoform ++	173	8.401	8.396	(1.116)	390460	20.3973	20.4	8467

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
63 Isopropylbenzene	105	8.550	8.551	(1.136)	1507926	20.0373	20.0	8865
$ 64 Bromofluorobenzene	174	8.744	8.740	(1.162)	694063	30.4203	30.4	8718
65 1,1,2,2-Tetrachloroethane++	83	8.853	8.854	(0.872)	385715	19.7359	19.7	8323
66 trans-1,4-Dichloro-2-Butene	53	8.916	8.917	(0.878)	115050	20.0423	20.0	7366
67 1,2,3-Trichloropropane	75	8.933	8.928	(0.879)	500590	19.8974	19.9	7312
68 Bromobenzene	77	8.944	8.940	(0.881)	749708	19.5460	19.5	7924
69 n-Propylbenzene	91	9.019	9.020	(0.888)	1733438	20.0192	20.0	
70 2-Chlorotoluene	91	9.162	9.157	(0.902)	1240641	20.5712	20.6	
71 1,2,4-Trimethylbenzene	105	9.219	9.215	(0.908)	1416934	20.2470	20.2	
72 4-Chlorotoluene	91	9.276	9.278	(0.913)	1252528	20.2609	20.3	
73 tert-butylbenzene	91	9.625	9.627	(0.948)	1102935	20.2207	20.2	8406
74 1,3,5-Trimethylbenzene	105	9.688	9.684	(0.954)	1400572	20.0524	20.1	8634 (MH)
75 sec-Butylbenzene	105	9.900	9.895	(0.975)	1605337	19.7292	19.7	
76 p-Isopropyltoluene	119	10.072	10.073	(0.992)	1453547	19.9622	20.0	8437
77 1,3-Dichlorobenzene	146	10.083	10.079	(0.993)	851443	19.7678	19.8	
* 78 1,4-DICHLOROBENZENE-D4	152	10.157	10.153	(1.000)	814103	30.0000		9458
79 1,4-Dichlorobenzene	146	10.186	10.187	(1.003)	871337	20.1064	20.1	
80 n-Butylbenzene	91	10.609	10.611	(1.044)	1301539	20.1589	20.2	9113
81 1,2-Dichlorobenzene	146	10.690	10.685	(1.052)	841427	20.0449	20.0	
82 1,2-Dibromo-3-Chloropropane	157	11.731	11.732	(1.155)	111234	20.3249	20.3	5448
83 1,2,4-Trichlorobenzene	180	12.944	12.939	(1.274)	572480	20.1172	20.1	
84 Hexachlorobutadiene	225	13.178	13.180	(1.297)	509440	20.2302	20.2	9657
85 Naphthalene	128	13.316	13.311	(1.311)	888527	20.2882	20.3	8933
86 1,2,3-Trichlorobenzene	180	13.676	13.677	(1.346)	538422	20.0228	20.0	

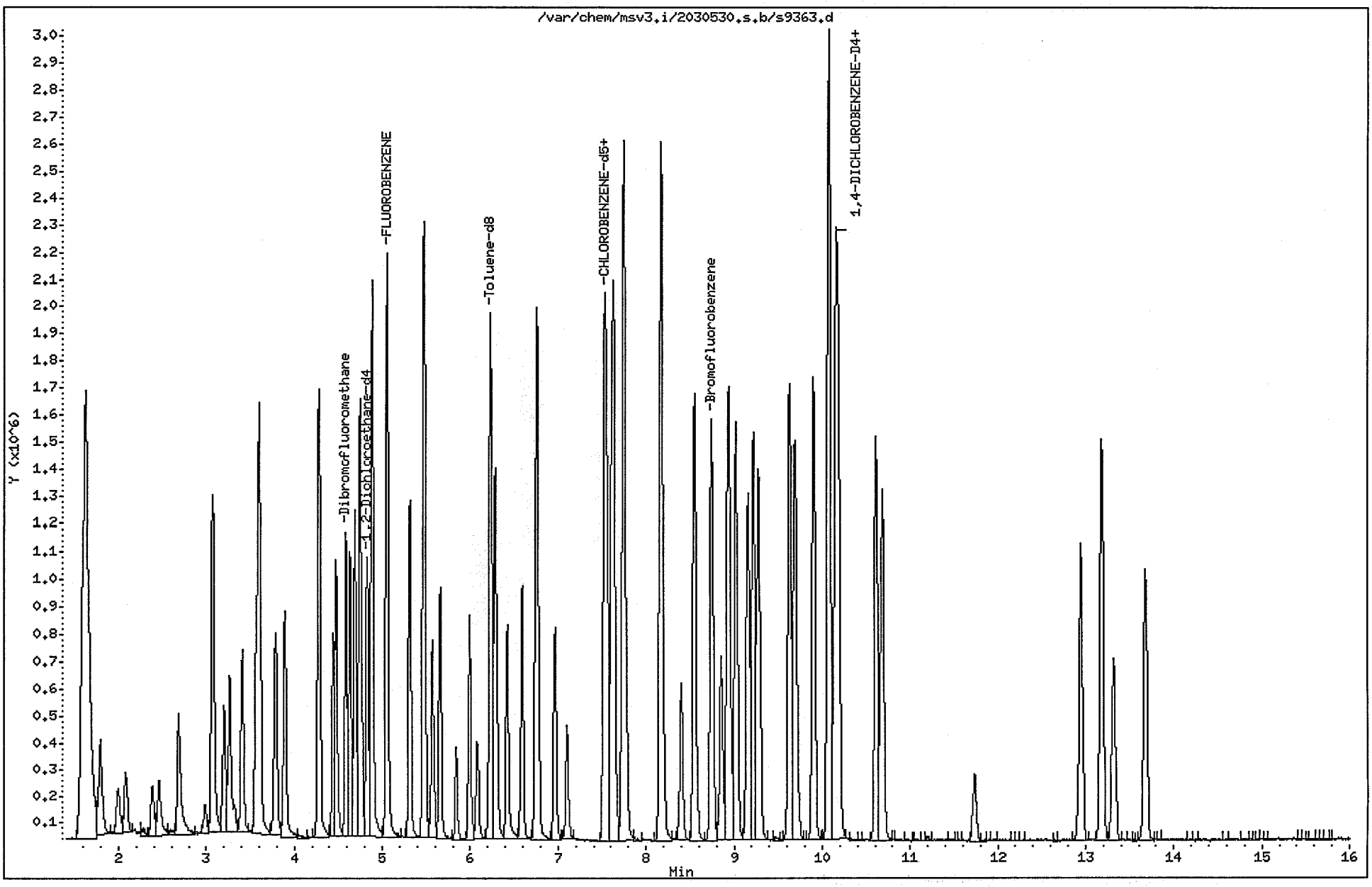
QC Flag Legend

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/msv3.i/2030530.s.b/s9363.d
Date : 30-MAY-2003 12:59
Client ID: V3LCS01
Sample Info: 101546*LCS FOR HBN 257869[MSV/3302]
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53

000117



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9376.d
Lab Smp Id: 20305291106 Client Smp ID: 086-CEF43-33N-Q2-03
Inj Date : 30-MAY-2003 17:30
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291106*086-CEF43-33N-Q2-03-61MS
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 8 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.783	1.782	(0.176)	457957	22.0834	22.1	1498
2 Chloromethane ++	50	1.989	1.988	(0.393)	248571	20.8435	20.8	6479
3 Vinyl Chloride +	62	2.069	2.068	(0.409)	306767	21.4776	21.5	4830
4 Bromomethane	94	2.366	2.366	(0.468)	201695	24.6912	24.7	7662
5 Chloroethane	64	2.447	2.440	(0.484)	201895	21.7758	21.8	4082
6 Trichlorofluoromethane	101	2.675	2.669	(0.529)	562869	23.3785	23.4	8461(H)
7 Acrolein	56	2.979	2.972	(0.589)	78635	75.7224	75.7	3498
8 1,1,2Trichlotrifluoroethane	101	3.059	3.058	(0.605)	357652	22.5267	22.5	1495
9 Acetone	43	3.093	3.092	(0.612)	109140	17.9096	17.9	(a)
10 Methyl Iodide	142	3.196	3.190	(0.632)	666477	22.8513	22.9	9392
11 Carbon Disulfide	76	3.259	3.258	(0.645)	1062830	22.8702	22.9	8662
12 Methyl Acetate	43	3.316	3.316	(0.656)	103001	19.9195	19.9	8591
13 Methylene Chloride	49	3.402	3.396	(0.673)	433895	21.8754	21.9	8638
14 Acrylonitrile	53	3.557	3.556	(0.703)	492057	107.729	108	6875
15 MTBE	73	3.591	3.584	(0.710)	853693	20.8074	20.8	3558

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.602	3.602	(0.713)	320281	23.1823	23.2	8953
	17 trans-1,2-Dichloroethene	61	3.602	3.596	(0.713)	435496	22.2118	22.2	
	18 Vinyl Acetate	43	3.780	3.773	(0.748)	233567	21.3916	21.4	
	19 Hexane	57	3.785	3.779	(0.749)	417380	21.7916	21.8	4553
	20 1,1-Dichloroethane ++	63	3.888	3.888	(0.769)	537810	21.4202	21.4	6612
	21 2-Butanone	43	4.260	4.260	(0.843)	116997	18.9401	18.9	(a)
M	22 Total 1,2-Dichloroethene	61				953512	43.7972	43.8	0
	23 cis-1,2-Dichloroethene	61	4.272	4.271	(0.845)	518016	21.5854	21.6	
	24 2,2-Dichloropropane	77	4.283	4.283	(0.847)	496560	22.5793	22.6	7809
	25 Bromochloromethane	128	4.438	4.437	(0.878)	215353	21.5120	21.5	8803
	26 Chloroform +	83	4.472	4.471	(0.885)	681537	22.2388	22.2	9203
$	27 Dibromofluoromethane	111	4.581	4.580	(0.906)	582949	32.0933	32.1	1474 (H)
	28 1,1,1-Trichloroethane	97	4.627	4.626	(0.915)	608787	23.2284	23.2	9059
	29 Cyclohexane	56	4.684	4.683	(0.926)	456565	21.0564	21.1	2542
	30 1,1-Dichloropropene	75	4.735	4.735	(0.937)	452480	22.1128	22.1	6862
	31 Carbon Tetrachloride	117	4.752	4.746	(0.940)	526140	23.8218	23.8	9408
$	32 1,2-Dichloroethane-d4	67	4.827	4.820	(0.955)	337314	30.4089	30.4	8201
	33 1,2-Dichloroethane	62	4.878	4.872	(0.965)	633675	22.3929	22.4	6320
	34 Benzene	78	4.884	4.883	(0.966)	1114509	21.0691	21.1	7715
*	35 FLUOROBENZENE	96	5.056	5.055	(1.000)	1694044	30.0000		9139
	36 Trichloroethene	130	5.313	5.312	(1.051)	396465	21.3370	21.3	9467
	37 Methyl Cyclohexane	83	5.473	5.473	(1.083)	558722	22.3973	22.4	3321
	38 1,2-Dichloropropane +	63	5.479	5.473	(1.084)	303809	21.5670	21.6	6985
	39 Dibromomethane	93	5.571	5.564	(1.102)	262891	22.5591	22.6	8990
	40 Bromodichloromethane	83	5.656	5.656	(1.119)	575227	22.2204	22.2	9425
	42 cis-1,3-Dichloropropene	75	5.994	5.988	(1.186)	435754	19.6615	19.7	
	43 4-methyl-2-pentanone	43	6.080	6.079	(1.203)	225688	21.7853	21.8	
$	44 Toluene-d8	98	6.229	6.222	(0.828)	1402924	29.1509	29.2	8787
	45 Toluene +	91	6.286	6.279	(0.836)	1162560	20.3324	20.3	8894
	46 trans-1,3-Dichloropropene	75	6.423	6.417	(1.270)	461963	20.4999	20.5	
M	47 1,3 Dichloropropene	100				897717	40.1614	40.2	0
	48 1,1,2-Trichloroethane	97	6.589	6.588	(1.303)	300448	21.3914	21.4	8755
	49 1,3-Dichloropropane	76	6.749	6.743	(1.335)	455008	20.7417	20.7	8224
	50 Tetrachloroethene	164	6.761	6.760	(1.337)	357940	22.1957	22.2	9228
	51 2-Hexanone	43	6.766	6.760	(0.900)	157586	21.6010	21.6	
	52 Dibromochloromethane	129	6.967	6.960	(0.926)	483745	22.2047	22.2	8860
	53 1,2-Dibromoethane(EDB)	107	7.098	7.098	(0.944)	334844	21.4955	21.5	5533
*	54 CHLOROBENZENE-d5	82	7.522	7.521	(1.000)	652561	30.0000		8950
	55 Chlorobenzene ++	112	7.556	7.550	(1.005)	820678	21.2716	21.3	8695
	56 1,1,1,2-Tetrachloroethane	133	7.608	7.607	(1.011)	401664	22.1807	22.2	8959
	57 Ethylbenzene +	106	7.630	7.630	(1.014)	411075	21.7101	21.7	
	58 p,m-Xylene	106	7.751	7.744	(1.030)	995146	43.7338	43.7	
	59 o-Xylene	106	8.168	8.168	(1.086)	490801	22.1884	22.2	
	60 Styrene	104	8.174	8.168	(1.087)	819274	21.3438	21.3	8358
M	61 TOTAL XYLENE	106				1485947	65.9221	65.9	0
	62 Bromoform ++	173	8.397	8.396	(1.116)	359592	22.2628	22.3	8386
	63 Isopropylbenzene	105	8.552	8.551	(1.137)	1451560	22.8596	22.9	8892

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 64 Bromofluorobenzene	174	8.746	8.740	(1.163)	591710	30.7360	30.7	8709
65 1,1,2,2-Tetrachloroethane++	83	8.855	8.854	(0.872)	365912	21.7818	21.8	8177
66 trans-1,4-Dichloro-2-Butene	53	8.918	8.917	(0.878)	107807	21.8491	21.8	7291
67 1,2,3-Trichloropropane	75	8.929	8.928	(0.879)	468712	21.6744	21.7	7600
68 Bromobenzene	77	8.946	8.940	(0.881)	724390	21.9718	22.0	7982
69 n-Propylbenzene	91	9.021	9.020	(0.888)	1693797	22.7576	22.8	
70 2-Chlorotoluene	91	9.158	9.157	(0.902)	1206082	23.2657	23.3	
71 1,2,4-Trimethylbenzene	105	9.221	9.215	(0.908)	1360508	22.6172	22.6	
72 4-Chlorotoluene	91	9.284	9.278	(0.914)	1184644	22.2939	22.3	
73 tert-butylbenzene	91	9.627	9.627	(0.948)	1097395	23.4064	23.4	8401
74 1,3,5-Trimethylbenzene	105	9.684	9.684	(0.954)	1382791	23.0326	23.0	8620(H)
75 sec-Butylbenzene	105	9.902	9.895	(0.975)	1592341	22.7670	22.8	
76 p-Isopropyltoluene	119	10.074	10.073	(0.992)	1446464	23.1108	23.1	8331
77 1,3-Dichlorobenzene	146	10.085	10.079	(0.993)	801427	21.6468	21.6	
* 78 1,4-DICHLOROBENZENE-D4	152	10.154	10.153	(1.000)	699766	30.0000		9580
79 1,4-Dichlorobenzene	146	10.188	10.187	(1.003)	798863	21.4460	21.4	
80 n-Butylbenzene	91	10.611	10.611	(1.045)	1287260	23.1954	23.2	9152
81 1,2-Dichlorobenzene	146	10.680	10.685	(1.052)	781456	21.6580	21.7	
82 1,2-Dibromo-3-Chloropropane	157	11.739	11.732	(1.156)	105368	22.3989	22.4	5528
83 1,2,4-Trichlorobenzene	180	12.946	12.939	(1.275)	543124	22.2041	22.2	
84 Hexachlorobutadiene	225	13.186	13.180	(1.299)	501979	23.1910	23.2	9622
85 Naphthalene	128	13.312	13.311	(1.311)	846432	22.4850	22.5	9048
86 1,2,3-Trichlorobenzene	180	13.672	13.677	(1.347)	520664	22.5261	22.5	

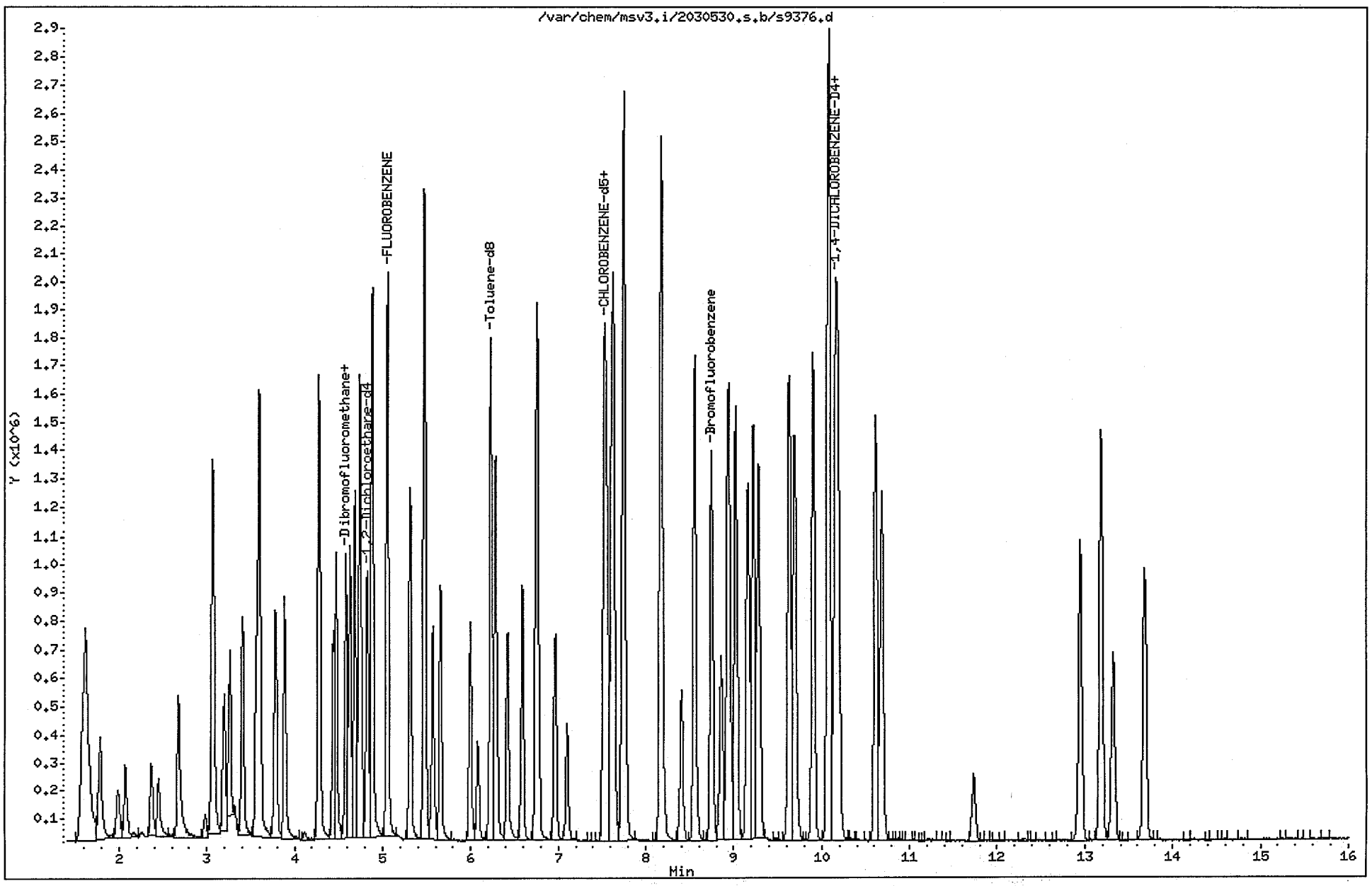
QC Flag Legend

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

Data File: /var/chem/msv3.i/2030530.s.b/s9376.d
Date : 30-MAY-2003 17:30
Client ID: 086-CEF43-33N-Q2-03
Sample Info: 20305291106*086-CEF43-33N-Q2-03-61MS
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i
Operator: RJO
Column diameter: 0.53

000121



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/msv3.i/2030530.s.b/s9377.d
Lab Smp Id: 20305291107 Client Smp ID: 086-CEF43-33N-Q2-03
Inj Date : 30-MAY-2003 17:51
Operator : RJO Inst ID: msv3.i
Smp Info : 20305291107*086-CEF43-33N-Q2-03-61MSD
Misc Info : MSV~3302~*1*RJO
Comment :
Method : /var/chem/msv3.i/2030530.s.b/624w3.m
Meth Date : 05-Jun-2003 11:42 rsp Quant Type: ISTD
Cal Date : 30-MAY-2003 11:28 Cal File: s9359.d
Als bottle: 9 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.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)

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	1.789	1.782	(0.176)	476264	21.3070	21.3	1320
2 Chloromethane ++	50	1.989	1.988	(0.393)	267226	20.4547	20.5	6479
3 Vinyl Chloride +	62	2.075	2.068	(0.410)	336566	21.5101	21.5	4830
4 Bromomethane	94	2.372	2.366	(0.469)	212895	23.7907	23.8	7515
5 Chloroethane	64	2.447	2.440	(0.484)	216130	21.2793	21.3	4082
6 Trichlorofluoromethane	101	2.675	2.669	(0.529)	616666	23.3805	23.4	8440(H)
7 Acrolein	56	2.979	2.972	(0.589)	94139	82.7509	82.8	3497
8 1,1,2Trichlotrifluoroethane	101	3.064	3.058	(0.606)	391455	22.5068	22.5	1342
9 Acetone	43	3.093	3.092	(0.612)	119212	17.8573	17.9	(a)
10 Methyl Iodide	142	3.196	3.190	(0.632)	706246	22.1043	22.1	9400
11 Carbon Disulfide	76	3.259	3.258	(0.645)	1145969	22.5099	22.5	8665
12 Methyl Acetate	43	3.316	3.316	(0.656)	112192	19.8059	19.8	8726
13 Methylene Chloride	49	3.402	3.396	(0.673)	428509	19.7209	19.7	8622
14 Acrylonitrile	53	3.562	3.556	(0.705)	510482	102.022	102	6875
15 MTBE	73	3.591	3.584	(0.710)	912621	20.3049	20.3	3741

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
	16 1,1-Dichloroethene +	96	3.602	3.602	(0.713)	332812	21.9897	22.0	8970
	17 trans-1,2-Dichloroethene	61	3.602	3.596	(0.713)	459645	21.4002	21.4	
	18 Vinyl Acetate	43	3.780	3.773	(0.748)	254934	21.3135	21.3	
	19 Hexane	57	3.780	3.779	(0.748)	437233	20.8384	20.8	4480
	20 1,1-Dichloroethane ++	63	3.888	3.888	(0.769)	577065	20.9804	21.0	6571
	21 2-Butanone	43	4.266	4.260	(0.844)	127702	18.8712	18.9	(a)
M	22 Total 1,2-Dichloroethene	61				1024106	42.8709	42.9	0
	23 cis-1,2-Dichloroethene	61	4.277	4.271	(0.846)	564461	21.4707	21.5	
	24 2,2-Dichloropropane	77	4.283	4.283	(0.847)	529774	21.9900	22.0	7638
	25 Bromochloromethane	128	4.443	4.437	(0.879)	242788	22.1386	22.1	8803
	26 Chloroform +	83	4.472	4.471	(0.885)	725132	21.5990	21.6	9150
$	27 Dibromofluoromethane	111	4.586	4.580	(0.907)	631361	31.7290	31.7	1803
	28 1,1,1-Trichloroethane	97	4.632	4.626	(0.916)	659486	22.9696	23.0	9066
	29 Cyclohexane	56	4.684	4.683	(0.926)	497199	20.9318	20.9	2494
	30 1,1-Dichloropropene	75	4.735	4.735	(0.937)	491431	21.9231	21.9	6889
	31 Carbon Tetrachloride	117	4.752	4.746	(0.940)	553753	22.8867	22.9	9400
$	32 1,2-Dichloroethane-d4	67	4.827	4.820	(0.955)	360125	29.6356	29.6	8319
	33 1,2-Dichloroethane	62	4.878	4.872	(0.965)	675990	21.8062	21.8	6370
	34 Benzene	78	4.884	4.883	(0.966)	1227631	21.1848	21.2	7608
*	35 FLUOROBENZENE	96	5.056	5.055	(1.000)	1855795	30.0000		9256
	36 Trichloroethene	130	5.313	5.312	(1.051)	427860	21.0197	21.0	9428
	37 Methyl Cyclohexane	83	5.473	5.473	(1.083)	589511	21.5718	21.6	3317
	38 1,2-Dichloropropane +	63	5.479	5.473	(1.084)	318060	20.6107	20.6	7009
	39 Dibromomethane	93	5.571	5.564	(1.102)	280497	21.9719	22.0	8963
	40 Bromodichloromethane	83	5.656	5.656	(1.119)	624099	22.0070	22.0	9608
	42 cis-1,3-Dichloropropene	75	5.994	5.988	(1.186)	506340	20.8551	20.9	
	43 4-methyl-2-pentanone	43	6.080	6.079	(1.203)	242844	21.3982	21.4	
$	44 Toluene-d8	98	6.229	6.222	(0.827)	1527966	29.7441	29.7	8761
	45 Toluene +	91	6.286	6.279	(0.835)	1249217	20.4683	20.5	8882
	46 trans-1,3-Dichloropropene	75	6.423	6.417	(1.270)	504196	20.4239	20.4	
M	47 1,3 Dichloropropene	100				1010536	41.2790	41.3	0
	48 1,1,2-Trichloroethane	97	6.589	6.588	(1.303)	316969	20.6007	20.6	8731
	49 1,3-Dichloropropane	76	6.749	6.743	(1.335)	488064	20.3094	20.3	8395
	50 Tetrachloroethene	164	6.766	6.760	(1.338)	369027	20.8887	20.9	9342
	51 2-Hexanone	43	6.766	6.760	(0.899)	165739	21.2838	21.3	
	52 Dibromochloromethane	129	6.967	6.960	(0.926)	516614	22.2159	22.2	8806
	53 1,2-Dibromoethane(EDB)	107	7.098	7.098	(0.943)	353535	21.2621	21.3	5533
*	54 CHLOROBENZENE-d5	82	7.527	7.521	(1.000)	696549	30.0000		8890
	55 Chlorobenzene ++	112	7.550	7.550	(1.003)	853755	20.7315	20.7	8688
	56 1,1,1,2-Tetrachloroethane	133	7.607	7.607	(1.011)	425995	22.0387	22.0	8990
	57 Ethylbenzene +	106	7.630	7.630	(1.014)	430641	21.3072	21.3	
	58 p,m-Xylene	106	7.745	7.744	(1.029)	1039753	42.8085	42.8	
	59 o-Xylene	106	8.168	8.168	(1.085)	516013	21.8549	21.9	
	60 Styrene	104	8.174	8.168	(1.086)	859026	20.9661	21.0	8371
M	61 TOTAL XYLENE	106				1555766	64.6634	64.7	0
	62 Bromoform ++	173	8.403	8.396	(1.116)	387206	22.4585	22.5	8470
	63 Isopropylbenzene	105	8.552	8.551	(1.136)	1525128	22.5014	22.5	8895

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/L)	SIMILARITY
$ 64 Bromofluorobenzene	174	8.746	8.740	(1.162)	622415	30.2892	30.3	8686
65 1,1,2,2-Tetrachloroethane++	83	8.855	8.854	(0.872)	392774	21.6916	21.7	8207
66 trans-1,4-Dichloro-2-Butene	53	8.918	8.917	(0.878)	113718	21.3820	21.4	7246
67 1,2,3-Trichloropropane	75	8.929	8.928	(0.879)	499595	21.4334	21.4	7617
68 Bromobenzene	77	8.946	8.940	(0.881)	741617	20.8691	20.9	7841
69 n-Propylbenzene	91	9.021	9.020	(0.888)	1758543	21.9204	21.9	
70 2-Chlorotoluene	91	9.158	9.157	(0.901)	1258415	22.5214	22.5	
71 1,2,4-Trimethylbenzene	105	9.221	9.215	(0.908)	1419508	21.8931	21.9	
72 4-Chlorotoluene	91	9.278	9.278	(0.913)	1234565	21.5548	21.6	
73 tert-butylbenzene	91	9.627	9.627	(0.948)	1132394	22.4079	22.4	8442
74 1,3,5-Trimethylbenzene	105	9.684	9.684	(0.953)	1444372	22.3202	22.3	8627(H)
75 sec-Butylbenzene	105	9.902	9.895	(0.975)	1653773	21.9370	21.9	
76 p-Isopropyltoluene	119	10.074	10.073	(0.992)	1479213	21.9265	21.9	8369
77 1,3-Dichlorobenzene	146	10.079	10.079	(0.992)	839320	21.0324	21.0	
* 78 1,4-DICHLOROBENZENE-D4	152	10.159	10.153	(1.000)	754260	30.0000		9341
79 1,4-Dichlorobenzene	146	10.182	10.187	(1.002)	832198	20.7268	20.7	
80 n-Butylbenzene	91	10.611	10.611	(1.044)	1348573	22.5446	22.5	9064
81 1,2-Dichlorobenzene	146	10.686	10.685	(1.052)	817548	21.0212	21.0	
82 1,2-Dibromo-3-Chloropropane	157	11.727	11.732	(1.154)	109608	21.6168	21.6	5508
83 1,2,4-Trichlorobenzene	180	12.946	12.939	(1.274)	578271	21.9330	21.9	
84 Hexachlorobutadiene	225	13.180	13.180	(1.297)	520888	22.3259	22.3	9643
85 Naphthalene	128	13.318	13.311	(1.311)	931058	22.9461	22.9	9005
86 1,2,3-Trichlorobenzene	180	13.678	13.677	(1.346)	553189	22.2042	22.2	

QC Flag Legend

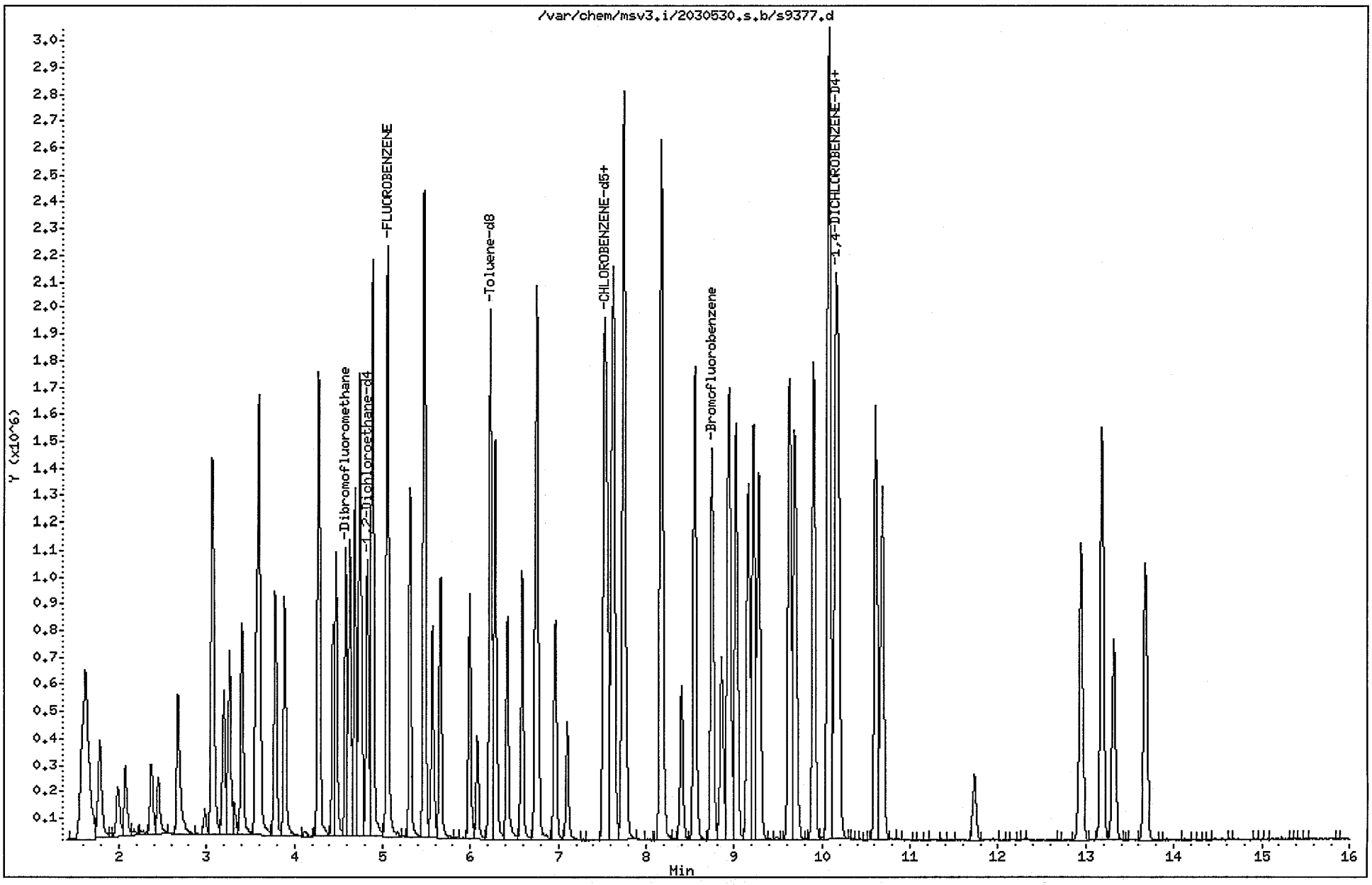
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv3.i/2030530.s.b/s9377.d
Date : 30-MAY-2003 17:51
Client ID: 086-CEF43-33N-Q2-03
Sample Info: 20305291107*086-CEF43-33N-Q2-03-61MSD
Purge Volume: 5.0
Column phase: DB-624-30M

Instrument: msv3.i

Operator: RJO
Column diameter: 0.53

000125



LABORATORY CHRONICLE: GC-MS DEPARTMENT

Date: 30-MAY-2003
Instrument: msv3.i
Analyst(s): RJO

Standard	Conc ppm
Int. Standard	50
Surrogate	50
8260	50
Ac/Ac/VA	250/50
CVE	50

Sample ID	Status/Comments	DataFile	WT VOL	Injection Time	DilFactor	ALS
1000		s9353.d	0.00	30-MAY-2003 08:30	1.000	2
1000		s9354.d	0.00	30-MAY-2003 08:52	1.000	2
1202		s9355.d	5.00	30-MAY-2003 09:23	1.000	2
BLANK		s9356.d	5.00	30-MAY-2003 10:10	1.000	3
1201		s9357.d	5.00	30-MAY-2003 10:35	1.000	4
1203		s9358.d	5.00	30-MAY-2003 10:57	1.000	5
1204		s9359.d	5.00	30-MAY-2003 11:28	1.000	6
BLANK		s9360.d	5.00	30-MAY-2003 11:49	1.000	7
ICV		s9361.d	5.00	30-MAY-2003 12:17	1.000	8
BLANK		s9362.d	5.00	30-MAY-2003 12:38	1.000	9
101546		s9363.d	5.00	30-MAY-2003 12:59	1.000	3
101546		s9364.d	5.00	30-MAY-2003 13:20	1.000	4
101683		s9365.d	5.00	30-MAY-2003 13:41	1.000	5
20305291101		s9366.d	5.00	30-MAY-2003 14:14	500.000	3
20305291102		s9367.d	5.00	30-MAY-2003 14:35	500.000	4
20305291103		s9368.d	5.00	30-MAY-2003 14:56	500.000	5
20305291104		s9369.d	5.00	30-MAY-2003 15:17	500.000	6
20305291105		s9370.d	5.00	30-MAY-2003 15:38	500.000	7
20305291109		s9371.d	5.00	30-MAY-2003 15:59	500.000	10
20305291110		s9373.d	5.00	30-MAY-2003 16:21	500.000	11
20305291105		s9374.d	5.00	30-MAY-2003 17:09	1.000	7
20305291106		s9376.d	5.00	30-MAY-2003 17:30	1.000	8
20305291107		s9377.d	5.00	30-MAY-2003 17:51	1.000	9
BLANK		s9378.d	5.00	30-MAY-2003 18:12	1.000	10
20305291111		s9379.d	5.00	30-MAY-2003 18:33	1.000	12
20305291112		s9380.d	5.00	30-MAY-2003 18:54	1.000	13
20305291101		s9381.d	5.00	30-MAY-2003 19:15	1.000	3
20305291102		s9382.d	5.00	30-MAY-2003 19:36	1.000	4
20305291103		s9383.d	5.00	30-MAY-2003 19:56	1.000	5
20305291104		s9384.d	5.00	30-MAY-2003 20:18	5.000	6
20305291109		s9385.d	5.00	30-MAY-2003 20:38	1.000	10
20305291110		s9386.d	5.00	30-MAY-2003 20:59	1.000	11
20305291104		s9387.d	5.00	31-MAY-2003 08:09	1.000	6

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
A-23-1 8260 IS/SS MSV-0,1,-4	4-23-1	C-440-04 SURRO	NSF 2500ppm	C-440-04 Exp-06-03	2.0ml	100ml	50ppm	meoH 028443	RV	3-21-03	06-30-0
		C-441-04 INT STD	NSF 2500ppm	C-441-04 Exp-02-04	2.0ml						
App-1-mix	4-23-2	93014	Abs 2500ppm	93014 / 103001 Exp 103004	2.5ml	25ml	250ppm	meoH 028443	RV	3-21-03	9-20-03
App-3-1-3-butadiene	4-23-3	93016	Abs 2500ppm	103101 Exp 103104	1.0ml	10ml	250ppm	meoH 028443	RV	3-21-03	9-20
APP-2-mix	4-23-4	93015	Abs	93015 Exp-121005	2.5ml	10ml	50ppm	meoH 028443	RV	3-21-03	9-20
2CVE	4-23-5 (23) pos 10-15-03	17-04-05	NSF 1000ppm	17-04-05 Exp-01-04	2.5ml	10ml	250ppm	meoH 028443	RV	4-16-03	10-15-0
AC/AE	4-23-6	Q-2143	NSF	011403-04 Exp-07-03	3.125 ml	25ml	050ppm	Water	RV	4-17-03	7-30-0
8260 IS/SS MSV 0,1,4	4-23-7	C-441-04 IS	NSF 2500ppm	C-441-04 Exp-02-04	2.0ml	100ml	50ppm	meoH 028443	RV	4-17-03	06-30-03
		C-440-04	NSF 2500ppm	C-440-04 Exp-06-03	2.0ml						
8260 STD	Q-3393 4-23-8	Q-3393	NSF 1000ppm	031803-03 Exp-03-04	6.250 ml	25.0 ml	250ppm	meoH 028443	RV	4-19-03	7-30-03
		C-303H Genes	NSF 2000ppm	031703 Exp-03-04	3.125 ml						
		Q-2128	NSF 2000ppm	103002-04 Exp-7-03	3.125 ml						
Dated	3/24	03-4/19/03	Removed				QA/QC 4/24/03				
8260 IS MSV 0,1,4	4-23-9	C-441-04 INT STD	NSI 2500ppm	C-441-04 Exp 02/04	2.0 mL	100 mL	50ppm	meoH 028443	HSL	4-24-03	7-23-03
CLP-3 25 STD A	4-23-10	93164	Abs 2000ppm	050102 Exp 050107	3.125ml	25ml	250ppm	meoH 028443	RV	5-2-03	11-1-03
CLP-3 2 STD-B Ketone	4-23-11	82402	Abs 2000ppm	111402 Exp 111405	2.5ml	10ml	500ppm	meoH 028443	RV	5-2-03	11-1-03
CLP-3 2 IS	4-23-12	20048	Abs 2500ppm	051601 Exp-051606	2.5ml	25ml	250ppm	meoH 028443	RV	5-2-03	11-1-03
CLP 3 2-1 A 10 Ketone	4-23-13	ES-5038-1	cambridge 100ppm	PR-13684	1.0ml	10ml	10ppm	meoH 028443	RV	5-2-03	11-1-03

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
3-2-CLP Ketone SURR-D	4-24-1	ES-5038-2 200ppm	Cambridge	PS026463 PR-12932	0.5ml	2.0ml	50ppm	meOH 028443	RW	5-2-03	11-1-03
3-2CLP IS	4-24-2	200488 2500ppm	Abs 250 ppm	051601 Exp - 051606	1ml	50ml	50ppm	meOH 028443	RW	5-2-03	11-1-03
8260 IS/SS MSV 2+3	4-24-3	C-440-05 Surr.	NSI 2500 ppm	C-440-05 Exp 02/05	0.5 ml	50ml	25 ppm	meOH 028443	HJL	5-3-03	11-2-03
		C-441-04 Int. STD	NSI 2500 ppm	C-441-04 Exp 02/04	0.5 ml						
Ac/Ac	4-24-4	Q-2143	NCS 050103 04 Exp-11-03	051030 4 Exp-11-03	3.125ml	25ml	50ppm	Water	RW	5-6-03	11-5-03
8260 ICV	4-24-5	93017 2000 ppm	Abs 2000 ppm	110101 Exp. 11-01-04	0.625 ml	5 ml	250 ppm	meOH 027979	HJL	5-7-03	11-06-03
		30058 2000 ppm	Abs 2000 ppm	121202 Exp. 12-12-05	0.625 ml	5 ml	250 ppm	meOH 027971	HJL	5-7-03	11-6-03
		93358 2500 ppm	Abs 2500 ppm	122302 Exp. 12-23-07	0.5 ml	5 ml	250 ppm	meOH 027971	HJL	5-7-03	11-6-03
AC/AC ICV	4-24-6	93018	Abs	022503 Exp. 02-25-06	1.250 ml	10 ml	50 ppm	water	HJL	5-7-03	11-06-03
~~8260-ABS~~	~~4-24-7~~	~~30058~~		RW					RW		
~~8260 STD~~	~~Q-3393~~										
8260 STD	4-24-7	Q-3393	NSI 1000ppm	050103-03 Exp-5-04	6.250 ml	25 ml	250 ppm	meOH 027971	RW	5-7-03	11-6-03
		C-303H 5000	NCS 2000ppm	031703 Exp-03-04	3.125 ml						
		Q-2128	NSI 2000 ppm	031803-04 Exp-1-04	3.125ml						
3-2CLP-Ketone SURR-B	4-24-8	ES-5038-2 200ppm	Cambridge	PR-14255	0.5ml	2.0ml	50ppm	meOH 027971	RW	5-8-03	11-7-03
CLP IS/SS 2+1	4-24-9	C-157-03 INT STD	NSI 2500ppm	C-157-03 Exp-09-04	500ul	50ml	25ppm	meOH 027971	RW	5-13-03	11-12-03
		233-04-06	2005ppm	233-04-06 Exp-08-04	6364						
~~CLP BFB~~	~~4-24-10~~	~~233-04-06~~ NSF	~~NSF~~ 2005ppm								

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
CLP Ketone 2-1-mix	4-25-1	C-109-10	NSF 2000 ppm	C-109-10 Exp - 11-03	1.0 ml	10 ml	200 ppm	water	RK	5-13-03	11-12-03 RK - 5-13
1-Bromo-2-chloroethane	4-25-2	71245	Abs 1000 ppm	012003 Exp. 01-20-08	1.25 ml	5 ml	250 ppm	028443 MeOH	HJL	5-14-03	11-13-03
3-2-CLP Ketone SURR-B	4-25-3	ES-5038-2 200 ppm	Cambridge	PR-14255	0.5 ml	2 ml	50 ppm	meoH 028443	RK	5-14-03	11-13-0
AC/AE	4-25-4	NSF Q-2143	NSF	050103-04 Exp-11-03	3.125	25 ml	water 50 ppm	water	RK	5-19-03	11-18-0
AE/AC ICV	4-25-5	93018	Abs	022503 Exp -02-25-06	0.625	5 ml	50 ppm	water	RK	5-19-03	11-18-0
8260 IS/SS	4-25-6	C-440-05 2000 ppm	NSF IS	C-440-05 Exp - 02-04-05	2.0 ml	100 ml	50 ppm	meoH	RK	5-20-03	11-19-03
		C-441-04 2000 ppm	NSF IS	C-441-04 Exp - 02-04	2.0 ml			028443			
8260 SS	4-25-7	C-440-05 2000 ppm	NSF	C-440-05 Exp - 02-05	1.25 ml	10 ml	250 ppm	meoH 028443	RK	5-20-03	11-19-03
Order	4/24/03	5/20/03		Remained	By	QA/QC		5/22/03			

000129

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291101	086-CEF43-2N-Q2-03-61	Water	5/27/03 16:40	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 16:24	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	2.29J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	7.09J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291102	086-CEF43-6N-Q2-03-61	Water	5/27/03 16:00	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 16:42	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	1.58J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	6.89J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.4 ug/L	103	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291103	086-CEF43-7N-Q2-03-61	Water	5/27/03 15:05	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:01	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	52 ug/L	104	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291104	086-CEF43-9N-Q2-03-61	Water	5/27/03 14:30	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:20	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	**Ethylbenzene**	**16.8**	**5.00**	**0.370**	**ug/L**
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	**Xylene (total)**	**82.6**	**10.0**	**1.06**	**ug/L**
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	68.2 ug/L	136	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291105	086-CEF43-33N-Q2-03-61	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:16	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	50.5 ug/L	101	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291106	086-CEF43-33N-Q2-03-61MS	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:34	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	21.3	5.00	0.370	ug/L
100-41-4	Ethylbenzene	21.6	5.00	0.370	ug/L
108-88-3	Toluene	21.0	5.00	0.380	ug/L
1330-20-7	Xylene (total)	63.1	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	106	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	50.1 ug/L	100	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291107	086-CEF43-33N-Q2-03-61MSD	Water	5/28/03 14:50	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 15:53	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	21.4	5.00	0.370	ug/L
100-41-4	Ethylbenzene	21.8	5.00	0.370	ug/L
108-88-3	Toluene	21.3	5.00	0.380	ug/L
1330-20-7	Xylene (total)	63.6	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	99.9	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291109	086-CEF43-38N-Q2-03-61	Water	5/28/03 15:45	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:40	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.1 ug/L	102	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291110	086-DUP-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 17:59	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	1.12J	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	4.34J	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.6 ug/L	103	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291111	086-EQB-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8021B, Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 18:18	JAR	258041

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-43-2	Benzene	5.00 U	5.00	0.370	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	0.370	ug/L
108-88-3	Toluene	5.00 U	5.00	0.380	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	1.06	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	2.40	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
106-39-8	Bromochlorobenzene	50	51.9 ug/L	104	60 - 142

RESULTS REPORTED ON A WET WEIGHT BASIS

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
102240	Method Blank	Water	

SW-846 8021B

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 14:14	JAR	258041

CAS #	PARAMETER	RESULT	RDL	UNITS
71-43-2	Benzene	5.00 U	5.00	ug/L
100-41-4	Ethylbenzene	5.00 U	5.00	ug/L
108-88-3	Toluene	5.00 U	5.00	ug/L
1330-20-7	Xylene (total)	10.0 U	10.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00 U	5.00	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC LIMITS
106-39-8	Bromochlorobenzene	50	51.6 ug/L	103	60 - 142

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
102241	Lab Control Sample	Water	

SW-846 8021B

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	6/3/03 14:32	JAR	258041

CAS #	PARAMETER	RESULT	RDL	UNITS
71-43-2	Benzene	20.4	5.00	ug/L
100-41-4	Ethylbenzene	22.0	5.00	ug/L
108-88-3	Toluene	21.5	5.00	ug/L
1330-20-7	Xylene (total)	64.4	10.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	84.7	5.00	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC LIMITS
106-39-8	Bromochlorobenzene	50	52.8 ug/L	106	60 - 142

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	102440	103				0
02	102241	106				0
03	33N-Q2-03-61	101				0
04	33N-Q2-03-61	100				0
05	33N-Q2-03-61	102				0
06	2N-Q2-03-61	102				0
07	6N-Q2-03-61	103				0
08	7N-Q2-03-61	104				0
09	9N-Q2-03-61	136				0
10	38N-Q2-03-61	102				0
11	DUP-Q2-03-61	103				0
12	EQB-Q2-03-61	104				0
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

SMC1 = Bromochlorobenzene QC LIMITS (60-142)

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Matrix Spike - EPA Sample No.: 33N-Q2-03-61

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Toluene	20.0	0.0	21.0	105	58-138
Benzene	20.0	0.0	21.3	107	56-141
Ethylbenzene	20.0	0.0	21.6	108	42-151
Xylene(Total)	60.0	0.0	63.1	105	53-143
MTBE	100	0.0	106	106	50-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Toluene	20.0	21.3	107	2	15	58-138
Benzene	20.0	21.4	107	0	19	56-141
Ethylbenzene	20.0	21.8	109	1	15	42-151
Xylene(Total)	60.0	63.6	106	1	17	53-143
MTBE	100	99.9	100	6	25	50-150

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

102440

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Lab File ID: V4B002 Lab Sample ID: 102440

Date Analyzed: 06/03/03 Time Analyzed: 1414

GC Column: DB-VRX-30 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCV4B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	102241	102241	V4B003	1432
02	33N-Q2-03-61	20305291105	V4B004	1516
03	33N-Q2-03-61	20305291106	V4B005	1534
04	33N-Q2-03-61	20305291107	V4B006	1553
05	2N-Q2-03-61	20305291101	V4B007	1624
06	6N-Q2-03-61	20305291102	V4B008	1642
07	7N-Q2-03-61	20305291103	V4B009	1701
08	9N-Q2-03-61	20305291104	V4B010	1720
09	38N-Q2-03-61	20305291109	V4B011	1740
10	DUP-Q2-03-61	20305291110	V4B012	1759
11	EQB-Q2-03-61	20305291111	V4B013	1818
12				
13				
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COMMENTS:

Gulf Coast Analytical Services

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-2003 10:36
End Cal Date : 10-MAR-2003 13:18
Quant Method : ISTD
Origin : Included
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Cal Date : 05-Jun-2003 16:23 jdt

Calibration File Names:
Level 1: /var/chem/gcv4b.i/2030310.b/V4B002.d
Level 2: /var/chem/gcv4b.i/2030310.b/V4B003.d
Level 3: /var/chem/gcv4b.i/2030310.b/V4B004.d
Level 4: /var/chem/gcv4b.i/2030310.b/V4B001.d
Level 5: /var/chem/gcv4b.i/2030310.b/V4B005.d
Level 6: /var/chem/gcv4b.i/2030310.b/V4B006.d

Compound	1 Level 1	5 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
M 1 Total Xylenes	1.36303	1.30721	1.31142	1.30549	1.23784	1.23623	AVRG		1.29354		3.76600
2 MTBE	80802	447989	863744	1717230	3249805	5507703	QUAD	0.01341	2.46831	1.31153	0.99980
3 Benzene	1.42523	1.49900	1.47238	1.46698	1.42745	1.43845	AVRG		1.45492		2.01579
5 Toluene	1.45295	1.34990	1.34395	1.33205	1.28502	1.28908	AVRG		1.34216		4.53469
6 Chlorobenzene	1.44112	1.39393	1.40356	1.39092	1.33187	1.34363	AVRG		1.38417		2.91478
7 Ethylbenzene	1.22122	1.17120	1.17307	1.16916	1.11463	1.13569	AVRG		1.16416		3.13831
8 m,p-Xylene	1.43508	1.37992	1.38608	1.38099	1.30136	1.29363	AVRG		1.36284		4.01223
9 o-Xylene	1.21894	1.16181	1.16211	1.15450	1.11081	1.12143	AVRG		1.15493		3.30048
10 1,3-Dichlorobenzene	1.30447	1.21178	1.19494	1.19892	1.14470	1.16183	AVRG		1.20277		4.63637
11 1,4-Dichlorobenzene	1.32530	1.25035	1.22125	1.22836	1.17416	1.19237	AVRG		1.23196		4.30859
12 1,2-Dichlorobenzene	1.08849	1.00826	0.98489	0.98864	0.94793	0.94697	AVRG		0.99420		5.24135
$ 13 Bromochlorobenzene	1.39459	1.40963	1.35522	1.37429	1.35260	1.32694	AVRG		1.36888		2.20635

000145

Data File: /var/chem/gcv4b.i/2030603p.b/V4B001.d
Report Date: 05-Jun-2003 16:23

Gulf Coast Analytical Services

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv4b.i
Lab File ID: V4B001.d
Analysis Type: WATER
Lab Sample ID: 0603V4STD020
Method: /var/chem/gcv4b.i/2030603p.b/BTEXPh.m

Injection Date: 03-JUN-2003 13:39
Init. Cal. Date(s): 10-MAR-2003 10-MAR-2003
Init. Cal. Times: 10:36 13:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF20	CCAL RRF20	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
M 1 Total Xylenes	1.29354	1.25300	1.25300	0.010	3.13416	15.00000	Averaged
2 MTBE	103	100	0.31255	0.010	-3.44076	15.00000	Quadratic
3 Benzene	1.45492	1.40800	1.40800	0.010	3.22472	15.00000	Averaged
5 Toluene	1.34216	1.29533	1.29533	0.010	3.48878	15.00000	Averaged
7 Ethylbenzene	1.16416	1.12610	1.12610	0.010	3.26973	15.00000	Averaged
8 m,p-Xylene	1.36284	1.32183	1.32183	0.010	3.00943	15.00000	Averaged
9 o-Xylene	1.15493	1.11533	1.11533	0.010	3.42854	15.00000	Averaged
$ 13 Bromochlorobenzene	1.36888	1.38671	1.38671	0.010	-1.30254	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 3.03733
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcv4b.i/2030603p.b/V4B014.d
Report Date: 05-Jun-2003 16:23

Gulf Coast Analytical Services

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv4b.i
Lab File ID: V4B014.d
Analysis Type: WATER
Lab Sample ID: 0603V4STD020
Method: /var/chem/gcv4b.i/2030603p.b/BTEXPh.m

Injection Date: 03-JUN-2003 18:37
Init. Cal. Date(s): 10-MAR-2003 10-MAR-2003
Init. Cal. Times: 10:36 13:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF20	CCAL RRF20	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
M 1 Total Xylenes	1.29354	1.36604	1.36604	0.010	-5.60517	15.00000	Averaged
2 MTBE	108	100	0.32331	0.010	-7.89432	15.00000	Quadratic
3 Benzene	1.45492	1.52977	1.52977	0.010	-5.14520	15.00000	Averaged
5 Toluene	1.34216	1.41617	1.41617	0.010	-5.51414	15.00000	Averaged
7 Ethylbenzene	1.16416	1.22822	1.22822	0.010	-5.50250	15.00000	Averaged
8 m,p-Xylene	1.36284	1.44142	1.44142	0.010	-5.76599	15.00000	Averaged
9 o-Xylene	1.15493	1.21528	1.21528	0.010	-5.22561	15.00000	Averaged
$ 13 Bromochlorobenzene	1.36888	1.40876	1.40876	0.010	-2.91388	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.44585
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Services

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-2003 10:36
End Cal Date : 10-MAR-2003 13:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Cal Date : 05-Jun-2003 16:32 jdt
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcv4a.i/2030310.b/V4A002.d
Level 2: /var/chem/gcv4a.i/2030310.b/V4A003.d
Level 3: /var/chem/gcv4a.i/2030310.b/V4A004.d
Level 4: /var/chem/gcv4a.i/2030310.b/V4A001.d
Level 5: /var/chem/gcv4a.i/2030310.b/V4A005.d
Level 6: /var/chem/gcv4a.i/2030310.b/V4A006.d

	Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	20.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
M	1 Total Xylenes	1.26507	1.09481	1.26907	1.21029	1.12934	1.22538	1.19899	5.992
	2 MTBE	0.58881	0.62956	0.59195	0.64364	0.59801	0.64774	0.61662	4.348
	3 Benzene	1.32122	1.15636	1.16390	1.10742	0.99996	1.16923	1.15302	9.029
	5 Toluene	0.96475	1.34548	1.17747	1.21641	1.09718	1.23318	1.17241	11.081
	6 Chlorobenzene	0.89436	0.86331	0.99994	0.88577	0.80925	0.87962	0.88871	7.019
	7 Ethylbenzene	1.26892	1.11822	1.30741	1.19476	1.10036	1.20148	1.19852	6.770
	8 m,p-Xylene	1.26784	1.05162	1.25736	1.21246	1.11957	1.22647	1.18922	7.188
	9 o-Xylene	1.25953	1.18120	1.29247	1.20594	1.14888	1.22319	1.21854	4.276
	10 1,3-Dichlorobenzene	0.73634	0.66643	0.62171	0.63047	0.59296	0.64242	0.64839	7.619
	11 1,4-Dichlorobenzene	0.76249	0.67146	0.65851	0.67118	0.62910	0.68222	0.67916	6.588
	12 1,2-Dichlorobenzene	0.80521	0.57044	0.62070	0.63706	0.58851	0.63417	0.64268	13.048
$	13 Bromochlorobenzene	0.48220	0.48405	0.45905	0.44768	0.45344	0.38896	0.45256	7.643

Data File: /var/chem/gcv4a.i/2030603p.b/V4A001.d
Report Date: 05-Jun-2003 16:31

Gulf Coast Analytical Services

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv4a.i
Lab File ID: V4A001.d
Analysis Type: WATER
Lab Sample ID: 0603V4STD020
Method: /var/chem/gcv4a.i/2030603p.b/BTEXFh.m

Injection Date: 03-JUN-2003 13:39
Init. Cal. Date(s): 10-MAR-2003 10-MAR-2003
Init. Cal. Times: 10:36 13:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF20	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M 1 Total Xylenes	1.19899	1.06575	0.010	11.11326	15.00000	Averaged	
2 MTBE	0.61662	0.62357	0.010	-1.12729	15.00000	Averaged	
3 Benzene	1.15302	1.10626	0.010	4.05500	15.00000	Averaged	
5 Toluene	1.17241	1.13598	0.010	3.10755	15.00000	Averaged	
7 Ethylbenzene	1.19852	1.10863	0.010	7.50026	15.00000	Averaged	
8 m,p-Xylene	1.18922	1.09976	0.010	7.52274	15.00000	Averaged	
9 o-Xylene	1.21854	0.99772	0.010	18.12156	15.00000	Averaged	<-
$ 13 Bromochlorobenzene	0.45256	0.46416	0.010	-2.56346	15.00000	Averaged	

Average %D / Drift Results.

Calculated Average %D/Drift = 6.88889
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcv4a.i/2030603p.b/V4A014.d
Report Date: 05-Jun-2003 16:32

Gulf Coast Analytical Services

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv4a.i
Lab File ID: V4A014.d
Analysis Type: WATER
Lab Sample ID: 0603V4STD020
Method: /var/chem/gcv4a.i/2030603p.b/BTEXFh.m

Injection Date: 03-JUN-2003 18:37
Init. Cal. Date(s): 10-MAR-2003 10-MAR-2003
Init. Cal. Times: 10:36 13:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF20	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
M 1 Total Xylenes	1.19899	1.22948	0.010	-2.54271	15.00000	Averaged
2 MTBE	0.61662	0.64422	0.010	-4.47662	15.00000	Averaged
3 Benzene	1.15302	1.19331	0.010	-3.49490	15.00000	Averaged
5 Toluene	1.17241	1.18125	0.010	-0.75404	15.00000	Averaged
7 Ethylbenzene	1.19852	1.20841	0.010	-0.82504	15.00000	Averaged
8 m,p-Xylene	1.18922	1.22713	0.010	-3.18807	15.00000	Averaged
9 o-Xylene	1.21854	1.23417	0.010	-1.28303	15.00000	Averaged
$ 13 Bromochlorobenzene	0.45256	0.50057	0.010	-10.60849	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 3.39661
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Lab File ID (Standard): V4B001 Date Analyzed: 06/03/03

Instrument ID: GCV4B Time Analyzed: 1339

GC Column: DB-VRX-30 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3062053	4.63				
	UPPER LIMIT	6124106	4.73				
	LOWER LIMIT	1531026	4.54				
	EPA SAMPLE NO.						
01	102440	2822356	4.64				
02	102241	2753654	4.64				
03	33N-Q2-03-61	2862350	4.64				
04	33N-Q2-03-61	2795177	4.64				
05	33N-Q2-03-61	2818963	4.63				
06	2N-Q2-03-61	2876663	4.63				
07	6N-Q2-03-61	2731924	4.64				
08	7N-Q2-03-61	2722075	4.64				
09	9N-Q2-03-61	2655513	4.64				
10	38N-Q2-03-61	2802055	4.64				
11	DUP-Q2-03-61	2745264	4.64				
12	EQB-Q2-03-61	2792854	4.64				
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Fluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.10 minutes of internal standard RT
RT LOWER LIMIT = - 0.10 minutes of internal standard RT

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

Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B007.d
Lab Smp Id: 20305291101 Client Smp ID: 2N-Q2-03-61
Inj Date : 03-JUN-2003 16:24
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291101-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

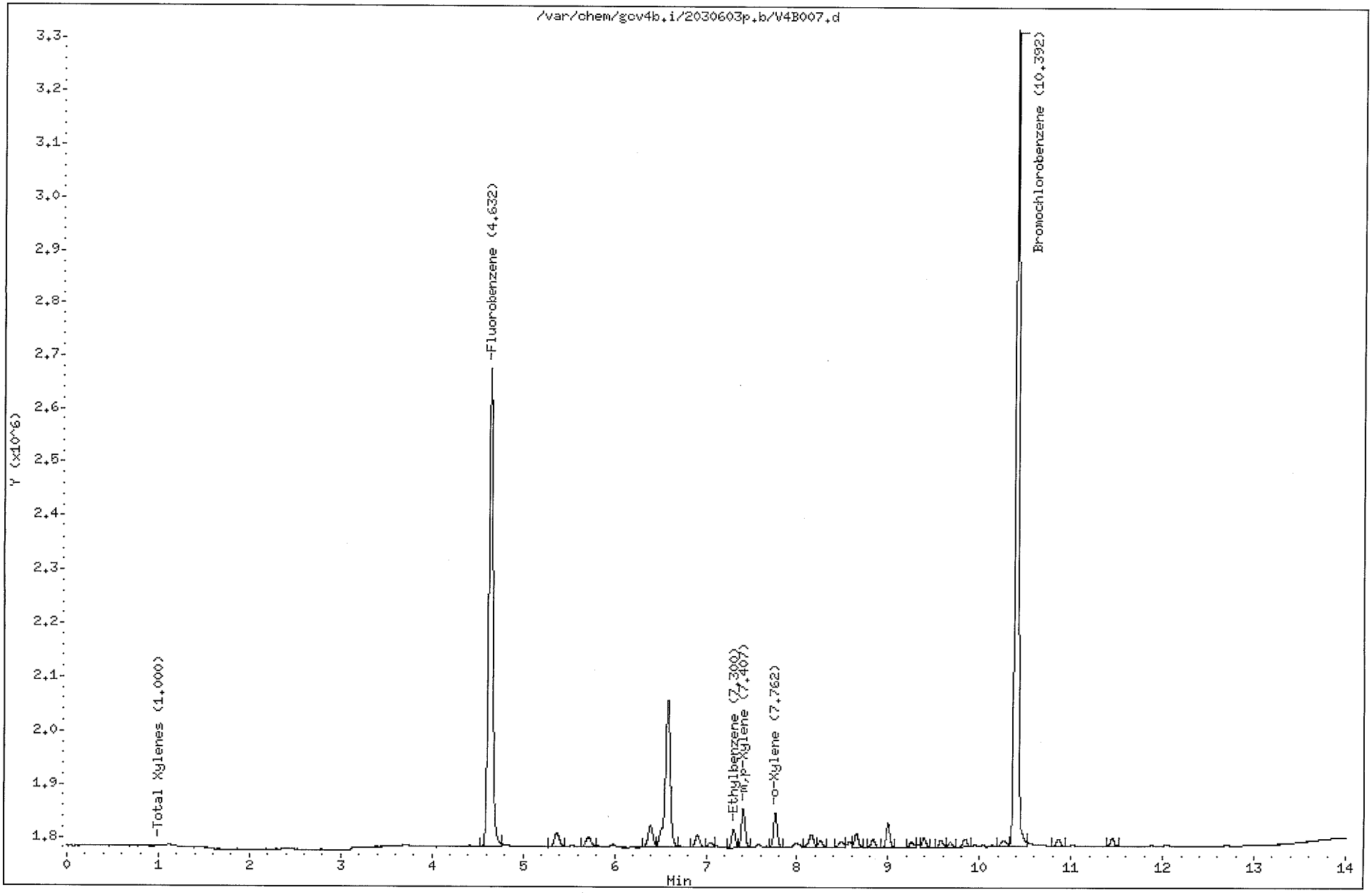
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
M 1 Total Xylenes				390726	5.40736	5.4
* 4 Fluorobenzene	4.632	4.635	(1.000)	2876663	50.0000	
7 Ethylbenzene	7.300	7.303	(1.576)	98548	1.47135	1.5
8 m,p-Xylene	7.407	7.410	(1.599)	205977	2.62696	2.6
9 o-Xylene	7.762	7.765	(1.676)	184749	2.78040	2.8
$ 13 Bromochlorobenzene	10.392	10.392	(2.244)	4024515	51.1011	51.1

Data File: /var/chem/gcv4b.i/2030603p.b/V4B007.d
Date : 03-JUN-2003 16:24
Client ID: 2N-Q2-03-61
Sample Info: 20305291101-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000153



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A007.d
Lab Smp Id: 20305291101 Client Smp ID: 2N-Q2-03-61
Inj Date : 03-JUN-2003 16:24
Operator : JAR Inst ID: gcv4a.i
Smp Info : 20305291101-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

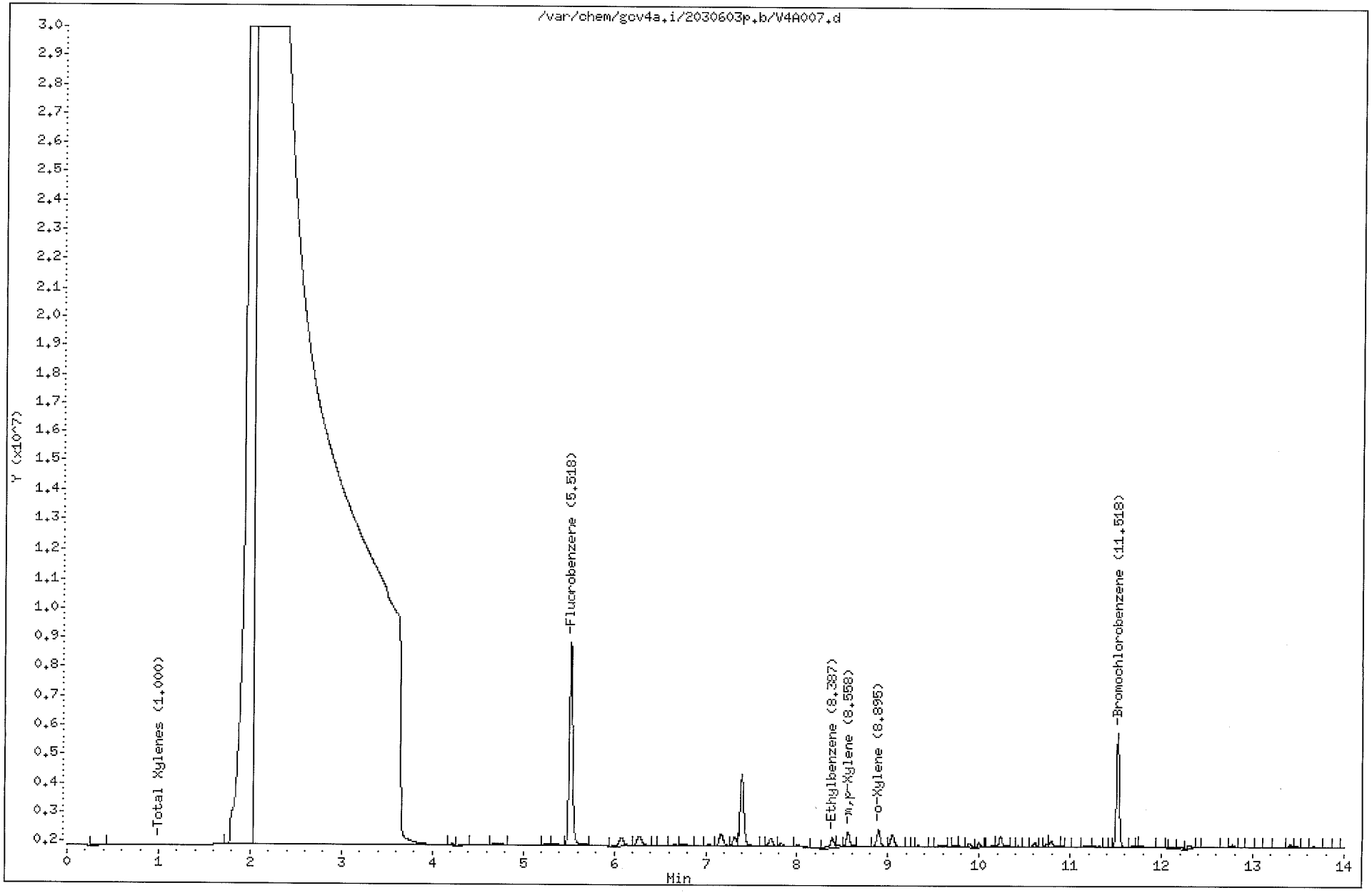
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				3064775	7.08886	7.1
* 4 Fluorobenzene	5.518	5.525	(1.000)	17951409	50.0000	
7 Ethylbenzene	8.387	8.388	(1.520)	985521	2.29029	2.3
8 m,p-Xylene	8.558	8.562	(1.551)	1481621	3.47013	3.5
9 o-Xylene	8.895	8.898	(1.612)	1583154	3.61873	3.6
$ 13 Bromochlorobenzene	11.518	11.518	(2.087)	8642401	53.1896	53.2

Data File: /var/chem/gcv4a.i/2030603p.b/V4A007.d
Date : 03-JUN-2003 16:24
Client ID: 2N-Q2-03-61
Sample Info: 20305291101-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JAR
Column diameter: 0.53

000155



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B008.d
Lab Smp Id: 20305291102 Client Smp ID: 6N-Q2-03-61
Inj Date : 03-JUN-2003 16:42
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291102-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

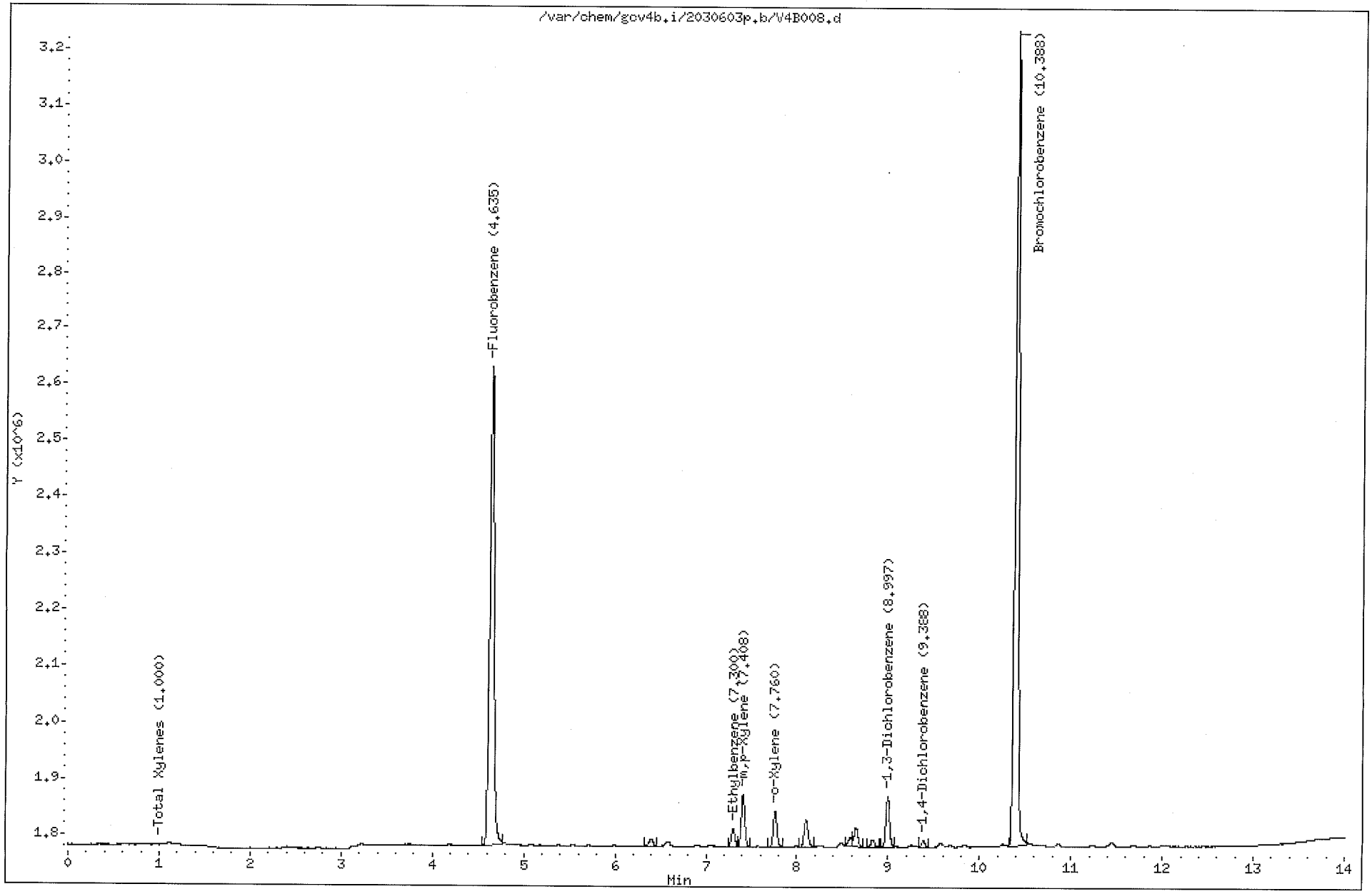
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				428512	6.18830	6.2
* 4 Fluorobenzene	4.635	4.635	(1.000)	2731924	50.0000	
7 Ethylbenzene	7.300	7.303	(1.575)	89829	1.41223	1.4
8 m,p-Xylene	7.408	7.410	(1.598)	249137	3.34575	3.3
9 o-Xylene	7.760	7.765	(1.674)	179375	2.84255	2.8
$ 13 Bromochlorobenzene	10.388	10.392	(2.241)	3842078	51.3693	51.4

Data File: /var/chem/gcv4b.i/2030603p.b/V4B008.d
Date : 03-JUN-2003 16:42
Client ID: 6N-Q2-03-61
Sample Info: 20305291102-1-GCV~1779~
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000157



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A008.d
Lab Smp Id: 20305291102 Client Smp ID: 6N-Q2-03-61
Inj Date : 03-JUN-2003 16:42
Operator : JAR Inst ID: gcv4a.i
Smp Info : 20305291102-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

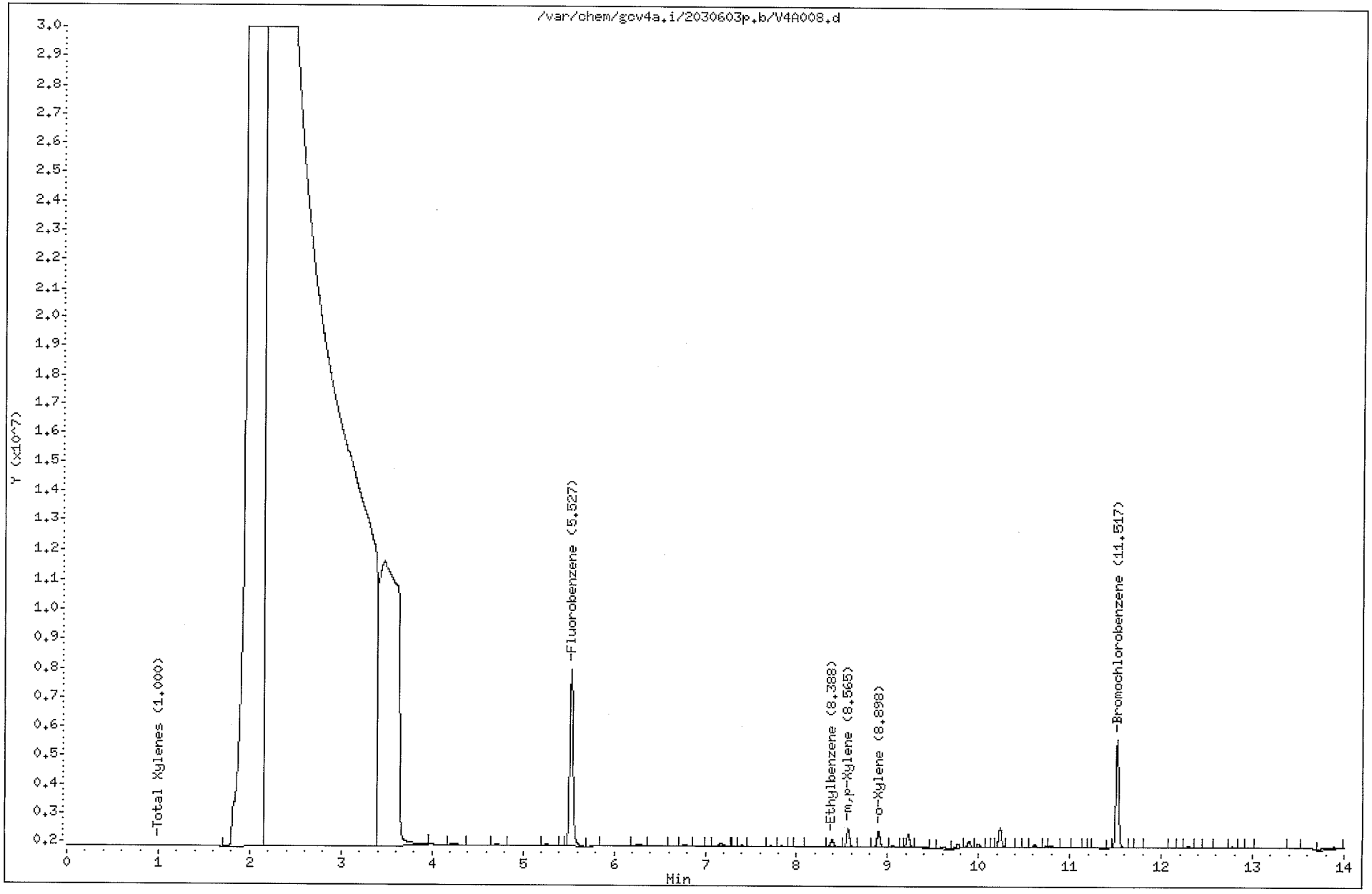
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
M 1 Total Xylenes				2626018	6.89019	6.9
* 4 Fluorobenzene	5.527	5.525	(1.000)	15843937	50.0000	
7 Ethylbenzene	8.388	8.388	(1.518)	600085	1.58006	1.6
8 m,p-Xylene	8.565	8.562	(1.550)	1398662	3.71157	3.7
9 o-Xylene	8.898	8.898	(1.610)	1227356	3.17862	3.2
$ 13 Bromochlorobenzene	11.517	11.518	(2.084)	8056597	56.1797	56.2

Data File: /var/chem/gcv4a.i/2030603p.b/V4A008.d
Date : 03-JUN-2003 16:42
Client ID: 6N-Q2-03-61
Sample Info: 20305291102-1-GCV^1779^
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JAR
Column diameter: 0.53

000159



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B009.d
Lab Smp Id: 20305291103 Client Smp ID: 7N-Q2-03-61
Inj Date : 03-JUN-2003 17:01
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291103-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

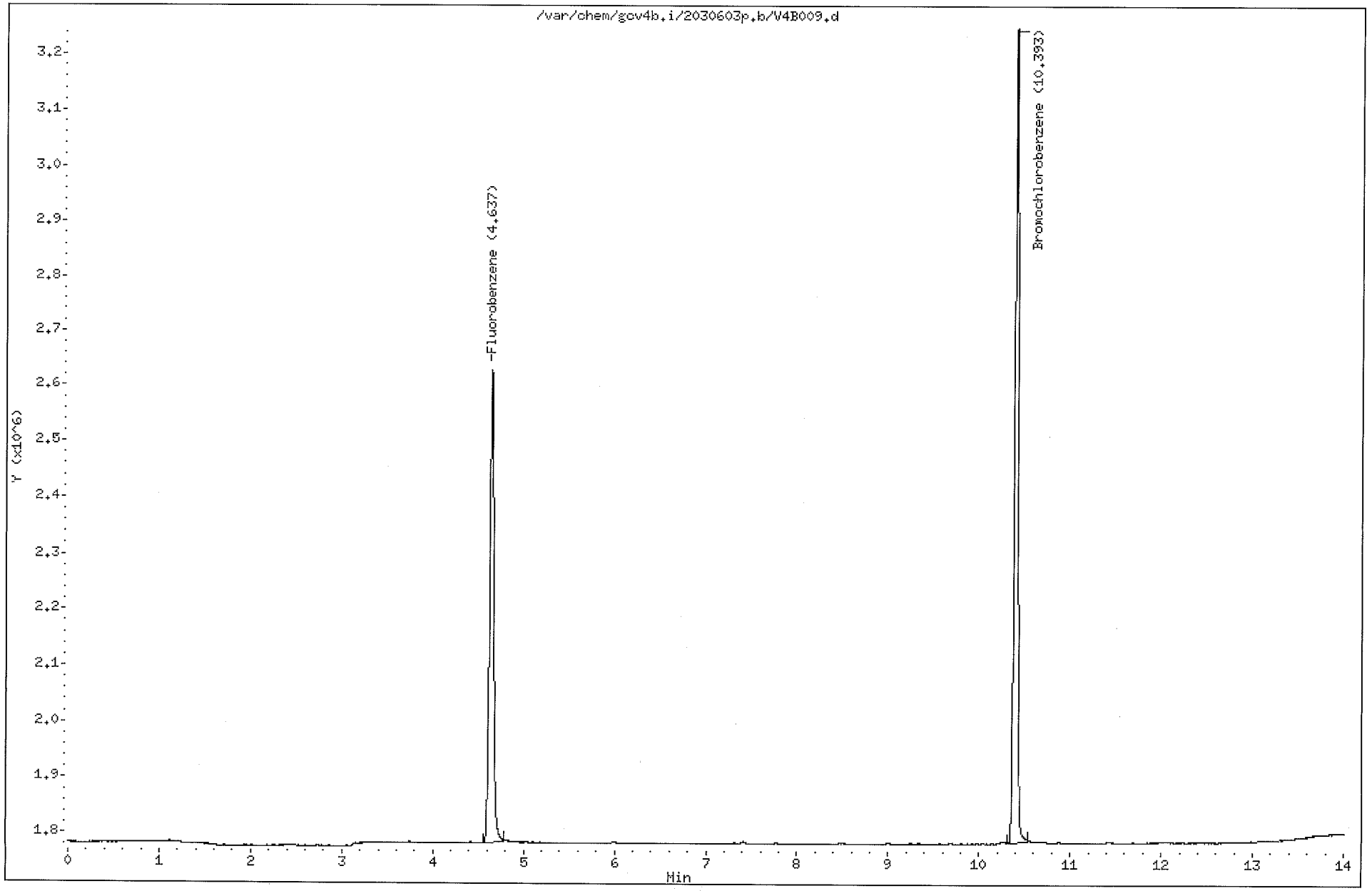
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
* 4 Fluorobenzene	4.637	4.635	(1.000)	2722075	50.0000	
$ 13 Bromochlorobenzene	10.393	10.392	(2.242)	3877963	52.0366	52.0

Data File: /var/chem/gcv4b.i/2030603p.b/V4B009.d
Date : 03-JUN-2003 17:01
Client ID: 7N-Q2-03-61
Sample Info: 20305291103-1-GCV~1779~
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000161



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B010.d
Lab Smp Id: 20305291104 Client Smp ID: 9N-Q2-03-61
Inj Date : 03-JUN-2003 17:20
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291104-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

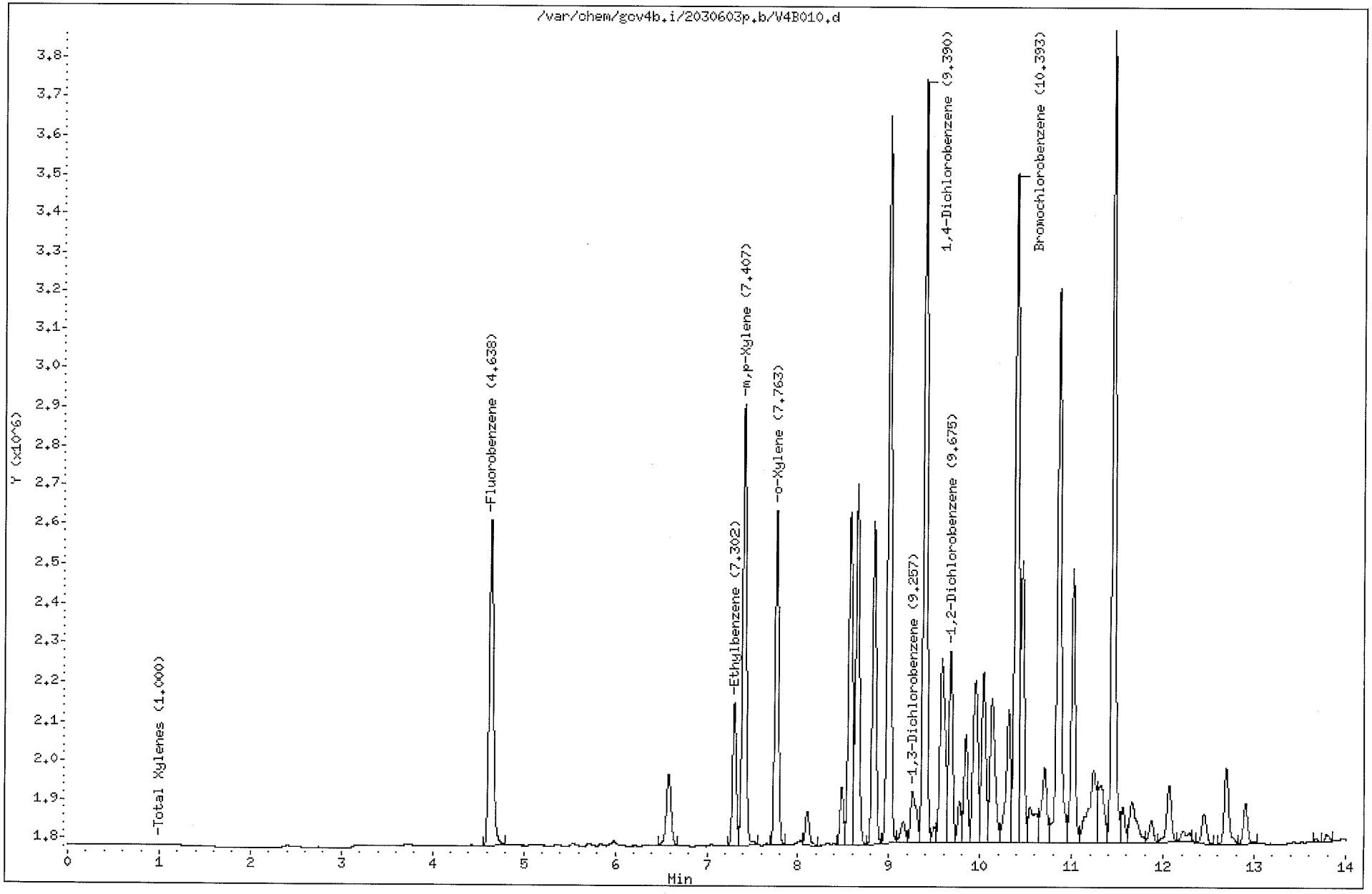
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
M 1 Total Xylenes				5556526	82.6359	82.6
* 4 Fluorobenzene	4.638	4.635	(1.000)	2655513	50.0000	
7 Ethylbenzene	7.302	7.303	(1.574)	1020955	16.5126	16.5
8 m,p-Xylene	7.407	7.410	(1.597)	3197157	44.1712	44.2
9 o-Xylene	7.763	7.765	(1.674)	2359369	38.4646	38.5
$ 13 Bromochlorobenzene	10.393	10.392	(2.241)	4955849	68.1672	68.2

Data File: /var/chem/gcv4b.i/2030603p.b/V4B010.d
Date : 03-JUN-2003 17:20
Client ID: 9N-Q2-03-61
Sample Info: 20305291104-1-GCW"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000163



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A010.d
Lab Smp Id: 20305291104 Client Smp ID: 9N-Q2-03-61
Inj Date : 03-JUN-2003 17:20
Operator : JAR Inst ID: gcv4a.i
Smp Info : 20305291104-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				33165873	81.2260	81.2
* 4 Fluorobenzene	5.528	5.525	(1.000)	16970495	50.0000	
7 Ethylbenzene	8.388	8.388	(1.517)	6846680	16.8309	16.8
8 m,p-Xylene	8.557	8.562	(1.548)	17356250	43.0001	43.0
9 o-Xylene	8.898	8.898	(1.610)	15809623	38.2260	38.2
$ 13 Bromochlorobenzene	11.522	11.518	(2.084)	18236560	118.724	119(R)

QC Flag Legend

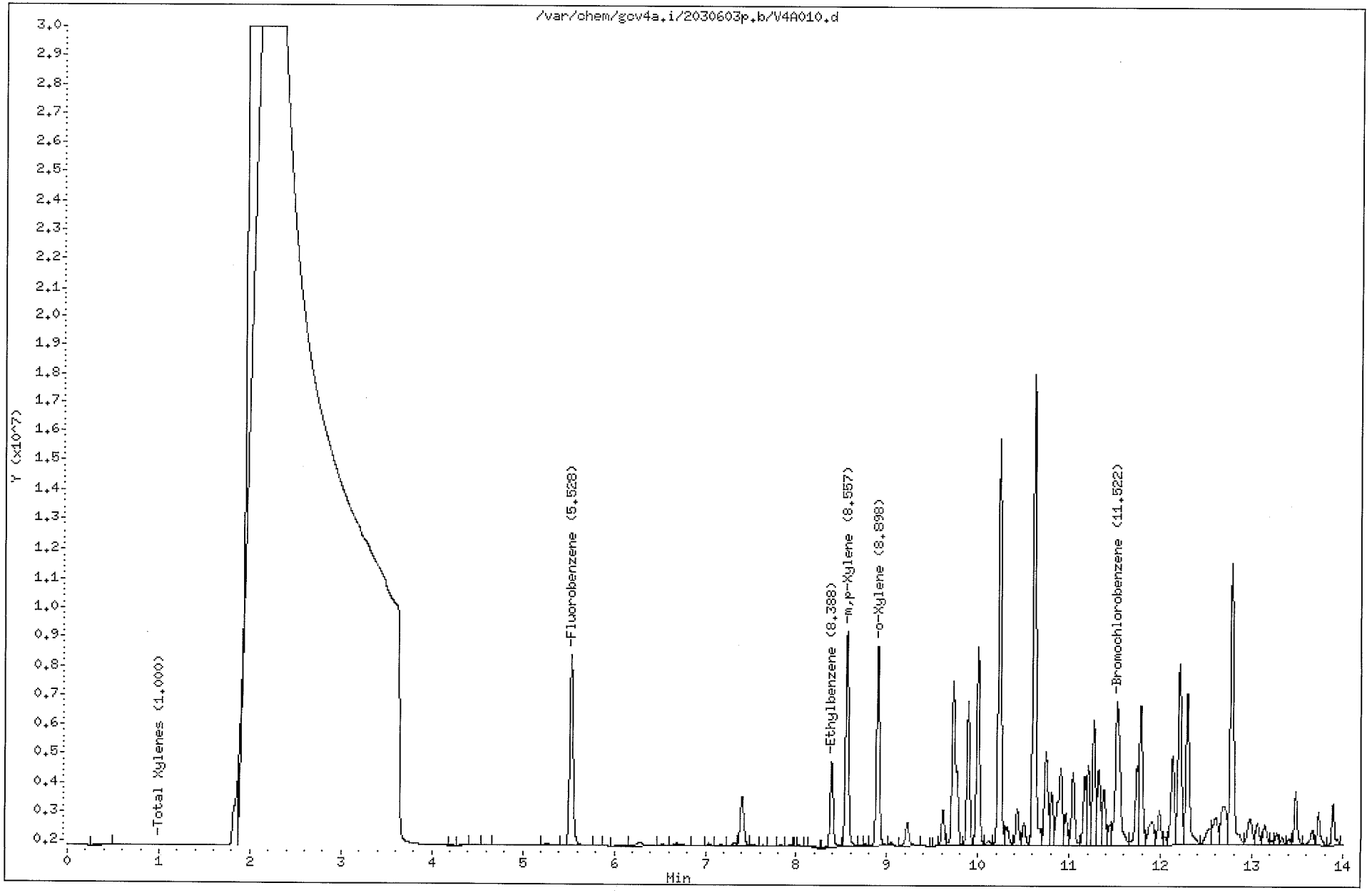
R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gov4a.i/2030603p.b/V4A010.d
Date : 03-JUN-2003 17:20
Client ID: 9N-Q2-03-61
Sample Info: 20305291104-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gov4a.i

Operator: JAR
Column diameter: 0.53

000165



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B004.d
Lab Smp Id: 20305291105 Client Smp ID: 33N-Q2-03-61
Inj Date : 03-JUN-2003 15:16
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291105-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

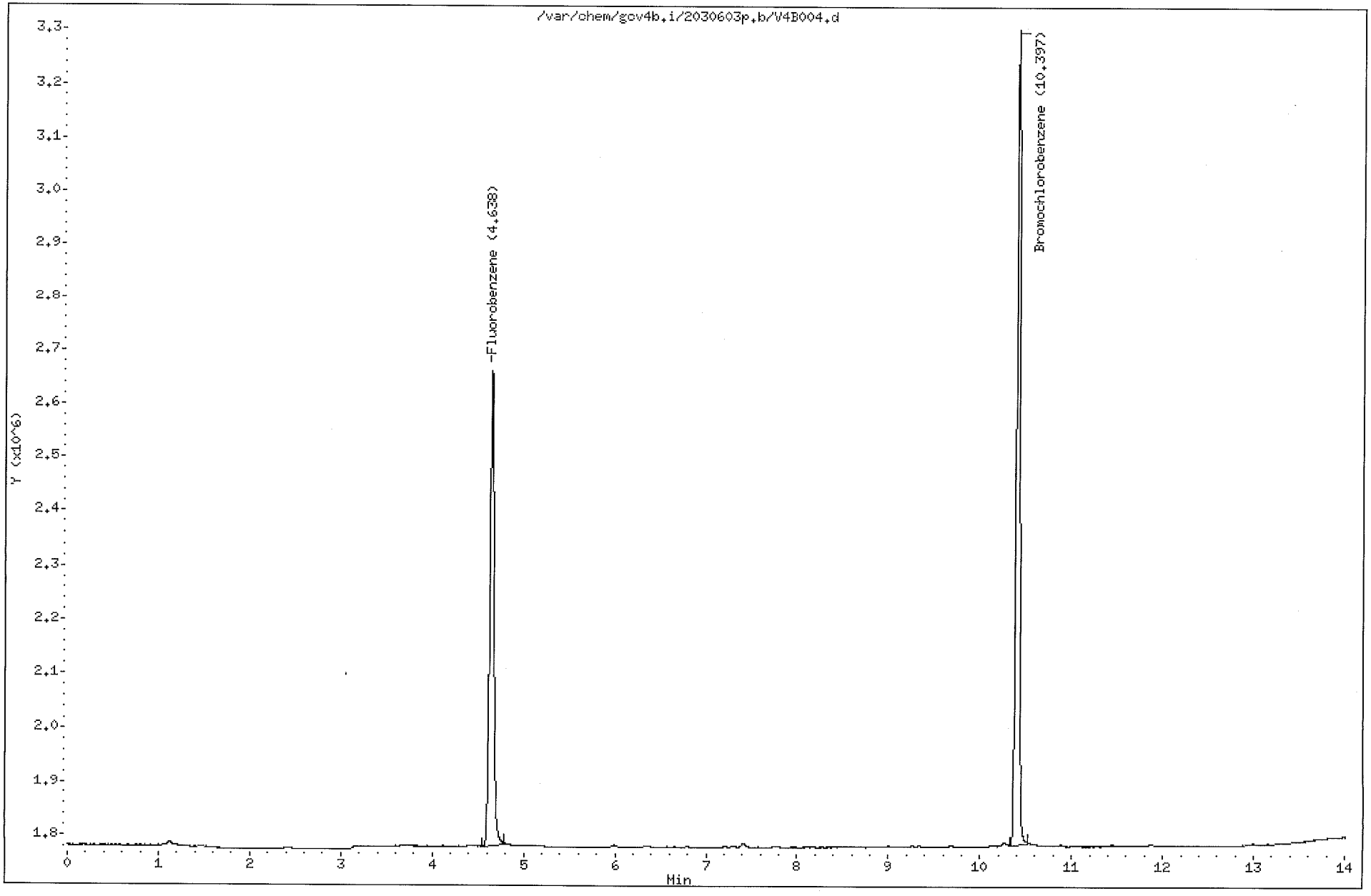
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
* 4 Fluorobenzene	4.638	4.635	(1.000)	2862350	50.0000	
$ 13 Bromochlorobenzene	10.397	10.392	(2.241)	3957875	50.5062	50.5

Data File: /var/chem/gcv4b.i/2030603p.b/V4B004.d
Date : 03-JUN-2003 15:16
Client ID: 33N-Q2-03-61
Sample Info: 20305291105-1-GCV~1779~
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000167



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B011.d
Lab Smp Id: 20305291109 Client Smp ID: 38N-Q2-03-61
Inj Date : 03-JUN-2003 17:40
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291109-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

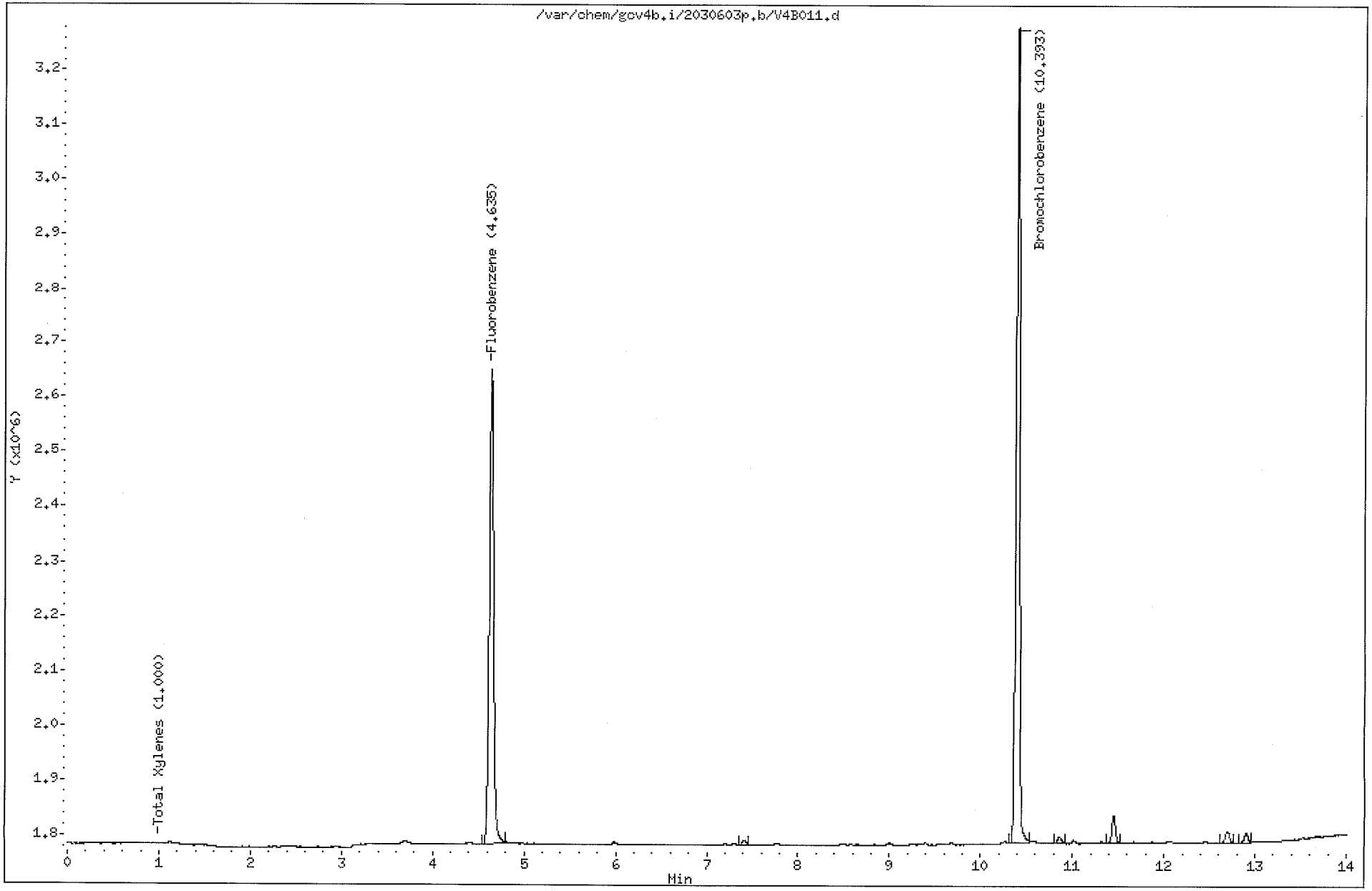
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
* 4 Fluorobenzene	4.635	4.635	(1.000)	2802055	50.0000	
$ 13 Bromochlorobenzene	10.393	10.392	(2.242)	3917418	51.0657	51.1

Data File: /var/chem/gcv4b.i/2030603p.b/V4B011.d
Date : 03-JUN-2003 17:40
Client ID: 38N-Q2-03-61
Sample Info: 20305291109-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

0001169



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B012.d
Lab Smp Id: 20305291110 Client Smp ID: DUP-Q2-03-61
Inj Date : 03-JUN-2003 17:59
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291110-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

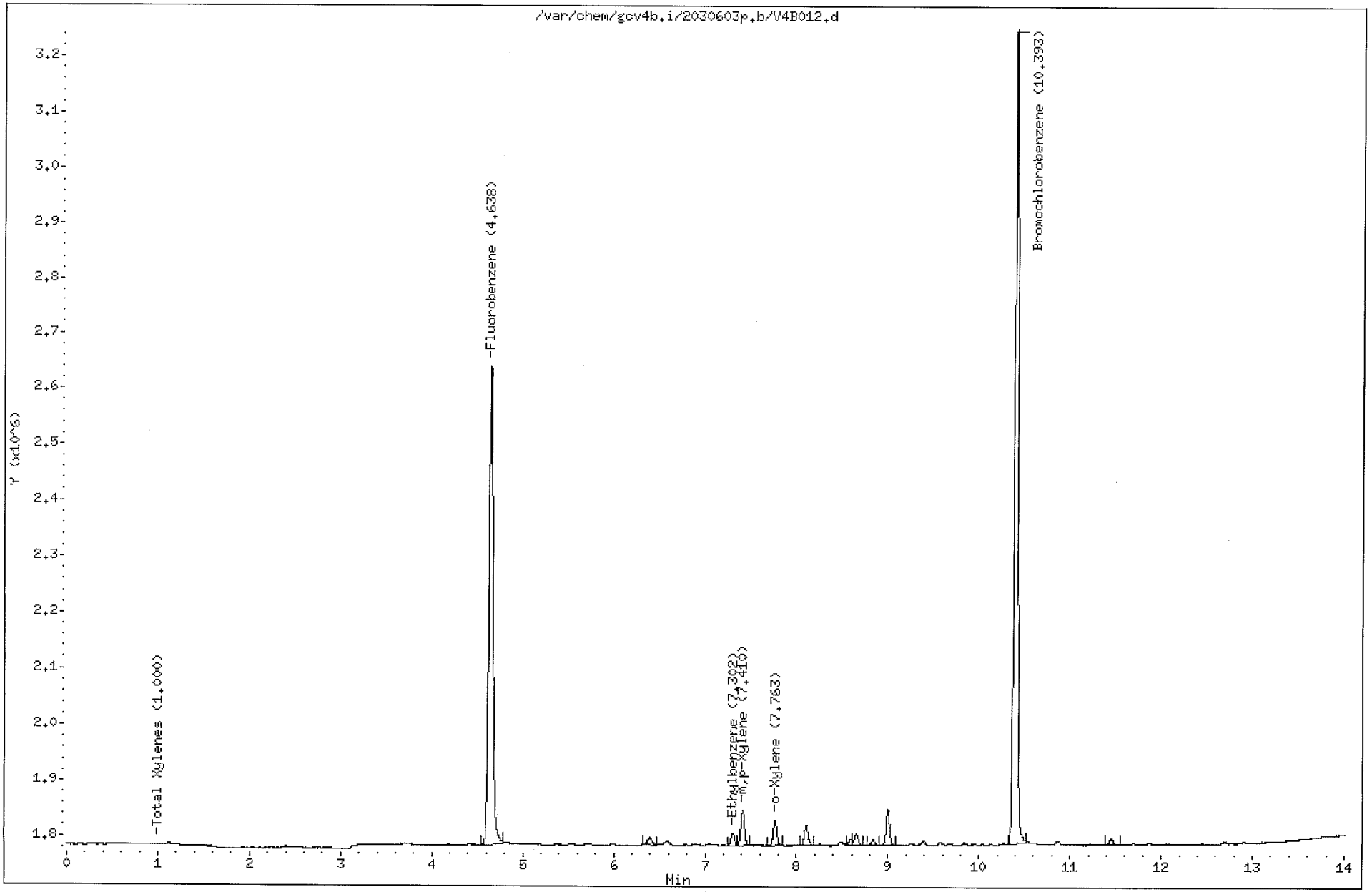
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
M 1 Total Xylenes				300890	4.33633	4.3
* 4 Fluorobenzene	4.638	4.635	(1.000)	2745264	50.0000	
7 Ethylbenzene	7.302	7.303	(1.574)	60501	0.94653	0.95
8 m,p-Xylene	7.410	7.410	(1.598)	169875	2.27023	2.3
9 o-Xylene	7.763	7.765	(1.674)	131015	2.06610	2.1
$ 13 Bromochlorobenzene	10.393	10.392	(2.241)	3876503	51.5777	51.6

Data File: /var/chem/gcv4b.i/2030603p.b/V4B012.d
Date : 03-JUN-2003 17:59
Client ID: DUP-Q2-03-61
Sample Info: 20305291110-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000171



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A012.d
Lab Smp Id: 20305291110 Client Smp ID: DUP-Q2-03-61
Inj Date : 03-JUN-2003 17:59
Operator : JAR Inst ID: gcv4a.i
Smp Info : 20305291110-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

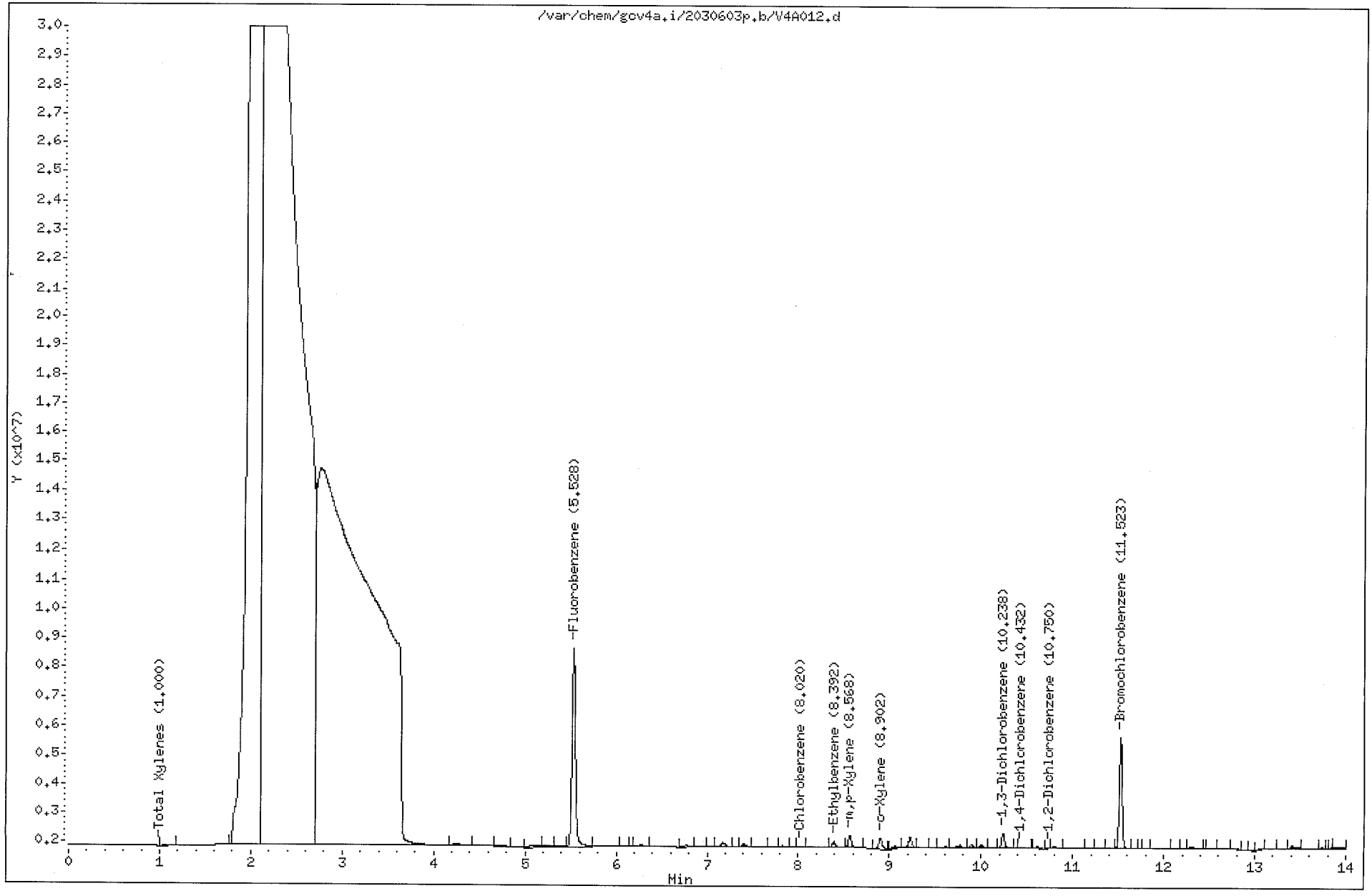
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
M 1 Total Xylenes				1860755	4.29127	4.3
* 4 Fluorobenzene	5.528	5.525	(1.000)	18018891	50.0000	
7 Ethylbenzene	8.392	8.388	(1.518)	482635	1.11741	1.1
8 m,p-Xylene	8.568	8.562	(1.550)	960820	2.24193	2.2
9 o-Xylene	8.902	8.898	(1.610)	899935	2.04934	2.0
$ 13 Bromochlorobenzene	11.523	11.518	(2.084)	8129110	49.8432	49.8

Data File: /var/chem/gov4a.i/2030603p.b/V4A012.d
Date : 03-JUN-2003 17:59
Client ID: DUP-Q2-03-61
Sample Info: 20305291110-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gov4a.i

Operator: JAR
Column diameter: 0.53

000173



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B013.d
Lab Smp Id: 20305291111 Client Smp ID: EQB-Q2-03-61
Inj Date : 03-JUN-2003 18:18
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291111-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

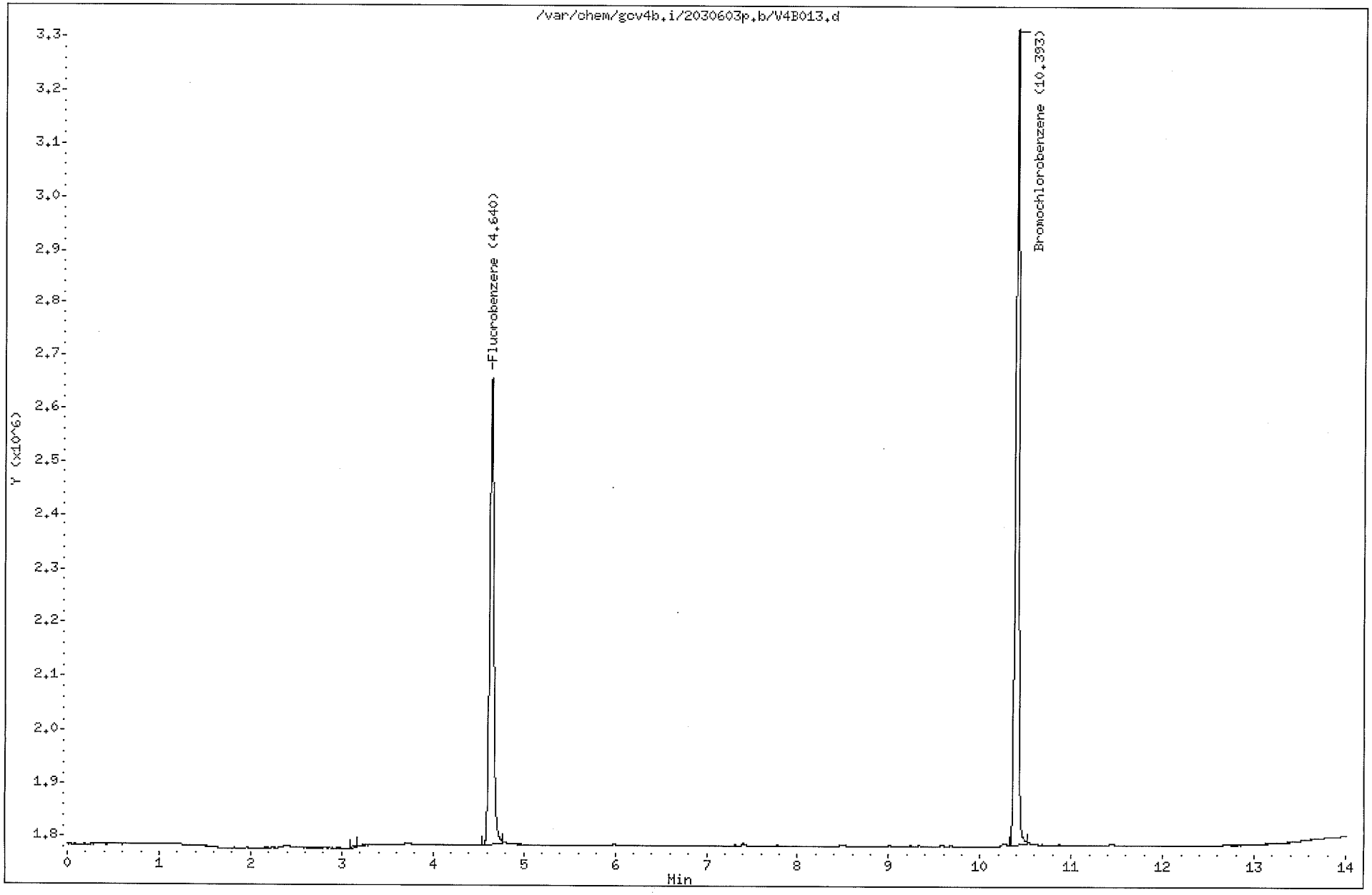
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
* 4 Fluorobenzene	4.640	4.635	(1.000)	2792854	50.0000	
$ 13 Bromochlorobenzene	10.393	10.392	(2.240)	3968353	51.9000	51.9

Data File: /var/chem/gcv4b.i/2030603p.b/V4B013.d
Date : 03-JUN-2003 18:18
Client ID: EQB-Q2-03-61
Sample Info: 20305291111-1-GCV~1779~
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000175



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B002.d
Lab Smp Id: 0310STD001 Client Smp ID: 0310STD001
Inj Date : 10-MAR-2003 11:31
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD001
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 11:31 Cal File: V4B002.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M 1 Total Xylenes				218478	3.00000	3.2(a)
2 MTBE	2.962	2.960	(0.636)	80802	5.00000	4.5
3 Benzene	4.435	4.428	(0.953)	76149	1.00000	0.98(a)
* 4 Fluorobenzene	4.653	4.650	(1.000)	2671465	50.0000	
5 Toluene	6.007	6.007	(1.291)	77630	1.00000	1.1(a)
6 Chlorobenzene	7.222	7.222	(1.552)	76998	1.00000	1.0
7 Ethylbenzene	7.323	7.325	(1.574)	65249	1.00000	1.0(a)
8 m,p-Xylene	7.432	7.432	(1.597)	153351	2.00000	2.1(a)
9 o-Xylene	7.785	7.787	(1.673)	65127	1.00000	1.0
10 1,3-Dichlorobenzene	9.277	9.273	(1.994)	69697	1.00000	1.1
11 1,4-Dichlorobenzene	9.360	9.358	(2.011)	70810	1.00000	1.1
12 1,2-Dichlorobenzene	9.708	9.707	(2.086)	58157	1.00000	1.1
$ 13 Bromochlorobenzene	10.418	10.417	(2.239)	3725589	50.0000	50.9

QC Flag Legend

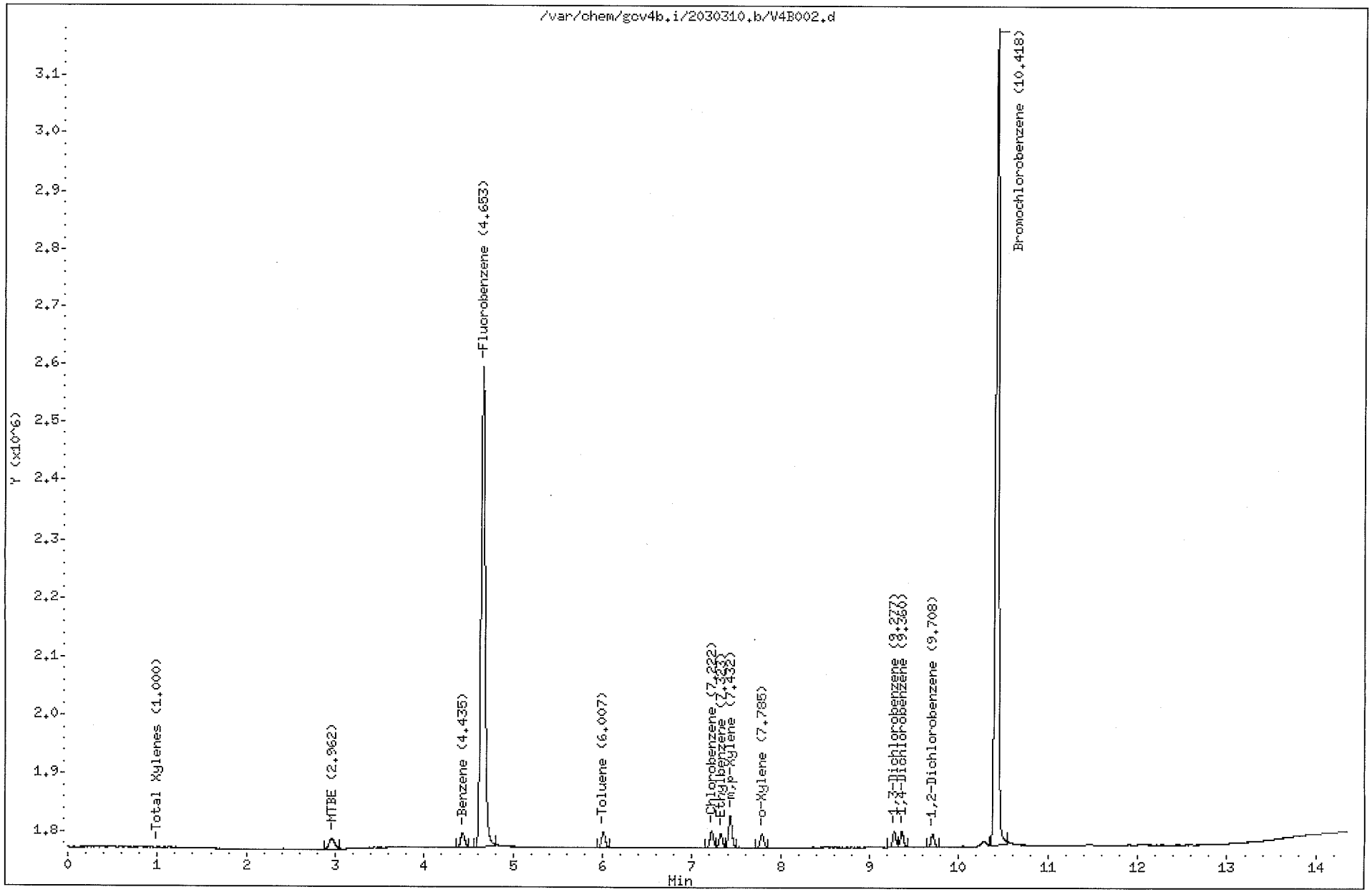
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

000178

Data File: /var/chem/gcv4b.i/2030310.b/V4B002.d
Date : 10-MAR-2003 11:31
Client ID: 0310STD001
Sample Info: 0310STD001
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B003.d
Lab Smp Id: 0310STD005 Client Smp ID: 0310STD005
Inj Date : 10-MAR-2003 11:49
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD005
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 11:49 Cal File: V4B003.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

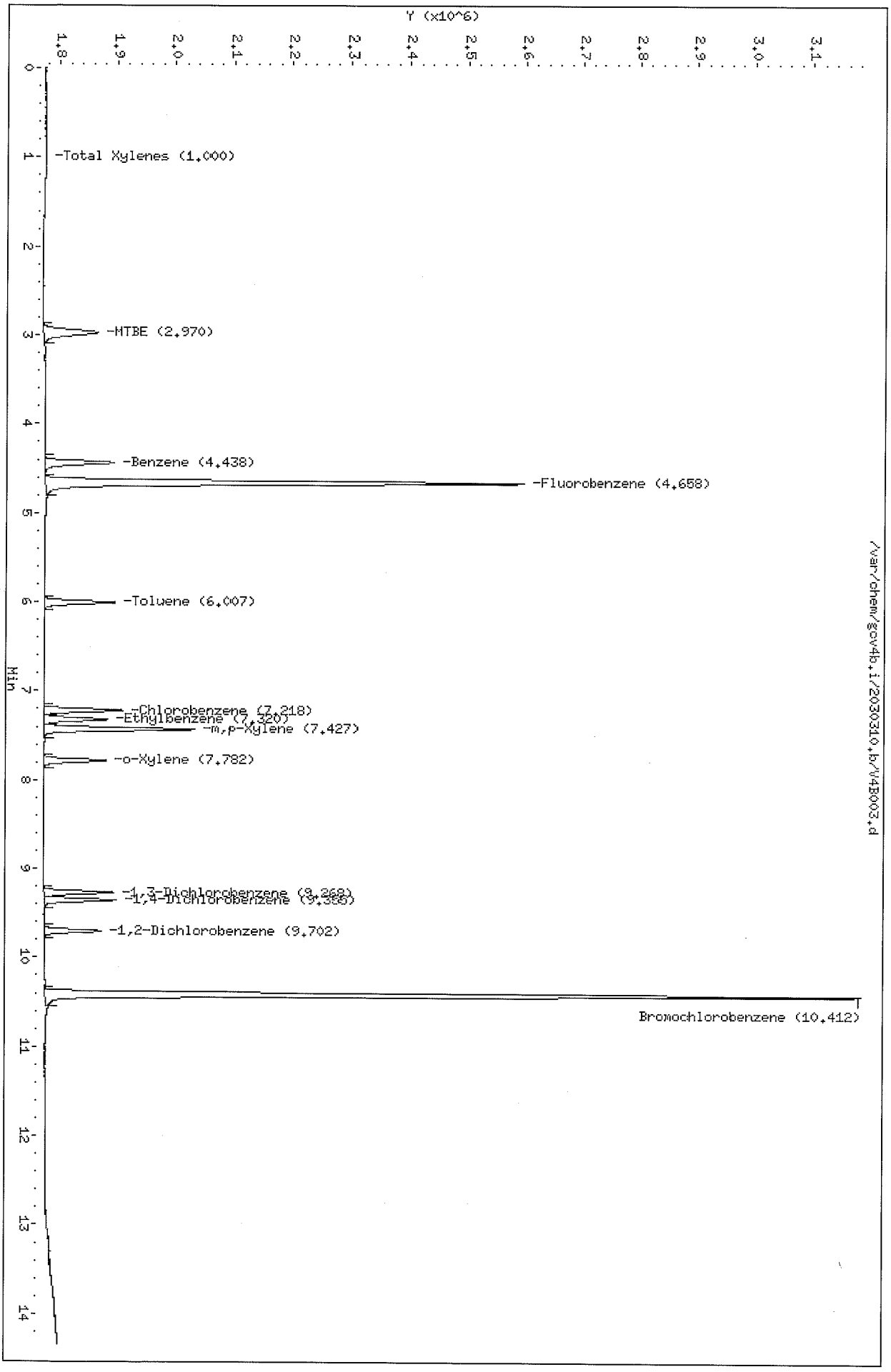
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				1039550	15.0000	15.2
	2 MTBE	2.970	2.960	(0.638)	447989	25.0000	23.4
	3 Benzene	4.438	4.428	(0.953)	397356	5.00000	5.2
*	4 Fluorobenzene	4.658	4.650	(1.000)	2650803	50.0000	
	5 Toluene	6.007	6.007	(1.289)	357833	5.00000	5.0
	6 Chlorobenzene	7.218	7.222	(1.550)	369504	5.00000	5.0
	7 Ethylbenzene	7.320	7.325	(1.571)	310462	5.00000	5.0
	8 m,p-Xylene	7.427	7.432	(1.594)	731578	10.0000	10.1
	9 o-Xylene	7.782	7.787	(1.670)	307972	5.00000	5.0
	10 1,3-Dichlorobenzene	9.268	9.273	(1.990)	321219	5.00000	5.0
	11 1,4-Dichlorobenzene	9.355	9.358	(2.008)	331442	5.00000	5.1
	12 1,2-Dichlorobenzene	9.702	9.707	(2.083)	267271	5.00000	5.1
$	13 Bromochlorobenzene	10.412	10.417	(2.235)	3736641	50.0000	51.5

Data File: /var/chem/gcv4b.i/20030310.b/V4B003.d
Date : 10-MAR-2003 11:49
Client ID: 0310STD005
Sample Info: 0310STD005
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i
Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B004.d
Lab Smp Id: 0310STD010 Client Smp ID: 0310STD010
Inj Date : 10-MAR-2003 12:08
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD010
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 12:08 Cal File: V4B004.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

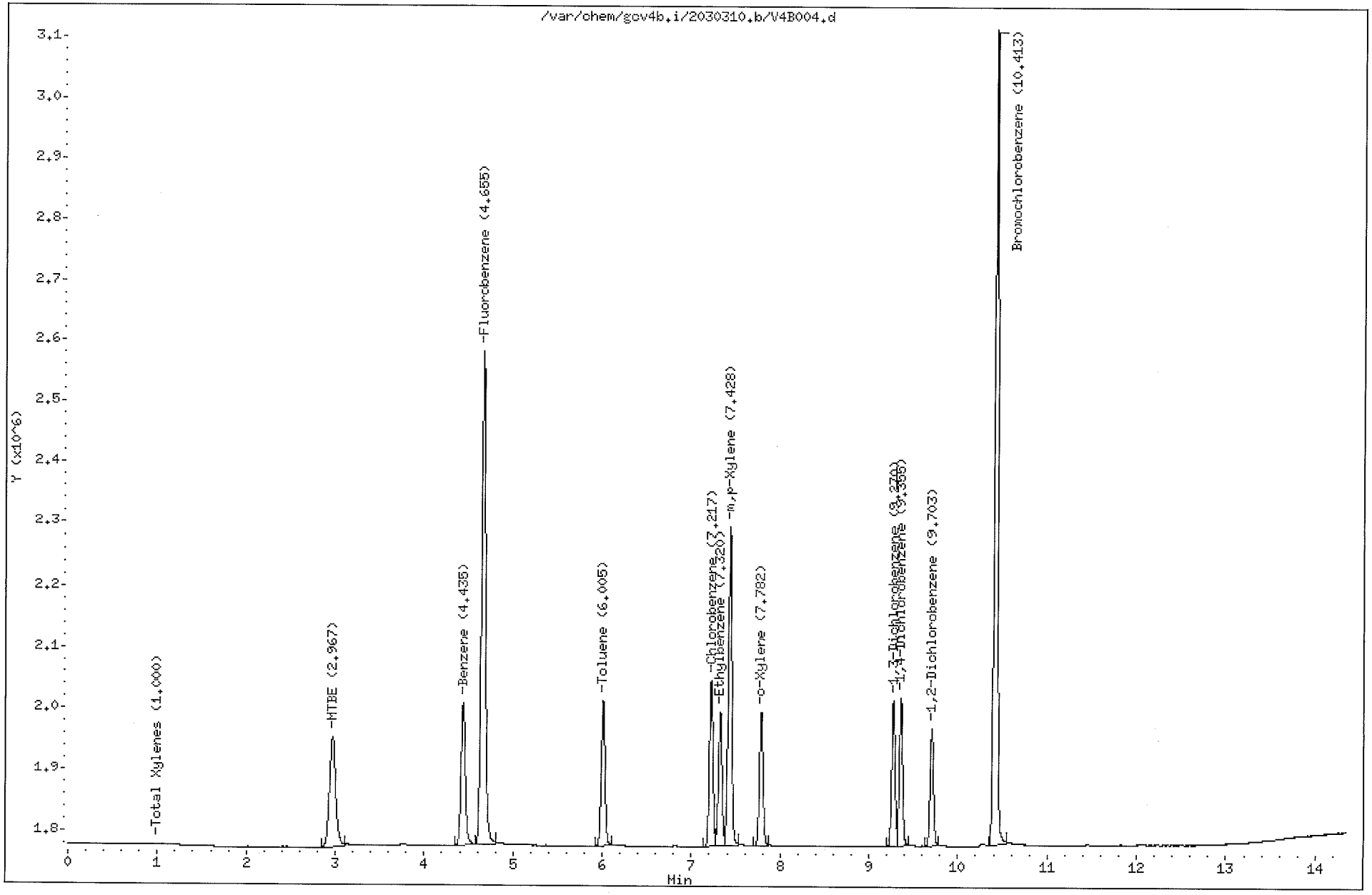
	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				2034317	30.0000	30.4
	2 MTBE	2.967	2.960	(0.637)	863744	50.0000	49.2
	3 Benzene	4.435	4.428	(0.953)	761335	10.0000	10.1
*	4 Fluorobenzene	4.655	4.650	(1.000)	2585385	50.0000	
	5 Toluene	6.005	6.007	(1.290)	694924	10.0000	10.0
	6 Chlorobenzene	7.217	7.222	(1.550)	725747	10.0000	10.1
	7 Ethylbenzene	7.320	7.325	(1.572)	606569	10.0000	10.1
	8 m,p-Xylene	7.428	7.432	(1.596)	1433419	20.0000	20.3
	9 o-Xylene	7.782	7.787	(1.672)	600898	10.0000	10.1
	10 1,3-Dichlorobenzene	9.270	9.273	(1.991)	617877	10.0000	9.9
	11 1,4-Dichlorobenzene	9.355	9.358	(2.010)	631478	10.0000	9.9
	12 1,2-Dichlorobenzene	9.703	9.707	(2.084)	509262	10.0000	9.9
$	13 Bromochlorobenzene	10.413	10.417	(2.237)	3503760	50.0000	49.5

Data File: /var/chem/gcv4b.i/2030310.b/V4B004.d
Date : 10-MAR-2003 12:08
Client ID: 0310STD010
Sample Info: 0310STD010
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JDT
Column diameter: 0.53

000182



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B001.d
Lab Smp Id: 0310STD020 Client Smp ID: 0310STD020
Inj Date : 10-MAR-2003 10:36
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 10:36 Cal File: V4B001.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

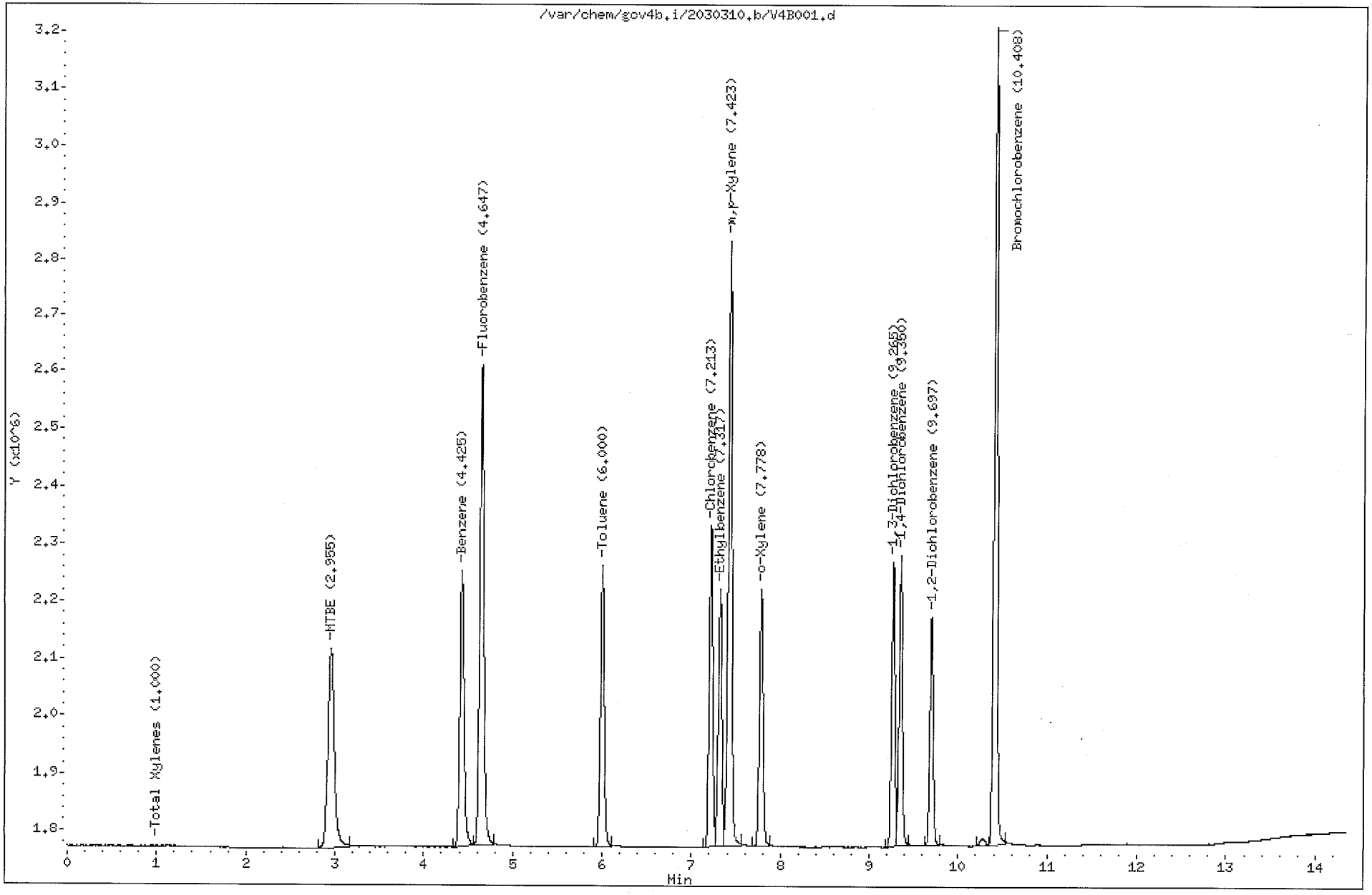
	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				4257874	60.0000	60.5
	2 MTBE	2.955	2.960	(0.636)	1717230	100.000	105
	3 Benzene	4.425	4.428	(0.952)	1594852	20.0000	20.2
*	4 Fluorobenzene	4.647	4.650	(1.000)	2717925	50.0000	
	5 Toluene	6.000	6.007	(1.291)	1448168	20.0000	19.8
	6 Chlorobenzene	7.213	7.222	(1.552)	1512167	20.0000	20.1
	7 Ethylbenzene	7.317	7.325	(1.575)	1271078	20.0000	20.1
	8 m,p-Xylene	7.423	7.432	(1.598)	3002740	40.0000	40.5
	9 o-Xylene	7.778	7.787	(1.674)	1255134	20.0000	20.0
	10 1,3-Dichlorobenzene	9.265	9.273	(1.994)	1303425	20.0000	19.9
	11 1,4-Dichlorobenzene	9.350	9.358	(2.012)	1335431	20.0000	19.9
	12 1,2-Dichlorobenzene	9.697	9.707	(2.087)	1074819	20.0000	19.9
$	13 Bromochlorobenzene	10.408	10.417	(2.240)	3735209	50.0000	50.2

Data File: /var/chem/gov4b.i/2030310.b/W4B001.d
Date : 10-MAR-2003 10:36
Client ID: 0310STD020
Sample Info: 0310STD020
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gov4b.i

Operator: JDT
Column diameter: 0.53

000184



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B005.d
Lab Smp Id: 0310STD050 Client Smp ID: 0310STD050
Inj Date : 10-MAR-2003 12:26
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD050
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 12:26 Cal File: V4B005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

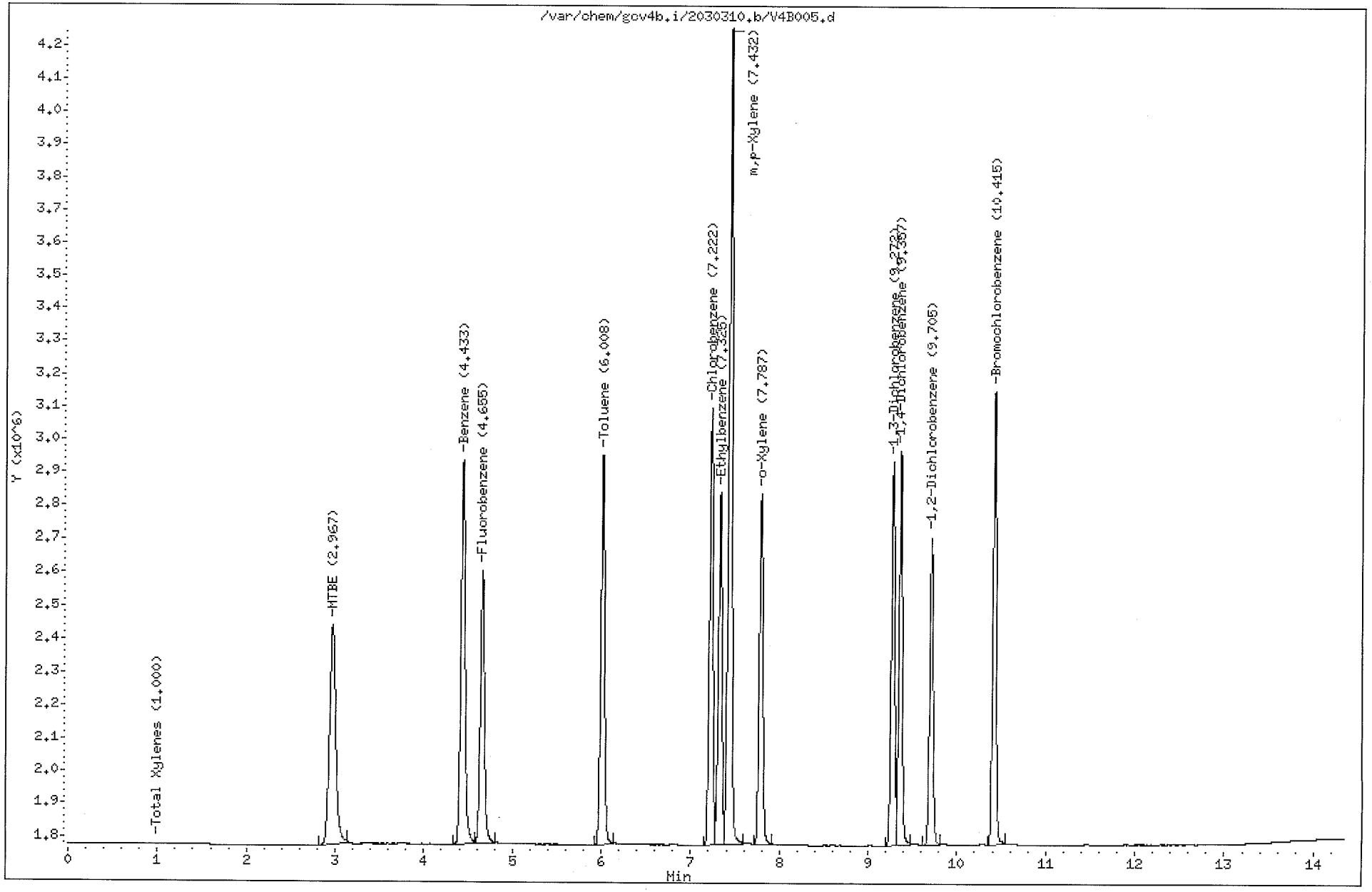
	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				9956700	150.000	144
	2 MTBE	2.967	2.960	(0.637)	3249805	250.000	246
	3 Benzene	4.433	4.428	(0.952)	3827291	50.0000	49.0
*	4 Fluorobenzene	4.655	4.650	(1.000)	2681201	50.0000	
	5 Toluene	6.008	6.007	(1.291)	3445399	50.0000	47.9
	6 Chlorobenzene	7.222	7.222	(1.551)	3571015	50.0000	48.1
	7 Ethylbenzene	7.325	7.325	(1.574)	2988537	50.0000	47.9
	8 m,p-Xylene	7.432	7.432	(1.596)	6978404	100.000	95.5
	9 o-Xylene	7.787	7.787	(1.673)	2978296	50.0000	48.1
	10 1,3-Dichlorobenzene	9.272	9.273	(1.992)	3069174	50.0000	47.6
	11 1,4-Dichlorobenzene	9.357	9.358	(2.010)	3148151	50.0000	47.6
	12 1,2-Dichlorobenzene	9.705	9.707	(2.085)	2541592	50.0000	47.7
$	13 Bromochlorobenzene	10.415	10.417	(2.237)	3626600	50.0000	49.4

Data File: /var/chem/gcv4b.i/2030310.b/V4B005.d
Date : 10-MAR-2003 12:26
Client ID: 0310STD050
Sample Info: 0310STD050
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JDT
Column diameter: 0.53

000186



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B006.d
Lab Smp Id: 0310STD100 Client Smp ID: 0310STD100
Inj Date : 10-MAR-2003 13:18
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310STD100
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

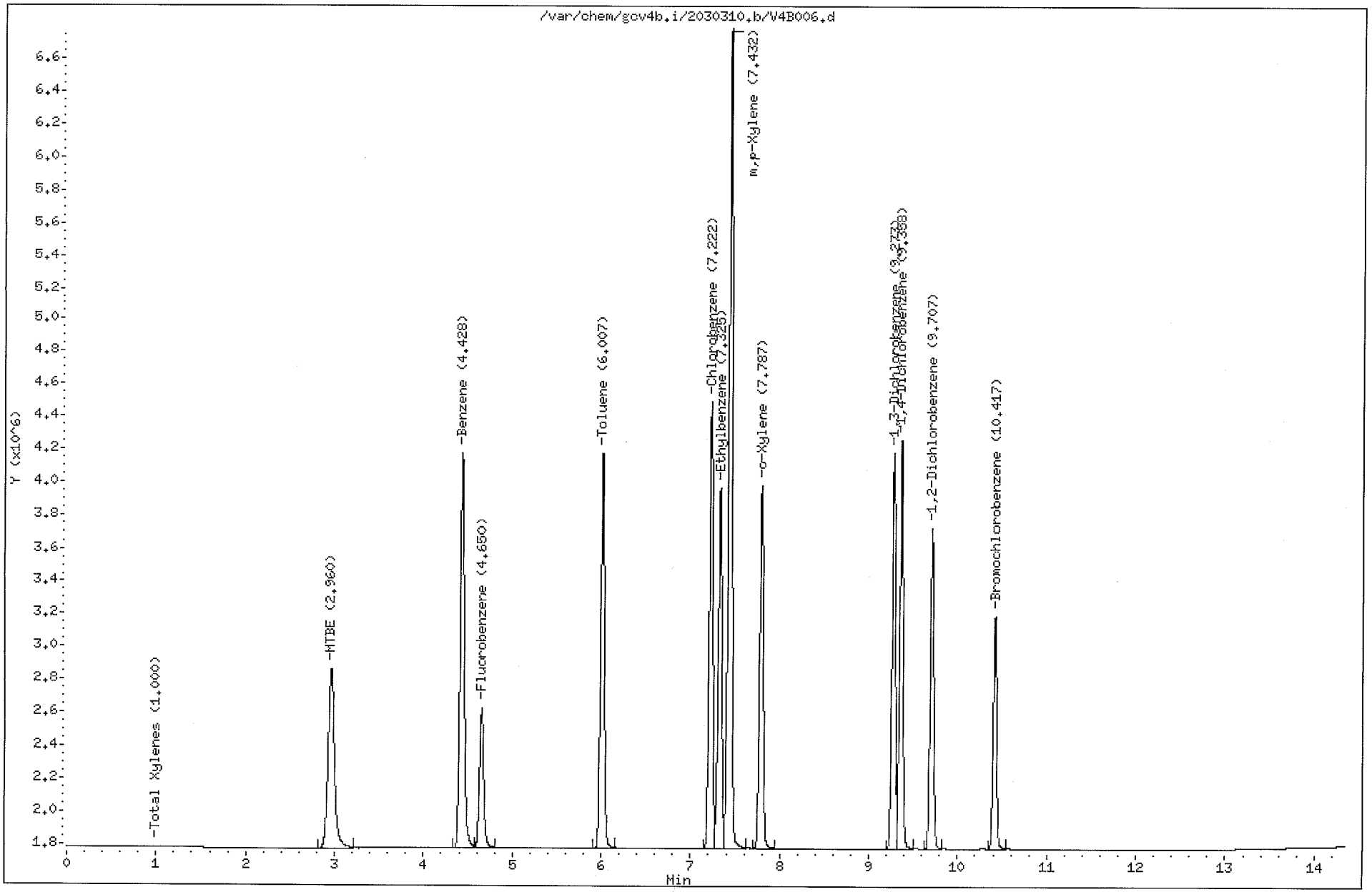
	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				20668179	300.000	287
	2 MTBE	2.960	2.960	(0.637)	5507703	500.000	501
	3 Benzene	4.428	4.428	(0.952)	8016336	100.000	98.9
*	4 Fluorobenzene	4.650	4.650	(1.000)	2786446	50.0000	
	5 Toluene	6.007	6.007	(1.292)	7183921	100.000	96.0
	6 Chlorobenzene	7.222	7.222	(1.553)	7487890	100.000	97.1
	7 Ethylbenzene	7.325	7.325	(1.575)	6329089	100.000	97.6
	8 m,p-Xylene	7.432	7.432	(1.598)	14418565	200.000	190
	9 o-Xylene	7.787	7.787	(1.675)	6249614	100.000	97.1
	10 1,3-Dichlorobenzene	9.273	9.273	(1.994)	6474745	100.000	96.6
	11 1,4-Dichlorobenzene	9.358	9.358	(2.013)	6644928	100.000	96.8
	12 1,2-Dichlorobenzene	9.707	9.707	(2.087)	5277352	100.000	95.2
$	13 Bromochlorobenzene	10.417	10.417	(2.240)	3697446	50.0000	48.5

Data File: /var/chem/gcv4b.i/2030310.b/V4B006.d
Date : 10-MAR-2003 13:18
Client ID: 0310STD100
Sample Info: 0310STD100
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JDT
Column diameter: 0.53

000188



Gulf Coast Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 0310ICV020
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Misc Info: 5-10-8

Client SDG:
Fraction: VOA
Client Smp ID: 0310ICV020
Operator: JDT
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
M 1 Total Xylenes	60.0	61.1	101.84	70-130
2 MTBE	100	108	107.87	70-130
3 Benzene	20.0	20.8	104.17	70-130
5 Toluene	20.0	20.2	100.90	70-130
6 Chlorobenzene	20.0	20.6	103.06	70-130
7 Ethylbenzene	20.0	20.4	101.80	70-130
8 m,p-Xylene	40.0	40.9	102.24	70-130
9 o-Xylene	20.0	20.2	101.05	70-130
10 1,3-Dichlorobenzen	20.0	20.2	101.04	70-130
11 1,4-Dichlorobenzen	20.0	20.4	102.02	70-130
12 1,2-Dichlorobenzen	20.0	20.2	101.27	70-130

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 13 Bromochlorobenzene	50.0	49.7	99.47	60-142

Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030310.b/V4B007.d
Lab Smp Id: 0310ICV020 Client Smp ID: 0310ICV020
Inj Date : 10-MAR-2003 15:16
Operator : JDT Inst ID: gcv4b.i
Smp Info : 0310ICV020
Misc Info : 5-10-8
Comment :
Method : /var/chem/gcv4b.i/2030310.b/BTEXPh.m
Meth Date : 27-Mar-2003 16:45 jar Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

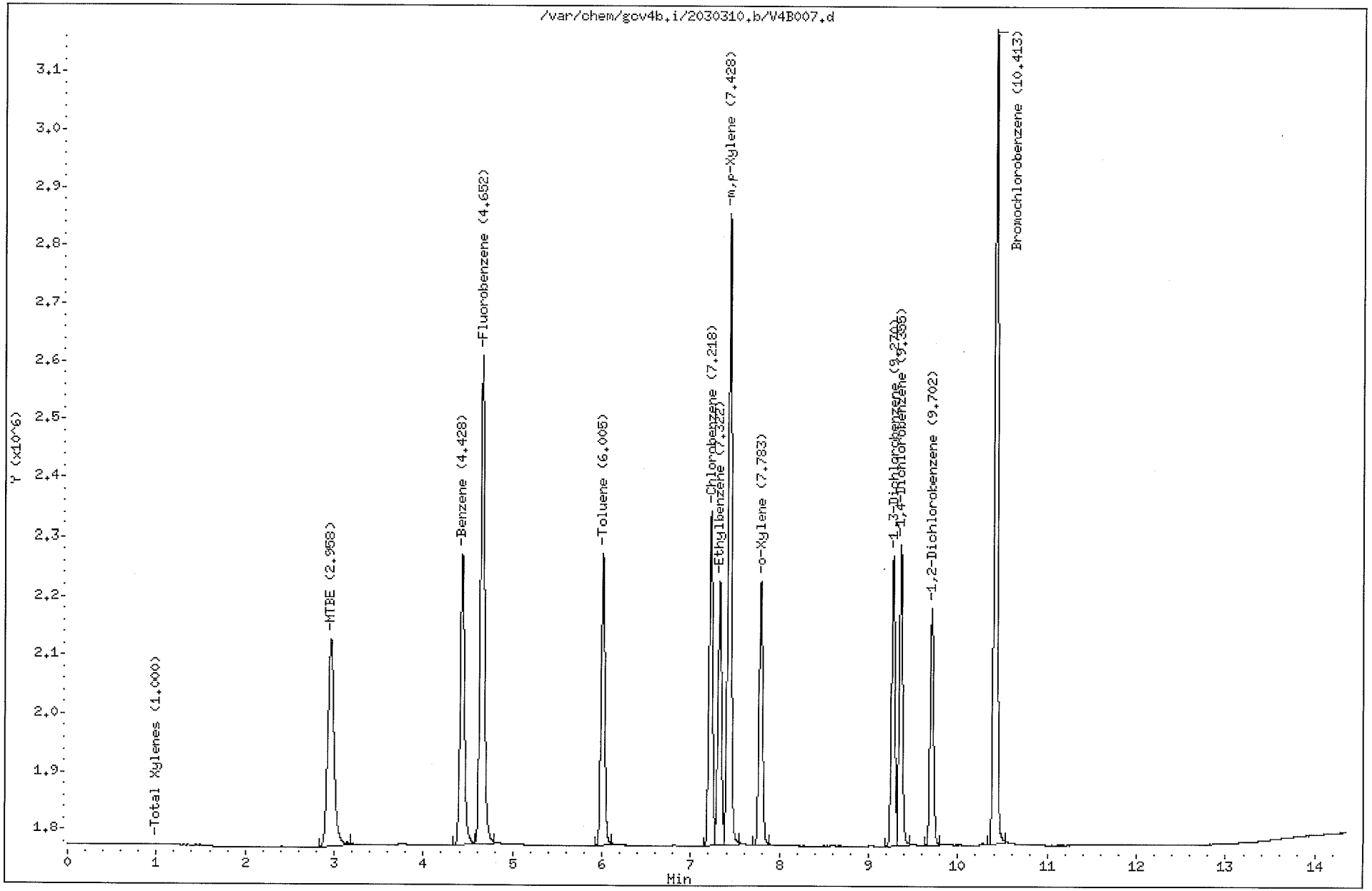
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				4267592	61.1044	61.1
2 MTBE	2.958	2.960	(0.636)	1744648	107.874	108
3 Benzene	4.428	4.428	(0.952)	1635843	20.8331	20.8
* 4 Fluorobenzene	4.652	4.650	(1.000)	2698483	50.0000	
5 Toluene	6.005	6.007	(1.291)	1461728	20.1796	20.2
6 Chlorobenzene	7.218	7.222	(1.552)	1539739	20.6114	20.6
7 Ethylbenzene	7.322	7.325	(1.574)	1279247	20.3606	20.4
8 m,p-Xylene	7.428	7.432	(1.597)	3007905	40.8948	40.9
9 o-Xylene	7.783	7.787	(1.673)	1259687	20.2096	20.2
10 1,3-Dichlorobenzene	9.270	9.273	(1.993)	1311774	20.2081	20.2
11 1,4-Dichlorobenzene	9.355	9.358	(2.011)	1356595	20.4034	20.4
12 1,2-Dichlorobenzene	9.702	9.707	(2.086)	1086771	20.2543	20.2
$ 13 Bromochlorobenzene	10.413	10.417	(2.239)	3674268	49.7344	49.7

Data File: /var/chem/gcv4b.i/2030310.b/V4B007.d
Date : 10-MAR-2003 15:16
Client ID: 0310ICV020
Sample Info: 0310ICV020
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JDT
Column diameter: 0.53

000191



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B001.d
Lab Smp Id: 0603V4STD020 Client Smp ID: 0603V4STD020
Inj Date : 03-JUN-2003 13:39
Operator : JAR Inst ID: gcv4b.i
Smp Info : 0603V4STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

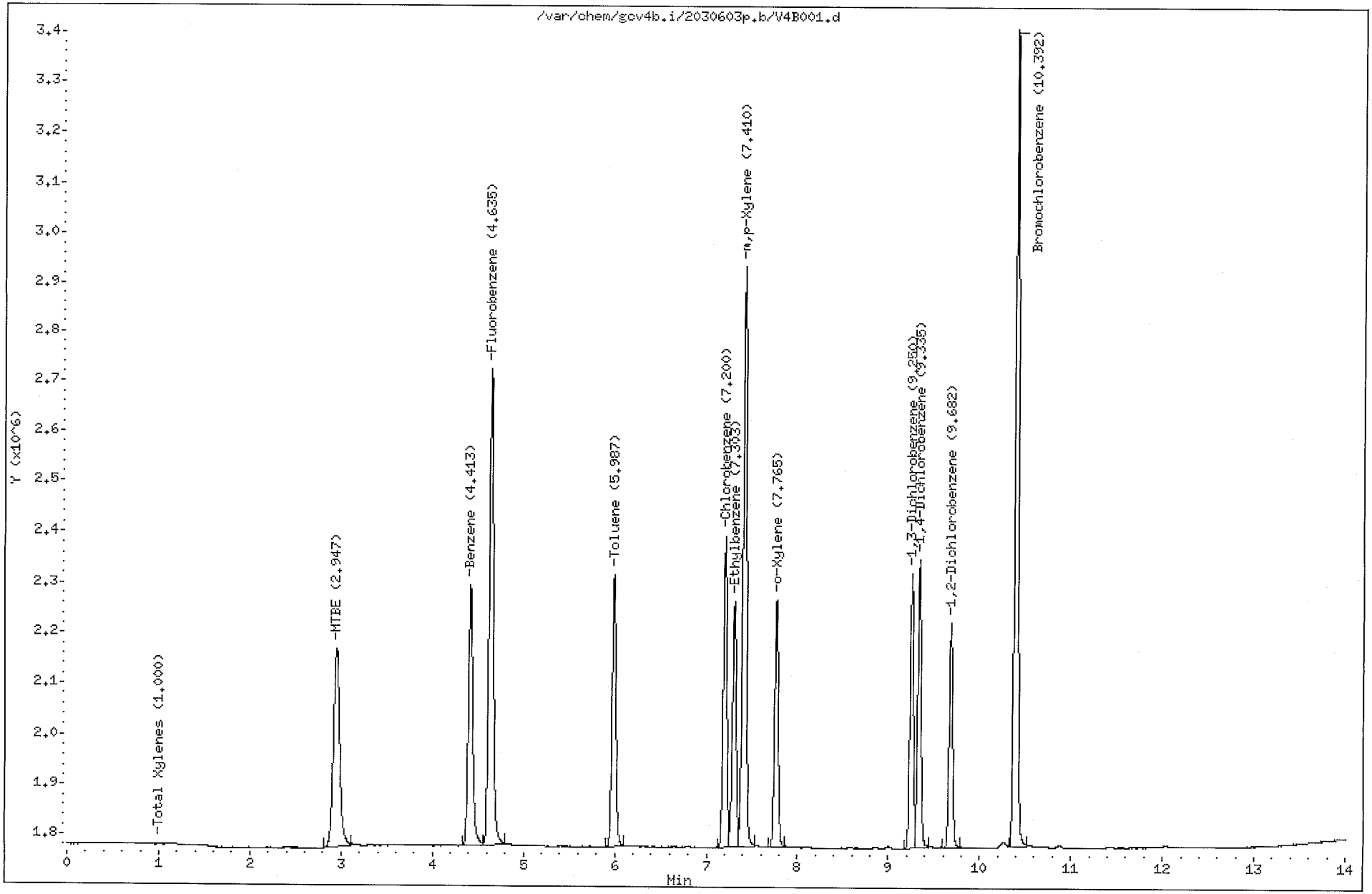
Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M 1 Total Xylenes				4604094	60.0000	58.1
2 MTBE	2.947	2.947	(0.636)	1914073	100.000	103
3 Benzene	4.413	4.413	(0.952)	1724547	20.0000	19.4
* 4 Fluorobenzene	4.635	4.635	(1.000)	3062053	50.0000	
5 Toluene	5.987	5.987	(1.292)	1586553	20.0000	19.3
7 Ethylbenzene	7.303	7.303	(1.576)	1379268	20.0000	19.3
8 m,p-Xylene	7.410	7.410	(1.599)	3238010	40.0000	38.8
9 o-Xylene	7.765	7.765	(1.675)	1366084	20.0000	19.3
$ 13 Bromochlorobenzene	10.392	10.392	(2.242)	4246170	50.0000	50.6

Data File: /var/chem/gcv4b.i/2030603p.b/V4B001.d
Date : 03-JUN-2003 13:39
Client ID: 0603V4STD020
Sample Info: 0603V4STD020
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000193



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B014.d
Lab Smp Id: 0603V4STD020 Client Smp ID: 0603V4STD020
Inj Date : 03-JUN-2003 18:37
Operator : JAR Inst ID: gcv4b.i
Smp Info : 0603V4STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

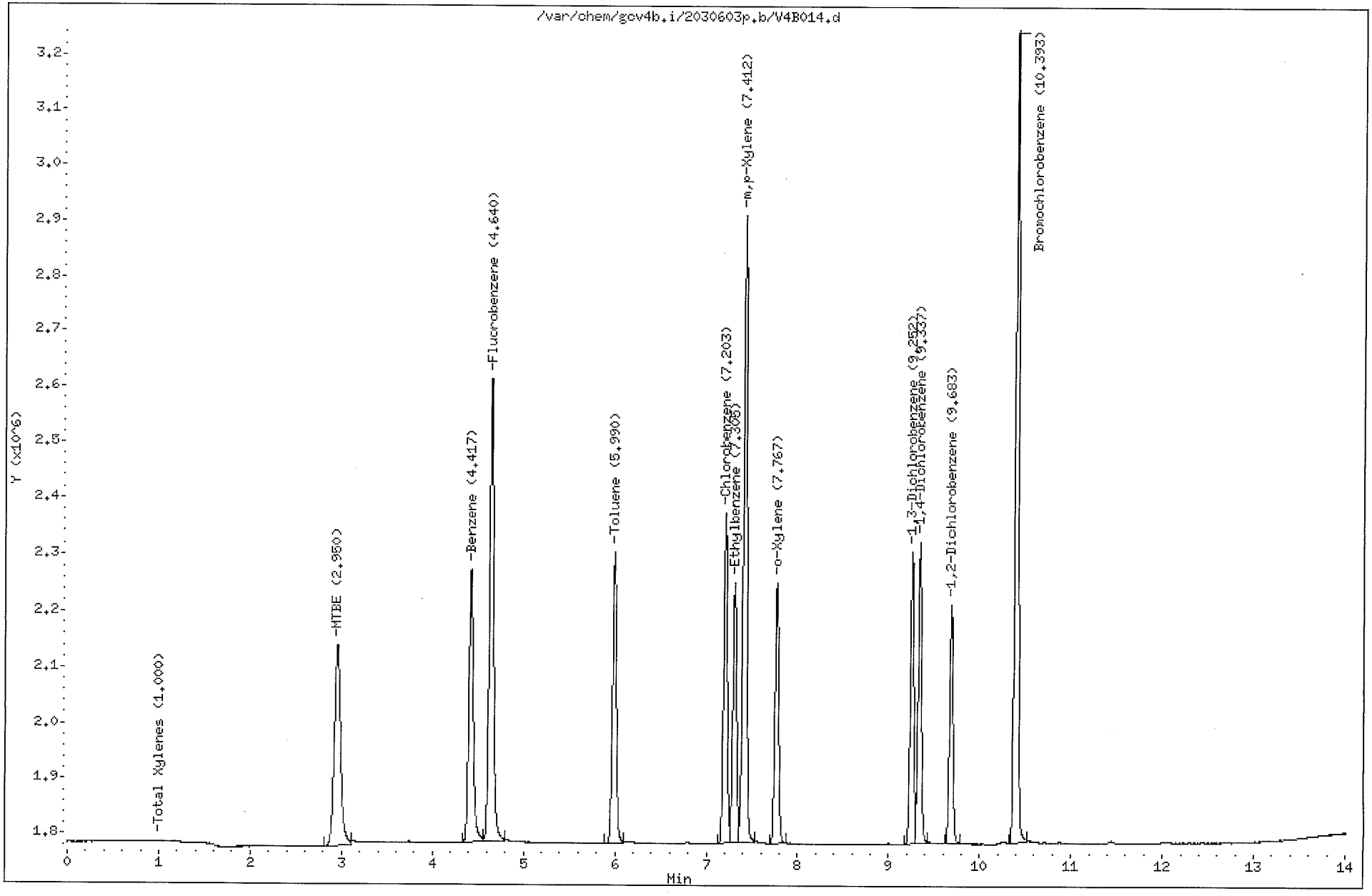
Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M 1 Total Xylenes				4412176	60.0000	63.4
2 MTBE	2.950	2.950	(0.636)	1740452	100.000	108
3 Benzene	4.417	4.417	(0.952)	1647002	20.0000	21.0
* 4 Fluorobenzene	4.640	4.640	(1.000)	2691577	50.0000	
5 Toluene	5.990	5.990	(1.291)	1524690	20.0000	21.1
7 Ethylbenzene	7.305	7.305	(1.574)	1322340	20.0000	21.1
8 m,p-Xylene	7.412	7.412	(1.597)	3103765	40.0000	42.3
9 o-Xylene	7.767	7.767	(1.674)	1308411	20.0000	21.0
$ 13 Bromochlorobenzene	10.393	10.393	(2.240)	3791797	50.0000	51.4

Data File: /var/chem/gcv4b.i/2030603p.b/V4B014.d
Date : 03-JUN-2003 18:37
Client ID: 0603W4STD020
Sample Info: 0603W4STD020
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000195



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A002.d
Lab Smp Id: 0310STD001 Client Smp ID: 0310STD001
Inj Date : 10-MAR-2003 11:31
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD001
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 11:31 Cal File: V4A002.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

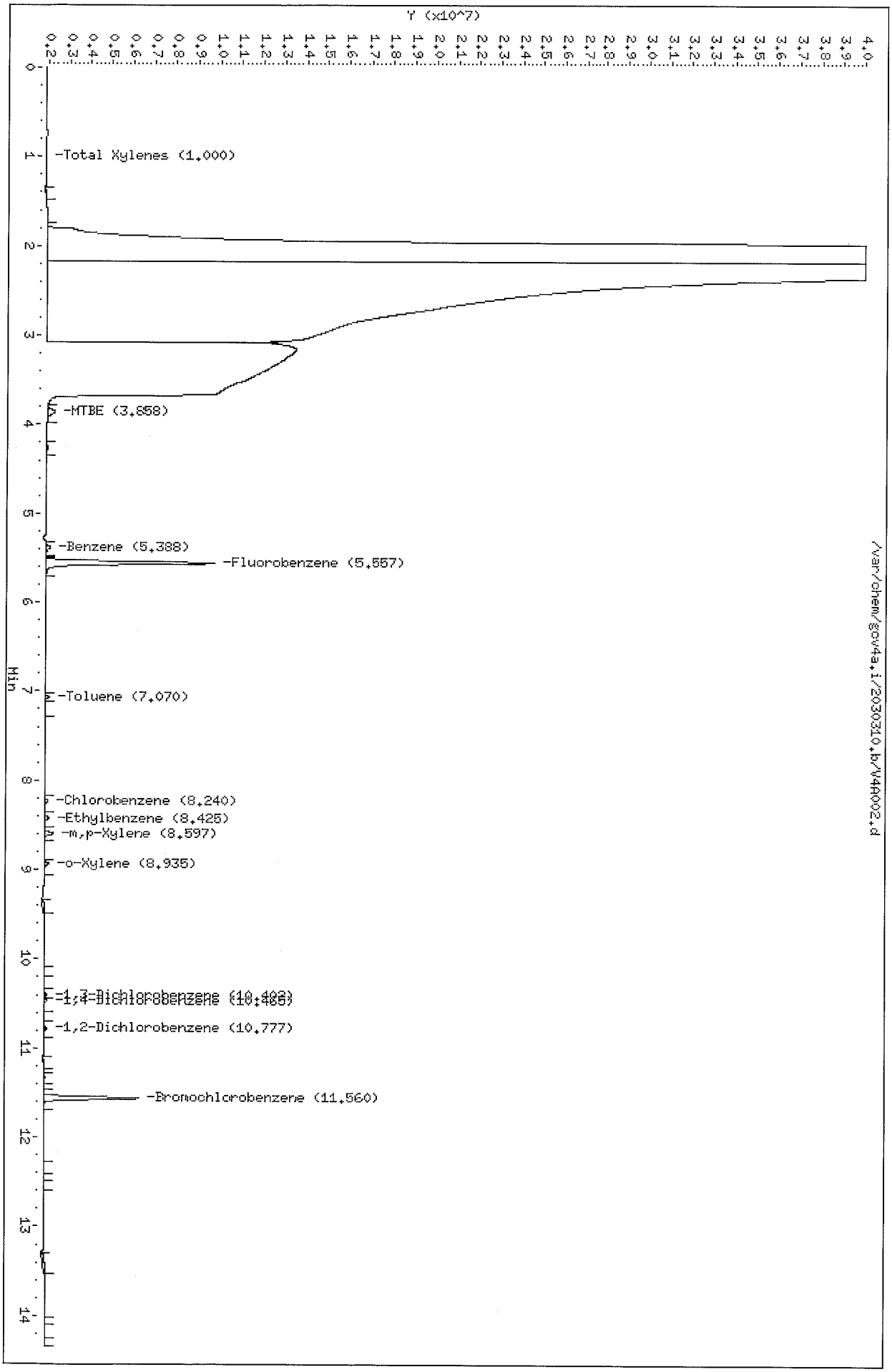
	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				1528103	3.00000	3.2(a)
	2 MTBE	3.858	3.858	(0.694)	1185388	5.00000	4.8(M)
	3 Benzene	5.388	5.388	(0.970)	531977	1.00000	1.1(aM)
*	4 Fluorobenzene	5.557	5.557	(1.000)	20131995	50.0000	(M)
	5 Toluene	7.070	7.070	(1.272)	388445	1.00000	0.82(a)
	6 Chlorobenzene	8.240	8.240	(1.483)	360107	1.00000	1.0
	7 Ethylbenzene	8.425	8.425	(1.516)	510917	1.00000	1.0(a)
	8 m,p-Xylene	8.597	8.597	(1.547)	1020965	2.00000	2.1(a)
	9 o-Xylene	8.935	8.935	(1.608)	507138	1.00000	1.0
	10 1,3-Dichlorobenzene	10.402	10.402	(1.872)	296481	1.00000	1.1
	11 1,4-Dichlorobenzene	10.465	10.465	(1.883)	307010	1.00000	1.1
	12 1,2-Dichlorobenzene	10.777	10.777	(1.939)	324210	1.00000	1.2
$	13 Bromochlorobenzene	11.560	11.560	(2.080)	9707660	50.0000	53.3

QC Flag Legend

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

Data File: /var/chem/gcv4a.i/20030310.b/V4A002.d
Date : 10-MAR-2003 11:31
Client ID: 0310STD001
Sample Info: 0310STD001
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i
Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A003.d
Lab Smp Id: 0310STD005 Client Smp ID: 0310STD005
Inj Date : 10-MAR-2003 11:49
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD005
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 11:49 Cal File: V4A003.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				6771347	15.0000	13.7
	2 MTBE	3.868	3.868	(0.695)	6489597	25.0000	25.5
	3 Benzene	5.397	5.397	(0.970)	2384004	5.00000	5.0
*	4 Fluorobenzene	5.565	5.565	(1.000)	20616421	50.0000	
	5 Toluene	7.075	7.075	(1.271)	2773892	5.00000	5.7
	6 Chlorobenzene	8.238	8.238	(1.480)	1779836	5.00000	4.8
	7 Ethylbenzene	8.423	8.423	(1.514)	2305374	5.00000	4.7(a)
	8 m,p-Xylene	8.597	8.597	(1.545)	4336143	10.0000	8.8
	9 o-Xylene	8.933	8.933	(1.605)	2435204	5.00000	4.8
	10 1,3-Dichlorobenzene	10.397	10.397	(1.868)	1373936	5.00000	5.1
	11 1,4-Dichlorobenzene	10.460	10.460	(1.880)	1384317	5.00000	4.9
	12 1,2-Dichlorobenzene	10.772	10.772	(1.936)	1176033	5.00000	4.4
$	13 Bromochlorobenzene	11.553	11.553	(2.076)	9979438	50.0000	53.5

QC Flag Legend

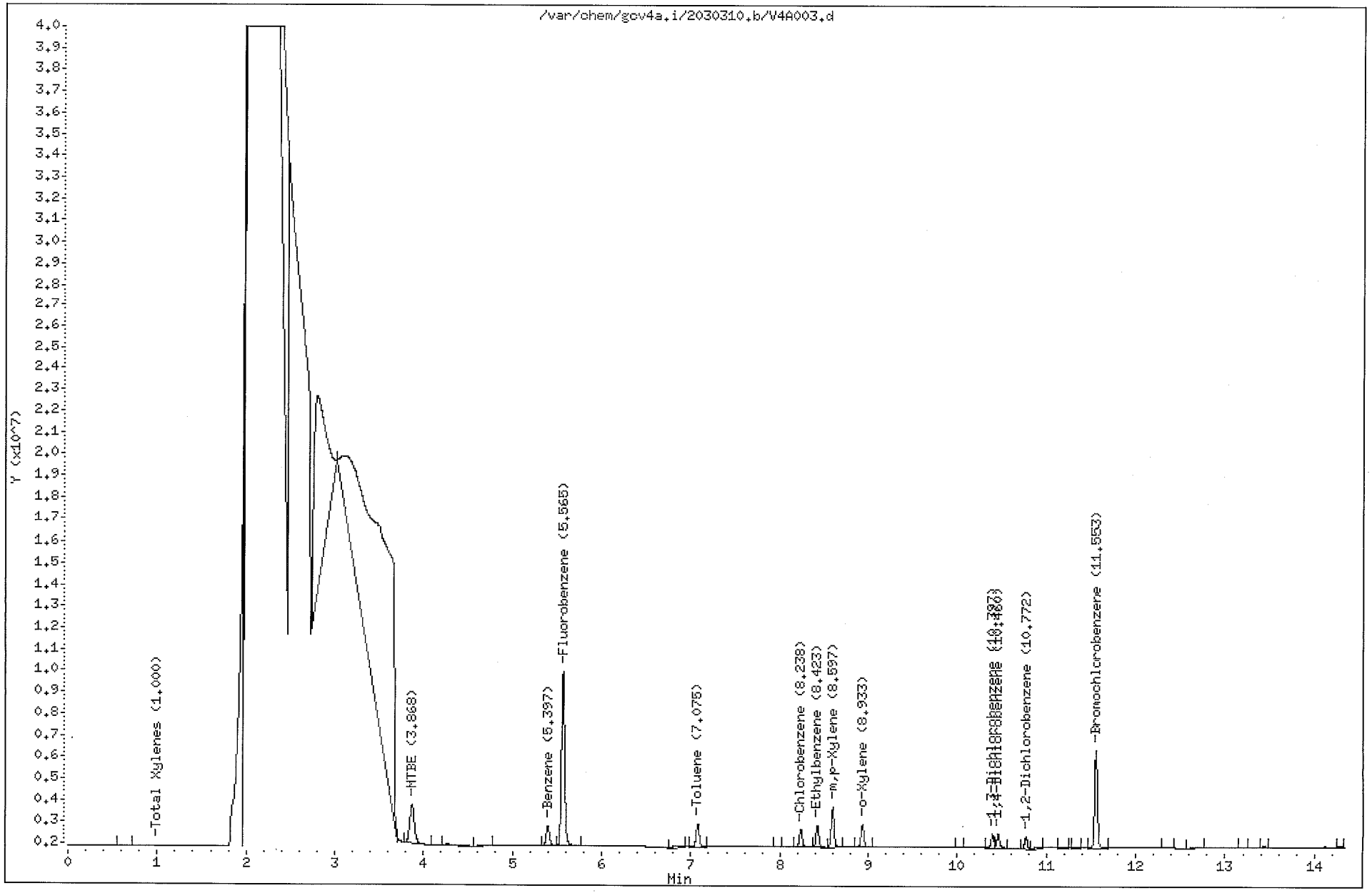
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcv4a.i/2030310.b/V4A003.d
Date : 10-MAR-2003 11:49
Client ID: 0310STD005
Sample Info: 0310STD005
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JDT
Column diameter: 0.53

000201



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A004.d
Lab Smp Id: 0310STD010 Client Smp ID: 0310STD010
Inj Date : 10-MAR-2003 12:08
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD010
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 12:08 Cal File: V4A004.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				15514077	30.0000	31.8
	2 MTBE	3.862	3.862	(0.695)	12060740	50.0000	48.0(M)
	3 Benzene	5.392	5.392	(0.970)	4742807	10.0000	10.1
*	4 Fluorobenzene	5.560	5.560	(1.000)	20374651	50.0000	
	5 Toluene	7.072	7.072	(1.272)	4798123	10.0000	10.0
	6 Chlorobenzene	8.237	8.237	(1.481)	4074686	10.0000	11.2
	7 Ethylbenzene	8.422	8.422	(1.515)	5327592	10.0000	10.9
	8 m,p-Xylene	8.595	8.595	(1.546)	10247349	20.0000	21.1
	9 o-Xylene	8.933	8.933	(1.607)	5266728	10.0000	10.6
	10 1,3-Dichlorobenzene	10.395	10.395	(1.870)	2533406	10.0000	9.6
	11 1,4-Dichlorobenzene	10.460	10.460	(1.881)	2683399	10.0000	9.7
	12 1,2-Dichlorobenzene	10.772	10.772	(1.937)	2529297	10.0000	9.6
$	13 Bromochlorobenzene	11.553	11.553	(2.078)	9352902	50.0000	50.7

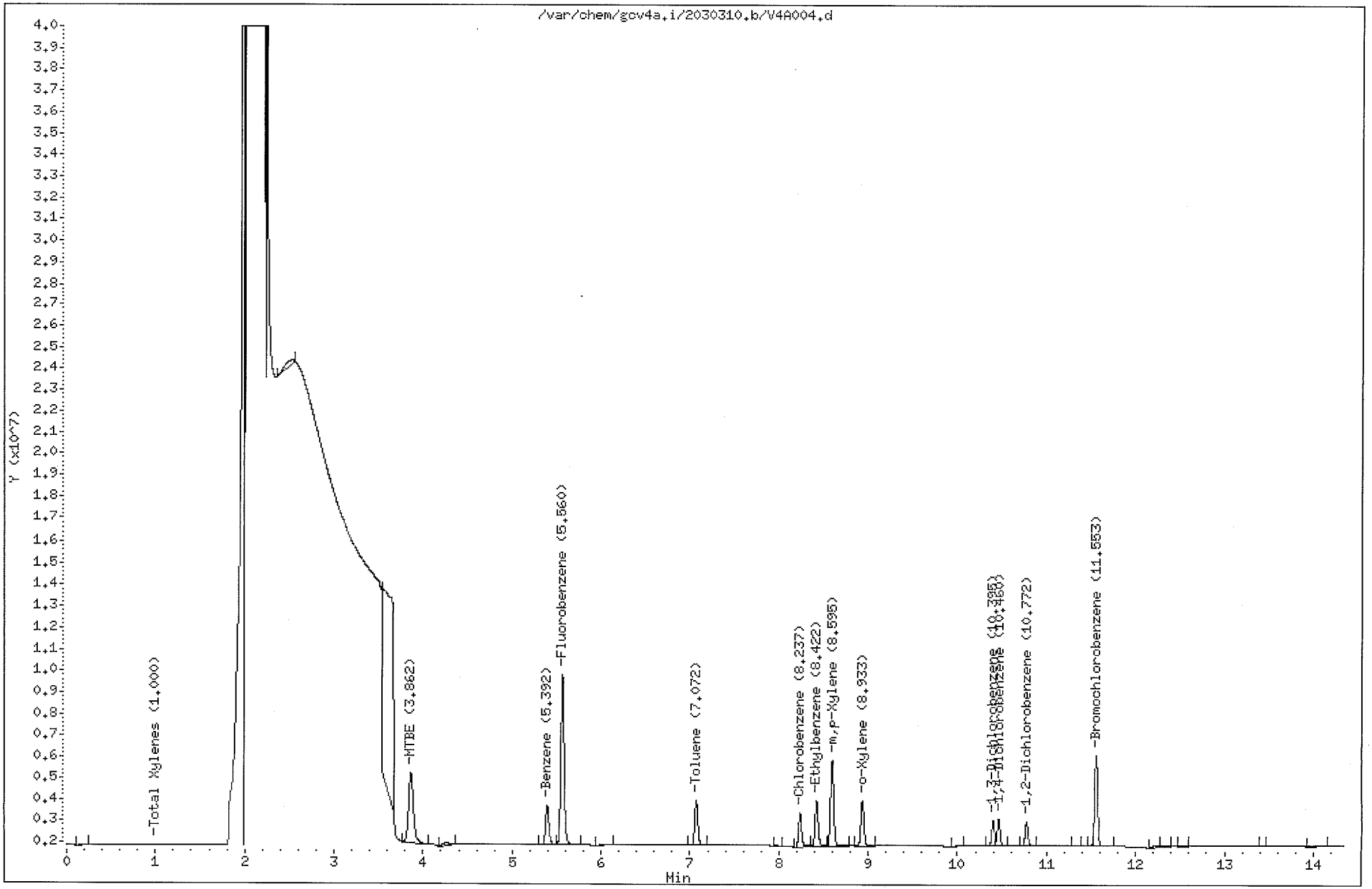
QC Flag Legend

M - Compound response manually integrated.

000204

Data File: /var/chem/gcv4a.i/2030310.b/V4A004.d
Date : 10-MAR-2003 12:08
Client ID: 0310STD010
Sample Info: 0310STD010
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i
Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A001.d
Lab Smp Id: 0310STD020 Client Smp ID: 0310STD020
Inj Date : 10-MAR-2003 10:36
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 10:36 Cal File: V4A001.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				29408024	60.0000	60.6
	2 MTBE	3.850	3.850	(0.694)	26065866	100.000	104(M)
	3 Benzene	5.380	5.380	(0.969)	8969539	20.0000	19.2
*	4 Fluorobenzene	5.550	5.550	(1.000)	20248660	50.0000	
	5 Toluene	7.065	7.065	(1.273)	9852253	20.0000	20.8
	6 Chlorobenzene	8.230	8.230	(1.483)	7174247	20.0000	19.9
	7 Ethylbenzene	8.415	8.415	(1.516)	9676953	20.0000	19.9
	8 m,p-Xylene	8.588	8.588	(1.547)	19640518	40.0000	40.8
	9 o-Xylene	8.927	8.927	(1.608)	9767506	20.0000	19.8
	10 1,3-Dichlorobenzene	10.390	10.390	(1.872)	5106472	20.0000	19.4
	11 1,4-Dichlorobenzene	10.453	10.453	(1.883)	5436203	20.0000	19.8
	12 1,2-Dichlorobenzene	10.765	10.765	(1.940)	5159836	20.0000	19.8
$	13 Bromochlorobenzene	11.548	11.548	(2.081)	9064964	50.0000	49.5

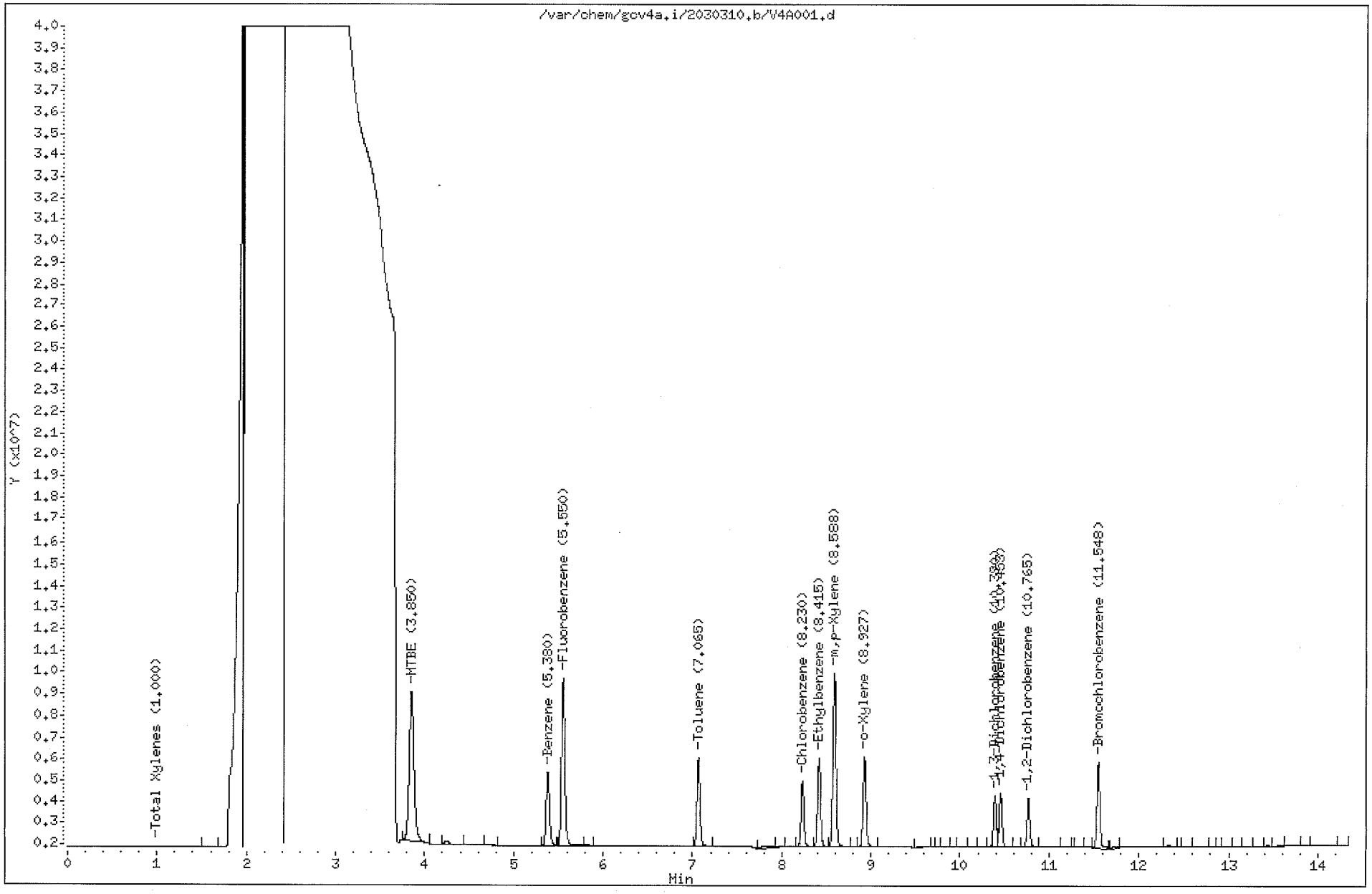
QC Flag Legend

M - Compound response manually integrated.

000207

Data File: /var/chem/gcv4a.i/2030310.b/V4A001.d
Date : 10-MAR-2003 10:36
Client ID: 0310STD020
Sample Info: 0310STD020
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i
Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A005.d
Lab Smp Id: 0310STD050 Client Smp ID: 0310STD050
Inj Date : 10-MAR-2003 12:26
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD050
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 12:26 Cal File: V4A005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				71077824	150.000	141
	2 MTBE	3.860	3.860	(0.694)	62728780	250.000	242(M)
	3 Benzene	5.390	5.390	(0.969)	20978464	50.0000	43.4
*	4 Fluorobenzene	5.560	5.560	(1.000)	20979223	50.0000	
	5 Toluene	7.073	7.073	(1.272)	23018028	50.0000	46.8
	6 Chlorobenzene	8.238	8.238	(1.482)	16977356	50.0000	45.5
	7 Ethylbenzene	8.423	8.423	(1.515)	23084700	50.0000	45.9
	8 m,p-Xylene	8.595	8.595	(1.546)	46975280	100.000	94.1
	9 o-Xylene	8.933	8.933	(1.607)	24102544	50.0000	47.1
	10 1,3-Dichlorobenzene	10.397	10.397	(1.870)	12439926	50.0000	45.7
	11 1,4-Dichlorobenzene	10.460	10.460	(1.881)	13198118	50.0000	46.3
	12 1,2-Dichlorobenzene	10.772	10.772	(1.937)	12346445	50.0000	45.8
$	13 Bromochlorobenzene	11.553	11.553	(2.078)	9512742	50.0000	50.1

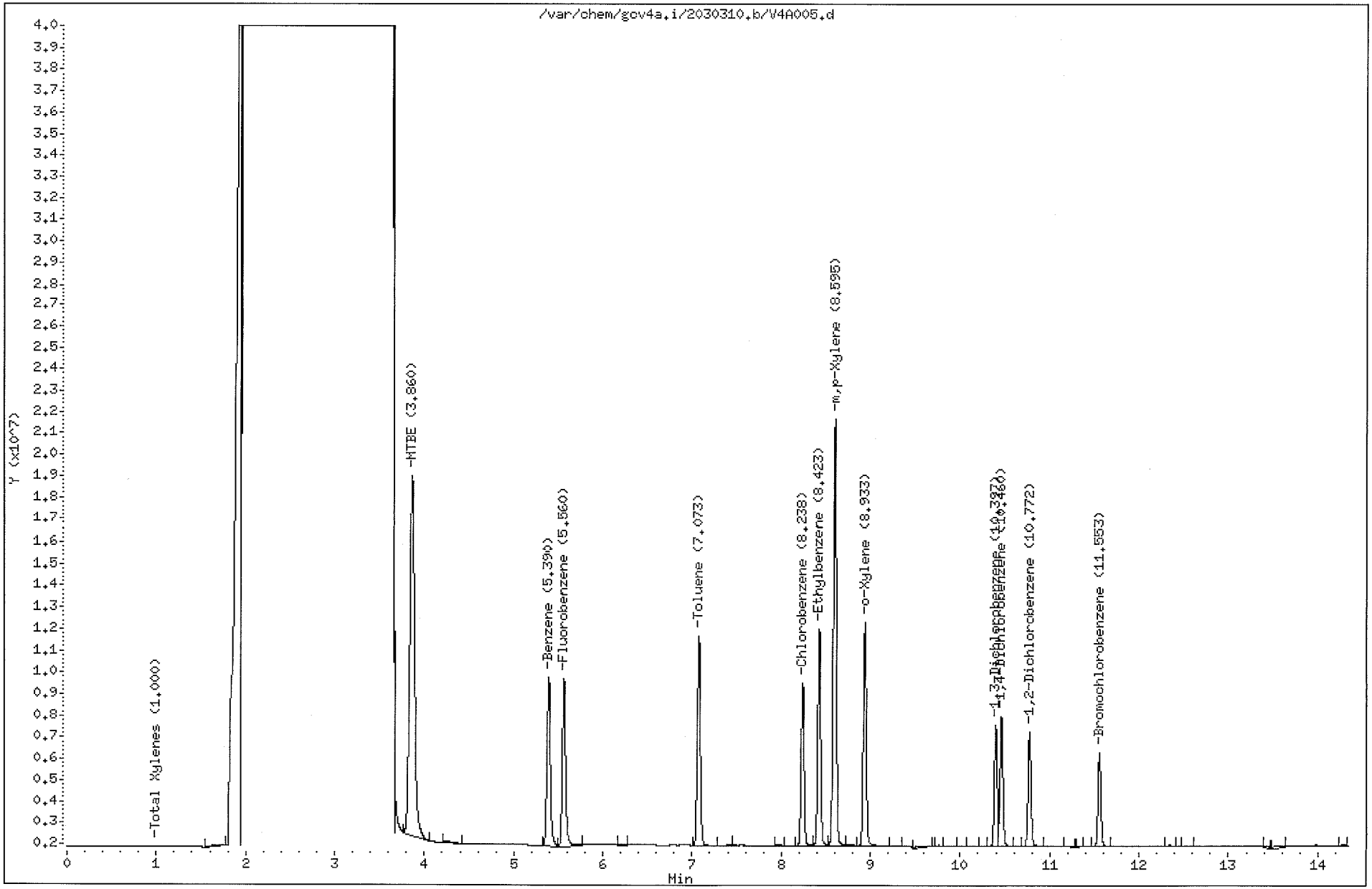
QC Flag Legend

M - Compound response manually integrated.

000210

Data File: /var/chem/gcv4a.i/2030310.b/V4A005.d
Date : 10-MAR-2003 12:26
Client ID: 0310STD050
Sample Info: 0310STD050
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i
Operator: JDT
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A006.d
Lab Smp Id: 0310STD100 Client Smp ID: 0310STD100
Inj Date : 10-MAR-2003 13:18
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310STD100
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M	1 Total Xylenes				145189651	300.000	307
	2 MTBE	3.852	3.852	(0.694)	127912587	500.000	525
	3 Benzene	5.380	5.380	(0.969)	46179036	100.000	101(A)
*	4 Fluorobenzene	5.552	5.552	(1.000)	19747592	50.0000	
	5 Toluene	7.070	7.070	(1.273)	48704753	100.000	105(A)
	6 Chlorobenzene	8.235	8.235	(1.483)	34740579	100.000	99.0
	7 Ethylbenzene	8.422	8.422	(1.517)	47452596	100.000	100(A)
	8 m,p-Xylene	8.593	8.593	(1.548)	96879375	200.000	206(A)
	9 o-Xylene	8.932	8.932	(1.609)	48310276	100.000	100
	10 1,3-Dichlorobenzene	10.395	10.395	(1.872)	25372662	100.000	99.1
	11 1,4-Dichlorobenzene	10.460	10.460	(1.884)	26944568	100.000	100
	12 1,2-Dichlorobenzene	10.772	10.772	(1.940)	25046558	100.000	98.7
$	13 Bromochlorobenzene	11.555	11.555	(2.081)	7681068	50.0000	43.0

QC Flag Legend

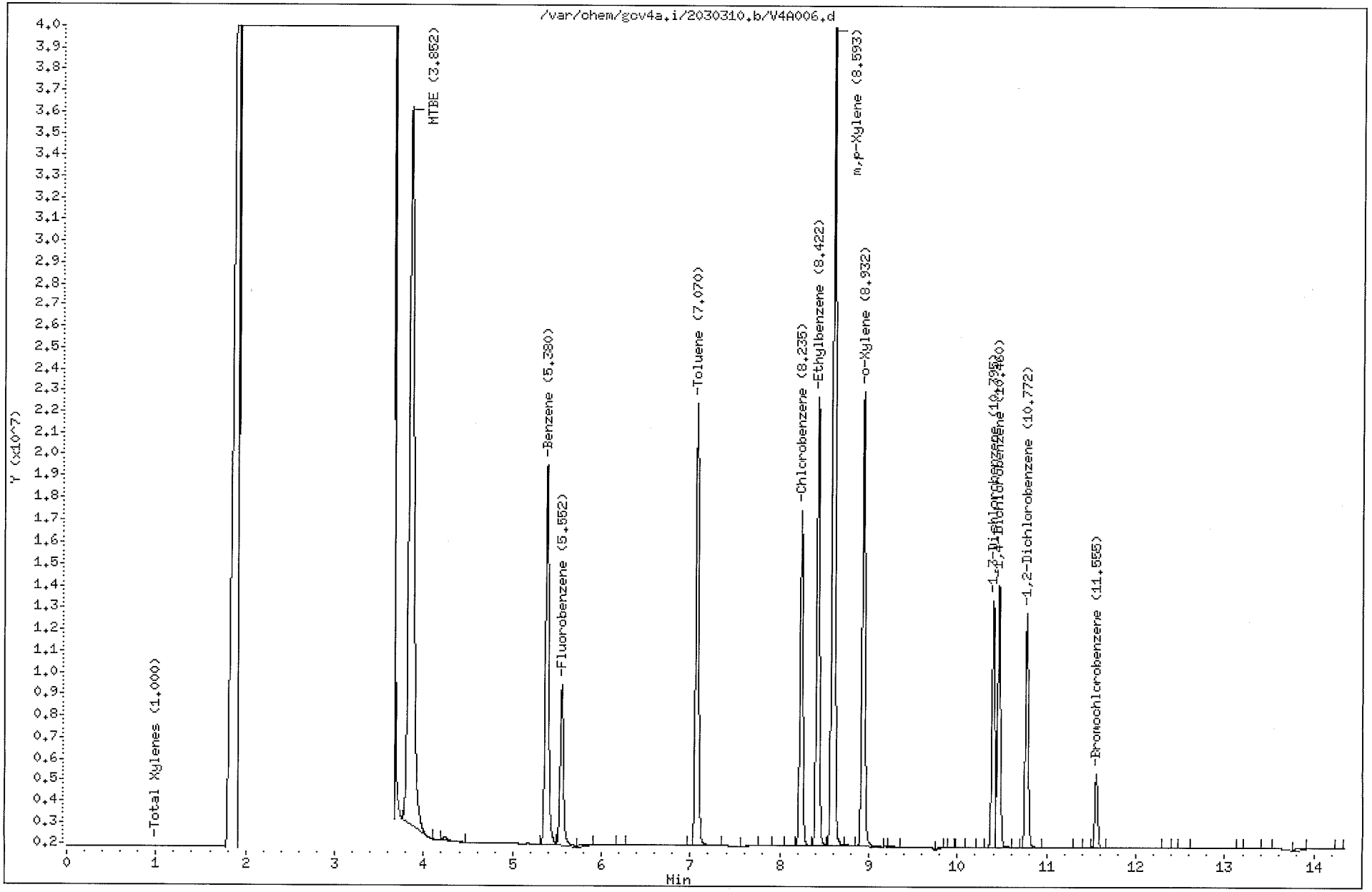
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcv4a.i/2030310.b/V4A006.d
Date : 10-MAR-2003 13:18
Client ID: 0310STD100
Sample Info: 0310STD100
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JDT
Column diameter: 0.53

000213



Data File: /var/chem/gcv4a.i/2030310.b/V4A007.d
Report Date: 05-Jun-2003 16:38

Gulf Coast Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 0310ICV020
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Misc Info: 5-10-8

Client SDG:
Fraction: VOA
Client Smp ID: 0310ICV020
Operator: JDT
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
M 1 Total Xylenes	60.0	60.1	100.13	70-130
2 MTBE	100	100	100.59	70-130
3 Benzene	20.0	21.4	107.21	70-130
5 Toluene	20.0	19.7	98.59	70-130
6 Chlorobenzene	20.0	19.6	97.88	70-130
7 Ethylbenzene	20.0	19.6	98.10	70-130
8 m,p-Xylene	40.0	40.3	100.86	70-130
9 o-Xylene	20.0	19.7	98.68	70-130
10 1,3-Dichlorobenzen	20.0	19.2	95.93	70-130
11 1,4-Dichlorobenzen	20.0	19.5	97.40	70-130
12 1,2-Dichlorobenzen	20.0	19.7	98.59	70-130

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 13 Bromochlorobenzene	50.0	51.3	102.64	60-142

Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030310.b/V4A007.d
Lab Smp Id: 0310ICV020 Client Smp ID: 0310ICV020
Inj Date : 10-MAR-2003 15:16
Operator : JDT Inst ID: gcv4a.i
Smp Info : 0310ICV020
Misc Info : 5-10-8
Comment :
Method : /var/chem/gcv4a.i/2030310.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:37 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

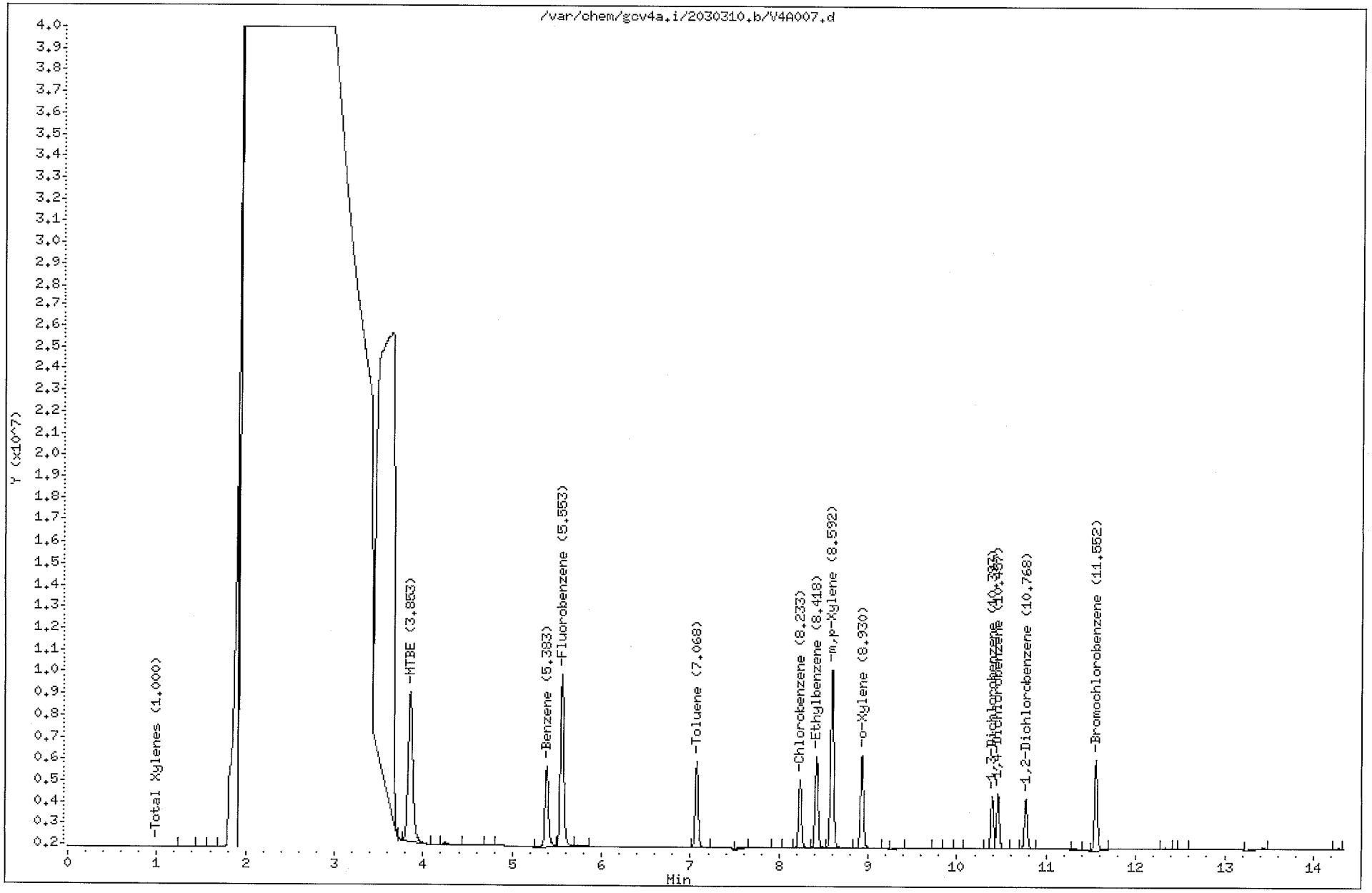
	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M	1 Total Xylenes				30097127	60.0784	60.1
	2 MTBE	3.853	3.852	(0.694)	25918539	100.590	100
	3 Benzene	5.383	5.380	(0.969)	10331170	21.4423	21.4
*	4 Fluorobenzene	5.553	5.552	(1.000)	20893513	50.0000	
	5 Toluene	7.068	7.070	(1.273)	9660507	19.7187	19.7
	6 Chlorobenzene	8.233	8.235	(1.483)	7270191	19.5770	19.6
	7 Ethylbenzene	8.418	8.422	(1.516)	9826287	19.6201	19.6
	8 m,p-Xylene	8.592	8.593	(1.547)	20047892	40.3427	40.3
	9 o-Xylene	8.930	8.932	(1.608)	10049235	19.7357	19.7
	10 1,3-Dichlorobenzene	10.393	10.395	(1.872)	5198254	19.1858	19.2
	11 1,4-Dichlorobenzene	10.457	10.460	(1.883)	5528611	19.4805	19.5
	12 1,2-Dichlorobenzene	10.768	10.772	(1.939)	5295616	19.7188	19.7
$	13 Bromochlorobenzene	11.552	11.555	(2.080)	9705300	51.3202	51.3

Data File: /var/chem/gcv4a.i/20030310.b/V4A007.d
Date : 10-MAR-2003 15:16
Client ID: 0310ICV020
Sample Info: 0310ICV020
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JDT
Column diameter: 0.53

000216



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A001.d
Lab Smp Id: 0603V4STD020 Client Smp ID: 0603V4STD020
Inj Date : 03-JUN-2003 13:39
Operator : JAR Inst ID: gcv4a.i
Smp Info : 0603V4STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

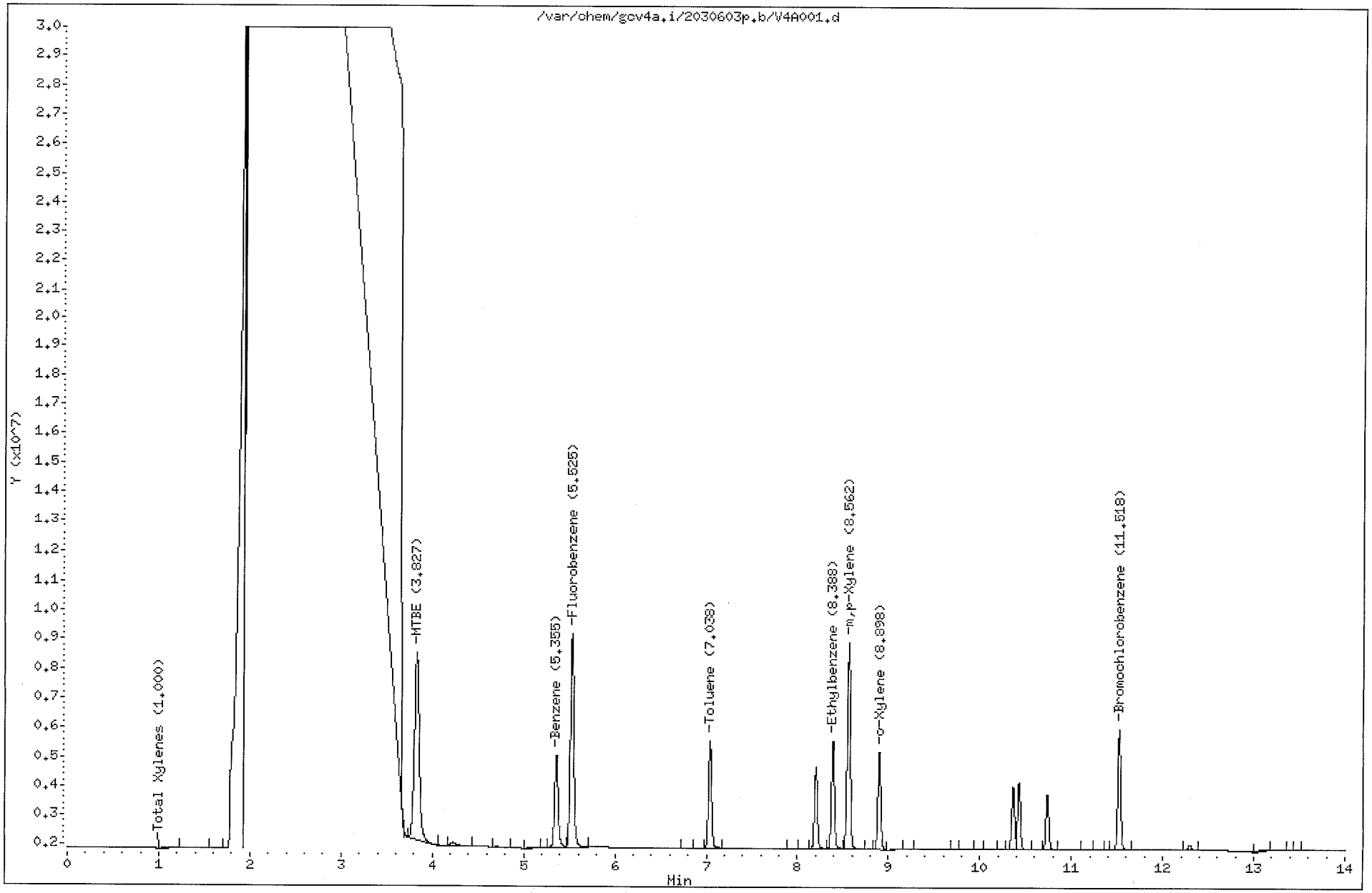
Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M 1 Total Xylenes				24412316	60.0000	53.4
2 MTBE	3.827	3.827	(0.693)	23806107	100.000	101
3 Benzene	5.355	5.355	(0.969)	8446806	20.0000	19.2
* 4 Fluorobenzene	5.525	5.525	(1.000)	19088614	50.0000	
5 Toluene	7.038	7.038	(1.274)	8673699	20.0000	19.4
7 Ethylbenzene	8.388	8.388	(1.518)	8464903	20.0000	18.5
8 m,p-Xylene	8.562	8.562	(1.550)	16794293	40.0000	37.0
9 o-Xylene	8.898	8.898	(1.611)	7618023	20.0000	16.4
$ 13 Bromochlorobenzene	11.518	11.518	(2.085)	8860260	50.0000	51.3

Data File: /var/chem/gov4a.i/2030603p.b/V4A001.d
Date : 03-JUN-2003 13:39
Client ID: 0603V4STD020
Sample Info: 0603V4STD020
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gov4a.i

Operator: JAR
Column diameter: 0.53

000218



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A014.d
Lab Smp Id: 0603V4STD020 Client Smp ID: 0603V4STD020
Inj Date : 03-JUN-2003 18:37
Operator : JAR Inst ID: gcv4a.i
Smp Info : 0603V4STD020
Misc Info : 5-11-8
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:32 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

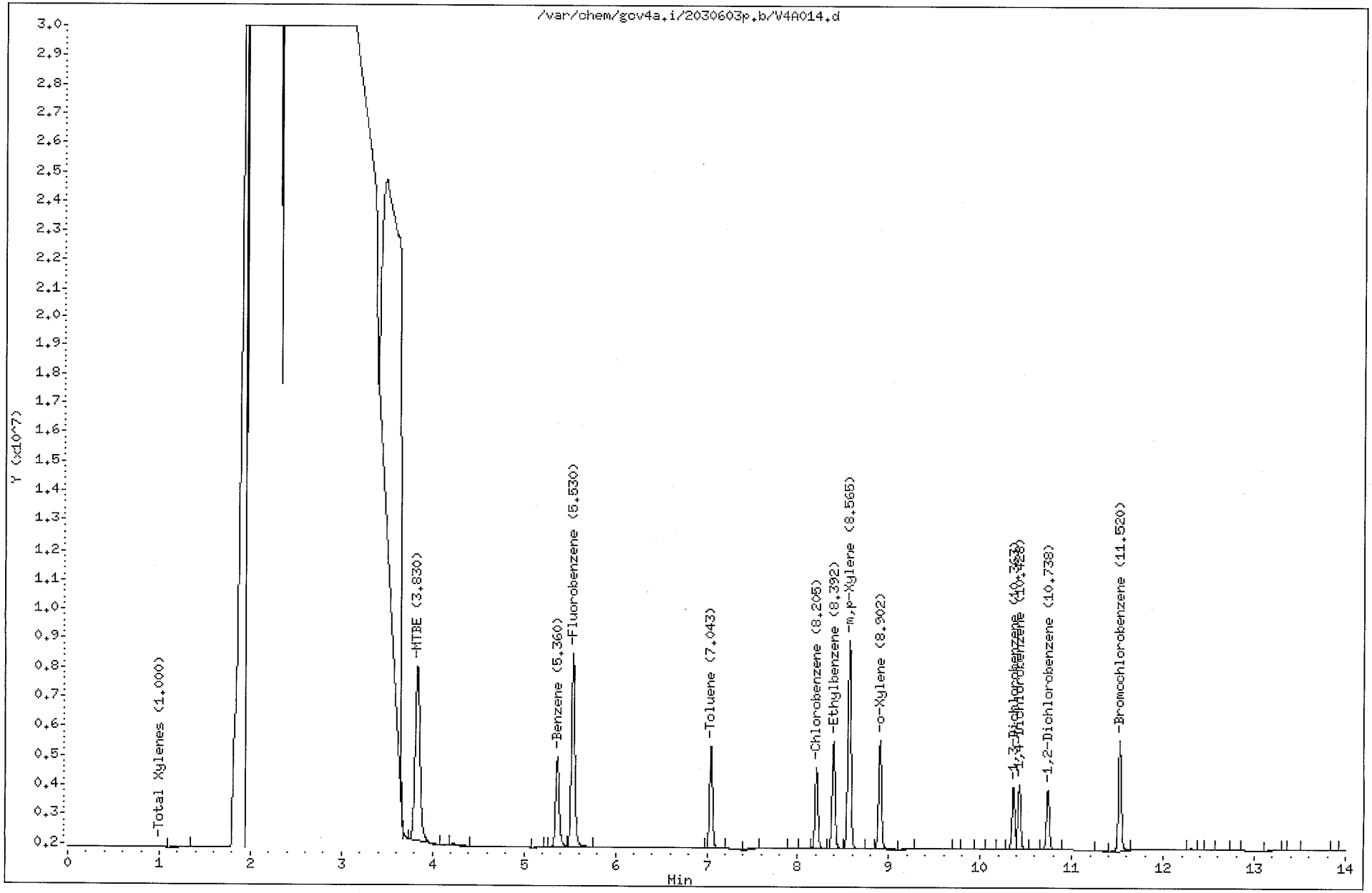
Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
M 1 Total Xylenes				25453151	60.0000	61.5
2 MTBE	3.830	3.830	(0.693)	22228178	100.000	104
3 Benzene	5.360	5.360	(0.969)	8234815	20.0000	20.7
* 4 Fluorobenzene	5.530	5.530	(1.000)	17251988	50.0000	
5 Toluene	7.043	7.043	(1.274)	8151577	20.0000	20.2
7 Ethylbenzene	8.392	8.392	(1.517)	8339013	20.0000	20.2
8 m,p-Xylene	8.565	8.565	(1.549)	16936396	40.0000	41.3
9 o-Xylene	8.902	8.902	(1.610)	8516755	20.0000	20.2
$ 13 Bromochlorobenzene	11.520	11.520	(2.083)	8635888	50.0000	55.3

Data File: /var/chem/gov4a.i/2030603p.b/V4A014.d
Date : 03-JUN-2003 18:37
Client ID: 0603W4STD020
Sample Info: 0603W4STD020
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gov4a.i

Operator: JAR
Column diameter: 0.53

000220



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B002.d
Lab Smp Id: 102440 Client Smp ID: 102440
Inj Date : 03-JUN-2003 14:14
Operator : JAR Inst ID: gcv4b.i
Smp Info : 102240-1-GCV~1779~
Misc Info : 0603V4BLK01
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

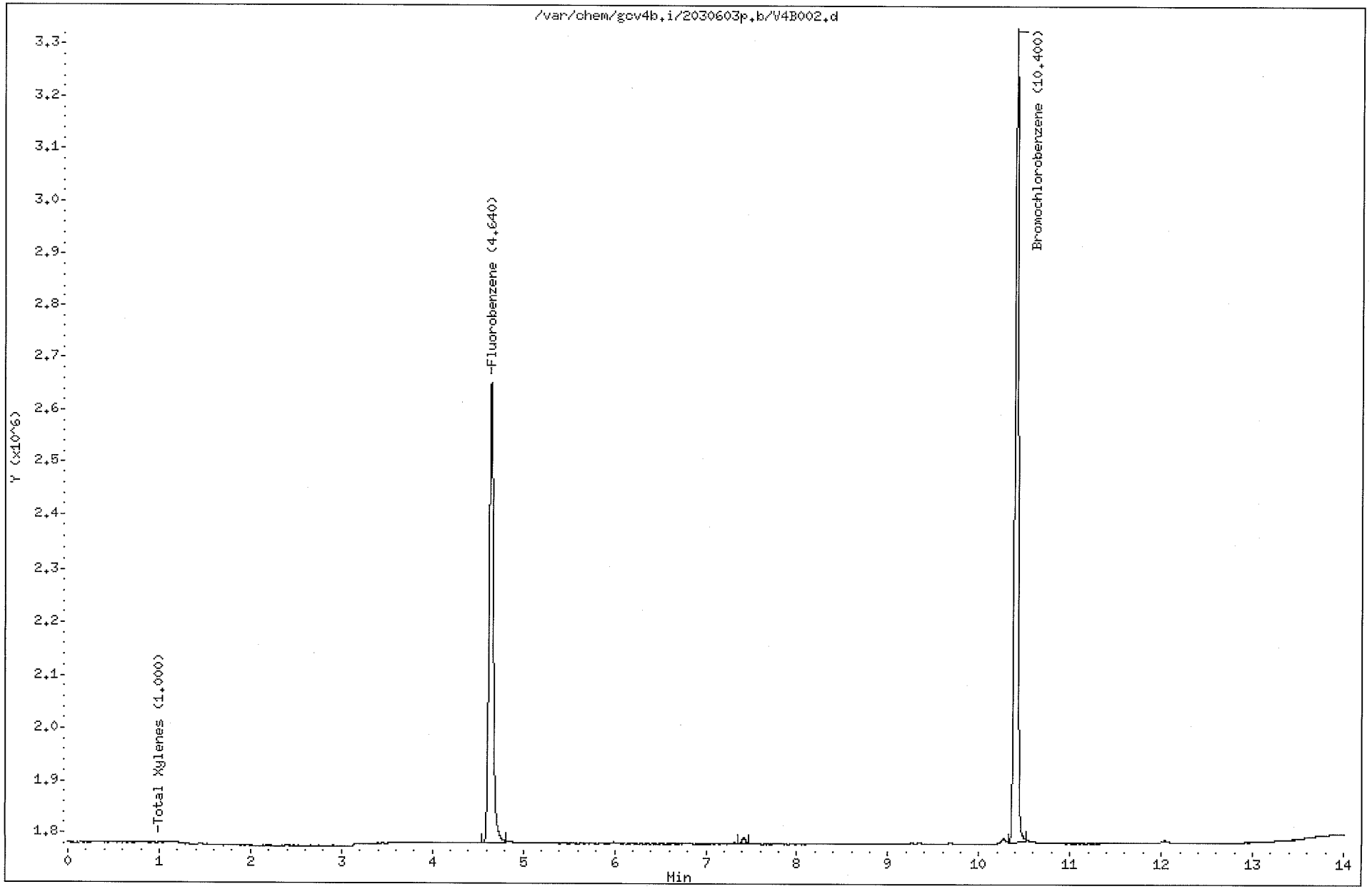
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
* 4 Fluorobenzene	4.640	4.635	(1.000)	2822356	50.0000	
$ 13 Bromochlorobenzene	10.400	10.392	(2.241)	3987910	51.6106	51.6

Data File: /var/chem/gcv4b.i/2030603p.b/V4B002.d
Date : 03-JUN-2003 14:14
Client ID: 102440
Sample Info: 102240-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000222



Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A002.d
Lab Smp Id: 102240 Client Smp ID: 102240
Inj Date : 03-JUN-2003 14:14
Operator : JAR Inst ID: gcv4a.i
Smp Info : 102240-1-GCV~1779~
Misc Info : 0603V4BLK01
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

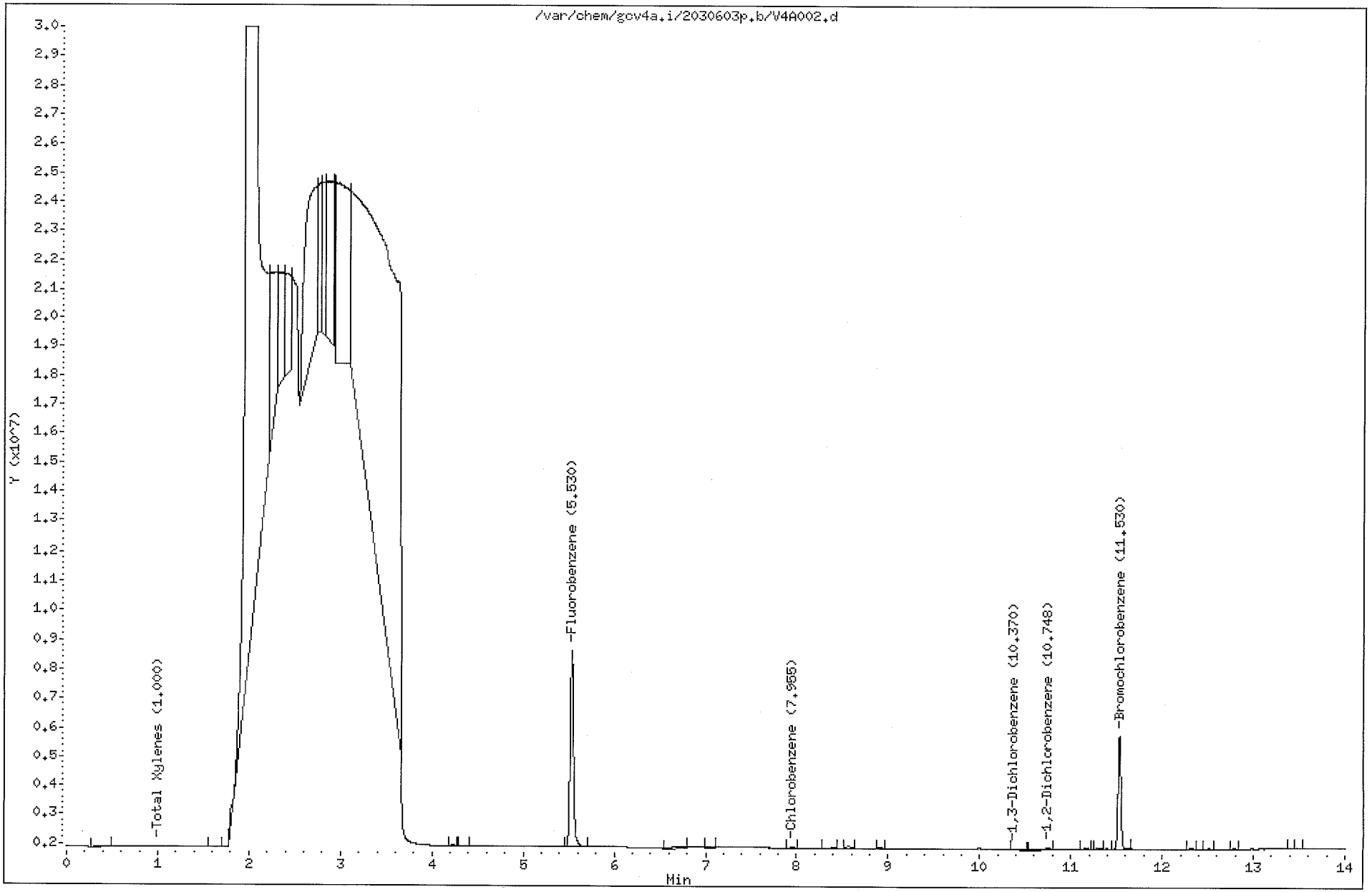
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 4 Fluorobenzene	5.530	5.525	(1.000)	17490284	50.0000	
$ 13 Bromochlorobenzene	11.530	11.518	(2.085)	8382734	52.9516	53.0

Data File: /var/chem/gcv4a.i/2030603p.b/V4A002.d
Date : 03-JUN-2003 14:14
Client ID: 102240
Sample Info: 102240-1-GCV^1779^
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JAR
Column diameter: 0.53

000224



Gulf Coast Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 102241
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: mbtexlcs.spk
Sublist File: MBTEX.sub
Method File: /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Misc Info: 0603V4LCS01, 5-12-5

Client SDG:
Fraction: VOA
Client Smp ID: 102241
Operator: JAR
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
M 1 Total Xylenes	60.0	64.4	107.35	57-143
2 MTBE	100	84.7	84.70	50-150
3 Benzene	20.0	20.4	102.24	56-138
5 Toluene	20.0	21.5	107.68	58-138
7 Ethylbenzene	20.0	22.0	109.85	62-137
8 m,p-Xylene	40.0	43.1	107.70	57-143
9 o-Xylene	20.0	21.3	106.64	57-143

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 13 Bromochlorobenzene	50.0	52.8	105.60	60-142

Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B003.d
Lab Smp Id: 102241 Client Smp ID: 102241
Inj Date : 03-JUN-2003 14:32
Operator : JAR Inst ID: gcv4b.i
Smp Info : 102241-1-GCV~1779~
Misc Info : 0603V4LCS01, 5-12-5
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

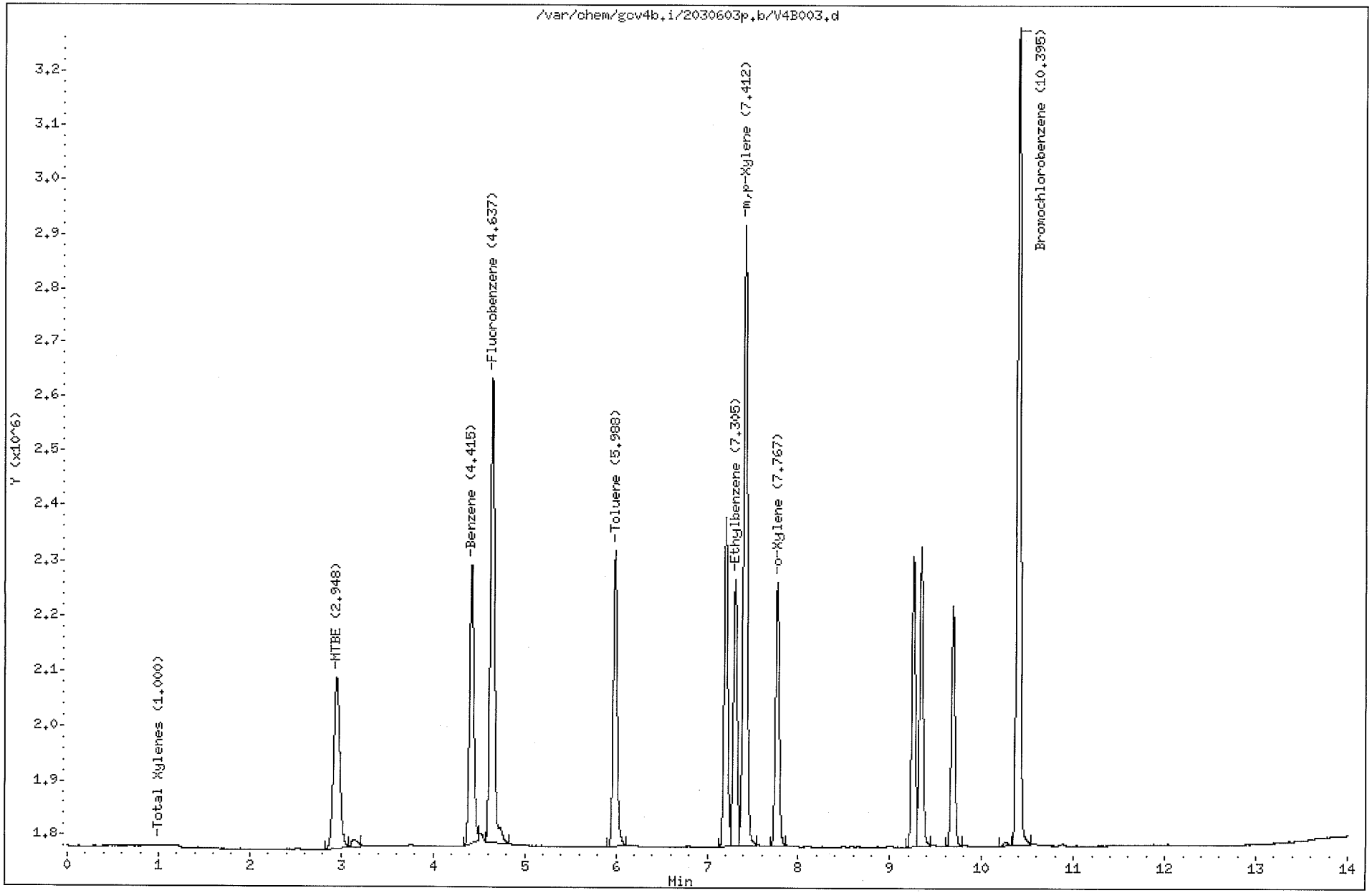
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				4590094	64.4095	64.4
2 MTBE	2.948	2.947	(0.636)	1462280	84.7007	84.7
3 Benzene	4.415	4.413	(0.952)	1638402	20.4476	20.4
* 4 Fluorobenzene	4.637	4.635	(1.000)	2753654	50.0000	
5 Toluene	5.988	5.987	(1.292)	1591915	21.5366	21.5
7 Ethylbenzene	7.305	7.303	(1.575)	1408553	21.9695	22.0
8 m,p-Xylene	7.412	7.410	(1.598)	3233457	43.0806	43.1
9 o-Xylene	7.767	7.765	(1.675)	1356637	21.3289	21.3
$ 13 Bromochlorobenzene	10.395	10.392	(2.242)	3980432	52.7991	52.8

Data File: /var/chem/gcv4b.i/2030603p.b/V4B003.d
Date : 03-JUN-2003 14:32
Client ID: 102241
Sample Info: 102241-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000227



Gulf Coast Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 102241
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: mbtexlcs.spk
Sublist File: MBTEX.sub
Method File: /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Misc Info: 0603V4LCS01, 5-12-5

Client SDG:
Fraction: VOA
Client Smp ID: 102241
Operator: JAR
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
M 1 Total Xylenes	60.0	65.0	108.32	57-143
2 MTBE	80.0	91.6	114.54	57-143
3 Benzene	20.0	21.9	109.60	56-138
5 Toluene	20.0	21.8	109.26	58-138
7 Ethylbenzene	20.0	22.1	110.45	62-137
8 m,p-Xylene	40.0	43.6	109.13	57-143
9 o-Xylene	20.0	21.3	106.70	57-143

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 13 Bromochlorobenzene	50.0	52.7	105.33	60-142

Gulf Coast Analytical Services

Data file : /var/chem/gcv4a.i/2030603p.b/V4A003.d
Lab Smp Id: 102241 Client Smp ID: 102241
Inj Date : 03-JUN-2003 14:32
Operator : JAR Inst ID: gcv4a.i
Smp Info : 102241-1-GCV~1779~
Misc Info : 0603V4LCS01, 5-12-5
Comment :
Method : /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Meth Date : 05-Jun-2003 16:31 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4A006.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

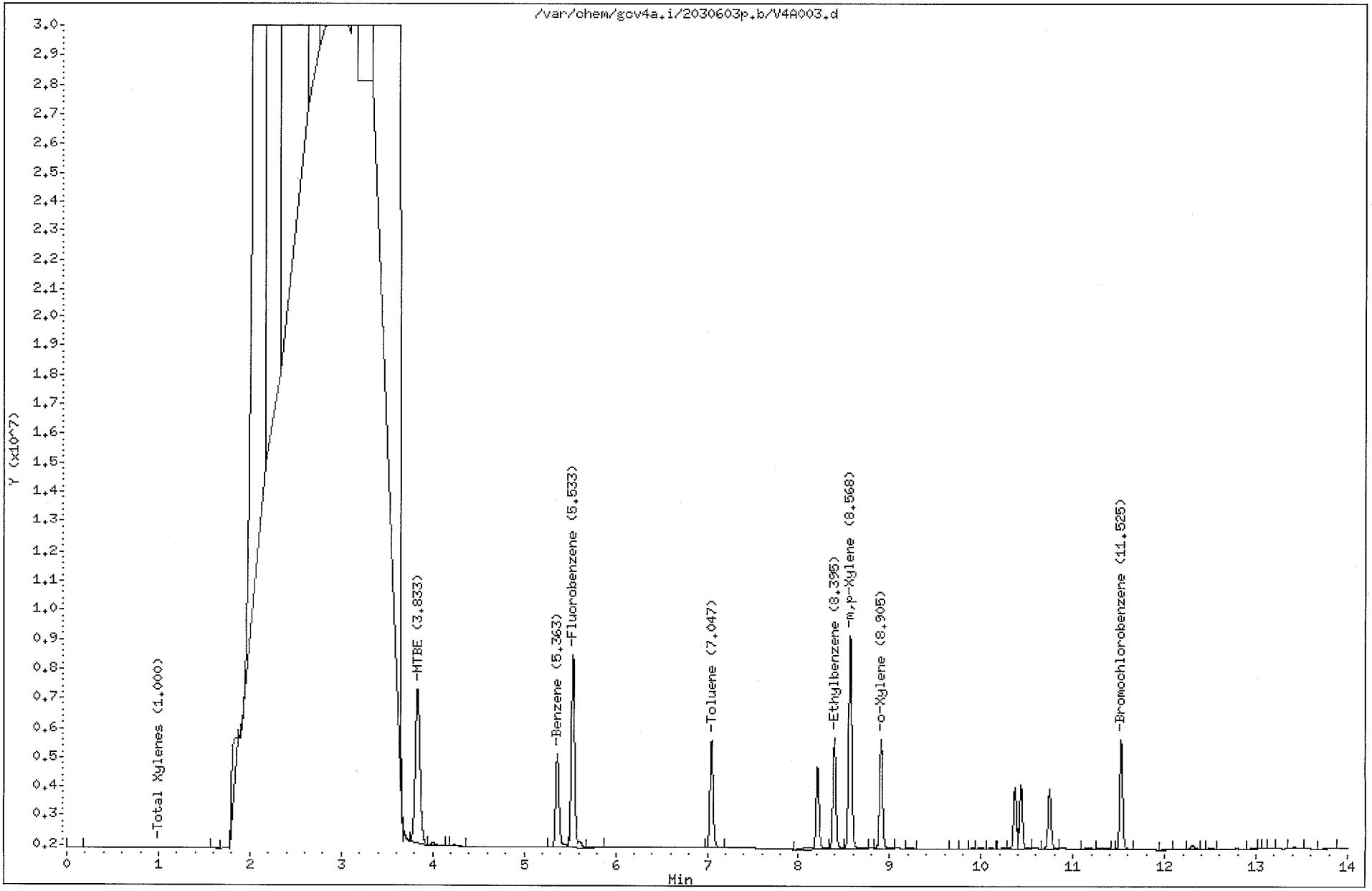
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				26535191	64.9917	65.0
2 MTBE	3.833	3.827	(0.693)	19242597	91.6321	91.6
3 Benzene	5.363	5.355	(0.969)	8607444	21.9199	21.9
* 4 Fluorobenzene	5.533	5.525	(1.000)	17028272	50.0000	
5 Toluene	7.047	7.038	(1.273)	8725372	21.8526	21.8
7 Ethylbenzene	8.395	8.388	(1.517)	9016753	22.0903	22.1
8 m,p-Xylene	8.568	8.562	(1.548)	17679188	43.6515	43.6
9 o-Xylene	8.905	8.898	(1.609)	8856003	21.3402	21.3
$ 13 Bromochlorobenzene	11.525	11.518	(2.083)	8117258	52.6659	52.7

Data File: /var/chem/gcv4a.i/2030603p.b/V4A003.d
Date : 03-JUN-2003 14:32
Client ID: 102241
Sample Info: 102241-1-GCV^1779^
Volume Injected (uL): 1.0
Column phase: DB-624-30

Instrument: gcv4a.i

Operator: JAR
Column diameter: 0.53

000230



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B005.d
Lab Smp Id: 20305291106 Client Smp ID: 33N-Q2-03-61MS
Inj Date : 03-JUN-2003 15:34
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291106-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

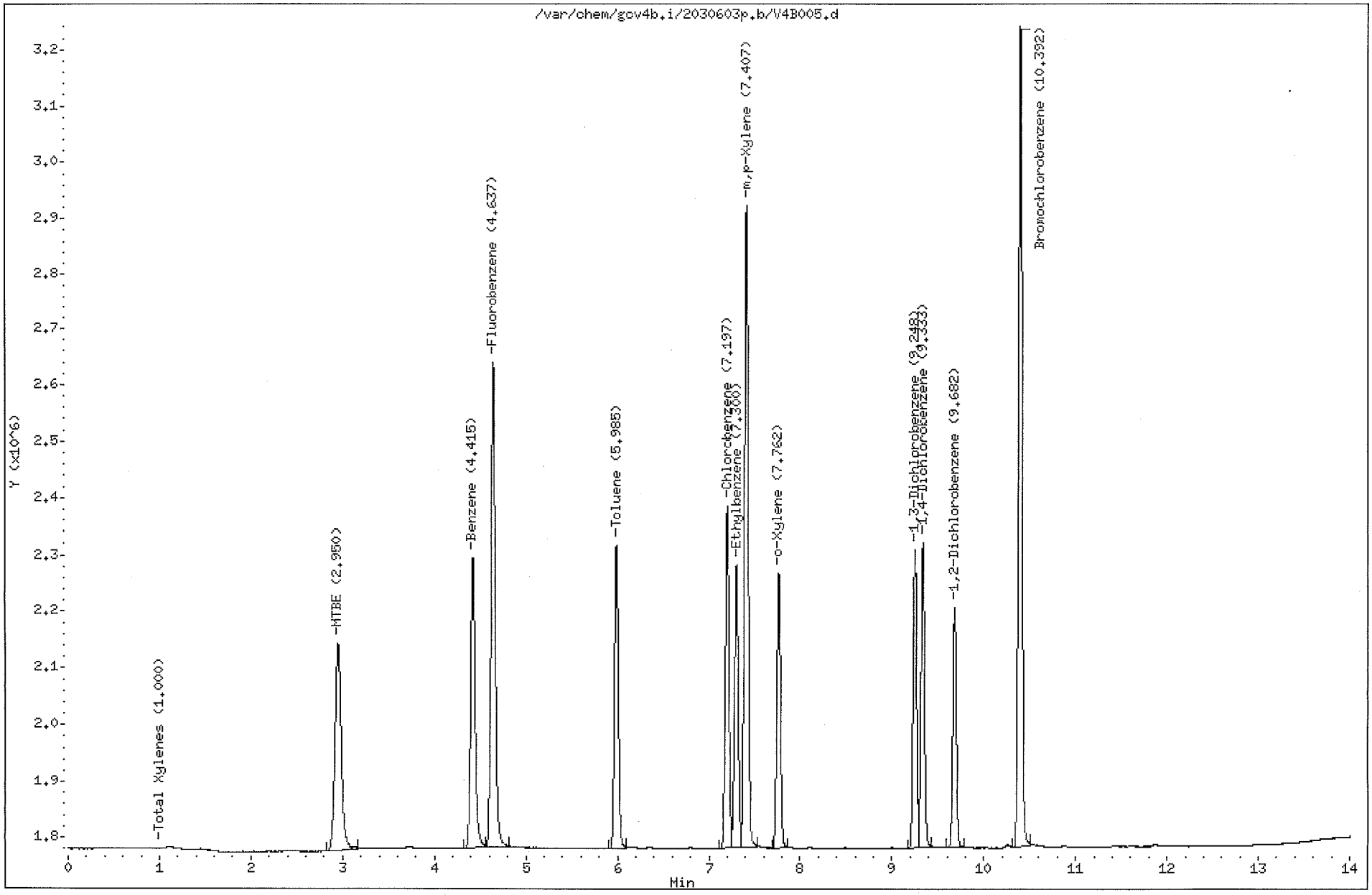
Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M 1 Total Xylenes				4563724	63.1068	63.1
2 MTBE	2.950	2.947	(0.636)	1782790	106.063	106
3 Benzene	4.415	4.413	(0.952)	1734559	21.3261	21.3
* 4 Fluorobenzene	4.637	4.635	(1.000)	2795177	50.0000	
5 Toluene	5.985	5.987	(1.291)	1578036	21.0317	21.0
7 Ethylbenzene	7.300	7.303	(1.574)	1403811	21.5703	21.6
8 m,p-Xylene	7.407	7.410	(1.597)	3206996	42.0933	42.1
9 o-Xylene	7.762	7.765	(1.674)	1356728	21.0135	21.0
$ 13 Bromochlorobenzene	10.392	10.392	(2.241)	3832731	50.0847	50.1

Data File: /var/chem/gov4b.i/2030603p.b/V4B005.d
Date : 03-JUN-2003 15:34
Client ID: 33N-Q2-03-61MS
Sample Info: 20305291106-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gov4b.i

Operator: JAR
Column diameter: 0.53

000232



Gulf Coast Analytical Services

Data file : /var/chem/gcv4b.i/2030603p.b/V4B006.d
Lab Smp Id: 20305291107 Client Smp ID: 33N-Q2-03-61MSD
Inj Date : 03-JUN-2003 15:53
Operator : JAR Inst ID: gcv4b.i
Smp Info : 20305291107-1-GCV~1779~
Misc Info :
Comment :
Method : /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Meth Date : 05-Jun-2003 16:23 jdt Quant Type: ISTD
Cal Date : 10-MAR-2003 13:18 Cal File: V4B006.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: MBTEX.sub
Target Version: 3.50
Processing Host: hpchem

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

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vo	1.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

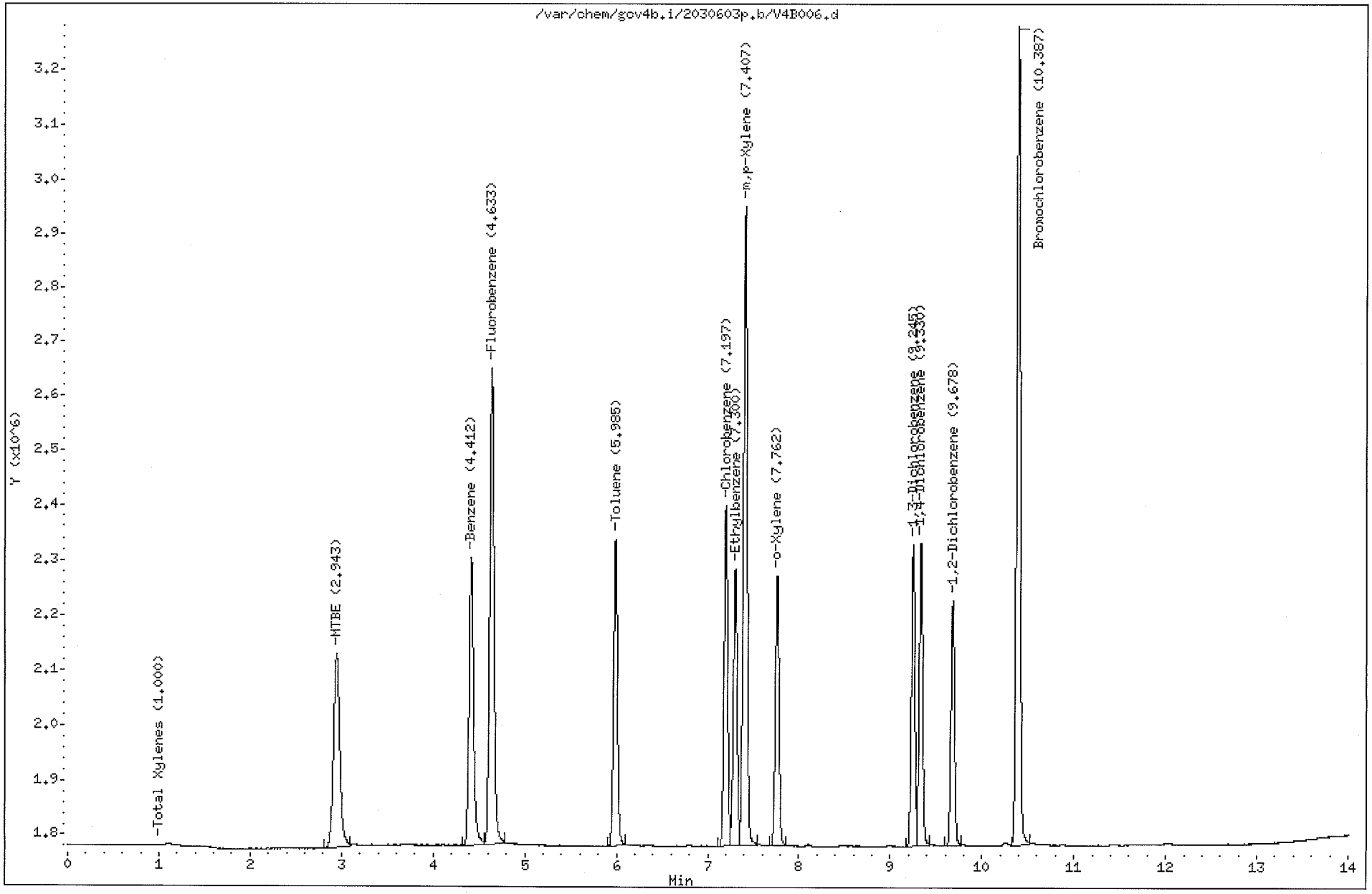
	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
M	1 Total Xylenes				4638633	63.5924	63.6
	2 MTBE	2.943	2.947	(0.635)	1713478	99.9162	99.9
	3 Benzene	4.412	4.413	(0.952)	1757598	21.4270	21.4
*	4 Fluorobenzene	4.633	4.635	(1.000)	2818963	50.0000	
	5 Toluene	5.985	5.987	(1.292)	1613675	21.3252	21.3
	7 Ethylbenzene	7.300	7.303	(1.576)	1428323	21.7617	21.8
	8 m,p-Xylene	7.407	7.410	(1.599)	3263479	42.4732	42.5
	9 o-Xylene	7.762	7.765	(1.675)	1375154	21.1191	21.1
$	13 Bromochlorobenzene	10.387	10.392	(2.242)	3946758	51.1395	51.1

Data File: /var/chem/gcv4b.i/2030603p.b/V4B006.d
Date : 03-JUN-2003 15:53
Client ID: 33N-Q2-03-61MSD
Sample Info: 20305291107-1-GCV"1779"
Volume Injected (uL): 1.0
Column phase: DB-VRX-30

Instrument: gcv4b.i

Operator: JAR
Column diameter: 0.53

000234



LABORATORY CHRONICLE: GCV DEPARTMENT

Date: 06/03/2003
Instrument: gcv4b.i
Method File: /var/chem/gcv4b.i/2030603p.b/BTEXPh.m
Batch: /var/chem/gcv4b.i/2030603p.b
Column-Detector: DB-VRX-30

Sample ID	ClientName	DataFile	Injection Time	DilFactor	Anal	Comments
0603V4STD020	0603V4STD020	V4B001.d	03-JUN-2003 13:39	1.000	JAR	
102440	102440	V4B002.d	03-JUN-2003 14:14	1.000	JAR	
102241	102241	V4B003.d	03-JUN-2003 14:32	1.000	JAR	
20305291105	33N-Q2-03-61	V4B004.d	03-JUN-2003 15:16	1.000	JAR	
20305291106	33N-Q2-03-61MS	V4B005.d	03-JUN-2003 15:34	1.000	JAR	
20305291107	33N-Q2-03-61MS	V4B006.d	03-JUN-2003 15:53	1.000	JAR	
20305291101	2N-Q2-03-61	V4B007.d	03-JUN-2003 16:24	1.000	JAR	
20305291102	6N-Q2-03-61	V4B008.d	03-JUN-2003 16:42	1.000	JAR	
20305291103	7N-Q2-03-61	V4B009.d	03-JUN-2003 17:01	1.000	JAR	
20305291104	9N-Q2-03-61	V4B010.d	03-JUN-2003 17:20	1.000	JAR	
20305291109	38N-Q2-03-61	V4B011.d	03-JUN-2003 17:40	1.000	JAR	
20305291110	DUP-Q2-03-61	V4B012.d	03-JUN-2003 17:59	1.000	JAR	
20305291111	EQB-Q2-03-61	V4B013.d	03-JUN-2003 18:18	1.000	JAR	
0603V4STD020	0603V4STD020	V4B014.d	03-JUN-2003 18:37	1.000	JAR	

REVISED 06/05/2003 Supervisor Review: QA Review:

LABORATORY CHRONICLE: GCV DEPARTMENT

Date: 06/03/2003
Instrument: gcv4a.i
Method File: /var/chem/gcv4a.i/2030603p.b/BTEXFh.m
Batch: /var/chem/gcv4a.i/2030603p.b
Column-Detector: DB-624-30

Sample ID	ClientName	DataFile	Injection Time	DilFactor	Anal	Comments
0603V4STD020	0603V4STD020	V4A001.d	03-JUN-2003 13:39	1.000	JAR	
102240	102240	V4A002.d	03-JUN-2003 14:14	1.000	JAR	
102241	102241	V4A003.d	03-JUN-2003 14:32	1.000	JAR	
20305291105	33N-Q2-03-61	V4A004.d	03-JUN-2003 15:16	1.000	JAR	
20305291101	2N-Q2-03-61	V4A007.d	03-JUN-2003 16:24	1.000	JAR	
20305291102	6N-Q2-03-61	V4A008.d	03-JUN-2003 16:42	1.000	JAR	
20305291104	9N-Q2-03-61	V4A010.d	03-JUN-2003 17:20	1.000	JAR	
20305291110	DUP-Q2-03-61	V4A012.d	03-JUN-2003 17:59	1.000	JAR	
0603V4STD020	0603V4STD020	V4A014.d	03-JUN-2003 18:37	1.000	JAR	

REVISED 06/05/2003 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#	INIT	DATE PREPARED	EXP DATE
RSK_SPK	5-11-1	M,E,E 1000/100 ppmV	TNT	103102-1A / 10/28/03	0.5ml	44ml	M 17.5ug/L E 3.28ug/L E 3.06ug/L	Helium	JDT	1/13/03	~~1/13/03~~ 4/22/03 JDT 1/13/03
↓	↓	ISOB 100ppmV	TNT	110802-1 / 11/8/03	2.0ml	↓	ISOB 6.30ug/L	↓	↓	↓	↓
↓	↓	1-Hexene 5ppm	In House	5-6-4 / 4/22/03	132ul	44ml	1-Hex 15ug/L ~~DI~~ JDT 1/13/03	DIH2O	↓	↓	↓
GRO Marker	5-11-2	Dodecane 99%+	ALDRICH	09020LU / NA	0.1 gram	100ml	NA	MEOH	JAR	1-21-03	1-21-04
↓	↓	Trimethylbenzene 1,2,4 98%	ALDRICH	06BMJA / NA	0.1 gram	100ml	NA	↓	↓	↓	↓
↓	↓	2-methyl 99% Pentane	ALDRICH	07622HS / NA	0.1 gram	100ml	NA	↓	↓	↓	↓
Dates 12/18/02 - 1/21/03 reviewed by QA/QC 1/27/03											
CO2 100,000ppmV	5-11-3	CO2 Pure	TNT	110202001 / 11/5/03	50ml	500ml	100,000ppmV	Helium	JDT	2/17/03	8/17/03
RSK_SPK	5-11-4	Methane 1000ppmV	TNT	103102-1A / 10/28/03	0.5ml	44ml	17.5ug/L	Helium	JDT	2/17/03	8/17/03
↓	↓	Ethene 100ppmV	↓	↓ ↓	↓	↓	3.06ug/L	↓	↓	↓	↓
↓	↓	Ethane 100ppmV					3.28ug/L				
CO2_SPK	5-11-5	CO2 100,000ppmV	In House	5-11-3 / 8-17-03	1.0ml	44ml	4100ug/L	Helium	JDT	2/17/03	8/17/03
TPHGCCV	5-11 ~~5-11~~ 6-18-04	5000ug/ml	Ultra ~~NSI~~	~~UST 130-5~~ R-1675 / ~~3-03~~ 1-2005	1000ul	20ml	250ppm	MEOH	JAR	2-18-03	~~3-3-03~~ 2-18-04
~~TPHG-LCS~~	~~5-11-7~~	~~5000ug/ml~~	~~Ultra~~	R-1675 / ~~1-05~~	~~1.25ml~~	~~25ml~~	~~250ppm~~	~~MEOH~~	~~JAR~~	~~2-18-03~~	~~2-18-04~~ JAR 2-18-03
TPHG	5-11-7	5000ug/ml	NSI ~~Ultra~~ JAR	UST 130-07 / 12-05	1000ul	20ml	250ppm	MEOH	JAR	2-25-03	2-25-04
Dates 2/17/03 - 2/25/03 reviewed by QA/QC 2/26/03											
~~8021 CCV~~	5-11-8	2000ug/ml	NSI	UST 130-02 / 3-4	125ul	50ml	5ppm	MEOH	JAR/CMG	3-6-03	3-6-04 JAR 3-6-03
8021 CCV	5-11-8	2000ppm m-8020-10X	Accu STD	B1030292 / ~~3-4-03~~ 11-26-03	125ul	50ml	5ppm	MEOH	JAR/CMG	3-6-03	11-26-03
↓	↓	MTBE 2000ppm	↓	B2080613 / 11-26-05	625ul	↓	25ppm	↓	↓	↓	↓
8021_ISSS	5-11-9	~~TB~~ 2000ug/ml Fluorobenzene	Ultra	R-1411 / 12/04	625ul	50ml	25ppm	Meoh / 022443	JDT/CMG	3/10/3	9/10/3
↓	↓	~~SS~~ 2000ug/ml Bromochlorobenzene	Ultra	S-0837 / 08/05	625ul	↓	25ppm	↓	↓	↓	↓
Dates 3/6/03 - 3/10/03 reviewed by QA/QC 3/25/03											

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INIT	DATE PREPARED	EXP DATE
TPHG LCS	5-12-1	5000ug/ml	NSI	UST-130-07/12-05	1.25ml	25ml	250ppm	MEOH	JAR	4-1-03	4-1-04
8021 IS/SS	5-12-2	IS 2000/ug/ml Fluorobenzene	ULTRA	T0957 ~~STS-160~~ / 8-06	625ul	50ml	25ppm	MEOH	JAR	4-8-03	10-8-03
↓	↓	SS 2000/ug/ml 4-Bromochlorobenzene	ULTRA	T1021 ~~STS-160~~ / 9-06	625ul	50ml	25ppm	MEOH	JAR	4-8-03	10-8-03
Dates 4/1/03 - 4/8/03 Reviewed by QA/QC 4/24/03 [illegible]											
RSK_Surr	5-12-3	Propene 1000ppmV	TNT	10602-1/10/10/03	0.5ml	44ml	40.5ug/L	Helium	JDT	5/19/03	10/16/03
8021 CCV	5-12-4	2000 ppm m-8020-10x	Accu STD	B1070292/11-26-03	125ul	50ml	5ppm	MEOH	JAR	5-21-03	11-21-03
↓	↓	2000 ppm MTBE	Accu STD	B2080163	625ul	↓	25ppm	↓	↓	↓	↓
Dates 5/19/03 & 5/21/03 Reviewed by QA/QC 5/22/03 [illegible]											
8021 LCS	5-12-5	2000 ppm Amm-812	ULTRA	S-1460/12-04	125ul	50ml	5ppm	MEOH	JAR	5-22-03	11-22-03
↓	↓	2000ppm STS-440	↓	R-1162/10-04	625ul	↓	25ppm	↓	↓	↓	↓
TPHG-CCV	5-12-6	5000ug/ml	ULTRA	R-1675/1-05	1.25ml	25ml	250ppm	MEOH	JAR	6-5-03	6-5-04

000238

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291101	086-CEF43-2N-Q2-03-61	Water	5/27/03 16:40	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:25	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.89 ug/L	95	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291102	086-CEF43-6N-Q2-03-61	Water	5/27/03 16:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:32	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.84 ug/L	92	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291103	086-CEF43-7N-Q2-03-61	Water	5/27/03 15:05	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:39	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.65 ug/L	83	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291104	086-CEF43-9N-Q2-03-61	Water	5/27/03 14:30	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	5	6/3/03 12:04	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	**1-Methylnaphthalene**	**39.0**	**5.00**	**1.46**	**ug/L**
91-57-6	**2-Methylnaphthalene**	**29.8**	**5.00**	**0.710**	**ug/L**
83-32-9	Acenaphthene	5.00 U	5.00	1.66	ug/L
208-96-8	Acenaphthylene	5.00 U	5.00	0.765	ug/L
120-12-7	Anthracene	0.500 U	0.500	0.120	ug/L
56-55-3	Benzo(a)anthracene	0.500 U	0.500	0.160	ug/L
50-32-8	Benzo(a)pyrene	0.500 U	0.500	0.165	ug/L
205-99-2	Benzo(b)fluoranthene	0.500 U	0.500	0.080	ug/L
191-24-2	Benzo(g,h,i)perylene	0.500 U	0.500	0.080	ug/L
207-08-9	Benzo(k)fluoranthene	0.500 U	0.500	0.165	ug/L
218-01-9	Chrysene	0.500 U	0.500	0.150	ug/L
53-70-3	Dibenz(a,h)anthracene	0.500 U	0.500	0.145	ug/L
206-44-0	Fluoranthene	0.500 U	0.500	0.220	ug/L
86-73-7	Fluorene	2.50 U	2.50	0.495	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	1.25 U	1.25	0.205	ug/L
91-20-3	**Naphthalene**	**58.9**	**1.25**	**0.620**	**ug/L**
85-01-8	Phenanthrene	0.500 U	0.500	0.125	ug/L
129-00-0	Pyrene	0.500 U	0.500	0.170	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.67 ug/L	84	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291105	086-CEF43-33N-Q2-03-61	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:53	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.67 ug/L	84	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291106	086-CEF43-33N-Q2-03-61MS	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:20	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	8.17	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	7.26	1.00	0.142	ug/L
83-32-9	Acenaphthene	6.89	1.00	0.331	ug/L
208-96-8	Acenaphthylene	3.58	1.00	0.153	ug/L
120-12-7	Anthracene	0.153	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.429	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.382	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.154	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.544	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.163	0.100	0.033	ug/L
218-01-9	Chrysene	0.343	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	1.56	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.355	0.100	0.044	ug/L
86-73-7	Fluorene	0.761	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.365	0.250	0.041	ug/L
91-20-3	Naphthalene	3.95	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.373	0.100	0.025	ug/L
129-00-0	Pyrene	0.832	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291107	086-CEF43-33N-Q2-03-61MSD	Water	5/28/03 14:50	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:27	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	8.22	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	7.96	1.00	0.142	ug/L
83-32-9	Acenaphthene	7.67	1.00	0.331	ug/L
208-96-8	Acenaphthylene	3.58	1.00	0.153	ug/L
120-12-7	Anthracene	0.164	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.426	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.420	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.171	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.602	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.197	0.100	0.033	ug/L
218-01-9	Chrysene	0.335	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	1.66	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.365	0.100	0.044	ug/L
86-73-7	Fluorene	0.817	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.379	0.250	0.041	ug/L
91-20-3	Naphthalene	3.98	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.325	0.100	0.025	ug/L
129-00-0	Pyrene	0.829	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291109	086-CEF43-38N-Q2-03-61	Water	5/28/03 15:45	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 10:35	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.82 ug/L	91	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291110	086-DUP-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 11:12	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.72 ug/L	86	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20305291111	086-EQB-Q2-03-61	Water	5/27/03 00:00	5/29/03 09:30	

8310, PNAs by HPLC, Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 11:19	JDT	258017

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	0.291	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	0.142	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	0.331	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	0.153	ug/L
120-12-7	Anthracene	0.100 U	0.100	0.024	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	0.032	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	0.033	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	0.016	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	0.016	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	0.033	ug/L
218-01-9	Chrysene	0.100 U	0.100	0.030	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	0.029	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	0.044	ug/L
86-73-7	Fluorene	0.500 U	0.500	0.099	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	0.041	ug/L
91-20-3	Naphthalene	0.250 U	0.250	0.124	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	0.025	ug/L
129-00-0	Pyrene	0.100 U	0.100	0.034	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
92-94-4	p-Terphenyl	2	1.77 ug/L	89	40 - 140

RESULTS REPORTED ON A WET WEIGHT BASIS

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
101400	Method Blank	Water	

SW-846 8310

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:04	JDT	258017

CAS #	PARAMETER	RESULT	RDL	UNITS
90-12-0	1-Methylnaphthalene	1.00 U	1.00	ug/L
91-57-6	2-Methylnaphthalene	1.00 U	1.00	ug/L
83-32-9	Acenaphthene	1.00 U	1.00	ug/L
208-96-8	Acenaphthylene	1.00 U	1.00	ug/L
120-12-7	Anthracene	0.100 U	0.100	ug/L
56-55-3	Benzo(a)anthracene	0.100 U	0.100	ug/L
50-32-8	Benzo(a)pyrene	0.100 U	0.100	ug/L
205-99-2	Benzo(b)fluoranthene	0.100 U	0.100	ug/L
191-24-2	Benzo(g,h,i)perylene	0.100 U	0.100	ug/L
207-08-9	Benzo(k)fluoranthene	0.100 U	0.100	ug/L
218-01-9	Chrysene	0.100 U	0.100	ug/L
53-70-3	Dibenz(a,h)anthracene	0.100 U	0.100	ug/L
206-44-0	Fluoranthene	0.100 U	0.100	ug/L
86-73-7	Fluorene	0.500 U	0.500	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250 U	0.250	ug/L
91-20-3	Naphthalene	0.250 U	0.250	ug/L
85-01-8	Phenanthrene	0.100 U	0.100	ug/L
129-00-0	Pyrene	0.100 U	0.100	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC LIMITS
92-94-4	p-Terphenyl	2	1.72 ug/L	86	40 - 140

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
101401	Lab Control Sample	Water	

SW-846 8310

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
5/29/03 14:30	257824	SW-846 8310	1	6/3/03 9:11	JDT	258017

CAS #	PARAMETER	RESULT	RDL	UNITS
90-12-0	1-Methylnaphthalene	6.33	1.00	ug/L
91-57-6	2-Methylnaphthalene	5.54	1.00	ug/L
83-32-9	Acenaphthene	6.96	1.00	ug/L
208-96-8	Acenaphthylene	3.33	1.00	ug/L
120-12-7	Anthracene	0.155	0.100	ug/L
56-55-3	Benzo(a)anthracene	0.438	0.100	ug/L
50-32-8	Benzo(a)pyrene	0.393	0.100	ug/L
205-99-2	Benzo(b)fluoranthene	0.186	0.100	ug/L
191-24-2	Benzo(g,h,i)perylene	0.625	0.100	ug/L
207-08-9	Benzo(k)fluoranthene	0.152	0.100	ug/L
218-01-9	Chrysene	0.448	0.100	ug/L
53-70-3	Dibenz(a,h)anthracene	1.16	0.100	ug/L
206-44-0	Fluoranthene	0.472	0.100	ug/L
86-73-7	Fluorene	0.796	0.500	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.416	0.250	ug/L
91-20-3	Naphthalene	2.89	0.250	ug/L
85-01-8	Phenanthrene	0.342	0.100	ug/L
129-00-0	Pyrene	1.11	0.100	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC LIMITS
92-94-4	p-Terphenyl	2	1.86 ug/L	93	40 - 140

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	101400	86								0
02	101401	93								0
03	2N-Q2-03-61	95								0
04	6N-Q2-03-61	92								0
05	7N-Q2-03-61	83								0
06	33N-Q2-03-61	84								0
07	33N-Q2-03-61	89								0
08	33N-Q2-03-61	89								0
09	38N-Q2-03-61	91								0
10	DUP-Q2-03-61	86								0
11	EQB-Q2-03-61	89								0
12	9N-Q2-03-61	84								0
13										
14										
15										
16										
17										
18										
19										
20										
21										
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25										
26										
27										
28										
29										
30										

S1 = p-Terphenyl QC LIMITS (40-140)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Matrix Spike - EPA Sample No.: 33N-Q2-03-61

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Naphthalene	5.00	0.00	3.95	79	40-140
Acenaphthylene	5.00	0.00	3.58	72	40-140
Acenaphthene	10.0	0.00	6.89	69	40-140
Fluorene	1.00	0.00	0.761	76	40-140
Phenanthrene	0.400	0.00	0.373	93	40-140
Anthracene	0.200	0.00	0.153	77	40-140
Fluoranthene	0.500	0.00	0.355	71	40-140
Pyrene	1.00	0.00	0.832	83	40-140
Benzo(a)Anthracene	0.500	0.00	0.429	86	40-140
Chrysene	0.500	0.00	0.343	69	40-140
Benzo(b)Fluoranthene	0.200	0.00	0.154	77	40-140
Benzo(k)Fluoranthene	0.200	0.00	0.163	82	40-140
Benzo(a)Pyrene	0.500	0.00	0.382	76	40-140
Indeno(1,2,3-c,d)Pyrene	0.500	0.00	0.365	73	40-140
Dibenzo(a,h)Anthracene	2.00	0.00	1.56	78	40-140
Benzo(g,h,i)Perylene	0.800	0.00	0.544	68	40-140
1-Methynaphthalene	10.0	0.00	8.17	82	40-140
2-Methylnaphthalene	10.0	0.00	7.26	73	40-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Matrix Spike - EPA Sample No.: 33N-Q2-03-61

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Naphthalene	5.00	3.98	80	1	30	40-140
Acenaphthylene	5.00	3.58	72	0	30	40-140
Acenaphthene	10.0	7.67	77	11	30	40-140
Fluorene	1.00	0.817	82	8	30	40-140
Phenanthrene	0.400	0.325	81	14	30	40-140
Anthracene	0.200	0.164	82	6	30	40-140
Fluoranthene	0.500	0.365	73	3	30	40-140
Pyrene	1.00	0.829	83	0	30	40-140
Benzo(a)Anthracene	0.500	0.426	85	1	30	40-140
Chrysene	0.500	0.335	67	3	30	40-140
Benzo(b)Fluoranthene	0.200	0.171	86	11	30	40-140
Benzo(k)Fluoranthene	0.200	0.197	99	19	30	40-140
Benzo(a)Pyrene	0.500	0.420	84	10	30	40-140
Indeno(1,2,3-c,d)Pyrene	0.500	0.379	76	4	30	40-140
Dibenzo(a,h)Anthracene	2.00	1.66	83	6	30	40-140
Benzo(g,h,i)Perylene	0.800	0.602	75	10	30	40-140
1-Methynaphthalene	10.0	8.22	82	0	30	40-140
2-Methylnaphthalene	10.0	7.96	80	9	30	40-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 18 outside limits
Spike Recovery: 0 out of 36 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

101400

Lab Name: Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Lab File ID: H0004942 Lab Sample ID: 101400

Instrument ID: HPLC1 Date Extracted: 05/29/03

Matrix: (soil/water) WATER Date Analyzed: 06/03/03

Level:(low/med) LOW Time Analyzed: 0904

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	101401	101401	H0004943	06/03/03
02	2N-Q2-03-61	20305291101	H0004944	06/03/03
03	6N-Q2-03-61	20305291102	H0004945	06/03/03
04	7N-Q2-03-61	20305291103	H0004946	06/03/03
05	33N-Q2-03-61	20305291105	H0004948	06/03/03
06	33N-Q2-03-61	20305291106	H0004949	06/03/03
07	33N-Q2-03-61	20305291107	H0004950	06/03/03
08	38N-Q2-03-61	20305291109	H0004951	06/03/03
09	DUP-Q2-03-61	20305291110	H0004953	06/03/03
10	EQB-Q2-03-61	20305291111	H0004954	06/03/03
11	9N-Q2-03-61	20305291104	H0004955	06/03/03
12				
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COMMENTS:

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603.b/flpnauv.m
Cal Date : 03-Jun-2003 10:54 jdt
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/hplc1.i/030312.b/h0004600.d
Level 2: /var/chem/hplc1.i/030312.b/h0004599.d
Level 3: /var/chem/hplc1.i/030312.b/h0004598.d
Level 4: /var/chem/hplc1.i/030312.b/h0004597.d
Level 5: /var/chem/hplc1.i/030312.b/h0004601.d
Level 6: /var/chem/hplc1.i/030312.b/h0004596.d
Level 7: /var/chem/hplc1.i/030312.b/h0004595.d
Level 8: /var/chem/hplc1.i/030312.b/h0004594.d

Compound	0.10000 Level 1 / 10.000 Level 7	0.25000 Level 2 / 20.000 Level 8	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
1 Naphthalene	+++++	2984	3272	3004	2558	2642		
	2666	2632					2823	9.419
2 Acenaphthylene	+++++	+++++	+++++	2104	1753	1797		
	1886	1875					1883	7.187
3 1-Methynaphthalene	+++++	+++++	1742	1762	1448	1556		
	1577	1555					1607	7.551
4 2-Methylnaphthalene	+++++	+++++	2622	2426	2165	2215		
	2232	2218					2313	7.619
5 Acenaphthene	+++++	+++++	1110	1128	1056	981		
	1011	983					1045	6.115
6 Fluorene	+++++	+++++	13578	13289	12117	12433		
	12347	12217					12664	4.840
7 Phenanthrene	30830	29236	28212	28212	26002	26563		
	26264	25834					27644	6.468

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603.b/flpnauv.m
Cal Date : 03-Jun-2003 10:54 jdt
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	61590	58664	57480	56228	51849	51919		
	49441	45629					54100	9.785
9 Fluoranthene	8610	7956	8432	7850	7386	7541		
	7501	7428					7838	5.978
10 Pyrene	6590	7176	7528	6495	6193	6441		
	6384	6319					6641	6.989
12 Benzo(a)Anthracene	19020	19992	19074	18648	17229	18118		
	17918	17756					18469	4.797
13 Chrysene	32490	31864	31478	31117	28924	30308		
	29806	29401					30674	4.110
14 Benzo(b)Fluoranthene	24730	22596	24796	22052	20558	21829		
	20944	20463					22246	7.735
15 Benzo(k)Fluoranthene	15950	13028	15780	13974	13084	13735		
	13099	12736					13923	9.080
16 Benzo(a)Pyrene	21800	19592	21654	21530	19992	20396		
	19774	19454					20524	4.799
17 Dibenzo(a,h)Anthracene	4200	3888	4502	4631	4221	4536		
	4379	4383					4342	5.440
18 Benzo(g,h,i)Perylene	8170	7484	7600	7505	6888	7379		
	7258	7268					7444	4.912

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603.b/flpnauv.m
Cal Date : 03-Jun-2003 10:54 jdt
Curve Type : Average

Compound	0.10000 Level 1 / 10.000 Level 7	0.25000 Level 2 / 20.000 Level 8	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD
19 Indeno(1,2,3-c,d)Pyrene	17640	15676	16032	16526	14819	15423		
	15466	15401					15873	5.489
$ 11 p-Terphenyl	8300	8092	8738	7879	7567	7710		
	7674	7603					7945	5.144

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603.b/flpnauv.m
Cal Date : 03-Jun-2003 10:54 jdt
Curve Type : Average

```
|Average %RSD Results.                                |
|=====================================================|
|Calculated Average %RSD = 6.49783229                 |
|Maximun Average %RSD    =         20                 |
|* Passed Average %RSD Test.                          |
|_____________________________________________________|
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Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0004941.d
Analysis Type: WATER
Lab Sample ID: 0603STD05
Method: /var/chem/hplc1.i/030603.b/flpnauv.m

Injection Date: 03-JUN-2003 08:11
Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Init. Cal. Times: 14:50 15:51
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	2823	2689	0.010	4.74791	15.00000	Averaged
	2 Acenaphthylene	1883	1763	0.010	6.37719	15.00000	Averaged
	3 1-Methynaphthalene	1607	1477	0.010	8.08775	15.00000	Averaged
	4 2-Methylnaphthalene	2313	2088	0.010	9.74968	15.00000	Averaged
	5 Acenaphthene	1045	891	0.010	14.67024	15.00000	Averaged
	6 Fluorene	12664	12470	0.010	1.53075	15.00000	Averaged
	7 Phenanthrene	27644	27217	0.010	1.54465	15.00000	Averaged
	8 Anthracene	54100	55230	0.010	-2.08777	15.00000	Averaged
	9 Fluoranthene	7838	8010	0.010	-2.19921	15.00000	Averaged
	10 Pyrene	6641	6577	0.010	0.96252	15.00000	Averaged
$	11 p-Terphenyl	7945	8023	0.010	-0.97399	15.00000	Averaged
	12 Benzo(a)Anthracene	18469	18012	0.010	2.47620	15.00000	Averaged
	13 Chrysene	30674	30444	0.010	0.74981	15.00000	Averaged
	14 Benzo(b)Fluoranthene	22246	22372	0.010	-0.56666	15.00000	Averaged
	15 Benzo(k)Fluoranthene	13923	14120	0.010	-1.41306	15.00000	Averaged
	16 Benzo(a)Pyrene	20524	21172	0.010	-3.15636	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	4342	4590	0.010	-5.69134	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	7444	7163	0.010	3.77671	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	15873	15823	0.010	0.31649	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 3.74096
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0004952.d
Analysis Type: WATER
Lab Sample ID: 0603STD05
Method: /var/chem/hplc1.i/030603.b/flpnauv.m

Injection Date: 03-JUN-2003 10:58
Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Init. Cal. Times: 14:50 15:51
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	2823	2625	0.010	6.99543	15.00000	Averaged
	2 Acenaphthylene	1883	1736	0.010	7.80048	15.00000	Averaged
	3 1-Methynaphthalene	1607	1502	0.010	6.51439	15.00000	Averaged
	4 2-Methylnaphthalene	2313	2151	0.010	6.98621	15.00000	Averaged
	5 Acenaphthene	1045	959	0.010	8.17651	15.00000	Averaged
	6 Fluorene	12664	12732	0.010	-0.53880	15.00000	Averaged
	7 Phenanthrene	27644	27345	0.010	1.08104	15.00000	Averaged
	8 Anthracene	54100	54579	0.010	-0.88437	15.00000	Averaged
	9 Fluoranthene	7838	7827	0.010	0.13811	15.00000	Averaged
	10 Pyrene	6641	6658	0.010	-0.25905	15.00000	Averaged
$	11 p-Terphenyl	7945	7955	0.010	-0.11714	15.00000	Averaged
	12 Benzo(a)Anthracene	18469	18087	0.010	2.06904	15.00000	Averaged
	13 Chrysene	30674	30541	0.010	0.43136	15.00000	Averaged
	14 Benzo(b)Fluoranthene	22246	22738	0.010	-2.21189	15.00000	Averaged
	15 Benzo(k)Fluoranthene	13923	13990	0.010	-0.48109	15.00000	Averaged
	16 Benzo(a)Pyrene	20524	20616	0.010	-0.44657	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	4342	4220	0.010	2.82735	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	7444	6962	0.010	6.47202	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	15873	15671	0.010	1.27258	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 3.10515
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i Injection Date: 03-JUN-2003 12:11
Lab File ID: h0004956.d Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Analysis Type: WATER Init. Cal. Times: 14:50 15:51
Lab Sample ID: 0603STD05 Quant Type: ESTD
Method: /var/chem/hplc1.i/030603.b/flpnauv.m

	COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	2823	2628	0.010	6.89907	15.00000	Averaged
	2 Acenaphthylene	1883	1726	0.010	8.31457	15.00000	Averaged
	3 1-Methynaphthalene	1607	1508	0.010	6.16586	15.00000	Averaged
	4 2-Methylnaphthalene	2313	2240	0.010	3.15401	15.00000	Averaged
	5 Acenaphthene	1045	917	0.010	12.18149	15.00000	Averaged
	6 Fluorene	12664	12648	0.010	0.12136	15.00000	Averaged
	7 Phenanthrene	27644	27340	0.010	1.10072	15.00000	Averaged
	8 Anthracene	54100	54735	0.010	-1.17391	15.00000	Averaged
	9 Fluoranthene	7838	7922	0.010	-1.07648	15.00000	Averaged
	10 Pyrene	6641	6813	0.010	-2.59256	15.00000	Averaged
$	11 p-Terphenyl	7945	7927	0.010	0.23728	15.00000	Averaged
	12 Benzo(a)Anthracene	18469	18094	0.010	2.03309	15.00000	Averaged
	13 Chrysene	30674	30556	0.010	0.38311	15.00000	Averaged
	14 Benzo(b)Fluoranthene	22246	22785	0.010	-2.42047	15.00000	Averaged
	15 Benzo(k)Fluoranthene	13923	14156	0.010	-1.66932	15.00000	Averaged
	16 Benzo(a)Pyrene	20524	21058	0.010	-2.60052	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	4342	4330	0.010	0.29237	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	7444	7060	0.010	5.16091	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	15873	15647	0.010	1.42076	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 3.10515
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603f.b/flpnafld.m
Cal Date : 03-Jun-2003 10:54 jdt

Calibration File Names:
Level 1: /var/chem/hplc1.i/030312f.b/h0004600.d
Level 2: /var/chem/hplc1.i/030312f.b/h0004599.d
Level 3: /var/chem/hplc1.i/030312f.b/h0004598.d
Level 4: /var/chem/hplc1.i/030312f.b/h0004597.d
Level 5: /var/chem/hplc1.i/030312f.b/h0004601.d
Level 6: /var/chem/hplc1.i/030312f.b/h0004596.d
Level 7: /var/chem/hplc1.i/030312f.b/h0004595.d
Level 8: /var/chem/hplc1.i/030312f.b/h0004594.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	+++++	12528	15366	13585	12585	13362					
	13011	12906					AVRG		13335		7.30353
3 1-Methynaphthalene	+++++	+++++	2888	2969	3183	2783					
	2765	2839					AVRG		2905		5.34085
4 2-Methylnaphthalene	+++++	+++++	2396	2515	2322	2253					
	2278	2337					AVRG		2350		4.02911
5 Acenaphthene	+++++	+++++	5882	5910	5488	5565					
	5517	5602					AVRG		5661		3.29752
7 Phenanthrene	21220	21080	20550	20561	18645	19826					
	19791	+++++					AVRG		20239		4.41067

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603f.b/flpnafld.m
Cal Date : 03-Jun-2003 10:54 jdt

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	6470	7008	6818	6662	6104	6259					
	6055	5856					AVRG		6404		6.30131
9 Fluoranthene	6920	6376	6756	6602	5983	6189					
	6138	6041					AVRG		6376		5.46637
10 Pyrene	42290	41624	41736	42924	37259	+++++					
	+++++	+++++					AVRG		41167		5.45274
12 Benzo(a)Anthracene	32180	34840	35582	36166	33083	35003					
	32318	+++++					AVRG		34167		4.73296
13 Chrysene	246	694	1810	4092	10156	22586					
	+++++	+++++					QUAD	0.04083	0.00026	-1.561e-09	0.99970
14 Benzo(b)Fluoranthene	30250	30056	30582	30288	28169	29350					
	29131	+++++					AVRG		29689		2.86558
15 Benzo(k)Fluoranthene	71810	70000	69184	68343	63024	64915					
	+++++	+++++					AVRG		67879		4.85144
16 Benzo(a)Pyrene	59800	59508	58900	59110	54100	57387					
	+++++	+++++					AVRG		58134		3.69234
17 Dibenzo(a,h)Anthracene	21490	21956	22534	22377	20363	21518					
	21539	+++++					AVRG		21682		3.31977

000263

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603f.b/flpnafld.m
Cal Date : 03-Jun-2003 10:54 jdt

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	17060	17572	18926	18874	16762	+++++					
	+++++	+++++					AVRG		17839		5.66844
19 Indeno(1,2,3-c,d)Pyrene	5380	5448	5772	5893	5589	5789					
	5842	5764					AVRG		5685		3.33196
$ 11 p-Terphenyl	+++++	10348	11316	11723	11254	11634					
	11517	11249					AVRG		11292		4.03964

000264

Gulf Coast Analytical Laboratories, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAR-2003 14:50
End Cal Date : 12-MAR-2003 15:51
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/hplc1.i/030603f.b/flpnafld.m
Cal Date : 03-Jun-2003 10:54 jdt

Average %RSD Results.

Calculated Average %RSD = 4.63151359
Maximun Average %RSD = 20
* Passed Average %RSD Test.

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

000265

Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i Injection Date: 03-JUN-2003 08:11
Lab File ID: h0004941.d Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Analysis Type: WATER Init. Cal. Times: 14:50 15:51
Lab Sample ID: 0603STD05 Quant Type: ESTD
Method: /var/chem/hplc1.i/030603f.b/flpnafld.m

COMPOUND	RRF / AMOUNT	RF2	CCAL RRF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Naphthalene	13335	13330	13330	0.010	0.03837	15.00000	Averaged
3 1-Methynaphthalene	2905	3117	3117	0.010	-7.31225	15.00000	Averaged
4 2-Methylnaphthalene	2350	2269	2269	0.010	3.45231	15.00000	Averaged
5 Acenaphthene	5661	5376	5376	0.010	5.02745	15.00000	Averaged
7 Phenanthrene	20239	20127	20127	0.010	0.55571	15.00000	Averaged
8 Anthracene	6404	6747	6747	0.010	-5.35823	15.00000	Averaged
9 Fluoranthene	6376	7038	7038	0.010	-10.38537	15.00000	Averaged
10 Pyrene	41167	46081	46081	0.010	-11.93872	15.00000	Averaged
$ 11 p-Terphenyl	11292	11260	11260	0.010	0.28004	15.00000	Averaged
12 Benzo(a)Anthracene	34167	36912	36912	0.010	-8.03330	15.00000	Averaged
13 Chrysene	2.73016	2.50000	4533	0.010	-9.20637	15.00000	Quadratic
14 Benzo(b)Fluoranthene	29689	29146	29146	0.010	1.82889	15.00000	Averaged
15 Benzo(k)Fluoranthene	67879	63788	63788	0.010	6.02764	15.00000	Averaged
16 Benzo(a)Pyrene	58134	56407	56407	0.010	2.97021	15.00000	Averaged
17 Dibenzo(a,h)Anthracene	21682	20844	20844	0.010	3.86856	15.00000	Averaged
18 Benzo(g,h,i)Perylene	17839	18160	18160	0.010	-1.80258	15.00000	Averaged
19 Indeno(1,2,3-c,d)Pyrene	5685	5791	5791	0.010	-1.86681	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 4.70311
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i Injection Date: 03-JUN-2003 10:58
Lab File ID: h0004952.d Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Analysis Type: WATER Init. Cal. Times: 14:50 15:51
Lab Sample ID: 0603STD05 Quant Type: ESTD
Method: /var/chem/hplc1.i/030603f.b/flpnafld.m

COMPOUND	RRF / AMOUNT	RF2	CCAL RRF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Naphthalene	13335	12892	12892	0.010	3.32332	15.00000	Averaged
3 1-Methynaphthalene	2905	2490	2490	0.010	14.27194	15.00000	Averaged
4 2-Methylnaphthalene	2350	2080	2080	0.010	11.49752	15.00000	Averaged
5 Acenaphthene	5661	5294	5294	0.010	6.47676	15.00000	Averaged
7 Phenanthrene	20239	19362	19362	0.010	4.33553	15.00000	Averaged
8 Anthracene	6404	6778	6778	0.010	-5.84480	15.00000	Averaged
9 Fluoranthene	6376	6826	6826	0.010	-7.06580	15.00000	Averaged
10 Pyrene	41167	40742	40742	0.010	1.03132	15.00000	Averaged
$ 11 p-Terphenyl	11292	11244	11244	0.010	0.42174	15.00000	Averaged
12 Benzo(a)Anthracene	34167	35782	35782	0.010	-4.72664	15.00000	Averaged
13 Chrysene	2.59230	2.50000	4283	0.010	-3.69198	15.00000	Quadratic
14 Benzo(b)Fluoranthene	29689	28532	28532	0.010	3.89966	15.00000	Averaged
15 Benzo(k)Fluoranthene	67879	63066	63066	0.010	7.09165	15.00000	Averaged
16 Benzo(a)Pyrene	58134	53951	53951	0.010	7.19590	15.00000	Averaged
17 Dibenzo(a,h)Anthracene	21682	20261	20261	0.010	6.55426	15.00000	Averaged
18 Benzo(g,h,i)Perylene	17839	16937	16937	0.010	5.05458	15.00000	Averaged
19 Indeno(1,2,3-c,d)Pyrene	5685	5748	5748	0.010	-1.11955	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.48351
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplc1.i
Lab File ID: h0004956.d
Analysis Type: WATER
Lab Sample ID: 0603STD05
Method: /var/chem/hplc1.i/030603f.b/flpnafld.m

Injection Date: 03-JUN-2003 12:11
Init. Cal. Date(s): 12-MAR-2003 12-MAR-2003
Init. Cal. Times: 14:50 15:51
Quant Type: ESTD

	COMPOUND	RRF / AMOUNT	RF2	CCAL RRF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Naphthalene	13335	13404	13404	0.010	-0.51747	15.00000	Averaged
	3 1-Methynaphthalene	2905	2575	2575	0.010	11.36201	15.00000	Averaged
	4 2-Methylnaphthalene	2350	2094	2094	0.010	10.90694	15.00000	Averaged
	5 Acenaphthene	5661	5185	5185	0.010	8.40870	15.00000	Averaged
	7 Phenanthrene	20239	19776	19776	0.010	2.28702	15.00000	Averaged
	8 Anthracene	6404	6655	6655	0.010	-3.91978	15.00000	Averaged
	9 Fluoranthene	6376	7004	7004	0.010	-9.86086	15.00000	Averaged
	10 Pyrene	41167	44437	44437	0.010	-7.94363	15.00000	Averaged
$	11 p-Terphenyl	11292	11285	11285	0.010	0.05474	15.00000	Averaged
	12 Benzo(a)Anthracene	34167	36804	36804	0.010	-7.71522	15.00000	Averaged
	13 Chrysene	2.65336	2.50000	4393	0.010	-6.13442	15.00000	Quadratic
	14 Benzo(b)Fluoranthene	29689	28905	28905	0.010	2.64319	15.00000	Averaged
	15 Benzo(k)Fluoranthene	67879	63444	63444	0.010	6.53419	15.00000	Averaged
	16 Benzo(a)Pyrene	58134	55114	55114	0.010	5.19535	15.00000	Averaged
	17 Dibenzo(a,h)Anthracene	21682	20517	20517	0.010	5.37320	15.00000	Averaged
	18 Benzo(g,h,i)Perylene	17839	17617	17617	0.010	1.24245	15.00000	Averaged
	19 Indeno(1,2,3-c,d)Pyrene	5685	5507	5507	0.010	3.12056	15.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.48351
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004944.d
Lab Smp Id: 20305291101 Client Smp ID: 2N-Q2-03-61
Inj Date : 03-JUN-2003 09:25
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291101-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 08:13 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

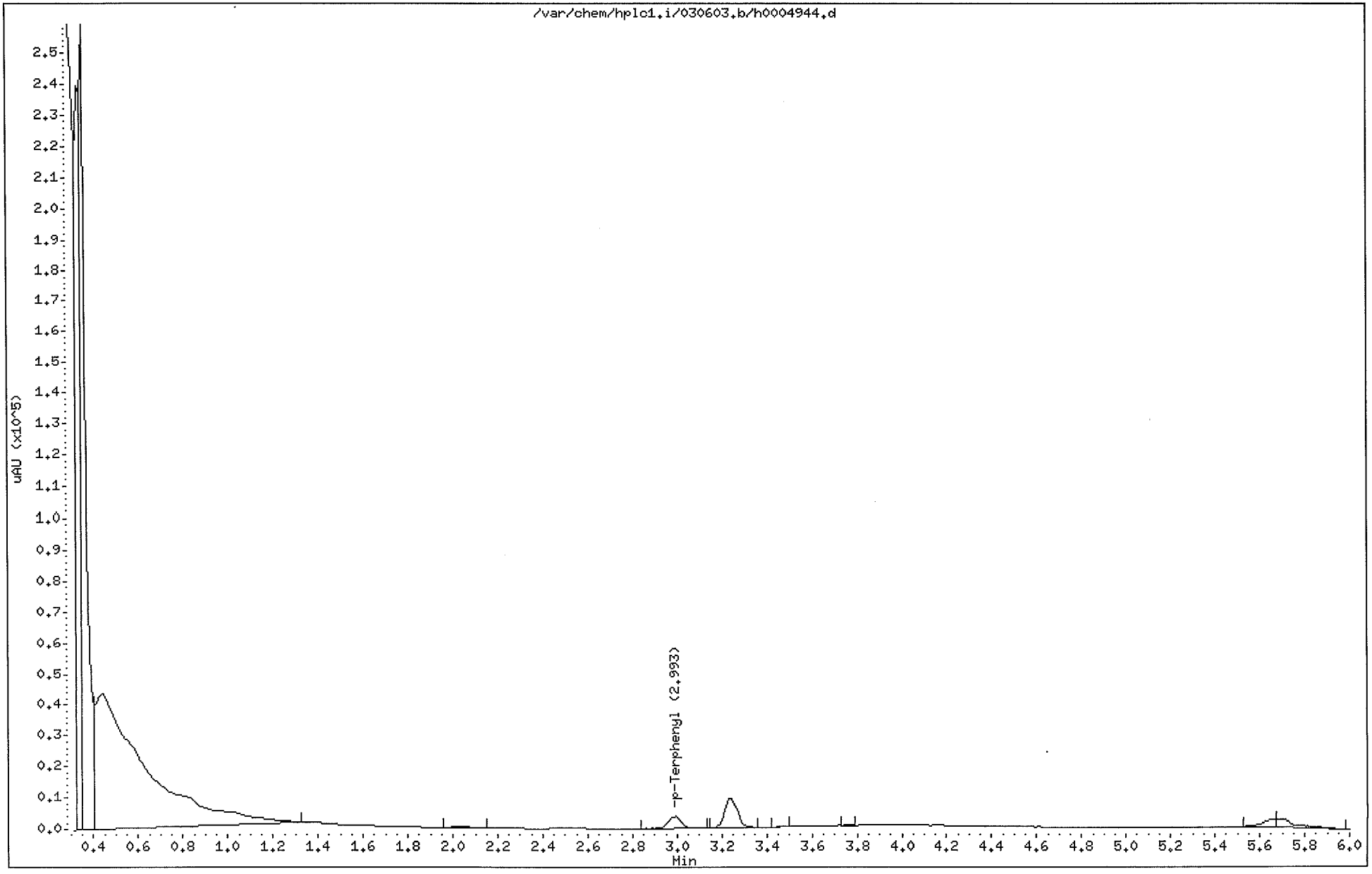
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.993	2.943	0.050	14987	1.88625	1.89

Data File: /var/chem/hplc1.i/030603.b/h0004944.d
Date : 03-JUN-2003 09:25
Client ID: 2N-Q2-03-61
Sample Info: 20305291101-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

002000



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004944.d
Lab Smp Id: 20305291101 Client Smp ID: 2N-Q2-03-61
Inj Date : 03-JUN-2003 09:25
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291101-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 08:15 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	3.007	2.960	0.047	20261	1.79439	1.79

Data File: /var/chem/hplc1.i/030603f.b/h0004944.d

Date : 03-JUN-2003 09:25

Client ID: 2N-Q2-03-61

Sample Info: 20305291101-DL1

Volume Injected (uL): 10.0

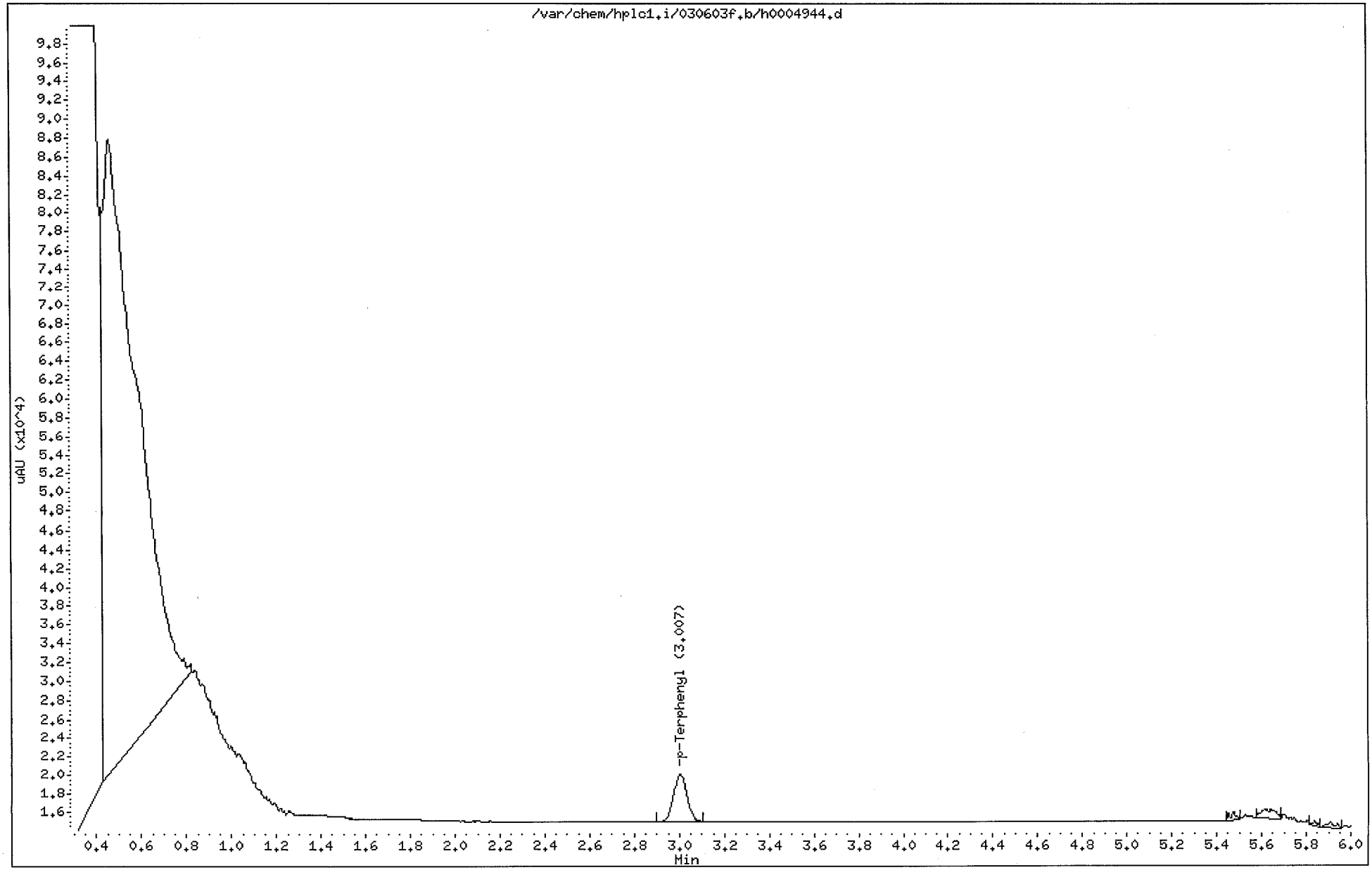
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt

Column diameter: 2.10

000272



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004945.d
Lab Smp Id: 20305291102 Client Smp ID: 6N-Q2-03-61
Inj Date : 03-JUN-2003 09:32
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291102-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 08:13 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

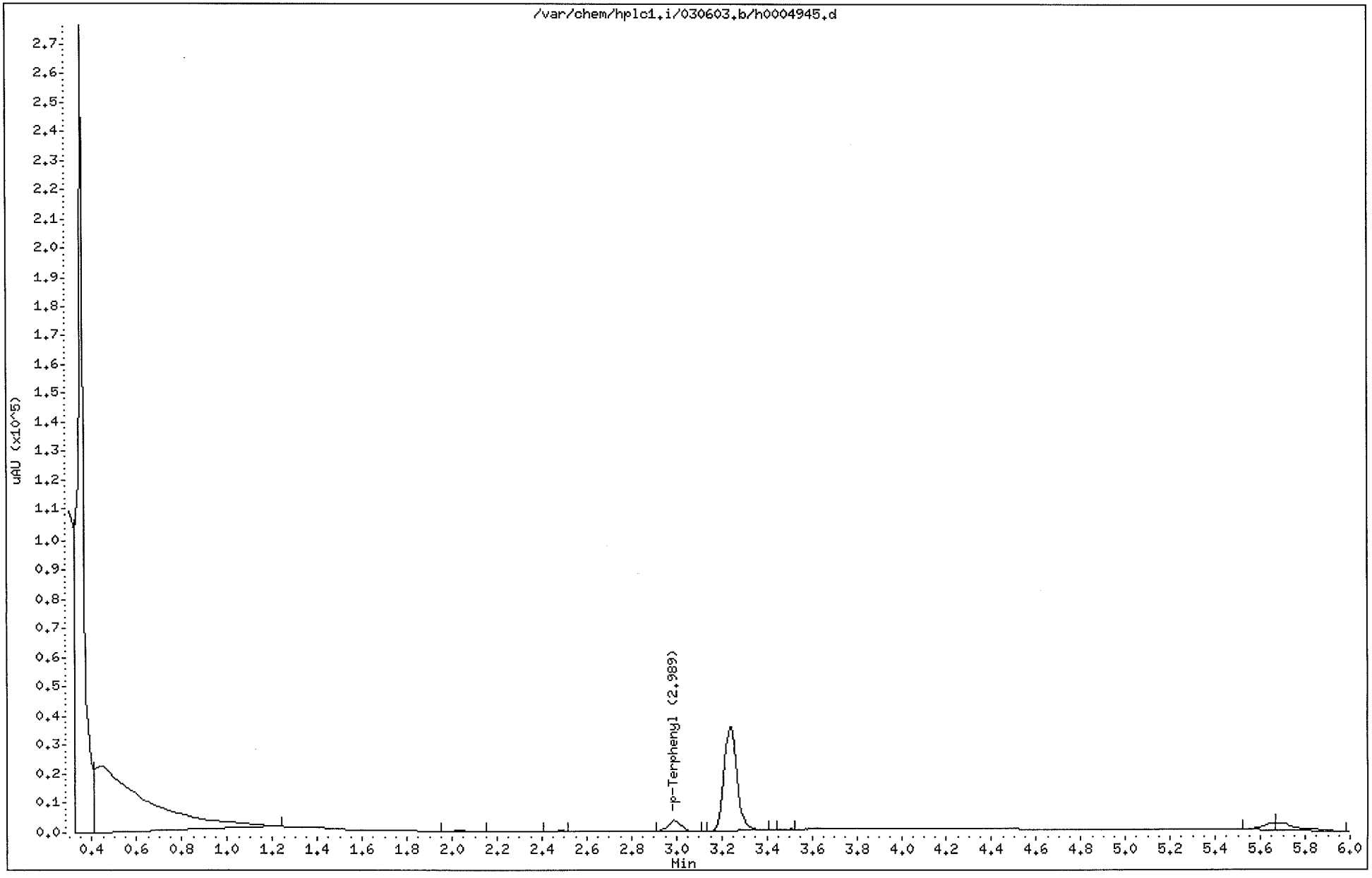
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.989	2.943	0.046	14608	1.83855	1.84

Data File: /var/chem/hplc1.i/030603.b/h0004945.d
Date : 03-JUN-2003 09:32
Client ID: 6N-Q2-03-61
Sample Info: 20305291102-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

000274



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004945.d
Lab Smp Id: 20305291102 Client Smp ID: 6N-Q2-03-61
Inj Date : 03-JUN-2003 09:32
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291102-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 08:15 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

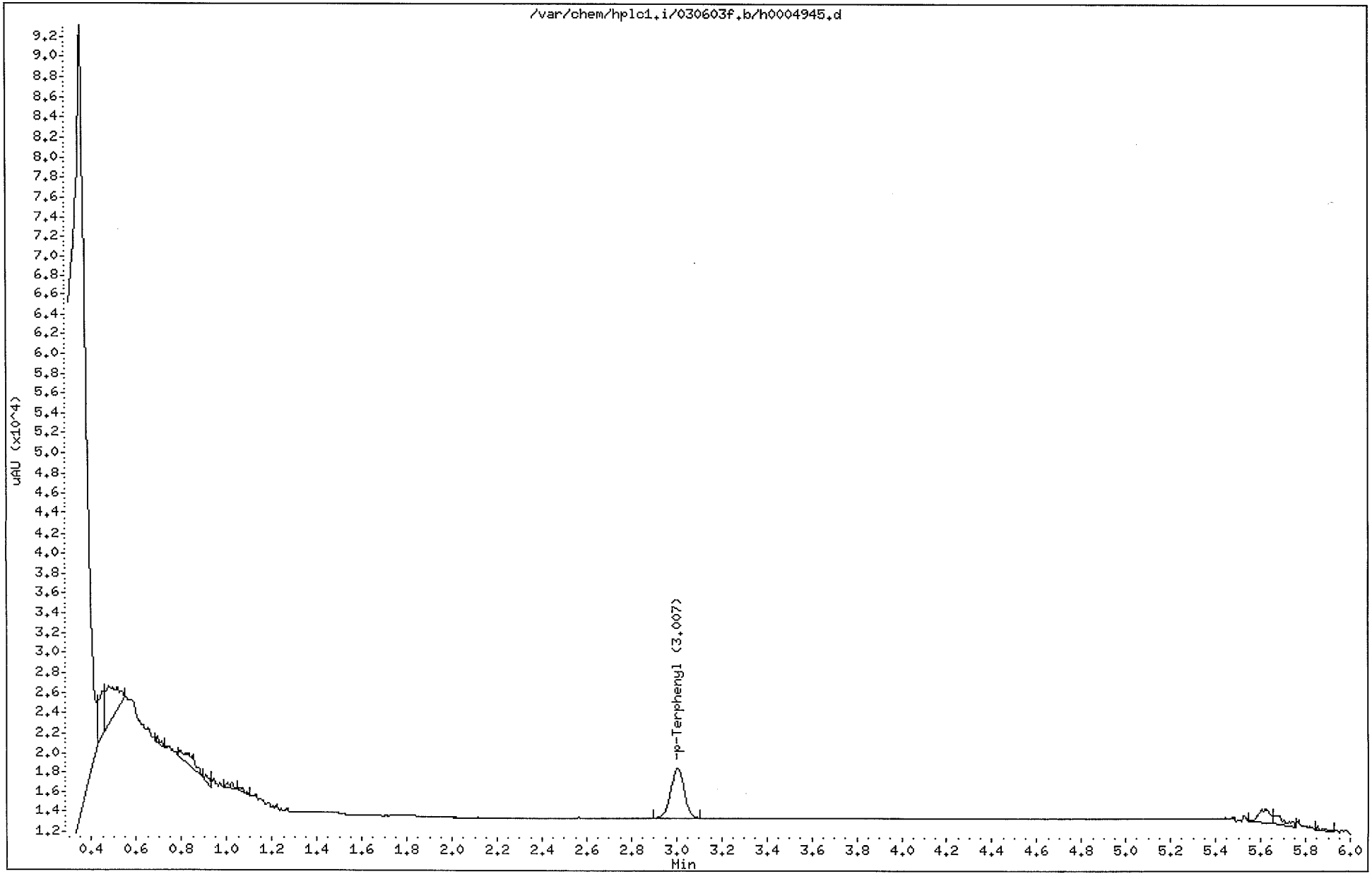
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	3.007	2.960	0.047	20543	1.81931	1.82

Data File: /var/chem/hplc1.i/030603f.b/h0004945.d
Date : 03-JUN-2003 09:32
Client ID: 6N-Q2-03-61
Sample Info: 20305291102-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000276



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004946.d
Lab Smp Id: 20305291103 Client Smp ID: 7N-Q2-03-61
Inj Date : 03-JUN-2003 09:39
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291103-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 08:13 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

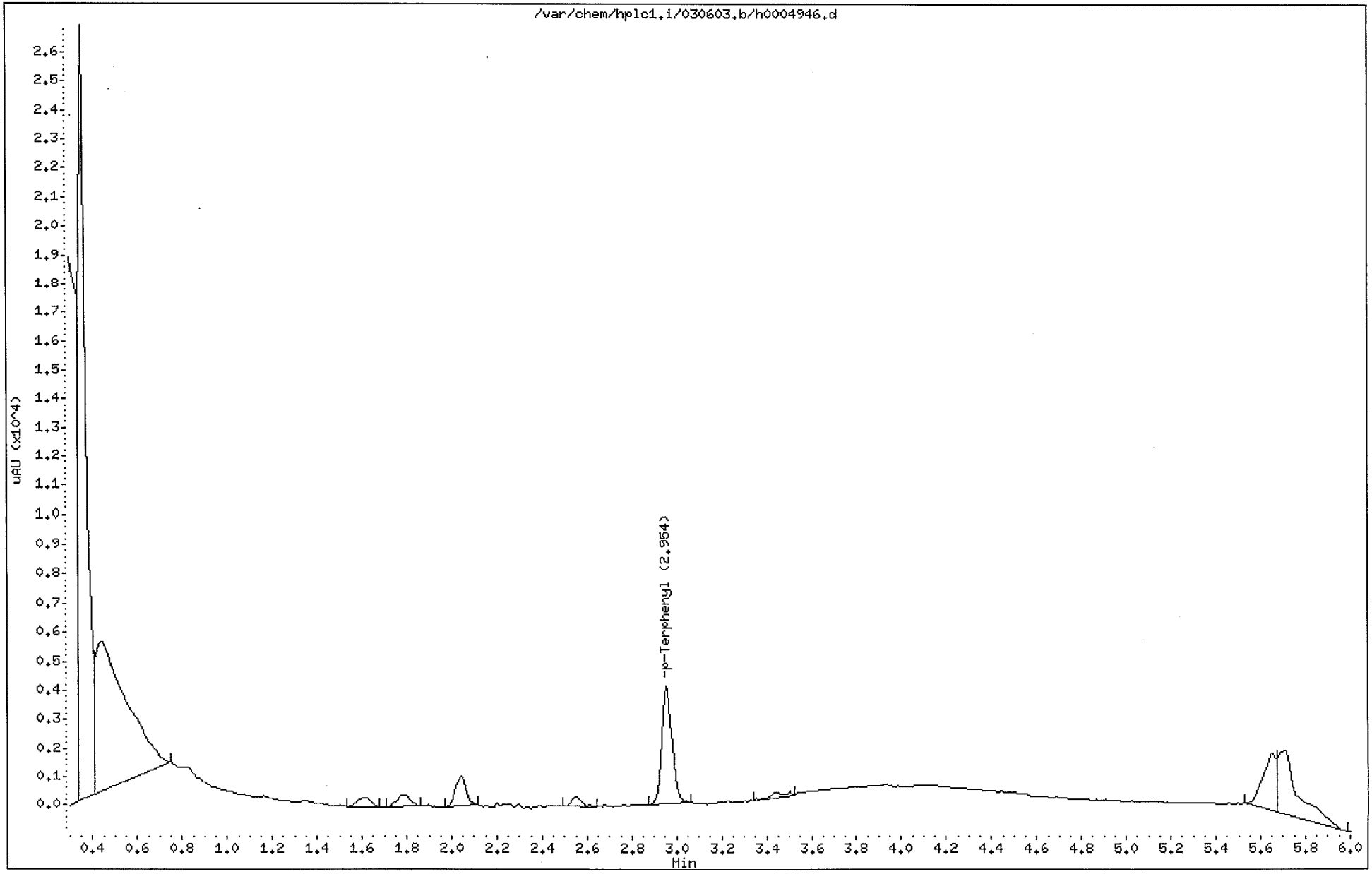
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.954	2.943	0.011	13128	1.65227	1.65

Data File: /var/chem/hplc1.i/030603.b/h0004946.d
Date : 03-JUN-2003 09:39
Client ID: 7N-Q2-03-61
Sample Info: 20305291103-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000278



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004946.d
Lab Smp Id: 20305291103 Client Smp ID: 7N-Q2-03-61
Inj Date : 03-JUN-2003 09:39
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291103-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 08:15 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

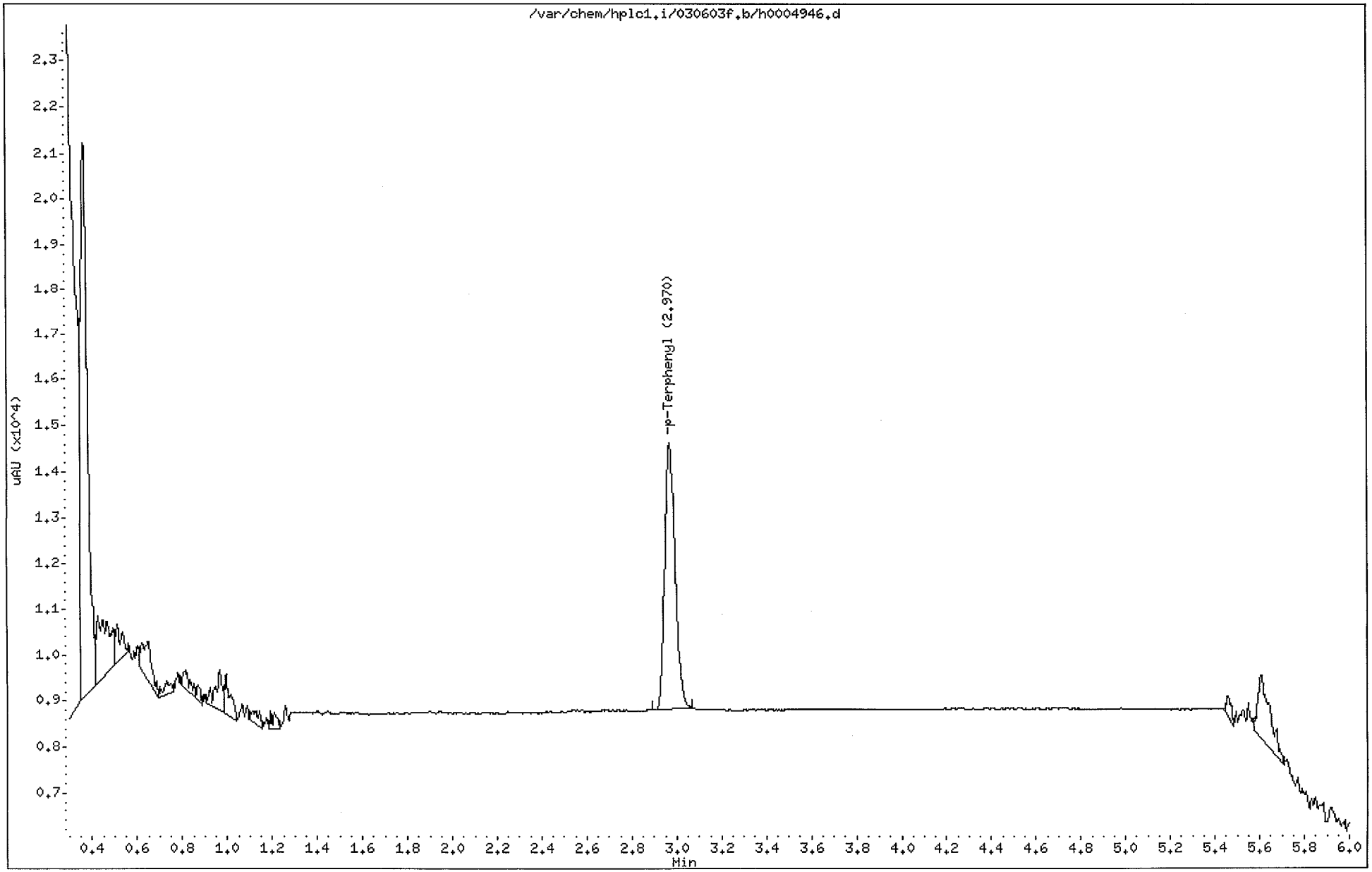
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.970	2.960	0.010	18606	1.64781	1.65

Data File: /var/chem/hplc1.i/030603f.b/h0004946.d
Date : 03-JUN-2003 09:39
Client ID: 7N-Q2-03-61
Sample Info: 20305291103-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000280



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004955.d
Lab Smp Id: 20305291104 Client Smp ID: 9N-Q2-03-61
Inj Date : 03-JUN-2003 12:04
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291104-DL5
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.d
Als bottle: 1
Dil Factor: 5.00000
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	5.00000	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	1.042	1.051	-0.009	33246	11.7783	58.9(M)
3 1-Methynaphthalene	1.396	1.397	-0.001	12532	7.79960	39.0(M)
4 2-Methylnaphthalene	1.476	1.484	-0.008	13768	5.95236	29.8(M)
$ 11 p-Terphenyl	2.996	3.004	-0.008	2647	0.33315	1.67

QC Flag Legend

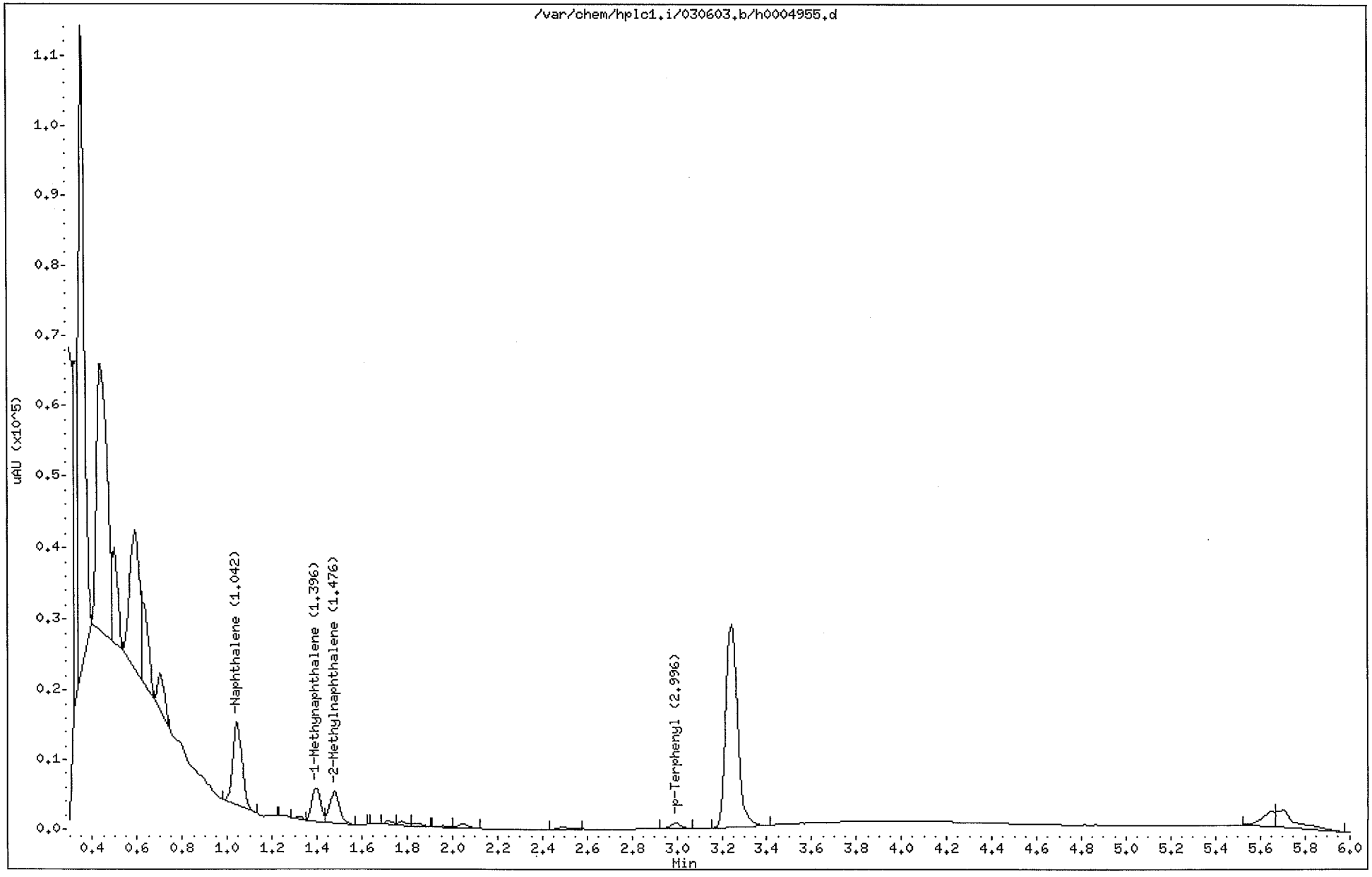
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603.b/h0004955.d
Date : 03-JUN-2003 12:04
Client ID: 9N-Q2-03-61
Sample Info: 20305291104-DL5
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000282



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004955.d
Lab Smp Id: 20305291104 Client Smp ID: 9N-Q2-03-61
Inj Date : 03-JUN-2003 12:04
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291104-DL5
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.d
Als bottle: 1
Dil Factor: 5.00000
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	5.00000	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	1.060	1.063	-0.003	144261	10.8184	54.1
3 1-Methynaphthalene	1.407	1.410	-0.003	14790	5.09235	25.5
4 2-Methylnaphthalene	1.490	1.497	-0.007	13606	5.78947	28.9
$ 11 p-Terphenyl	3.010	3.020	-0.010	3191	0.28268	1.41

Data File: /var/chem/hplc1.i/030603f.b/h0004955.d

Date : 03-JUN-2003 12:04

Client ID: 9N-Q2-03-61

Sample Info: 20305291104-DL5

Volume Injected (uL): 10.0

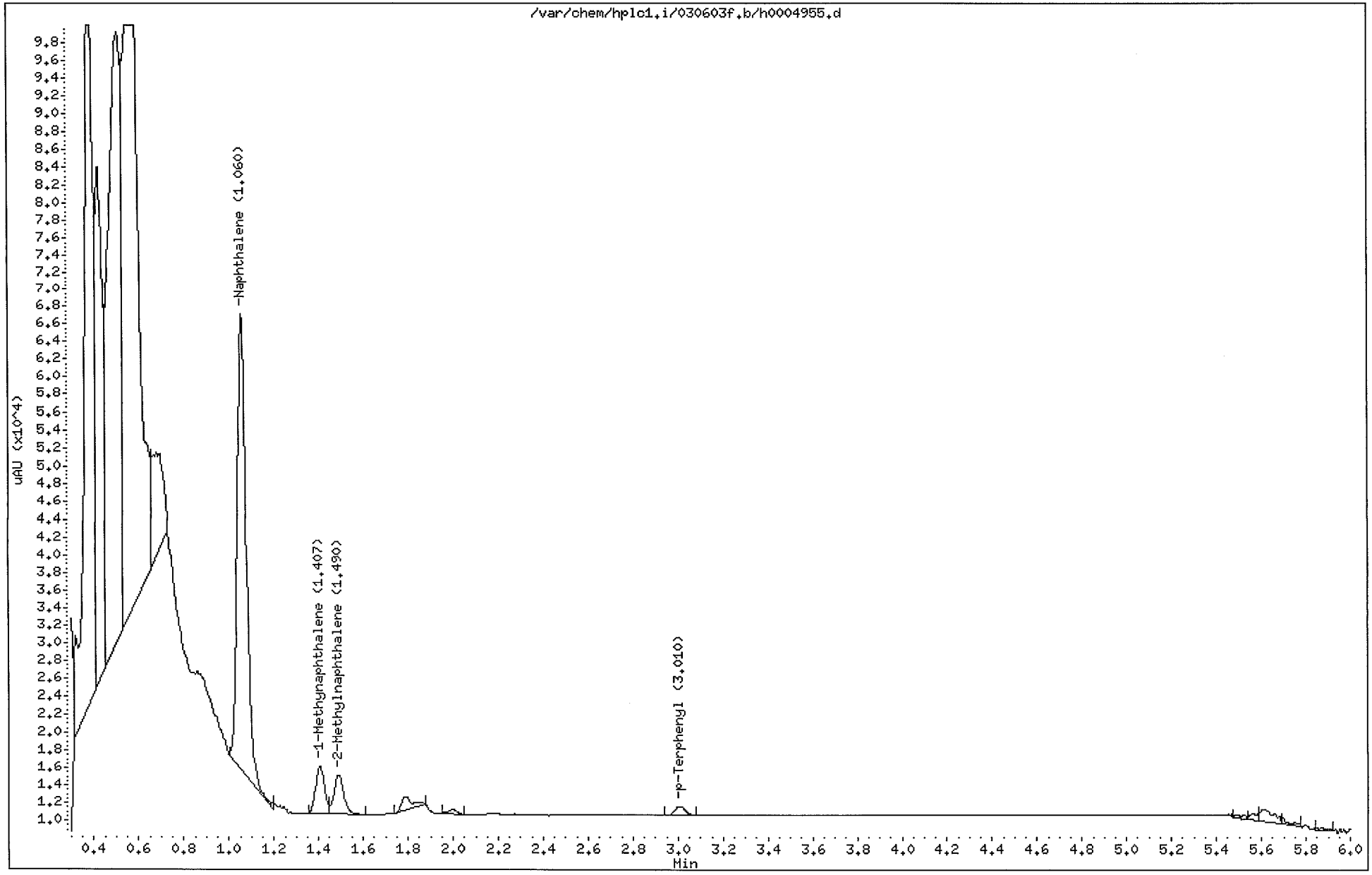
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt

Column diameter: 2.10

000284



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004948.d
Lab Smp Id: 20305291105 Client Smp ID: 33N-Q2-03-61
Inj Date : 03-JUN-2003 09:53
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291105-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

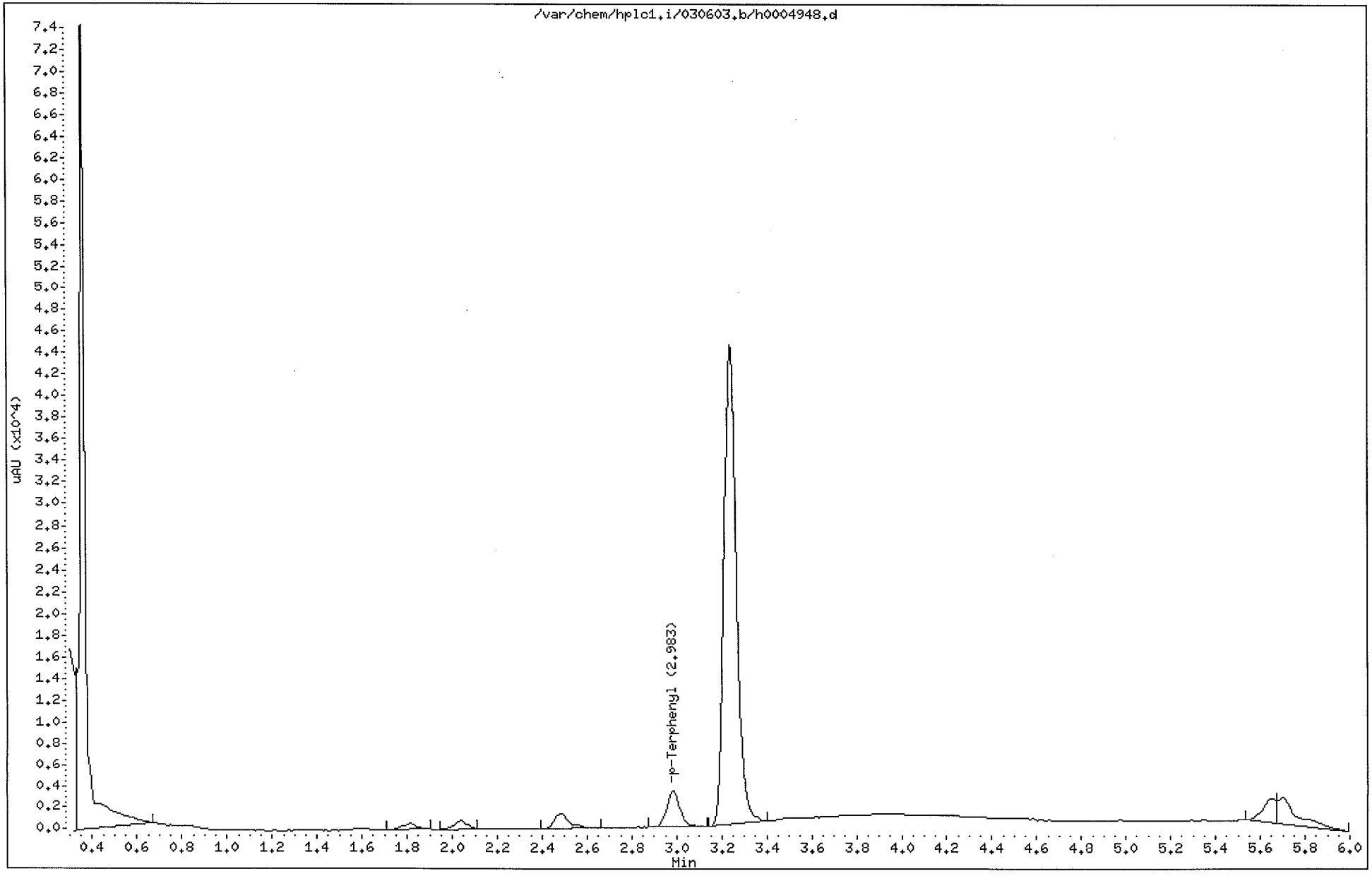
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.983	3.004	-0.021	13250	1.66763	1.67

Data File: /var/chem/hplc1.i/030603.b/h0004948.d
Date : 03-JUN-2003 09:53
Client ID: 33N-Q2-03-61
Sample Info: 20305291105-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000286



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004948.d
Lab Smp Id: 20305291105 Client Smp ID: 33N-Q2-03-61
Inj Date : 03-JUN-2003 09:53
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291105-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	3.000	3.020	-0.020	17541	1.55347	1.55

Data File: /var/chem/hplc1.i/030603f.b/h0004948.d

Date : 03-JUN-2003 09:53

Client ID: 33N-Q2-03-61

Sample Info: 20305291105-DL1

Volume Injected (uL): 10.0

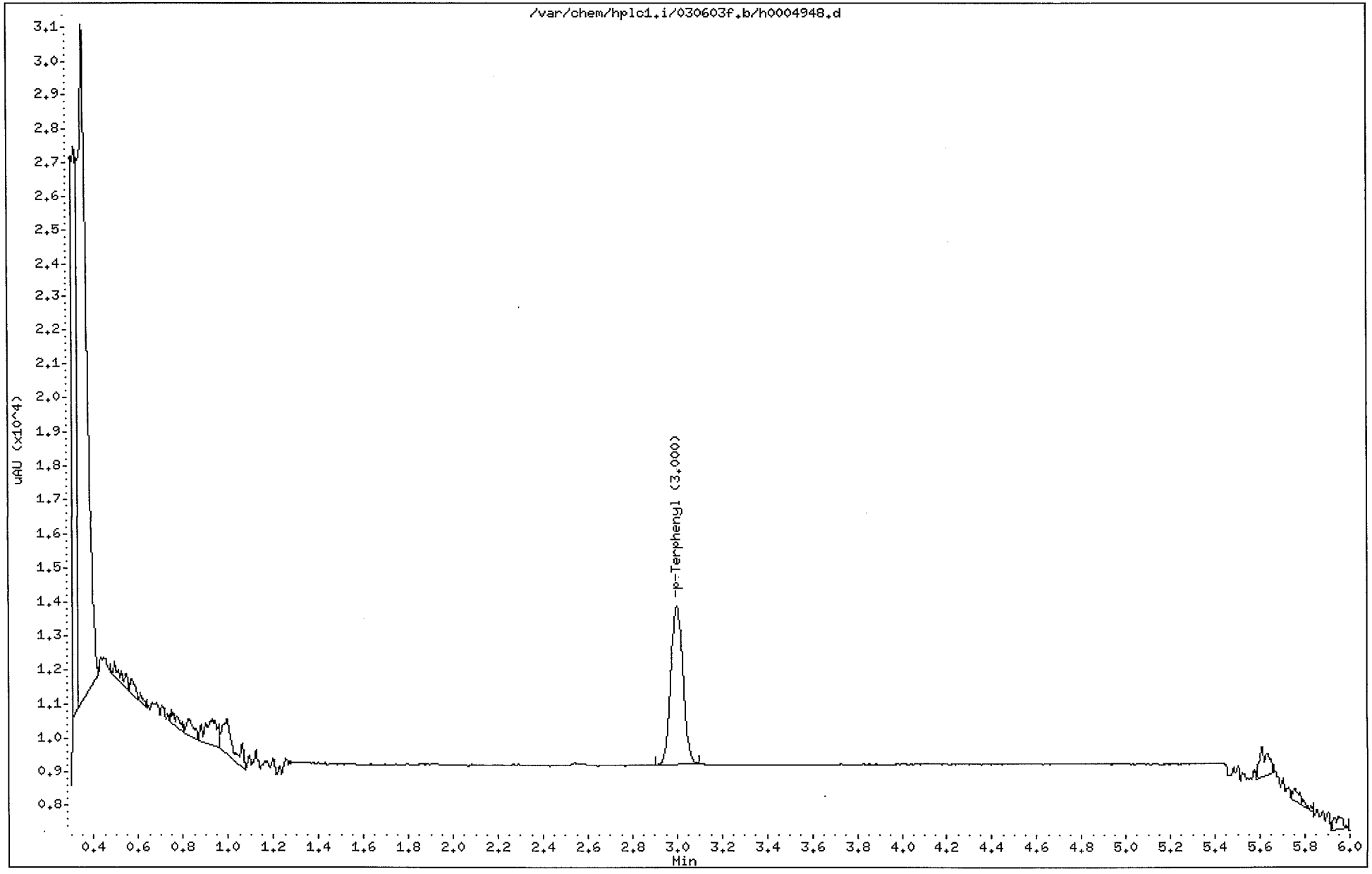
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt

Column diameter: 2.10

000288



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004951.d
Lab Smp Id: 20305291109 Client Smp ID: 38N-Q2-03-61
Inj Date : 03-JUN-2003 10:35
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291109-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

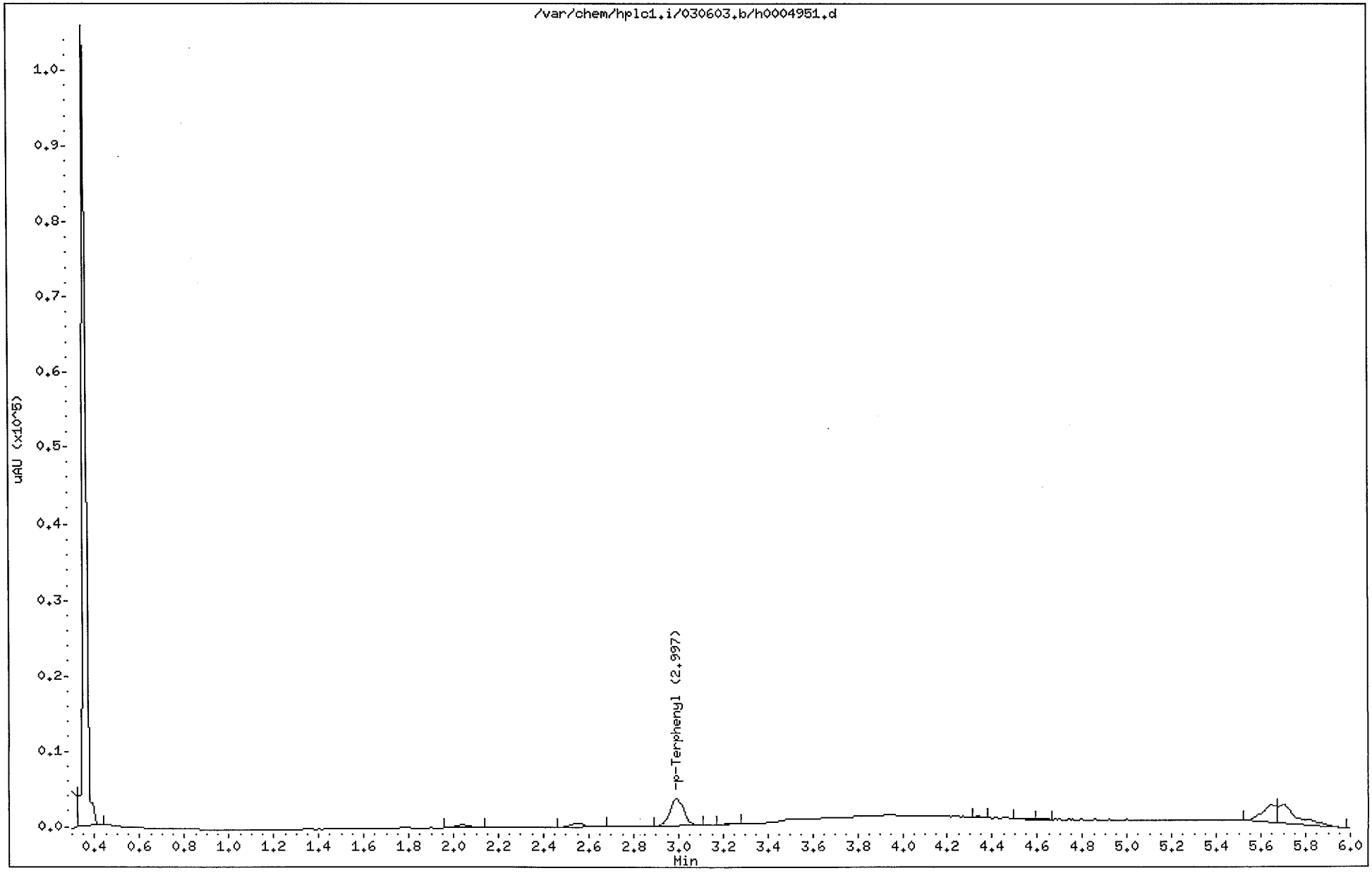
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.997	3.004	-0.007	14457	1.81954	1.82

Data File: /var/chem/hplc1.i/030603.b/h0004951.d
Date : 03-JUN-2003 10:35
Client ID: 38N-Q2-03-61
Sample Info: 20305291109-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

000290



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004951.d
Lab Smp Id: 20305291109 Client Smp ID: 38N-Q2-03-61
Inj Date : 03-JUN-2003 10:35
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291109-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

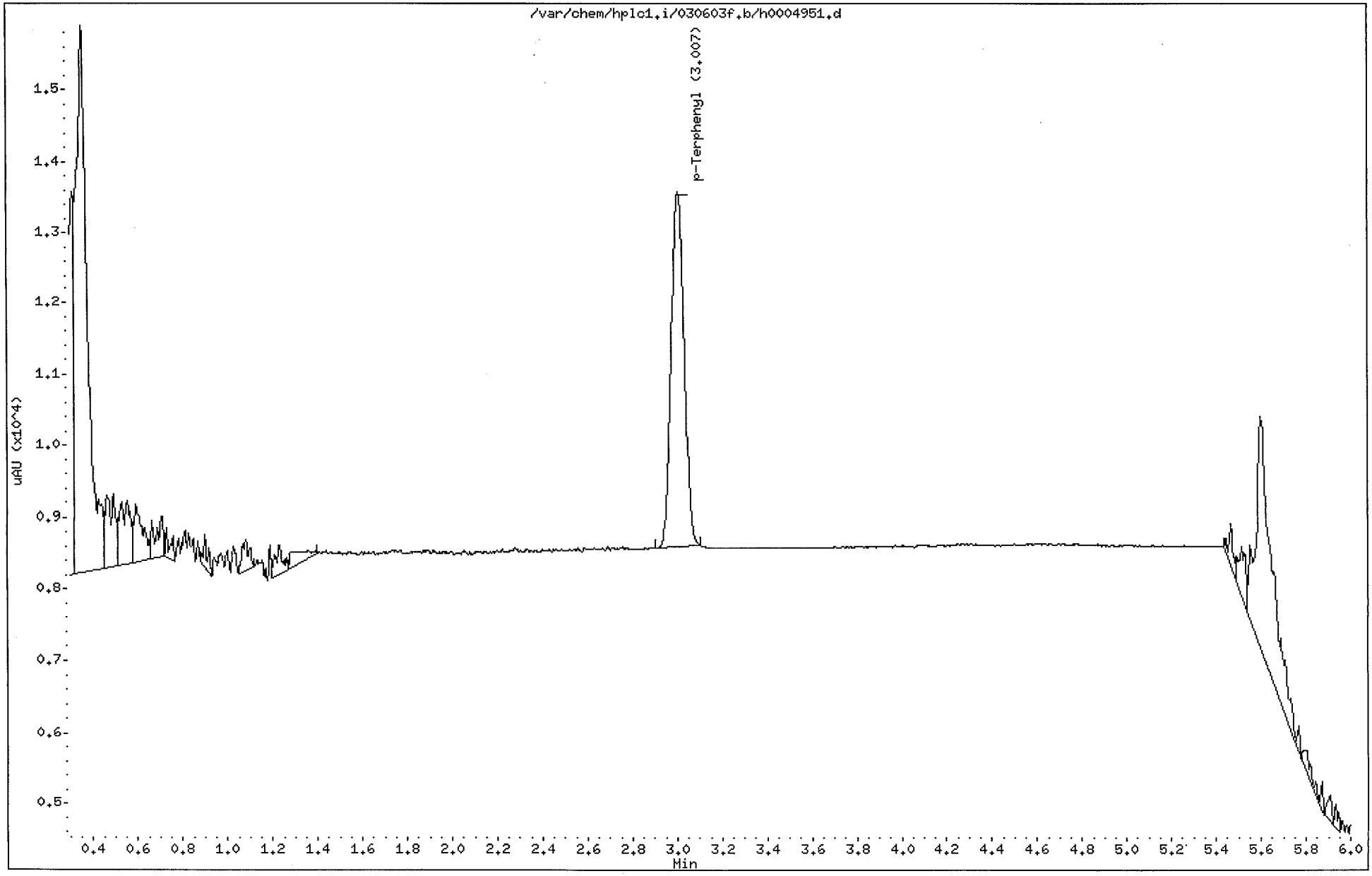
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	3.007	3.020	-0.013	19923	1.76441	1.76

Data File: /var/chem/hplc1.i/030603f.b/h0004951.d
Date : 03-JUN-2003 10:35
Client ID: 38N-Q2-03-61
Sample Info: 20305291109-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000292



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004953.d
Lab Smp Id: 20305291110 Client Smp ID: DUP-Q2-03-61
Inj Date : 03-JUN-2003 11:12
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291110-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

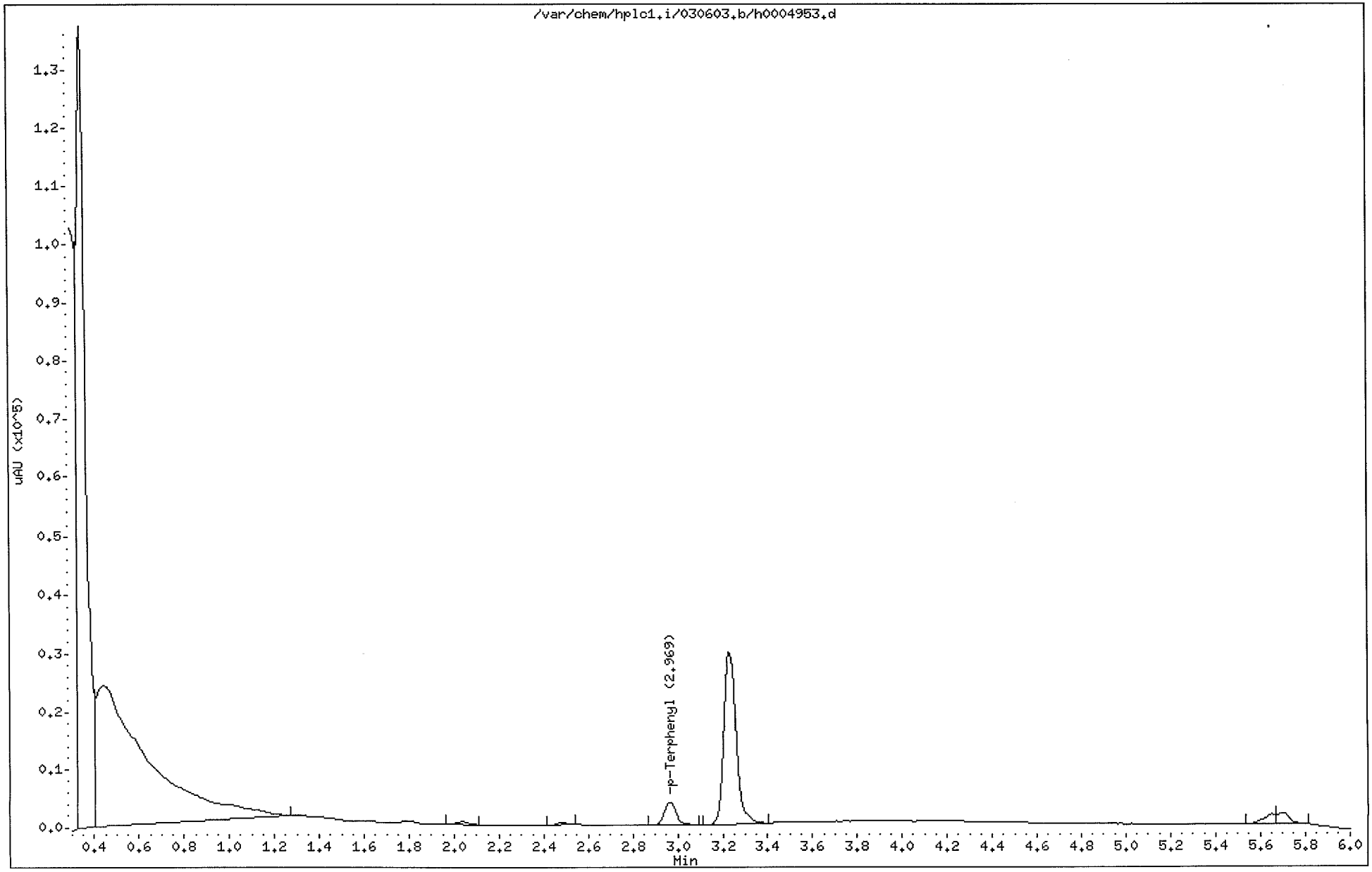
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.969	3.004	-0.035	13678	1.72150	1.72

Data File: /var/chem/hplc1.i/030603.b/h0004953.d
Date : 03-JUN-2003 11:12
Client ID: DUP-Q2-03-61
Sample Info: 20305291110-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000294



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004953.d
Lab Smp Id: 20305291110 Client Smp ID: DUP-Q2-03-61
Inj Date : 03-JUN-2003 11:12
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291110-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

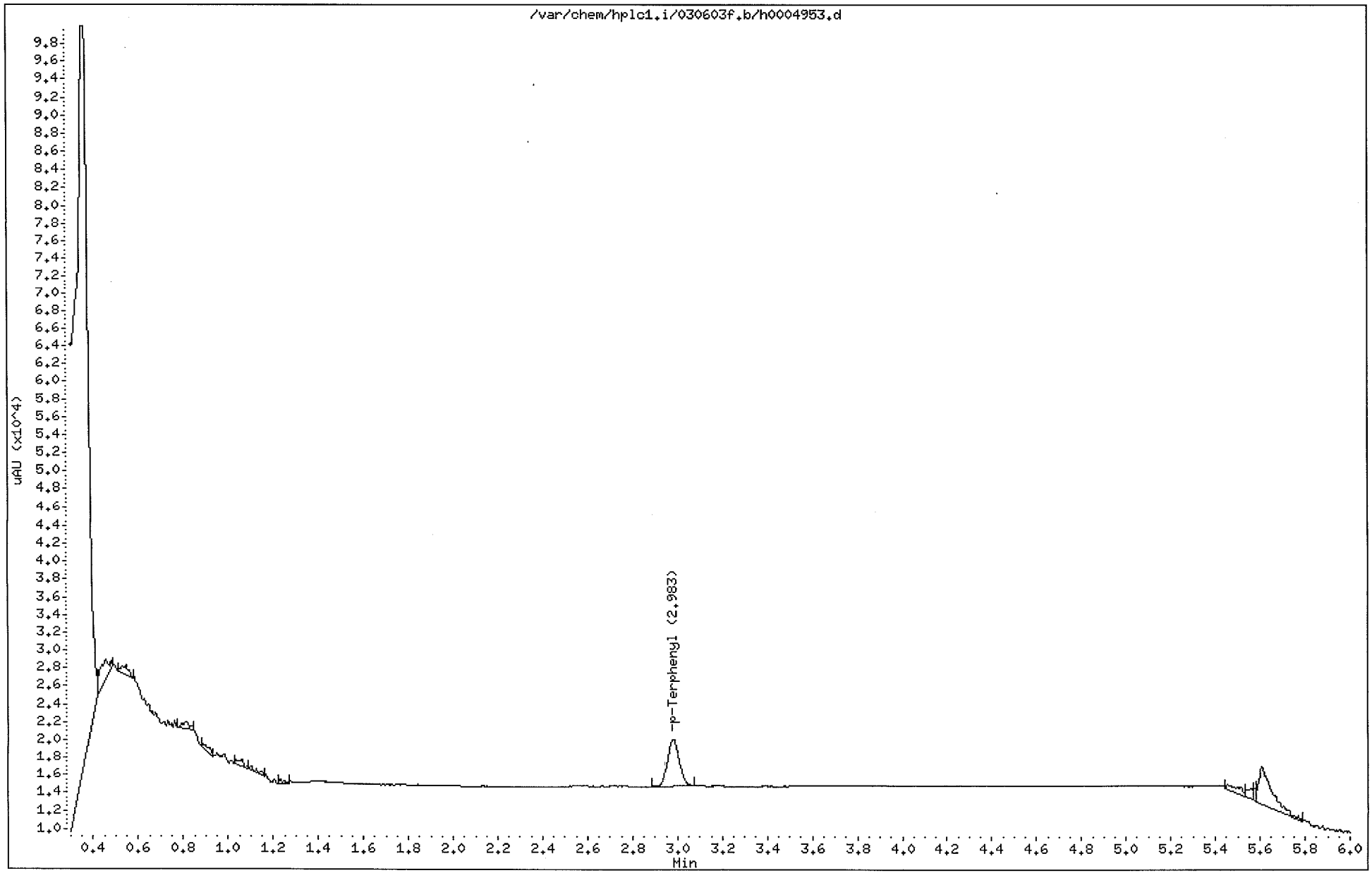
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
$ 11 p-Terphenyl	2.983	3.020	-0.037	18685	1.65477	1.65

Data File: /var/chem/hplc1.i/030603f.b/h0004953.d
Date : 03-JUN-2003 11:12
Client ID: DUP-Q2-03-61
Sample Info: 20305291110-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000296



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004954.d
Lab Smp Id: 20305291111 Client Smp ID: EQB-Q2-03-61
Inj Date : 03-JUN-2003 11:19
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291111-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

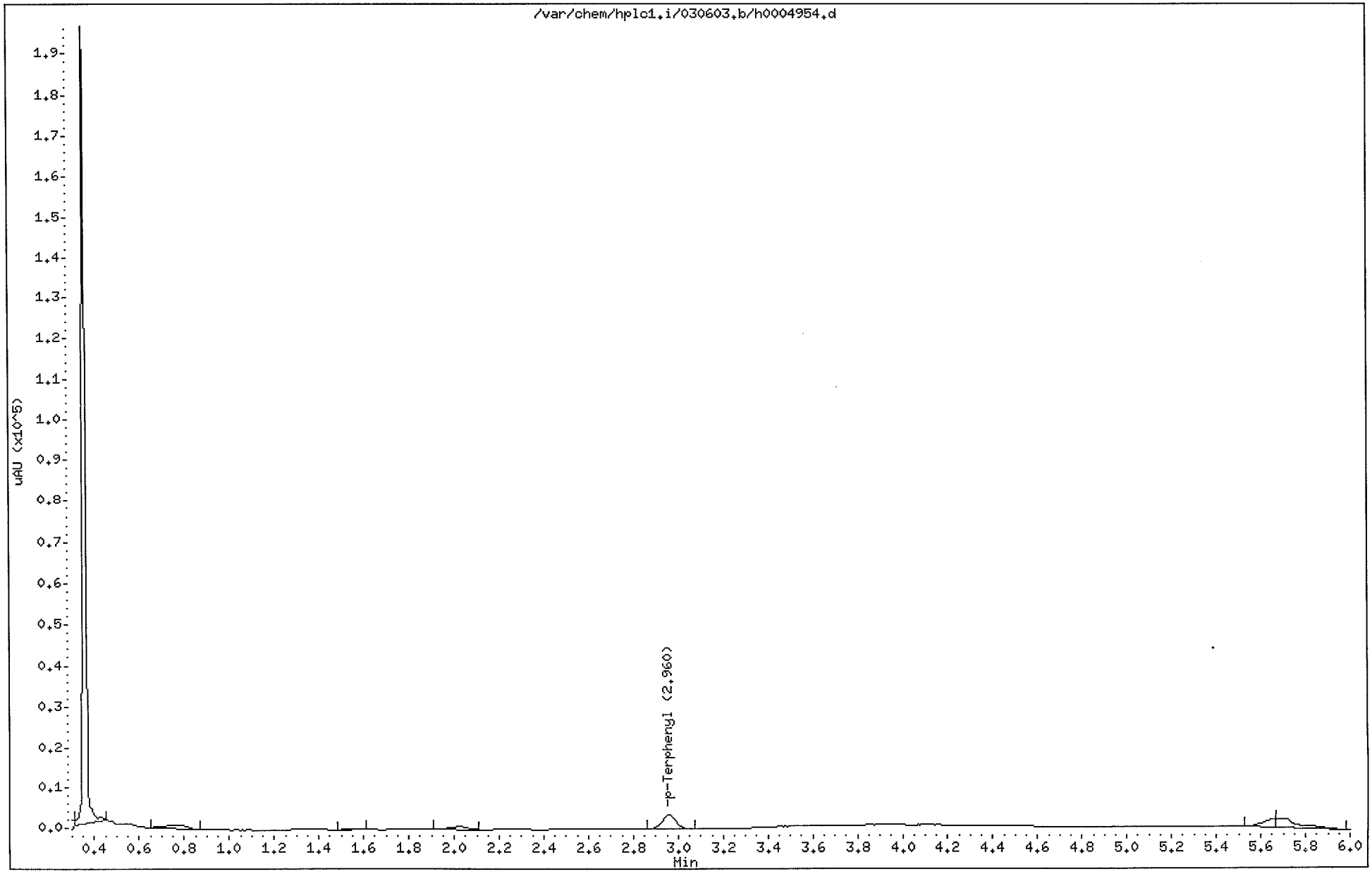
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.960	3.004	-0.044	14081	1.77222	1.77

Data File: /var/chem/hplc1.i/030603.b/h0004954.d
Date : 03-JUN-2003 11:19
Client ID: EQB-Q2-03-61
Sample Info: 20305291111-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

000298



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004954.d
Lab Smp Id: 20305291111 Client Smp ID: EQB-Q2-03-61
Inj Date : 03-JUN-2003 11:19
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291111-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

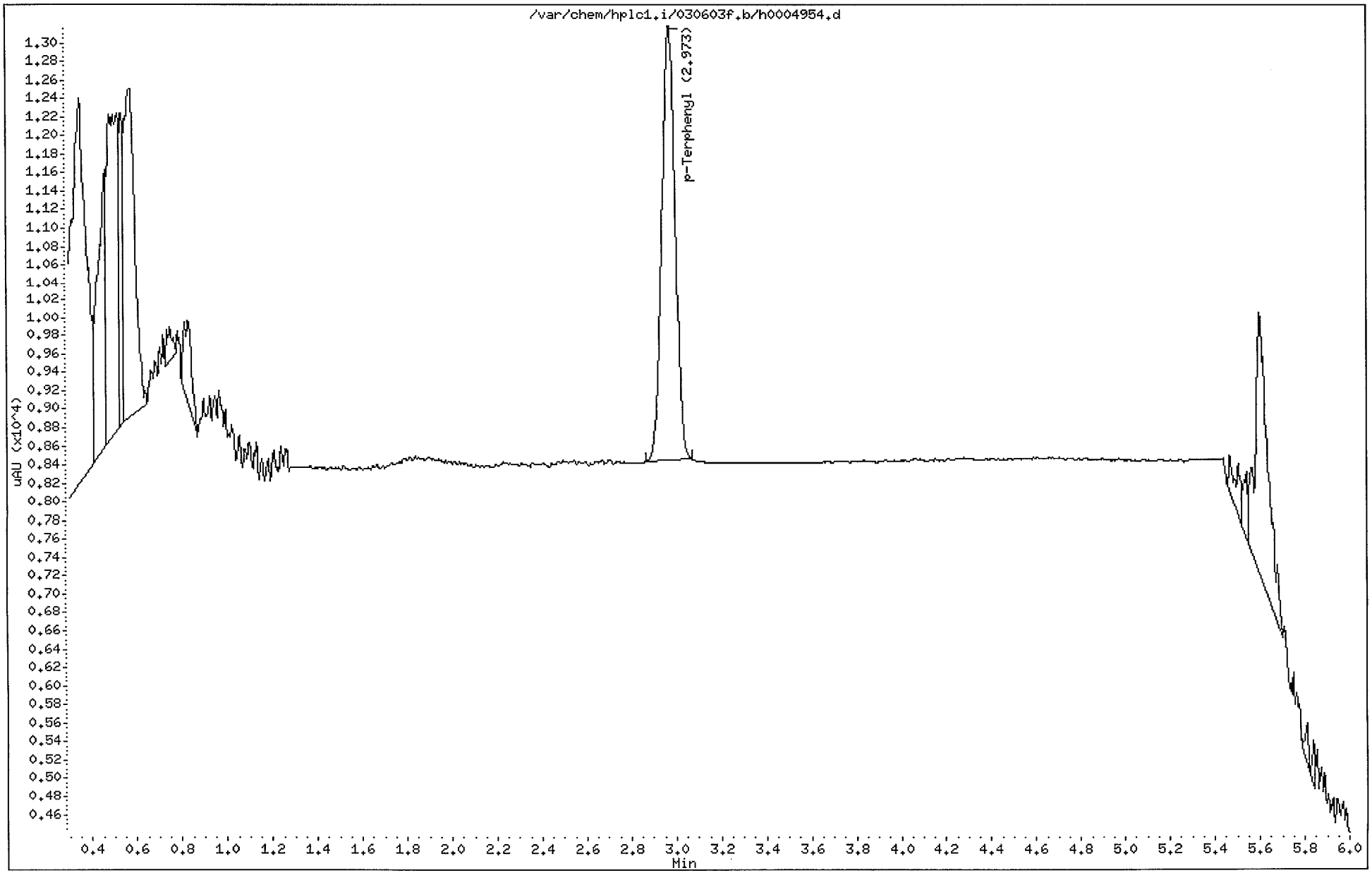
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	2.973	3.020	-0.047	19700	1.74471	1.74

Data File: /var/chem/hplc1.i/030603f.b/h0004954.d
Date : 03-JUN-2003 11:19
Client ID: EQB-Q2-03-61
Sample Info: 20305291111-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

000300



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004600.d
Lab Smp Id: 0311STD01 Client Smp ID: 0311STD01
Inj Date : 12-MAR-2003 15:44
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD01
Misc Info : 3-40-15
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:44 Cal File: h0004600.d
Als bottle: 1 Calibration Sample, Level: 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	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
7 Phenanthrene	1.904	1.897	0.007	3083	0.10000	0.112
8 Anthracene	2.138	2.130	0.008	6159	0.10000	0.114(M)
9 Fluoranthene	2.377	2.370	0.007	861	0.10000	0.110(M)
10 Pyrene	2.564	2.550	0.014	659	0.10000	0.0991
$ 11 p-Terphenyl	2.991	2.977	0.014	830	0.10000	0.104
12 Benzo(a)Anthracene	3.191	3.170	0.021	1902	0.10000	0.103
13 Chrysene	3.331	3.317	0.014	3249	0.10000	0.106
14 Benzo(b)Fluoranthene	3.824	3.810	0.014	2473	0.10000	0.111(M)
15 Benzo(k)Fluoranthene	4.058	4.043	0.015	1595	0.10000	0.115(M)
16 Benzo(a)Pyrene	4.244	4.217	0.027	2180	0.10000	0.107(M)
17 Dibenzo(a,h)Anthracene	4.531	4.523	0.008	420	0.10000	0.0967(M)
18 Benzo(g,h,i)Perylene	4.697	4.683	0.014	817	0.10000	0.110(M)
19 Indeno(1,2,3-c,d)Pyrene	4.857	4.830	0.027	1764	0.10000	0.111(M)

QC Flag Legend

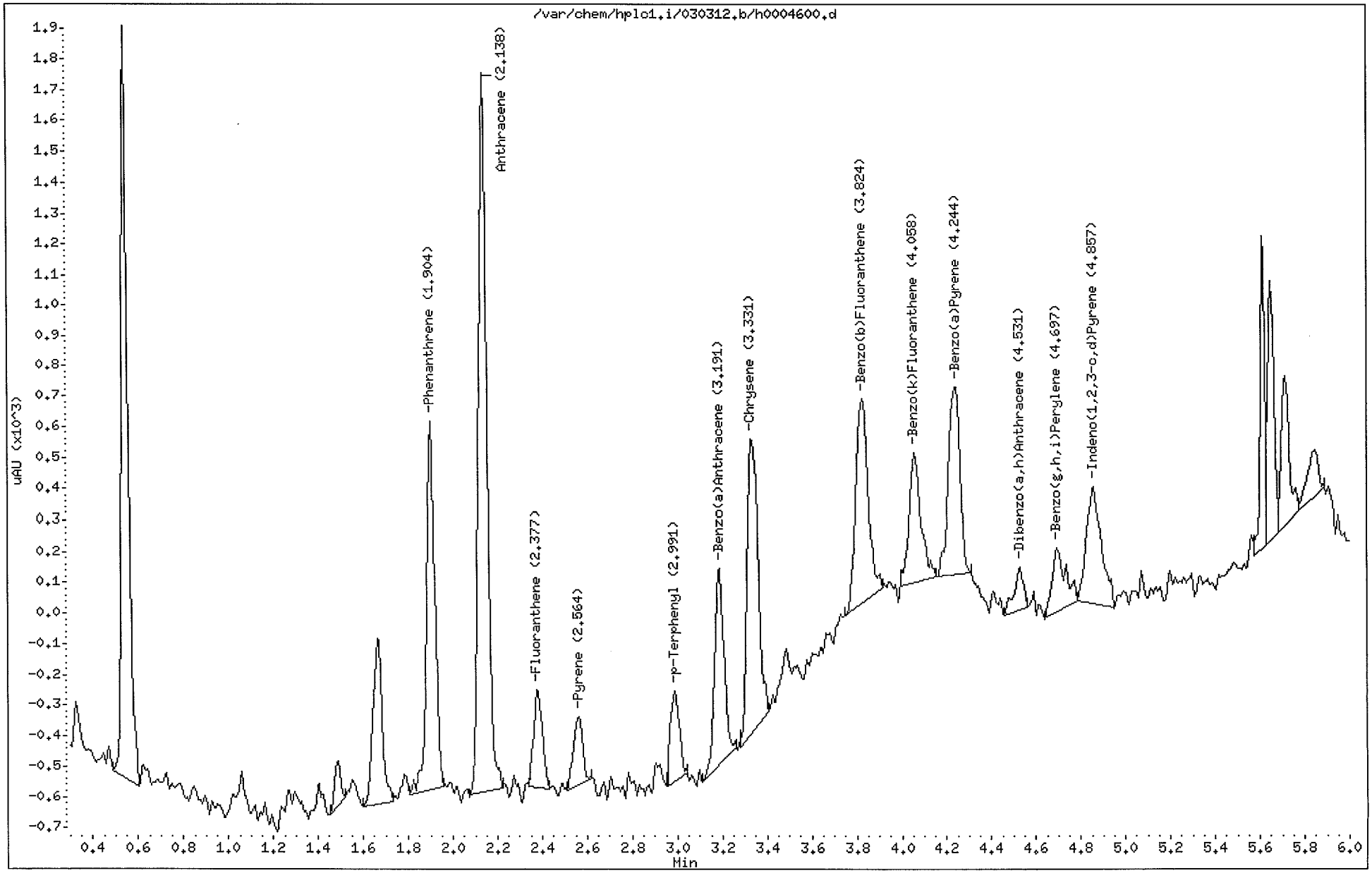
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312.b/h0004600.d
Date : 12-MAR-2003 15:44
Client ID: 0311STD01
Sample Info: 0311STD01
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000303



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004599.d
Lab Smp Id: 0311STD02 Client Smp ID: 0311STD02
Inj Date : 12-MAR-2003 15:37
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD02
Misc Info : 3-40-14
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:37 Cal File: h0004599.d
Als bottle: 1 Calibration Sample, Level: 2
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	1.058	1.050	0.008	746	0.25000	0.262(M)
7 Phenanthrene	1.905	1.897	0.008	7309	0.25000	0.269
8 Anthracene	2.138	2.130	0.008	14666	0.25000	0.277
9 Fluoranthene	2.378	2.370	0.008	1989	0.25000	0.257
10 Pyrene	2.552	2.550	0.002	1794	0.25000	0.267(M)
$ 11 p-Terphenyl	2.985	2.977	0.008	2023	0.25000	0.256
12 Benzo(a)Anthracene	3.178	3.170	0.008	4998	0.25000	0.272
13 Chrysene	3.325	3.317	0.008	7966	0.25000	0.262
14 Benzo(b)Fluoranthene	3.818	3.810	0.008	5649	0.25000	0.258(M)
15 Benzo(k)Fluoranthene	4.045	4.043	0.002	3257	0.25000	0.239
16 Benzo(a)Pyrene	4.232	4.217	0.015	4898	0.25000	0.242
17 Dibenzo(a,h)Anthracene	4.525	4.523	0.002	972	0.25000	0.223(M)
18 Benzo(g,h,i)Perylene	4.685	4.683	0.002	1871	0.25000	0.255(M)

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	4.838	4.830	0.008	3919	0.25000	0.251(M)

QC Flag Legend

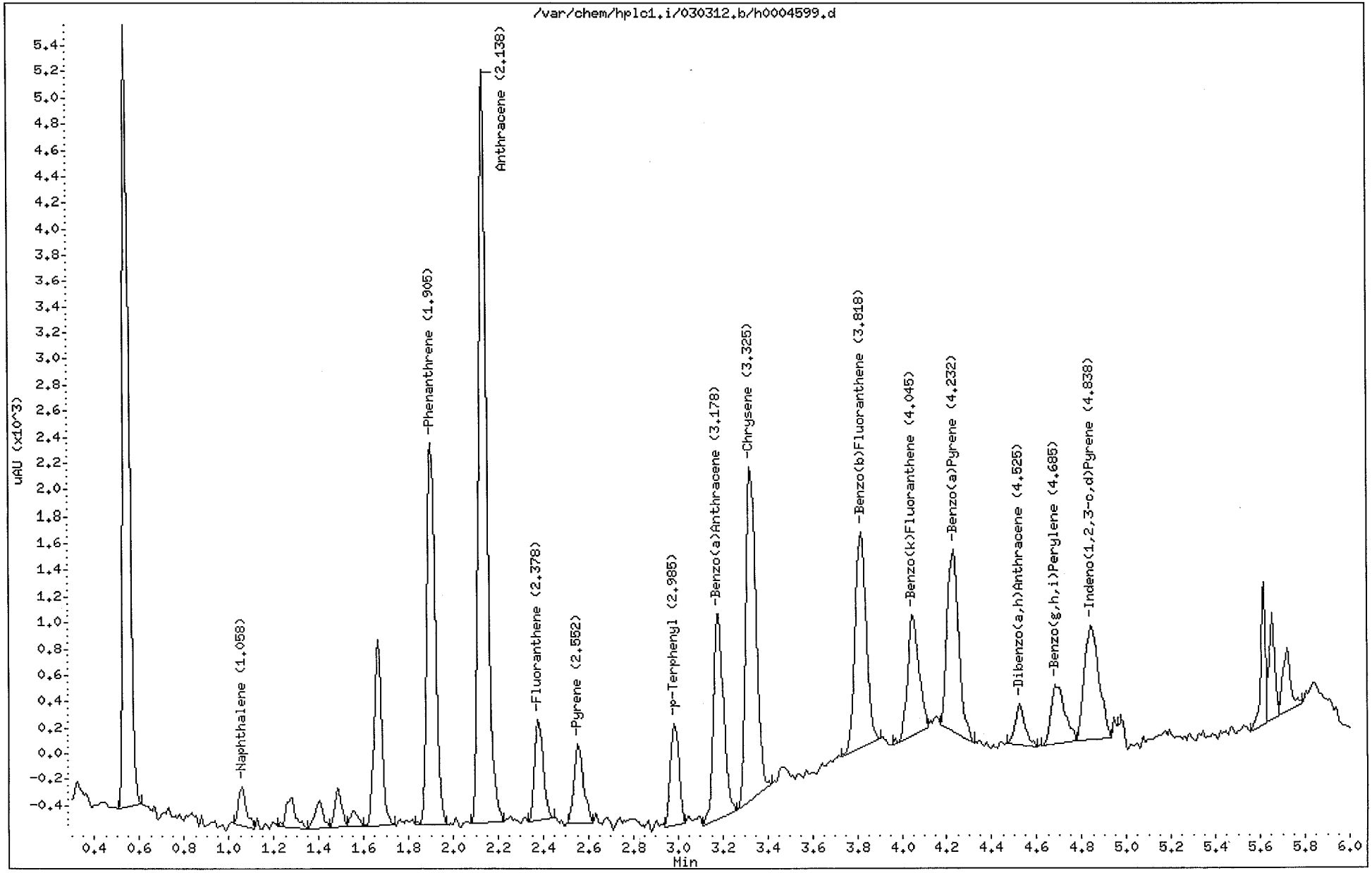
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312.b/h0004599.d
Date : 12-MAR-2003 15:37
Client ID: 0311STD02
Sample Info: 0311STD02
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000306



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004598.d
Lab Smp Id: 0311STD03 Client Smp ID: 0311STD03
Inj Date : 12-MAR-2003 15:30
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD03
Misc Info : 3-40-13
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.d
Als bottle: 1 Calibration Sample, Level: 3
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	1.050	1.050	0.000	1636	0.50000	0.580
3 1-Methynaphthalene	1.403	1.403	0.000	871	0.50000	0.542
4 2-Methylnaphthalene	1.483	1.483	0.000	1311	0.50000	0.567
5 Acenaphthene	1.563	1.563	0.000	555	0.50000	0.531
6 Fluorene	1.657	1.657	0.000	6789	0.50000	0.536
7 Phenanthrene	1.897	1.897	0.000	14106	0.50000	0.510
8 Anthracene	2.130	2.130	0.000	28740	0.50000	0.531
9 Fluoranthene	2.370	2.370	0.000	4216	0.50000	0.538
10 Pyrene	2.550	2.550	0.000	3764	0.50000	0.567(M)
$ 11 p-Terphenyl	2.977	2.977	0.000	4369	0.50000	0.550
12 Benzo(a)Anthracene	3.170	3.170	0.000	9537	0.50000	0.516
13 Chrysene	3.317	3.317	0.000	15739	0.50000	0.513
14 Benzo(b)Fluoranthene	3.810	3.810	0.000	12398	0.50000	0.557

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
15 Benzo(k)Fluoranthene	4.043	4.043	0.000	7890	0.50000	0.567
16 Benzo(a)Pyrene	4.217	4.217	0.000	10827	0.50000	0.528
17 Dibenzo(a,h)Anthracene	4.523	4.523	0.000	2251	0.50000	0.518
18 Benzo(g,h,i)Perylene	4.683	4.683	0.000	3800	0.50000	0.510
19 Indeno(1,2,3-c,d)Pyrene	4.830	4.830	0.000	8016	0.50000	0.505

QC Flag Legend

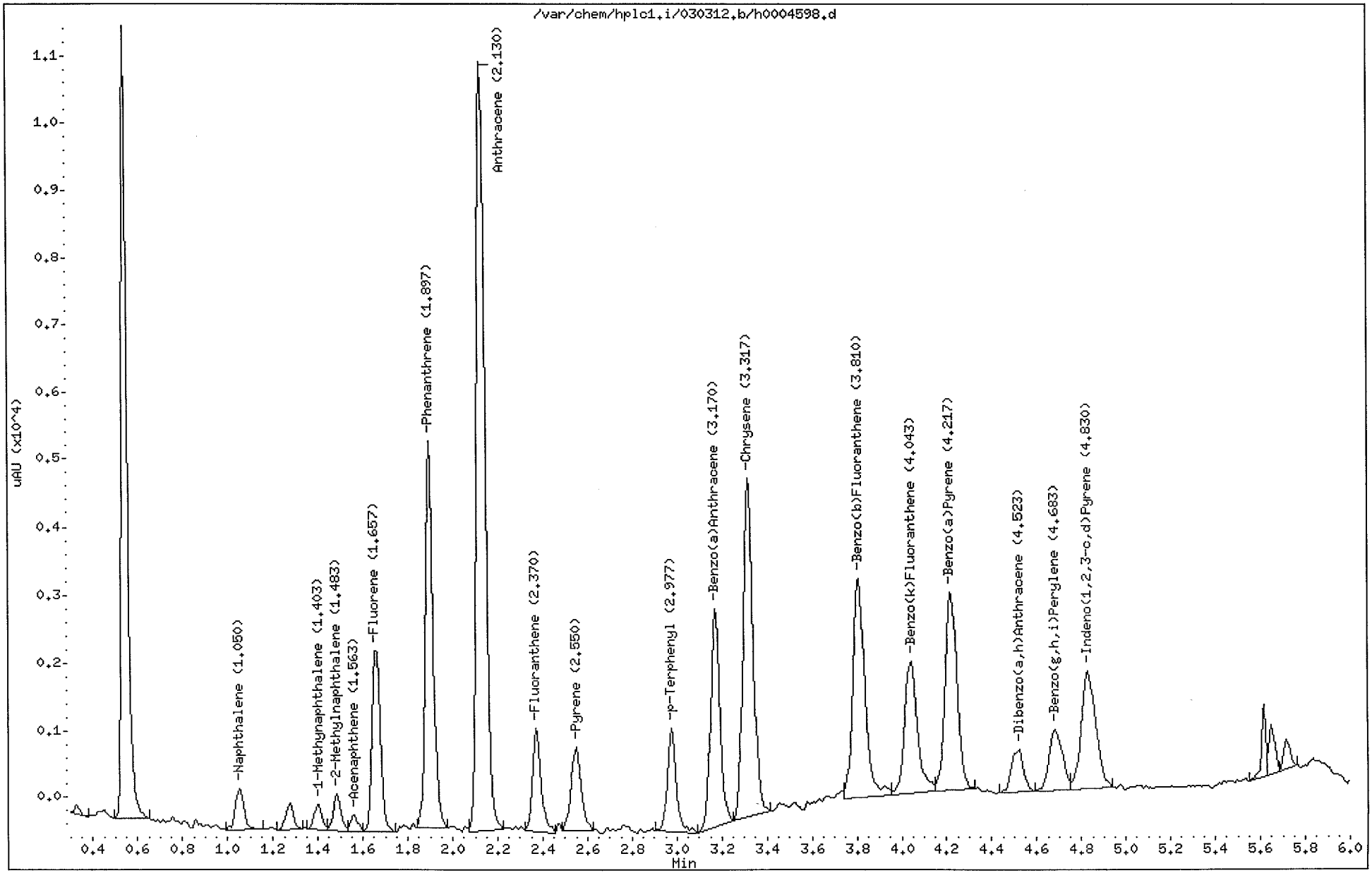
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312.b/h0004598.d
Date : 12-MAR-2003 15:30
Client ID: 0311STD03
Sample Info: 0311STD03
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000309



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004597.d
Lab Smp Id: 0311STD04 Client Smp ID: 0311STD04
Inj Date : 12-MAR-2003 15:23
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD04
Misc Info : 3-40-12
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:23 Cal File: h0004597.d
Als bottle: 1 Calibration Sample, Level: 4
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

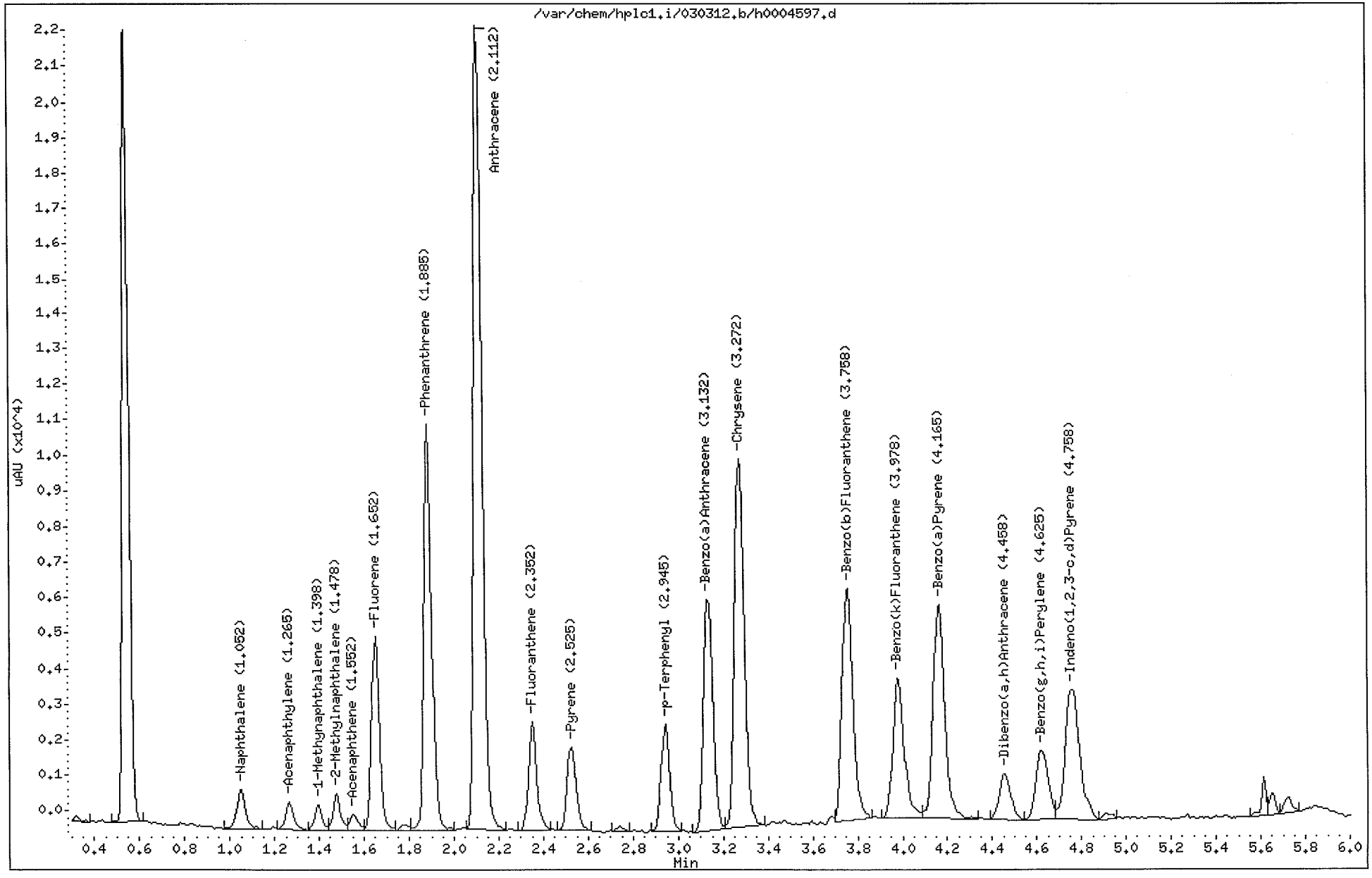
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.052	1.050	0.002	3004	1.00000	1.10
2 Acenaphthylene	1.265	1.271	-0.006	2104	1.00000	1.12
3 1-Methynaphthalene	1.398	1.403	-0.005	1762	1.00000	1.11
4 2-Methylnaphthalene	1.478	1.483	-0.005	2426	1.00000	1.09
5 Acenaphthene	1.552	1.563	-0.011	1128	1.00000	1.12
6 Fluorene	1.652	1.657	-0.005	13289	1.00000	1.07
7 Phenanthrene	1.885	1.897	-0.012	28212	1.00000	1.06
8 Anthracene	2.112	2.130	-0.018	56228	1.00000	1.10
9 Fluoranthene	2.352	2.370	-0.018	7850	1.00000	1.04
10 Pyrene	2.525	2.550	-0.025	6495	1.00000	1.02
$ 11 p-Terphenyl	2.945	2.977	-0.032	7879	1.00000	1.02
12 Benzo(a)Anthracene	3.132	3.170	-0.038	18648	1.00000	1.04
13 Chrysene	3.272	3.317	-0.045	31117	1.00000	1.04

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.758	3.810	-0.052	22052	1.00000	1.04
15 Benzo(k)Fluoranthene	3.978	4.043	-0.065	13974	1.00000	1.05
16 Benzo(a)Pyrene	4.165	4.217	-0.052	21530	1.00000	1.07
17 Dibenzo(a,h)Anthracene	4.458	4.523	-0.065	4631	1.00000	1.04
18 Benzo(g,h,i)Perylene	4.625	4.683	-0.058	7505	1.00000	1.03
19 Indeno(1,2,3-c,d)Pyrene	4.758	4.830	-0.072	16526	1.00000	1.06

000312

Data File: /var/chem/hplc1.i/030312.b/h0004597.d
Date : 12-MAR-2003 15:23
Client ID: 0311STD04
Sample Info: 0311STD04
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004601.d
Lab Smp Id: 0312STD05 Client Smp ID: 0312STD05
Inj Date : 12-MAR-2003 15:51
Operator : jdt Inst ID: hplc1.i
Smp Info : 0312STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.d
Als bottle: 1 Calibration Sample, Level: 5
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

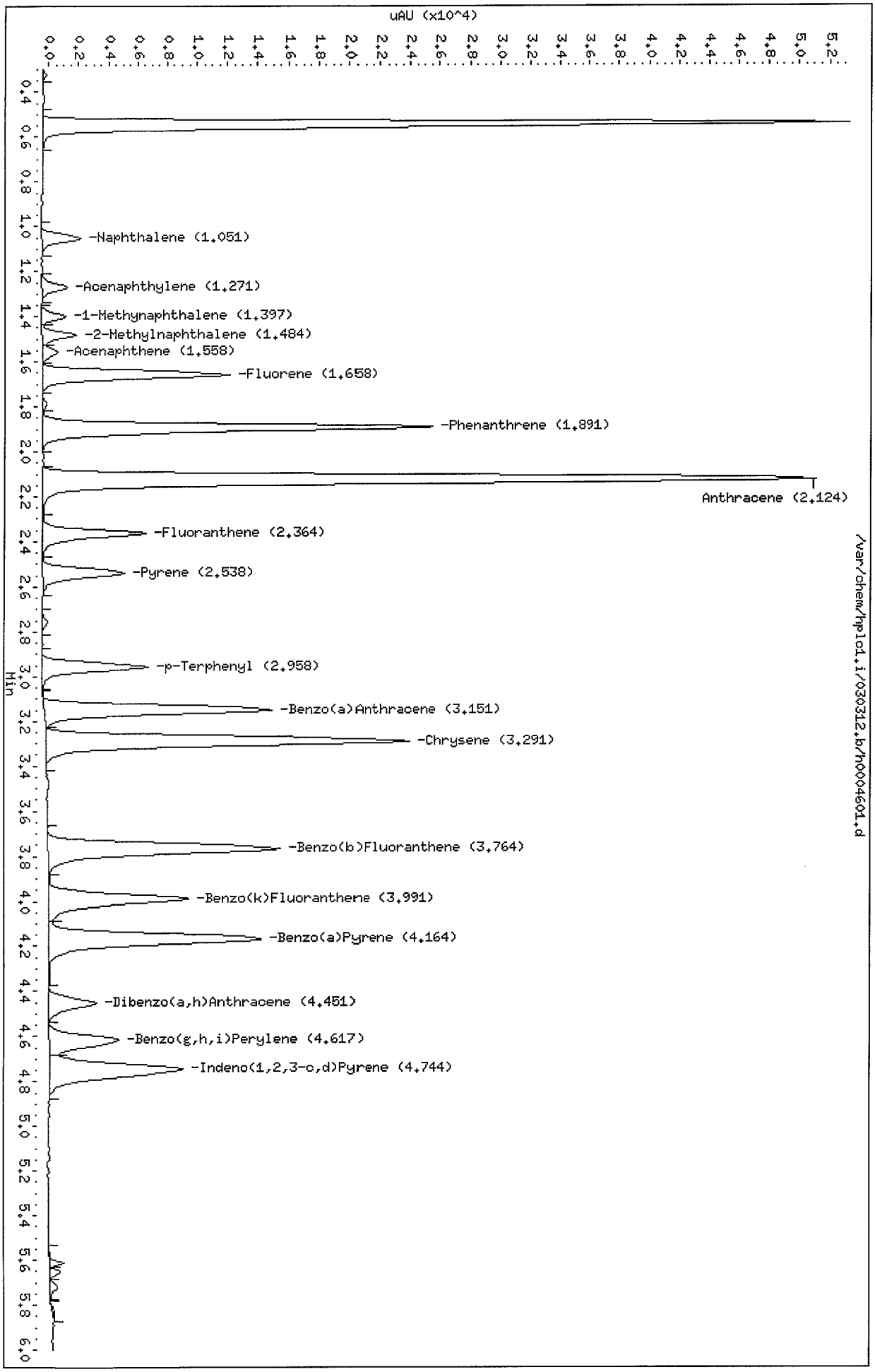
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.051	1.050	0.001	6396	2.50000	2.27
2 Acenaphthylene	1.271	1.271	0.000	4382	2.50000	2.33
3 1-Methynaphthalene	1.397	1.403	-0.006	3621	2.50000	2.25
4 2-Methylnaphthalene	1.484	1.483	0.001	5413	2.50000	2.34
5 Acenaphthene	1.558	1.563	-0.005	2640	2.50000	2.53
6 Fluorene	1.658	1.657	0.001	30293	2.50000	2.39
7 Phenanthrene	1.891	1.897	-0.006	65004	2.50000	2.35
8 Anthracene	2.124	2.130	-0.006	129623	2.50000	2.40
9 Fluoranthene	2.364	2.370	-0.006	18466	2.50000	2.36
10 Pyrene	2.538	2.550	-0.012	15482	2.50000	2.33
$ 11 p-Terphenyl	2.958	2.977	-0.019	18918	2.50000	2.38
12 Benzo(a)Anthracene	3.151	3.170	-0.019	43072	2.50000	2.33
13 Chrysene	3.291	3.317	-0.026	72311	2.50000	2.36

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.764	3.810	-0.046	51396	2.50000	2.31
15 Benzo(k)Fluoranthene	3.991	4.043	-0.052	32710	2.50000	2.35
16 Benzo(a)Pyrene	4.164	4.217	-0.053	49981	2.50000	2.44
17 Dibenzo(a,h)Anthracene	4.451	4.523	-0.072	10552	2.50000	2.43
18 Benzo(g,h,i)Perylene	4.617	4.683	-0.066	17219	2.50000	2.31
19 Indeno(1,2,3-c,d)Pyrene	4.744	4.830	-0.086	37048	2.50000	2.33

Data File: /var/chem/hplc1.i/030312.b/h0004601.d
Date : 12-MAR-2003 15:51
Client ID: 0312STD05
Sample Info: 0312STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004596.d
Lab Smp Id: 0311STD06 Client Smp ID: 0311STD06
Inj Date : 12-MAR-2003 15:17
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD06
Misc Info : 3-40-10
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:17 Cal File: h0004596.d
Als bottle: 1 Calibration Sample, Level: 6
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

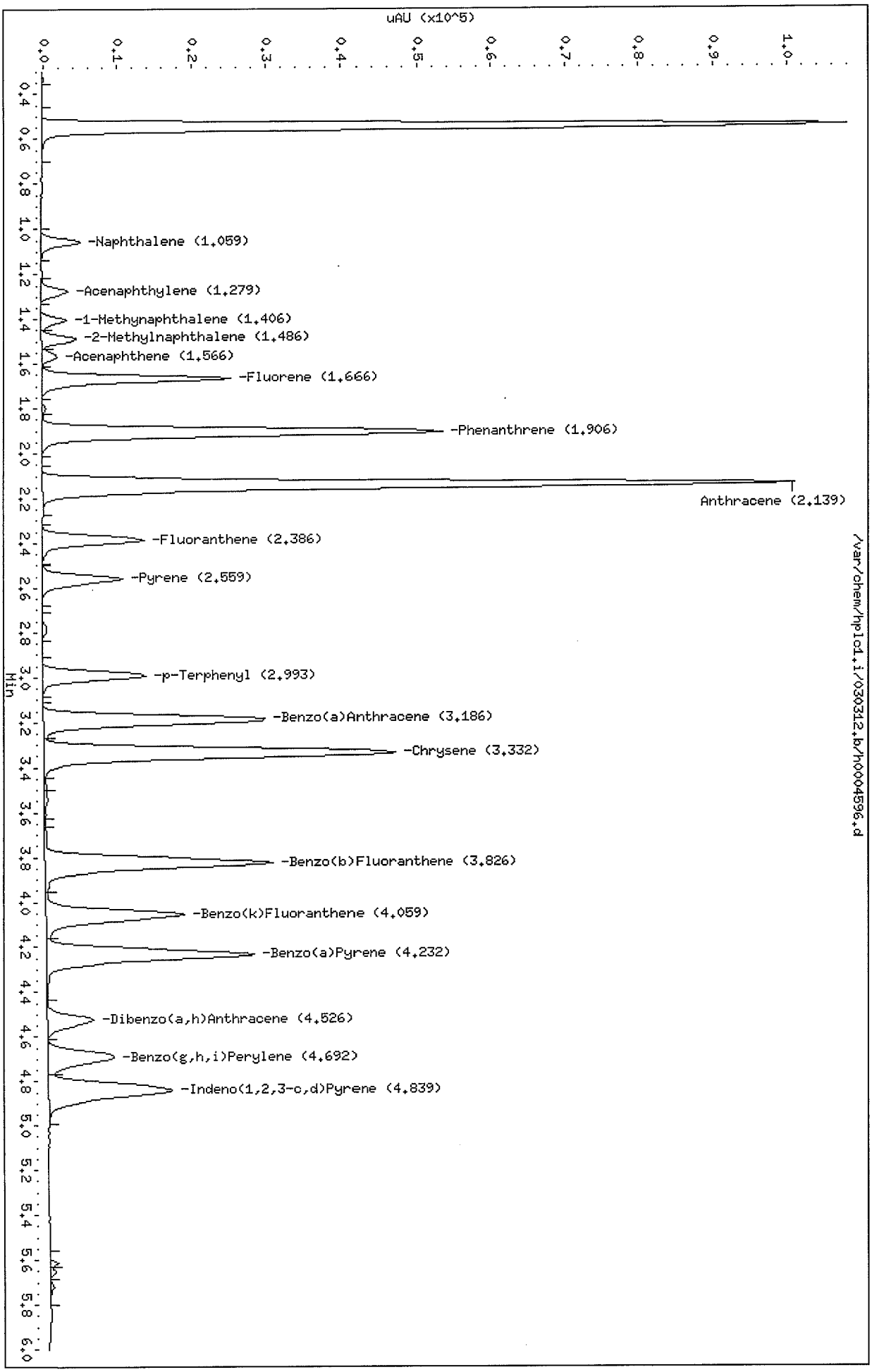
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.059	1.050	0.009	13211	5.00000	4.96
2 Acenaphthylene	1.279	1.271	0.008	8985	5.00000	4.92
3 1-Methynaphthalene	1.406	1.403	0.003	7779	5.00000	5.03
4 2-Methylnaphthalene	1.486	1.483	0.003	11073	5.00000	5.08
5 Acenaphthene	1.566	1.563	0.003	4904	5.00000	5.00
6 Fluorene	1.666	1.657	0.009	62165	5.00000	5.08
7 Phenanthrene	1.906	1.897	0.009	132813	5.00000	5.09
8 Anthracene	2.139	2.130	0.009	259596	5.00000	5.24
9 Fluoranthene	2.386	2.370	0.016	37703	5.00000	5.05
10 Pyrene	2.559	2.550	0.009	32205	5.00000	5.07
$ 11 p-Terphenyl	2.993	2.977	0.016	38552	5.00000	5.05
12 Benzo(a)Anthracene	3.186	3.170	0.016	90591	5.00000	5.10
13 Chrysene	3.332	3.317	0.015	151538	5.00000	5.13

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.826	3.810	0.016	109145	5.00000	5.19
15 Benzo(k)Fluoranthene	4.059	4.043	0.016	68677	5.00000	5.22
16 Benzo(a)Pyrene	4.232	4.217	0.015	101982	5.00000	5.18
17 Dibenzo(a,h)Anthracene	4.526	4.523	0.003	22679	5.00000	5.17
18 Benzo(g,h,i)Perylene	4.692	4.683	0.009	36896	5.00000	5.12
19 Indeno(1,2,3-c,d)Pyrene	4.839	4.830	0.009	77114	5.00000	5.03

Data File: /var/chem/hplc1.i/030312.b/h0004596.d
Date : 12-MAR-2003 15:17
Client ID: 0311STD06
Sample Info: 0311STD06
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004595.d
Lab Smp Id: 0311STD07 Client Smp ID: 0311STD07
Inj Date : 12-MAR-2003 15:10
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD07
Misc Info : 3-40-9
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:10 Cal File: h0004595.d
Als bottle: 1 Calibration Sample, Level: 7
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	1.058	1.050	0.008	26662	10.0000	10.0
2 Acenaphthylene	1.272	1.271	0.001	18858	10.0000	10.3
3 1-Methynaphthalene	1.405	1.403	0.002	15769	10.0000	10.2
4 2-Methylnaphthalene	1.485	1.483	0.002	22323	10.0000	10.3
5 Acenaphthene	1.565	1.563	0.002	10106	10.0000	10.2
6 Fluorene	1.665	1.657	0.008	123470	10.0000	10.1
7 Phenanthrene	1.905	1.897	0.008	262640	10.0000	10.1
8 Anthracene	2.138	2.130	0.008	494414	10.0000	10.1
9 Fluoranthene	2.378	2.370	0.008	75007	10.0000	10.1
10 Pyrene	2.552	2.550	0.002	63836	10.0000	10.1
$ 11 p-Terphenyl	2.985	2.977	0.008	76737	10.0000	10.1
12 Benzo(a)Anthracene	3.178	3.170	0.008	179177	10.0000	10.2
13 Chrysene	3.325	3.317	0.008	298058	10.0000	10.2

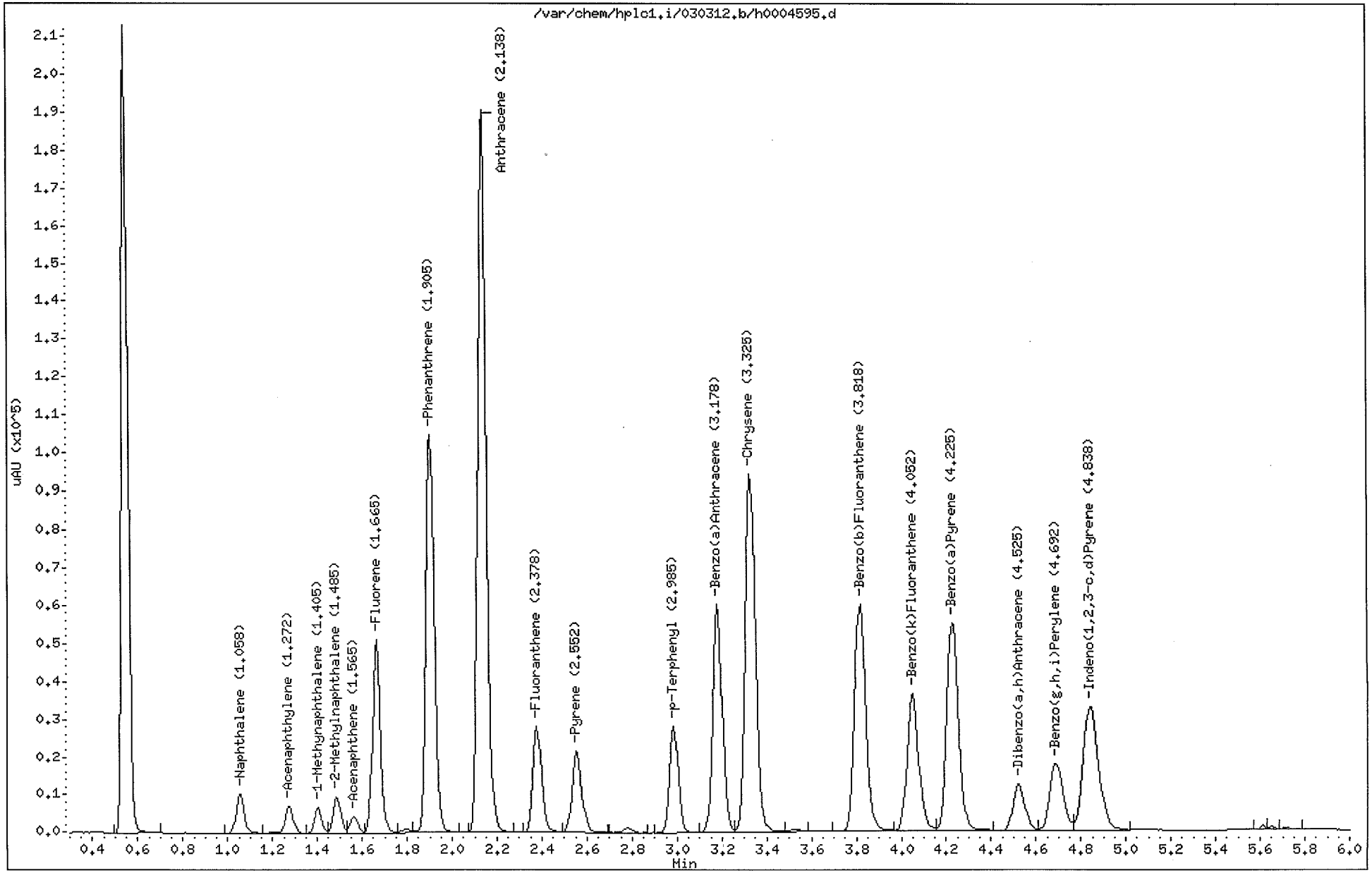
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.818	3.810	0.008	209444	10.0000	10.1
15 Benzo(k)Fluoranthene	4.052	4.043	0.009	130986	10.0000	10.1
16 Benzo(a)Pyrene	4.225	4.217	0.008	197745	10.0000	10.2
17 Dibenzo(a,h)Anthracene	4.525	4.523	0.002	43794	10.0000	10.1
18 Benzo(g,h,i)Perylene	4.692	4.683	0.009	72584	10.0000	10.1
19 Indeno(1,2,3-c,d)Pyrene	4.838	4.830	0.008	154665	10.0000	10.1

000321

Data File: /var/chem/hplc1.i/030312.b/h0004595.d
Date : 12-MAR-2003 15:10
Client ID: 0311STD07
Sample Info: 0311STD07
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004594.d
Lab Smp Id: 0311STD08 Client Smp ID: 0311STD08
Inj Date : 12-MAR-2003 15:03
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD08
Misc Info : 3-40-8
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:03 Cal File: h0004594.d
Als bottle: 1 Calibration Sample, Level: 8
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

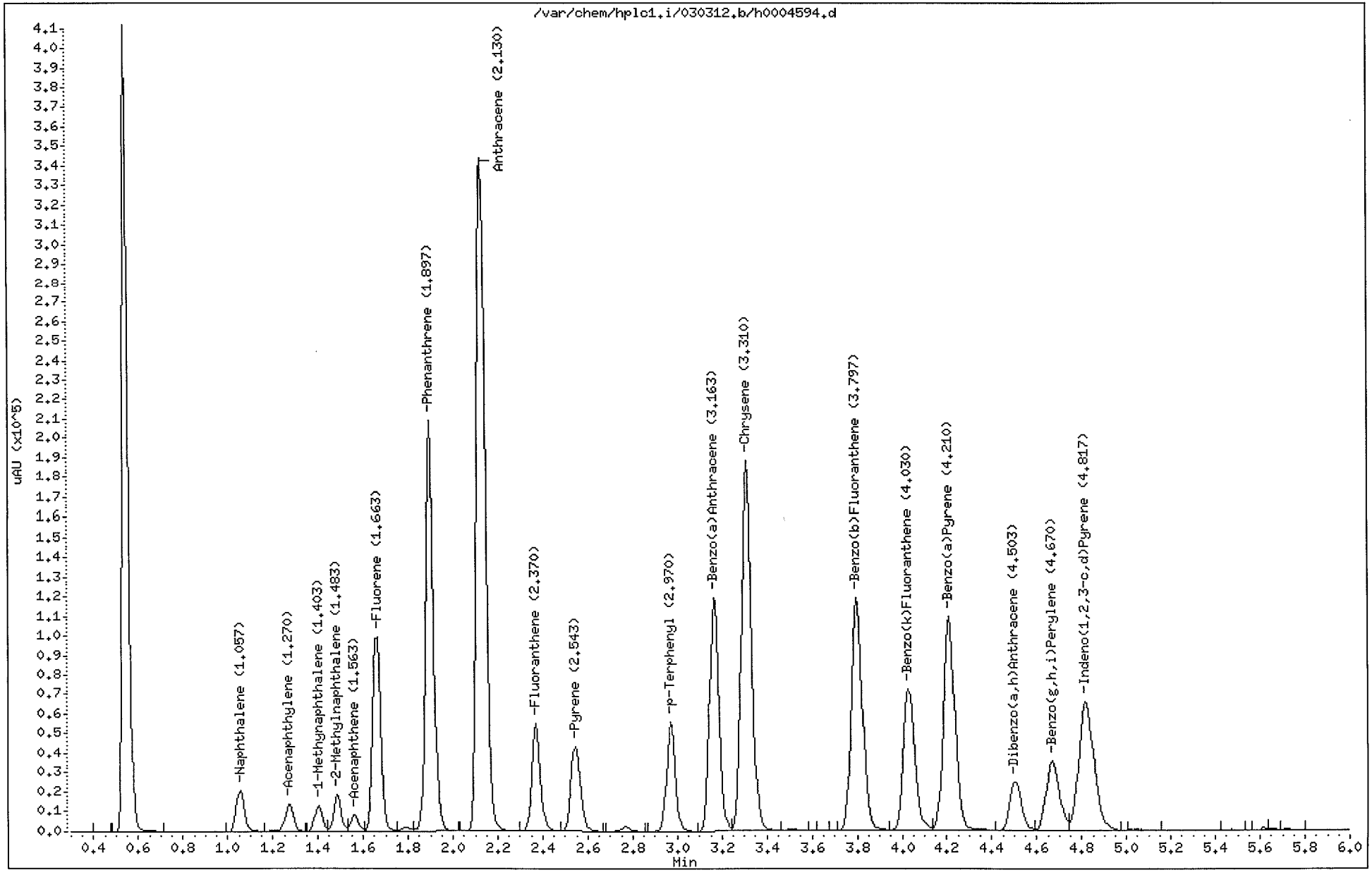
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.057	1.050	0.007	52636	20.0000	19.7
2 Acenaphthylene	1.270	1.271	-0.001	37504	20.0000	20.7
3 1-Methynaphthalene	1.403	1.403	0.000	31108	20.0000	20.4
4 2-Methylnaphthalene	1.483	1.483	0.000	44362	20.0000	20.7
5 Acenaphthene	1.563	1.563	0.000	19656	20.0000	20.0
6 Fluorene	1.663	1.657	0.006	244349	20.0000	20.2
7 Phenanthrene	1.897	1.897	0.000	516683	20.0000	20.0
8 Anthracene	2.130	2.130	0.000	912582	20.0000	18.8
9 Fluoranthene	2.370	2.370	0.000	148570	20.0000	20.0
10 Pyrene	2.543	2.550	-0.007	126374	20.0000	20.1
$ 11 p-Terphenyl	2.970	2.977	-0.007	152060	20.0000	20.0
12 Benzo(a)Anthracene	3.163	3.170	-0.007	355120	20.0000	20.3
13 Chrysene	3.310	3.317	-0.007	588026	20.0000	20.2

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.797	3.810	-0.013	409260	20.0000	19.8
15 Benzo(k)Fluoranthene	4.030	4.043	-0.013	254721	20.0000	19.7
16 Benzo(a)Pyrene	4.210	4.217	-0.007	389071	20.0000	20.1
17 Dibenzo(a,h)Anthracene	4.503	4.523	-0.020	87653	20.0000	20.3
18 Benzo(g,h,i)Perylene	4.670	4.683	-0.013	145359	20.0000	20.5
19 Indeno(1,2,3-c,d)Pyrene	4.817	4.830	-0.013	308023	20.0000	20.3

000324

Data File: /var/chem/hplc1.i/030312.b/h0004594.d
Date : 12-MAR-2003 15:03
Client ID: 0311STD08
Sample Info: 0311STD08
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 0312PNAICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/030312.b/flpnauv.m
Misc Info: 3-40-16

Client SDG:
Fraction: OTHER
Client Smp ID: 0312PNAICV
Operator: jdt
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	5.00	4.52	90.40	70-130
2 Acenaphthylene	5.00	4.61	92.24	70-130
3 1-Methynaphthalene	10.0	10.2	102.33	70-130
4 2-Methylnaphthalen	10.0	9.01	90.12	70-130
5 Acenaphthene	10.0	9.75	97.53	70-130
6 Fluorene	1.00	0.942	94.17	70-130
7 Phenanthrene	0.400	0.402	100.52	70-130
8 Anthracene	0.200	0.205	102.62	70-130
9 Fluoranthene	0.500	0.489	97.80	70-130
10 Pyrene	1.00	0.933	93.30	70-130
12 Benzo(a)Anthracene	0.500	0.463	92.65	70-130
13 Chrysene	0.500	0.464	92.79	70-130
14 Benzo(b)Fluoranthe	0.200	0.178	89.07	70-130
15 Benzo(k)Fluoranthe	0.200	0.221	110.71	70-130
16 Benzo(a)Pyrene	0.500	0.483	96.54	70-130
17 Dibenzo(a,h)Anthra	2.00	1.96	97.99	70-130
18 Benzo(g,h,i)Peryle	0.800	0.744	93.04	70-130
19 Indeno(1,2,3-c,d)P	0.500	0.448	89.56	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	4.00	3.80	95.08	40-140

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312.b/h0004602.d
Lab Smp Id: 0312PNAICV Client Smp ID: 0312PNAICV
Inj Date : 12-MAR-2003 15:58
Operator : jdt Inst ID: hplc1.i
Smp Info : 0312PNAICV
Misc Info : 3-40-16
Comment :
Method : /var/chem/hplc1.i/030312.b/flpnauv.m
Meth Date : 27-Mar-2003 14:14 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	1.050	1.050	0.000	12759	4.52017	4.52
2 Acenaphthylene	1.270	1.271	-0.001	8684	4.61185	4.61
3 1-Methynaphthalene	1.403	1.403	0.000	16442	10.2329	10.2
4 2-Methylnaphthalene	1.483	1.483	0.000	20845	9.01182	9.01
5 Acenaphthene	1.563	1.563	0.000	10189	9.75304	9.75
6 Fluorene	1.657	1.657	0.000	11925	0.94167	0.942
7 Phenanthrene	1.897	1.897	0.000	11115	0.40208	0.402
8 Anthracene	2.130	2.130	0.000	11104	0.20525	0.205
9 Fluoranthene	2.370	2.370	0.000	3833	0.48902	0.489
10 Pyrene	2.543	2.550	-0.007	6196	0.93304	0.933
$ 11 p-Terphenyl	2.970	2.977	-0.007	30217	3.80307	3.80
12 Benzo(a)Anthracene	3.170	3.170	0.000	8556	0.46325	0.463
13 Chrysene	3.310	3.317	-0.007	14231	0.46395	0.464

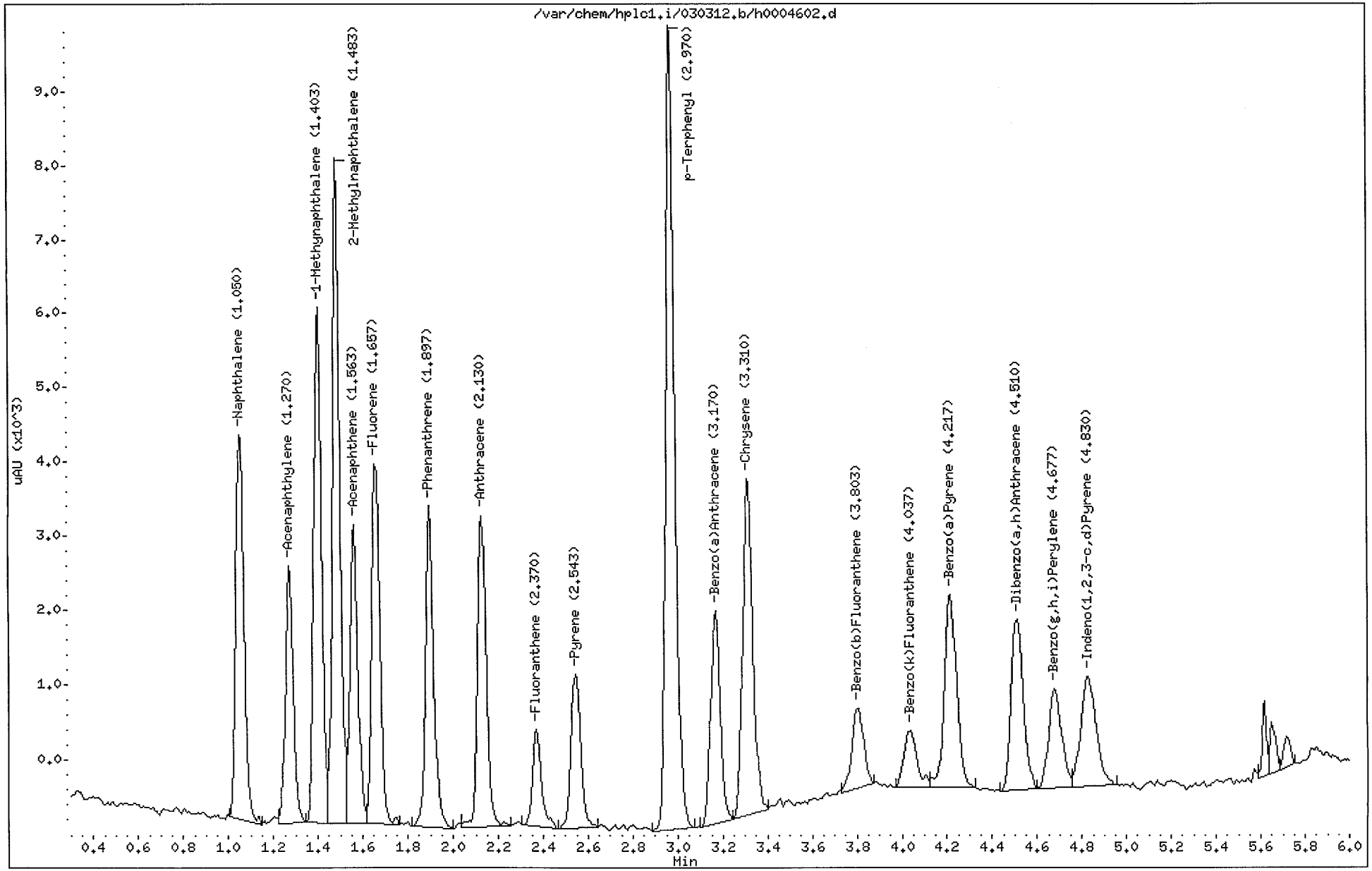
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
14 Benzo(b)Fluoranthene	3.803	3.810	-0.007	3963	0.17814	0.178
15 Benzo(k)Fluoranthene	4.037	4.043	-0.006	3083	0.22143	0.221
16 Benzo(a)Pyrene	4.217	4.217	0.000	9907	0.48270	0.483
17 Dibenzo(a,h)Anthracene	4.510	4.523	-0.013	8510	1.95971	1.96
18 Benzo(g,h,i)Perylene	4.677	4.683	-0.006	5541	0.74435	0.744
19 Indeno(1,2,3-c,d)Pyrene	4.830	4.830	0.000	7108	0.44780	0.448

000328

Data File: /var/chem/hplc1.i/030312.b/h0004602.d
Date : 12-MAR-2003 15:58
Client ID: 0312PNAICV
Sample Info: 0312PNAICV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004941.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 08:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 05-Jun-2003 06:55 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

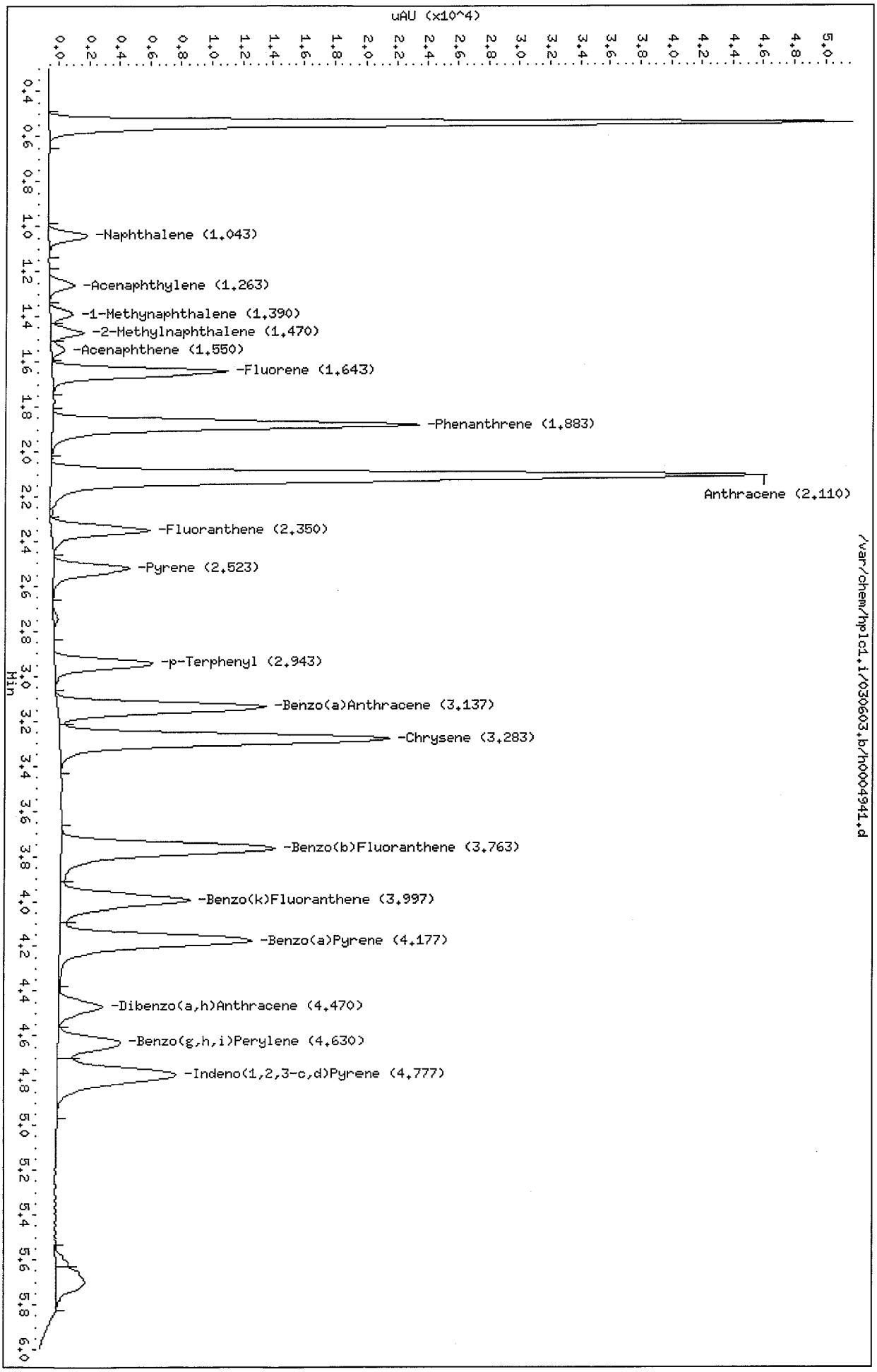
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.043	1.051	-0.008	6721	2.50000	2.38
2 Acenaphthylene	1.263	1.271	-0.008	4407	2.50000	2.34
3 1-Methynaphthalene	1.390	1.397	-0.007	3692	2.50000	2.30
4 2-Methylnaphthalene	1.470	1.484	-0.014	5218	2.50000	2.26
5 Acenaphthene	1.550	1.558	-0.008	2228	2.50000	2.13
6 Fluorene	1.643	1.664	-0.021	31174	2.50000	2.46
7 Phenanthrene	1.883	1.904	-0.021	68042	2.50000	2.46
8 Anthracene	2.110	2.144	-0.034	138074	2.50000	2.55
9 Fluoranthene	2.350	2.391	-0.041	20026	2.50000	2.55
10 Pyrene	2.523	2.564	-0.041	16441	2.50000	2.48
$ 11 p-Terphenyl	2.943	3.004	-0.061	20057	2.50000	2.52
12 Benzo(a)Anthracene	3.137	3.204	-0.067	45029	2.50000	2.44
13 Chrysene	3.283	3.357	-0.074	76108	2.50000	2.48

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.763	3.857	-0.094	55930	2.50000	2.51
15 Benzo(k)Fluoranthene	3.997	4.098	-0.101	35300	2.50000	2.54
16 Benzo(a)Pyrene	4.177	4.277	-0.100	52929	2.50000	2.58
17 Dibenzo(a,h)Anthracene	4.470	4.571	-0.101	11474	2.50000	2.64
18 Benzo(g,h,i)Perylene	4.630	4.744	-0.114	17907	2.50000	2.41
19 Indeno(1,2,3-c,d)Pyrene	4.777	4.911	-0.134	39556	2.50000	2.49

Data File: /var/chem/hplc1.i/030603.b/h0004941.d
Date : 03-JUN-2003 08:11
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004952.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 10:58
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 05-Jun-2003 06:55 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

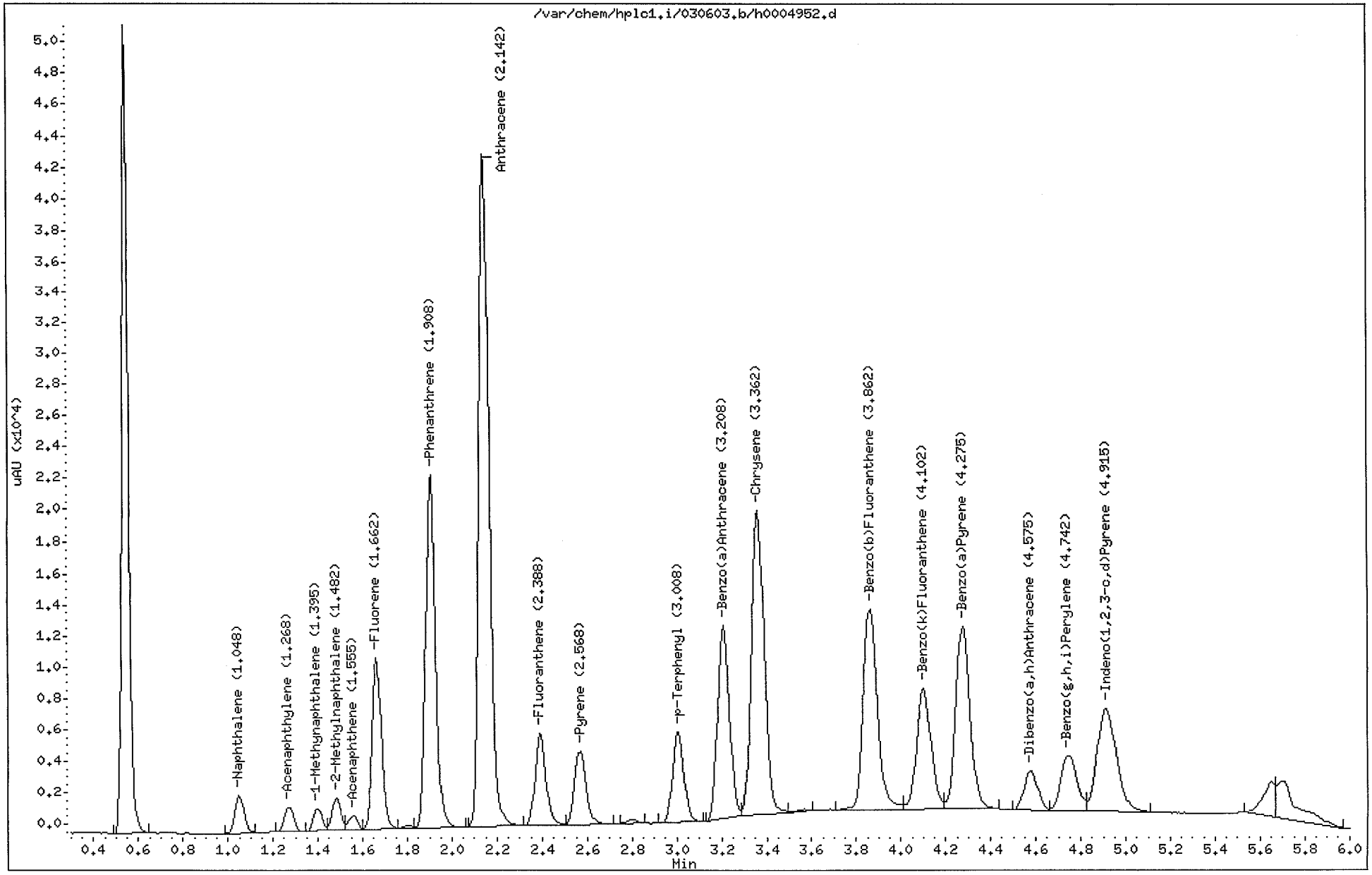
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.048	1.051	-0.003	6563	2.50000	2.33
2 Acenaphthylene	1.268	1.271	-0.003	4340	2.50000	2.30
3 1-Methynaphthalene	1.395	1.397	-0.002	3755	2.50000	2.34
4 2-Methylnaphthalene	1.482	1.484	-0.002	5378	2.50000	2.33
5 Acenaphthene	1.555	1.558	-0.003	2398	2.50000	2.30
6 Fluorene	1.662	1.664	-0.002	31829	2.50000	2.51
7 Phenanthrene	1.908	1.904	0.004	68362	2.50000	2.47
8 Anthracene	2.142	2.144	-0.002	136446	2.50000	2.52
9 Fluoranthene	2.388	2.391	-0.003	19568	2.50000	2.50
10 Pyrene	2.568	2.564	0.004	16644	2.50000	2.51
$ 11 p-Terphenyl	3.008	3.004	0.004	19886	2.50000	2.50
12 Benzo(a)Anthracene	3.208	3.204	0.004	45218	2.50000	2.45
13 Chrysene	3.362	3.357	0.005	76353	2.50000	2.49

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.862	3.857	0.005	56845	2.50000	2.56
15 Benzo(k)Fluoranthene	4.102	4.098	0.004	34975	2.50000	2.51
16 Benzo(a)Pyrene	4.275	4.277	-0.002	51539	2.50000	2.51
17 Dibenzo(a,h)Anthracene	4.575	4.571	0.004	10549	2.50000	2.43
18 Benzo(g,h,i)Perylene	4.742	4.744	-0.002	17405	2.50000	2.34
19 Indeno(1,2,3-c,d)Pyrene	4.915	4.911	0.004	39177	2.50000	2.47

000334

Data File: /var/chem/hplc1.i/030603.b/h0004952.d
Date : 03-JUN-2003 10:58
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004956.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 12:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 05-Jun-2003 06:55 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

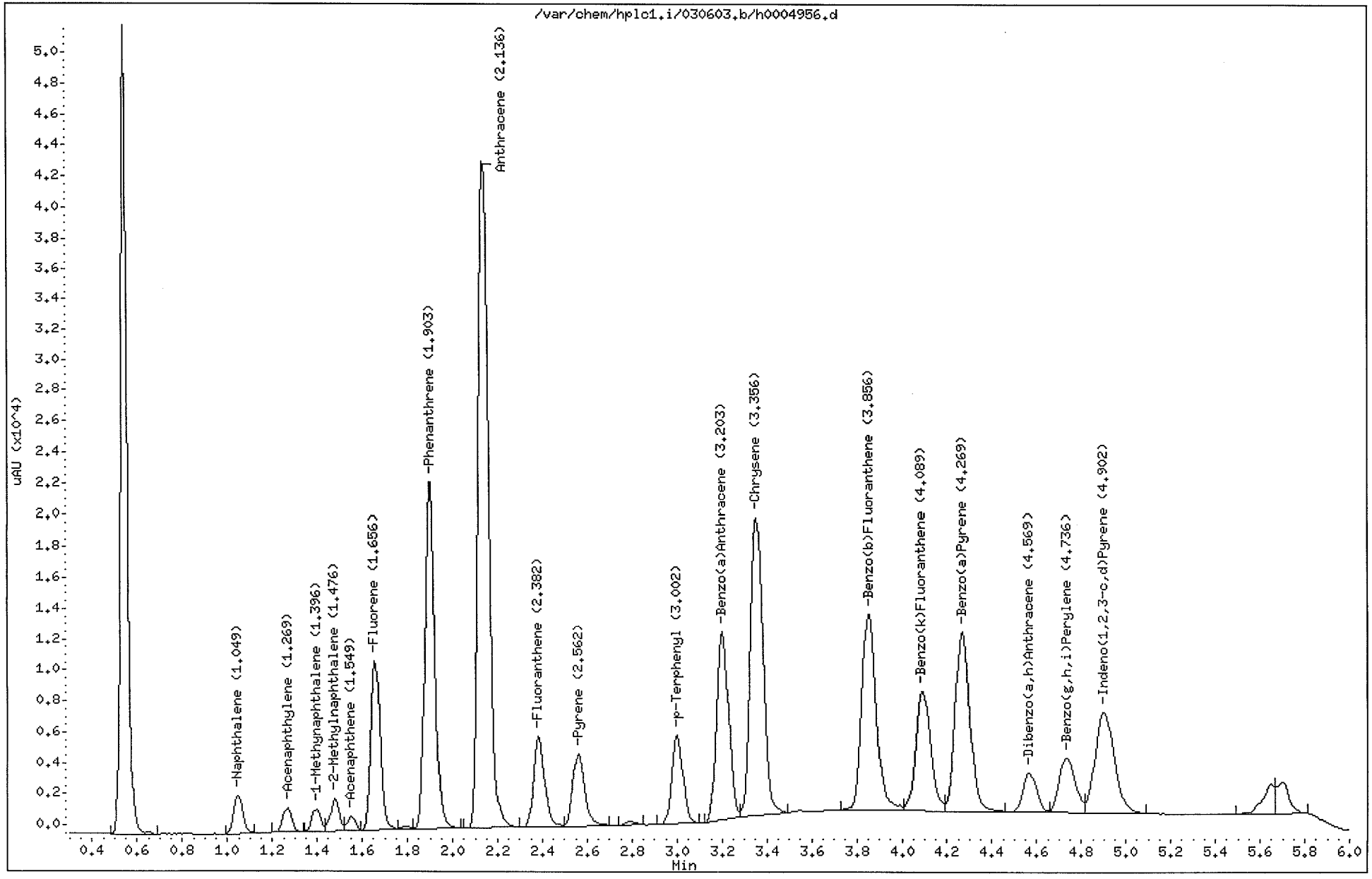
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.049	1.051	-0.002	6569	2.50000	2.33
2 Acenaphthylene	1.269	1.271	-0.002	4316	2.50000	2.29
3 1-Methynaphthalene	1.396	1.397	-0.001	3769	2.50000	2.35
4 2-Methylnaphthalene	1.476	1.484	-0.008	5600	2.50000	2.42
5 Acenaphthene	1.549	1.558	-0.009	2293	2.50000	2.20
6 Fluorene	1.656	1.664	-0.008	31620	2.50000	2.50
7 Phenanthrene	1.903	1.904	-0.001	68349	2.50000	2.47
8 Anthracene	2.136	2.144	-0.008	136838	2.50000	2.53
9 Fluoranthene	2.382	2.391	-0.009	19806	2.50000	2.53
10 Pyrene	2.562	2.564	-0.002	17032	2.50000	2.56
$ 11 p-Terphenyl	3.002	3.004	-0.002	19816	2.50000	2.49
12 Benzo(a)Anthracene	3.203	3.204	-0.001	45234	2.50000	2.45
13 Chrysene	3.356	3.357	-0.001	76389	2.50000	2.49

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
14 Benzo(b)Fluoranthene	3.856	3.857	-0.001	56961	2.50000	2.56
15 Benzo(k)Fluoranthene	4.089	4.098	-0.009	35389	2.50000	2.54
16 Benzo(a)Pyrene	4.269	4.277	-0.008	52644	2.50000	2.57
17 Dibenzo(a,h)Anthracene	4.569	4.571	-0.002	10824	2.50000	2.49
18 Benzo(g,h,i)Perylene	4.736	4.744	-0.008	17649	2.50000	2.37
19 Indeno(1,2,3-c,d)Pyrene	4.902	4.911	-0.009	39118	2.50000	2.46

000337

Data File: /var/chem/hplc1.i/030603.b/h0004956.d
Date : 03-JUN-2003 12:11
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004600.d
Lab Smp Id: 0311STD01 Client Smp ID: 0311STD01
Inj Date : 12-MAR-2003 15:44
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD01
Misc Info : 3-40-15
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:44 Cal File: h0004600.d
Als bottle: 1 Calibration Sample, Level: 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	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
7 Phenanthrene	1.920	1.927	-0.007	2122	0.10000	0.105(M)
8 Anthracene	2.153	2.143	0.010	647	0.10000	0.101(M)
9 Fluoranthene	2.397	2.383	0.014	692	0.10000	0.109(M)
10 Pyrene	2.577	2.590	-0.013	4229	0.10000	0.103(M)
$ 11 p-Terphenyl	3.007	2.987	0.020	908	0.10000	0.0804(M)
12 Benzo(a)Anthracene	3.203	3.207	-0.004	3218	0.10000	0.0942(M)
13 Chrysene	3.347	3.327	0.020	246	0.10000	0.103(M)
14 Benzo(b)Fluoranthene	3.840	3.837	0.003	3025	0.10000	0.102
15 Benzo(k)Fluoranthene	4.073	4.083	-0.010	7181	0.10000	0.106
16 Benzo(a)Pyrene	4.253	4.260	-0.007	5980	0.10000	0.103
17 Dibenzo(a,h)Anthracene	4.547	4.533	0.014	2149	0.10000	0.0991(M)
18 Benzo(g,h,i)Perylene	4.720	4.690	0.030	1706	0.10000	0.0956(M)
19 Indeno(1,2,3-c,d)Pyrene	4.877	4.833	0.044	538	0.10000	0.0946(M)

QC Flag Legend

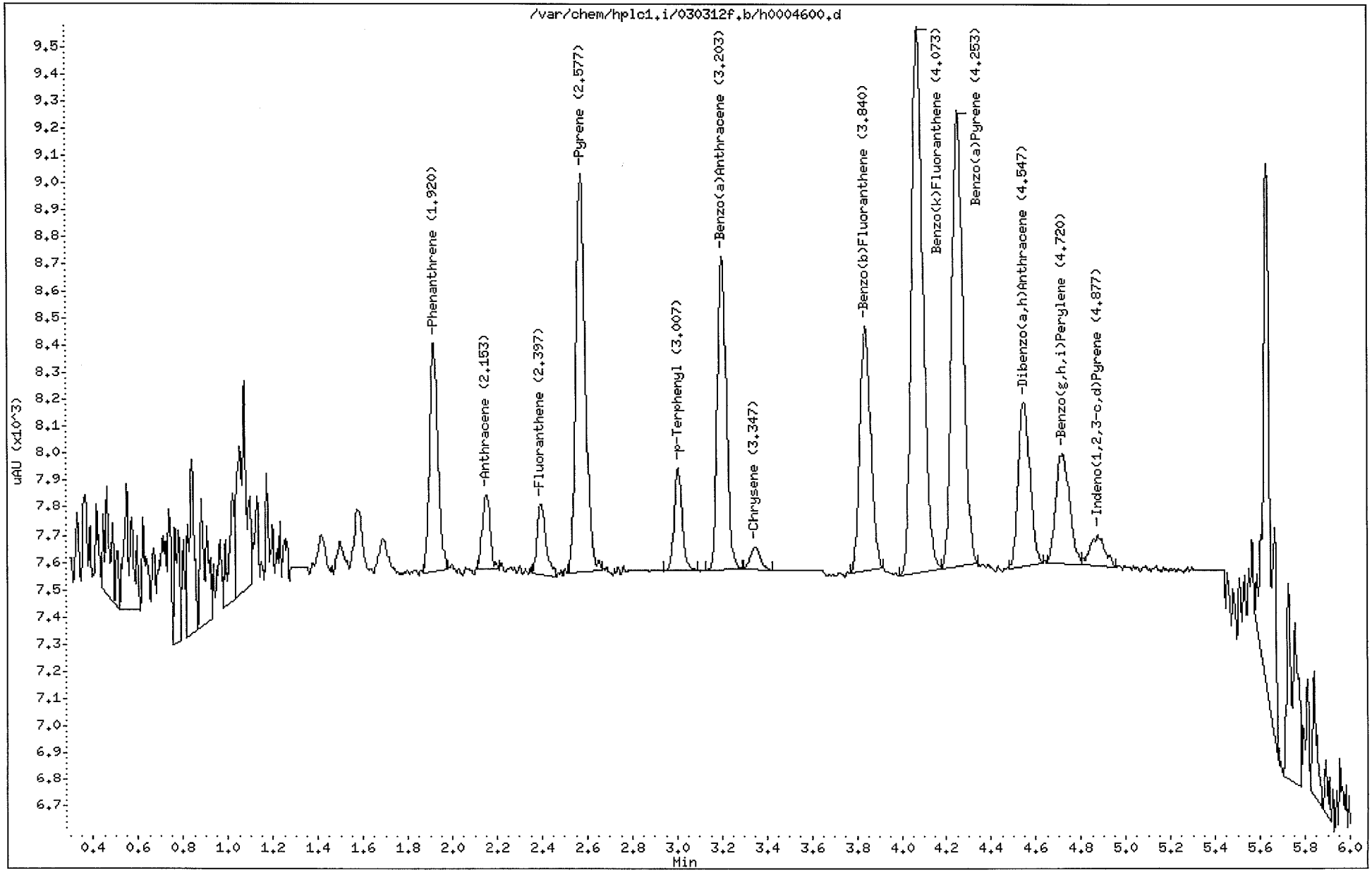
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312f.b/h0004600.d
Date : 12-MAR-2003 15:44
Client ID: 0311STD01
Sample Info: 0311STD01
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000340



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004599.d
Lab Smp Id: 0311STD02 Client Smp ID: 0311STD02
Inj Date : 12-MAR-2003 15:37
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD02
Misc Info : 3-40-14
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:37 Cal File: h0004599.d
Als bottle: 1 Calibration Sample, Level: 2
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	1.073	1.073	0.000	3132	0.25000	0.235(M)
7 Phenanthrene	1.917	1.927	-0.010	5270	0.25000	0.260
8 Anthracene	2.153	2.143	0.010	1752	0.25000	0.274
9 Fluoranthene	2.393	2.383	0.010	1594	0.25000	0.250
10 Pyrene	2.570	2.590	-0.020	10406	0.25000	0.253
$ 11 p-Terphenyl	3.000	2.987	0.013	2587	0.25000	0.229
12 Benzo(a)Anthracene	3.197	3.207	-0.010	8710	0.25000	0.255
13 Chrysene	3.343	3.327	0.016	694	0.25000	0.217
14 Benzo(b)Fluoranthene	3.833	3.837	-0.004	7514	0.25000	0.253
15 Benzo(k)Fluoranthene	4.063	4.083	-0.020	17500	0.25000	0.258
16 Benzo(a)Pyrene	4.243	4.260	-0.017	14877	0.25000	0.256
17 Dibenzo(a,h)Anthracene	4.537	4.533	0.004	5489	0.25000	0.253
18 Benzo(g,h,i)Perylene	4.710	4.690	0.020	4393	0.25000	0.246(M)

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	4.850	4.833	0.017	1362	0.25000	0.240(M)

QC Flag Legend

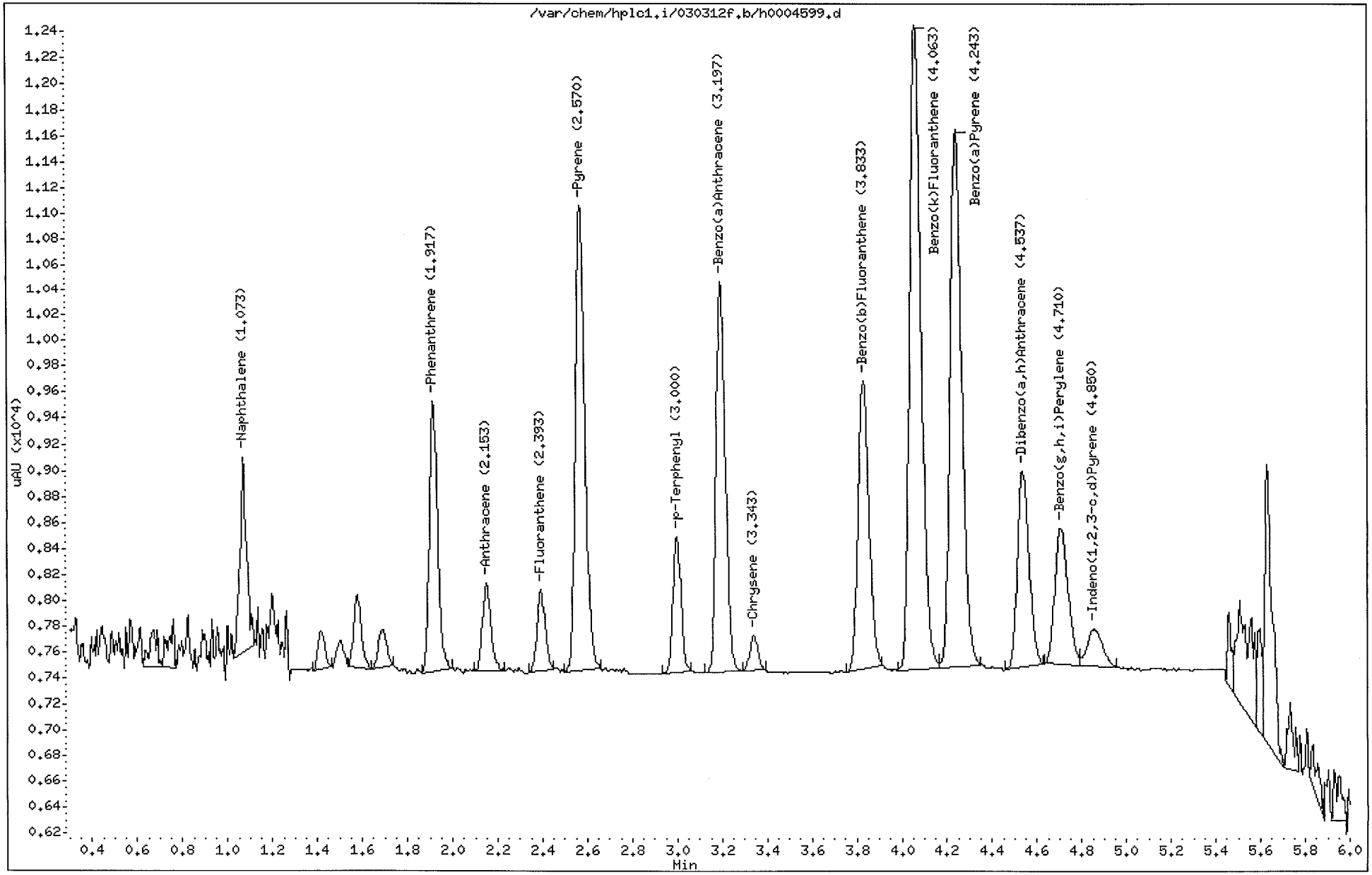
M - Compound response manually integrated.

000343

Data File: /var/chem/hplc1.i/030312f.b/h0004599.d
Date : 12-MAR-2003 15:37
Client ID: 0311STD02
Sample Info: 0311STD02
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004598.d
Lab Smp Id: 0311STD03 Client Smp ID: 0311STD03
Inj Date : 12-MAR-2003 15:30
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD03
Misc Info : 3-40-13
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.d
Als bottle: 1 Calibration Sample, Level: 3
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	1.063	1.073	-0.010	7683	0.50000	0.576
3 1-Methynaphthalene	1.413	1.417	-0.004	1444	0.50000	0.497(M)
4 2-Methylnaphthalene	1.497	1.500	-0.003	1198	0.50000	0.510(M)
5 Acenaphthene	1.573	1.577	-0.004	2941	0.50000	0.520(M)
7 Phenanthrene	1.910	1.927	-0.017	10275	0.50000	0.508
8 Anthracene	2.143	2.143	0.000	3409	0.50000	0.532
9 Fluoranthene	2.387	2.383	0.004	3378	0.50000	0.530
10 Pyrene	2.563	2.590	-0.027	20868	0.50000	0.507
$ 11 p-Terphenyl	2.990	2.987	0.003	5658	0.50000	0.501
12 Benzo(a)Anthracene	3.187	3.207	-0.020	17791	0.50000	0.521
13 Chrysene	3.330	3.327	0.003	1810	0.50000	0.497
14 Benzo(b)Fluoranthene	3.820	3.837	-0.017	15291	0.50000	0.515
15 Benzo(k)Fluoranthene	4.053	4.083	-0.030	34592	0.50000	0.510

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.233	4.260	-0.027	29450	0.50000	0.507
17 Dibenzo(a,h)Anthracene	4.527	4.533	-0.006	11267	0.50000	0.520(M)
18 Benzo(g,h,i)Perylene	4.697	4.690	0.007	9463	0.50000	0.530(M)
19 Indeno(1,2,3-c,d)Pyrene	4.840	4.833	0.007	2886	0.50000	0.508(M)

QC Flag Legend

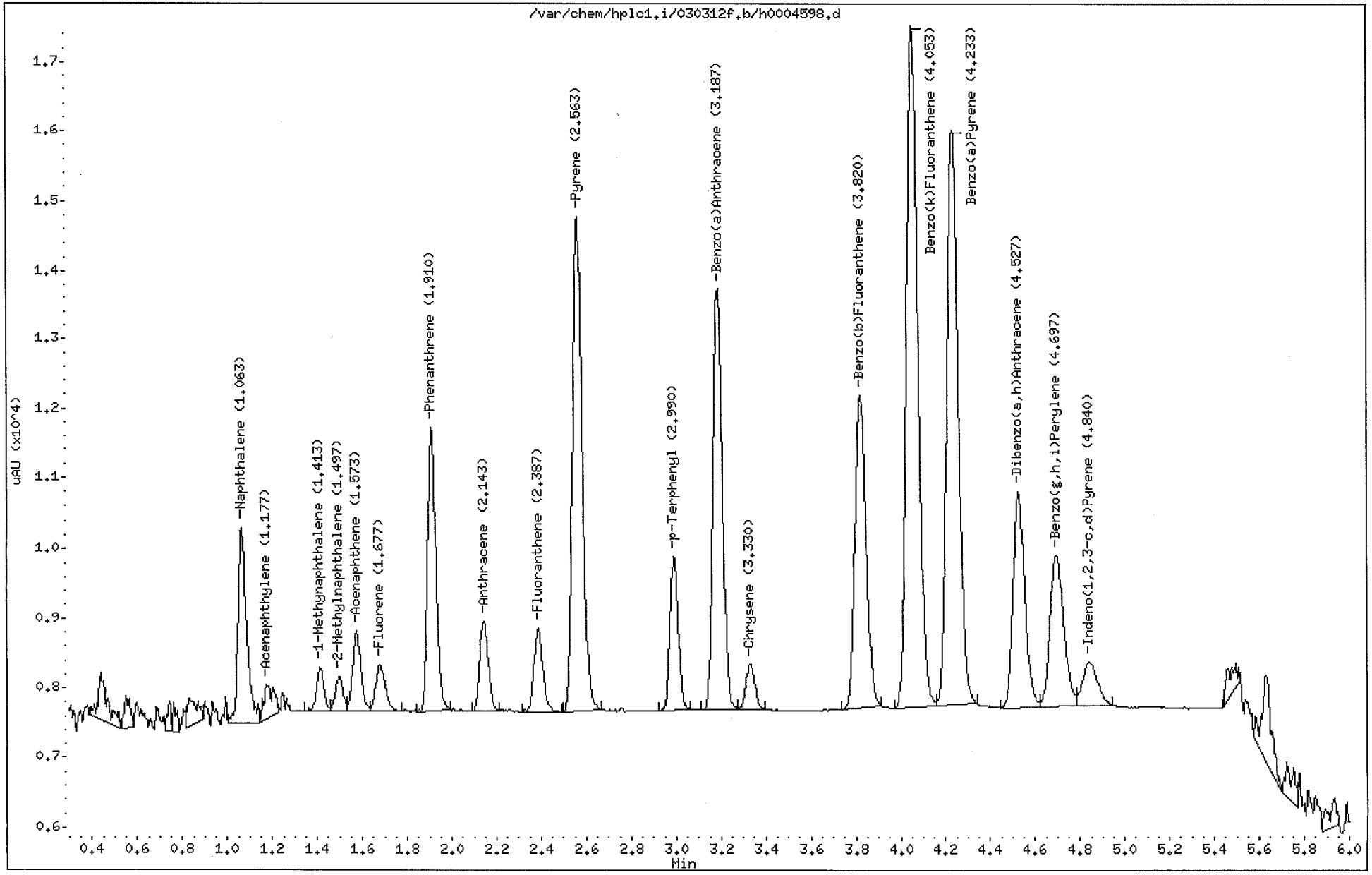
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312f.b/h0004598.d
Date : 12-MAR-2003 15:30
Client ID: 0311STD03
Sample Info: 0311STD03
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000346



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004597.d
Lab Smp Id: 0311STD04 Client Smp ID: 0311STD04
Inj Date : 12-MAR-2003 15:23
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD04
Misc Info : 3-40-12
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:23 Cal File: h0004597.d
Als bottle: 1 Calibration Sample, Level: 4
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	1.063	1.073	-0.010	13585	1.00000	1.02
3 1-Methynaphthalene	1.410	1.417	-0.007	2969	1.00000	1.02(M)
4 2-Methylnaphthalene	1.493	1.500	-0.007	2515	1.00000	1.07(M)
5 Acenaphthene	1.570	1.577	-0.007	5910	1.00000	1.04(M)
7 Phenanthrene	1.900	1.927	-0.027	20561	1.00000	1.02
8 Anthracene	2.127	2.143	-0.016	6662	1.00000	1.04
9 Fluoranthene	2.367	2.383	-0.016	6602	1.00000	1.04
10 Pyrene	2.540	2.590	-0.050	42924	1.00000	1.04
$ 11 p-Terphenyl	2.960	2.987	-0.027	11723	1.00000	1.04
12 Benzo(a)Anthracene	3.150	3.207	-0.057	36166	1.00000	1.06
13 Chrysene	3.290	3.327	-0.037	4092	1.00000	1.06
14 Benzo(b)Fluoranthene	3.770	3.837	-0.067	30288	1.00000	1.02
15 Benzo(k)Fluoranthene	3.997	4.083	-0.086	68343	1.00000	1.01

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.177	4.260	-0.083	59110	1.00000	1.02
17 Dibenzo(a,h)Anthracene	4.470	4.533	-0.063	22377	1.00000	1.03
18 Benzo(g,h,i)Perylene	4.637	4.690	-0.053	18874	1.00000	1.06
19 Indeno(1,2,3-c,d)Pyrene	4.773	4.833	-0.060	5893	1.00000	1.04

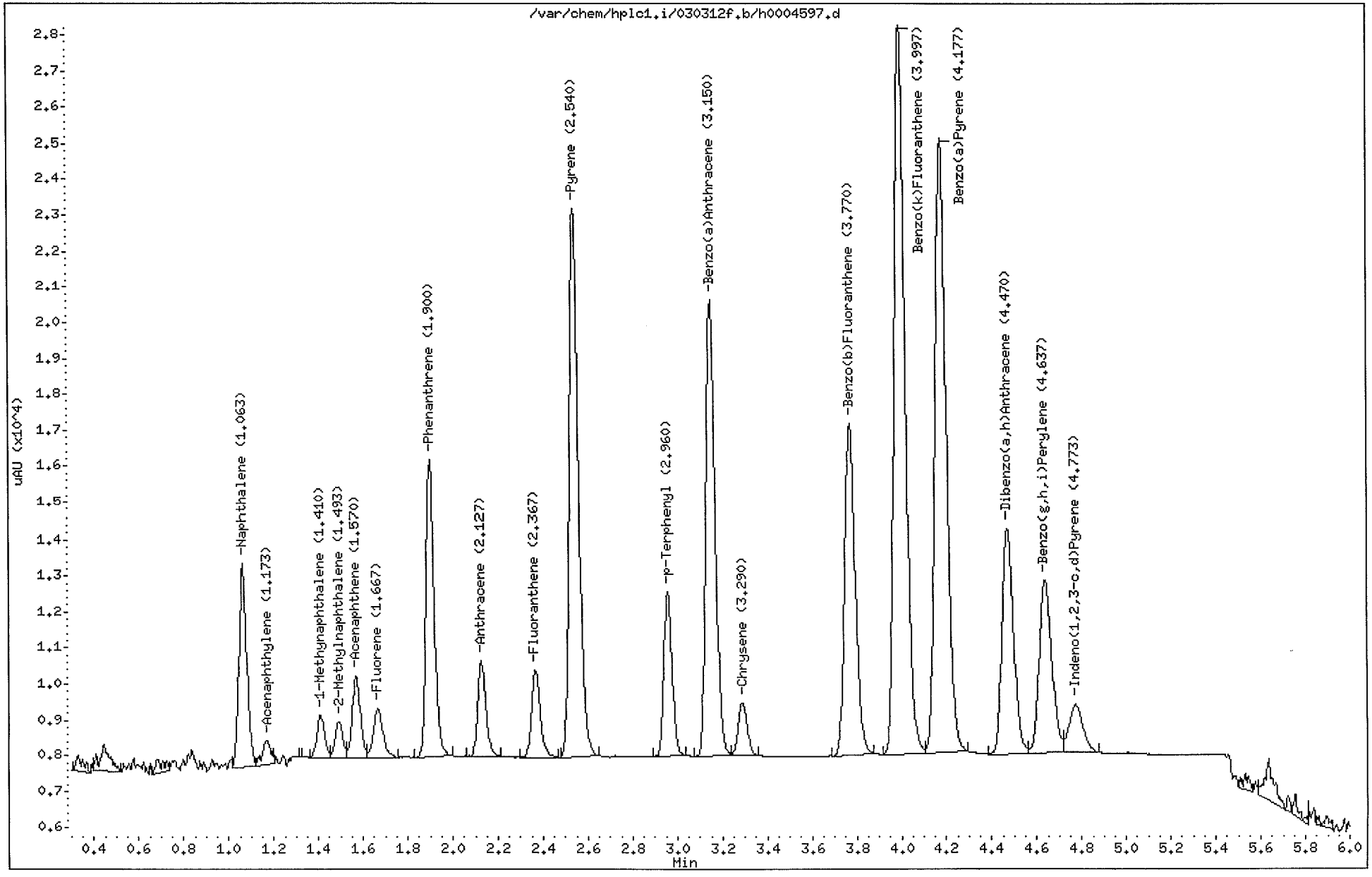
QC Flag Legend

M - Compound response manually integrated.

000349

Data File: /var/chem/hplc1.i/030312f.b/h0004597.d
Date : 12-MAR-2003 15:23
Client ID: 0311STD04
Sample Info: 0311STD04
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004601.d
Lab Smp Id: 0312STD05 Client Smp ID: 0312STD05
Inj Date : 12-MAR-2003 15:51
Operator : jdt Inst ID: hplc1.i
Smp Info : 0312STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.d
Als bottle: 1 Calibration Sample, Level: 5
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	1.067	1.073	-0.006	31462	2.50000	2.36(M)
3 1-Methynaphthalene	1.413	1.417	-0.004	7957	2.50000	2.74
4 2-Methylnaphthalene	1.497	1.500	-0.003	5805	2.50000	2.47
5 Acenaphthene	1.573	1.577	-0.004	13721	2.50000	2.42
7 Phenanthrene	1.910	1.927	-0.017	46613	2.50000	2.30
8 Anthracene	2.137	2.143	-0.006	15260	2.50000	2.38
9 Fluoranthene	2.380	2.383	-0.003	14957	2.50000	2.35
10 Pyrene	2.553	2.590	-0.037	93147	2.50000	2.26
$ 11 p-Terphenyl	2.973	2.987	-0.014	28136	2.50000	2.49
12 Benzo(a)Anthracene	3.163	3.207	-0.044	82707	2.50000	2.42
13 Chrysene	3.303	3.327	-0.024	10156	2.50000	2.47
14 Benzo(b)Fluoranthene	3.780	3.837	-0.057	70422	2.50000	2.37
15 Benzo(k)Fluoranthene	4.003	4.083	-0.080	157561	2.50000	2.32

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.180	4.260	-0.080	135249	2.50000	2.33
17 Dibenzo(a,h)Anthracene	4.467	4.533	-0.066	50907	2.50000	2.35
18 Benzo(g,h,i)Perylene	4.630	4.690	-0.060	41906	2.50000	2.35
19 Indeno(1,2,3-c,d)Pyrene	4.760	4.833	-0.073	13973	2.50000	2.46

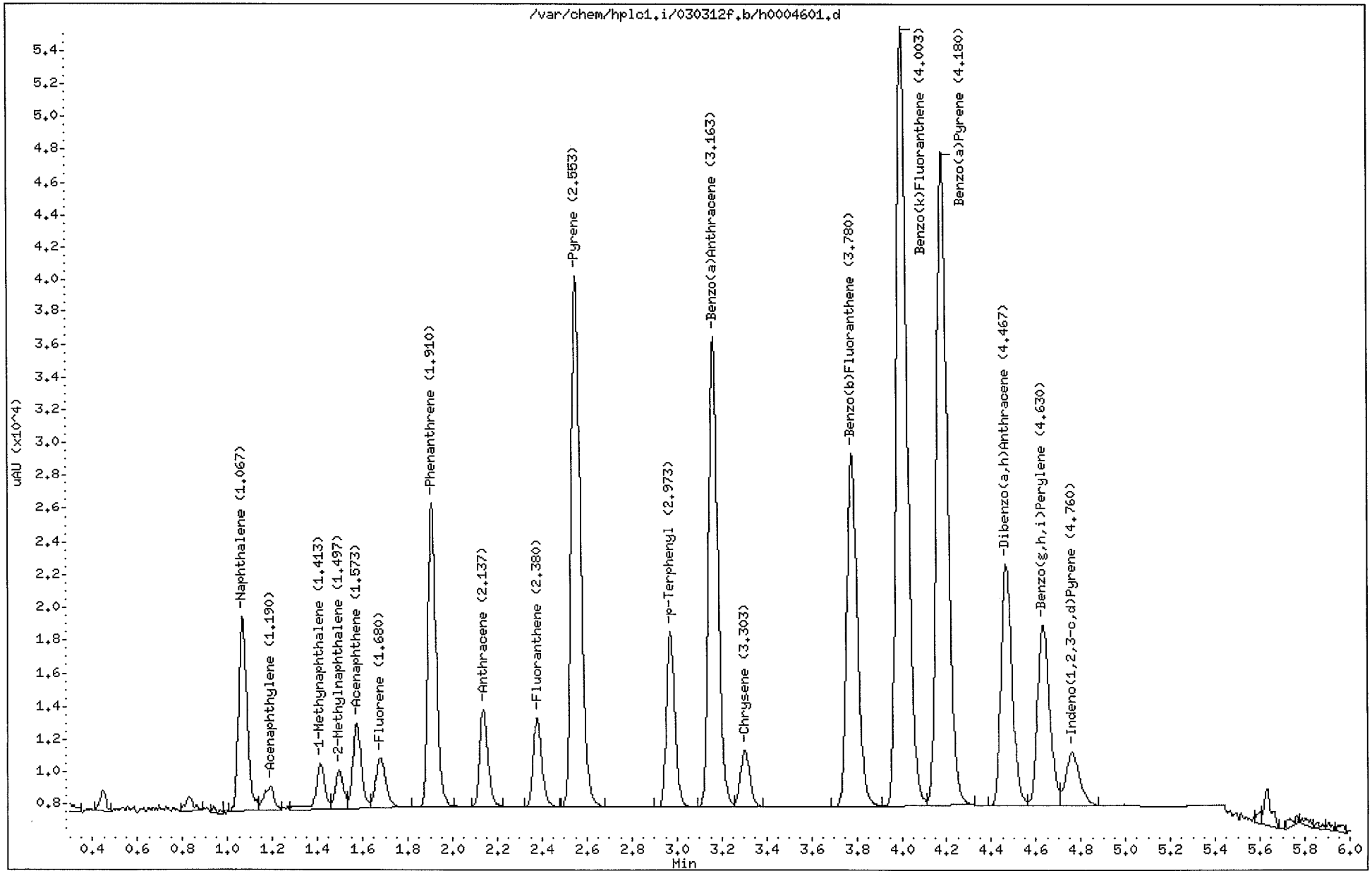
QC Flag Legend

M - Compound response manually integrated.

000352

Data File: /var/chem/hplc1.i/030312f.b/h0004601.d
Date : 12-MAR-2003 15:51
Client ID: 0312STD05
Sample Info: 0312STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004596.d
Lab Smp Id: 0311STD06 Client Smp ID: 0311STD06
Inj Date : 12-MAR-2003 15:17
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD06
Misc Info : 3-40-10
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:17 Cal File: h0004596.d
Als bottle: 1 Calibration Sample, Level: 6
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	1.073	1.073	0.000	66811	5.00000	5.01
3 1-Methynaphthalene	1.420	1.417	0.003	13916	5.00000	4.79
4 2-Methylnaphthalene	1.503	1.500	0.003	11266	5.00000	4.79
5 Acenaphthene	1.580	1.577	0.003	27825	5.00000	4.92
7 Phenanthrene	1.920	1.927	-0.007	99130	5.00000	4.90
8 Anthracene	2.157	2.143	0.014	31297	5.00000	4.89
9 Fluoranthene	2.400	2.383	0.017	30943	5.00000	4.85
10 Pyrene	2.577	2.590	-0.013	211611	5.00000	5.14
$ 11 p-Terphenyl	3.007	2.987	0.020	58169	5.00000	5.15
12 Benzo(a)Anthracene	3.203	3.207	-0.004	175014	5.00000	5.12
13 Chrysene	3.350	3.327	0.023	22586	5.00000	5.00
14 Benzo(b)Fluoranthene	3.840	3.837	0.003	146748	5.00000	4.94
15 Benzo(k)Fluoranthene	4.073	4.083	-0.010	324574	5.00000	4.78

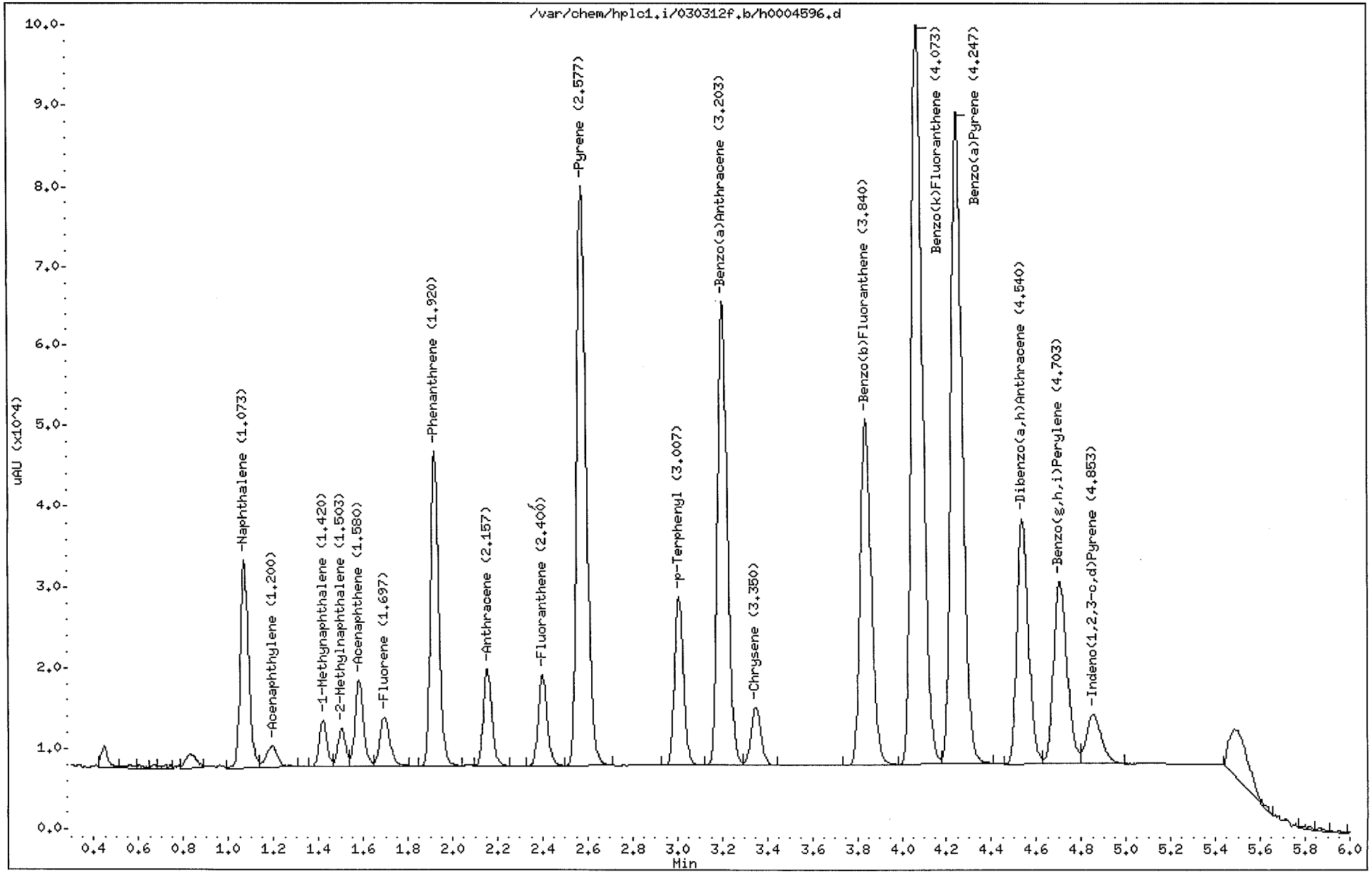
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.247	4.260	-0.013	286934	5.00000	4.94
17 Dibenzo(a,h)Anthracene	4.540	4.533	0.007	107588	5.00000	4.96
18 Benzo(g,h,i)Perylene	4.703	4.690	0.013	95058	5.00000	5.33
19 Indeno(1,2,3-c,d)Pyrene	4.853	4.833	0.020	28947	5.00000	5.09

Data File: /var/chem/hplc1.i/030312f.b/h0004596.d
Date : 12-MAR-2003 15:17
Client ID: 0311STD06
Sample Info: 0311STD06
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000355



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004595.d
Lab Smp Id: 0311STD07 Client Smp ID: 0311STD07
Inj Date : 12-MAR-2003 15:10
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD07
Misc Info : 3-40-9
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:10 Cal File: h0004595.d
Als bottle: 1 Calibration Sample, Level: 7
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	1.067	1.073	-0.006	130109	10.0000	9.76
3 1-Methynaphthalene	1.417	1.417	0.000	27650	10.0000	9.52
4 2-Methylnaphthalene	1.500	1.500	0.000	22781	10.0000	9.69
5 Acenaphthene	1.577	1.577	0.000	55166	10.0000	9.75
7 Phenanthrene	1.917	1.927	-0.010	197913	10.0000	9.78
8 Anthracene	2.150	2.143	0.007	60554	10.0000	9.46
9 Fluoranthene	2.393	2.383	0.010	61382	10.0000	9.63
10 Pyrene	2.583	2.590	-0.007	354209	10.0000	8.60
$ 11 p-Terphenyl	2.997	2.987	0.010	115174	10.0000	10.2
12 Benzo(a)Anthracene	3.203	3.207	-0.004	323184	10.0000	9.46
13 Chrysene	3.340	3.327	0.013	46092	10.0000	8.48
14 Benzo(b)Fluoranthene	3.830	3.837	-0.007	291313	10.0000	9.81
15 Benzo(k)Fluoranthene	4.090	4.083	0.007	460913	10.0000	6.79

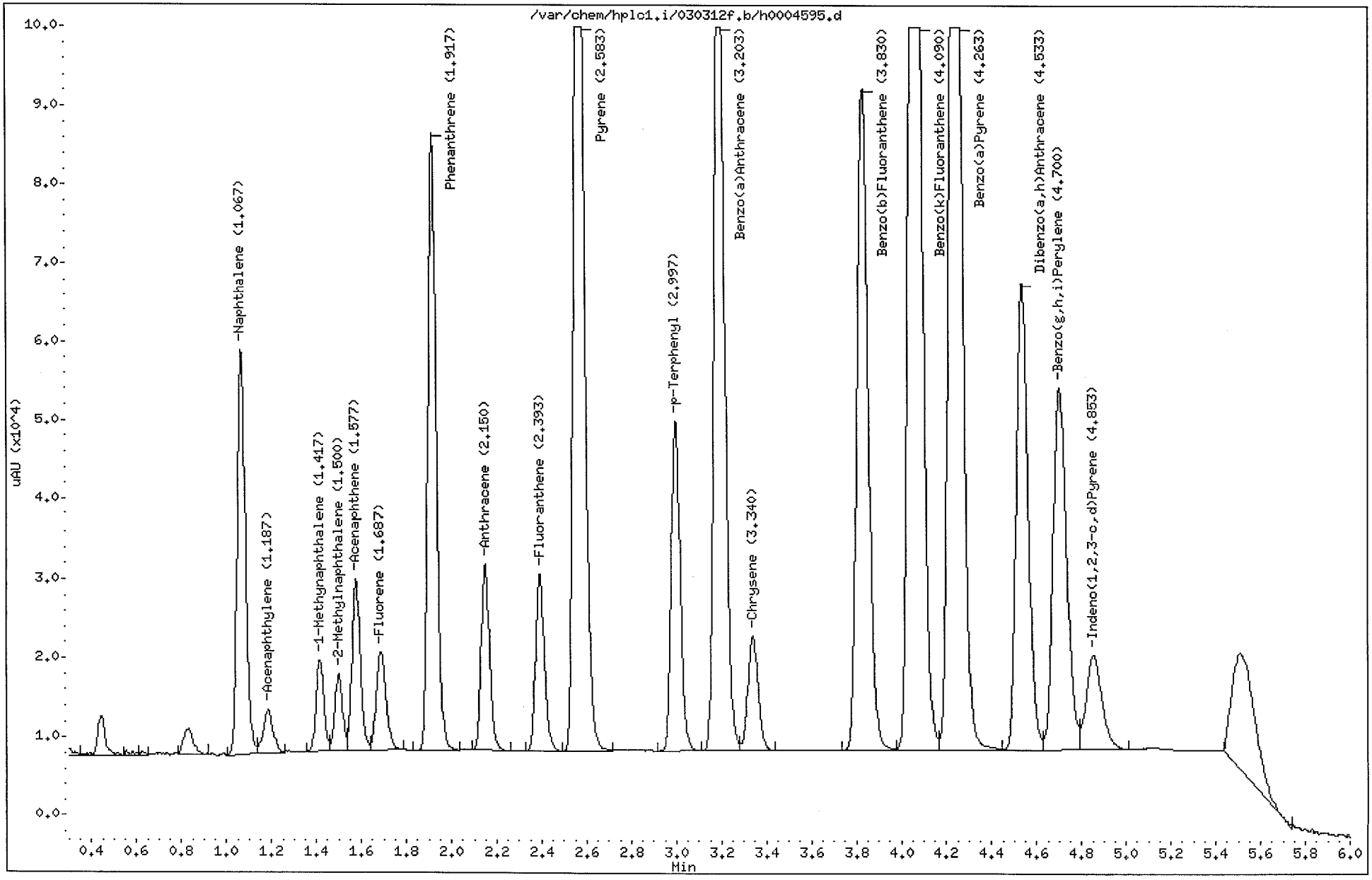
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.263	4.260	0.003	448317	10.0000	7.71
17 Dibenzo(a,h)Anthracene	4.533	4.533	0.000	215388	10.0000	9.93
18 Benzo(g,h,i)Perylene	4.700	4.690	0.010	194668	10.0000	10.9
19 Indeno(1,2,3-c,d)Pyrene	4.853	4.833	0.020	58425	10.0000	10.3

Data File: /var/chem/hplc1.i/030312f.b/h0004595.d
Date : 12-MAR-2003 15:10
Client ID: 0311STD07
Sample Info: 0311STD07
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000358



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004594.d
Lab Smp Id: 0311STD08 Client Smp ID: 0311STD08
Inj Date : 12-MAR-2003 15:03
Operator : jdt Inst ID: hplc1.i
Smp Info : 0311STD08
Misc Info : 3-40-8
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:03 Cal File: h0004594.d
Als bottle: 1 Calibration Sample, Level: 8
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	1.073	1.073	0.000	258128	20.0000	19.4
3 1-Methynaphthalene	1.417	1.417	0.000	56784	20.0000	19.6
4 2-Methylnaphthalene	1.500	1.500	0.000	46740	20.0000	19.9
5 Acenaphthene	1.577	1.577	0.000	112035	20.0000	19.8
7 Phenanthrene	1.927	1.927	0.000	315739	20.0000	15.6
8 Anthracene	2.143	2.143	0.000	117119	20.0000	18.3
9 Fluoranthene	2.383	2.383	0.000	120811	20.0000	18.9
10 Pyrene	2.590	2.590	0.000	454530	20.0000	11.0
$ 11 p-Terphenyl	2.987	2.987	0.000	224975	20.0000	19.9
12 Benzo(a)Anthracene	3.207	3.207	0.000	424467	20.0000	12.4
13 Chrysene	3.327	3.327	0.000	93420	20.0000	10.2
14 Benzo(b)Fluoranthene	3.837	3.837	0.000	435625	20.0000	14.7
15 Benzo(k)Fluoranthene	4.083	4.083	0.000	555997	20.0000	8.19

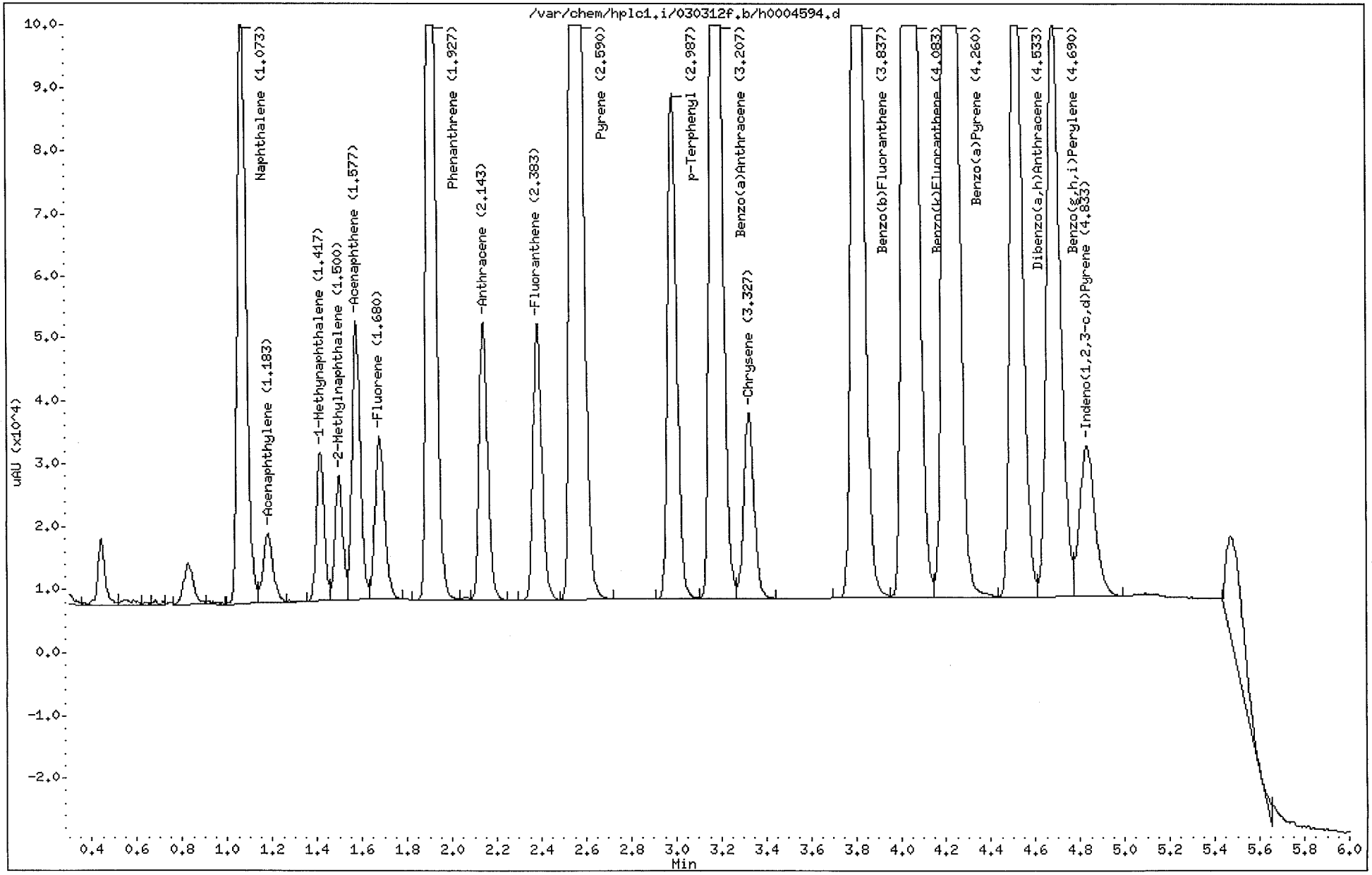
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.260	4.260	0.000	557114	20.0000	9.58
17 Dibenzo(a,h)Anthracene	4.533	4.533	0.000	392064	20.0000	18.1
18 Benzo(g,h,i)Perylene	4.690	4.690	0.000	393950	20.0000	22.1
19 Indeno(1,2,3-c,d)Pyrene	4.833	4.833	0.000	115279	20.0000	20.3

Data File: /var/chem/hplc1.i/030312f.b/h0004594.d
Date : 12-MAR-2003 15:03
Client ID: 0311STD08
Sample Info: 0311STD08
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000361



Gulf Coast Analytical Laboratories, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 0312PNAICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/030312f.b/flpnafld.m
Misc Info: 3-40-16

Client SDG:
Fraction: OTHER
Client Smp ID: 0312PNAICV
Operator: jdt
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	5.00	4.34	86.80	70-130
3 1-Methynaphthalene	10.0	9.12	91.16	70-130
4 2-Methylnaphthalen	10.0	8.84	88.41	70-130
5 Acenaphthene	10.0	8.59	85.94	70-130
7 Phenanthrene	0.400	0.367	91.83	70-130
8 Anthracene	0.200	0.185	92.36	70-130
9 Fluoranthene	0.500	0.458	91.54	70-130
10 Pyrene	1.00	0.859	85.88	70-130
12 Benzo(a)Anthracene	0.500	0.466	93.18	70-130
13 Chrysene	0.500	0.435	86.92	70-130
14 Benzo(b)Fluoranthe	0.200	0.179	89.29	70-130
15 Benzo(k)Fluoranthe	0.200	0.180	90.15	70-130
16 Benzo(a)Pyrene	0.500	0.439	87.78	70-130
17 Dibenzo(a,h)Anthra	2.00	1.86	93.23	70-130
18 Benzo(g,h,i)Peryle	0.800	0.755	94.38	70-130
19 Indeno(1,2,3-c,d)P	0.500	0.559	111.74	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	4.00	3.99	99.87	40-140

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030312f.b/h0004602.d
Lab Smp Id: 0312PNAICV Client Smp ID: 0312PNAICV
Inj Date : 12-MAR-2003 15:58
Operator : jdt Inst ID: hplc1.i
Smp Info : 0312PNAICV
Misc Info : 3-40-16
Comment :
Method : /var/chem/hplc1.i/030312f.b/flpnafld.m
Meth Date : 27-Mar-2003 14:25 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	1.067	1.073	-0.006	57873	4.34001	4.34
3 1-Methynaphthalene	1.417	1.417	0.000	26477	9.11575	9.12(M)
4 2-Methylnaphthalene	1.500	1.500	0.000	20778	8.84089	8.84(M)
5 Acenaphthene	1.577	1.577	0.000	48645	8.59357	8.59(M)
7 Phenanthrene	1.913	1.927	-0.014	7434	0.36731	0.367
8 Anthracene	2.140	2.143	-0.003	1183	0.18473	0.185
9 Fluoranthene	2.387	2.383	0.004	2918	0.45769	0.458
10 Pyrene	2.560	2.590	-0.030	35354	0.85880	0.859
$ 11 p-Terphenyl	2.987	2.987	0.000	45108	3.99482	3.99
12 Benzo(a)Anthracene	3.183	3.207	-0.024	15918	0.46588	0.466
13 Chrysene	3.330	3.327	0.003	1559	0.43460	0.435
14 Benzo(b)Fluoranthene	3.817	3.837	-0.020	5302	0.17858	0.179
15 Benzo(k)Fluoranthene	4.050	4.083	-0.033	12238	0.18029	0.180

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
16 Benzo(a)Pyrene	4.230	4.260	-0.030	25516	0.43892	0.439
17 Dibenzo(a,h)Anthracene	4.527	4.533	-0.006	40429	1.86461	1.86(M)
18 Benzo(g,h,i)Perylene	4.693	4.690	0.003	13469	0.75504	0.755(M)
19 Indeno(1,2,3-c,d)Pyrene	4.847	4.833	0.014	3176	0.55869	0.559(M)

QC Flag Legend

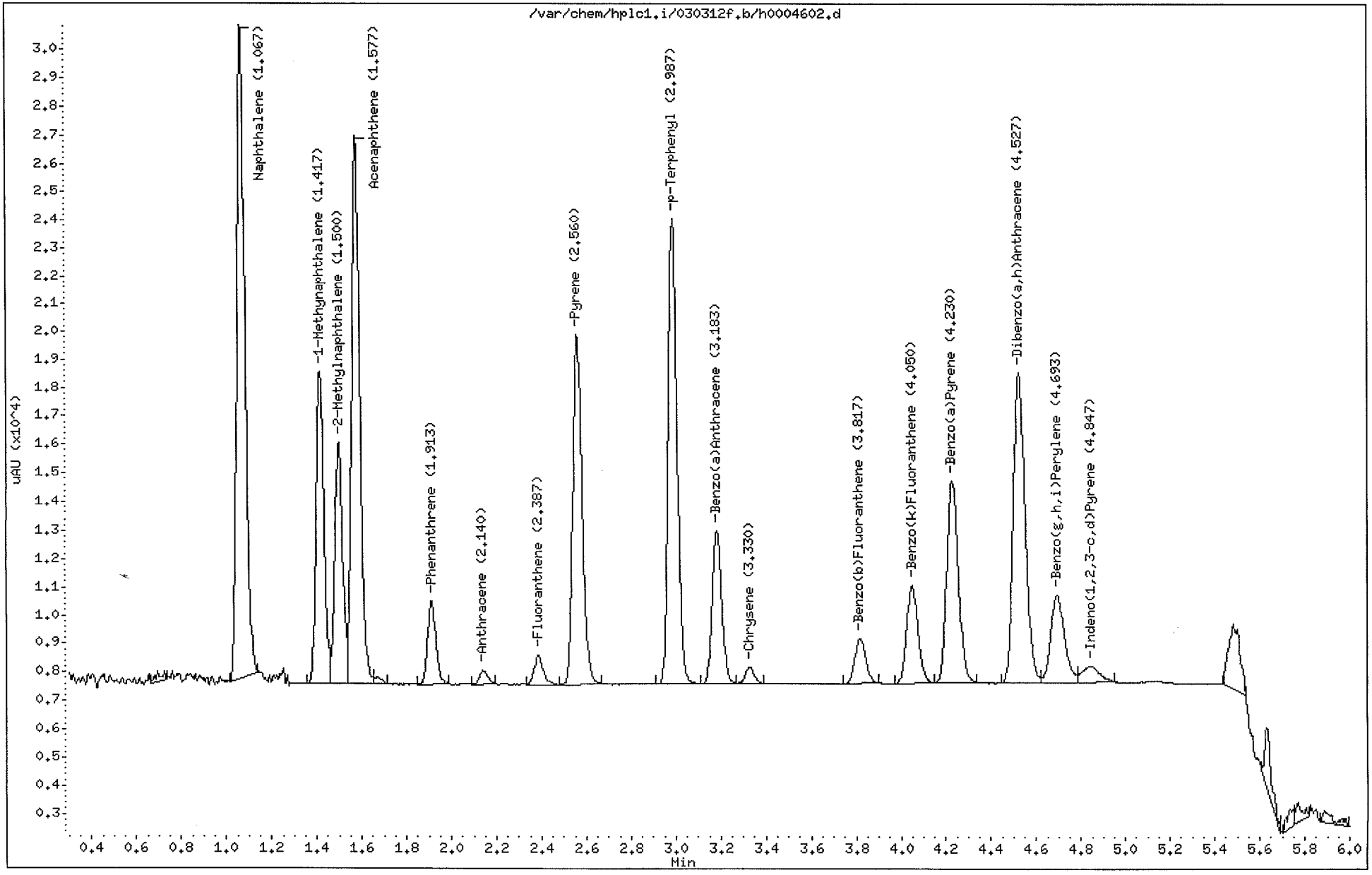
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030312f.b/h0004602.d
Date : 12-MAR-2003 15:58
Client ID: 0312PNAICV
Sample Info: 0312PNAICV
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000365



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004941.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 08:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 05-Jun-2003 06:56 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	1.060	1.063	-0.003	33324	2.50000	2.50
3 1-Methynaphthalene	1.403	1.410	-0.007	7792	2.50000	2.68
4 2-Methylnaphthalene	1.487	1.497	-0.010	5672	2.50000	2.41
5 Acenaphthene	1.563	1.570	-0.007	13440	2.50000	2.37
7 Phenanthrene	1.897	1.920	-0.023	50316	2.50000	2.49
8 Anthracene	2.123	2.157	-0.034	16868	2.50000	2.63
9 Fluoranthene	2.367	2.403	-0.036	17594	2.50000	2.76
10 Pyrene	2.537	2.580	-0.043	115203	2.50000	2.80
$ 11 p-Terphenyl	2.960	3.020	-0.060	28150	2.50000	2.49
12 Benzo(a)Anthracene	3.153	3.220	-0.067	92280	2.50000	2.70
13 Chrysene	3.293	3.373	-0.080	11331	2.50000	2.73
14 Benzo(b)Fluoranthene	3.780	3.873	-0.093	72866	2.50000	2.45
15 Benzo(k)Fluoranthene	4.010	4.113	-0.103	159469	2.50000	2.35

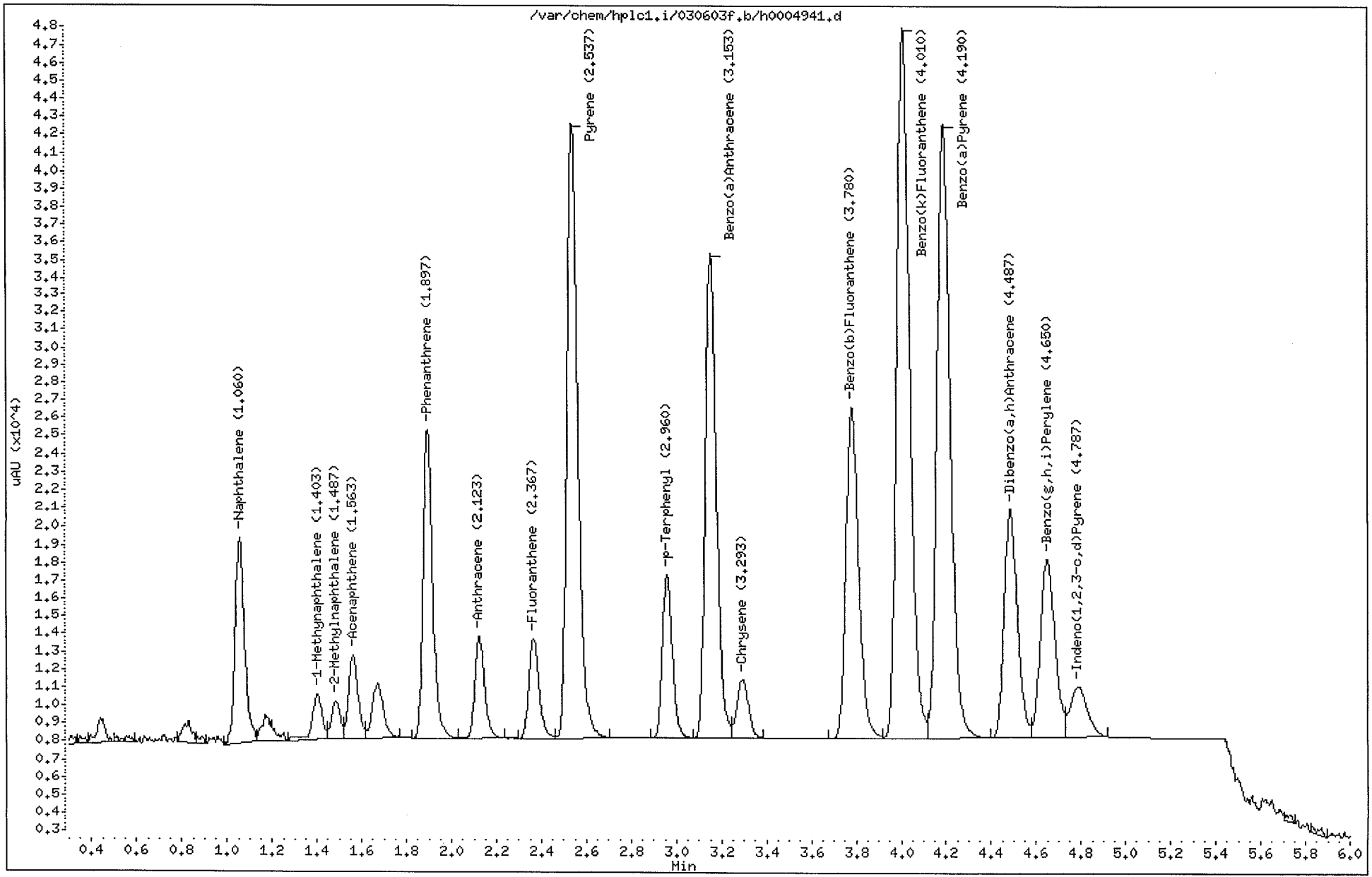
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.190	4.290	-0.100	141018	2.50000	2.43
17 Dibenzo(a,h)Anthracene	4.487	4.590	-0.103	52108	2.50000	2.40
18 Benzo(g,h,i)Perylene	4.650	4.757	-0.107	45401	2.50000	2.55
19 Indeno(1,2,3-c,d)Pyrene	4.787	4.923	-0.136	14477	2.50000	2.55

Data File: /var/chem/hplc1.i/030603f.b/h0004941.d
Date : 03-JUN-2003 08:11
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000368



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004952.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 10:58
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 05-Jun-2003 06:56 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

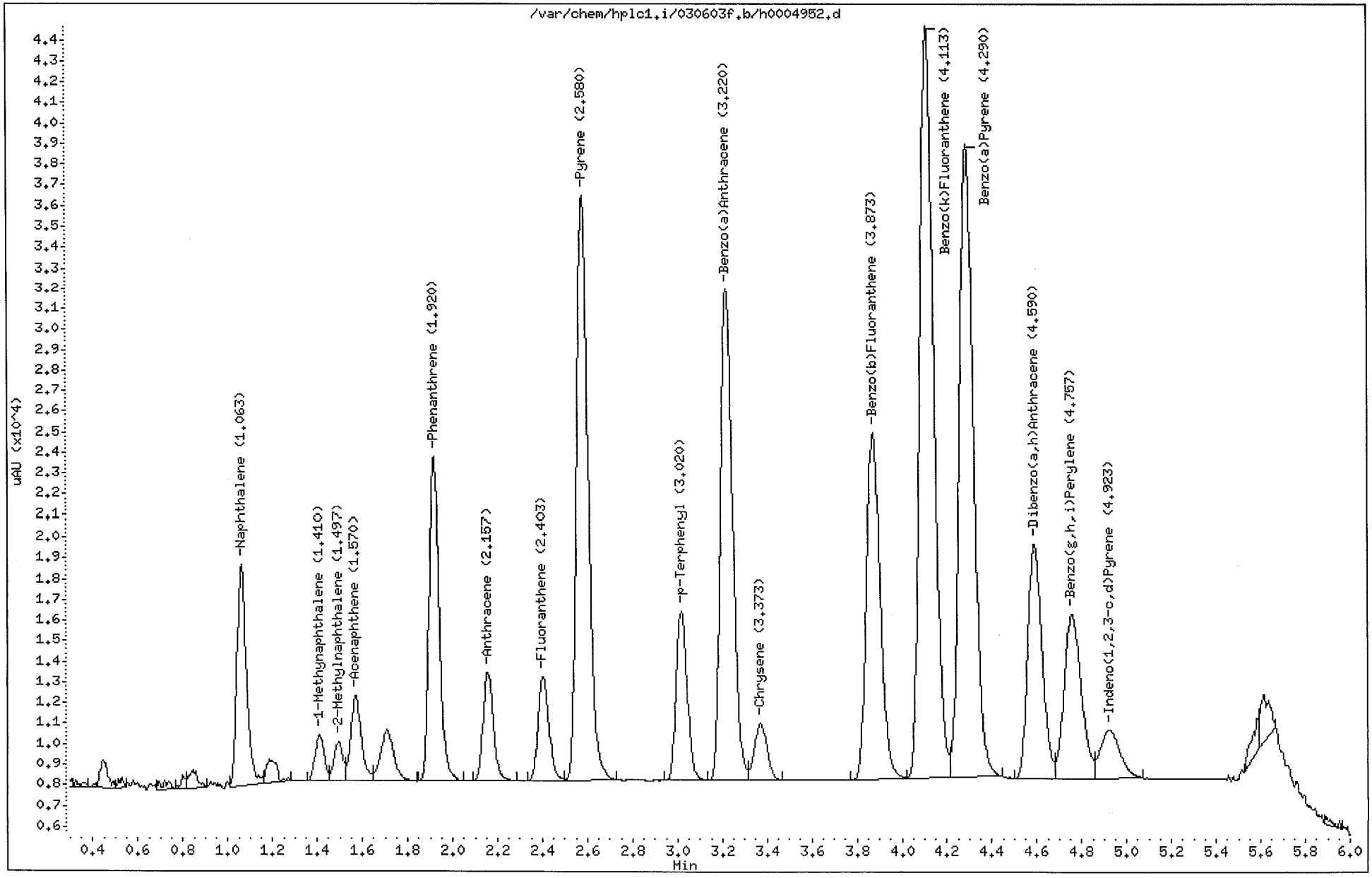
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.063	1.063	0.000	32229	2.50000	2.42
3 1-Methynaphthalene	1.410	1.410	0.000	6225	2.50000	2.14
4 2-Methylnaphthalene	1.497	1.497	0.000	5200	2.50000	2.21
5 Acenaphthene	1.570	1.570	0.000	13235	2.50000	2.34
7 Phenanthrene	1.920	1.920	0.000	48404	2.50000	2.39
8 Anthracene	2.157	2.157	0.000	16946	2.50000	2.65
9 Fluoranthene	2.403	2.403	0.000	17065	2.50000	2.68
10 Pyrene	2.580	2.580	0.000	101855	2.50000	2.47
$ 11 p-Terphenyl	3.020	3.020	0.000	28110	2.50000	2.49
12 Benzo(a)Anthracene	3.220	3.220	0.000	89456	2.50000	2.62
13 Chrysene	3.373	3.373	0.000	10707	2.50000	2.59
14 Benzo(b)Fluoranthene	3.873	3.873	0.000	71329	2.50000	2.40
15 Benzo(k)Fluoranthene	4.113	4.113	0.000	157664	2.50000	2.32

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.290	4.290	0.000	134877	2.50000	2.32
17 Dibenzo(a,h)Anthracene	4.590	4.590	0.000	50653	2.50000	2.34
18 Benzo(g,h,i)Perylene	4.757	4.757	0.000	42343	2.50000	2.37
19 Indeno(1,2,3-c,d)Pyrene	4.923	4.923	0.000	14371	2.50000	2.53

Data File: /var/chem/hplc1.i/030603f.b/h0004952.d
Date : 03-JUN-2003 10:58
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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

000371



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004956.d
Lab Smp Id: 0603STD05 Client Smp ID: 0603STD05
Inj Date : 03-JUN-2003 12:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 0603STD05
Misc Info : 3-40-11
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 05-Jun-2003 06:56 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

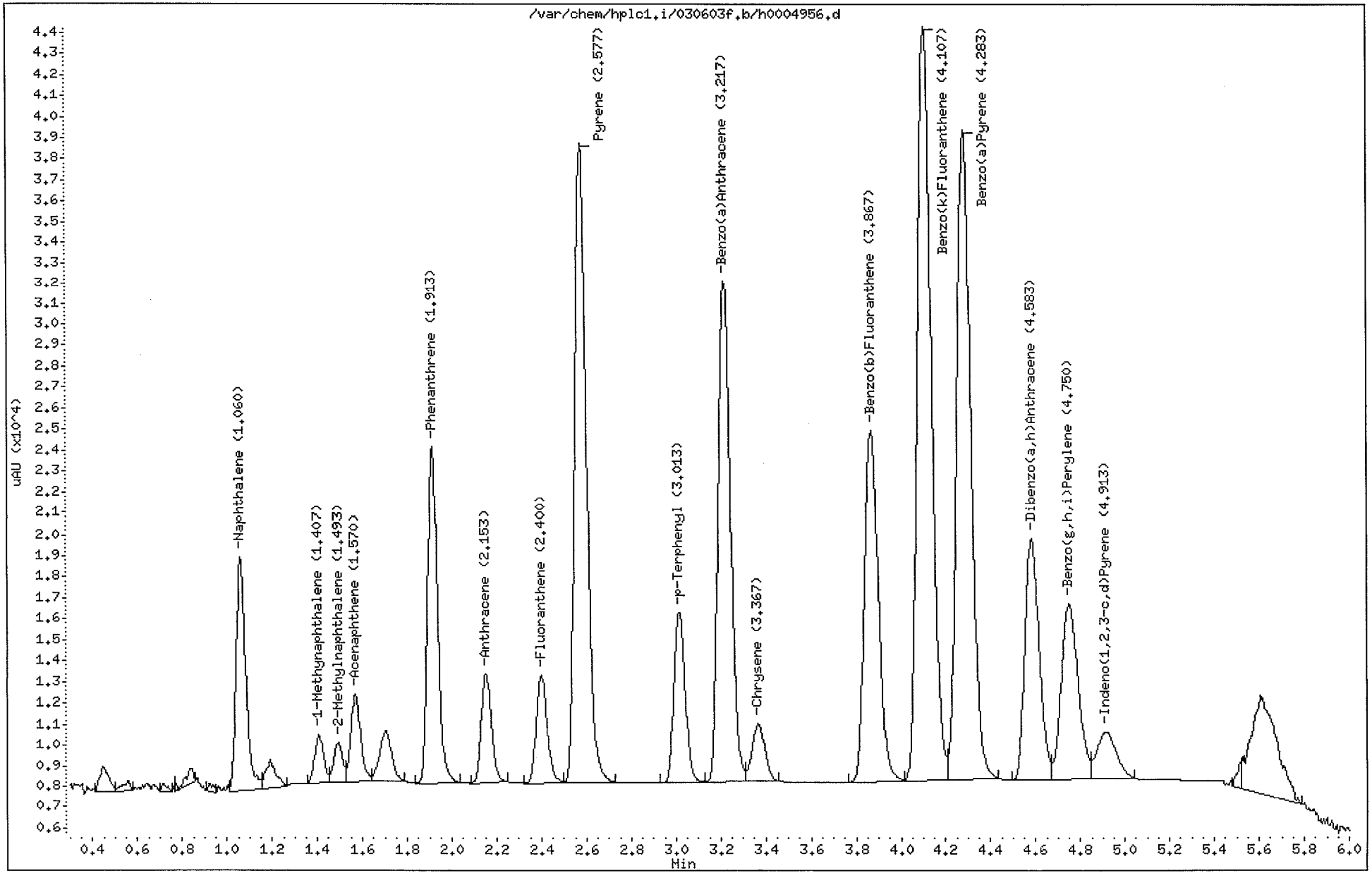
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
1 Naphthalene	1.060	1.063	-0.003	33509	2.50000	2.51
3 1-Methynaphthalene	1.407	1.410	-0.003	6436	2.50000	2.22
4 2-Methylnaphthalene	1.493	1.497	-0.004	5234	2.50000	2.23
5 Acenaphthene	1.570	1.570	0.000	12961	2.50000	2.29
7 Phenanthrene	1.913	1.920	-0.007	49440	2.50000	2.44
8 Anthracene	2.153	2.157	-0.004	16637	2.50000	2.60
9 Fluoranthene	2.400	2.403	-0.003	17510	2.50000	2.75
10 Pyrene	2.577	2.580	-0.003	111091	2.50000	2.70
$ 11 p-Terphenyl	3.013	3.020	-0.007	28213	2.50000	2.50
12 Benzo(a)Anthracene	3.217	3.220	-0.003	92008	2.50000	2.69
13 Chrysene	3.367	3.373	-0.006	10983	2.50000	2.65
14 Benzo(b)Fluoranthene	3.867	3.873	-0.006	72261	2.50000	2.43
15 Benzo(k)Fluoranthene	4.107	4.113	-0.006	158609	2.50000	2.34

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)
16 Benzo(a)Pyrene	4.283	4.290	-0.007	137784	2.50000	2.37
17 Dibenzo(a,h)Anthracene	4.583	4.590	-0.007	51293	2.50000	2.37
18 Benzo(g,h,i)Perylene	4.750	4.757	-0.007	44043	2.50000	2.47
19 Indeno(1,2,3-c,d)Pyrene	4.913	4.923	-0.010	13768	2.50000	2.42

000374

Data File: /var/chem/hplc1.i/030603f.b/h0004956.d
Date : 03-JUN-2003 12:11
Client ID: 0603STD05
Sample Info: 0603STD05
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004942.d
Lab Smp Id: 101400 Client Smp ID: 101400
Inj Date : 03-JUN-2003 09:04
Operator : jdt Inst ID: hplc1.i
Smp Info : 101400-DL1
Misc Info : 0529BLK01
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 08:13 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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

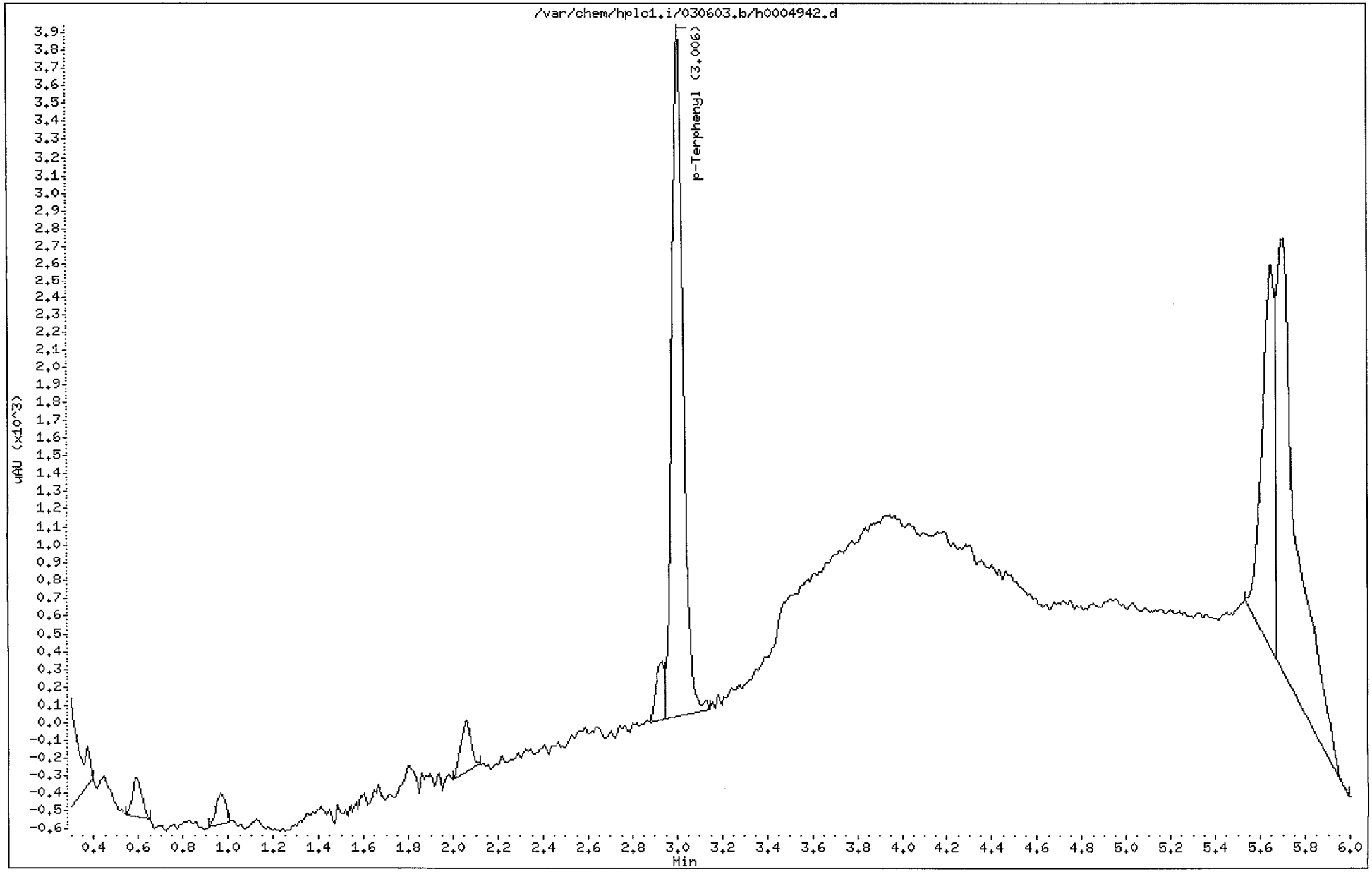
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	3.006	2.943	0.063	13631	1.71558	1.72

Data File: /var/chem/hplc1.i/030603.b/h0004942.d
Date : 03-JUN-2003 09:04
Client ID: 101400
Sample Info: 101400-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000376



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004942.d
Lab Smp Id: 101400 Client Smp ID: 101400
Inj Date : 03-JUN-2003 09:04
Operator : jdt Inst ID: hplc1.i
Smp Info : 101400-DL1
Misc Info : 0529BLK01
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 08:15 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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

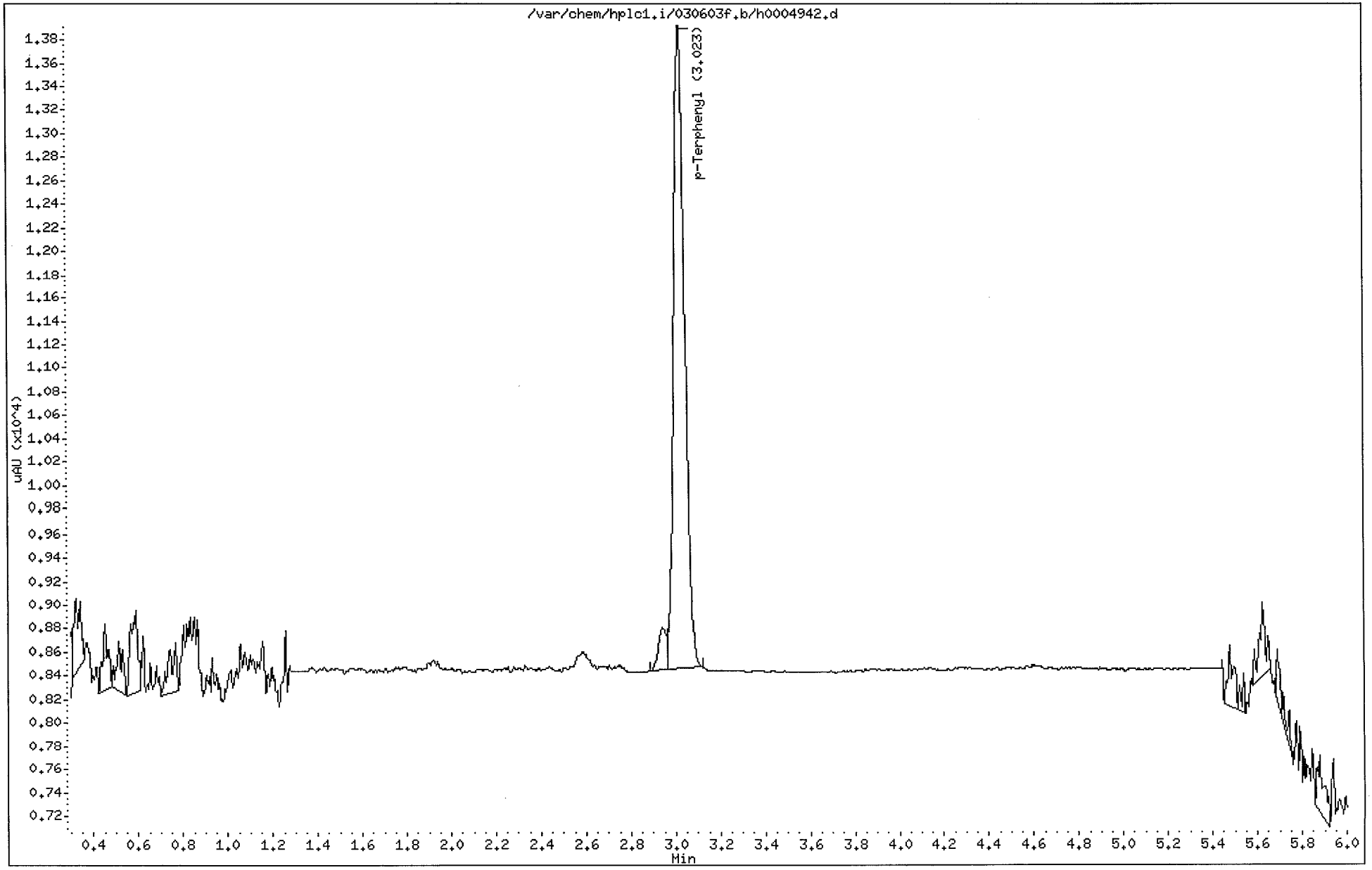
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
$ 11 p-Terphenyl	3.023	2.960	0.063	18754	1.66094	1.66

000378

Data File: /var/chem/hplc1.i/030603f.b/h0004942.d
Date : 03-JUN-2003 09:04
Client ID: 101400
Sample Info: 101400-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

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



Gulf Coast Analytical Laboratories, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 101401
Level: LOW
Data Type: LC DATA
SpikeList File: ALLpna.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/030603.b/flpnauv.m
Misc Info: 0529LCS01

Client SDG:
Fraction: OTHER
Client Smp ID: 101401
Operator: jdt
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	5.00	2.89	57.73	40-140
2 Acenaphthylene	5.00	3.33	66.67	40-140
3 1-Methynaphthalene	10.0	6.33	63.28	40-140
4 2-Methylnaphthalen	10.0	5.54	55.42	40-140
5 Acenaphthene	10.0	6.96	69.59	40-140
6 Fluorene	1.00	0.796	79.62	40-140
7 Phenanthrene	0.400	0.342	85.62	40-140
8 Anthracene	0.200	0.155	77.71	40-140
9 Fluoranthene	0.500	0.472	94.39	40-140
10 Pyrene	1.00	1.11	110.86	40-140
12 Benzo(a)Anthracene	0.500	0.438	87.53	40-140
13 Chrysene	0.500	0.448	89.58	40-140
14 Benzo(b)Fluoranthe	0.200	0.186	93.02	40-140
15 Benzo(k)Fluoranthe	0.200	0.152	76.16	40-140
16 Benzo(a)Pyrene	0.500	0.393	78.53	40-140
17 Dibenzo(a,h)Anthra	2.00	1.16	58.05	40-140
18 Benzo(g,h,i)Peryle	0.800	0.625	78.07	40-140
19 Indeno(1,2,3-c,d)P	0.500	0.416	83.16	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	2.00	1.86	92.96	40-140

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004943.d
Lab Smp Id: 101401 Client Smp ID: 101401
Inj Date : 03-JUN-2003 09:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 101401-DL1
Misc Info : 0529LCS01
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 08:13 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.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	1.048	1.043	0.005	8148	2.88664	2.89
2 Acenaphthylene	1.268	1.263	0.005	6276	3.33347	3.33
3 1-Methynaphthalene	1.395	1.390	0.005	10167	6.32793	6.33
4 2-Methylnaphthalene	1.482	1.470	0.012	12819	5.54242	5.54
5 Acenaphthene	1.555	1.550	0.005	7269	6.95855	6.96
6 Fluorene	1.662	1.643	0.019	10082	0.79620	0.796
7 Phenanthrene	1.902	1.883	0.019	9468	0.34250	0.342
8 Anthracene	2.142	2.110	0.032	8408	0.15542	0.155
9 Fluoranthene	2.388	2.350	0.038	3699	0.47196	0.472
10 Pyrene	2.562	2.523	0.039	7362	1.10863	1.11
$ 11 p-Terphenyl	3.002	2.943	0.059	14772	1.85926	1.86
12 Benzo(a)Anthracene	3.202	3.137	0.065	8083	0.43767	0.438
13 Chrysene	3.355	3.283	0.072	13738	0.44790	0.448

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
14 Benzo(b)Fluoranthene	3.848	3.763	0.085	4138	0.18605	0.186(M)
15 Benzo(k)Fluoranthene	4.082	3.997	0.085	2120	0.15232	0.152(M)
16 Benzo(a)Pyrene	4.255	4.177	0.078	8058	0.39264	0.393(M)
17 Dibenzo(a,h)Anthracene	4.542	4.470	0.072	5041	1.16100	1.16
18 Benzo(g,h,i)Perylene	4.708	4.630	0.078	4649	0.62456	0.625
19 Indeno(1,2,3-c,d)Pyrene	4.862	4.777	0.085	6599	0.41579	0.416

QC Flag Legend

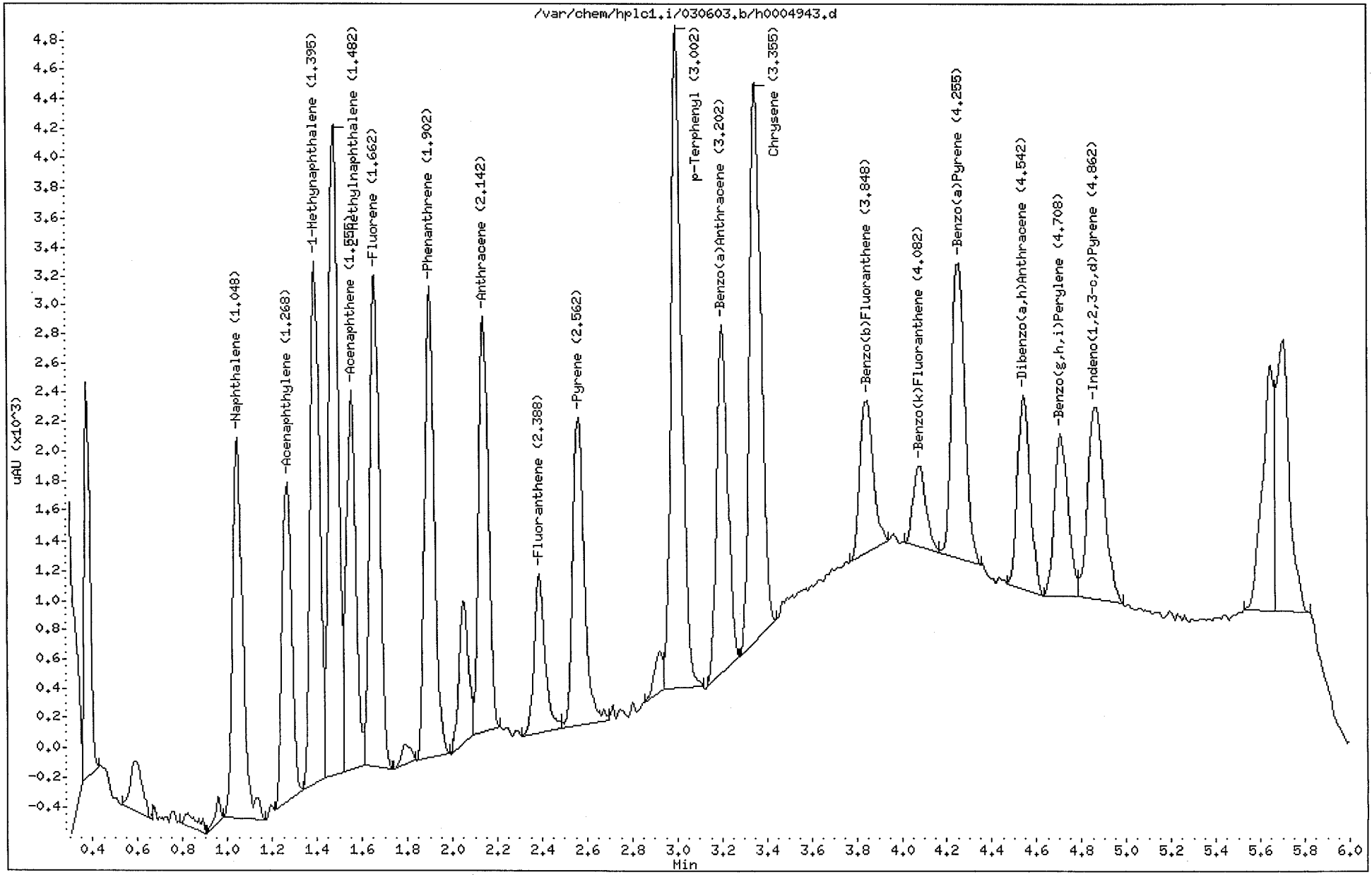
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603.b/h0004943.d
Date : 03-JUN-2003 09:11
Client ID: 101401
Sample Info: 101401-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000382



Gulf Coast Analytical Laboratories, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 101401
Level: LOW
Data Type: LC DATA
SpikeList File: ALLpna.spk
Sublist File: all.sub
Method File: /var/chem/hplc1.i/030603f.b/flpnafld.m
Misc Info: 0529LCS01

Client SDG:
Fraction: OTHER
Client Smp ID: 101401
Operator: jdt
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Naphthalene	5.00	2.93	58.62	40-140
3 1-Methynaphthalene	10.0	5.72	57.15	40-140
4 2-Methylnaphthalen	10.0	5.16	51.58	40-140
5 Acenaphthene	10.0	6.44	64.44	40-140
7 Phenanthrene	0.400	0.350	87.41	40-140
8 Anthracene	0.200	0.211	105.57	40-140
9 Fluoranthene	0.500	0.579	115.75	40-140
10 Pyrene	1.00	0.955	95.49	40-140
12 Benzo(a)Anthracene	0.500	0.474	94.84	40-140
13 Chrysene	0.500	0.408	81.59	40-140
14 Benzo(b)Fluoranthe	0.200	0.174	87.07	40-140
15 Benzo(k)Fluoranthe	0.200	0.173	86.60	40-140
16 Benzo(a)Pyrene	0.500	0.375	74.99	40-140
17 Dibenzo(a,h)Anthra	2.00	1.12	55.81	40-140
18 Benzo(g,h,i)Peryle	0.800	0.711	88.87	40-140
19 Indeno(1,2,3-c,d)P	0.500	0.546	109.22	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 p-Terphenyl	2.00	1.87	93.72	40-140

Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004943.d
Lab Smp Id: 101401 Client Smp ID: 101401
Inj Date : 03-JUN-2003 09:11
Operator : jdt Inst ID: hplc1.i
Smp Info : 101401-DL1
Misc Info : 0529LCS01
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 08:15 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.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	1.057	1.060	-0.003	39084	2.93100	2.93
3 1-Methynaphthalene	1.407	1.403	0.004	16600	5.71538	5.72
4 2-Methylnaphthalene	1.490	1.487	0.003	12121	5.15757	5.16
5 Acenaphthene	1.567	1.563	0.004	36474	6.44351	6.44
7 Phenanthrene	1.913	1.897	0.016	7076	0.34962	0.350
8 Anthracene	2.150	2.123	0.027	1352	0.21115	0.211
9 Fluoranthene	2.397	2.367	0.030	3689	0.57873	0.579
10 Pyrene	2.577	2.537	0.040	39310	0.95490	0.955
$ 11 p-Terphenyl	3.013	2.960	0.053	21165	1.87449	1.87
12 Benzo(a)Anthracene	3.213	3.153	0.060	16202	0.47420	0.474
13 Chrysene	3.367	3.293	0.074	1452	0.40797	0.408
14 Benzo(b)Fluoranthene	3.857	3.780	0.077	5170	0.17414	0.174
15 Benzo(k)Fluoranthene	4.093	4.010	0.083	11756	0.17320	0.173

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
16 Benzo(a)Pyrene	4.267	4.190	0.077	21797	0.37494	0.375
17 Dibenzo(a,h)Anthracene	4.560	4.487	0.073	24201	1.11621	1.12(M)
18 Benzo(g,h,i)Perylene	4.727	4.650	0.077	12682	0.71098	0.711(M)
19 Indeno(1,2,3-c,d)Pyrene	4.880	4.787	0.093	3104	0.54609	0.546(M)

QC Flag Legend

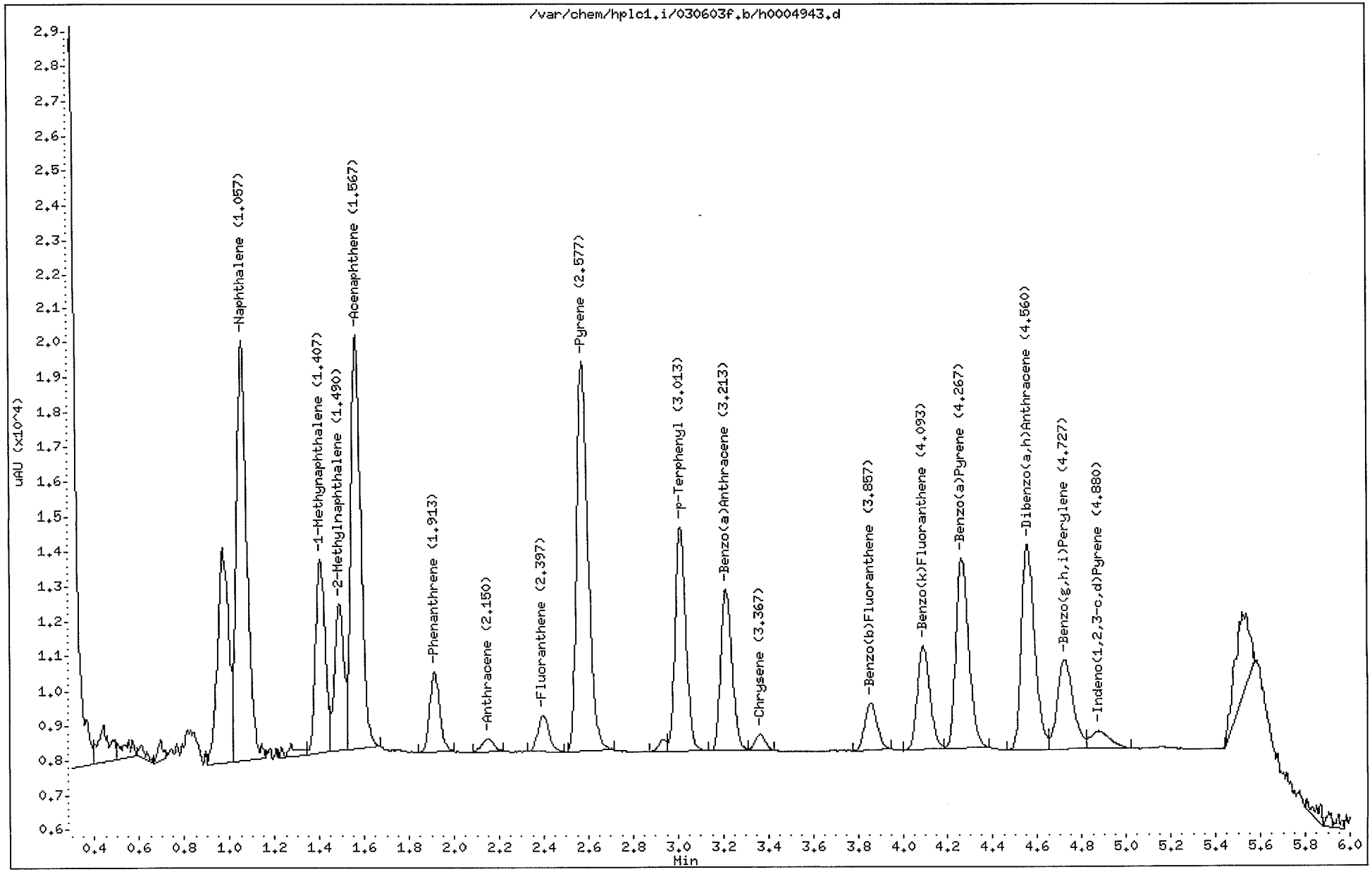
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603f.b/h0004943.d
Date : 03-JUN-2003 09:11
Client ID: 101401
Sample Info: 101401-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000386



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004949.d
Lab Smp Id: 20305291106 Client Smp ID: 33N-Q2-03-61MS
Inj Date : 03-JUN-2003 10:20
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291106-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.d
Als bottle: 1 QC Sample: MS
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	1.044	1.051	-0.007	11155	3.95216	3.95(M)
2 Acenaphthylene	1.264	1.271	-0.007	6741	3.58043	3.58
3 1-Methynaphthalene	1.391	1.397	-0.006	13133	8.17389	8.17
4 2-Methylnaphthalene	1.471	1.484	-0.013	16801	7.26371	7.26
5 Acenaphthene	1.551	1.558	-0.007	7198	6.89040	6.89
6 Fluorene	1.651	1.664	-0.013	9638	0.76109	0.761
7 Phenanthrene	1.891	1.904	-0.013	10307	0.37288	0.373
8 Anthracene	2.131	2.144	-0.013	8278	0.15301	0.153
9 Fluoranthene	2.371	2.391	-0.020	2782	0.35494	0.355
10 Pyrene	2.551	2.564	-0.013	11742	1.76832	1.77(RM)
$ 11 p-Terphenyl	2.984	3.004	-0.020	14036	1.76663	1.77
14 Benzo(b)Fluoranthene	3.837	3.857	-0.020	3427	0.15406	0.154
15 Benzo(k)Fluoranthene	4.077	4.098	-0.021	2265	0.16271	0.163

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
16 Benzo(a)Pyrene	4.251	4.277	-0.026	7834	0.38171	0.382
17 Dibenzo(a,h)Anthracene	4.551	4.571	-0.020	6760	1.55686	1.56
18 Benzo(g,h,i)Perylene	4.718	4.744	-0.026	4047	0.54377	0.544
19 Indeno(1,2,3-c,d)Pyrene	4.884	4.911	-0.027	5788	0.36468	0.365

QC Flag Legend

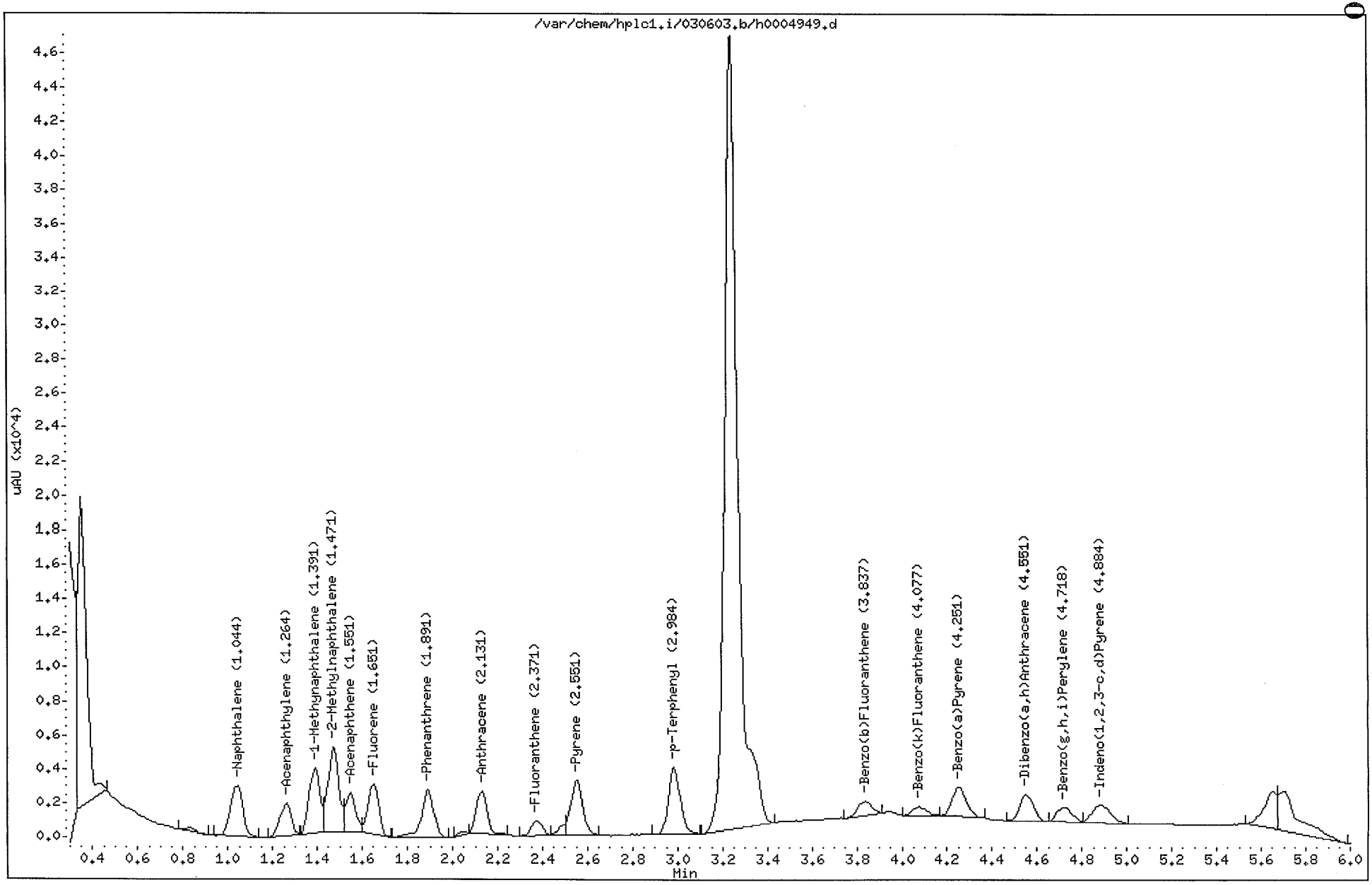
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603.b/h0004949.d
Date : 03-JUN-2003 10:20
Client ID: 33N-Q2-03-61MS
Sample Info: 20305291106-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000389



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004949.d
Lab Smp Id: 20305291106 Client Smp ID: 33N-Q2-03-61MS
Inj Date : 03-JUN-2003 10:20
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291106-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.d
Als bottle: 1 QC Sample: MS
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	1.057	1.063	-0.006	53352	4.00097	4.00
3 1-Methynaphthalene	1.403	1.410	-0.007	17454	6.00923	6.01
4 2-Methylnaphthalene	1.487	1.497	-0.010	13931	5.92754	5.93
5 Acenaphthene	1.563	1.570	-0.007	39928	7.05364	7.05
7 Phenanthrene	1.907	1.920	-0.013	6611	0.32665	0.327
8 Anthracene	2.143	2.157	-0.014	989	0.15443	0.154
9 Fluoranthene	2.387	2.403	-0.016	2846	0.44640	0.446
10 Pyrene	2.563	2.580	-0.017	34236	0.83165	0.832
$ 11 p-Terphenyl	2.997	3.020	-0.023	19450	1.72252	1.72
12 Benzo(a)Anthracene	3.200	3.220	-0.020	14651	0.42880	0.429
13 Chrysene	3.353	3.373	-0.020	1192	0.34259	0.343
14 Benzo(b)Fluoranthene	3.850	3.873	-0.023	4715	0.15881	0.159
15 Benzo(k)Fluoranthene	4.090	4.113	-0.023	10952	0.16135	0.161

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
16 Benzo(a)Pyrene	4.267	4.290	-0.023	20823	0.35819	0.358
17 Dibenzo(a,h)Anthracene	4.567	4.590	-0.023	32882	1.51654	1.52(M)
18 Benzo(g,h,i)Perylene	4.737	4.757	-0.020	11922	0.66837	0.668(M)
19 Indeno(1,2,3-c,d)Pyrene	4.890	4.923	-0.033	2427	0.42697	0.427(M)

QC Flag Legend

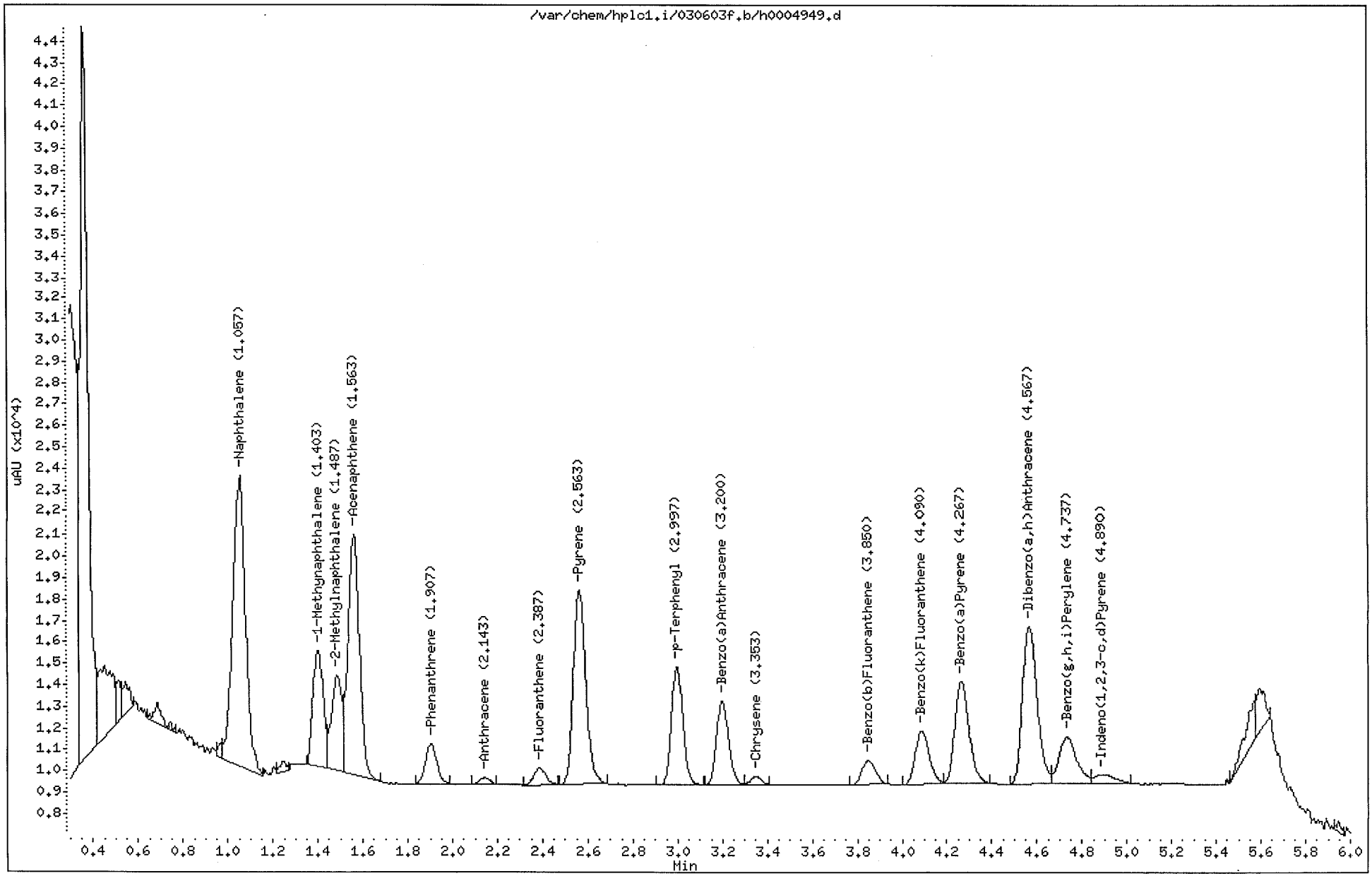
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603f.b/h0004949.d
Date : 03-JUN-2003 10:20
Client ID: 33N-Q2-03-61MS
Sample Info: 20305291106-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000392



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603.b/h0004950.d
Lab Smp Id: 20305291107 Client Smp ID: 33N-Q2-03-61MSD
Inj Date : 03-JUN-2003 10:27
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291107-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603.b/flpnauv.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:30 Cal File: h0004598.d
Als bottle: 1 QC Sample: MSD
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	1.044	1.051	-0.007	11236	3.98065	3.98
	2 Acenaphthylene	1.258	1.271	-0.013	6743	3.58106	3.58
	3 1-Methynaphthalene	1.391	1.397	-0.006	13210	8.22157	8.22
	4 2-Methylnaphthalene	1.471	1.484	-0.013	18418	7.96270	7.96
	5 Acenaphthene	1.551	1.558	-0.007	8010	7.66727	7.67
	6 Fluorene	1.651	1.664	-0.013	10340	0.81651	0.817
	7 Phenanthrene	1.898	1.904	-0.006	8998	0.32550	0.325
	8 Anthracene	2.131	2.144	-0.013	8851	0.16360	0.164
	9 Fluoranthene	2.377	2.391	-0.014	2860	0.36489	0.365
	10 Pyrene	2.558	2.564	-0.006	11948	1.79922	1.80(R)
$	11 p-Terphenyl	2.998	3.004	-0.006	14029	1.76567	1.77
	14 Benzo(b)Fluoranthene	3.857	3.857	0.000	3808	0.17118	0.171(M)
	15 Benzo(k)Fluoranthene	4.098	4.098	0.000	2745	0.19720	0.197(M)

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
16 Benzo(a)Pyrene	4.264	4.277	-0.013	8614	0.41970	0.420(M)
17 Dibenzo(a,h)Anthracene	4.564	4.571	-0.007	7199	1.65782	1.66
18 Benzo(g,h,i)Perylene	4.737	4.744	-0.007	4479	0.60169	0.602
19 Indeno(1,2,3-c,d)Pyrene	4.904	4.911	-0.007	6016	0.37901	0.379

QC Flag Legend

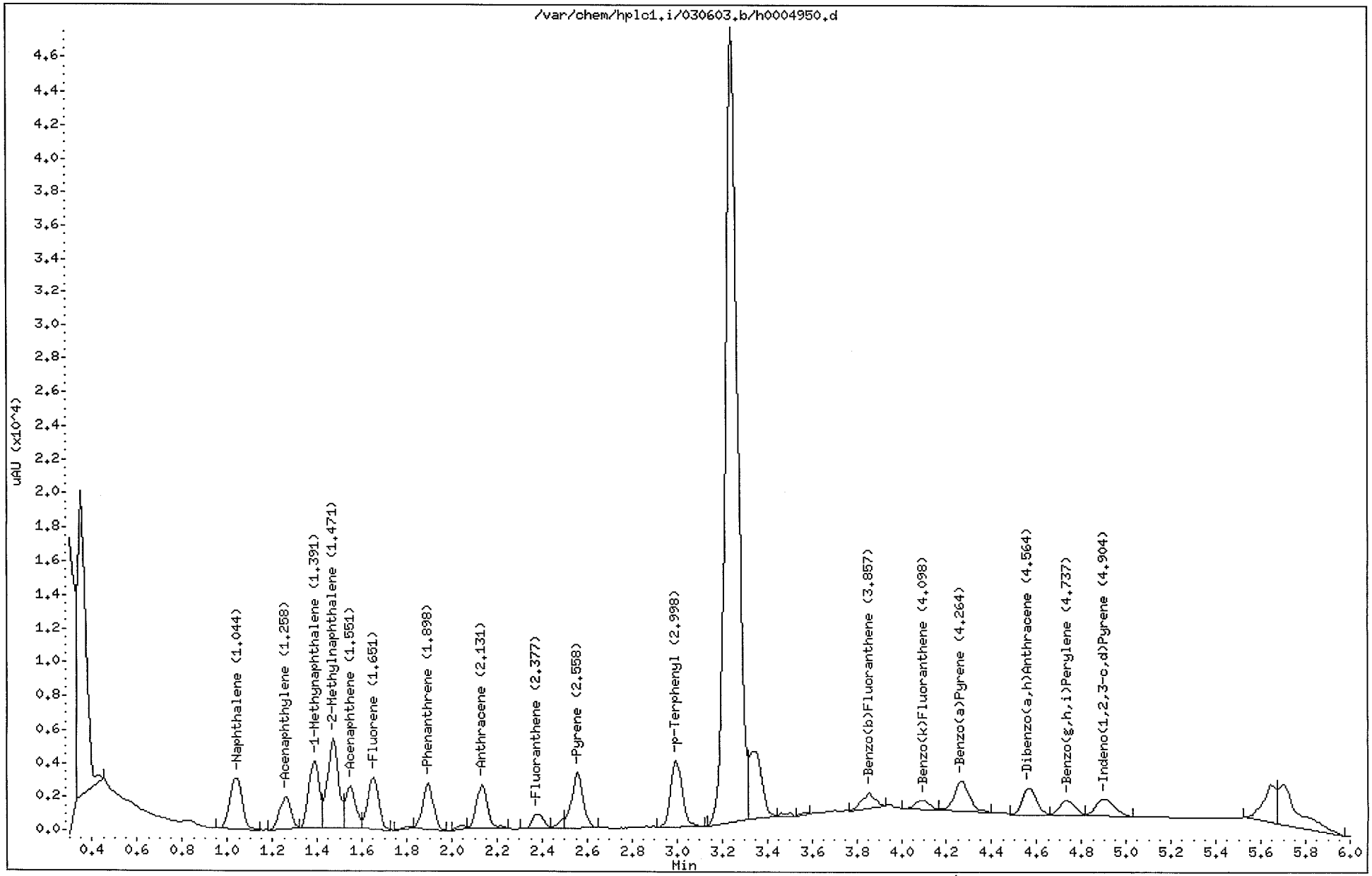
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/hplc1.i/030603.b/h0004950.d
Date : 03-JUN-2003 10:27
Client ID: 33N-Q2-03-61MSD
Sample Info: 20305291107-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10

000395



Gulf Coast Analytical Laboratories, Inc.

Data file : /var/chem/hplc1.i/030603f.b/h0004950.d
Lab Smp Id: 20305291107 Client Smp ID: 33N-Q2-03-61MSD
Inj Date : 03-JUN-2003 10:27
Operator : jdt Inst ID: hplc1.i
Smp Info : 20305291107-DL1
Misc Info :
Comment :
Method : /var/chem/hplc1.i/030603f.b/flpnafld.m
Meth Date : 03-Jun-2003 10:54 jdt Quant Type: ESTD
Cal Date : 12-MAR-2003 15:51 Cal File: h0004601.d
Als bottle: 1 QC Sample: MSD
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	1.057	1.063	-0.006	51487	3.86118	3.86
3 1-Methynaphthalene	1.403	1.410	-0.007	17817	6.13434	6.13
4 2-Methylnaphthalene	1.490	1.497	-0.007	14240	6.05940	6.06
5 Acenaphthene	1.563	1.570	-0.007	39593	6.99458	6.99
7 Phenanthrene	1.910	1.920	-0.010	6826	0.33729	0.337
8 Anthracene	2.150	2.157	-0.007	892	0.13932	0.139
9 Fluoranthene	2.397	2.403	-0.006	2725	0.42751	0.428
10 Pyrene	2.573	2.580	-0.007	34138	0.82929	0.829
$ 11 p-Terphenyl	3.013	3.020	-0.007	19416	1.71954	1.72
12 Benzo(a)Anthracene	3.213	3.220	-0.007	14572	0.42649	0.426
13 Chrysene	3.363	3.373	-0.010	1160	0.33469	0.335
14 Benzo(b)Fluoranthene	3.870	3.873	-0.003	4680	0.15764	0.158
15 Benzo(k)Fluoranthene	4.107	4.113	-0.006	10938	0.16115	0.161

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
16 Benzo(a)Pyrene	4.283	4.290	-0.007	20998	0.36120	0.361
17 Dibenzo(a,h)Anthracene	4.583	4.590	-0.007	33057	1.52464	1.52(M)
18 Benzo(g,h,i)Perylene	4.753	4.757	-0.004	12128	0.67987	0.680(M)
19 Indeno(1,2,3-c,d)Pyrene	4.917	4.923	-0.006	2603	0.45789	0.458(M)

QC Flag Legend

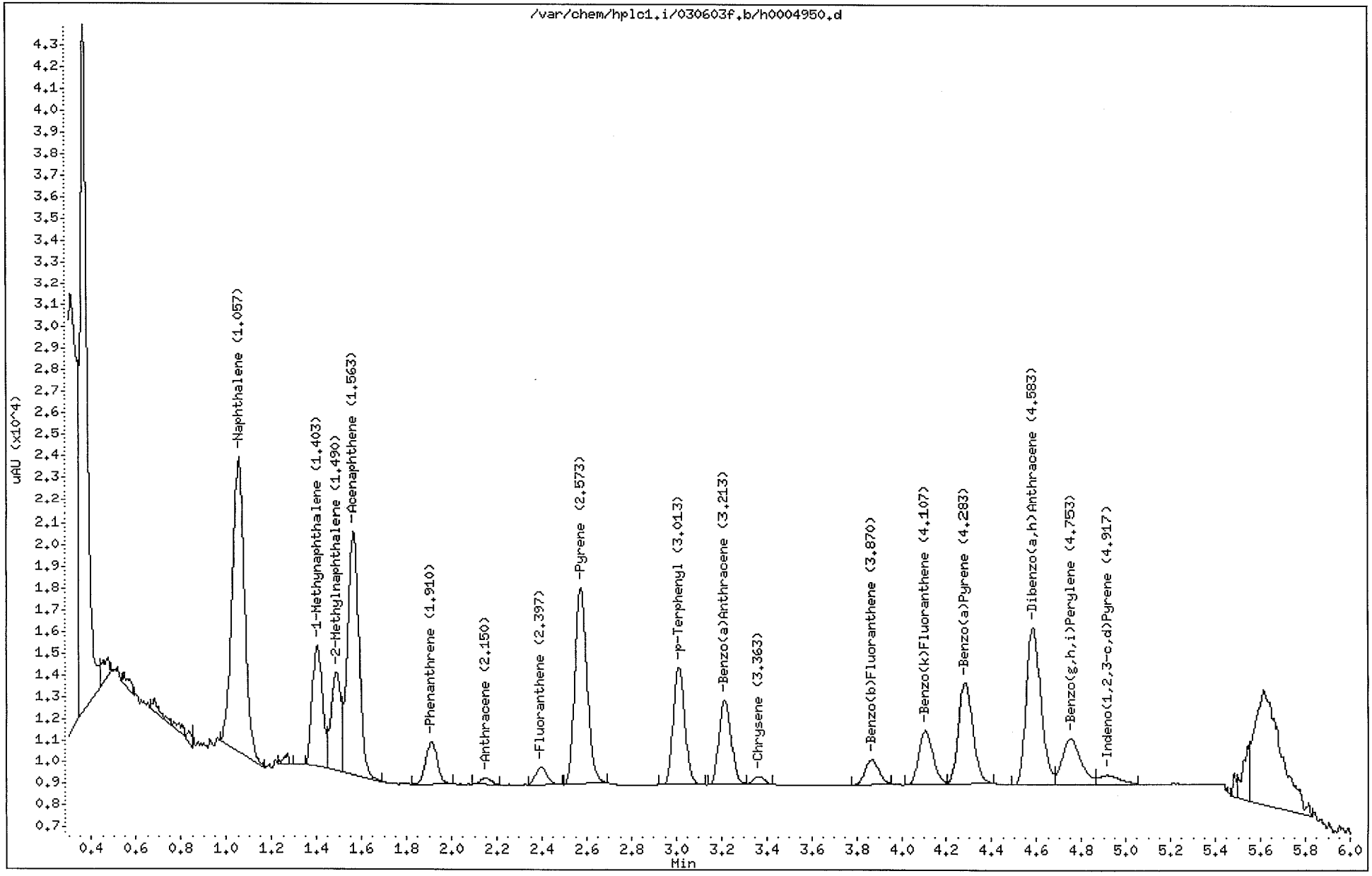
M - Compound response manually integrated.

000398

Data File: /var/chem/hplc1.i/030603f.b/h0004950.d
Date : 03-JUN-2003 10:27
Client ID: 33N-Q2-03-61MSD
Sample Info: 20305291107-DL1
Volume Injected (uL): 10.0
Column phase: 201TP-0.15M

Instrument: hplc1.i

Operator: jdt
Column diameter: 2.10



PAH SAMPLE PREPARATION FORM

EXTRACTION DATE/TIME:	05/29/03 14:30	BATCH NO:	257824
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	In-house QC Ac	MB for HBN 257824 [EXTO/3825]	101400	1000	1.0	7		LIQUID LIQUID/3520
2	In-house QC Ac	LCS for HBN 257824 [EXTO/3825]	101401	1000	1.0	7		
3	CH2M HILL Cons	086-CEF43-2N-Q2-03-61	20305291101	1000	1.0	7		SEPARATORY FUNNEL/3510 ✓
4	CH2M HILL Cons	086-CEF43-6N-Q2-03-61	20305291102	1000	1.0	7		
5	CH2M HILL Cons	086-CEF43-7N-Q2-03-61	20305291103	1000	1.0	7		
6	CH2M HILL Cons	086-CEF43-9N-Q2-03-61	20305291104	1000	1.0	7		
7	CH2M HILL Cons	086-CEF43-33N-Q2-03-61	20305291105	1000	1.0	7		SONICATOR/3550
8	CH2M HILL Cons	086-CEF43-33N-Q2-03-61MS	20305291106	1000	1.0	7		
9	CH2M HILL Cons	086-CEF43-33N-Q2-03-61MSD	20305291107	1000	1.0	7		SOXHLET/3540
10	CH2M HILL Cons	086-CEF43-38N-Q2-03-61	20305291109	1000	1.0	7		
11	CH2M HILL Cons	086-DUP-Q2-03-61	20305291110	1000	1.0	7		
12	CH2M HILL Cons	086-EQB-Q2-03-61	20305291111	1000	1.0	7		
13								
14								
15								
16								
17								
18								
19								Sodium Sulfate Lot No:
20				SKB 05/29/03				027869
21								ACETONITRILE:
22								003221
23								MeCL2 Lot No:
24								030609
25								
26								
27								
28								

COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME

	8-200-2						
SURROGATE ID	~~8-169-1~~	SKB 05/29/03		SPIKE ID	8-199-1	TECHNICIAN	DATE
VOLUME	0.5mL			VOLUME	1.0mL	John Bailey	05/29/03
CONCENTRATION	4.0µg/mL			CONCENTRATION	Various		
NaOH		ACID				SUPERVISOR	DATE
SPIKE WITNESS	OLT					John Bailey	05/29/03

LABORATORY CHRONICLE: HPLC - 8310

Date: 03-JUN-2003
Instrument: hplc1.i
Analyst: jdt

Sample ID	ClientName	DataFile	WT VOL	Injection Time	DilFactor	ALS	Comments
0603STD05	3-40-11	h0004941.d	1000.00 ml	03-JUN-2003 08:11	1.000	1	
101400	101400	h0004942.d	1000.00 ml	03-JUN-2003 09:04	1.000	1	
101401	101401	h0004943.d	1000.00 ml	03-JUN-2003 09:11	1.000	1	
20305291101	2N-Q2-03-61	h0004944.d	1000.00 ml	03-JUN-2003 09:25	1.000	1	
20305291102	6N-Q2-03-61	h0004945.d	1000.00 ml	03-JUN-2003 09:32	1.000	1	
20305291103	7N-Q2-03-61	h0004946.d	1000.00 ml	03-JUN-2003 09:39	1.000	1	
20305291104		h0004947.d	1000.00 ml	03-JUN-2003 09:46	1.000	1	
20305291105	33N-Q2-03-61	h0004948.d	1000.00 ml	03-JUN-2003 09:53	1.000	1	
20305291106	33N-Q2-03-61	h0004949.d	1000.00 ml	03-JUN-2003 10:20	1.000	1	
20305291107	33N-Q2-03-61	h0004950.d	1000.00 ml	03-JUN-2003 10:27	1.000	1	
20305291109	38N-Q2-03-61	h0004951.d	1000.00 ml	03-JUN-2003 10:35	1.000	1	
0603STD05	3-40-11	h0004952.d	1000.00 ml	03-JUN-2003 10:58	1.000	1	
20305291110	DUP-Q2-03-61	h0004953.d	1000.00 ml	03-JUN-2003 11:12	1.000	1	
20305291111	EQB-Q2-03-61	h0004954.d	1000.00 ml	03-JUN-2003 11:19	1.000	1	
20305291104	9N-Q2-03-61	h0004955.d	1000.00 ml	03-JUN-2003 12:04	5.000	1	
0603STD05	3-40-11	h0004956.d	1000.00 ml	03-JUN-2003 12:11	1.000	1	

REVISED 06/04/2003 Supervisor Review: QA Review:

8-198-1 BNA SURR

NSI Solutions Inc. 1-800-234-7837
7617 Precision Dr. Ste 101 Raleigh, NC 27617
C-371 BNA SURROGATES (SW 846) 25 mL
LOT#:042603-25 EXP DATE:04/04
SOLV: METHANOL
HAZARD: IRRITANT, FLAMMABLE
For Research Use Only

FINAL CONC 100/200 ug/ml EXP 04/01/04

John Bailey
05/05/03

8-198-2 625 SPIKE

NSI Solutions Inc. 1-800-234-7837
7617 Precision Dr. Ste 101 Raleigh, NC 27617
Q-3582 Custom BNA Spike Mix
LOT: 050103-06 PREP DATE: 05/01/03
SOLVENT: Methanol
HAZARD: IRRITANT, FLAMMABLE
For Research Use Only

FINAL CONC 100 ug/ml EXP 05/01/04

John Bailey
05/05/03

8-198-3 HERB SPIKE

Solution was prepared by transferring 1.0mL of ACCU Standard M-8150A LOT# B1080134 into a 10.0mL class "A" vol flask, then diluting to mark w/h methanol. Transfer was made with a 1.0mL gastight syring (methanol LOT# 001620)

FINAL CONC 10 ug/ml EXP 09/16/03

M-8150A
Lot: B1080134
Exp: Sep 16,2003
Date opened:
Varied conc. in MeOH
STORAGE AMBIENT

John Bailey
05/08/03

8-199-1 PAH SPIKE

Solution was prepared by transferring 200ul of ULTRA 1-methylnaphthalene EPA-1225 LOT R1459 and 2.0mL ULTRA 2-methylnaphthalene SV-200 LOT# T-0520 and 200ul of ULTRA PAH PM-831A LOT R0889 into a 20mL class "A" vol flask, then diluting to mark with acetonitrile. Transfer was made with a 1.0mL + 250ul gastight syring. (Acetonitrile LOT# 030641)

EXP 11/14/03

John Bailey
05/14/03

8-199-2 8141 SURR

Solution was prepared by transferring 5.0mL of ULTRA Scientific Triphenyl phosphate PPS-110 LOT T-0580 into a 100mL class "A" vol flask, then diluting to mark with Acetone. Transfer was made with a 5.0mL gastight syringe (Acetone LOT# 030523)

FINAL CONC. 25 ug/ml EXP 11/19/03

ULTRA SCIENTIFIC 250 Smith St., North Kingstown, RI 02852 401-294-9400
Triphenyl Phosphate Solution
500 ug/mL in Methyl tert-Butyl Ether
PPS-110 1 mL
Lot No. T-0580 Exp. Date 06/2005
LAB USE ONLY

John Bailey
05/19/03

0004401

8-200-1 8141 SPIKE

ULTRA SCIENTIFIC 250 Smith St., North Kingstown, RI 02852 401-294-9400

Organophosphorous Pesticides Mixture

200 ug/mL each in Hexane/Acetone (1:1)

SPM-834 1 mL

LAB USE ONLY

Lot No. S-0796 Exp. Date 07/2004

FINAL CONC 200ug/ml EXP 07/01/04

John Bailey 05/19/03

8-200-2 PNA SURR (8310)

Solution was prepared by transferring 200 ul of ULTRA P-Terphenyl IST-490 LOT M491B into a 100mL class "A" vol flask, then diluting to mark with Acetonitrile. Transfer was made with a 250 ul gastight syringe. (acetonitrile LOT 030641)

FINAL CONC 4.0ug/ml EXP 11/22/03

John Bailey 05/22/03

Scales 4/25/03 - 5/22/03 reviewed by QA/QC 5/22/03

8-200-3 JP-5 SPIKE

Solution was prepared by transferring 1.0mL of JP-5 fuel LOT# 051502 into a 100.0mL class "A" vol flask, then diluting to mark with methylene chloride. Transfer was made with a 1.0mL gastight syringe. (Methylene chloride LOT# 030609)

FINAL CONC 200ug/ml EXP 11/22/03

Part #: 51004 Laboratory Use Only-See MSDS
Lot #: 051502 Exp: 051507 1 mL
JP-5 Fuel

John Bailey 05/22/03

8-201-1 Herb SPIKE

Solution was prepared by transferring 1.0mL of ACCU Standard M-8150A LOT# B1080134 into a 100.0mL class "A" vol flask, then diluting to mark with methanol. Transfer was made with a 1.0mL gastight syringe. (methanol LOT# 001620)

FINAL CONC 10ug/ml EXP 09/16/03

AccuStandard, Inc. 125 Market Street • New Haven, CT 06513 • Phone 800-442-5690 • 203-786-5290

M-8150A 1 mL
Underivatized Chlorinated Herbicides
Varied conc. in MeOH
Lot: B3020166 10 comps.
Exp: Feb 20,2005 CARCINOGENIC

FOR LABORATORY USE ONLY
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.
STORAGE AMBIENT

John Bailey 05/22/03

8-201-2 TPHD SURR

Solution was prepared by transferring 2.0mL of NSI O-Terphenyl LOT 1341H-02-04 into a 200mL class "A" vol flask, then diluting to mark with acetone. Transfer was made with a 1.0mL gastight syringe. (Acetone LOT#)

FINAL CONC 100 ug/ml EXP 11/28/03

NSI Solutions Inc. 1-800-234-7837
7517 Precision Dr. Ste 101 Raleigh, NC 27617
O-TERPHENYL
1341H-02-04 EXP DATE: 01/05
SOLV: CH2Cl2 CONC: 9998.4 ug/mL
HAZARD: IRRITANT, CARCINOGEN
For Research Use Only

John Bailey 05/28/03

8-201-3 PAH SPIKE 8310

Solution was prepared by transferring 2ccul of ULTRA 1-Methylnaphthalene EPA-1225 LOT R1459 and 1.0 mL of ULTRA 2-methylnaphthalene SV-200 LOT T-0520 and 200 ul of ULTRA PAH Pin 931A LOT R0889 into a 20mL class "A" vol flask then diluting to mark with acetonitrile. Acetonitrile LOT#

EXP 11/30/03

John Bailey

2-Methylnaphthalene Solution
SV-200 1 mL
Lot No. T-0520 LAB USE ONLY
ULTRA SCIENTIFIC Exp. Date 05/2006
North Kingstown, RI 401-294-9400

000402

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INIT	DATE PREPARED	EXP DATE
BNA 10	3-40-1	Q-3392	USI	121202-07/12-12-03	50ul	1.0ml	10ppm	DCM/023764	RLW	02-24-03	12-12-03
50	3-40-2	↓	↓	↓	250ul	↓	50 ppm	↓	↓	↓	↓
80	3-40-3				400ul		80 ppm				
120	3-40-4				600ul		120 ppm				
160	3-40-5				800ul		160 ppm				
200	30-40-6				1000ul	✓	200ppm				
Cal Form 1000ppm	3-40-7	Form 37.4%	FISHER	011089/ NA	267ul	100ml	1000ppm	DI H_2O	JDT	2/25/03	3/4/03
Dates 2/24/03 — 2/25/03				Reviewed By GM/GC			2/26/03 (OK)				
PNA Cal 8	3-40-8	p-Terphenyl PAH Mix	Ultra Accu-Std	M491B / 1/2005 B2060136 / 6/19/03	200ul 200ul	20ml	20ppm	ACN/023255	JDT	3/11/03	6/19/03
PNA Cal 7	3-40-9	PNA Cal 8	In House	3-40-8/6/19/03	2.5ml	5.0ml	10 ppm	ACN/023255	JDT	3/11/03	6/19/03
PNA Cal 6	3-40-10	↓	↓	↓	1.25ml	5.0ml	5ppm	↓	↓	↓	↓
PNA Cal 5	3-40-11				5.0ml	40ml	2.5ppm				
PNA Cal 4	3-40-12				250ul	5.0ml	1.0 ppm				
PNA Cal 3	3-40-13				125ul	5.0ml	0.50ppm				
PNA Cal 2	3-40-14				62.5ul	5.0ml	0.25ppm				
PNA Cal 1	3-40-15	↓	↓	↓	25ul	5.0ml	0.10ppm	↓	↓	↓	↓
PNA ICV	3-40-16	PAH Mix	Ultra	R-0289/2/03	10ul	1000ul	Various	ACN/023255	JDT	3/11/03	8/01/03
↓	↓	p-Terphenyl	Ultra	M491B/1/2005	2ul	↓	4ppm	↓	↓	↓	↓
		1-MNAP	Ultra	R1454/12/4	10ul		10ppm				
		2-MNAP	Ultra	S1534/01/02	100ul		10ppm				
608 pest mix 200	3-40-17	C-309-01	USI	C-309-01/02/04	1.0ml	5.0ml	200ppm	DCM/023764	RLW	03-25-03	02-01-04
PCB 1016+1260 200	3-40-18	W-125-07 W-129-06	USI	W-125M-07-02 / 09/03 W-129M-06-02 / 10/03	1.0ml	5.0ml	200ppm	DCM/023764	RLW	03-25-03	09-30-03

000403

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-2N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291101

Date Collected: 05/27/03 Time: 1640

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1612

Dilution Factor: 10 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	7930		407	1000

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-6N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291102

Date Collected: 05/27/03 Time: 1600

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1400

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	84.8	J	40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-7N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291103

Date Collected: 05/27/03 Time: 1505

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1536

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	776		40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-9N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291104

Date Collected: 05/27/03 Time: 1430

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1710

Dilution Factor: 50 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	21500		2040	5000

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-33N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291105

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1732

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	211		40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-33N-Q2-03-61MS

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291106

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1830

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1500		40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-33N-Q2-03-61MSD

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291107

Date Collected: 05/28/03 Time: 1450

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 1927

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1580		40.7	100

FORM I ORG-1

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-CEF43-38N-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291109

Date Collected: 05/28/03 Time: 1545

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 2023

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	131		40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-DUP-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291110

Date Collected: 05/27/03 Time: 0000

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 06/02/03 Time: 1807

Dilution Factor: 5 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	3410		204	500

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: 086-EQB-Q2-03-61

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 20305291111

Date Collected: 05/27/03 Time: 0000

Date Received: 05/29/03

Date Extracted:

Date Analyzed: 05/31/03 Time: 2310

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	215		40.7	100

FORM I ORG-1

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: MB101498

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 101498

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 05/31/03 Time: 1109

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	100	U	40.7	100

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: ID: (mm)

Concentrated Extract Volume: 2000 (µL)

Soil Aliquot Volume: (µL)

Injection Volume: 1 (µL)

GPC Cleanup: (Y/N) N pH:

Prep Batch: 257848 Analytical Batch: 258183

Sample ID: LCS101499

Contract:

SAS No.: SDG No.: 203052911

Lab Sample ID: 101499

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 05/31/03 Time: 1205

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030531/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1930		40.7	100

FORM I ORG-1

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

GC Column (1): ID: (mm) GC Cloumn (2): ID: (mm)

Method: FLORIDA PRO

	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 .	086-CEF43-2N-Q2-03-61	0	35	116	D					0	40	131	D					0
2 .	086-CEF43-6N-Q2-03-61	11	35	116	*					20	40	131	*					2
3 .	086-CEF43-7N-Q2-03-61	103	35	116						114	40	131						0
4 .	086-CEF43-9N-Q2-03-61	0	35	116	D					0	40	131	D					0
5 .	086-CEF43-33N-Q2-03-61	111	35	116						104	40	131						0
6 .	086-CEF43-33N-Q2-03-61MS	103	35	116						71	40	131						0
7 .	086-CEF43-33N-Q2-03-61MSD	103	35	116						90	40	131						0
8 .	086-CEF43-38N-Q2-03-61	114	35	116						130	40	131						0
9 .	086-DUP-Q2-03-61	149	35	116	*					105	40	131						1
10 .	086-EQB-Q2-03-61	107	35	116						124	40	131						0
11 .	MB101498	135	35	116	*					77	40	131						1
12 .	LCS101499	137	35	116	*					109	40	131						1

SMC 1 : O-Terphenyl SMC 2 : Nonatriacontane

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: 086-CEF43-33N-Q2-03-61

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Contract:

Method: FLORIDA PRO

SAMPLE NO : 20305291106

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS % REC	MS % REC FLAG	QC. LIMITS
Petroleum Hydrocarbons	ug/L	1700	211	1500	76		41 - 101

SAMPLE NO : 20305291107

COMPOUND	UNITS	SPIKE ADDED	MSD CONC.	MSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
Petroleum Hydrocarbons	ug/L	1700	1580	81		6		41 - 101	0 - 20

RPD : 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

3E

WATER ORGANICS LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Contract: Method: FLORIDA PRO

SAMPLE NO : 101499

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
Petroleum Hydrocarbons	ug/L	1700	0	1930	114		55 - 118

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 1 outside limits

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB101498

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 101498

SAS No.: SDG No.: 203052911

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

Date Extracted:

Date Analyzed (1): 05/31/03 Time (1): 1109

Date Analyzed (2): Time (2):

Instrument ID (1): GCS2A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: FLORIDA PRO

Prep Batch: 257848 Analytical Batch: 258183

Lab File ID: 2030531/SV2AD0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS101499	101499	05/31/03	1205		
2.	086-CEF43-6N-Q2-03-61	20305291102	05/31/03	1400		
3.	086-CEF43-7N-Q2-03-61	20305291103	05/31/03	1536		
4.	086-CEF43-33N-Q2-03-61	20305291105	05/31/03	1732		
5.	086-CEF43-33N-Q2-03-61MS	20305291106	05/31/03	1830		
6.	086-CEF43-33N-Q2-03-61MSD	20305291107	05/31/03	1927		
7.	086-CEF43-38N-Q2-03-61	20305291109	05/31/03	2023		
8.	086-EQB-Q2-03-61	20305291111	05/31/03	2310		
9.	086-CEF43-2N-Q2-03-61	20305291101	06/02/03	1612		
10.	086-CEF43-9N-Q2-03-61	20305291104	06/02/03	1710		
11.	086-DUP-Q2-03-61	20305291110	06/02/03	1807		

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF5 =SV2AD002S RRF50 =SV2AD003S
RRF150=SV2AD004S RRF250=SV2AD005S RRF350=SV2AD006S

COMPOUND	RRF5	RRF50	RRF150	RRF250	RRF350	$\overline{RRF}$	% RSD
TOTAL PRO	172611	259089	240193	237108	229558		
O-TERPHENYL	535787	550599	529781	522715	502395		
Nonatriacontane	3415.8	2708.8	3081.2	2909.5	3302.5		

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

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: FLPRO SAS No.: SDG No.: 2030402

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF500=SV2AD007S

COMPOUND	RRF500					$\overline{RRF}$	% RSD
TOTAL PRO	222144					226784	12.9
O-TERPHENYL	484480					520960	4.6
Nonatriacontane	3517.1					3155.8	9.9

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

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date: 05/31/03 Time: 1000

Lab File ID: SV2AD002S Init. Calib. Date(s): 03/28/03 03/28/03

Init. Calib. Times: 1408 1843

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Total PRO	226784	243726		-7.5	
O-TERPHENYL	503447	488169		3.0	
Nonatriacontane	3117.2	2463.9		21.0	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date: 05/31/03 Time: 2119

Lab File ID: SV2AD013S Init. Calib. Date(s): 03/28/03 03/28/03

Init. Calib. Times: 1408 1843

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Total PRO	226784	230215		-1.5	
O-TERPHENYL	503447	484128		3.8	
Nonatriacontane	3117.2	2448.1		21.5	

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV-1 OLM03.0

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date: 06/01/03 Time: 0005

Lab File ID: SV2AD016S Init. Calib. Date(s): 03/28/03 03/28/03

Init. Calib. Times: 1408 1843

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Total PRO	226784	250526		-10.4	
O-TERPHENYL	503447	512315		-1.8	
Nonatriacontane	3117.2	2452.3		21.3	

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV-1 OLM03.0

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date: 06/02/03 Time: 1505

Lab File ID: SV2AD018S Init. Calib. Date(s): 03/28/03 03/28/03

Init. Calib. Times: 1408 1843

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Total PRO	226784	237593		-4.7	
O-TERPHENYL	503447	477928		5.1	
Nonatriacontane	3117.2	5834.7		-87.2	

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV-1 OLM03.0

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203052911 SAS No.: SDG No.: 203052911

Instrument ID: GCSV2AD Calibration Date: 06/02/03 Time: 1904

Lab File ID: SV2AD022S Init. Calib. Date(s): 03/28/03 03/28/03

Init. Calib. Times: 1408 1843

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Total PRO	226784	207294		8.6	
O-TERPHENYL	503447	450675		10.5	
Nonatriacontane	3117.2	4700.8		-50.8	

All other compounds must meet a minimum RRF of 0.010.

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad019.d
Lab Smp Id: 2030529110 1
Inj Date : 02-JUN-2003 16:12
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 2030529110 1-10.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 19
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	8.323	11.897	-3.574	92832691	329.349	6586.9777(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{92832691 - 2929570}{226784} \times 10 \times \frac{2}{1000} \times 1000 = 7929 \text{ ug}$$

dlb
6/5/3

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad019S.d
Lab Smp Id: 20305291101
Inj Date : 02-JUN-2003 16:12
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291101-10.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 19
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.136	17.157	-0.021	2784278	5.53043	110.6086
$ 18 Nonatriacontane	35.070	35.119	-0.049	145292	46.6097	932.1940(M)
				2929570		

QC Flag Legend

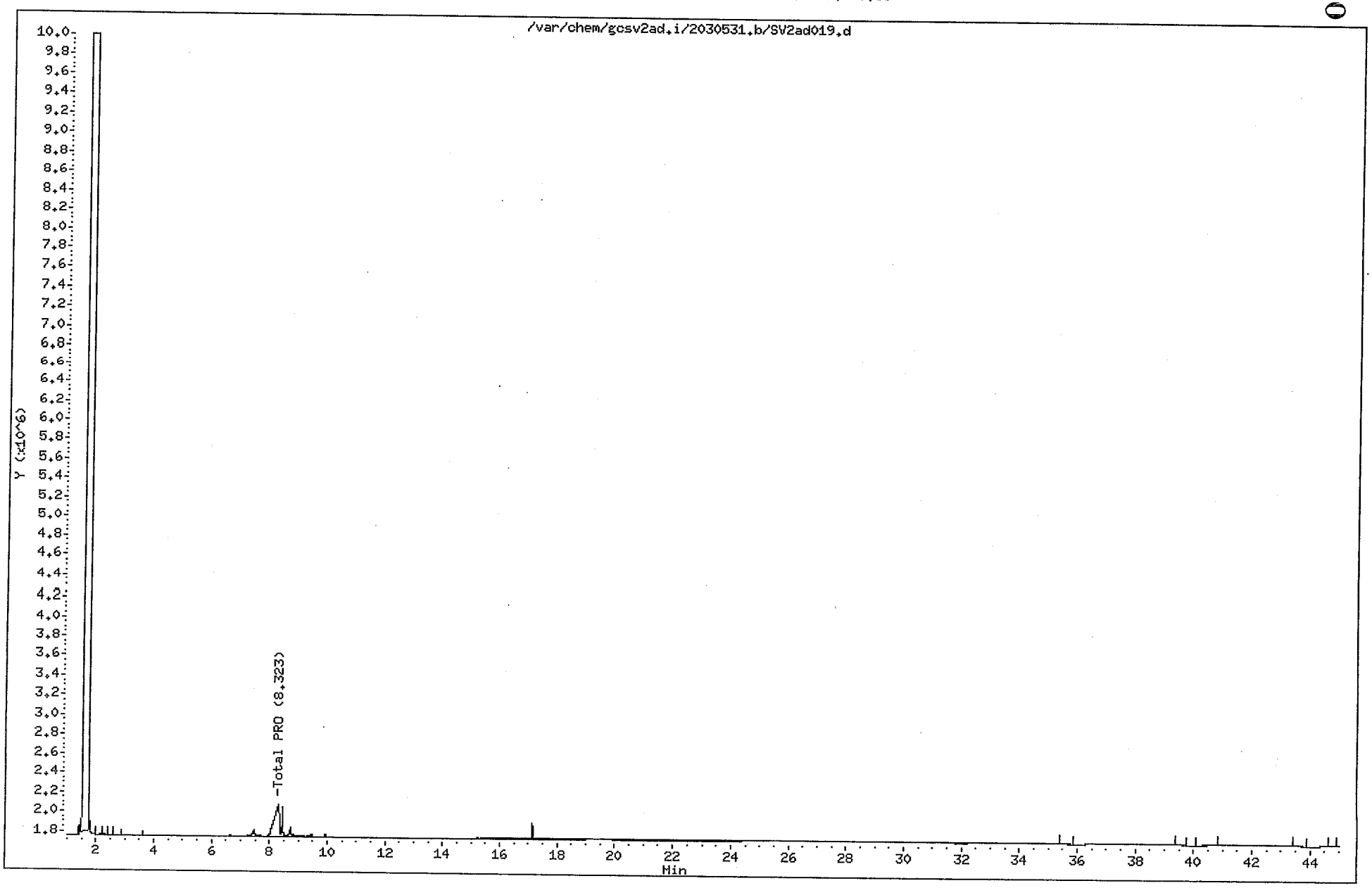
M - Compound response manually integrated.

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad019.d
Date : 02-JUN-2003 16:12
Client ID:
Sample Info: 20305291101-10.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i

Operator: tls
Column diameter: 0.53

000429



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad006.d
Lab Smp Id: 20305291102
Inj Date : 31-MAY-2003 14:00
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291102-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
20 Total PRO	17.137	11.897	5.240	12574011	44.6097	89.2193(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{12574011 - 2962332}{226784} \cdot \frac{2}{1000} \cdot 1000 = 84.8 \text{ ug/L}$$

Surr low | Sample reext. w/ simil. low recov. - Mat. ind.

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad006S.d
Lab Smp Id: 20305291102
Inj Date : 31-MAY-2003 14:00
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291102-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.137	17.157	-0.020	2779382	5.52071	11.0414(R)
$ 18 Nonatriacontane	35.077	35.119	-0.042	182950	58.6903	117.3806(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

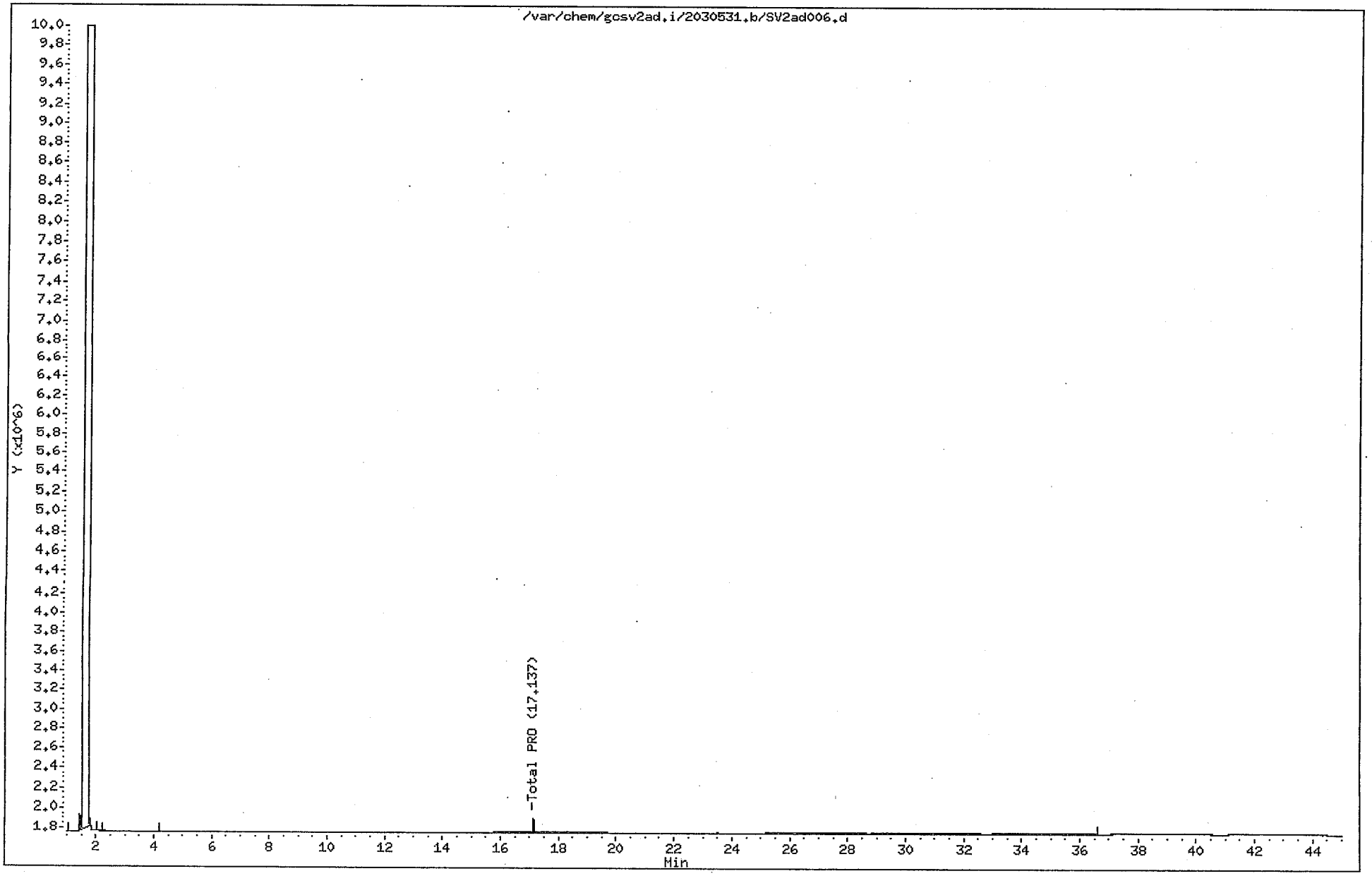
Surrogate low

2,962,332

000432

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad006.d
Date : 31-MAY-2003 14:00
Client ID:
Sample Info: 20305291102-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad007.d
Lab Smp Id: 20305291103
Inj Date : 31-MAY-2003 15:36
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291103-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
20 Total PRO	17.153	12.120	5.033	115048679	408.166	816.3321(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{115048679 - 27008629}{226784} \times \frac{2}{1000} \times 1000 = 776 \text{ ug/L}$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad007S.d
Lab Smp Id: 20305291103
Inj Date : 31-MAY-2003 15:36
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291103-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.153	17.157	-0.004	25938732	51.5223	103.0446
$ 18 Nonatriacontane	35.090	35.119	-0.029	1069897	343.223	686.4456(M)

27008629

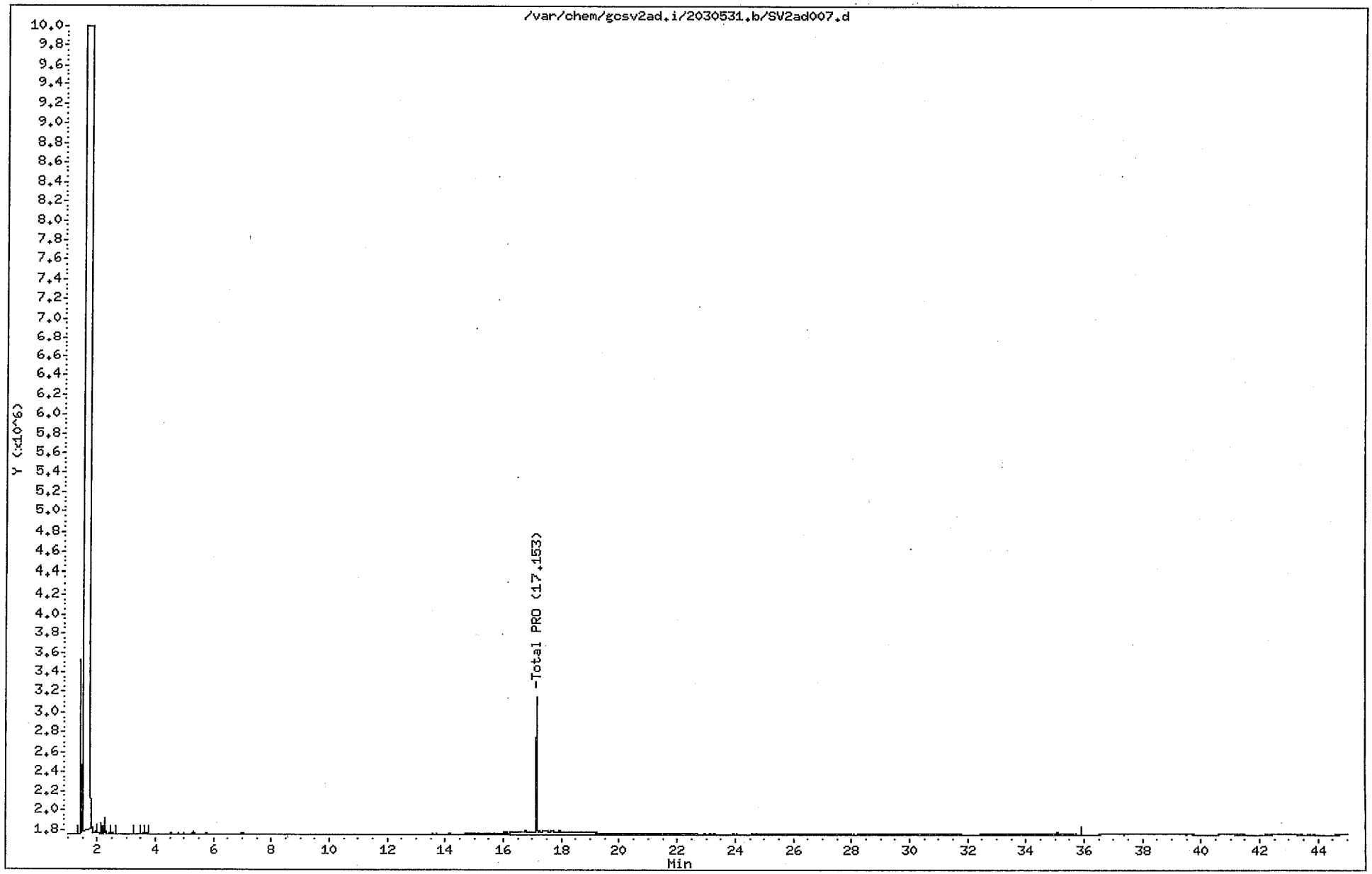
QC Flag Legend

M - Compound response manually integrated.

000435

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad007.d
Date : 31-MAY-2003 15:36
Client ID:
Sample Info: 20305291103-1.0-GCSV^26XX^-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad020.d
Lab Smp Id: 2030529110 4
Inj Date : 02-JUN-2003 17:10
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291104-50.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 20
Dil Factor: 50.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	17.137	11.897	5.240	49182665	174.489	17448.8704(M)

$ DO

QC Flag Legend

M - Compound response manually integrated.

$$\frac{49182665 - 511411}{226784} \times 50 \times \frac{2}{1000} \times 1000 = 21,461 \text{ ug/L}$$

MS
6/5/3

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad020S.d
Lab Smp Id: 203052911 04
Inj Date : 02-JUN-2003 17:10
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 203052911 04-50.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 20
Dil Factor: 50.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

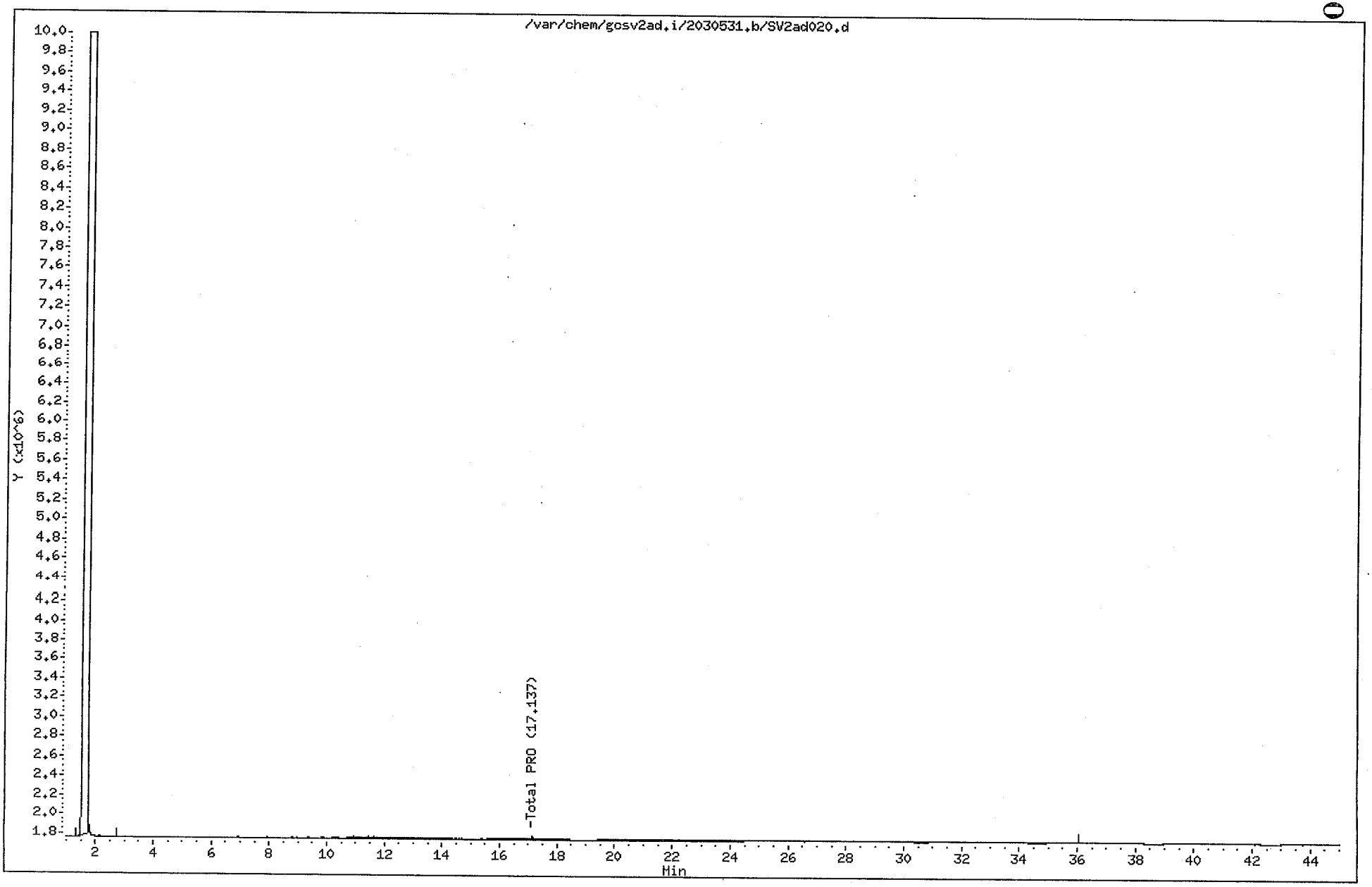
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.137	17.157	-0.020	511411	1.01582	101.5820

000438

Data File: /var/chem/gosv2ad.i/2030531.b/SV2ad020.d
Date : 02-JUN-2003 17:10
Client ID:
Sample Info: 20305291104-50.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gosv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad009.d
Lab Smp Id: 20305291105
Inj Date : 31-MAY-2003 17:32
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291105-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	17.150	12.120	5.030	52678975	186.893	373.7856 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{52678975 - 28808924}{226784} \times \frac{2}{1000} \times 1000 = 211\ ug/L$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad009S.d
Lab Smp Id: 20305291105
Inj Date : 31-MAY-2003 17:32
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291105-1.0-GCSV~26XX~~203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.149	17.157	-0.008	27841201	55.3012	110.6024
$ 18 Nonatriacontane	35.073	35.119	-0.046	967723	310.445	620.8909(M)
				28808924		

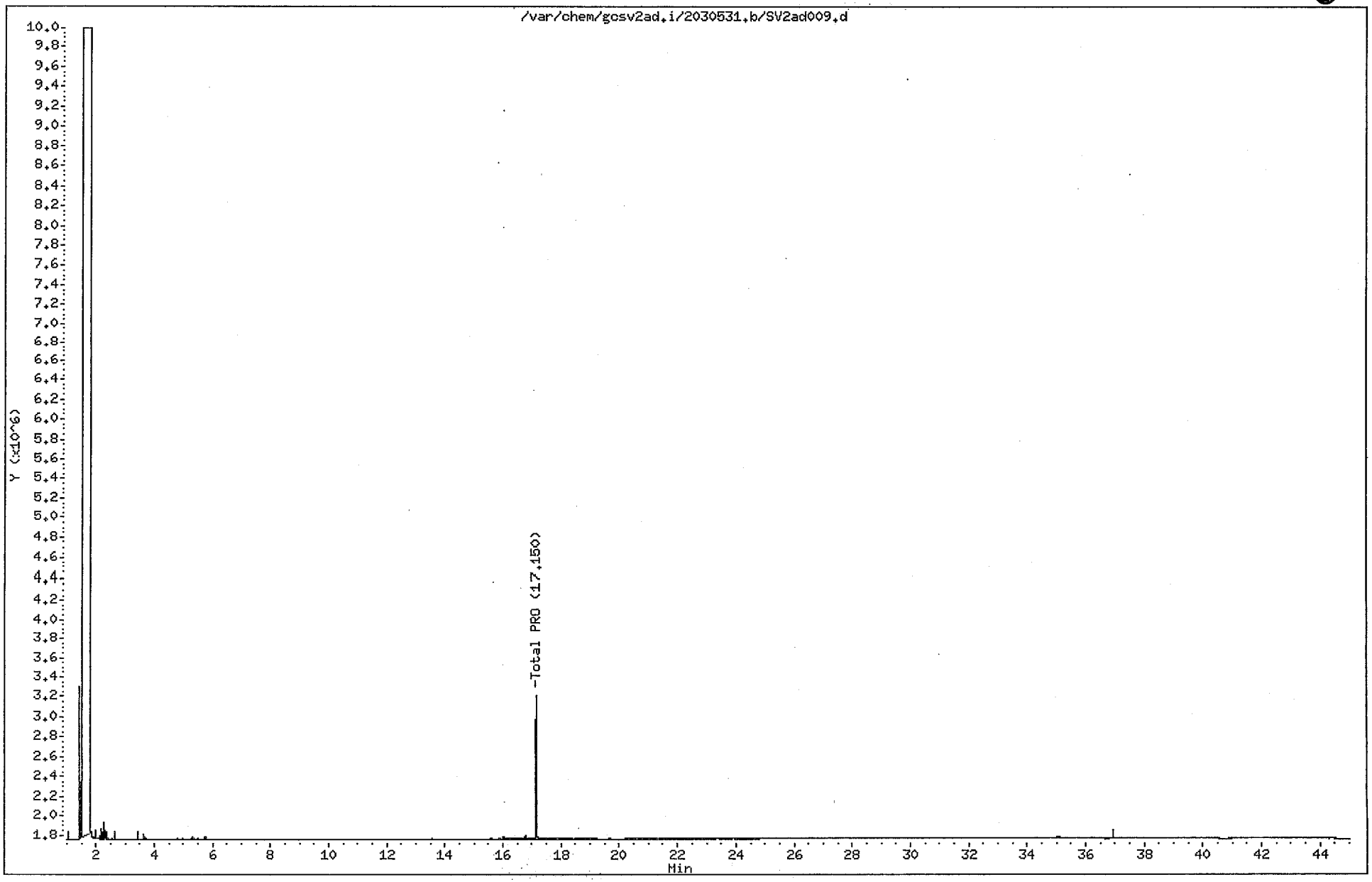
QC Flag Legend

M - Compound response manually integrated.

000441

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad009.d
Date : 31-MAY-2003 17:32
Client ID:
Sample Info: 20305291105-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad012.d
Lab Smp Id: 20305291109
Inj Date : 31-MAY-2003 20:23
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291109-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	17.157	12.120	5.037	44628393	158.331	316.6624(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{44628393 - 29789251}{226784} \times \frac{2}{1000} \times 1000 = 131 \text{ ug/L}$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad012S.d
Lab Smp Id: 20305291109
Inj Date : 31-MAY-2003 20:23
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291109-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.157	17.157	0.000	28573191	56.7552	113.5103 (M)
$ 18 Nonatriacontane	35.102	35.119	-0.017	1216060	390.112	780.2234

29789251

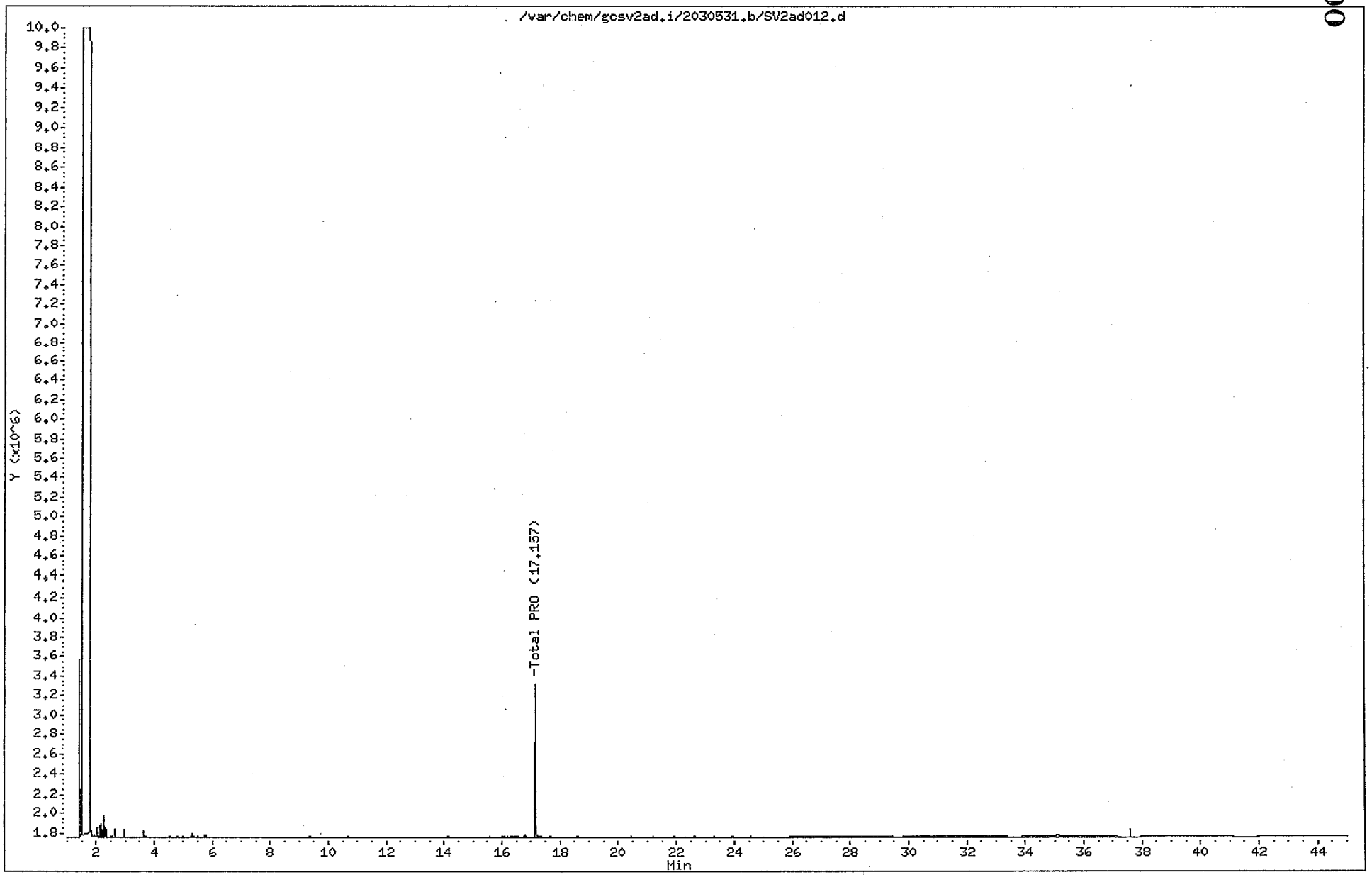
QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad012.d
Date : 31-MAY-2003 20:23
Client ID:
Sample Info: 20305291109-1.0-GCSV^26XX^-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53

000444



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad021.d
Lab Smp Id: 20305291110
Inj Date : 02-JUN-2003 18:07
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291110-5.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 21
Dil Factor: 5.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	17.137	11.897	5.240	84912943	301.251	3012.5145(M)

QC Flag Legend

M - Compound response manually integrated.

$$5 \times \frac{84912943 - 7687383}{226784} \times \frac{2}{1000} \times 1000 = 3405 \text{ ug/L}$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad021S.d
Lab Smp Id: 20305291110
Inj Date : 02-JUN-2003 18:07
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291110-5.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 21
Dil Factor: 5.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.137	17.157	-0.020	7491667	14.8808	148.8076(RM)
$ 18 Nonatriacontane	35.072	35.119	-0.047	195716	62.7856	627.8564(M)

7687383

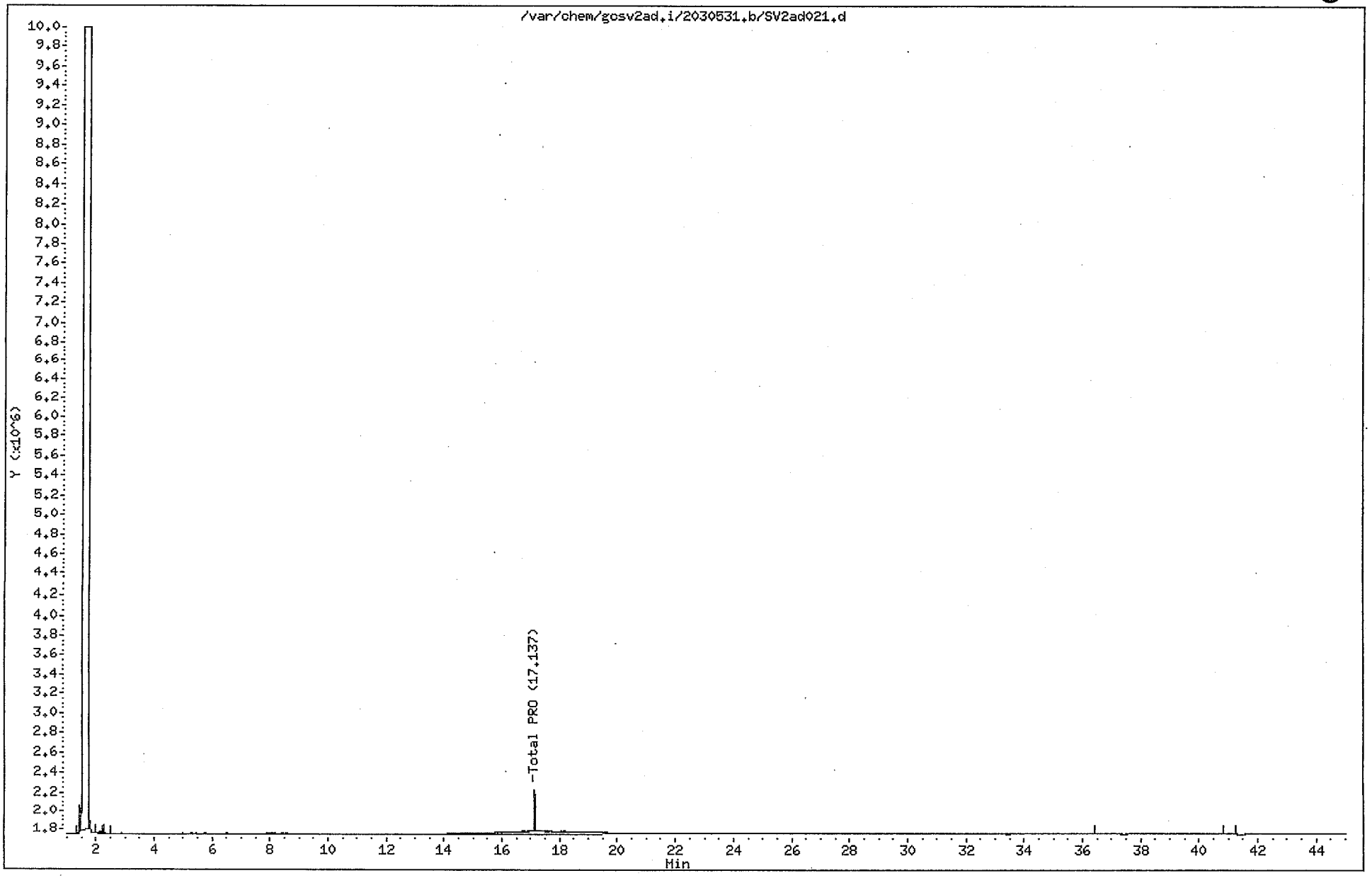
QC Flag Legend

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

0004417

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad021.d
Date : 02-JUN-2003 18:07
Client ID:
Sample Info: 20305291110-5.0-GCSV^26XX^-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad015.d
Lab Smp Id: 20305291111
Inj Date : 31-MAY-2003 23:10
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291111-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	17.157	12.120	5.037	52564936	186.488	372.9764(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{52564936 - 28{,}173{,}757}{226784} \cdot \frac{2}{1000} \cdot 1000 = 215\ ug/L$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad015S.d
Lab Smp Id: 20305291111
Inj Date : 31-MAY-2003 23:10
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291111-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

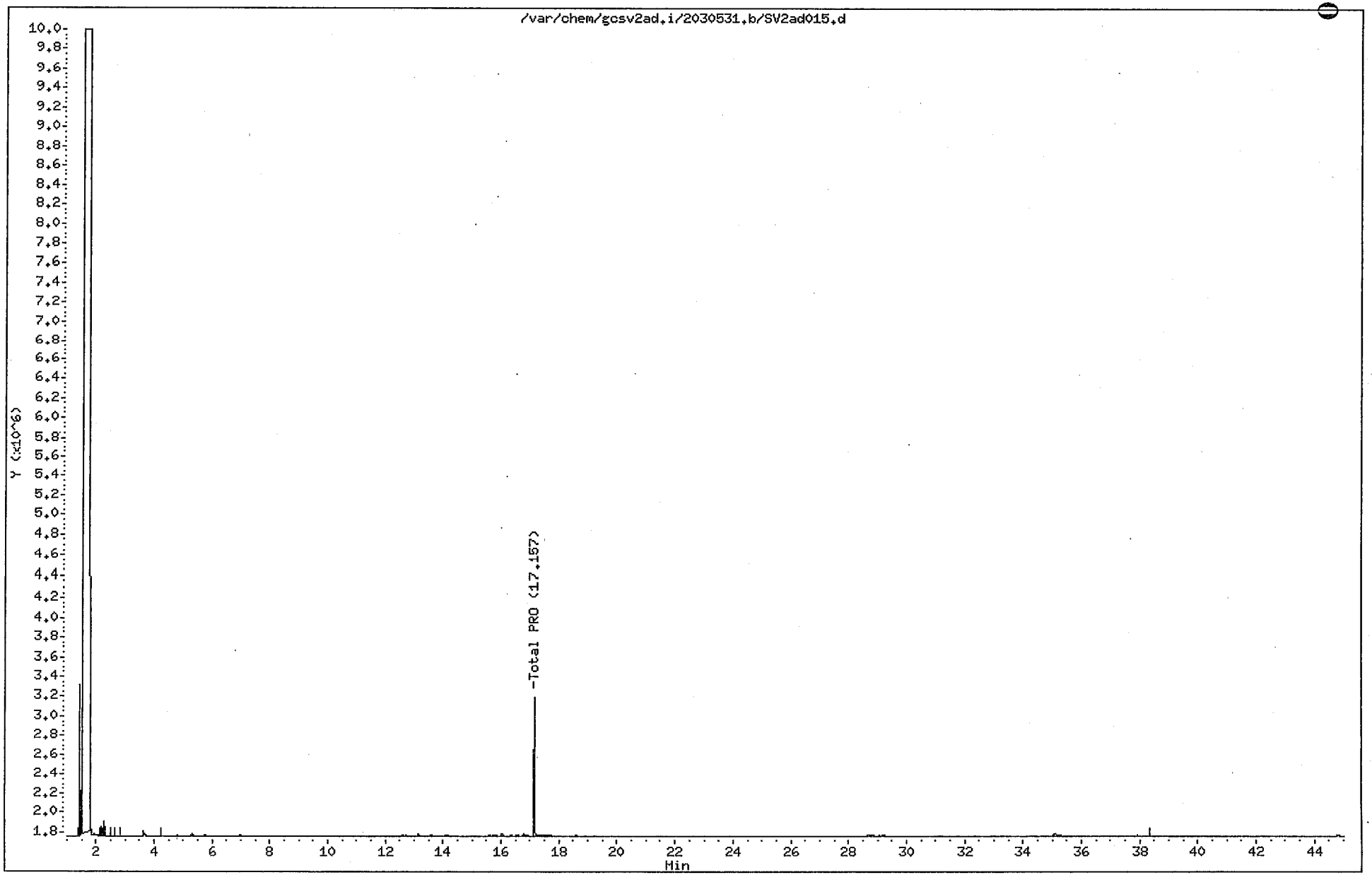
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.155	17.157	-0.002	27012961	53.6561	107.3121
$ 18 Nonatriacontane	35.106	35.119	-0.013	1160796	372.383	744.7661

28,173,757

000450

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad015.d
Date : 31-MAY-2003 23:10
Client ID:
Sample Info: 20305291111-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad002.d
Lab Smp Id: 6 PPM
Inj Date : 29-MAR-2003 15:08
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 6 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 15:08 Cal File: SV2ad002.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	17.210	5.010	12.200	45420515	102.000	161.1414(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{45420515 - 27814095}{102} = 172611$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad002S.d
Lab Smp Id: 6 PPM
Inj Date : 29-MAR-2003 15:08
Operator : tls
Inst ID: gcsv2ad.i
Smp Info : 6 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb
Quant Type: ESTD
Cal Date : 29-MAR-2003 15:08
Cal File: SV2ad002S.d
Als bottle: 2
Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie
Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

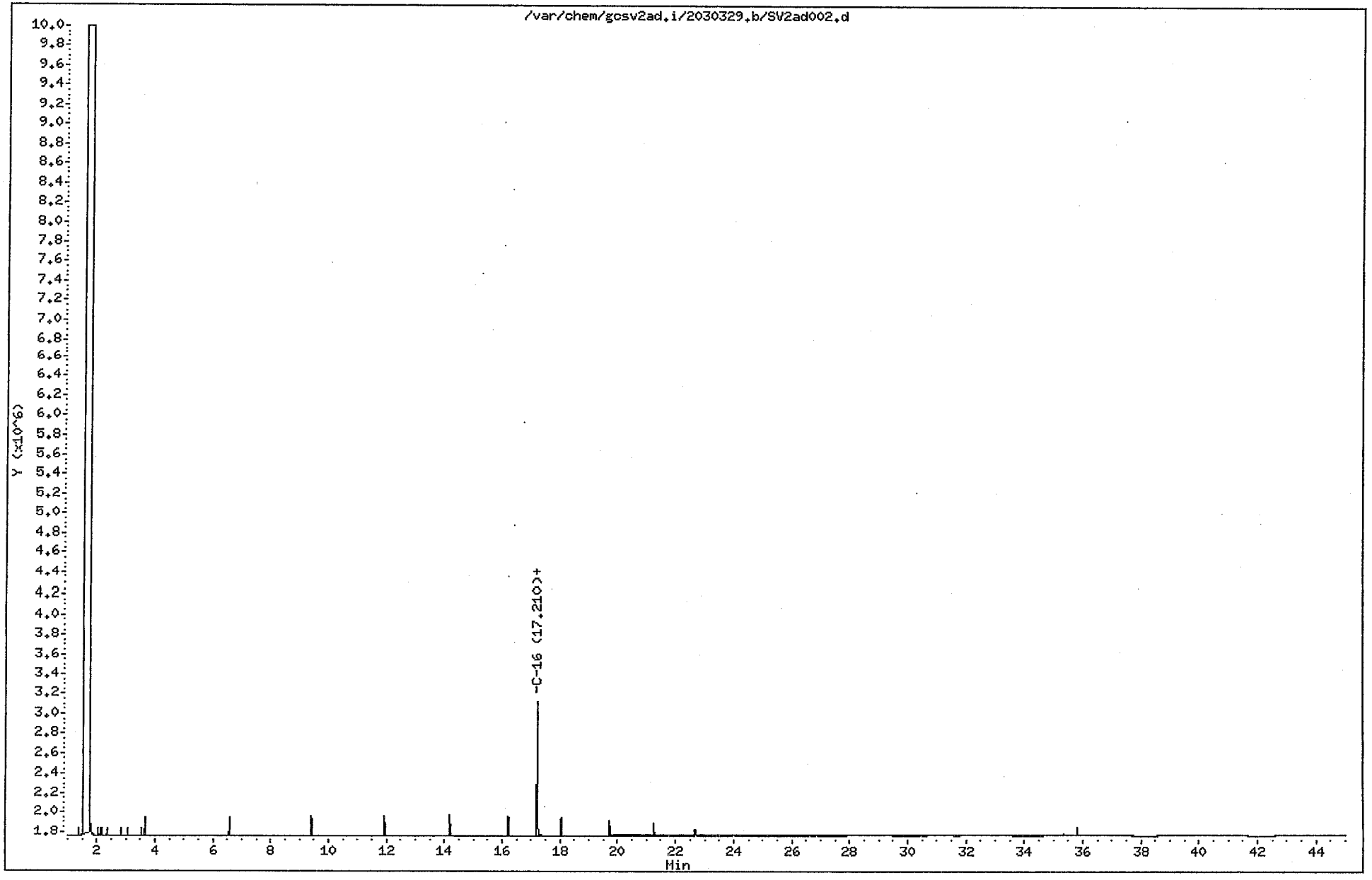
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.208	17.210	-0.002	26789358	50.0000	51.4230
$ 18 Nonatriacontane	35.345	35.327	0.018	1024737	300.000	324.7119

27814095

000453

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad002.d
Date : 29-MAR-2003 15:08
Client ID:
Sample Info: 6 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad003.d
Lab Smp Id: 50 PPM
Inj Date : 29-MAR-2003 16:01
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 16:01 Cal File: SV2ad003.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.658	5.010	-1.352	248568648	850.000	881.8639(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{248568648 - 28342612}{850} = 259089$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad003S.d
Lab Smp Id: 50 PPM
Inj Date : 29-MAR-2003 16:01
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 16:01 Cal File: SV2ad003S.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

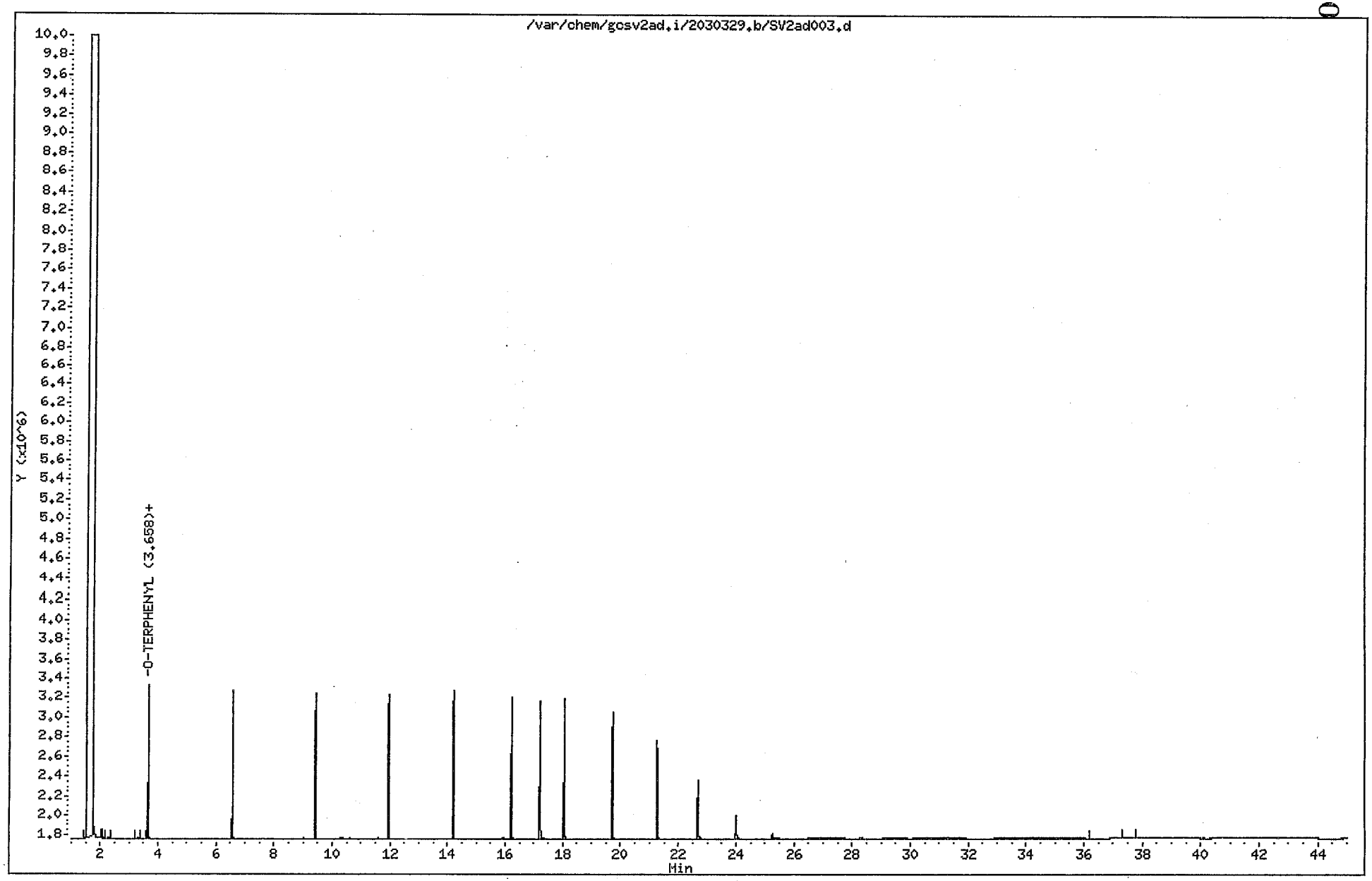
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.209	17.210	-0.001	27529958	50.0000	52.8446
$ 18 Nonatriacontane	35.344	35.327	0.017	812654	300.000	257.5084

28342612

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad003.d
Date : 29-MAR-2003 16:01
Client ID:
Sample Info: 50 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



000456

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad004.d
Lab Smp Id: 150 PPM
Inj Date : 29-MAR-2003 16:55
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 150 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 16:55 Cal File: SV2ad004.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.667	5.010	-1.343	639905891	2550.00	2270.2378 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{639905891 - 27413413}{2550} = 240193$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad004S.d
Lab Smp Id: 150 PPM
Inj Date : 29-MAR-2003 16:55
Operator : tls
Inst ID: gcsv2ad.i
Smp Info : 150 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb
Quant Type: ESTD
Cal Date : 29-MAR-2003 16:55
Cal File: SV2ad004S.d
Als bottle: 4
Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie
Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.209	17.210	-0.001	26489065	50.0000	50.8466
$ 18 Nonatriacontane	35.343	35.327	0.016	924348	300.000	292.9012

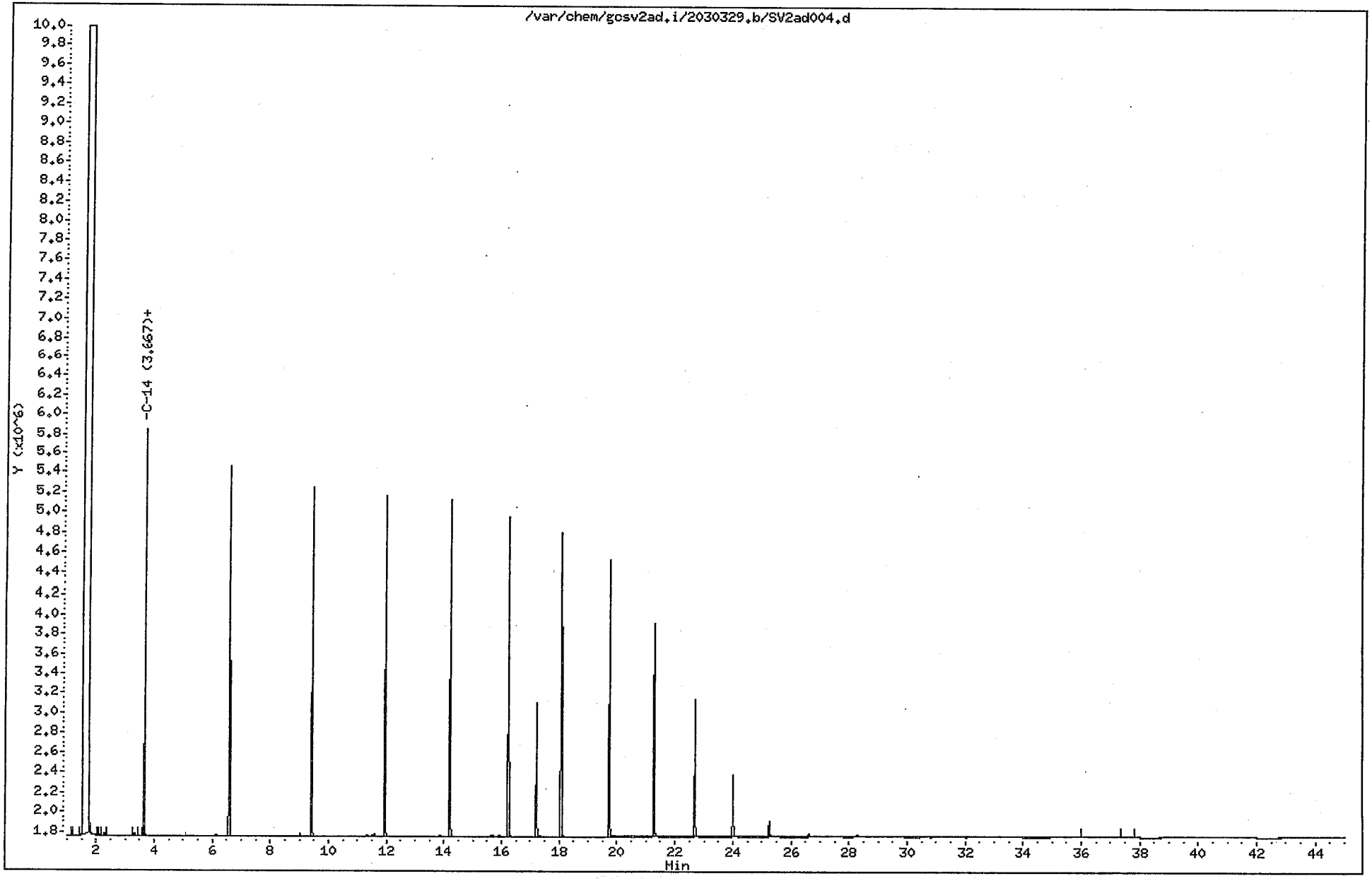
27413413

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad004.d
Date : 29-MAR-2003 16:55
Client ID:
Sample Info: 150 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i

Operator: tls
Column diameter: 0.53

000459



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad005.d
Lab Smp Id: 250 PPM
Inj Date : 29-MAR-2003 17:49
Operator : tls
Inst ID: gcsv2ad.i
Smp Info : 250 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb
Quant Type: ESTD
Cal Date : 29-MAR-2003 17:49
Cal File: SV2ad005.d
Als bottle: 5
Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie
Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.675	5.010	-1.335	1034720731	4250.00	3670.9495(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{1034720731 - 27008633}{4250} = 237108$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad005S.d
Lab Smp Id: 250 PPM
Inj Date : 29-MAR-2003 17:49
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 250 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 17:49 Cal File: SV2ad005S.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.210	17.210	0.000	26135774	50.0000	50.1685
$ 18 Nonatriacontane	35.344	35.327	0.017	872859	300.000	276.5858

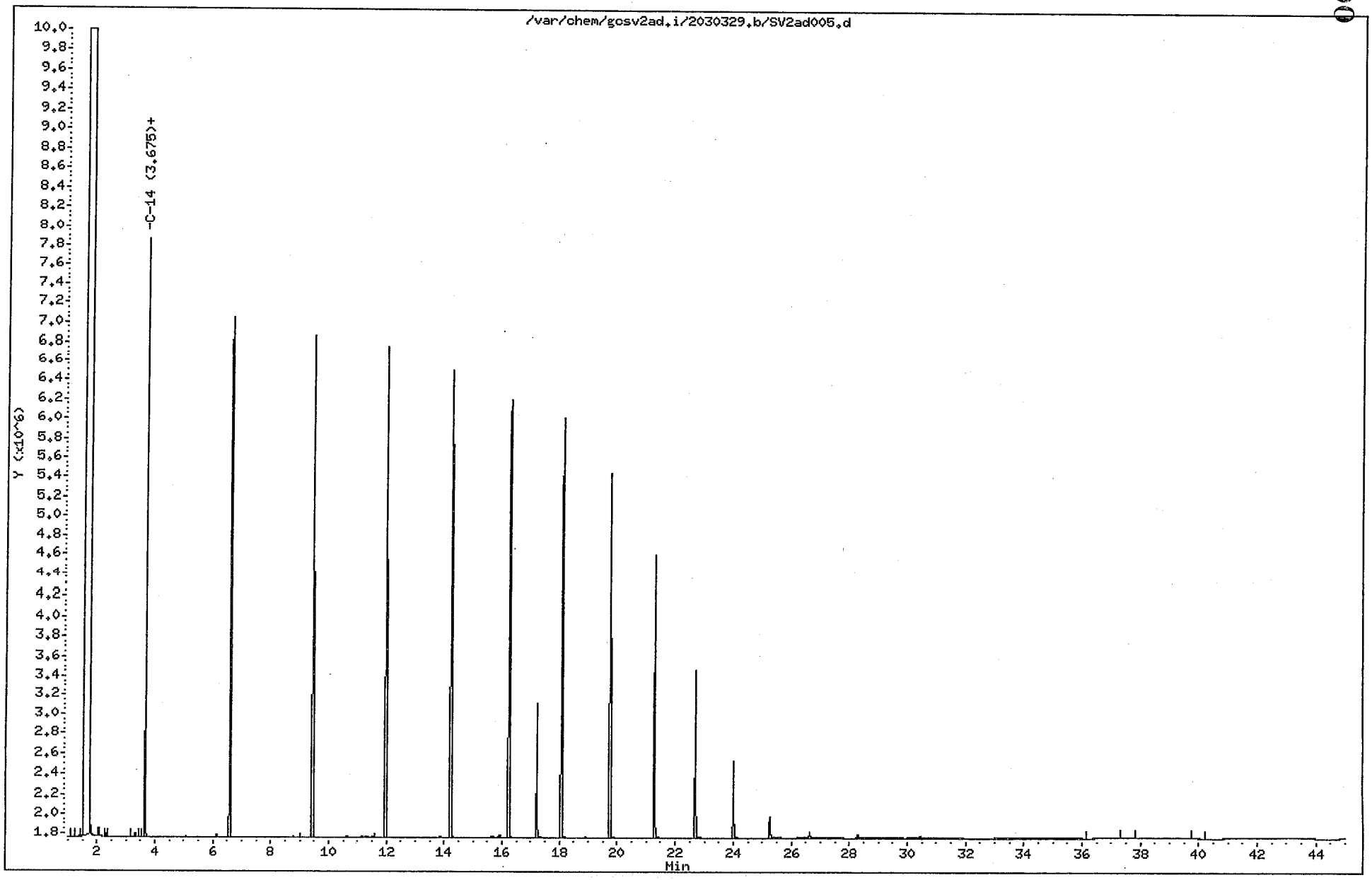
27008633

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad005.d
Date : 29-MAR-2003 17:49
Client ID:
Sample Info: 250 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i

Operator: tls
Column diameter: 0.53

000462



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad006.d
Lab Smp Id: 350 PPM
Inj Date : 29-MAR-2003 18:43
Operator : tls
Inst ID: gcsv2ad.i
Smp Info : 350 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb
Quant Type: ESTD
Cal Date : 29-MAR-2003 18:43
Cal File: SV2ad006.d
Als bottle: 6
Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie
Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable
Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.683	5.010	-1.327	1391980269	5950.00	4938.4236 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{1391980269 - 26110505}{5950} = 229558$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad006S.d
Lab Smp Id: 350 PPM
Inj Date : 29-MAR-2003 18:43
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 350 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 18:43 Cal File: SV2ad006S.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

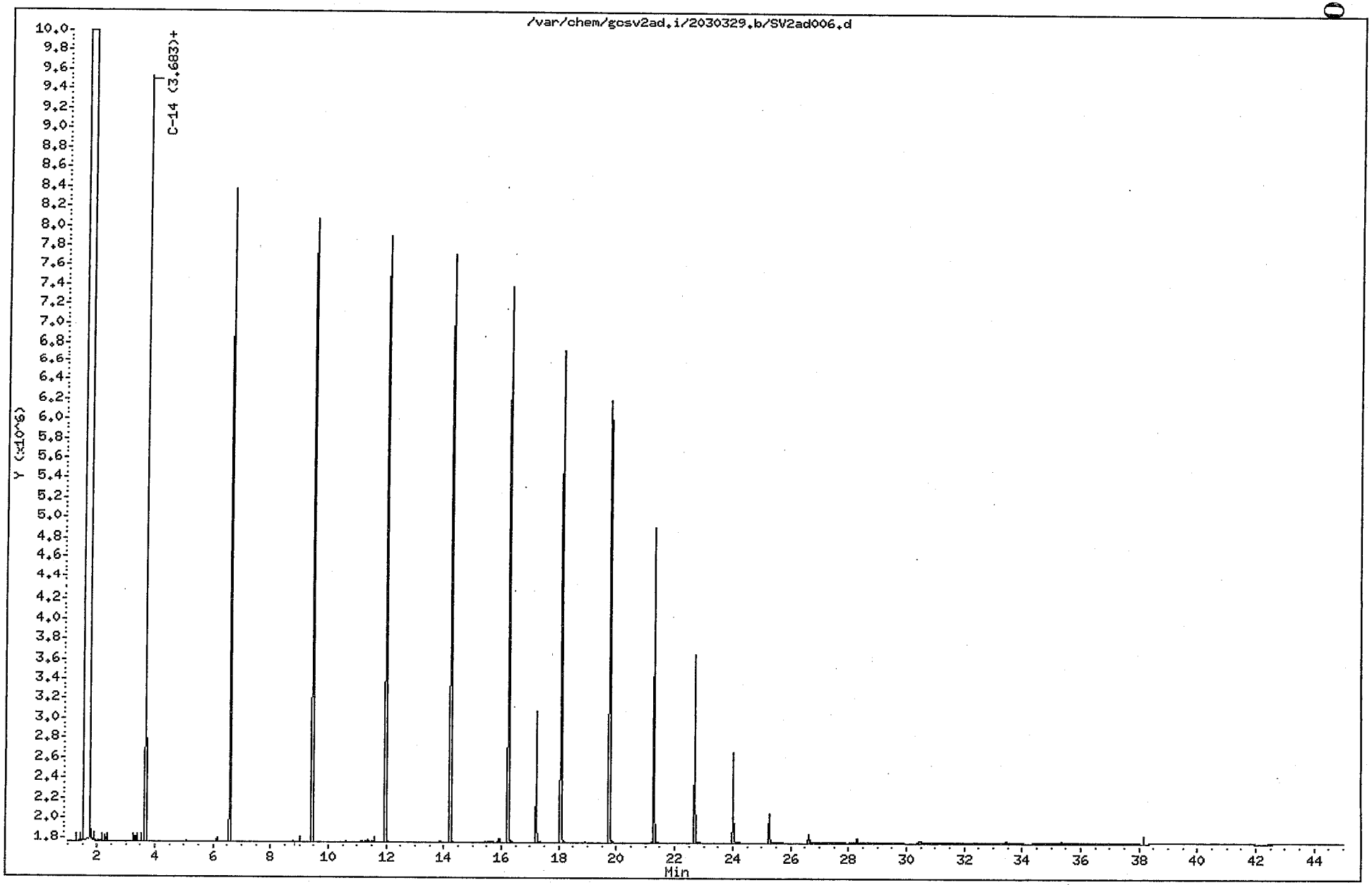
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.210	17.210	0.000	25119743	50.0000	48.2182
$ 18 Nonatriacontane	35.339	35.327	0.012	990762	300.000	313.9461

26110505

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad006.d
Date : 29-MAR-2003 18:43
Client ID:
Sample Info: 350 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i

Operator: tls
Column diameter: 0.53



000465

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad007.d
Lab Smp Id: 500 PPM
Inj Date : 29-MAR-2003 19:37
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 500 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flpro.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.690	5.010	-1.320	1913499997	8500.00	6788.6548 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{1913499997 - 25279158}{8500} = 222144$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030329.b/SV2ad007S.d
Lab Smp Id: 500 PPM
Inj Date : 29-MAR-2003 19:37
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 500 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030329.b/flsur.m
Meth Date : 22-Apr-2003 15:40 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007S.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

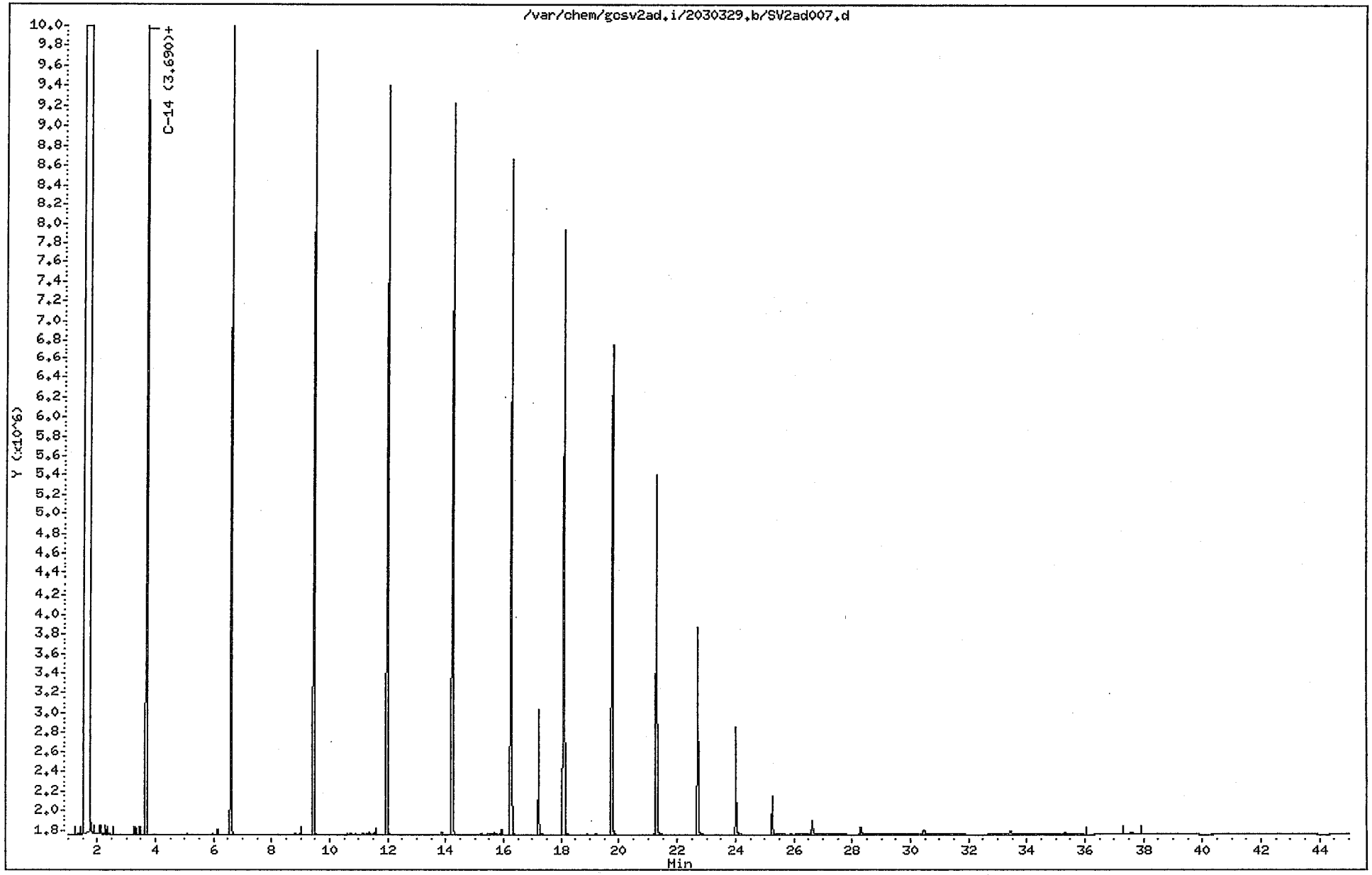
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
$ 7 O-TERPHENYL	17.211	17.210	0.001	24224016	50.0000	46.4988
$ 18 Nonatriacontane	35.339	35.327	0.012	1055142	300.000	334.3464

25279158

Data File: /var/chem/gcsv2ad.i/2030329.b/SV2ad007.d
Date : 29-MAR-2003 19:37
Client ID:
Sample Info: 500 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53

000468



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad002.d
Lab Smp Id: 50 PPM
Inj Date : 31-MAY-2003 10:00
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 31-May-2003 12:20 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	14.143	12.119	2.024	232314976	850.000	824.1997(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{232314976 - 25147634}{850} = \frac{243726 - 226784}{226784} = 7\%$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad002S.d
Lab Smp Id: 50 PPM
Inj Date : 31-MAY-2003 10:00
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

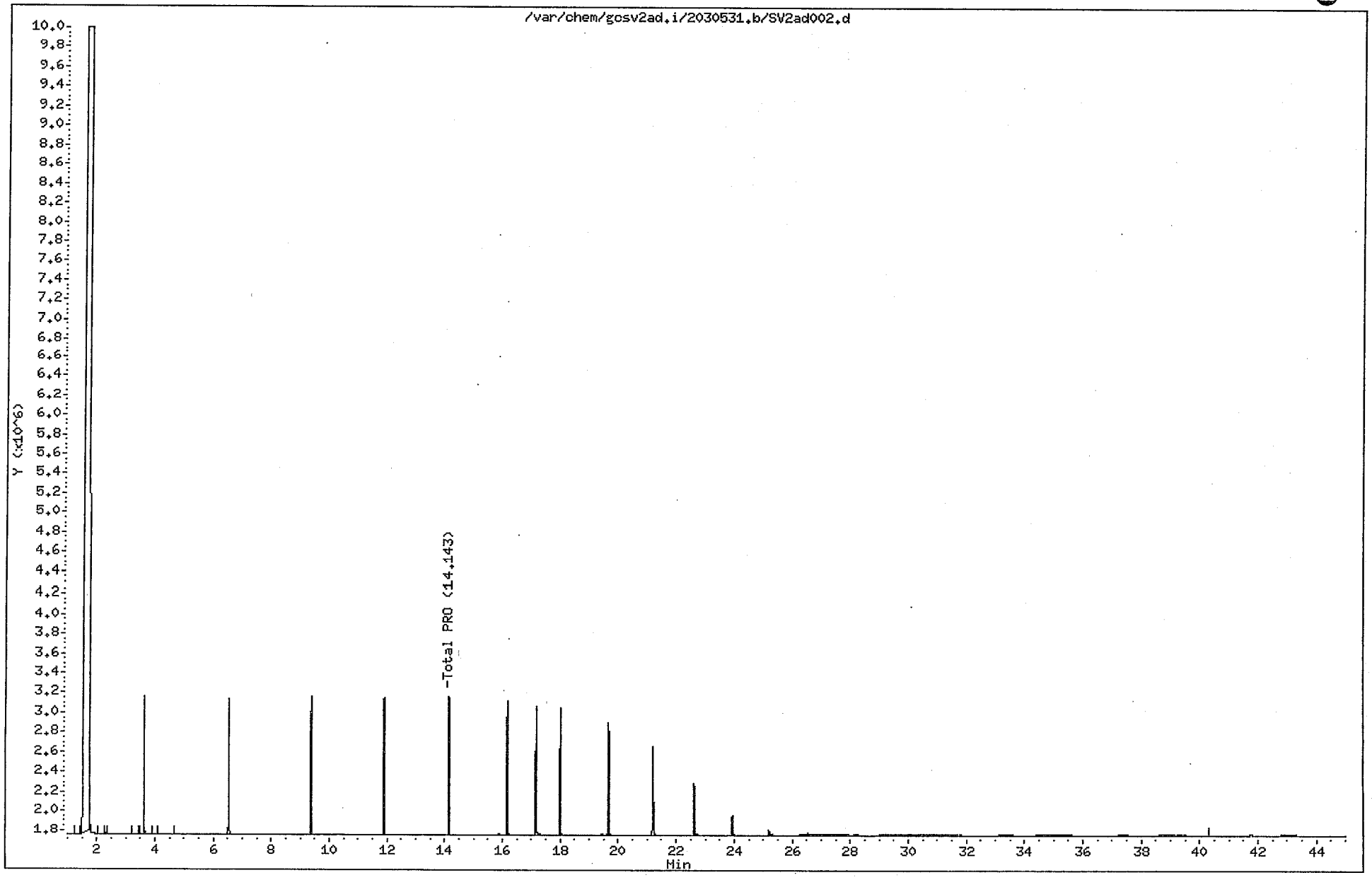
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.154	17.157	-0.003	24408464	48.4827	96.9654
$ 18 Nonatriacontane	35.106	35.119	-0.013	739170	237.126	474.2510

25147634

000471

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad002.d
Date : 31-MAY-2003 10:00
Client ID:
Sample Info: 50 PPM
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad013.d
Lab Smp Id: 50 PPM CCV
Inj Date : 31-MAY-2003 21:19
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 01-Jun-2003 11:53 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.625	11.068	-7.443	220624346	850.000	782.7240(M)

QC Flag Legend

M - Compound response manually integrated.

$\frac{220624346 - 24940837}{850}$ $\frac{230215 - 226784}{226784} = 1.5\%$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad013S.d
Lab Smp Id: 50 PPM CCV
Inj Date : 31-MAY-2003 21:19
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.153	17.157	-0.004	24206400	48.0814	96.1627
14 C-32	15.882	15.868	0.014	85892		(a)
$ 18 Nonatriacontane	35.104	35.119	-0.015	734437	235.607	471.2144

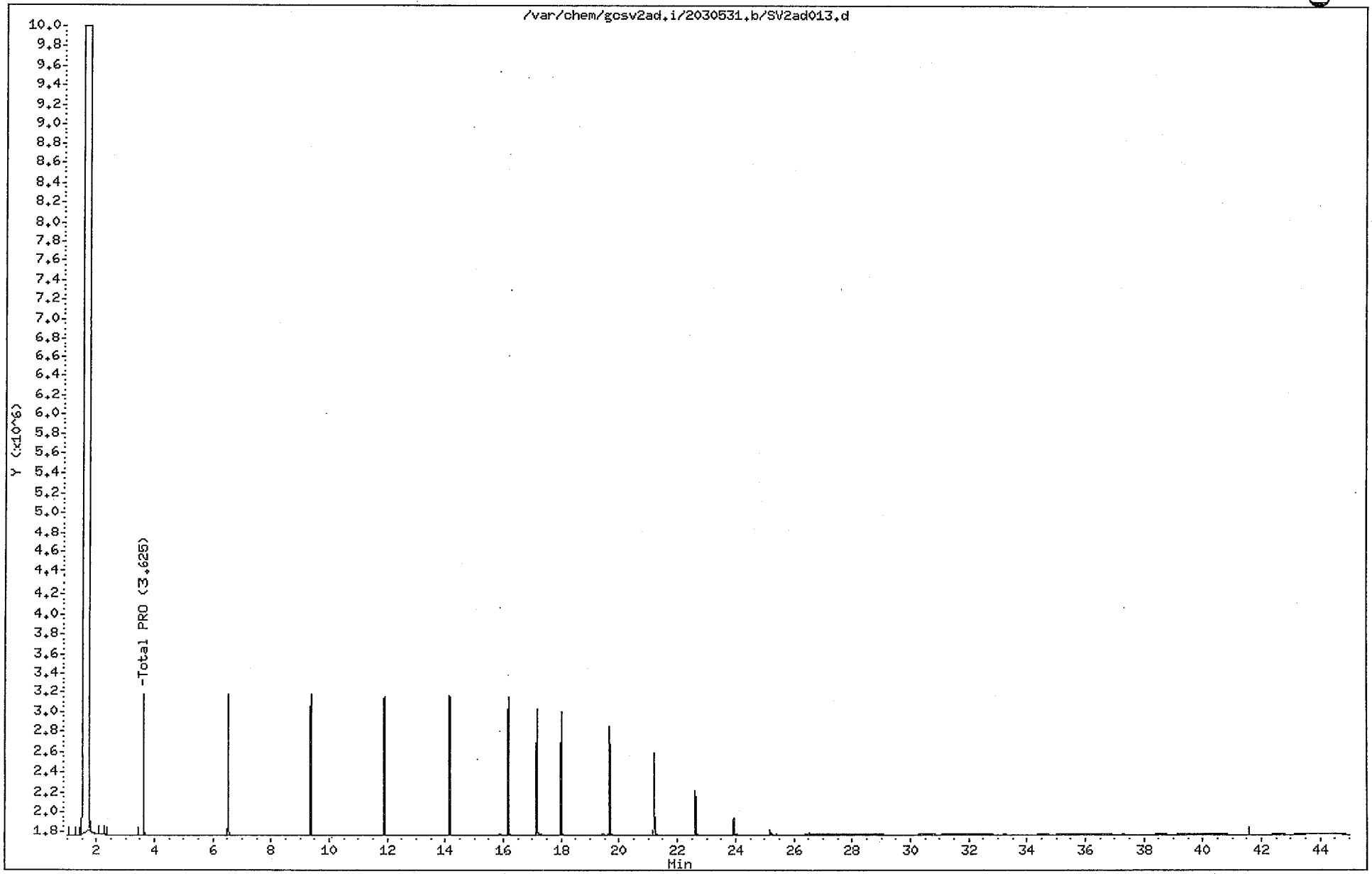
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

24940837-

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad013.d
Date : 31-MAY-2003 21:19
Client ID:
Sample Info: 50 PPM CCV
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



000474

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad016.d
Lab Smp Id: 50 PPM CCV
Inj Date : 01-JUN-2003 00:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 01-Jun-2003 11:53 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	14.145	12.120	2.025	239299111	850.000	848.9778(M)

QC Flag Legend

M - Compound response manually integrated.

$\frac{239299111 - 263514\cancel{1}6}{850}$ $\frac{250526 - 226784}{226784}$. 10.4%

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad016S.d
Lab Smp Id: 50 PPM CCV
Inj Date : 01-JUN-2003 00:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)	
$ 7 O-TERPHENYL	17.155	17.157	-0.002	25615729	50.8807	101.7614	
14 C-32	15.883	15.868	0.015	92426			(a)
$ 18 Nonatriacontane	35.109	35.119	-0.010	735687	236.008	472.0164	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

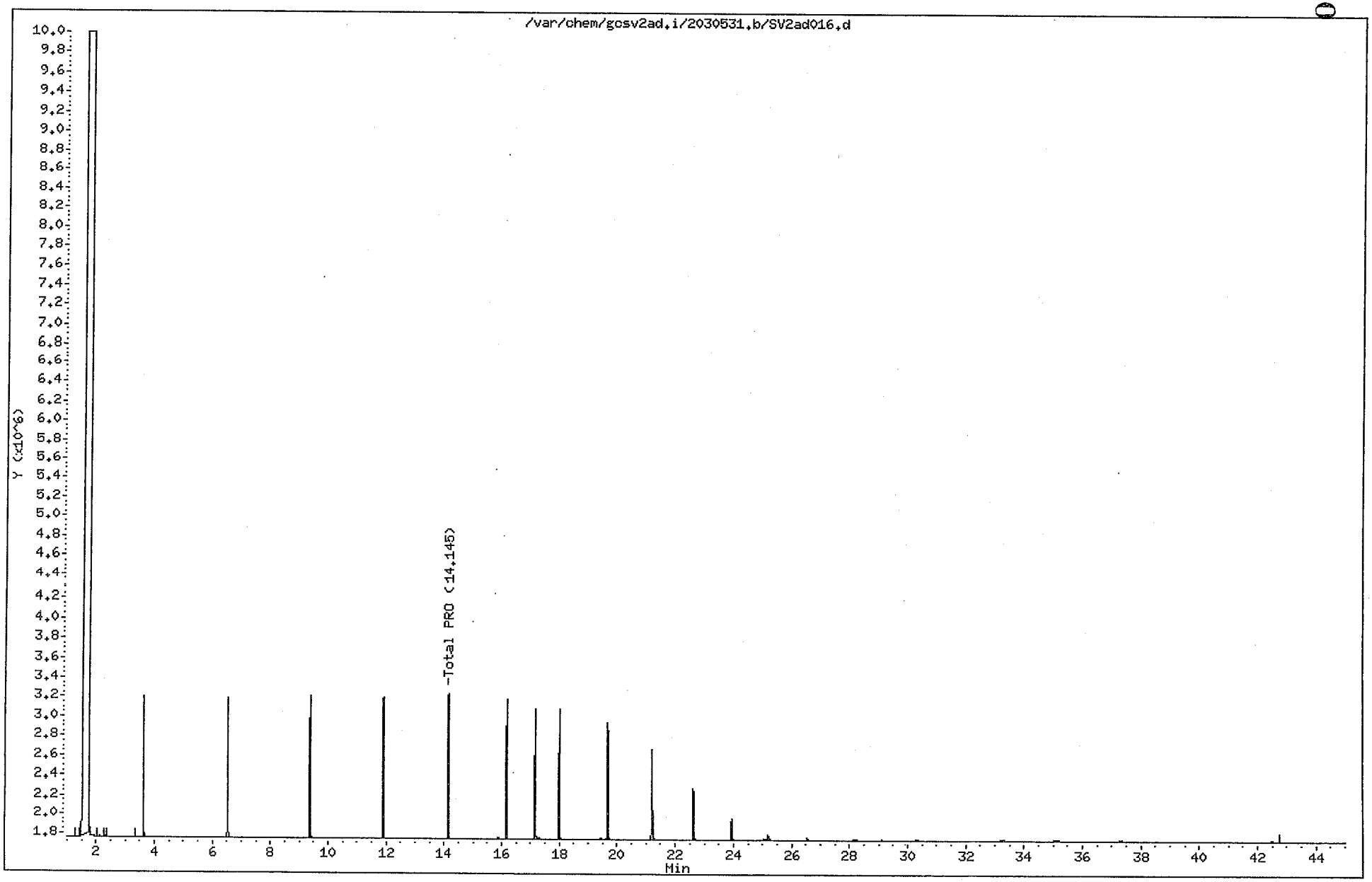
26351416

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad016.d
Date : 01-JUN-2003 00:05
Client ID:
Sample Info: 50 PPM CCV
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i

Operator: tls
Column diameter: 0.53

000477



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad018.d
Lab Smp Id: 50 PPM CCV
Inj Date : 02-JUN-2003 15:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 15:54 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	3.615	11.061	-7.446	227601438	850.000	807.4771(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{227601438 - 25646816}{850} \qquad \frac{237593 - 226784}{226784} \cdot 100 = 4.7\%$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad018S.d
Lab Smp Id: 50 PPM CCV
Inj Date : 02-JUN-2003 15:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

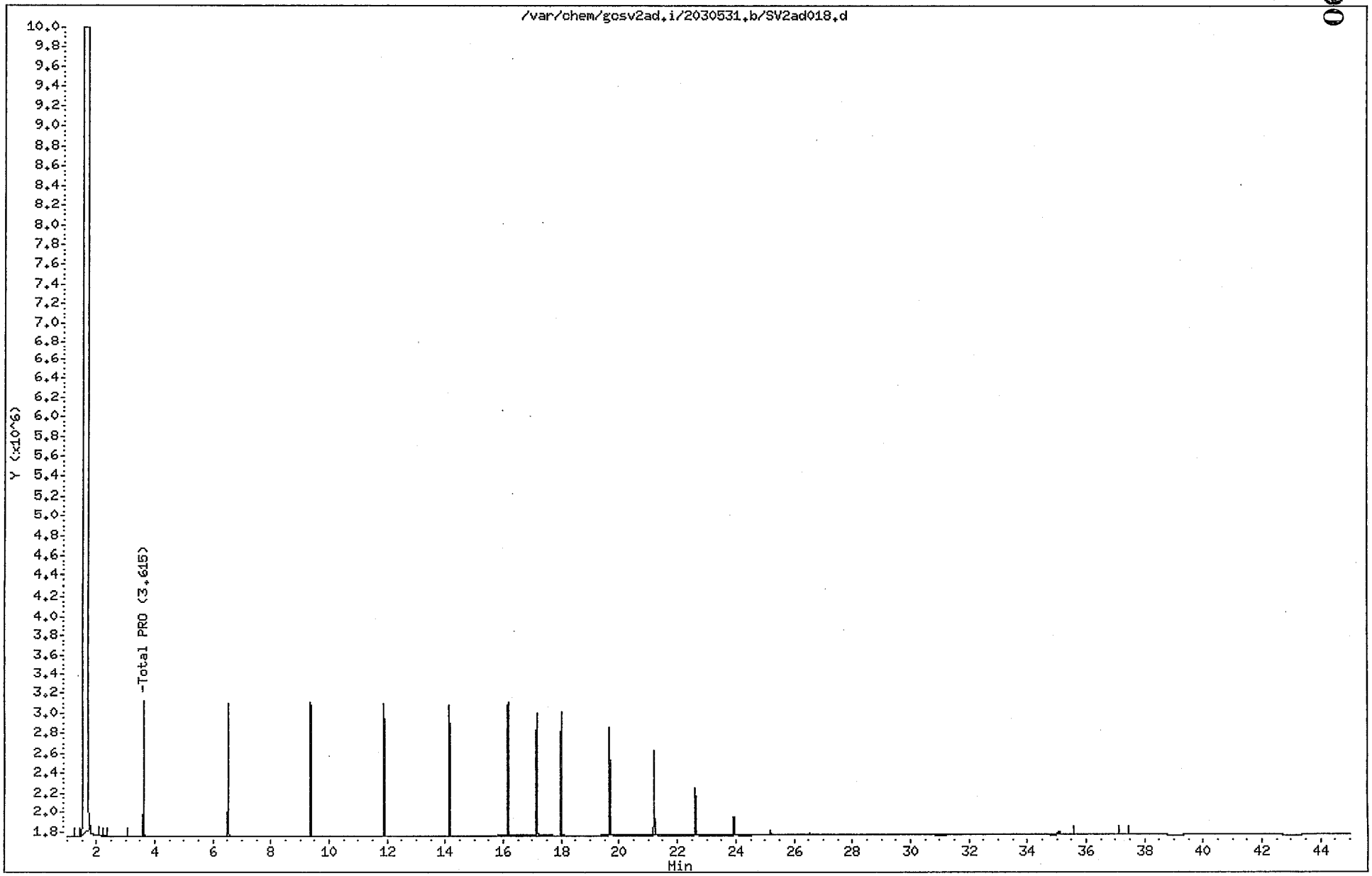
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.149	17.157	-0.008	23896393	47.4656	94.9312
$ 18 Nonatriacontane	35.084	35.119	-0.035	1750423	561.535	1123.0705

25646816

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad018.d
Date : 02-JUN-2003 15:05
Client ID:
Sample Info: 50 PPM CCV
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53

000480



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad022.d
Lab Smp Id: 50 PPM CCV
Inj Date : 02-JUN-2003 19:04
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 09:58 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG/ML)	AMOUNTS ON-COL (UG/ML)
20 Total PRO	9.363	11.636	-2.273	200143769	850.000	710.0637(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{200143769 - 23943979}{850}$$

$$\frac{207294 - 226784}{226784} \times 100 = 8.6\%$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad022S.d
Lab Smp Id: 50 PPM CCV
Inj Date : 02-JUN-2003 19:04
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 50 PPM CCV
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.148	17.157	-0.009	22533754	44.7590	89.5179
$ 18 Nonatriacontane	35.083	35.119	-0.036	1410225	452.400	904.7999(M)

23943979

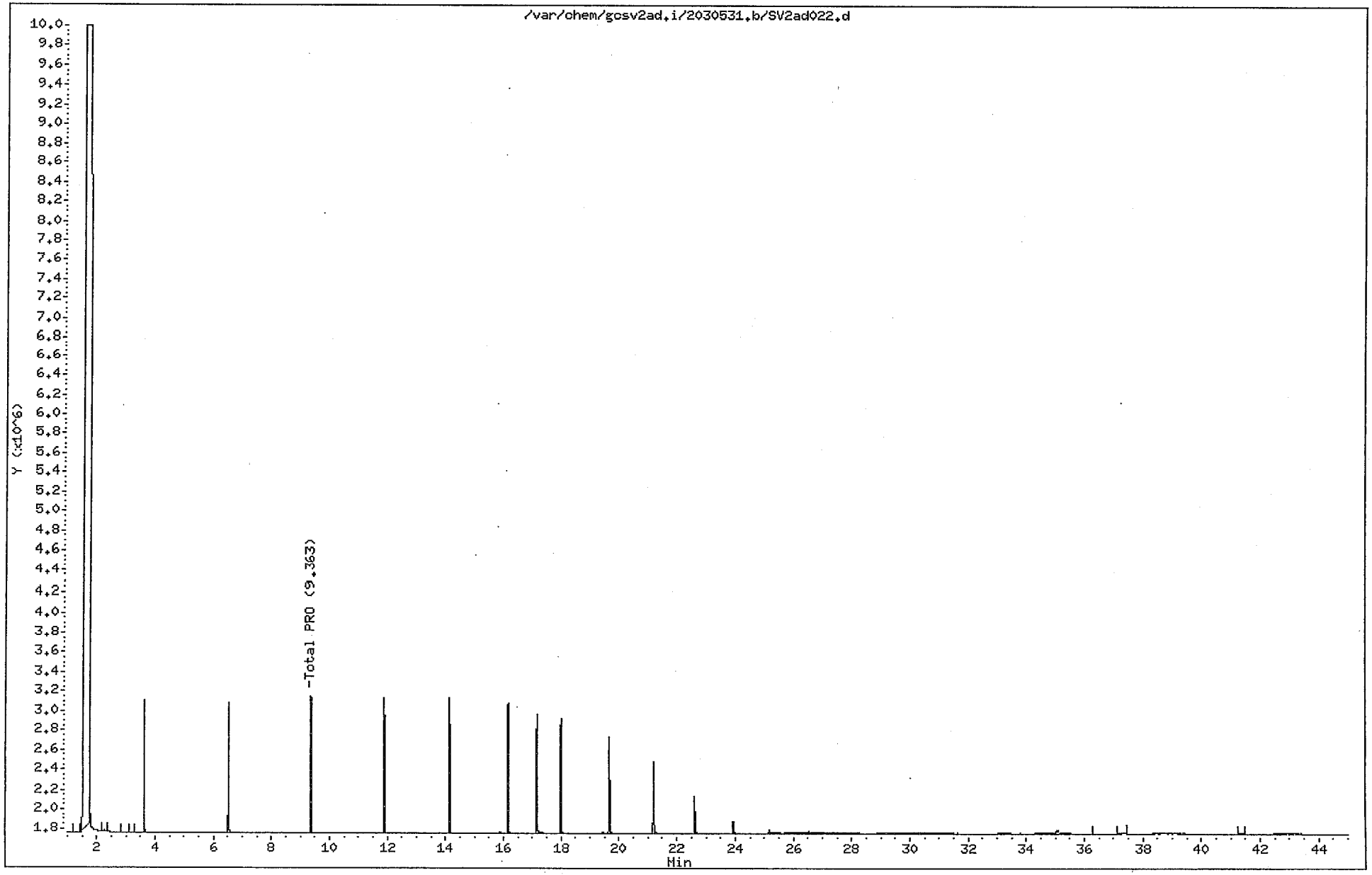
QC Flag Legend

M - Compound response manually integrated.

000483

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad022.d
Date : 02-JUN-2003 19:04
Client ID:
Sample Info: 50 PPM CCV
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad003.d
Lab Smp Id: 101498
Inj Date : 31-MAY-2003 11:09
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 101498-1.0-GCSV~26XX~-2030529BLK--BLK 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
20 Total PRO	17.160	11.897	5.263	26350004	93.4837	186.9674 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{26350004 - 34758633}{226784} \times \frac{2}{1000} \times 1000 = 20 \quad <DL$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad003S.d
Lab Smp Id: 101498
Inj Date : 31-MAY-2003 11:09
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 101498-1.0-GCSV~26XX~-2030529BLK--BLK 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.158	17.157	0.001	34040666	67.6153	135.2305
$ 18 Nonatriacontane	35.098	35.119	-0.021	717967	230.324	460.6475 (M)
				34758633		

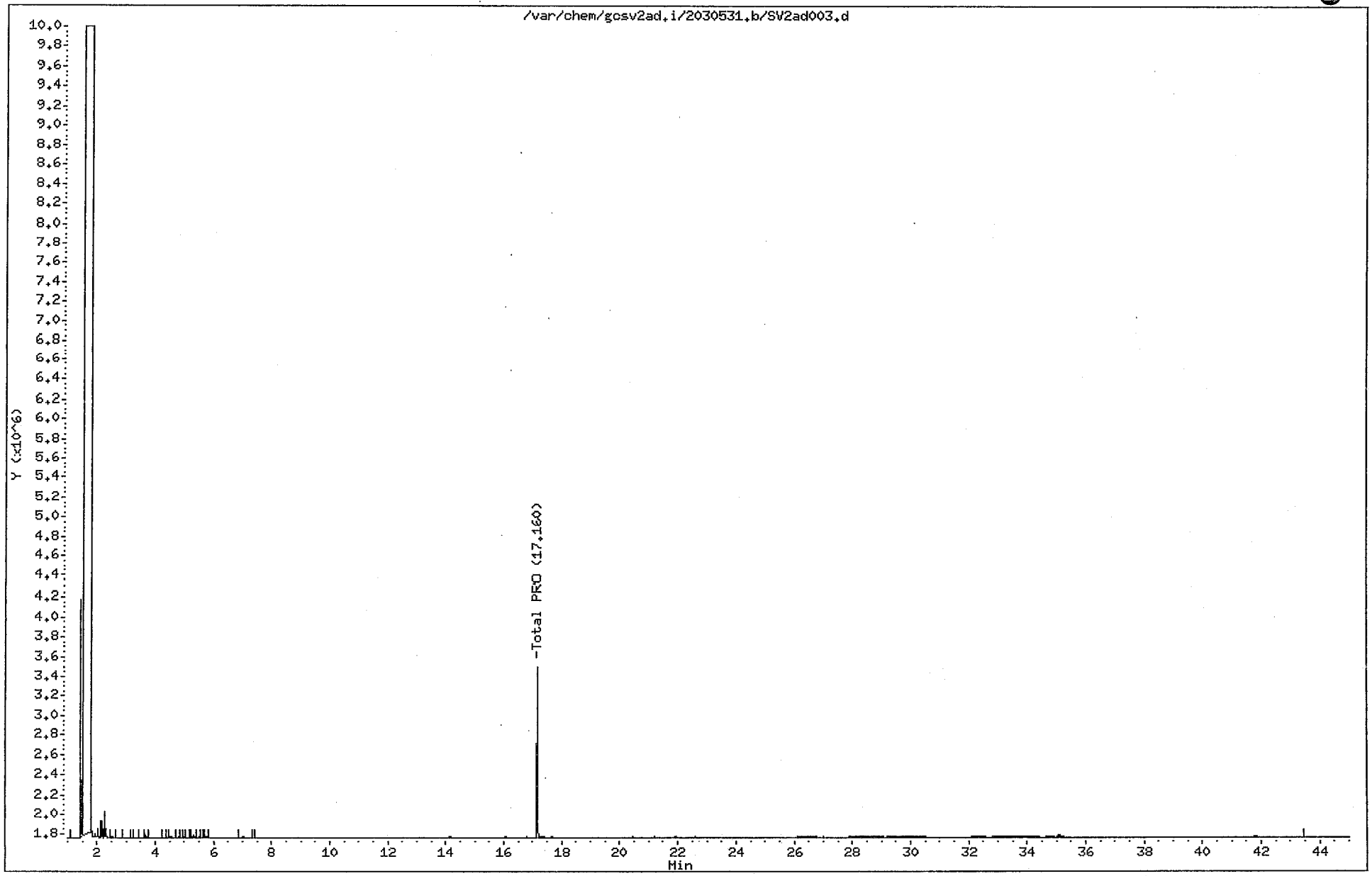
QC Flag Legend

M - Compound response manually integrated.

000486

Data File: /var/chem/gosv2ad.i/2030531.b/SV2ad003.d
Date : 31-MAY-2003 11:09
Client ID:
Sample Info: 101498-1.0-GCSV~26XX~-2030529BLK--BLK 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gosv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad004.d
Lab Smp Id: 101499
Inj Date : 31-MAY-2003 12:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 101499-1.0-GCSV~26XX~-2030529BLK--lcs 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 03-Jun-2003 11:24 dlb Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	14.147	11.897	2.250	254399906	902.552	1805.1038 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{254399906 - 35561856}{226784} \times \frac{2}{1000} \times 1000 = 1930$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad004S.d
Lab Smp Id: 101499
Inj Date : 31-MAY-2003 12:05
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 101499-1.0-GCSV~26XX~-2030529BLK--lcs 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.156	17.157	-0.001	34543950	68.6149	137.2298
$ 18 Nonatriacontane	35.083	35.119	-0.036	1017906	326.544	653.0879(M)

35561856

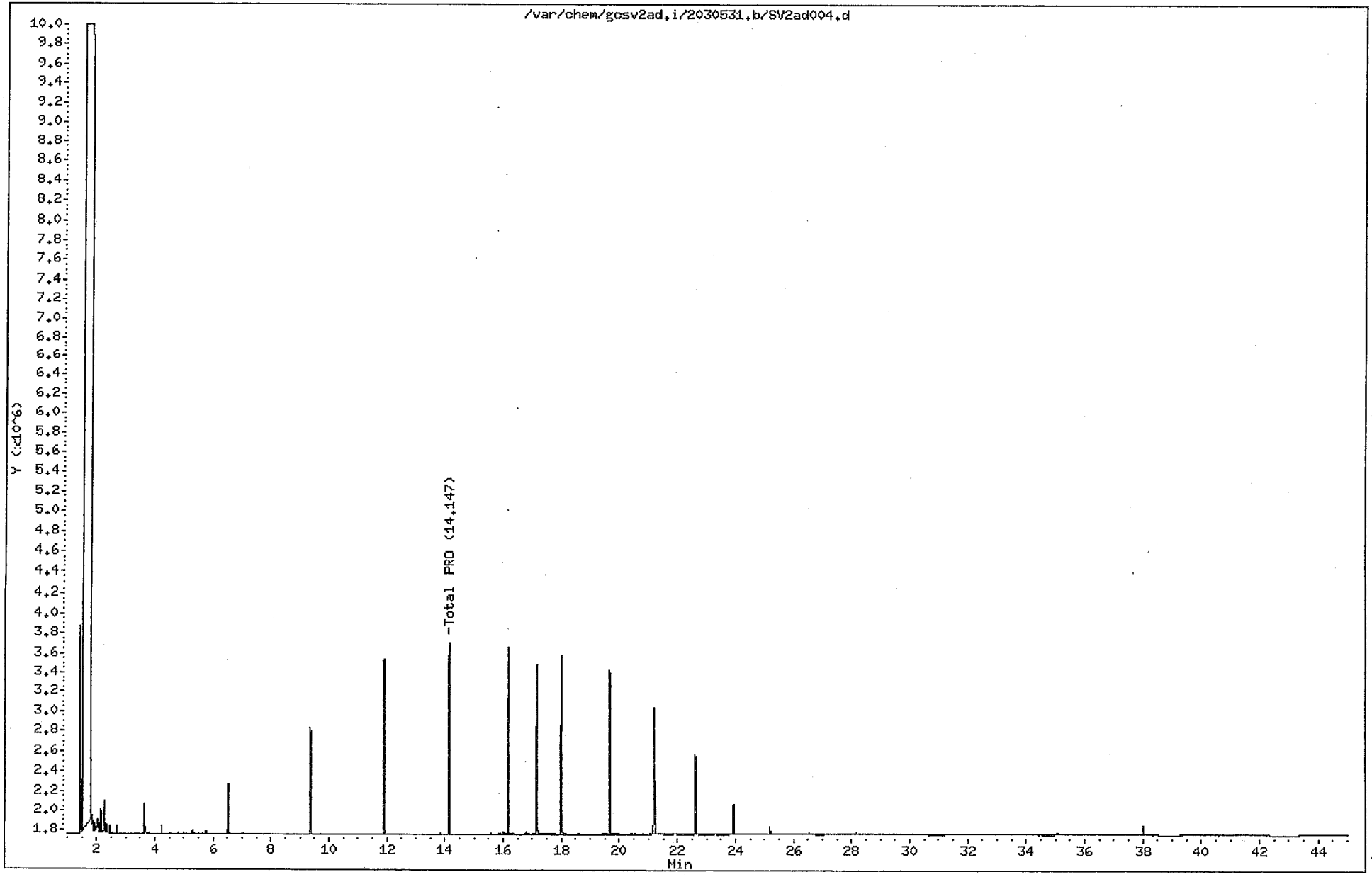
QC Flag Legend

M - Compound response manually integrated.

000489

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad004.d
Date : 31-MAY-2003 12:05
Client ID:
Sample Info: 101499-1.0-GCSV~26XX~-2030529BLK--lcs 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad010.d
Lab Smp Id: 20305291106
Inj Date : 31-MAY-2003 18:30
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291106-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 10 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
20 Total PRO	16.160	12.120	4.040	197062105	699.131	1398.2614(M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{197062105 - 26538373}{226784} \times \frac{2}{1000} \times 1000 = 1504$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad010S.d
Lab Smp Id: 20305291106
Inj Date : 31-MAY-2003 18:30
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291106-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
$ 7 O-TERPHENYL	17.150	17.157	-0.007	25876415	51.3985	102.7970
$ 18 Nonatriacontane	35.078	35.119	-0.041	661958	212.356	424.7119(M)

26538373

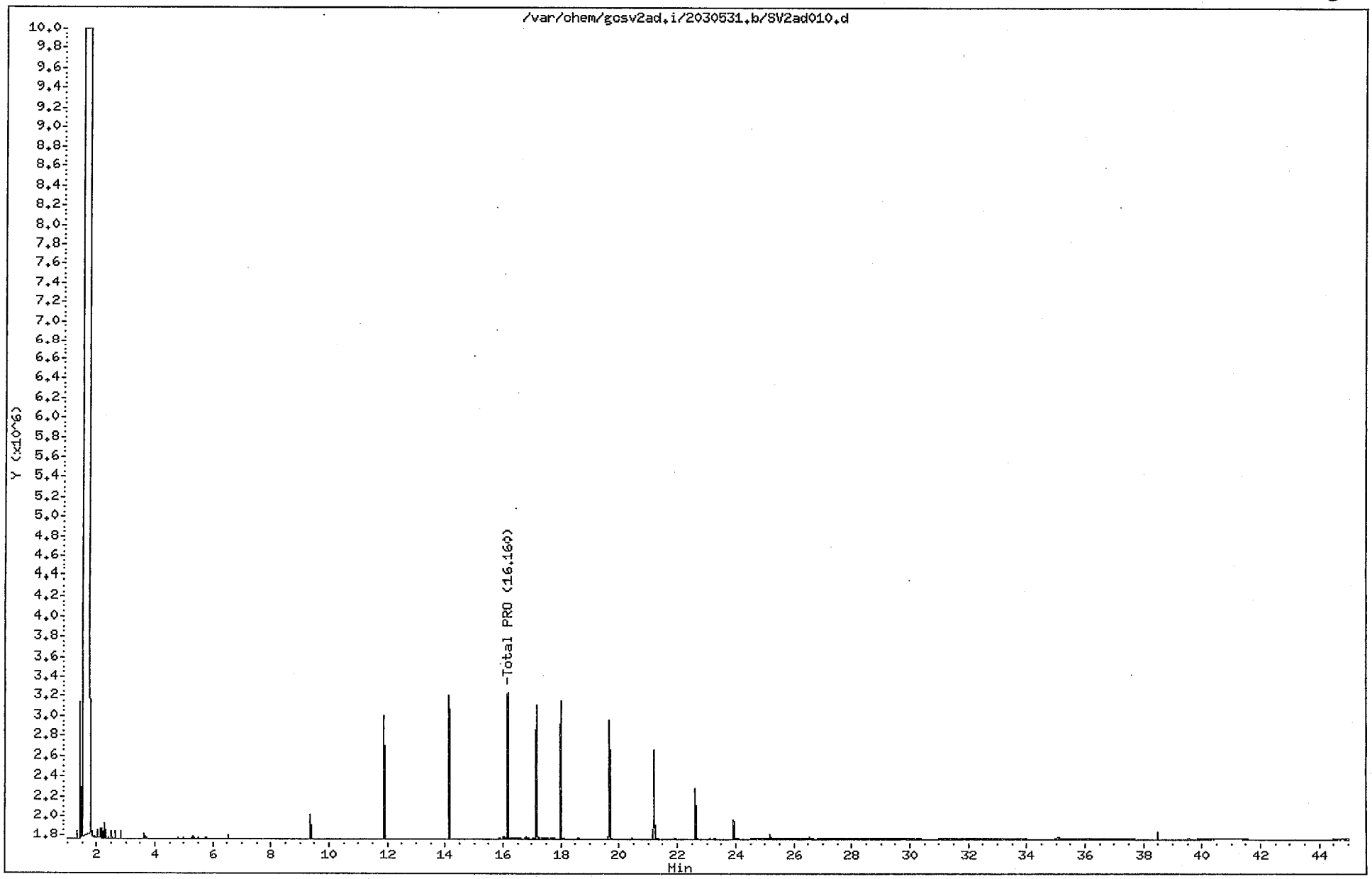
QC Flag Legend

M - Compound response manually integrated.

000492

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad010.d
Date : 31-MAY-2003 18:30
Client ID:
Sample Info: 20305291106-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad011.d
Lab Smp Id: 20305291107
Inj Date : 31-MAY-2003 19:27
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291107-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flpro.m
Meth Date : 02-Jun-2003 10:03 tls Quant Type: ESTD
Cal Date : 29-MAR-2003 19:37 Cal File: SV2ad007.d
Als bottle: 11 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PRO.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	CONCENTRATIONS FINAL (ug/L)
20 Total PRO	14.142	12.120	2.022	206358237	732.111	1464.2224 (M)

QC Flag Legend

M - Compound response manually integrated.

$$\frac{206358237 - 26703855}{226784} \times \frac{2}{1000} \times 1000 = 1584$$

Gulf Coast Analytical Services

Data file : /var/chem/gcsv2ad.i/2030531.b/SV2ad011S.d
Lab Smp Id: 20305291107
Inj Date : 31-MAY-2003 19:27
Operator : tls Inst ID: gcsv2ad.i
Smp Info : 20305291107-1.0-GCSV~26XX~-203052911--ch2m 1000 2
Misc Info :
Comment :
Method : /var/chem/gcsv2ad.i/2030531.b/flsur.m
Meth Date : 31-May-2003 07:57 Quant Type: ESTD
Cal Date : 28-MAR-2003 14:08 Cal File: SV2ad002s.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: flsurr.sub
Target Version: 3.50
Processing Host: hpchem

Concentration Formula: Amt * DF * (Uf * Vt)/(Vo * Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	1.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG/ML)	FINAL (ug/L)
$ 7 O-TERPHENYL	17.153	17.157	-0.004	25859089	51.3641	102.7282
$ 18 Nonatriacontane	35.097	35.119	-0.022	844746	270.994	541.9886(M)

26703855

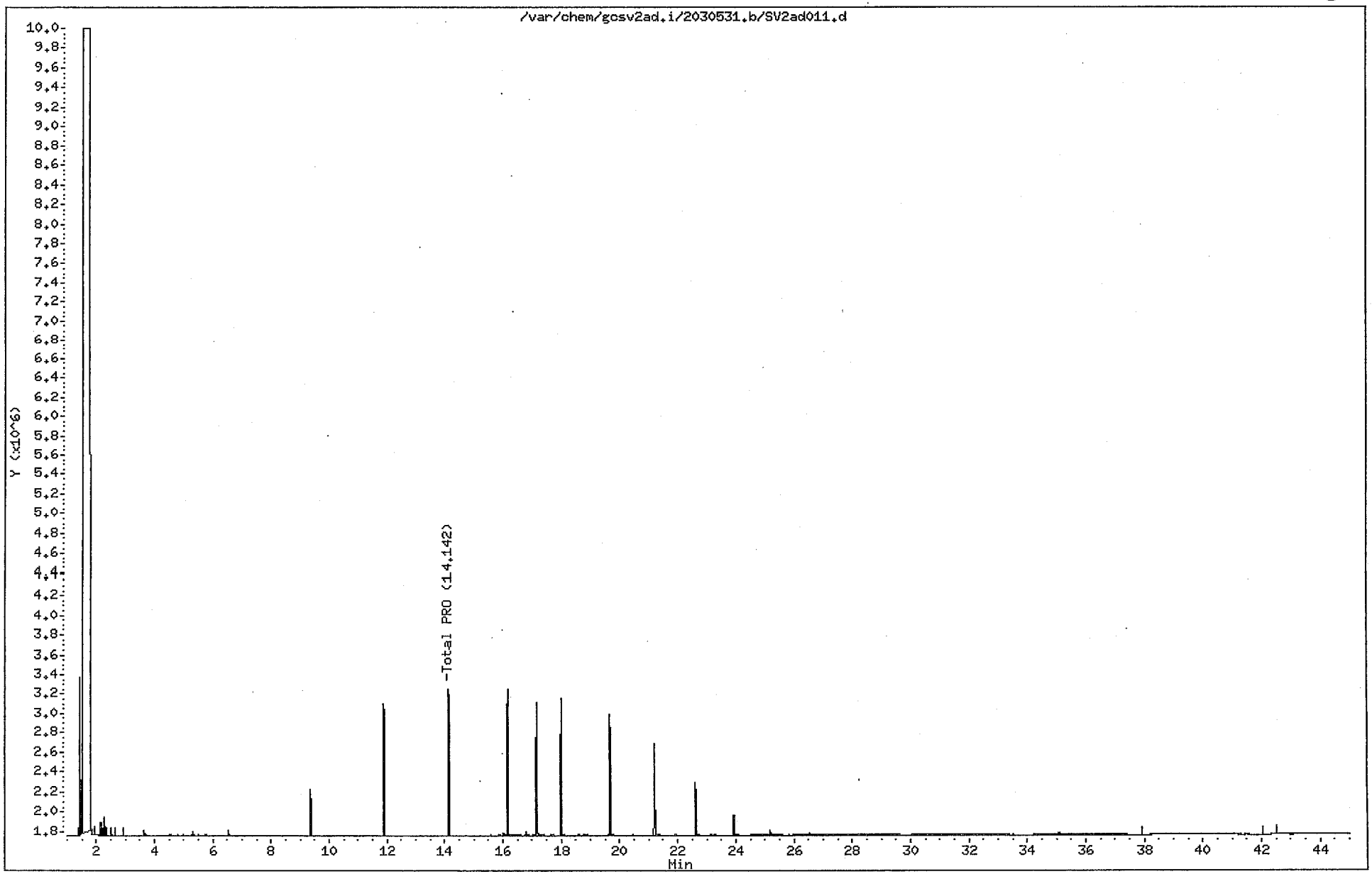
QC Flag Legend

M - Compound response manually integrated.

000495

Data File: /var/chem/gcsv2ad.i/2030531.b/SV2ad011.d
Date : 31-MAY-2003 19:27
Client ID:
Sample Info: 20305291107-1.0-GCSV"26XX"-203052911--ch2m 1000 2
Volume Injected (uL): 1.0
Column phase: DB-5ms

Instrument: gcsv2ad.i
Operator: tls
Column diameter: 0.53



FLPRO SAMPLE PREPARATION FORM

EXTRACTION DATE/TIME:	05/29/03 14:30	BATCH NO:	257848
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	In-house QC Ac	MB for HBN 257848 [EXTO/3828]	101498	1000	2.0	<2	OTH	
2	In-house QC Ac	LCS for HBN 257848 [EXTO/3828]	101499	1000	2.0	<2	OTH / SP H	
3	CH2M HILL Cons	086-CEF43-2N-Q2-03-61	20305291101	1000	2.0	<2	$ DO	SEPARATORY FUNNEL/3510
4	CH2M HILL Cons	086-CEF43-6N-Q2-03-61	20305291102	1000	2.0	<2	$ low REW/Sim	
5	CH2M HILL Cons	086-CEF43-7N-Q2-03-61	20305291103	1000	2.0	<2		
6	CH2M HILL Cons	086-CEF43-9N-Q2-03-61	20305291104	1000	2.0	<2	$ DU	
7	CH2M HILL Cons	086-CEF43-33N-Q2-03-61	20305291105	1000	2.0	<2		SONICATOR/3550
8	CH2M HILL Cons	086-CEF43-33N-Q2-03-61MS	20305291106	1000	2.0	<2		
9	CH2M HILL Cons	086-CEF43-33N-Q2-03-61MSD	20305291107	1000	2.0	<2		
10	CH2M HILL Cons	086-CEF43-38N-Q2-03-61	20305291109	1000	2.0	<2		
11	CH2M HILL Cons	086-DUP-Q2-03-61	20305291110	1000	2.0	<2	O'T - MI	SILICA GEL CLEANUP
12	CH2M HILL Cons	086-EQB-Q2-03-61	20305291111	1000	2.0	<2		
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								MeCL2 Lot No:
24								030609
25								
26								
27								Sodium Sulfate Lot No:
28								027869

SKB 05/29/03

COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME

SURROGATE ID	8-193-3	FLPRO SPIKE ID	8-193-1			TECHNICIAN	DATE
VOLUME	1.0 mL	VOLUME	200 ul			John Bailey	05/29/03
CONCENTRATION	100/600 ug/ml	CONCENTRATION	500 ug/ml				
ACID						SUPERVISOR	DATE
SPIKE WITNESS	OLT					John Bailey	05/29/03

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 06/05/2003
Instrument: gcsv2ad.i
Method File: /var/chem/gcsv2ad.i/2030531.b/flpro.m
Batch: /var/chem/gcsv2ad.i/2030531.b
Column-Detector: DB-5ms

Sample ID	ClientName	DataFile	Injection Time	DilFactor	Anal	Comments
DCM		SV2ad001.d	31-MAY-2003 08:59	1.000	tls	
50 PPM		SV2ad002.d	31-MAY-2003 10:00	1.000	tls	
50 PPM		SV2ad002S.d	31-MAY-2003 10:00	1.000	tls	
101498		SV2ad003.d	31-MAY-2003 11:09	1.000	tls	
101498		SV2ad003S.d	31-MAY-2003 11:09	1.000	tls	
101499		SV2ad004.d	31-MAY-2003 12:05	1.000	tls	
101499		SV2ad004S.d	31-MAY-2003 12:05	1.000	tls	
20305291101		SV2ad005.d	31-MAY-2003 13:02	1.000	tls	
20305291101		SV2ad005S.d	31-MAY-2003 13:02	1.000	tls	
20305291102		SV2ad006.d	31-MAY-2003 14:00	1.000	tls	
20305291102		SV2ad006S.d	31-MAY-2003 14:00	1.000	tls	
20305291103		SV2ad007.d	31-MAY-2003 15:36	1.000	tls	
20305291103		SV2ad007S.d	31-MAY-2003 15:36	1.000	tls	
20305291104		SV2ad008.d	31-MAY-2003 16:34	1.000	tls	
20305291104		SV2ad008S.d	31-MAY-2003 16:34	1.000	tls	
20305291105		SV2ad009.d	31-MAY-2003 17:32	1.000	tls	
20305291105		SV2ad009S.d	31-MAY-2003 17:32	1.000	tls	
20305291106		SV2ad010.d	31-MAY-2003 18:30	1.000	tls	
20305291106		SV2ad010S.d	31-MAY-2003 18:30	1.000	tls	
20305291107		SV2ad011.d	31-MAY-2003 19:27	1.000	tls	
20305291107		SV2ad011S.d	31-MAY-2003 19:27	1.000	tls	
20305291109		SV2ad012.d	31-MAY-2003 20:23	1.000	tls	
20305291109		SV2ad012S.d	31-MAY-2003 20:23	1.000	tls	
50 PPM CCV		SV2ad013.d	31-MAY-2003 21:19	1.000	tls	
50 PPM CCV		SV2ad013S.d	31-MAY-2003 21:19	1.000	tls	
20305291110		SV2ad014.d	31-MAY-2003 22:14	1.000	tls	
20305291110		SV2ad014S.d	31-MAY-2003 22:14	1.000	tls	
20305291111		SV2ad015.d	31-MAY-2003 23:10	1.000	tls	
20305291111		SV2ad015S.d	31-MAY-2003 23:10	1.000	tls	
50 PPM CCV		SV2ad016.d	01-JUN-2003 00:05	1.000	tls	
50 PPM CCV		SV2ad016S.d	01-JUN-2003 00:05	1.000	tls	
DCM		SV2ad017.d	02-JUN-2003 11:53	1.000	tls	
50 PPM CCV		SV2ad018.d	02-JUN-2003 15:05	1.000	tls	
50 PPM CCV		SV2ad018S.d	02-JUN-2003 15:05	1.000	tls	
20305291101		SV2ad019.d	02-JUN-2003 16:12	10.000	tls	
20305291101		SV2ad019S.d	02-JUN-2003 16:12	10.000	tls	

REVISED 6-1-95 Supervisor Review: QA Review:

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 06/05/2003
Instrument: gcsv2ad.i
Method File: /var/chem/gcsv2ad.i/2030531.b/flpro.m
Batch: /var/chem/gcsv2ad.i/2030531.b
Column-Detector: DB-5ms

Sample ID	ClientName	DataFile	Injection Time	DilFactor	Anal	Comments
20305291104		SV2ad020.d	02-JUN-2003 17:10	50.000	tls	
20305291104		SV2ad020S.d	02-JUN-2003 17:10	50.000	tls	
20305291110		SV2ad021.d	02-JUN-2003 18:07	5.000	tls	
20305291110		SV2ad021S.d	02-JUN-2003 18:07	5.000	tls	
50 PPM CCV		SV2ad022.d	02-JUN-2003 19:04	1.000	tls	
50 PPM CCV		SV2ad022S.d	02-JUN-2003 19:04	1.000	tls	
50 PPM CCV		SV2ad023.d	03-JUN-2003 11:29	1.000	dlb	
50 PPM CCV		SV2ad023S.d	03-JUN-2003 11:29	1.000	dlb	
0602blk		SV2ad024.d	03-JUN-2003 12:38	1.000	dlb	
0602blk		SV2ad024S.d	03-JUN-2003 12:38	1.000	dlb	
0602lcs		SV2ad025.d	03-JUN-2003 13:35	1.000	dlb	
0602lcs		SV2ad025S.d	03-JUN-2003 13:35	1.000	dlb	
0602lcsd		SV2ad026.d	03-JUN-2003 14:31	1.000	dlb	
0602lcsd		SV2ad026S.d	03-JUN-2003 14:31	1.000	dlb	
20305291102RE		SV2ad027.d	03-JUN-2003 15:28	1.000	dlb	
20305291102RE		SV2ad027S.d	03-JUN-2003 15:28	1.000	dlb	
50 PPM CCV		SV2ad028.d	03-JUN-2003 16:24	1.000	dlb	
50 PPM CCV		SV2ad028S.d	03-JUN-2003 16:24	1.000	dlb	

REVISED 6-1-95 Supervisor Review: QA Review:

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD CONC	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INITIAL	DATE PREPARED	EXP DATE
DEG Standard	58-22-1	m-8081-DS 0.2mg/m	Accu-Standard	B-2060297 9-30/03	40uL	100mL	80ppb	Hexane 028648	TLS	3-15-03	~~9-15-03~~ TLS 9-15-03
JP5 fuel matrix spike	58-22-2	58-21-7	in house	in house 9-12-03	1mL	2mL	2000ppm	DCM 023325	dlb	3-18-3	9-12-3
JP5-Fuel	58-22-3	JP5 Fuel 50,000ug/mL O Terph 10,000ug/mL	Ultra NSI	K-519A-9/2005 1341H-02-03 3/2006	800uL 100uL	10mL	4000/ 100 ppm	DCM 023325	TLS	3-20-3	9-20-03
Dates	2/28/03	– 3/20/03	/ renewed	By QA/QC					3/25/03		
IND A ICV III	58-22-4	Pest Standard Amix 5/10	~~5/10~~ 3-25/03 TLS Supelco	LB05770 July/2005	600uL	50mL	60/120 ppb	Hexane 028648	TLS	3-25-03	9-25-03
IND A III	58-22-5	CLP-216 5/10 ppm	Ultra	T-1257 10/2004	600uL	50mL	60/120 ppb	Hexane 028648	dlb	3-27-03	9-26-03
O-Terph	58-22-6	O-Terph 10,000	NSI	1341H-02-01 dlb 5/1/03 01/2005 ~~05/2003~~	200uL	1mL	2,000ppm	DCM 023325	TLS	3-28-03	9-28-03
Pro Standard 6ppm	58-22-6	C-Range 2,000 IST-680 O-Terph	NSI Ultra house	C-443-09-10/2003 T-0130-2/2007 58-22-6-9-28-03	3uL 150uL 25uL	1mL	6ppm 300ppm 50ppm	DCM 023325	TLS	3-28-03	9-28-03
Pro Standard 50ppm	58-22-7	See 58-22-6	—	—	25uL 150uL 25uL	1mL	50ppm 300ppm 50ppm	"	"	"	"
Prostandard 150 ppm	58-22-8	See 58-226	—	—	75uL 150uL 25uL	1mL	150ppm 300ppm 50ppm	"	"	"	"

STANDARD PREPARATION LOGBOOK

STANDARD NAME	STD#	STOCK STD CONC	SUPPLIER	LOT#/ EXP DATE	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INITIAL	DATE PREPARED	EXP DATE
Pro Standard 250 ppm	58-23-1	See 58-22-6	—	—	125uL 150uL 25uL	1mL	250ppm 300ppm 50ppm	DCM 023325	TLS	3-28-03	9-28-03
Pro Standard 350 ppm	58-23-2	See 58-22-6	—	—	175uL 150uL 25uL	1mL	350ppm 300ppm 50ppm	"	"	"	"
Pro Standard 500 ppm	58-23-3	See 58-22-6	—	—	250uL 150uL 25uL	1mL	500ppm 300ppm 50ppm	"	"	"	"
TOXAPHENE V	58-23-4	EPA 1161 1000ug/mL	Ultra	R-1428 12-2004	250uL	50mL	5000 ppb	Hexane 028648	dlb	3-28-3	9-27-3
CHLORDANE V	58-23-5	PP-151 100ug/mL	Ultra	S-1089 9-2005	200uL	50mL	400 ppb	Hexane 028648	dlb	3-28-3	9-27-3
PRO CCV	58-23-6	CRange 2000 IST-680 58-22-6	NSI Ultra In house	C-443-09 10/2003 T-0130 2/2007 58-22-6 9/28/03	25 uL 150 uL 25 uL	1mL	150 ppm 300 ppm 50 ppm	DCM 023325	dlb	3-31-3	9-28-3
PEM	58-23-7	CLP-250 10/20 ppm	Ultra	P573A 5-2004	50uL	50mL	10/20 ppb	Hexane 028648	dlb	3-31-3	9-30-3
Instr. Blank (CLP)	58-23-8	ISM-320 200ug/mL	Ultra		5 uL	50mL	20 ppb	Hexane 028648	dlb	4-2-3	
PRO CCV	58-23-9	CRange IST 680 oTerpH	NSI ultra NSI	C-443-09 10/2003 T-0130 2/2007 13411H-02-01 5/2003	25uL 150uL 5uL	1mL	150ppm 300ppm 50ppm	DCM 023325	TLS	4-2-3	9-2-3
IND B III	58-23-10	CLP 226B 5/10 ppb	Ultra	T-0527 5/2004	600uL	50mL	60/120 ppb	Hexane 028648	dlb	4-5-3	10-4-3

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

SOW No.:

EPA Sample No.	*Lab Sample ID.*
086-CEF43-2N-Q2-03-61	20305291101
086-CEF43-6N-Q2-03-61	20305291102
086-CEF43-7N-Q2-03-61	20305291103
086-CEF43-9N-Q2-03-61	20305291104
086-CEF43-33N-Q2-03-61	20305291105
086-CEF43-33N-Q2-03-61MS	20305291106
086-CEF43-33N-Q2-03-61MSD	20305291107
086-CEF43-33N-Q2-03-61DUP	20305291108
086-CEF43-38N-Q2-03-61	20305291109
086-DUP-Q2-03-61	20305291110
086-EQB-Q2-03-61	20305291111

Were ICP interelement corrections applied ?	Yes / No	YES
Were ICP background corrections applied ?	Yes / No	YES
If yes-were raw data generated before application of background corrections ?	Yes / No	NO

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-2N-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291101
Date Received: 05/29/03
Time: 0930
Date Collected: 05/27/03
Time: 1640

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-CEF43-6N-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291102

Date Received: 05/29/03 Time: 0930

Date Collected: 05/27/03 Time: 1600

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.017	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-7N-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291103
Date Received: 05/29/03
Time: 0930
Date Collected: 05/27/03
Time: 1505

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.0059	mg/L	B	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-9N-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291104
Date Received: 05/29/03
Time: 0930
Date Collected: 05/27/03
Time: 1430

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-33N-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291105
Date Received: 05/29/03
Time: 0930
Date Collected: 05/28/03
Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-33N-Q2-03-61MS
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291106
Date Received: 05/29/03
Time: 0930
Date Collected: 05/28/03
Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1.05	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-33N-Q2-03-61MSD
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291107
Date Received: 05/29/03
Time: 0930
Date Collected: 05/28/03
Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	1.07	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-33N-Q2-03-61DUP
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291108
Date Received: 05/29/03
Time: 0930
Date Collected: 05/28/03
Time: 1450

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-CEF43-38N-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291109
Date Received: 05/29/03
Time: 0930
Date Collected: 05/28/03
Time: 1545

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL

Sample ID: 086-DUP-Q2-03-61

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med) % Solids:

Lab Sample ID: 20305291110

Date Received: 05/29/03 Time: 0930

Date Collected: 05/27/03 Time: 0000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.017	mg/L		0.0016	0.015	SW-846 6010B	P

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 086-EQB-Q2-03-61
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203052911
Level: (low / med)
% Solids:
Lab Sample ID: 20305291111
Date Received: 05/29/03
Time: 0930
Date Collected: 05/27/03
Time: 0000

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Lead	0.015	mg/L	U	0.0016	0.015	SW-846 6010B	P

FORM I - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203052911
Calibration Source: 106-11-8 CPI/EXAXOL
Instrument ID: ICP5 ICAL ID: 1
Date Analyzed: 05/30/03 Time: 0821

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Antimony	1.00	0.970	97	mg/L	SW-846 6010B	P
Arsenic	1.00	0.990	99	mg/L	SW-846 6010B	P
Beryllium	1.00	0.950	95	mg/L	SW-846 6010B	P
Cadmium	1.00	0.960	96	mg/L	SW-846 6010B	P
Calcium	1.00	0.990	99	mg/L	SW-846 6010B	P
Chromium	1.00	0.990	99	mg/L	SW-846 6010B	P
Cobalt	1.00	0.990	99	mg/L	SW-846 6010B	P
Copper	1.00	0.940	94	mg/L	SW-846 6010B	P
Iron	1.00	1.03	103	mg/L	SW-846 6010B	P
Lead	1.00	0.990	99	mg/L	SW-846 6010B	P
Magnesium	1.00	1.03	103	mg/L	SW-846 6010B	P
Manganese	1.00	0.990	99	mg/L	SW-846 6010B	P
Molybdenum	1.00	1.00	100	mg/L	SW-846 6010B	P
Nickel	1.00	0.980	98	mg/L	SW-846 6010B	P
Selenium	1.00	0.940	94	mg/L	SW-846 6010B	P
Silver	1.00	0.980	98	mg/L	SW-846 6010B	P
Strontium	1.00	0.990	99	mg/L	SW-846 6010B	P
Thallium	1.00	0.970	97	mg/L	SW-846 6010B	P
Titanium	1.00	0.990	99	mg/L	SW-846 6010B	P
Vanadium	1.00	0.970	97	mg/L	SW-846 6010B	P
Zinc	1.00	0.940	94	mg/L	SW-846 6010B	P

ICV CONTROL LIMITS EPA 6010B = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Calibration Source: 106-12-3 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 1

Date Analyzed: 05/30/03 Time: 0854

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Aluminum	5.00	5.03	101	mg/L	SW-846 6010B	P
Arsenic	0.500	0.520	104	mg/L	SW-846 6010B	P
Barium	0.500	0.500	100	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cadmium	0.500	0.500	100	mg/L	SW-846 6010B	P
Calcium	5.00	5.12	102	mg/L	SW-846 6010B	P
Chromium	0.500	0.500	101	mg/L	SW-846 6010B	P
Cobalt	0.500	0.500	101	mg/L	SW-846 6010B	P
Copper	0.500	0.500	99	mg/L	SW-846 6010B	P
Iron	5.00	5.13	103	mg/L	SW-846 6010B	P
Lead	0.500	0.520	103	mg/L	SW-846 6010B	P
Magnesium	5.00	5.25	105	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 6010B	P
Nickel	0.500	0.500	101	mg/L	SW-846 6010B	P
Potassium	10.0	10.0	100	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	100	mg/L	SW-846 6010B	P
Silver	0.500	0.500	99	mg/L	SW-846 6010B	P
Sodium	20.0	20.8	104	mg/L	SW-846 6010B	P
Strontium	0.500	0.520	104	mg/L	SW-846 6010B	P
Thallium	0.500	0.500	99	mg/L	SW-846 6010B	P
Vanadium	0.500	0.500	99	mg/L	SW-846 6010B	P
Zinc	0.500	0.500	100	mg/L	SW-846 6010B	P
Zirconium	0.500	0.500	99	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-110 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203052911
Calibration Source: 106-12-3 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 1
Date Analyzed: 05/30/03 Time: 1350

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Aluminum	5.00	5.17	103	mg/L	SW-846 6010B	P
Arsenic	0.500	0.520	105	mg/L	SW-846 6010B	P
Barium	0.500	0.500	100	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cadmium	0.500	0.490	99	mg/L	SW-846 6010B	P
Calcium	5.00	5.39	108	mg/L	SW-846 6010B	P
Chromium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cobalt	0.500	0.500	100	mg/L	SW-846 6010B	P
Copper	0.500	0.490	97	mg/L	SW-846 6010B	P
Iron	5.00	5.37	107	mg/L	SW-846 6010B	P
Lead	0.500	0.510	103	mg/L	SW-846 6010B	P
Magnesium	5.00	4.74	95	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	102	mg/L	SW-846 6010B	P
Nickel	0.500	0.500	100	mg/L	SW-846 6010B	P
Potassium	10.0	11.3	113	mg/L	SW-846 6010B	P
Selenium	0.500	0.490	99	mg/L	SW-846 6010B	P
Silver	0.500	0.490	98	mg/L	SW-846 6010B	P
Sodium	20.0	22.2	111	mg/L	SW-846 6010B	P
Strontium	0.500	0.440	87	mg/L	SW-846 6010B	P
Thallium	0.500	0.500	99	mg/L	SW-846 6010B	P
Vanadium	0.500	0.490	99	mg/L	SW-846 6010B	P
Zinc	0.500	0.490	98	mg/L	SW-846 6010B	P
Zirconium	0.500	0.490	98	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-110 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203052911
Calibration Source: 106-12-3 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 1
Date Analyzed: 05/30/03 Time: 1524

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Aluminum	5.00	5.14	103	mg/L	SW-846 6010B	P
Arsenic	0.500	0.530	106	mg/L	SW-846 6010B	P
Barium	0.500	0.510	101	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cadmium	0.500	0.500	101	mg/L	SW-846 6010B	P
Calcium	5.00	5.23	105	mg/L	SW-846 6010B	P
Chromium	0.500	0.510	102	mg/L	SW-846 6010B	P
Cobalt	0.500	0.510	102	mg/L	SW-846 6010B	P
Copper	0.500	0.500	100	mg/L	SW-846 6010B	P
Iron	5.00	5.27	105	mg/L	SW-846 6010B	P
Lead	0.500	0.520	104	mg/L	SW-846 6010B	P
Magnesium	5.00	4.80	96	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 6010B	P
Nickel	0.500	0.510	102	mg/L	SW-846 6010B	P
Potassium	10.0	10.9	109	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	101	mg/L	SW-846 6010B	P
Silver	0.500	0.500	101	mg/L	SW-846 6010B	P
Sodium	20.0	21.3	106	mg/L	SW-846 6010B	P
Strontium	0.500	0.460	91	mg/L	SW-846 6010B	P
Thallium	0.500	0.500	100	mg/L	SW-846 6010B	P
Vanadium	0.500	0.500	101	mg/L	SW-846 6010B	P
Zinc	0.500	0.500	101	mg/L	SW-846 6010B	P
Zirconium	0.500	0.500	100	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-110 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203052911
Calibration Source: 106-12-3 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 1
Date Analyzed: 05/30/03 Time: 1700

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Aluminum	5.00	5.07	101	mg/L	SW-846 6010B	P
Arsenic	0.500	0.520	103	mg/L	SW-846 6010B	P
Barium	0.500	0.500	100	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cadmium	0.500	0.490	99	mg/L	SW-846 6010B	P
Calcium	5.00	5.12	102	mg/L	SW-846 6010B	P
Chromium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cobalt	0.500	0.500	101	mg/L	SW-846 6010B	P
Copper	0.500	0.500	101	mg/L	SW-846 6010B	P
Iron	5.00	5.16	103	mg/L	SW-846 6010B	P
Lead	0.500	0.510	103	mg/L	SW-846 6010B	P
Magnesium	5.00	4.65	93	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 6010B	P
Nickel	0.500	0.500	100	mg/L	SW-846 6010B	P
Potassium	10.0	10.7	107	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	100	mg/L	SW-846 6010B	P
Silver	0.500	0.500	99	mg/L	SW-846 6010B	P
Sodium	20.0	21.3	107	mg/L	SW-846 6010B	P
Strontium	0.500	0.440	88	mg/L	SW-846 6010B	P
Thallium	0.500	0.510	101	mg/L	SW-846 6010B	P
Vanadium	0.500	0.490	99	mg/L	SW-846 6010B	P
Zinc	0.500	0.500	100	mg/L	SW-846 6010B	P
Zirconium	0.500	0.490	97	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-110 EPA 7470/7471 AND 7XXX = 80-120

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: ICB

ICAL ID: 1

Lab Sample DESC: ICB FOR HBN 257860 [ICP/1921]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 0835

INITIAL CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 257860 [ICP/1921]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 0919

CONTINUING CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: 101531

ICAL ID: 1

Lab Sample DESC: MB101531

Preparation Blank Matrix: (soil / water) Water

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 1322

PREPARATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 257860 [ICP/1921]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 1405

CONTINUING CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 257860 [ICP/1921]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 1538

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203052911

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 257860 [ICP/1921]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 05/30/03 Time: 1720

CONTINUING CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

ICP ID Number: ICP5 ICS Source: 106-11-1 SPEX~

Concentration Units: mg/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	200	200	209	218	109			
Antimony	0	1.00		1.08	108			
Arsenic	0	1.00		1.12	112			
Barium	0	0.50		0.53	106			
Beryllium	0	0.50		0.54	108			
Boron	0	1.00		1.13	113			
Cadmium	0	1.00		1.02	102			
Calcium	200	200	206	210	105			
Chromium	0	0.50		0.52	104			
Cobalt	0	0.50		0.50	100			
Copper	0	0.50		0.55	110			
Iron	80.0	80.0	81.6	84.5	106			
Lead	0	1.00		1.03	103			
Magnesium	200	200	208	217	108			
Manganese	0	0.50		0.53	106			
Molybdenum	0	1.00		1.08	108			
Nickel	0	1.00		0.97	97			
Selenium	0	1.00		1.10	110			
Silver	0	1.00		1.11	111			
Thallium	0	1.00		1.09	109			
Vanadium	0	0.50		0.52	104			
Zinc	0	1.00		1.04	104			

SPIKE SAMPLE RECOVERY

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-03-61MS

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med)

Lab Sample ID: 20305291106

Orig Lab Sample ID: 20305291105

Analyte	LL	UL	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Units	Method	Type
Lead	75	125	1.05		0	U	1.00	105		mg/L	SW-846 6010B	P

FORM V (PART 1) - IN

SPIKE SAMPLE RECOVERY

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-03-61MSD

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med)

Lab Sample ID: 20305291107

Orig Lab Sample ID: 20305291105

Analyte	LL	UL	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Units	Method	Type
Lead	75	125	1.07		0	U	1.00	107		mg/L	SW-846 6010B	P

FORM V (PART 1) - IN

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2...PDS

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med)

Lab Sample ID: 101548

Orig Lab Sample ID: 20305291105

Analyte	LL	UL	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Units	Method	Type
Lead	75	125	0.97		0	U	1.00	97		mg/L	SW-846 6010B	P

FORM V (PART 2) - IN

DUPLICATES

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-03-61DUP

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

% Solids for Sample:

Level: (low / med)

% Solids for Duplicate:

Lab Sample ID: 20305291108

Analyte	LL	UL	Sample	C	Duplicate	C	RPD	Q	Units	Method	Type
Lead	0	20	0	U	0	U	0		mg/L	SW-846 6010B	P

FORM VI - IN

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS101532

Lab Code: LA024

Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.:

SDG No.: 203052911

Lab Sample ID: 101532

LCS Source: 334-13-17 INORGANIC VENTURES

Analyte	True	Found	% R	LL	UL	Units	Method	Type
Lead	1.00	1.00	100	80	120	mg/L	SW-846 6010B	P

FORM VII - IN

ICP SERIAL DILUTIONS

Lab Name: GCAL

Sample ID: 086-CEF43-33N-Q2-...SD

Lab Code: LA024 Case No.

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203052911

Level: (low / med)

Org Lab Sample ID: 20305291105

Lab Sample ID: 101547

Analyte	LL	UL	Initial Sample Result	C	Serial Dilution Result	C	% Diff.	Q	Units	Method	Type
Lead			0	U	0	U	0		mg/L	SW-846 6010B	P

FORM IX - IN

ICP LINEAR RANGES

Lab Name: GCAL

Lab Code: LA024 Case No.: _____ SAS No.: _____ SDG No.: 203052911

ICP ID Number: 4300DV Date: 01/14/03

Analyte	Integ. Time (sec)	Concentration mg/L	M
Aluminum	20.0	1000	P
Antimony	20.0	50	P
Arsenic	20.0	25	P
Barium	20.0	25	P
Beryllium	20.0	5	P
Cadmium	20.0	15	P
Calcium	20.0	1000	P
Chromium	20.0	120	P
Cobalt	20.0	125	P
Copper	20.0	100	P
Iron	20.0	600	P
Lead	20.0	100	P
Magnesium	20.0	800	P
Manganese	20.0	25	P
Mercury			CV
Nickel	20.0	50	P
Potassium	20.0	150	P
Selenium	20.0	15	P
Silver	20.0	10	P
Sodium	20.0	600	P
Thallium	20.0	10	P
Vanadium	20.0	100	P
Zinc	20.0	20	P

PREPARATION LOG

Lab Name: GCAL Sample ID:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911

Method: 3010A Method Type: P

EPA Sample No.	Preparation Date	Weight	Units	Volume	Units
086-CEF43-2N-Q2-03-61	05/29/03			50	mL
086-CEF43-33N-Q2-03-61	05/29/03			50	mL
086-CEF43-33N-Q2-03-61DUP	05/29/03			50	mL
086-CEF43-33N-Q2-03-61MS	05/29/03			50	mL
086-CEF43-33N-Q2-03-61MSD	05/29/03			50	mL
086-CEF43-38N-Q2-03-61	05/29/03			50	mL
086-CEF43-6N-Q2-03-61	05/29/03			50	mL
086-CEF43-7N-Q2-03-61	05/29/03			50	mL
086-CEF43-9N-Q2-03-61	05/29/03			50	mL
086-DUP-Q2-03-61	05/29/03			50	mL
086-EQB-Q2-03-61	05/29/03			50	mL
LCS101532	05/29/03			50	mL
MB101531	05/29/03			50	mL

ANALYSIS RUN LOG

Lab Name: GCAL Contract: Start Date: 05/30/03

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911 End Date: 05/30/03

Instrument ID Number: ICP5 Method: SW-846 6010B Method Type: P

Sample No.	PF	D/F	Time	Analyte Symbols																														
				Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr
ICV	*	1	0821													X																		
ICV2	*	1	0828																															
ICB	*	1	0835													X																		
ICSA	*	1	0843													X																		
ICSAB	*	1	0849													X																		
CCV	*	1	0854													X																		
CCV2	*	1	0901																															
CCB	*	1	0919													X																		
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	0926																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	0933																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	0941																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	0947																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	0953																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	0959																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		10	1005																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1012																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1027																															
CCV	*	1	1034																															
CCV2	*	1	1041																															
CCB	*	1	1048																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1055																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1102																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1110																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1116																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1122																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		2	1129																															
CCV	*	1	1205																															

0005533

ANALYSIS RUN LOG

Lab Name: GCAL Contract: Start Date: 05/30/03

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911 End Date: 05/30/03

Instrument ID Number: ICP5 Method: SW-846 6010B Method Type: P

				Analyte Symbols																														
Sample No.	PF	D/F	Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr
CCV2	*	1	1212																															
CCB	*	1	1220																															
MB101531	*	1	1322													X																		
LCS101532	*	1	1329													X																		
CCV	*	1	1350													X																		
CCV2	*	1	1358																															
CCB	*	1	1405													X																		
086-CEF43-33N-Q2-03-61	*	1	1411													X																		
086-CEF43-33N-Q2-03-61DUP	*	1	1419													X																		
086-CEF43-33N-Q2-03-61MS	*	1	1426													X																		
086-CEF43-33N-Q2-03-61MSD	*	1	1433													X																		
086-CEF43-33N-Q2...PDS	*	1	1440													X																		
086-CEF43-33N-Q2-...SD	*	5	1447													X																		
086-CEF43-38N-Q2-03-61	*	1	1455													X																		
086-DUP-Q2-03-61	*	1	1502													X																		
086-EQB-Q2-03-61	*	1	1509													X																		
086-CEF43-9N-Q2-03-61	*	1	1516													X																		
CCV	*	1	1524													X																		
CCV2	*	1	1531																															
CCB	*	1	1538													X																		
086-CEF43-7N-Q2-03-61	*	1	1547													X																		
086-CEF43-6N-Q2-03-61	*	1	1555													X																		
086-CEF43-2N-Q2-03-61	*	1	1602													X																		
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1609																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1616																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1624																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1631																															

000534

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: GCAL Contract: Start Date: 05/30/03

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911 End Date: 05/30/03

Instrument ID Number: ICP5 Method: SW-846 6010B Method Type: P

				Analyte Symbols																												
Sample No.	PF	D/F	Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1638																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1645																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1653																														
CCV	*	1	1700													X																	
CCV2	*	1	1707																														
CCB	*	1	1720													X																	
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1727																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		5	1734																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1741																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1748																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1756																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		5	1803																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1810																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1817																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1825																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1833																														
CCV	*	1	1840																														
CCV2	*	1	1848																														
CCB	*	1	1900																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1907																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1914																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1921																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1928																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1935																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1942																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	1950																														
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		5	1957																														

000535

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: GCAL Contract: Start Date: 05/30/03

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203052911 End Date: 05/30/03

Instrument ID Number: ICP5 Method: SW-846 6010B Method Type: P

				Analyte Symbols																												
Sample No.	PF	D/F	Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2004																															
CCV	*	1	2018																															
CCV2	*	1	2026																															
CCB	*	1	2033																															
CCV	*	1	2151																															
CCV2	*	1	2158																															
CCB	*	1	2211																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2218																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2226																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2233																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2241																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2248																															
ZZZZZZZZZZZZZZZZZZZZZZZZZZ		1	2255																															
CCV	*	1	2310																															
CCV2	*	1	2317																															
CCB	*	1	2329																															

0000536

ICP 5

ANALYST JAC
DATE 5-30-03
TIME 0802

AS#	SAMPLE ID		DILUTION
1	CALIBRATION BLANK		
2	STANDARD 1	106-12-6	
3	STANDARD 2	106-12-5	
12	ICV-1600	106-11-8	
13	ICV2-1601	106-11-2	
14	ICB-1700		
15	ICSA-2000	106-11-1	
16	ICSAB-2100	106-12-4	
7	CCV-1800		
8	CCV 2-1802		
4	CCB -1900		
17	[redacted]	[redacted]	
18	[redacted]	[redacted]	
19	[redacted]	[redacted]	2X
20	[redacted]	[redacted]	
21	[redacted]	[redacted]	
22	[redacted]	[redacted]	
23	[redacted]	[redacted]	10X
24		[redacted]	2X
25		[redacted] RIR1X	
26		[redacted]	
	[redacted]		
	[redacted]		
	[redacted]		
27		[redacted]	2X
28		[redacted]	
29		[redacted]	
30		[redacted]	
31		[redacted]	
32		[redacted]	
33		[redacted] RIR 5X	
34		[redacted] RIR1X	
35	[redacted]	[redacted]	
36	[redacted]	[redacted]	
7	CCV-1800		
8	CCV 2-1802		
4	CCB -1900		
37	[redacted]	[redacted]	
38	[redacted]	[redacted]	
39	[redacted]	[redacted]	
40	[redacted]	[redacted]	
41	[redacted]	[redacted]	5X
42		[redacted]	
43		[redacted]	
44		[redacted]	
45	101531	BLR 20305290 W2	
46	101532	LCS 20305290 W2	

AS#	SAMPLE ID		DILUTION
7	CCV-1800 F: K, Na, Sr		
8	CCV 2-1802		
4	CCB -1900 F: Na		
47	[redacted]	20305291105	
48		20305291108 D	
49		20305291106 MS	
50		20305291107 MSD	
51	101548	20305291105 A	
52	101547	20305291105 L	5X
53		20305291109	
54		20305291110	
55		20305291111	
56		20305291104	
7	CCV-1800		
8	CCV 2-1802		
4	CCB -1900		
57		20305291103	
58		20305291102	
59		20305291101	
60	[redacted]	[redacted]	
61		[redacted]	
62	[redacted]	[redacted]	
63	[redacted]	[redacted]	
64	[redacted]	[redacted]	
65	[redacted]	[redacted]	
66	[redacted]	[redacted]	
7	CCV-1800 F: SR		
8	CCV 2-1802		
4	CCB -1900		
67	[redacted]	[redacted]	
68	[redacted]	[redacted]	5X
69	[redacted]	[redacted]	
70	[redacted]	[redacted]	
71		[redacted]	
72		[redacted]	5X
73	[redacted]	[redacted]	
74	[redacted]	[redacted]	
75	[redacted]	[redacted]	
76	[redacted]	[redacted]	
7	[redacted] F: K, Na, Sr		
	[redacted]		
	[redacted]		

QC REVIEW: JAC

QC CONTROL LIMITS:
ICV (200.7) 95-105%
ICV (6010B) 90-110%
ICSAB 80-120%
CCV 90-110%

COMMENTS 1921, 257860

QC: all acceptable QC noted with a checkmark; failures as indicated.

Analysis Begun

Start Time: 05/30/2003 08:02:19
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

Method Loaded
Method Name: ICP5
IEC File: 2030114 IEC.iec
Method Description: ICP5

Method Last Saved: 05/30/2003 07:44:11
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Aluminum,7429-90-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Antimony,7440-36-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Ar 363.268 A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ar 420.067 R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Arsenic,7440-38-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Barium,7440-39-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Beryllium,7440-41-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Boron,7440-42-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cadmium,7440-43-9	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Calcium,7440-70-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Chromium,7440-47-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cobalt,7440-48-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Copper,7440-50-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Iron,7439-89-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Lead,7439-92-1	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Lithium,7439-93-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Magnesium,7439-95-4	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Manganese,7439-96-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Molybdenum,7439-98-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Nickel,7440-02-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Phosphorus,7723-14-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Potassium,7440-09-7	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Scandium-IS	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Selenium,7782-49-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Silicon,7440-21-3	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	No
Silver,7440-22-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Sodium,7440-23-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Strontium,7440-24-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Thallium,7440-28-0	Lin, Calc Int	Peak Height	Axial	Yttrium,7440-65-5A	No
Tin,7440-31-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Titanium,7440-32-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Vanadium,7440-62-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Yttrium,7440-65-5A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Yttrium,7440-65-5R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Zinc,7440-66-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Zirconium,7440-67-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Nebulizer Back Pressure: 189.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 08:02:19
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Ar 363.268 A	81490.8	161.89	0.20%	100.00	%
Ar 420.067 R	831858.1	1242.98	0.15%	100.00	%
Scandium-IS	7261909.2	67023.09	0.92%	100.000	%
Yttrium,7440-65-5A	3758952.3	33632.61	0.89%	100.00	%
Yttrium,7440-65-5R	81462.0	239.32	0.29%	100.00	%

Aluminum,7429-90-5†	7.8	9.91	127.80%	[0.00]	mg/L
Antimony,7440-36-0†	-3.6	8.76	241.22%	[0.00]	mg/L
Arsenic,7440-38-2†	-6.7	2.75	40.96%	[0.00]	mg/L
Barium,7440-39-3†	112.9	19.57	17.33%	[0.00]	mg/L
Beryllium,7440-41-7†	-6966.1	152.57	2.19%	[0.00]	mg/L
Boron,7440-42-8†	-916.7	16.44	1.79%	[0.00]	mg/L
Cadmium,7440-43-9†	37.5	17.42	46.45%	[0.00]	mg/L
Calcium,7440-70-2†	-155.4	6.50	4.18%	[0.00]	mg/L
Chromium,7440-47-3†	3191.3	42.65	1.34%	[0.00]	mg/L
Cobalt,7440-48-4†	74.4	3.69	4.96%	[0.00]	mg/L
Copper,7440-50-8†	9081.3	52.31	0.58%	[0.00]	mg/L
Iron,7439-89-6†	-17.1	1.00	5.81%	[0.00]	mg/L
Lead,7439-92-1†	257.6	14.35	5.57%	[0.00]	mg/L
Magnesium,7439-95-4†	-23.8	0.25	1.04%	[0.00]	mg/L
Manganese,7439-96-5†	-2771.2	70.79	2.55%	[0.00]	mg/L
Molybdenum,7439-98-7†	-99.4	5.61	5.65%	[0.00]	mg/L
Nickel,7440-02-0†	386.6	21.47	5.55%	[0.00]	mg/L
Potassium,7440-09-7†	-108.3	74.76	69.00%	[0.00]	mg/L
Selenium,7782-49-2†	4.7	3.00	64.39%	[0.00]	mg/L
Silver,7440-22-4†	-2030.4	304.00	14.97%	[0.00]	mg/L
Sodium,7440-23-5†	2704.0	22.00	0.81%	[0.00]	mg/L
Strontium,7440-24-6†	411.2	32.41	7.88%	[0.00]	mg/L
Thallium,7440-28-0†	-11.8	1.10	9.31%	[0.00]	mg/L
Tin,7440-31-5†	12.1	4.02	33.27%	[0.00]	mg/L
Titanium,7440-32-6†	2860.3	155.08	5.42%	[0.00]	mg/L
Vanadium,7440-62-2†	6936.9	79.30	1.14%	[0.00]	mg/L
Zinc,7440-66-6†	1967.3	25.44	1.29%	[0.00]	mg/L
Zirconium,7440-67-7†	-428.9	10.94	2.55%	[0.00]	mg/L

Sequence No.: 2
Sample ID: Calib Std 1
Analyst:
Nebulizer Back Pressure: 189.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 05/30/2003 08:09:31

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: Calib Std 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Ar 363.268 A	82104.0	218.75	0.27%	100.75	%
Ar 420.067 R	831139.8	1252.32	0.15%	99.914	%
Scandium-IS	7042465.2	53535.35	0.76%	96.978	%
Yttrium,7440-65-5A	3588313.5	15568.62	0.43%	95.460	%
Yttrium,7440-65-5R	77490.2	322.25	0.42%	95.124	%
Aluminum,7429-90-5†	1716.9	7.56	0.44%	[10.0]	mg/L
Arsenic,7440-38-2†	2041.2	7.94	0.39%	[1.00]	mg/L
Barium,7440-39-3†	236214.5	137.98	0.06%	[1.00]	mg/L
Beryllium,7440-41-7†	5383723.5	60596.13	1.13%	[1.00]	mg/L
Cadmium,7440-43-9†	274788.7	444.63	0.16%	[1.00]	mg/L
Calcium,7440-70-2†	13161.0	39.01	0.30%	[10.0]	mg/L
Chromium,7440-47-3†	163346.0	268.74	0.16%	[1.00]	mg/L
Cobalt,7440-48-4†	75114.3	198.59	0.26%	[1.00]	mg/L
Copper,7440-50-8†	435473.4	304.38	0.07%	[1.00]	mg/L
Iron,7439-89-6†	3133.6	11.01	0.35%	[10.0]	mg/L
Lead,7439-92-1†	23390.5	39.25	0.17%	[1.00]	mg/L
Magnesium,7439-95-4†	678.1	1.25	0.18%	[10.0]	mg/L
Manganese,7439-96-5†	1245671.0	1447.20	0.12%	[1.00]	mg/L
Nickel,7440-02-0†	92627.6	145.94	0.16%	[1.00]	mg/L
Potassium,7440-09-7†	115779.2	343.63	0.30%	[20.0]	mg/L
Selenium,7782-49-2†	2867.1	2.62	0.09%	[1.00]	mg/L
Silver,7440-22-4†	437596.4	671.03	0.15%	[1.00]	mg/L
Sodium,7440-23-5†	312780.9	508.29	0.16%	[40.0]	mg/L
Strontium,7440-24-6†	216079.8	1457.78	0.67%	[1.00]	mg/L
Thallium,7440-28-0†	1941.8	10.74	0.55%	[1.00]	mg/L
Vanadium,7440-62-2†	313850.1	259.67	0.08%	[1.00]	mg/L
Zinc,7440-66-6†	165687.5	320.86	0.19%	[1.00]	mg/L
Zirconium,7440-67-7†	532263.7	2117.25	0.40%	[1.00]	mg/L

Sequence No.: 3
Sample ID: Calib Std 2

Autosampler Location: 3
Date Collected: 05/30/2003 08:16:38

Analyst:
Nebulizer Back Pressure: 189.0 kPa
Sample Wt:
Dilution:

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: Calib Std 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Ar 363.268 A	81955.9	115.38	0.14%	100.57	%
Ar 420.067 R	841480.9	1297.09	0.15%	101.16	%
Scandium-IS	7333799.9	38227.75	0.52%	100.99	%
Yttrium,7440-65-5A	3759116.4	16615.45	0.44%	100.00	%
Yttrium,7440-65-5R	79034.2	859.87	1.09%	97.020	%
Antimony,7440-36-0†	4019.3	14.08	0.35%	[1.00]	mg/L
Boron,7440-42-8†	231600.3	859.21	0.37%	[5.00]	mg/L
Molybdenum,7439-98-7†	27637.9	124.49	0.45%	[1.00]	mg/L
Tin,7440-31-5†	9806.3	77.99	0.80%	[1.00]	mg/L
Titanium,7440-32-6†	830860.5	419.01	0.05%	[1.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Aluminum,7429-90-5	1	Lin, Calc Int	-0.0	171.7	0.00000	1.000000	
Antimony,7440-36-0	1	Lin, Calc Int	0.0	4019	0.00000	1.000000	
Arsenic,7440-38-2	1	Lin, Calc Int	0.0	2041	0.00000	1.000000	
Barium,7440-39-3	1	Lin, Calc Int	0.0	236200	0.00000	1.000000	
Beryllium,7440-41-7	1	Lin, Calc Int	0.0	5384000	0.00000	1.000000	
Boron,7440-42-8	1	Lin, Calc Int	0.0	46320	0.00000	1.000000	
Cadmium,7440-43-9	1	Lin, Calc Int	0.0	274800	0.00000	1.000000	
Calcium,7440-70-2	1	Lin, Calc Int	0.0	1316	0.00000	1.000000	
Chromium,7440-47-3	1	Lin, Calc Int	0.0	163300	0.00000	1.000000	
Cobalt,7440-48-4	1	Lin, Calc Int	0.0	75110	0.00000	1.000000	
Copper,7440-50-8	1	Lin, Calc Int	0.0	435500	0.00000	1.000000	
Iron,7439-89-6	1	Lin, Calc Int	-0.0	313.4	0.00000	1.000000	
Lead,7439-92-1	1	Lin, Calc Int	0.0	23390	0.00000	1.000000	
Magnesium,7439-95-4	1	Lin, Calc Int	0.0	67.81	0.00000	1.000000	
Manganese,7439-96-5	1	Lin, Calc Int	0.0	1246000	0.00000	1.000000	
Molybdenum,7439-98-7	1	Lin, Calc Int	0.0	27640	0.00000	1.000000	
Nickel,7440-02-0	1	Lin, Calc Int	0.0	92630	0.00000	1.000000	
Potassium,7440-09-7	1	Lin, Calc Int	0.0	5789	0.00000	1.000000	
Selenium,7782-49-2	1	Lin, Calc Int	0.0	2867	0.00000	1.000000	
Silver,7440-22-4	1	Lin, Calc Int	0.0	437600	0.00000	1.000000	
Sodium,7440-23-5	1	Lin, Calc Int	0.0	7820	0.00000	1.000000	
Strontium,7440-24-6	1	Lin, Calc Int	0.0	216100	0.00000	1.000000	
Thallium,7440-28-0	1	Lin, Calc Int	0.0	1942	0.00000	1.000000	
Tin,7440-31-5	1	Lin, Calc Int	0.0	9806	0.00000	1.000000	
Titanium,7440-32-6	1	Lin, Calc Int	0.0	830900	0.00000	1.000000	
Vanadium,7440-62-2	1	Lin, Calc Int	0.0	313900	0.00000	1.000000	
Zinc,7440-66-6	1	Lin, Calc Int	0.0	165700	0.00000	1.000000	
Zirconium,7440-67-7	1	Lin, Calc Int	0.0	532300	0.00000	1.000000	

Sequence No.: 4
Sample ID: 1600
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 12
Date Collected: 05/30/2003 08:21:34

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1600

Analyte	Mean Corrected Intensity	Calib Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	82155.2	100.82	%	0.260				0.26%
Ar 420.067 R	836810.7	100.60	%	0.270				0.27%
Scandium-IS	7174278.6	98.793	%	0.3275				0.33%
Yttrium,7440-65-5A	3715792.2	98.852	%	0.2753				0.28%
Yttrium,7440-65-5R	78713.4	96.626	%	0.6074				0.63%
Aluminum,7429-90-5†	6.9	0.0255	mg/L	0.05287	0.0255	mg/L	0.05287	207.39%
Antimony,7440-36-0†	4011.1	0.9741	mg/L	0.00272	0.9741	mg/L	0.00272	0.28%

QC value within limits for Antimony,7440-36-0 Recovery = 97.41%

Arsenic,7440-38-2†	1961.3	0.9900 mg/L	0.00406	0.9900 mg/L	0.00406	0.41%
QC value within limits for Arsenic,7440-38-2 Recovery = 99.00%						
Barium,7440-39-3†	195.2	0.0002 mg/L	0.00007	0.0002 mg/L	0.00007	40.67%
Beryllium,7440-41-7†	5131121.5	0.9529 mg/L	0.00479	0.9529 mg/L	0.00479	0.50%
QC value within limits for Beryllium,7440-41-7 Recovery = 95.29%						
Boron,7440-42-8†	926.4	0.0197 mg/L	0.00125	0.0197 mg/L	0.00125	6.37%
Cadmium,7440-43-9†	263363.5	0.9583 mg/L	0.00251	0.9583 mg/L	0.00251	0.26%
QC value within limits for Cadmium,7440-43-9 Recovery = 95.83%						
Calcium,7440-70-2†	1320.5	0.9943 mg/L	0.01195	0.9943 mg/L	0.01195	1.20%
QC value within limits for Calcium,7440-70-2 Recovery = 99.43%						
Chromium,7440-47-3†	161339.5	0.9872 mg/L	0.00162	0.9872 mg/L	0.00162	0.16%
QC value within limits for Chromium,7440-47-3 Recovery = 98.72%						
Cobalt,7440-48-4†	74176.7	0.9851 mg/L	0.00094	0.9851 mg/L	0.00094	0.10%
QC value within limits for Cobalt,7440-48-4 Recovery = 98.51%						
Copper,7440-50-8†	412446.1	0.9447 mg/L	0.00130	0.9447 mg/L	0.00130	0.14%
QC value within limits for Copper,7440-50-8 Recovery = 94.47%						
Iron,7439-89-6†	320.4	1.0251 mg/L	0.01884	1.0251 mg/L	0.01884	1.84%
QC value within limits for Iron,7439-89-6 Recovery = 102.51%						
Lead,7439-92-1†	23217.2	0.9921 mg/L	0.00396	0.9921 mg/L	0.00396	0.40%
QC value within limits for Lead,7439-92-1 Recovery = 99.21%						
Magnesium,7439-95-4†	69.4	1.0268 mg/L	0.05314	1.0268 mg/L	0.05314	5.18%
QC value within limits for Magnesium,7439-95-4 Recovery = 102.68%						
Manganese,7439-96-5†	1228079.5	0.9862 mg/L	0.00267	0.9862 mg/L	0.00267	0.27%
QC value within limits for Manganese,7439-96-5 Recovery = 98.62%						
Molybdenum,7439-98-7†	27544.6	0.9967 mg/L	0.00456	0.9967 mg/L	0.00456	0.46%
QC value within limits for Molybdenum,7439-98-7 Recovery = 99.67%						
Nickel,7440-02-0†	90526.0	0.9772 mg/L	0.00102	0.9772 mg/L	0.00102	0.10%
QC value within limits for Nickel,7440-02-0 Recovery = 97.72%						
Potassium,7440-09-7†	-91.5	-0.0171 mg/L	0.01652	-0.0171 mg/L	0.01652	96.51%
Selenium,7782-49-2†	2694.8	0.9399 mg/L	0.00602	0.9399 mg/L	0.00602	0.64%
QC value within limits for Selenium,7782-49-2 Recovery = 93.99%						
Silver,7440-22-4†	430630.7	0.9847 mg/L	0.00249	0.9847 mg/L	0.00249	0.25%
QC value within limits for Silver,7440-22-4 Recovery = 98.47%						
Sodium,7440-23-5†	84.4	0.0114 mg/L	0.01091	0.0114 mg/L	0.01091	95.86%
Strontium,7440-24-6†	213238.1	0.9868 mg/L	0.00538	0.9868 mg/L	0.00538	0.55%
QC value within limits for Strontium,7440-24-6 Recovery = 98.68%						
Thallium,7440-28-0†	1886.1	0.9713 mg/L	0.00284	0.9713 mg/L	0.00284	0.29%
QC value within limits for Thallium,7440-28-0 Recovery = 97.13%						
Tin,7440-31-5†	-72.2	0.0027 mg/L	0.00013	0.0027 mg/L	0.00013	4.71%
Titanium,7440-32-6†	820303.3	0.9873 mg/L	0.00191	0.9873 mg/L	0.00191	0.19%
QC value within limits for Titanium,7440-32-6 Recovery = 98.73%						
Vanadium,7440-62-2†	304612.2	0.9706 mg/L	0.00233	0.9706 mg/L	0.00233	0.24%
QC value within limits for Vanadium,7440-62-2 Recovery = 97.06%						
Zinc,7440-66-6†	156259.7	0.9417 mg/L	0.00182	0.9417 mg/L	0.00182	0.19%
QC value within limits for Zinc,7440-66-6 Recovery = 94.17%						
Zirconium,7440-67-7†	3278.3	0.0061 mg/L	0.00106	0.0061 mg/L	0.00106	17.42%

All analytes passed QC.

Sequence No.: 5
Sample ID: 1601
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 05/30/2003 08:28:41

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1601

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	82084.9	100.73	%	0.253				0.25%
Ar 420.067 R	840030.8	100.98	%	0.175				0.17%
Scandium-IS	7258432.8	99.952	%	0.4693				0.47%
Yttrium,7440-65-5A	3691604.6	98.208	%	0.4166				0.42%
Yttrium,7440-65-5R	78774.7	96.701	%	0.1927				0.20%
Aluminum,7429-90-5†	1693.7	9.8647	mg/L	0.02111	9.8647	mg/L	0.02111	0.21%
QC value within limits for Aluminum,7429-90-5 Recovery = 98.65%								
Antimony,7440-36-0†	-2.2	-0.0003	mg/L	0.00119	-0.0003	mg/L	0.00119	361.53%
Arsenic,7440-38-2†	1.0	0.0027	mg/L	0.00148	0.0027	mg/L	0.00148	54.48%
Barium,7440-39-3†	233038.2	0.9865	mg/L	0.01529	0.9865	mg/L	0.01529	1.55%
QC value within limits for Barium,7440-39-3 Recovery = 98.65%								
Beryllium,7440-41-7†	634.4	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	2.32%
Boron,7440-42-8†	224474.9	4.8459	mg/L	0.07674	4.8459	mg/L	0.07674	1.58%

QC value within limits for Boron,7440-42-8 Recovery = 96.92%

Cadmium,7440-43-9†	-263.7	-0.0009 mg/L	0.00005	-0.0009 mg/L	0.00005	5.40%
Calcium,7440-70-2†	-23.0	-0.0178 mg/L	0.00423	-0.0178 mg/L	0.00423	23.84%
Chromium,7440-47-3†	200.1	0.0009 mg/L	0.00014	0.0009 mg/L	0.00014	16.33%
Cobalt,7440-48-4†	-133.9	-0.0018 mg/L	0.00016	-0.0018 mg/L	0.00016	8.93%
Copper,7440-50-8†	838.5	0.0021 mg/L	0.00003	0.0021 mg/L	0.00003	1.51%
Iron,7439-89-6†	6.1	0.0190 mg/L	0.01630	0.0190 mg/L	0.01630	85.66%
Lead,7439-92-1†	-33.9	-0.0002 mg/L	0.00045	-0.0002 mg/L	0.00045	218.56%
Magnesium,7439-95-4†	0.8	0.0115 mg/L	0.01498	0.0115 mg/L	0.01498	129.81%
Manganese,7439-96-5†	-247.0	-0.0001 mg/L	0.00003	-0.0001 mg/L	0.00003	28.26%
Molybdenum,7439-98-7†	57.0	0.0021 mg/L	0.00047	0.0021 mg/L	0.00047	22.67%
Nickel,7440-02-0†	19.2	0.0002 mg/L	0.00035	0.0002 mg/L	0.00035	200.80%
Potassium,7440-09-7†	56433.5	9.7481 mg/L	0.02700	9.7481 mg/L	0.02700	0.28%

QC value within limits for Potassium,7440-09-7 Recovery = 97.48%

Selenium,7782-49-2†	1.5	0.0019 mg/L	0.00298	0.0019 mg/L	0.00298	155.52%
Silver,7440-22-4†	2419.6	0.0055 mg/L	0.00038	0.0055 mg/L	0.00038	6.81%
Sodium,7440-23-5†	78568.4	10.047 mg/L	0.0110	10.047 mg/L	0.0110	0.11%

QC value within limits for Sodium,7440-23-5 Recovery = 100.47%

Strontium,7440-24-6†	-32.7	-0.0002 mg/L	0.00010	-0.0002 mg/L	0.00010	67.32%
Thallium,7440-28-0†	0.9	0.0005 mg/L	0.00101	0.0005 mg/L	0.00101	217.00%
Tin,7440-31-5†	9617.7	0.9809 mg/L	0.00421	0.9809 mg/L	0.00421	0.43%

QC value within limits for Tin,7440-31-5 Recovery = 98.09%

Titanium,7440-32-6†	831.1	0.0010 mg/L	0.00007	0.0010 mg/L	0.00007	6.95%
Vanadium,7440-62-2†	307.7	0.0010 mg/L	0.00034	0.0010 mg/L	0.00034	34.81%
Zinc,7440-66-6†	-461.6	-0.0028 mg/L	0.00017	-0.0028 mg/L	0.00017	6.11%
Zirconium,7440-67-7†	504377.5	0.9476 mg/L	0.00648	0.9476 mg/L	0.00648	0.68%

QC value within limits for Zirconium,7440-67-7 Recovery = 94.76%

All analytes passed QC.

Sequence No.: 6
Sample ID: 1700
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 08:35:53
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1700

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81683.5	100.24	%	0.691				0.69%
Ar 420.067 R	832212.5	100.04	%	0.168				0.17%
Scandium-IS	7305290.1	100.60	%	1.334				1.33%
Yttrium,7440-65-5A	3783919.8	100.66	%	1.263				1.25%
Yttrium,7440-65-5R	80156.1	98.397	%	0.5350				0.54%
Aluminum,7429-90-5†	0.9	0.0050	mg/L	0.01916	0.0050	mg/L	0.01916	385.72%

QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated

Antimony,7440-36-0†	7.9	0.0020	mg/L	0.00251	0.0020	mg/L	0.00251	127.51%

QC value within limits for Antimony,7440-36-0 Recovery = Not calculated

Arsenic,7440-38-2†	5.3	0.0026	mg/L	0.00058	0.0026	mg/L	0.00058	22.18%

QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated

Barium,7440-39-3†	37.2	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	33.42%

QC value within limits for Barium,7440-39-3 Recovery = Not calculated

Beryllium,7440-41-7†	208.5	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	57.10%

QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated

Boron,7440-42-8†	1320.4	0.0285	mg/L	0.00212	0.0285	mg/L	0.00212	7.42%

QC value within limits for Boron,7440-42-8 Recovery = Not calculated

Cadmium,7440-43-9†	31.4	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	27.19%

QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated

Calcium,7440-70-2†	9.9	0.0075	mg/L	0.04495	0.0075	mg/L	0.04495	597.73%

QC value within limits for Calcium,7440-70-2 Recovery = Not calculated

Chromium,7440-47-3†	-47.6	-0.0003	mg/L	0.00021	-0.0003	mg/L	0.00021	71.20%

QC value within limits for Chromium,7440-47-3 Recovery = Not calculated

Cobalt,7440-48-4†	-0.2	0.0000	mg/L	0.00025	0.0000	mg/L	0.00025	>999.9%

QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated

Copper,7440-50-8†	168.4	0.0004	mg/L	0.00030	0.0004	mg/L	0.00030	78.51%

QC value within limits for Copper,7440-50-8 Recovery = Not calculated

Iron,7439-89-6†	2.1	0.0068	mg/L	0.02362	0.0068	mg/L	0.02362	345.51%

QC value within limits for Iron,7439-89-6 Recovery = Not calculated

Lead,7439-92-1†	10.5	0.0004	mg/L	0.00087	0.0004	mg/L	0.00087	195.26%

QC value within limits for Lead,7439-92-1 Recovery = Not calculated

Magnesium,7439-95-4†	0.4	0.0062	mg/L	0.05389	0.0062	mg/L	0.05389	863.56%

QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† -1.9 0.0000 mg/L 0.00007 0.0000 mg/L 0.00007 >999.9%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7† 27.7 0.0010 mg/L 0.00032 0.0010 mg/L 0.00032 32.25%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 5.8 0.0001 mg/L 0.00021 0.0001 mg/L 0.00021 335.84%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 151.4 0.0261 mg/L 0.01368 0.0261 mg/L 0.01368 52.30%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† 1.8 0.0006 mg/L 0.00063 0.0006 mg/L 0.00063 102.51%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silver,7440-22-4† -28.0 -0.0001 mg/L 0.00022 -0.0001 mg/L 0.00022 352.07%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 201.2 0.0257 mg/L 0.00419 0.0257 mg/L 0.00419 16.28%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† -61.0 -0.0003 mg/L 0.00004 -0.0003 mg/L 0.00004 15.84%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 2.3 0.0012 mg/L 0.00112 0.0012 mg/L 0.00112 95.24%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 6.4 0.0007 mg/L 0.00045 0.0007 mg/L 0.00045 68.72%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 101.4 0.0001 mg/L 0.00017 0.0001 mg/L 0.00017 141.80%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† 52.1 0.0002 mg/L 0.00030 0.0002 mg/L 0.00030 180.70%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† 24.7 0.0001 mg/L 0.00015 0.0001 mg/L 0.00015 101.55%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 3268.0 0.0061 mg/L 0.00077 0.0061 mg/L 0.00077 12.58%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analytes passed QC.

Sequence No.: 7
Sample ID: 2000
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 05/30/2003 08:43:03
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 2000

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	79437.0	97.480	%	0.7780				0.80%
Ar 420.067 R	803514.0	96.593	%	0.3039				0.31%
Scandium-IS	6559088.9	90.322	%	0.4840				0.54%
Yttrium,7440-65-5A	3370436.9	89.664	%	0.4782				0.53%
Yttrium,7440-65-5R	72170.4	88.594	%	0.6501				0.73%
Aluminum,7429-90-5†	35945.1	209.35	mg/L	0.415	209.35	mg/L	0.415	0.20%
QC value within limits for Aluminum,7429-90-5 Recovery = 104.68%								
Antimony,7440-36-0†	-26.7	-0.0022	mg/L	0.00085	-0.0022	mg/L	0.00085	38.25%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	-76.4	0.0151	mg/L	0.00320	0.0151	mg/L	0.00320	21.22%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	562.1	0.0006	mg/L	0.00008	0.0006	mg/L	0.00008	13.90%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	-1301.1	-0.0002	mg/L	0.00003	-0.0002	mg/L	0.00003	11.39%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	-203.0	-0.0336	mg/L	0.00212	-0.0336	mg/L	0.00212	6.30%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	21.5	-0.0034	mg/L	0.00001	-0.0034	mg/L	0.00001	0.40%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	271275.6	206.08	mg/L	1.997	206.08	mg/L	1.997	0.97%
QC value within limits for Calcium,7440-70-2 Recovery = 103.04%								
Chromium,7440-47-3†	757.1	-0.0025	mg/L	0.00038	-0.0025	mg/L	0.00038	15.42%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	75.0	0.0009	mg/L	0.00003	0.0009	mg/L	0.00003	3.40%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	-5558.4	0.0076	mg/L	0.00043	0.0076	mg/L	0.00043	5.63%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	25558.5	81.572	mg/L	0.1810	81.572	mg/L	0.1810	0.22%
QC value within limits for Iron,7439-89-6 Recovery = 101.96%								
Lead,7439-92-1†	-487.3	0.0039	mg/L	0.00142	0.0039	mg/L	0.00142	36.34%

QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Magnesium,7439-95-4† 14110.4 208.16 mg/L 3.029 208.16 mg/L 3.029 1.46%
QC value within limits for Magnesium,7439-95-4 Recovery = 104.08%
Manganese,7439-96-5† -6735.4 -0.0003 mg/L 0.00004 -0.0003 mg/L 0.00004 11.99%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7† 60.9 0.0005 mg/L 0.00040 0.0005 mg/L 0.00040 83.33%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 45.7 -0.0003 mg/L 0.00018 -0.0003 mg/L 0.00018 52.52%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 119.6 -0.0115 mg/L 0.02093 -0.0115 mg/L 0.02093 182.36%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† -110.5 0.0171 mg/L 0.00264 0.0171 mg/L 0.00264 15.49%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silver,7440-22-4† -4201.5 0.0001 mg/L 0.00028 0.0001 mg/L 0.00028 217.19%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 812.4 0.0386 mg/L 0.00652 0.0386 mg/L 0.00652 16.90%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† 1060.7 -0.0008 mg/L 0.00011 -0.0008 mg/L 0.00011 13.10%
Thallium,7440-28-0† 7.0 0.0036 mg/L 0.00158 0.0036 mg/L 0.00158 43.81%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 165.6 0.0177 mg/L 0.00129 0.0177 mg/L 0.00129 7.28%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 999.2 0.0012 mg/L 0.00012 0.0012 mg/L 0.00012 9.95%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† -1760.0 -0.0099 mg/L 0.00032 -0.0099 mg/L 0.00032 3.19%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† 3254.2 -0.0147 mg/L 0.00030 -0.0147 mg/L 0.00030 2.03%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 3356.9 0.0051 mg/L 0.00034 0.0051 mg/L 0.00034 6.59%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analytes passed QC.

Sequence No.: 8
Sample ID: 2100
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 05/30/2003 08:49:14

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 2100

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	79911.8	98.062	%	0.5107				0.52%
Ar 420.067 R	795024.2	95.572	%	0.1140				0.12%
Scandium-IS	6532619.3	89.957	%	0.4446				0.49%
Yttrium,7440-65-5A	3354705.2	89.246	%	0.4322				0.48%
Yttrium,7440-65-5R	73027.0	89.645	%	0.3530				0.39%
Aluminum,7429-90-5†	37490.9	218.35	mg/L	0.141	218.35	mg/L	0.141	0.06%
QC value within limits for Aluminum,7429-90-5 Recovery = 109.17%								
Antimony,7440-36-0†	4372.3	1.0792	mg/L	0.02143	1.0792	mg/L	0.02143	1.99%
QC value within limits for Antimony,7440-36-0 Recovery = 107.92%								
Arsenic,7440-38-2†	2135.8	1.1174	mg/L	0.03137	1.1174	mg/L	0.03137	2.81%
QC value within limits for Arsenic,7440-38-2 Recovery = 111.74%								
Barium,7440-39-3†	125796.1	0.5303	mg/L	0.00068	0.5303	mg/L	0.00068	0.13%
QC value within limits for Barium,7440-39-3 Recovery = 106.06%								
Beryllium,7440-41-7†	2882337.0	0.5354	mg/L	0.00005	0.5354	mg/L	0.00005	0.01%
QC value within limits for Beryllium,7440-41-7 Recovery = 107.08%								
Boron,7440-42-8†	53530.1	1.1254	mg/L	0.00164	1.1254	mg/L	0.00164	0.15%
QC value within limits for Boron,7440-42-8 Recovery = 112.54%								
Cadmium,7440-43-9†	280611.1	1.0175	mg/L	0.00164	1.0175	mg/L	0.00164	0.16%
QC value within limits for Cadmium,7440-43-9 Recovery = 101.75%								
Calcium,7440-70-2†	276739.0	210.23	mg/L	0.494	210.23	mg/L	0.494	0.23%
QC value within limits for Calcium,7440-70-2 Recovery = 105.11%								
Chromium,7440-47-3†	85518.6	0.5159	mg/L	0.00667	0.5159	mg/L	0.00667	1.29%
QC value within limits for Chromium,7440-47-3 Recovery = 103.18%								
Cobalt,7440-48-4†	37421.9	0.4978	mg/L	0.00623	0.4978	mg/L	0.00623	1.25%
QC value within limits for Cobalt,7440-48-4 Recovery = 99.57%								
Copper,7440-50-8†	230772.7	0.5496	mg/L	0.00049	0.5496	mg/L	0.00049	0.09%
QC value within limits for Copper,7440-50-8 Recovery = 109.91%								
Iron,7439-89-6†	26476.9	84.504	mg/L	0.1155	84.504	mg/L	0.1155	0.14%
QC value within limits for Iron,7439-89-6 Recovery = 105.63%								

Lead,7439-92-1†	23499.2	1.0303 mg/L	0.01254	1.0303 mg/L	0.01254	1.22%
QC value within limits for Lead,7439-92-1 Recovery = 103.03%						
Magnesium,7439-95-4†	14714.5	217.08 mg/L	1.412	217.08 mg/L	1.412	0.65%
QC value within limits for Magnesium,7439-95-4 Recovery = 108.54%						
Manganese,7439-96-5†	658635.7	0.5342 mg/L	0.00059	0.5342 mg/L	0.00059	0.11%
QC value within limits for Manganese,7439-96-5 Recovery = 106.83%						
Molybdenum,7439-98-7†	29968.6	1.0826 mg/L	0.01302	1.0826 mg/L	0.01302	1.20%
QC value within limits for Molybdenum,7439-98-7 Recovery = 108.26%						
Nickel,7440-02-0†	90060.3	0.9714 mg/L	0.01206	0.9714 mg/L	0.01206	1.24%
QC value within limits for Nickel,7440-02-0 Recovery = 97.14%						
Potassium,7440-09-7†	190.1	-0.0006 mg/L	0.02500	-0.0006 mg/L	0.02500	>999.9%
Selenium,7782-49-2†	2976.5	1.0958 mg/L	0.02160	1.0958 mg/L	0.02160	1.97%
QC value within limits for Selenium,7782-49-2 Recovery = 109.58%						
Silver,7440-22-4†	479984.3	1.1072 mg/L	0.00017	1.1072 mg/L	0.00017	0.02%
QC value within limits for Silver,7440-22-4 Recovery = 110.72%						
Sodium,7440-23-5†	10378.7	1.2598 mg/L	0.00501	1.2598 mg/L	0.00501	0.40%
Strontium,7440-24-6†	1094.4	-0.0008 mg/L	0.00013	-0.0008 mg/L	0.00013	17.00%
Thallium,7440-28-0†	2117.2	1.0903 mg/L	0.01621	1.0903 mg/L	0.01621	1.49%
QC value within limits for Thallium,7440-28-0 Recovery = 109.03%						
Tin,7440-31-5†	182.1	0.0196 mg/L	0.00184	0.0196 mg/L	0.00184	9.38%
Titanium,7440-32-6†	986.1	0.0012 mg/L	0.00015	0.0012 mg/L	0.00015	12.90%
Vanadium,7440-62-2†	165038.8	0.5213 mg/L	0.00180	0.5213 mg/L	0.00180	0.35%
QC value within limits for Vanadium,7440-62-2 Recovery = 104.26%						
Zinc,7440-66-6†	179035.3	1.0410 mg/L	0.00149	1.0410 mg/L	0.00149	0.14%
QC value within limits for Zinc,7440-66-6 Recovery = 104.10%						
Zirconium,7440-67-7†	7017.7	0.0120 mg/L	0.00097	0.0120 mg/L	0.00097	8.11%

All analytes passed QC.

Sequence No.: 9
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 05/30/2003 08:54:43
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	82613.5	101.38	%	0.440				0.43%
Ar 420.067 R	826608.3	99.369	%	0.1645				0.17%
Scandium-IS	7107163.1	97.869	%	0.6512				0.67%
Yttrium,7440-65-5A	3627009.8	96.490	%	0.5953				0.62%
Yttrium,7440-65-5R	78258.5	96.068	%	0.9805				1.02%
Aluminum,7429-90-5†	864.1	5.0260	mg/L	0.10393	5.0260	mg/L	0.10393	2.07%
QC value within limits for Aluminum,7429-90-5 Recovery = 100.52%								
Antimony,7440-36-0†	72.9	0.0054	mg/L	0.00173	0.0054	mg/L	0.00173	32.29%
Arsenic,7440-38-2†	1028.3	0.5201	mg/L	0.00498	0.5201	mg/L	0.00498	0.96%
QC value within limits for Arsenic,7440-38-2 Recovery = 104.01%								
Barium,7440-39-3†	118220.5	0.5000	mg/L	0.00568	0.5000	mg/L	0.00568	1.14%
QC value within limits for Barium,7440-39-3 Recovery = 100.01%								
Beryllium,7440-41-7†	2700347.0	0.5016	mg/L	0.00154	0.5016	mg/L	0.00154	0.31%
QC value within limits for Beryllium,7440-41-7 Recovery = 100.32%								
Boron,7440-42-8†	755.9	0.0147	mg/L	0.00085	0.0147	mg/L	0.00085	5.78%
Cadmium,7440-43-9†	136882.9	0.4979	mg/L	0.00545	0.4979	mg/L	0.00545	1.09%
QC value within limits for Cadmium,7440-43-9 Recovery = 99.57%								
Calcium,7440-70-2†	6742.8	5.1213	mg/L	0.05205	5.1213	mg/L	0.05205	1.02%
QC value within limits for Calcium,7440-70-2 Recovery = 102.43%								
Chromium,7440-47-3†	82236.8	0.5031	mg/L	0.00614	0.5031	mg/L	0.00614	1.22%
QC value within limits for Chromium,7440-47-3 Recovery = 100.62%								
Cobalt,7440-48-4†	37776.1	0.5028	mg/L	0.00581	0.5028	mg/L	0.00581	1.16%
QC value within limits for Cobalt,7440-48-4 Recovery = 100.55%								
Copper,7440-50-8†	215613.9	0.4950	mg/L	0.00632	0.4950	mg/L	0.00632	1.28%
QC value within limits for Copper,7440-50-8 Recovery = 99.01%								
Iron,7439-89-6†	1605.7	5.1253	mg/L	0.04193	5.1253	mg/L	0.04193	0.82%
QC value within limits for Iron,7439-89-6 Recovery = 102.51%								
Lead,7439-92-1†	12066.7	0.5162	mg/L	0.00586	0.5162	mg/L	0.00586	1.14%
QC value within limits for Lead,7439-92-1 Recovery = 103.24%								
Magnesium,7439-95-4†	356.1	5.2548	mg/L	0.08549	5.2548	mg/L	0.08549	1.63%
QC value within limits for Magnesium,7439-95-4 Recovery = 105.10%								
Manganese,7439-96-5†	630865.1	0.5067	mg/L	0.00055	0.5067	mg/L	0.00055	0.11%
QC value within limits for Manganese,7439-96-5 Recovery = 101.34%								

Molybdenum,7439-98-7†	59.2	0.0021 mg/L	0.00065	0.0021 mg/L	0.00065	30.39%
Nickel,7440-02-0†	46690.6	0.5041 mg/L	0.00661	0.5041 mg/L	0.00661	1.31%
QC value within limits for Nickel,7440-02-0 Recovery = 100.81%						
Potassium,7440-09-7†	58140.4	10.042 mg/L	0.0064	10.042 mg/L	0.0064	0.06%
QC value within limits for Potassium,7440-09-7 Recovery = 100.42%						
Selenium,7782-49-2†	1423.6	0.4987 mg/L	0.00373	0.4987 mg/L	0.00373	0.75%
QC value within limits for Selenium,7782-49-2 Recovery = 99.74%						
Silver,7440-22-4†	216731.4	0.4961 mg/L	0.00573	0.4961 mg/L	0.00573	1.15%
QC value within limits for Silver,7440-22-4 Recovery = 99.22%						
Sodium,7440-23-5†	162575.2	20.790 mg/L	0.0323	20.790 mg/L	0.0323	0.16%
QC value within limits for Sodium,7440-23-5 Recovery = 103.95%						
Strontium,7440-24-6†	112915.0	0.5224 mg/L	0.00289	0.5224 mg/L	0.00289	0.55%
QC value within limits for Strontium,7440-24-6 Recovery = 104.48%						
Thallium,7440-28-0†	965.7	0.4973 mg/L	0.00189	0.4973 mg/L	0.00189	0.38%
QC value within limits for Thallium,7440-28-0 Recovery = 99.47%						
Tin,7440-31-5†	30.6	0.0033 mg/L	0.00104	0.0033 mg/L	0.00104	31.39%
Titanium,7440-32-6†	678.0	0.0008 mg/L	0.00047	0.0008 mg/L	0.00047	57.14%
Vanadium,7440-62-2†	155602.2	0.4953 mg/L	0.00639	0.4953 mg/L	0.00639	1.29%
QC value within limits for Vanadium,7440-62-2 Recovery = 99.06%						
Zinc,7440-66-6†	83207.5	0.4992 mg/L	0.00601	0.4992 mg/L	0.00601	1.20%
QC value within limits for Zinc,7440-66-6 Recovery = 99.83%						
Zirconium,7440-67-7†	264590.3	0.4971 mg/L	0.00794	0.4971 mg/L	0.00794	1.60%
QC value within limits for Zirconium,7440-67-7 Recovery = 99.41%						

All analytes passed QC.

Sequence No.: 10
Sample ID: 1802
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 05/30/2003 09:01:48
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1802

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82116.7	100.77	%	0.086				0.09%
Ar 420.067 R	820978.6	98.692	%	0.0995				0.10%
Scandium-IS	7306907.4	100.62	%	0.076				0.08%
Yttrium,7440-65-5A	3736996.8	99.416	%	0.0691				0.07%
Yttrium,7440-65-5R	80701.6	99.066	%	0.8315				0.84%
Aluminum,7429-90-5†	5.8	0.0328	mg/L	0.03371	0.0328	mg/L	0.03371	102.66%
Antimony,7440-36-0†	2012.8	0.5015	mg/L	0.00348	0.5015	mg/L	0.00348	0.69%
QC value within limits for Antimony,7440-36-0 Recovery = 100.29%								
Arsenic,7440-38-2†	5.8	0.0029	mg/L	0.00074	0.0029	mg/L	0.00074	25.27%
Barium,7440-39-3†	16.2	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	39.08%
Beryllium,7440-41-7†	1343.0	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	9.50%
Boron,7440-42-8†	118677.1	2.5621	mg/L	0.02935	2.5621	mg/L	0.02935	1.15%
QC value within limits for Boron,7440-42-8 Recovery = 102.48%								
Cadmium,7440-43-9†	-295.8	-0.0011	mg/L	0.00002	-0.0011	mg/L	0.00002	1.76%
Calcium,7440-70-2†	21.7	0.0128	mg/L	0.00276	0.0128	mg/L	0.00276	21.58%
Chromium,7440-47-3†	84.0	0.0005	mg/L	0.00016	0.0005	mg/L	0.00016	34.25%
Cobalt,7440-48-4†	65.0	-0.0002	mg/L	0.00014	-0.0002	mg/L	0.00014	68.45%
Copper,7440-50-8†	1216.2	0.0026	mg/L	0.00026	0.0026	mg/L	0.00026	9.87%
Iron,7439-89-6†	5.3	0.0173	mg/L	0.00175	0.0173	mg/L	0.00175	10.12%
Lead,7439-92-1†	-33.7	-0.0015	mg/L	0.00049	-0.0015	mg/L	0.00049	32.22%
Magnesium,7439-95-4†	3.0	0.0468	mg/L	0.02324	0.0468	mg/L	0.02324	49.61%
Manganese,7439-96-5†	999.6	0.0008	mg/L	0.00004	0.0008	mg/L	0.00004	4.52%
Molybdenum,7439-98-7†	14143.3	0.5117	mg/L	0.00588	0.5117	mg/L	0.00588	1.15%
QC value within limits for Molybdenum,7439-98-7 Recovery = 102.35%								
Nickel,7440-02-0†	1.7	0.0000	mg/L	0.00015	0.0000	mg/L	0.00015	>999.9%
Potassium,7440-09-7†	-29.0	-0.0055	mg/L	0.01835	-0.0055	mg/L	0.01835	332.57%
Selenium,7782-49-2†	-0.3	-0.0001	mg/L	0.00165	-0.0001	mg/L	0.00165	>999.9%
Silver,7440-22-4†	1538.9	0.0035	mg/L	0.00012	0.0035	mg/L	0.00012	3.40%
Sodium,7440-23-5†	165.4	0.0211	mg/L	0.00959	0.0211	mg/L	0.00959	45.34%
Strontium,7440-24-6†	-74.6	-0.0003	mg/L	0.00013	-0.0003	mg/L	0.00013	38.54%
Thallium,7440-28-0†	-11.1	-0.0057	mg/L	0.00064	-0.0057	mg/L	0.00064	11.16%
Tin,7440-31-5†	4906.4	0.5055	mg/L	0.00211	0.5055	mg/L	0.00211	0.42%
QC value within limits for Tin,7440-31-5 Recovery = 101.10%								
Titanium,7440-32-6†	423855.0	0.5101	mg/L	0.00073	0.5101	mg/L	0.00073	0.14%
QC value within limits for Titanium,7440-32-6 Recovery = 102.03%								
Vanadium,7440-62-2†	169.7	0.0008	mg/L	0.00012	0.0008	mg/L	0.00012	15.65%

Zinc,7440-66-6†	-462.0	-0.0021 mg/L	0.00005	-0.0021 mg/L	0.00005	2.45%
Zirconium,7440-67-7†	301530.3	0.5664 mg/L	0.00428	0.5664 mg/L	0.00428	0.76%

All analytes passed QC.

==========

Sequence No.: 11
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 09:09:03
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

R/R

Mean Data: 1900

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	82025.2	100.66	%	0.182				0.18%
Ar 420.067 R	817580.9	98.284	%	0.0211				0.02%
Scandium-IS	7178514.6	98.852	%	0.1438				0.15%
Yttrium,7440-65-5A	3707201.2	98.623	%	0.1206				0.12%
Yttrium,7440-65-5R	75998.1	93.293	%	4.2154				4.52%
Aluminum,7429-90-5†	-1.8	-0.0107	mg/L	0.05060	-0.0107	mg/L	0.05060	473.70%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								
Antimony,7440-36-0†	13.1	0.0032	mg/L	0.00091	0.0032	mg/L	0.00091	28.18%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	3.7	0.0018	mg/L	0.00096	0.0018	mg/L	0.00096	53.07%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	21.4	0.0001	mg/L	0.00009	0.0001	mg/L	0.00009	101.29%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	84.5	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	108.94%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	1020.8	0.0220	mg/L	0.00109	0.0220	mg/L	0.00109	4.93%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	13.4	0.0000	mg/L	0.00008	0.0000	mg/L	0.00008	167.44%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	-29.7	-0.0226	mg/L	0.00504	-0.0226	mg/L	0.00504	22.33%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated								
Chromium,7440-47-3†	74.6	0.0005	mg/L	0.00021	0.0005	mg/L	0.00021	45.41%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	-12.1	-0.0002	mg/L	0.00019	-0.0002	mg/L	0.00019	120.22%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	247.8	0.0006	mg/L	0.00016	0.0006	mg/L	0.00016	27.78%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	0.6	0.0021	mg/L	0.00909	0.0021	mg/L	0.00909	439.00%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated								
Lead,7439-92-1†	9.0	0.0004	mg/L	0.00066	0.0004	mg/L	0.00066	173.14%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated								
Magnesium,7439-95-4†	5.1	0.0750	mg/L	0.05418	0.0750	mg/L	0.05418	72.27%
QC value greater than the upper limit for Magnesium,7439-95-4 Recovery = Not calculated								
Manganese,7439-96-5†	-156.2	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	20.59%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated								
Molybdenum,7439-98-7†	44.0	0.0016	mg/L	0.00023	0.0016	mg/L	0.00023	14.42%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated								
Nickel,7440-02-0†	16.7	0.0002	mg/L	0.00013	0.0002	mg/L	0.00013	74.78%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated								
Potassium,7440-09-7†	103.5	0.0179	mg/L	0.00882	0.0179	mg/L	0.00882	49.33%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated								
Selenium,7782-49-2†	4.3	0.0015	mg/L	0.00209	0.0015	mg/L	0.00209	138.14%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated								
Silver,7440-22-4†	-26.3	-0.0001	mg/L	0.00016	-0.0001	mg/L	0.00016	265.42%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated								
Sodium,7440-23-5†	359.0	0.0459	mg/L	0.01438	0.0459	mg/L	0.01438	31.33%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated								
Strontium,7440-24-6†	-12.9	-0.0001	mg/L	0.00034	-0.0001	mg/L	0.00034	574.16%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated								
Thallium,7440-28-0†	2.1	0.0011	mg/L	0.00013	0.0011	mg/L	0.00013	12.06%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated								
Tin,7440-31-5†	3.8	0.0004	mg/L	0.00044	0.0004	mg/L	0.00044	114.43%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated								
Titanium,7440-32-6†	200.9	0.0002	mg/L	0.00021	0.0002	mg/L	0.00021	85.92%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated								
Vanadium,7440-62-2†	-10.1	0.0000	mg/L	0.00032	0.0000	mg/L	0.00032	>999.9%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated								

```
Zinc,7440-66-6†            53.8      0.0003 mg/L      0.00002      0.0003 mg/L      0.00002   6.82%
   QC value within limits for Zinc,7440-66-6  Recovery = Not calculated
Zirconium,7440-67-7†       73.8      0.0001 mg/L      0.00015      0.0001 mg/L      0.00015 106.29%
   QC value within limits for Zirconium,7440-67-7  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

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Analysis Begun

Start Time: 05/30/2003 09:19:29
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

==========

Sequence No.: 11
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 191.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 09:19:29

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	81915.0	100.52	%	0.457				0.45%
Ar 420.067 R	820535.5	98.639	%	0.1251				0.13%
Scandium-IS	7240251.7	99.702	%	0.9542				0.96%
Yttrium,7440-65-5A	3752374.6	99.825	%	0.9251				0.93%
Yttrium,7440-65-5R	78674.4	96.578	%	0.0834				0.09%
Aluminum,7429-90-5†	-1.6	-0.0095	mg/L	0.00915	-0.0095	mg/L	0.00915	96.50%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								
Antimony,7440-36-0†	-1.5	-0.0004	mg/L	0.00203	-0.0004	mg/L	0.00203	560.69%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	2.3	0.0012	mg/L	0.00216	0.0012	mg/L	0.00216	186.32%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	3.8	0.0000	mg/L	0.00011	0.0000	mg/L	0.00011	719.61%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	13.2	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	696.27%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	507.9	0.0110	mg/L	0.00037	0.0110	mg/L	0.00037	3.41%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	-24.9	-0.0001	mg/L	0.00005	-0.0001	mg/L	0.00005	51.49%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	-25.6	-0.0194	mg/L	0.00141	-0.0194	mg/L	0.00141	7.25%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated								
Chromium,7440-47-3†	12.3	0.0001	mg/L	0.00021	0.0001	mg/L	0.00021	276.36%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	-13.1	-0.0002	mg/L	0.00022	-0.0002	mg/L	0.00022	124.80%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	226.7	0.0005	mg/L	0.00021	0.0005	mg/L	0.00021	40.88%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	1.5	0.0047	mg/L	0.01092	0.0047	mg/L	0.01092	231.09%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated								
Lead,7439-92-1†	-10.3	-0.0004	mg/L	0.00072	-0.0004	mg/L	0.00072	161.98%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated								
Magnesium,7439-95-4†	-1.2	-0.0180	mg/L	0.03914	-0.0180	mg/L	0.03914	217.74%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated								
Manganese,7439-96-5†	-93.8	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	37.94%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated								
Molybdenum,7439-98-7†	16.0	0.0006	mg/L	0.00013	0.0006	mg/L	0.00013	22.47%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated								
Nickel,7440-02-0†	-1.3	0.0000	mg/L	0.00032	0.0000	mg/L	0.00032	>999.9%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated								
Potassium,7440-09-7†	-12.1	-0.0021	mg/L	0.00970	-0.0021	mg/L	0.00970	463.00%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated								
Selenium,7782-49-2†	-5.1	-0.0018	mg/L	0.00133	-0.0018	mg/L	0.00133	74.59%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated								
Silver,7440-22-4†	-68.8	-0.0002	mg/L	0.00042	-0.0002	mg/L	0.00042	269.54%

QC value within limits for Silver,7440-22-4 Recovery = Not calculated

Sodium,7440-23-5†	-8.3	-0.0011 mg/L	0.01128	-0.0011 mg/L	0.01128	>999.9%

QC value within limits for Sodium,7440-23-5 Recovery = Not calculated

Strontium,7440-24-6†	-14.2	-0.0001 mg/L	0.00010	-0.0001 mg/L	0.00010	154.17%

QC value within limits for Strontium,7440-24-6 Recovery = Not calculated

Thallium,7440-28-0†	2.5	0.0013 mg/L	0.00062	0.0013 mg/L	0.00062	48.48%

QC value within limits for Thallium,7440-28-0 Recovery = Not calculated

Tin,7440-31-5†	5.6	0.0006 mg/L	0.00159	0.0006 mg/L	0.00159	277.24%

QC value within limits for Tin,7440-31-5 Recovery = Not calculated

Titanium,7440-32-6†	-165.7	-0.0002 mg/L	0.00037	-0.0002 mg/L	0.00037	185.23%

QC value within limits for Titanium,7440-32-6 Recovery = Not calculated

Vanadium,7440-62-2†	220.4	0.0007 mg/L	0.00027	0.0007 mg/L	0.00027	38.48%

QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated

Zinc,7440-66-6†	-64.2	-0.0004 mg/L	0.00007	-0.0004 mg/L	0.00007	18.65%

QC value within limits for Zinc,7440-66-6 Recovery = Not calculated

Zirconium,7440-67-7†	-11.6	0.0000 mg/L	0.00008	0.0000 mg/L	0.00008	377.13%

QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated

All analytes passed QC.

Sequence No.: 12
Sample ID: 101473
Analyst:
Nebulizer Back Pressure: 190.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 17
Date Collected: 05/30/2003 09:26:38
Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101473

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81820.0	100.40	%	0.823				0.82%
Ar 420.067 R	821597.8	98.767	%	0.1212				0.12%
Scandium-IS	7245907.2	99.780	%	0.5320				0.53%
Yttrium,7440-65-5A	3723220.4	99.049	%	0.5064				0.51%
Yttrium,7440-65-5R	78703.6	96.614	%	0.3978				0.41%
Aluminum,7429-90-5†	4.2	0.0246	mg/L	0.02280	0.9838	mg/kg	0.91189	92.69%
Antimony,7440-36-0†	-4.5	-0.0011	mg/L	0.00124	-0.0448	mg/kg	0.04964	110.79%
Arsenic,7440-38-2†	4.0	0.0020	mg/L	0.00164	0.0787	mg/kg	0.06562	83.36%
Barium,7440-39-3†	215.5	0.0009	mg/L	0.00005	0.0364	mg/kg	0.00205	5.64%
Beryllium,7440-41-7†	1103.9	0.0002	mg/L	0.00001	0.0082	mg/kg	0.00025	3.04%
Boron,7440-42-8†	662.6	0.0143	mg/L	0.00040	0.5709	mg/kg	0.01614	2.83%
Cadmium,7440-43-9†	17.2	0.0001	mg/L	0.00003	0.0023	mg/kg	0.00100	44.26%
Calcium,7440-70-2†	293.7	0.2231	mg/L	0.00223	8.9240	mg/kg	0.08903	1.00%
Chromium,7440-47-3†	82.2	0.0005	mg/L	0.00018	0.0200	mg/kg	0.00730	36.53%
Cobalt,7440-48-4†	-3.2	0.0000	mg/L	0.00004	-0.0018	mg/kg	0.00151	83.01%
Copper,7440-50-8†	869.1	0.0020	mg/L	0.00009	0.0801	mg/kg	0.00360	4.49%
Iron,7439-89-6†	34.1	0.1089	mg/L	0.00924	4.3554	mg/kg	0.36978	8.49%
Lead,7439-92-1†	7.4	0.0003	mg/L	0.00028	0.0126	mg/kg	0.01100	87.63%
Magnesium,7439-95-4†	6.3	0.0924	mg/L	0.01648	3.6942	mg/kg	0.65931	17.85%
Manganese,7439-96-5†	8554.5	0.0069	mg/L	0.00018	0.2748	mg/kg	0.00706	2.57%
Molybdenum,7439-98-7†	29.8	0.0011	mg/L	0.00009	0.0432	mg/kg	0.00357	8.28%
Nickel,7440-02-0†	30.3	0.0003	mg/L	0.00020	0.0131	mg/kg	0.00803	61.30%
Potassium,7440-09-7†	120.1	0.0207	mg/L	0.01196	0.8292	mg/kg	0.47832	57.69%
Selenium,7782-49-2†	4.7	0.0017	mg/L	0.00180	0.0673	mg/kg	0.07203	106.98%
Silver,7440-22-4†	-107.4	-0.0002	mg/L	0.00025	-0.0094	mg/kg	0.00992	106.10%
Sodium,7440-23-5†	113.4	0.0145	mg/L	0.01451	0.5790	mg/kg	0.58044	100.24%
Strontium,7440-24-6†	46.7	0.0002	mg/L	0.00014	0.0084	mg/kg	0.00554	66.05%
Thallium,7440-28-0†	-2.9	-0.0015	mg/L	0.00121	-0.0597	mg/kg	0.04854	81.28%
Tin,7440-31-5†	73.1	0.0075	mg/L	0.00015	0.2987	mg/kg	0.00613	2.05%
Titanium,7440-32-6†	1267.0	0.0015	mg/L	0.00014	0.0610	mg/kg	0.00543	8.90%
Vanadium,7440-62-2†	35.5	0.0001	mg/L	0.00015	0.0042	mg/kg	0.00605	143.87%
Zinc,7440-66-6†	4092.2	0.0247	mg/L	0.00024	0.9868	mg/kg	0.00956	0.97%
Zirconium,7440-67-7†	1021.9	0.0019	mg/L	0.00022	0.0767	mg/kg	0.00871	11.35%

Sequence No.: 13
Sample ID: 101474
Analyst:
Nebulizer Back Pressure: 191.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 18
Date Collected: 05/30/2003 09:33:50
Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Sample Wt:
Dilution: 1X

Sample Prep Volume:
Data Type: Original

Mean Data: 101156

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82332.9	101.03	%	0.602				0.60%
Ar 420.067 R	760692.6	91.445	%	0.1435				0.16%
Scandium-IS	7014207.6	96.589	%	0.5664				0.59%
Yttrium,7440-65-5A	3600966.1	95.797	%	1.0205				1.07%
Yttrium,7440-65-5R	72763.0	89.321	%	1.1013				1.23%
Aluminum,7429-90-5†	1770.8	10.298	mg/L	0.1704	10.298	mg/L	0.1704	1.65%
Antimony,7440-36-0†	4321.2	1.0503	mg/L	0.01792	1.0503	mg/L	0.01792	1.71%
Arsenic,7440-38-2†	2159.3	1.0919	mg/L	0.01330	1.0919	mg/L	0.01330	1.22%
Barium,7440-39-3†	244402.9	1.0338	mg/L	0.00343	1.0338	mg/L	0.00343	0.33%
Beryllium,7440-41-7†	5621152.6	1.0439	mg/L	0.01022	1.0439	mg/L	0.01022	0.98%
Boron,7440-42-8†	253966.3	5.4795	mg/L	0.00822	5.4795	mg/L	0.00822	0.15%
Cadmium,7440-43-9†	278650.5	1.0135	mg/L	0.00125	1.0135	mg/L	0.00125	0.12%
Calcium,7440-70-2†	13835.1	10.501	mg/L	0.1566	10.501	mg/L	0.1566	1.49%
Chromium,7440-47-3†	169131.8	1.0346	mg/L	0.00421	1.0346	mg/L	0.00421	0.41%
Cobalt,7440-48-4†	78058.7	1.0367	mg/L	0.00373	1.0367	mg/L	0.00373	0.36%
Copper,7440-50-8†	455943.6	1.0464	mg/L	0.00415	1.0464	mg/L	0.00415	0.40%
Iron,7439-89-6†	3302.9	10.543	mg/L	0.1658	10.543	mg/L	0.1658	1.57%
Lead,7439-92-1†	23940.8	1.0239	mg/L	0.01458	1.0239	mg/L	0.01458	1.42%
Magnesium,7439-95-4†	672.6	9.9305	mg/L	0.11474	9.9305	mg/L	0.11474	1.16%
Manganese,7439-96-5†	1295239.9	1.0404	mg/L	0.00269	1.0404	mg/L	0.00269	0.26%
Molybdenum,7439-98-7†	29053.3	1.0512	mg/L	0.01518	1.0512	mg/L	0.01518	1.44%
Nickel,7440-02-0†	96064.5	1.0370	mg/L	0.00430	1.0370	mg/L	0.00430	0.41%
Potassium,7440-09-7†	127657.0	22.049	mg/L	0.0608	22.049	mg/L	0.0608	0.28%
Selenium,7782-49-2†	2987.7	1.0465	mg/L	0.01773	1.0465	mg/L	0.01773	1.69%
Silver,7440-22-4†	452557.5	1.0359	mg/L	0.00382	1.0359	mg/L	0.00382	0.37%
Sodium,7440-23-5†	333420.8	42.637	mg/L	0.1299	42.637	mg/L	0.1299	0.30%
Strontium,7440-24-6†	207804.2	0.9614	mg/L	0.01813	0.9614	mg/L	0.01813	1.89%
Thallium,7440-28-0†	1966.9	1.0129	mg/L	0.01594	1.0129	mg/L	0.01594	1.57%
Tin,7440-31-5†	9974.2	1.0280	mg/L	0.01570	1.0280	mg/L	0.01570	1.53%
Titanium,7440-32-6†	869308.2	1.0463	mg/L	0.00443	1.0463	mg/L	0.00443	0.42%
Vanadium,7440-62-2†	324673.0	1.0339	mg/L	0.00305	1.0339	mg/L	0.00305	0.29%
Zinc,7440-66-6†	169589.0	1.0188	mg/L	0.00306	1.0188	mg/L	0.00306	0.30%
Zirconium,7440-67-7†	615544.5	1.1562	mg/L	0.00413	1.1562	mg/L	0.00413	0.36%

Sequence No.: 35
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 191.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 05/30/2003 12:05:25

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82651.0	101.42	%	0.269				0.27%
Ar 420.067 R	766443.3	92.136	%	0.1470				0.16%
Scandium-IS	7109604.8	97.903	%	0.2789				0.28%
Yttrium,7440-65-5A	3646501.0	97.008	%	0.7251				0.75%
Yttrium,7440-65-5R	72764.8	89.324	%	1.3595				1.52%
Aluminum,7429-90-5†	874.6	5.0875	mg/L	0.07750	5.0875	mg/L	0.07750	1.52%
QC value within limits for Aluminum,7429-90-5 Recovery = 101.75%								
Antimony,7440-36-0†	34.7	-0.0044	mg/L	0.00152	-0.0044	mg/L	0.00152	34.72%
Arsenic,7440-38-2†	1040.3	0.5263	mg/L	0.00636	0.5263	mg/L	0.00636	1.21%
QC value within limits for Arsenic,7440-38-2 Recovery = 105.25%								
Barium,7440-39-3†	121194.7	0.5126	mg/L	0.00671	0.5126	mg/L	0.00671	1.31%
QC value within limits for Barium,7440-39-3 Recovery = 102.53%								
Beryllium,7440-41-7†	2733541.5	0.5077	mg/L	0.00696	0.5077	mg/L	0.00696	1.37%
QC value within limits for Beryllium,7440-41-7 Recovery = 101.55%								
Boron,7440-42-8†	1564.8	0.0321	mg/L	0.00366	0.0321	mg/L	0.00366	11.39%
Cadmium,7440-43-9†	139281.0	0.5066	mg/L	0.00672	0.5066	mg/L	0.00672	1.33%
QC value within limits for Cadmium,7440-43-9 Recovery = 101.32%								
Calcium,7440-70-2†	6785.0	5.1534	mg/L	0.08072	5.1534	mg/L	0.08072	1.57%
QC value within limits for Calcium,7440-70-2 Recovery = 103.07%								
Chromium,7440-47-3†	83894.8	0.5132	mg/L	0.00588	0.5132	mg/L	0.00588	1.14%

QC value within limits for Chromium,7440-47-3 Recovery = 102.65%

Cobalt,7440-48-4†	38732.9	0.5155 mg/L	0.00721	0.5155 mg/L	0.00721	1.40%

QC value within limits for Cobalt,7440-48-4 Recovery = 103.10%

Copper,7440-50-8†	219232.6	0.5033 mg/L	0.00721	0.5033 mg/L	0.00721	1.43%

QC value within limits for Copper,7440-50-8 Recovery = 100.67%

Iron,7439-89-6†	1627.4	5.1945 mg/L	0.10059	5.1945 mg/L	0.10059	1.94%

QC value within limits for Iron,7439-89-6 Recovery = 103.89%

Lead,7439-92-1†	12311.7	0.5267 mg/L	0.00778	0.5267 mg/L	0.00778	1.48%

QC value within limits for Lead,7439-92-1 Recovery = 105.33%

Magnesium,7439-95-4†	327.3	4.8299 mg/L	0.05423	4.8299 mg/L	0.05423	1.12%

QC value within limits for Magnesium,7439-95-4 Recovery = 96.60%

Manganese,7439-96-5†	641530.9	0.5153 mg/L	0.00779	0.5153 mg/L	0.00779	1.51%

QC value within limits for Manganese,7439-96-5 Recovery = 103.06%

Molybdenum,7439-98-7†	49.7	0.0018 mg/L	0.00031	0.0018 mg/L	0.00031	17.19%
Nickel,7440-02-0†	47735.7	0.5153 mg/L	0.00670	0.5153 mg/L	0.00670	1.30%

QC value within limits for Nickel,7440-02-0 Recovery = 103.07%

Potassium,7440-09-7†	61373.7	10.601 mg/L	0.0341	10.601 mg/L	0.0341	0.32%

QC value within limits for Potassium,7440-09-7 Recovery = 106.01%

Selenium,7782-49-2†	1439.8	0.5044 mg/L	0.00429	0.5044 mg/L	0.00429	0.85%

QC value within limits for Selenium,7782-49-2 Recovery = 100.88%

Silver,7440-22-4†	220812.2	0.5055 mg/L	0.00561	0.5055 mg/L	0.00561	1.11%

QC value within limits for Silver,7440-22-4 Recovery = 101.09%

Sodium,7440-23-5†	162884.6	20.829 mg/L	0.0174	20.829 mg/L	0.0174	0.08%

QC value within limits for Sodium,7440-23-5 Recovery = 104.15%

Strontium,7440-24-6†	100972.8	0.4672 mg/L	0.00453	0.4672 mg/L	0.00453	0.97%

QC value within limits for Strontium,7440-24-6 Recovery = 93.43%

Thallium,7440-28-0†	975.4	0.5023 mg/L	0.00382	0.5023 mg/L	0.00382	0.76%

QC value within limits for Thallium,7440-28-0 Recovery = 100.46%

Tin,7440-31-5†	72.9	0.0076 mg/L	0.00778	0.0076 mg/L	0.00778	101.97%
Titanium,7440-32-6†	834.0	0.0010 mg/L	0.00027	0.0010 mg/L	0.00027	27.02%
Vanadium,7440-62-2†	159044.6	0.5062 mg/L	0.00712	0.5062 mg/L	0.00712	1.41%

QC value within limits for Vanadium,7440-62-2 Recovery = 101.25%

Zinc,7440-66-6†	84285.4	0.5056 mg/L	0.00700	0.5056 mg/L	0.00700	1.38%

QC value within limits for Zinc,7440-66-6 Recovery = 101.12%

Zirconium,7440-67-7†	266082.0	0.4999 mg/L	0.00821	0.4999 mg/L	0.00821	1.64%

QC value within limits for Zirconium,7440-67-7 Recovery = 99.97%

All analytes passed QC.

Sequence No.: 36
Sample ID: 1802
Analyst:
Nebulizer Back Pressure: 192.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 05/30/2003 12:12:47
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1802

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82405.5	101.12	%	0.409				0.40%
Ar 420.067 R	775493.1	93.224	%	0.1281				0.14%
Scandium-IS	7422833.9	102.22	%	0.714				0.70%
Yttrium,7440-65-5A	3805701.4	101.24	%	0.686				0.68%
Yttrium,7440-65-5R	73047.2	89.670	%	0.8962				1.00%
Aluminum,7429-90-5†	-1.6	-0.0100	mg/L	0.01280	-0.0100	mg/L	0.01280	127.48%
Antimony,7440-36-0†	1989.8	0.4957	mg/L	0.00471	0.4957	mg/L	0.00471	0.95%

QC value within limits for Antimony,7440-36-0 Recovery = 99.15%

Arsenic,7440-38-2†	3.8	0.0019	mg/L	0.00152	0.0019	mg/L	0.00152	78.18%
Barium,7440-39-3†	34.3	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	11.86%
Beryllium,7440-41-7†	1250.5	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	22.16%
Boron,7440-42-8†	118184.8	2.5515	mg/L	0.02688	2.5515	mg/L	0.02688	1.05%

QC value within limits for Boron,7440-42-8 Recovery = 102.06%

Cadmium,7440-43-9†	-295.9	-0.0011	mg/L	0.00004	-0.0011	mg/L	0.00004	3.50%
Calcium,7440-70-2†	-36.5	-0.0314	mg/L	0.00363	-0.0314	mg/L	0.00363	11.54%
Chromium,7440-47-3†	40.5	0.0002	mg/L	0.00007	0.0002	mg/L	0.00007	33.74%
Cobalt,7440-48-4†	57.1	-0.0003	mg/L	0.00006	-0.0003	mg/L	0.00006	18.04%
Copper,7440-50-8†	738.6	0.0015	mg/L	0.00010	0.0015	mg/L	0.00010	6.67%
Iron,7439-89-6†	1.4	0.0050	mg/L	0.01944	0.0050	mg/L	0.01944	390.55%
Lead,7439-92-1†	-43.6	-0.0020	mg/L	0.00017	-0.0020	mg/L	0.00017	8.71%
Magnesium,7439-95-4†	0.4	0.0084	mg/L	0.05970	0.0084	mg/L	0.05970	714.72%
Manganese,7439-96-5†	27.9	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	58.78%
Molybdenum,7439-98-7†	14070.5	0.5091	mg/L	0.00415	0.5091	mg/L	0.00415	0.82%

QC value within limits for Molybdenum,7439-98-7 Recovery = 101.82%

Nickel,7440-02-0†	-9.5	-0.0001 mg/L	0.00038	-0.0001 mg/L	0.00038	288.46%
Potassium,7440-09-7†	-114.3	-0.0202 mg/L	0.03539	-0.0202 mg/L	0.03539	174.84%
Selenium,7782-49-2†	2.5	0.0009 mg/L	0.00253	0.0009 mg/L	0.00253	292.77%
Silver,7440-22-4†	1419.8	0.0032 mg/L	0.00019	0.0032 mg/L	0.00019	5.83%
Sodium,7440-23-5†	-595.7	-0.0762 mg/L	0.00813	-0.0762 mg/L	0.00813	10.67%
Strontium,7440-24-6†	-58.8	-0.0003 mg/L	0.00032	-0.0003 mg/L	0.00032	118.54%
Thallium,7440-28-0†	-8.1	-0.0042 mg/L	0.00028	-0.0042 mg/L	0.00028	6.68%
Tin,7440-31-5†	4868.7	0.5016 mg/L	0.00361	0.5016 mg/L	0.00361	0.72%

QC value within limits for Tin,7440-31-5 Recovery = 100.33%

Titanium,7440-32-6†	422919.1	0.5090 mg/L	0.00054	0.5090 mg/L	0.00054	0.11%

QC value within limits for Titanium,7440-32-6 Recovery = 101.80%

Vanadium,7440-62-2†	184.5	0.0008 mg/L	0.00035	0.0008 mg/L	0.00035	43.09%
Zinc,7440-66-6†	-718.2	-0.0036 mg/L	0.00010	-0.0036 mg/L	0.00010	2.76%
Zirconium,7440-67-7†	299813.1	0.5632 mg/L	0.00401	0.5632 mg/L	0.00401	0.71%

All analytes passed QC.

Analysis Begun

Start Time: 05/30/2003 12:20:06
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

Method Loaded
Method Name: ICP5
IEC File: 2030114 IEC.iec
Method Description: ICP5

Method Last Saved: 05/30/2003 12:19:58
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Aluminum,7429-90-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Antimony,7440-36-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Ar 363.268 A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ar 420.067 R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Arsenic,7440-38-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Barium,7440-39-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Beryllium,7440-41-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Boron,7440-42-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cadmium,7440-43-9	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Calcium,7440-70-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Chromium,7440-47-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cobalt,7440-48-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Copper,7440-50-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Iron,7439-89-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Lead,7439-92-1	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Lithium,7439-93-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Magnesium,7439-95-4	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Manganese,7439-96-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Molybdenum,7439-98-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Nickel,7440-02-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Phosphorus,7723-14-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Potassium,7440-09-7	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Scandium-IS	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Selenium,7782-49-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Silicon,7440-21-3	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	No
Silver,7440-22-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Sodium,7440-23-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Strontium,7440-24-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Thallium,7440-28-0	Lin, Calc Int	Peak Height	Axial	Yttrium,7440-65-5A	No
Tin,7440-31-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Titanium,7440-32-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Vanadium,7440-62-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Yttrium,7440-65-5A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Yttrium,7440-65-5R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Zinc,7440-66-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Zirconium,7440-67-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes

Sequence No.: 1
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 192.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 12:20:06

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81774.3	100.35	%	0.643				0.64%
Ar 420.067 R	762981.7	91.720	%	0.1044				0.11%
Scandium-IS	7279408.7	100.24	%	0.753				0.75%
Yttrium,7440-65-5A	3804050.5	101.20	%	1.228				1.21%
Yttrium,7440-65-5R	75225.2	92.344	%	1.0977				1.19%

Aluminum,7429-90-5†	-4.0	-0.0233 mg/L	0.04423	-0.0233 mg/L	0.04423	189.45%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated						
Antimony,7440-36-0†	-0.0	0.0000 mg/L	0.00099	0.0000 mg/L	0.00099	>999.9%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated						
Arsenic,7440-38-2†	0.6	0.0003 mg/L	0.00416	0.0003 mg/L	0.00416	>999.9%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated						
Barium,7440-39-3†	8.2	0.0000 mg/L	0.00011	0.0000 mg/L	0.00011	334.81%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated						
Beryllium,7440-41-7†	108.5	0.0000 mg/L	0.00003	0.0000 mg/L	0.00003	125.05%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated						
Boron,7440-42-8†	1017.3	0.0220 mg/L	0.00171	0.0220 mg/L	0.00171	7.81%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated						
Cadmium,7440-43-9†	-229.9	-0.0008 mg/L	0.00002	-0.0008 mg/L	0.00002	2.74%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated						
Calcium,7440-70-2†	-22.6	-0.0172 mg/L	0.01253	-0.0172 mg/L	0.01253	72.95%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated						
Chromium,7440-47-3†	-52.5	-0.0003 mg/L	0.00026	-0.0003 mg/L	0.00026	79.64%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated						
Cobalt,7440-48-4†	-20.6	-0.0003 mg/L	0.00011	-0.0003 mg/L	0.00011	38.48%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated						
Copper,7440-50-8†	6.6	0.0000 mg/L	0.00034	0.0000 mg/L	0.00034	>999.9%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated						
Iron,7439-89-6†	1.5	0.0047 mg/L	0.01072	0.0047 mg/L	0.01072	228.84%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated						
Lead,7439-92-1†	25.0	0.0011 mg/L	0.00097	0.0011 mg/L	0.00097	91.36%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated						
Magnesium,7439-95-4†	1.5	0.0215 mg/L	0.02060	0.0215 mg/L	0.02060	95.99%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated						
Manganese,7439-96-5†	-6.9	0.0000 mg/L	0.00005	0.0000 mg/L	0.00005	930.06%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated						
Molybdenum,7439-98-7†	32.2	0.0012 mg/L	0.00034	0.0012 mg/L	0.00034	29.11%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated						
Nickel,7440-02-0†	-17.2	-0.0002 mg/L	0.00003	-0.0002 mg/L	0.00003	14.12%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated						
Potassium,7440-09-7†	-73.0	-0.0126 mg/L	0.03432	-0.0126 mg/L	0.03432	272.01%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated						
Selenium,7782-49-2†	0.7	0.0002 mg/L	0.00222	0.0002 mg/L	0.00222	970.19%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated						
Silver,7440-22-4†	-265.8	-0.0006 mg/L	0.00028	-0.0006 mg/L	0.00028	45.55%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated						
Sodium,7440-23-5†	-547.8	-0.0701 mg/L	0.01002	-0.0701 mg/L	0.01002	14.30%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated						
Strontium,7440-24-6†	-63.3	-0.0003 mg/L	0.00019	-0.0003 mg/L	0.00019	65.02%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated						
Thallium,7440-28-0†	-2.4	-0.0012 mg/L	0.00073	-0.0012 mg/L	0.00073	59.12%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated						
Tin,7440-31-5†	15.3	0.0016 mg/L	0.00081	0.0016 mg/L	0.00081	52.18%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated						
Titanium,7440-32-6†	19.5	0.0000 mg/L	0.00015	0.0000 mg/L	0.00015	641.65%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated						
Vanadium,7440-62-2†	209.7	0.0007 mg/L	0.00073	0.0007 mg/L	0.00073	109.05%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated						
Zinc,7440-66-6†	-267.9	-0.0016 mg/L	0.00013	-0.0016 mg/L	0.00013	8.27%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated						
Zirconium,7440-67-7†	83.0	0.0002 mg/L	0.00006	0.0002 mg/L	0.00006	41.17%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated						

All analytes passed QC.

Sequence No.: 2
Sample ID: 20305282101
Analyst:
Nebulizer Back Pressure: 192.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 37
Date Collected: 05/30/2003 12:27:31
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305282101

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	67060.8	82.292	%	0.3782				0.46%
Ar 420.067 R	703383.2	84.556	%	0.1569				0.19%
Scandium-IS	6236063.7	85.874	%	0.4037				0.47%

Yttrium,7440-65-5A	3385327.9	90.060	%	0.1792			0.20%
Yttrium,7440-65-5R	73658.7	90.421	%	1.7887			1.98%
Aluminum,7429-90-5†	59239.0	345.00	mg/L	7.549	345.00 mg/L	7.549	2.19%
Antimony,7440-36-0†	-195.4	-0.0571	mg/L	0.00209	-0.0571 mg/L	0.00209	3.67%
Arsenic,7440-38-2†	65.3	0.1826	mg/L	0.00769	0.1826 mg/L	0.00769	4.21%
Barium,7440-39-3†	9919.6	0.0297	mg/L	0.00026	0.0297 mg/L	0.00026	0.89%
Beryllium,7440-41-7†	85339.2	0.0154	mg/L	0.00007	0.0154 mg/L	0.00007	0.43%
Boron,7440-42-8†	11905.5	0.0707	mg/L	0.00369	0.0707 mg/L	0.00369	5.22%
Cadmium,7440-43-9†	7378.9	-0.0040	mg/L	0.00046	-0.0040 mg/L	0.00046	11.48%
Calcium,7440-70-2†	585217.7	444.60	mg/L	8.322	444.60 mg/L	8.322	1.87%
Chromium,7440-47-3†	100533.3	0.6017	mg/L	0.00150	0.6017 mg/L	0.00150	0.25%
Cobalt,7440-48-4†	12265.2	0.1607	mg/L	0.00106	0.1607 mg/L	0.00106	0.66%
Copper,7440-50-8†	600629.7	1.4707	mg/L	0.00381	1.4707 mg/L	0.00381	0.26%
Iron,7439-89-6†	186754.5	595.99	mg/L	11.901	595.99 mg/L	11.901	2.00%
Lead,7439-92-1†	2019.5	0.1092	mg/L	0.00140	0.1092 mg/L	0.00140	1.28%
Magnesium,7439-95-4†	6483.0	96.043	mg/L	0.5707	96.043 mg/L	0.5707	0.59%
Manganese,7439-96-5†	13941501.8	11.204	mg/L	0.0710	11.204 mg/L	0.0710	0.63%
Molybdenum,7439-98-7†	-76.4	-0.0050	mg/L	0.00183	-0.0050 mg/L	0.00183	36.94%
Nickel,7440-02-0†	48576.0	0.5296	mg/L	0.00126	0.5296 mg/L	0.00126	0.24%
Potassium,7440-09-7†	478579.0	82.633	mg/L	1.4620	82.633 mg/L	1.4620	1.77%
Selenium,7782-49-2†	-566.0	0.0349	mg/L	0.00795	0.0349 mg/L	0.00795	22.81%
Silver,7440-22-4†	-36322.5	-0.0135	mg/L	0.00090	-0.0135 mg/L	0.00090	6.71%
Sodium,7440-23-5†	5610044.5	717.38	mg/L	18.700	717.38 mg/L	18.700	2.61%
Strontium,7440-24-6†	490825.4	2.2591	mg/L	0.00993	2.2591 mg/L	0.00993	0.44%
Thallium,7440-28-0†	-9.0	-0.0047	mg/L	0.00111	-0.0047 mg/L	0.00111	23.78%
Tin,7440-31-5†	1.1	0.0321	mg/L	0.00189	0.0321 mg/L	0.00189	5.89%
Titanium,7440-32-6†	1657220.2	1.9946	mg/L	0.00428	1.9946 mg/L	0.00428	0.21%
Vanadium,7440-62-2†	235419.6	0.7031	mg/L	0.00220	0.7031 mg/L	0.00220	0.31%
Zinc,7440-66-6†	886612.5	5.1760	mg/L	0.00934	5.1760 mg/L	0.00934	0.18%
Zirconium,7440-67-7†	14987.6	0.0192	mg/L	0.00113	0.0192 mg/L	0.00113	5.89%

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Sequence No.: 3
Sample ID: 101157
Analyst:
Nebulizer Back Pressure: 192.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 38
Date Collected: 05/30/2003 12:34:19

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101157

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	66517.1	81.625	%	0.4178				0.51%
Ar 420.067 R	687802.4	82.683	%	0.0679				0.08%
Scandium-IS	6240422.4	85.934	%	0.4488				0.52%
Yttrium,7440-65-5A	3410913.3	90.741	%	0.8680				0.96%
Yttrium,7440-65-5R	73877.4	90.689	%	0.4753				0.52%
Aluminum,7429-90-5†	60108.6	350.06	mg/L	4.325	350.06	mg/L	4.325	1.24%
Antimony,7440-36-0†	-209.0	-0.0606	mg/L	0.00137	-0.0606	mg/L	0.00137	2.26%
Arsenic,7440-38-2†	60.2	0.1827	mg/L	0.00352	0.1827	mg/L	0.00352	1.93%
Barium,7440-39-3†	10005.5	0.0298	mg/L	0.00052	0.0298	mg/L	0.00052	1.75%
Beryllium,7440-41-7†	86686.3	0.0156	mg/L	0.00006	0.0156	mg/L	0.00006	0.41%
Boron,7440-42-8†	12277.2	0.0741	mg/L	0.00316	0.0741	mg/L	0.00316	4.26%
Cadmium,7440-43-9†	7470.8	-0.0045	mg/L	0.00025	-0.0045	mg/L	0.00025	5.53%
Calcium,7440-70-2†	600116.9	455.92	mg/L	0.603	455.92	mg/L	0.603	0.13%
Chromium,7440-47-3†	102191.3	0.6118	mg/L	0.00274	0.6118	mg/L	0.00274	0.45%
Cobalt,7440-48-4†	12421.7	0.1628	mg/L	0.00124	0.1628	mg/L	0.00124	0.76%
Copper,7440-50-8†	611483.8	1.4982	mg/L	0.00435	1.4982	mg/L	0.00435	0.29%
Iron,7439-89-6†	191533.5	611.24	mg/L	0.812	611.24	mg/L	0.812	0.13%
Lead,7439-92-1†	2028.5	0.1097	mg/L	0.00242	0.1097	mg/L	0.00242	2.21%
Magnesium,7439-95-4†	6522.0	96.630	mg/L	2.6088	96.630	mg/L	2.6088	2.70%
Manganese,7439-96-5†	14107696.1	11.337	mg/L	0.0602	11.337	mg/L	0.0602	0.53%
Molybdenum,7439-98-7†	-107.3	-0.0062	mg/L	0.00093	-0.0062	mg/L	0.00093	15.19%
Nickel,7440-02-0†	49332.9	0.5379	mg/L	0.00195	0.5379	mg/L	0.00195	0.36%
Potassium,7440-09-7†	497134.7	85.837	mg/L	0.1162	85.837	mg/L	0.1162	0.14%
Selenium,7782-49-2†	-580.6	0.0353	mg/L	0.00186	0.0353	mg/L	0.00186	5.27%
Silver,7440-22-4†	-37274.0	-0.0138	mg/L	0.00048	-0.0138	mg/L	0.00048	3.47%
Sodium,7440-23-5†	5693514.0	728.06	mg/L	8.401	728.06	mg/L	8.401	1.15%
Strontium,7440-24-6†	498667.2	2.2951	mg/L	0.03284	2.2951	mg/L	0.03284	1.43%
Thallium,7440-28-0†	-5.3	-0.0027	mg/L	0.00307	-0.0027	mg/L	0.00307	112.12%
Tin,7440-31-5†	-126.5	0.0197	mg/L	0.00156	0.0197	mg/L	0.00156	7.95%
Titanium,7440-32-6†	1687055.8	2.0305	mg/L	0.01025	2.0305	mg/L	0.01025	0.50%

Vanadium,7440-62-2†	239459.3	0.7148	mg/L	0.00330	0.7148	mg/L	0.00330	0.46%
Zinc,7440-66-6†	900181.2	5.2531	mg/L	0.02137	5.2531	mg/L	0.02137	0.41%
Zirconium,7440-67-7†	13632.1	0.0164	mg/L	0.00017	0.0164	mg/L	0.00017	1.01%

Sequence No.: 4
Sample ID: 101158
Analyst:
Nebulizer Back Pressure: 193.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 39
Date Collected: 05/30/2003 12:41:08
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101158

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	66631.2	81.765	%	0.9381				1.15%
Ar 420.067 R	673209.9	80.928	%	0.2102				0.26%
Scandium-IS	6143198.5	84.595	%	0.4154				0.49%
Yttrium,7440-65-5A	3331396.4	88.626	%	0.9736				1.10%
Yttrium,7440-65-5R	69290.7	85.059	%	0.7843				0.92%
Aluminum,7429-90-5†	66716.9	388.53	mg/L	0.605	388.53	mg/L	0.605	0.16%
Antimony,7440-36-0†	3217.7	0.7701	mg/L	0.00320	0.7701	mg/L	0.00320	0.42%
Arsenic,7440-38-2†	2140.5	1.2436	mg/L	0.01769	1.2436	mg/L	0.01769	1.42%
Barium,7440-39-3†	229080.5	0.9557	mg/L	0.00131	0.9557	mg/L	0.00131	0.14%
Beryllium,7440-41-7†	5371451.1	0.9971	mg/L	0.00522	0.9971	mg/L	0.00522	0.52%
Boron,7440-42-8†	207380.1	4.2718	mg/L	0.01330	4.2718	mg/L	0.01330	0.31%
Cadmium,7440-43-9†	255676.8	0.8965	mg/L	0.00244	0.8965	mg/L	0.00244	0.27%
Calcium,7440-70-2†	646425.0	491.09	mg/L	7.616	491.09	mg/L	7.616	1.55%
Chromium,7440-47-3†	253906.1	1.5387	mg/L	0.00045	1.5387	mg/L	0.00045	0.03%
Cobalt,7440-48-4†	83027.7	1.1007	mg/L	0.00708	1.1007	mg/L	0.00708	0.64%
Copper,7440-50-8†	1105864.5	2.6389	mg/L	0.00074	2.6389	mg/L	0.00074	0.03%
Iron,7439-89-6†	205581.5	656.07	mg/L	9.947	656.07	mg/L	9.947	1.52%
Lead,7439-92-1†	23375.6	1.0252	mg/L	0.00468	1.0252	mg/L	0.00468	0.46%
Magnesium,7439-95-4†	7338.6	108.71	mg/L	0.511	108.71	mg/L	0.511	0.47%
Manganese,7439-96-5†	15931262.8	12.803	mg/L	0.0812	12.803	mg/L	0.0812	0.63%
Molybdenum,7439-98-7†	21413.4	0.7723	mg/L	0.00214	0.7723	mg/L	0.00214	0.28%
Nickel,7440-02-0†	135044.3	1.4635	mg/L	0.00146	1.4635	mg/L	0.00146	0.10%
Potassium,7440-09-7†	674028.3	116.39	mg/L	1.965	116.39	mg/L	1.965	1.69%
Selenium,7782-49-2†	2477.7	1.1211	mg/L	0.01262	1.1211	mg/L	0.01262	1.13%
Silver,7440-22-4†	414329.4	1.0239	mg/L	0.00203	1.0239	mg/L	0.00203	0.20%
Sodium,7440-23-5†	6339432.9	810.66	mg/L	10.179	810.66	mg/L	10.179	1.26%
Strontium,7440-24-6†	700429.6	3.2279	mg/L	0.03304	3.2279	mg/L	0.03304	1.02%
Thallium,7440-28-0†	1709.9	0.8806	mg/L	0.01027	0.8806	mg/L	0.01027	1.17%
Tin,7440-31-5†	7161.7	0.7727	mg/L	0.00576	0.7727	mg/L	0.00576	0.75%
Titanium,7440-32-6†	2398810.8	2.8871	mg/L	0.00174	2.8871	mg/L	0.00174	0.06%
Vanadium,7440-62-2†	547322.9	1.6923	mg/L	0.00179	1.6923	mg/L	0.00179	0.11%
Zinc,7440-66-6†	1094599.7	6.4117	mg/L	0.01048	6.4117	mg/L	0.01048	0.16%
Zirconium,7440-67-7†	474495.1	0.8816	mg/L	0.00040	0.8816	mg/L	0.00040	0.05%

Sequence No.: 5
Sample ID: 101520
Analyst:
Nebulizer Back Pressure: 194.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 40
Date Collected: 05/30/2003 12:47:18
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101520

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	67366.4	82.668	%	0.2201				0.27%
Ar 420.067 R	668307.6	80.339	%	0.2399				0.30%
Scandium-IS	6255067.7	86.135	%	0.6270				0.73%
Yttrium,7440-65-5A	3381150.1	89.949	%	0.1845				0.21%
Yttrium,7440-65-5R	69910.0	85.819	%	0.9951				1.16%
Aluminum,7429-90-5†	60555.2	352.65	mg/L	3.346	352.65	mg/L	3.346	0.95%
Antimony,7440-36-0†	3787.4	0.9130	mg/L	0.00550	0.9130	mg/L	0.00550	0.60%
Arsenic,7440-38-2†	2063.4	1.1906	mg/L	0.00222	1.1906	mg/L	0.00222	0.19%
Barium,7440-39-3†	223853.3	0.9347	mg/L	0.00083	0.9347	mg/L	0.00083	0.09%
Beryllium,7440-41-7†	5218807.3	0.9687	mg/L	0.00885	0.9687	mg/L	0.00885	0.91%
Boron,7440-42-8†	247243.3	5.1498	mg/L	0.00404	5.1498	mg/L	0.00404	0.08%

Cadmium,7440-43-9†	250692.3	0.8812 mg/L	0.00147	0.8812 mg/L	0.00147	0.17%
Calcium,7440-70-2†	588816.0	447.32 mg/L	0.424	447.32 mg/L	0.424	0.09%
Chromium,7440-47-3†	242683.5	1.4714 mg/L	0.00183	1.4714 mg/L	0.00183	0.12%
Cobalt,7440-48-4†	79153.7	1.0491 mg/L	0.00272	1.0491 mg/L	0.00272	0.26%
Copper,7440-50-8†	1041474.2	2.4822 mg/L	0.00184	2.4822 mg/L	0.00184	0.07%
Iron,7439-89-6†	188269.3	600.82 mg/L	0.603	600.82 mg/L	0.603	0.10%
Lead,7439-92-1†	22381.5	0.9800 mg/L	0.00320	0.9800 mg/L	0.00320	0.33%
Magnesium,7439-95-4†	6726.0	99.633 mg/L	1.0200	99.633 mg/L	1.0200	1.02%
Manganese,7439-96-5†	14739206.8	11.845 mg/L	0.1040	11.845 mg/L	0.1040	0.88%
Molybdenum,7439-98-7†	25791.8	0.9310 mg/L	0.00389	0.9310 mg/L	0.00389	0.42%
Nickel,7440-02-0†	129500.6	1.4032 mg/L	0.00164	1.4032 mg/L	0.00164	0.12%
Potassium,7440-09-7†	619645.0	107.00 mg/L	0.245	107.00 mg/L	0.245	0.23%
Selenium,7782-49-2†	2375.3	1.0632 mg/L	0.00831	1.0632 mg/L	0.00831	0.78%
Silver,7440-22-4†	403282.0	0.9922 mg/L	0.00173	0.9922 mg/L	0.00173	0.17%
Sodium,7440-23-5†	5703186.3	729.29 mg/L	18.959	729.29 mg/L	18.959	2.60%
Strontium,7440-24-6†	633040.4	2.9172 mg/L	0.03955	2.9172 mg/L	0.03955	1.36%
Thallium,7440-28-0†	1631.4	0.8401 mg/L	0.00740	0.8401 mg/L	0.00740	0.88%
Tin,7440-31-5†	8552.2	0.9132 mg/L	0.00388	0.9132 mg/L	0.00388	0.42%
Titanium,7440-32-6†	2382689.0	2.8677 mg/L	0.00345	2.8677 mg/L	0.00345	0.12%
Vanadium,7440-62-2†	521198.5	1.6135 mg/L	0.00102	1.6135 mg/L	0.00102	0.06%
Zinc,7440-66-6†	1022751.9	5.9948 mg/L	0.00405	5.9948 mg/L	0.00405	0.07%
Zirconium,7440-67-7†	563152.9	1.0490 mg/L	0.00031	1.0490 mg/L	0.00031	0.03%

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Sequence No.: 6
Sample ID: 101519
Analyst:
Nebulizer Back Pressure: 195.0 kPa
Sample Wt:
Dilution: 5X

Autosampler Location: 41
Date Collected: 05/30/2003 12:53:20

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101519

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	79738.9	97.850	%	0.8867				0.91%
Ar 420.067 R	703184.8	84.532	%	0.4097				0.48%
Scandium-IS	6785064.4	93.434	%	0.9530				1.02%
Yttrium,7440-65-5A	3496434.4	93.016	%	0.7903				0.85%
Yttrium,7440-65-5R	68427.8	84.000	%	0.7742				0.92%
Aluminum,7429-90-5†	19606.8	114.19	mg/L	18.888	570.94	mg/L	94.440	16.54%
Antimony,7440-36-0†	-45.3	-0.0125	mg/L	0.00087	-0.0625	mg/L	0.00437	6.99%
Arsenic,7440-38-2†	15.9	0.0553	mg/L	0.01181	0.2763	mg/L	0.05905	21.37%
Barium,7440-39-3†	1932.1	0.0037	mg/L	0.00050	0.0187	mg/L	0.00248	13.25%
Beryllium,7440-41-7†	16706.0	0.0030	mg/L	0.00044	0.0150	mg/L	0.00219	14.55%
Boron,7440-42-8†	4154.5	0.0211	mg/L	0.00062	0.1054	mg/L	0.00312	2.96%
Cadmium,7440-43-9†	1185.7	-0.0072	mg/L	0.00107	-0.0358	mg/L	0.00534	14.90%
Calcium,7440-70-2†	209058.1	158.83	mg/L	22.774	794.14	mg/L	113.872	14.34%
Chromium,7440-47-3†	19999.4	0.1187	mg/L	0.01353	0.5936	mg/L	0.06764	11.39%
Cobalt,7440-48-4†	2470.2	0.0327	mg/L	0.00371	0.1633	mg/L	0.01855	11.36%
Copper,7440-50-8†	114180.2	0.2997	mg/L	0.04578	1.4986	mg/L	0.22889	15.27%
Iron,7439-89-6†	69089.3	220.48	mg/L	31.909	1102.4	mg/L	159.54	14.47%
Lead,7439-92-1†	389.1	0.0237	mg/L	0.00352	0.1184	mg/L	0.01761	14.87%
Magnesium,7439-95-4†	1991.9	29.536	mg/L	4.8639	147.68	mg/L	24.319	16.47%
Manganese,7439-96-5†	3021649.3	2.4298	mg/L	0.37037	12.149	mg/L	1.8518	15.24%
Molybdenum,7439-98-7†	79.2	0.0019	mg/L	0.00016	0.0093	mg/L	0.00080	8.60%
Nickel,7440-02-0†	9632.7	0.1061	mg/L	0.01225	0.5305	mg/L	0.06123	11.54%
Potassium,7440-09-7†	161776.8	27.933	mg/L	4.1225	139.67	mg/L	20.613	14.76%
Selenium,7782-49-2†	-129.7	0.0399	mg/L	0.00695	0.1997	mg/L	0.03477	17.41%
Silver,7440-22-4†	-6907.0	0.0102	mg/L	0.00106	0.0509	mg/L	0.00529	10.41%
Sodium,7440-23-5†	1979407.4	253.12	mg/L	36.816	1265.6	mg/L	184.08	14.55%
Strontium,7440-24-6†	147832.6	0.6797	mg/L	0.10022	3.3987	mg/L	0.50110	14.74%
Thallium,7440-28-0†	0.8	0.0004	mg/L	0.00059	0.0020	mg/L	0.00293	145.72%
Tin,7440-31-5†	77.0	0.0164	mg/L	0.00148	0.0819	mg/L	0.00738	9.01%
Titanium,7440-32-6†	349960.1	0.4212	mg/L	0.06481	2.1060	mg/L	0.32404	15.39%
Vanadium,7440-62-2†	45844.0	0.1287	mg/L	0.02006	0.6434	mg/L	0.10031	15.59%
Zinc,7440-66-6†	179908.6	1.0175	mg/L	0.15404	5.0877	mg/L	0.77018	15.14%
Zirconium,7440-67-7†	3603.0	0.0035	mg/L	0.00091	0.0175	mg/L	0.00457	26.19%

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Sequence No.: 7
Sample ID: 20305282102
Analyst:

Autosampler Location: 42
Date Collected: 05/30/2003 13:00:34

Nebulizer Back Pressure: 195.0 kPa
Sample Wt:
Dilution: 1X

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305282102

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	80004.8	98.176	%	0.4185				0.43%
Ar 420.067 R	696406.4	83.717	%	0.1200				0.14%
Scandium-IS	6639875.0	91.434	%	0.5155				0.56%
Yttrium,7440-65-5A	3387509.7	90.118	%	0.6231				0.69%
Yttrium,7440-65-5R	66166.5	81.224	%	1.1713				1.44%
Aluminum,7429-90-5†	20.6	0.1017	mg/L	0.06266	0.1017	mg/L	0.06266	61.62%
Antimony,7440-36-0†	-15.2	-0.0044	mg/L	0.00111	-0.0044	mg/L	0.00111	25.34%
Arsenic,7440-38-2†	508.8	0.2605	mg/L	0.00372	0.2605	mg/L	0.00372	1.43%
Barium,7440-39-3†	252599.7	1.0684	mg/L	0.00125	1.0684	mg/L	0.00125	0.12%
Beryllium,7440-41-7†	-1210.4	-0.0002	mg/L	0.00003	-0.0002	mg/L	0.00003	12.73%
Boron,7440-42-8†	9382.2	0.1879	mg/L	0.00149	0.1879	mg/L	0.00149	0.79%
Cadmium,7440-43-9†	315.7	-0.0015	mg/L	0.00005	-0.0015	mg/L	0.00005	3.03%
Calcium,7440-70-2†	472353.0	358.88	mg/L	6.773	358.88	mg/L	6.773	1.89%
Chromium,7440-47-3†	1444.1	0.0043	mg/L	0.00009	0.0043	mg/L	0.00009	2.20%
Cobalt,7440-48-4†	316.8	0.0044	mg/L	0.00008	0.0044	mg/L	0.00008	1.75%
Copper,7440-50-8†	-2515.2	-0.0177	mg/L	0.00037	-0.0177	mg/L	0.00037	2.11%
Iron,7439-89-6†	15375.7	49.098	mg/L	0.5496	49.098	mg/L	0.5496	1.12%
Lead,7439-92-1†	-7.8	-0.0008	mg/L	0.00032	-0.0008	mg/L	0.00032	41.95%
Magnesium,7439-95-4†	7312.6	107.89	mg/L	0.989	107.89	mg/L	0.989	0.92%
Manganese,7439-96-5†	12461921.0	10.007	mg/L	0.0923	10.007	mg/L	0.0923	0.92%
Molybdenum,7439-98-7†	349.6	0.0111	mg/L	0.00022	0.0111	mg/L	0.00022	2.03%
Nickel,7440-02-0†	575.3	0.0056	mg/L	0.00036	0.0056	mg/L	0.00036	6.38%
Potassium,7440-09-7†	10011.2	1.7067	mg/L	0.03350	1.7067	mg/L	0.03350	1.96%
Selenium,7782-49-2†	-66.9	-0.0144	mg/L	0.00321	-0.0144	mg/L	0.00321	22.29%
Silver,7440-22-4†	-1910.5	-0.0003	mg/L	0.00013	-0.0003	mg/L	0.00013	39.89%
Sodium,7440-23-5†	1135317.0	145.16	mg/L	2.583	145.16	mg/L	2.583	1.78%
Strontium,7440-24-6†	315500.2	1.4501	mg/L	0.00748	1.4501	mg/L	0.00748	0.52%
Thallium,7440-28-0†	12.3	0.0063	mg/L	0.00177	0.0063	mg/L	0.00177	27.91%
Tin,7440-31-5†	278.4	0.0211	mg/L	0.00140	0.0211	mg/L	0.00140	6.64%
Titanium,7440-32-6†	2154.9	0.0026	mg/L	0.00021	0.0026	mg/L	0.00021	8.11%
Vanadium,7440-62-2†	-2593.4	-0.0120	mg/L	0.00099	-0.0120	mg/L	0.00099	8.29%
Zinc,7440-66-6†	6355.4	0.0273	mg/L	0.00098	0.0273	mg/L	0.00098	3.59%
Zirconium,7440-67-7†	1318.7	0.0018	mg/L	0.00003	0.0018	mg/L	0.00003	1.59%

Sequence No.: 8
Sample ID: 20305282103
Analyst:
Nebulizer Back Pressure: 195.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 43
Date Collected: 05/30/2003 13:07:56

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305282103

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	77692.7	95.339	%	0.7686				0.81%
Ar 420.067 R	635003.4	76.336	%	0.5465				0.72%
Scandium-IS	5976050.8	82.293	%	0.0254				0.03%
Yttrium,7440-65-5A	3055868.3	81.296	%	1.2033				1.48%
Yttrium,7440-65-5R	63497.9	77.948	%	1.2461				1.60%
Aluminum,7429-90-5†	17.2	0.0843	mg/L	0.01214	0.0843	mg/L	0.01214	14.41%
Antimony,7440-36-0†	-9.5	-0.0026	mg/L	0.00146	-0.0026	mg/L	0.00146	56.01%
Arsenic,7440-38-2†	105.0	0.0591	mg/L	0.00271	0.0591	mg/L	0.00271	4.59%
Barium,7440-39-3†	41644.3	0.1763	mg/L	0.00203	0.1763	mg/L	0.00203	1.15%
Beryllium,7440-41-7†	-1059.5	-0.0002	mg/L	0.00005	-0.0002	mg/L	0.00005	24.92%
Boron,7440-42-8†	9285.6	0.1998	mg/L	0.00340	0.1998	mg/L	0.00340	1.70%
Cadmium,7440-43-9†	-82.5	-0.0004	mg/L	0.00004	-0.0004	mg/L	0.00004	10.03%
Calcium,7440-70-2†	363649.6	276.29	mg/L	2.057	276.29	mg/L	2.057	0.74%
Chromium,7440-47-3†	1385.6	0.0039	mg/L	0.00043	0.0039	mg/L	0.00043	11.05%
Cobalt,7440-48-4†	458.0	0.0061	mg/L	0.00024	0.0061	mg/L	0.00024	3.88%
Copper,7440-50-8†	2431.2	-0.0141	mg/L	0.00035	-0.0141	mg/L	0.00035	2.52%
Iron,7439-89-6†	692.9	2.2370	mg/L	0.02605	2.2370	mg/L	0.02605	1.16%
Lead,7439-92-1†	-45.2	-0.0011	mg/L	0.00081	-0.0011	mg/L	0.00081	71.16%
Magnesium,7439-95-4†	5052.9	74.530	mg/L	1.2618	74.530	mg/L	1.2618	1.69%

Manganese,7439-96-5†	11666393.1	9.3672 mg/L	0.15035	9.3672 mg/L	0.15035	1.61%
Molybdenum,7439-98-7†	2319.7	0.0830 mg/L	0.00148	0.0830 mg/L	0.00148	1.78%
Nickel,7440-02-0†	3176.4	0.0334 mg/L	0.00080	0.0334 mg/L	0.00080	2.40%
Potassium,7440-09-7†	51823.4	8.9354 mg/L	0.15879	8.9354 mg/L	0.15879	1.78%
Selenium,7782-49-2†	-28.8	-0.0157 mg/L	0.00136	-0.0157 mg/L	0.00136	8.64%
Silver,7440-22-4†	739.5	0.0003 mg/L	0.00022	0.0003 mg/L	0.00022	88.68%
Sodium,7440-23-5†	Saturated2					
Saturated in preshot (code 2)						
Strontium,7440-24-6†	261231.1	1.2013 mg/L	0.00384	1.2013 mg/L	0.00384	0.32%
Thallium,7440-28-0†	9.3	0.0048 mg/L	0.00143	0.0048 mg/L	0.00143	29.77%
Tin,7440-31-5†	463.5	0.0406 mg/L	0.00080	0.0406 mg/L	0.00080	1.96%
Titanium,7440-32-6†	3083.0	0.0037 mg/L	0.00032	0.0037 mg/L	0.00032	8.64%
Vanadium,7440-62-2†	-361.5	-0.0014 mg/L	0.00054	-0.0014 mg/L	0.00054	37.93%
Zinc,7440-66-6†	7904.8	0.0531 mg/L	0.00134	0.0531 mg/L	0.00134	2.52%
Zirconium,7440-67-7†	3596.6	0.0067 mg/L	0.00011	0.0067 mg/L	0.00011	1.63%

Sequence No.: 9
Sample ID: 20305282104
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 44
Date Collected: 05/30/2003 13:15:01
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305282104

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	74500.9	91.423	%	0.2121				0.23%
Ar 420.067 R	606259.7	72.880	%	0.4152				0.57%
Scandium-IS	5945283.3	81.869	%	0.5081				0.62%
Yttrium,7440-65-5A	3045833.9	81.029	%	0.4912				0.61%
Yttrium,7440-65-5R	61689.5	75.728	%	1.6499				2.18%
Aluminum,7429-90-5†	522.6	3.0382	mg/L	0.07794	3.0382	mg/L	0.07794	2.57%
Antimony,7440-36-0†	-109.8	-0.0270	mg/L	0.00239	-0.0270	mg/L	0.00239	8.82%
Arsenic,7440-38-2†	1738.2	0.8663	mg/L	0.00346	0.8663	mg/L	0.00346	0.40%
Barium,7440-39-3†	90522.7	0.3828	mg/L	0.00401	0.3828	mg/L	0.00401	1.05%
Beryllium,7440-41-7†	1058.0	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	15.24%
Boron,7440-42-8†	26947.4	0.5802	mg/L	0.00689	0.5802	mg/L	0.00689	1.19%
Cadmium,7440-43-9†	-253.7	-0.0012	mg/L	0.00010	-0.0012	mg/L	0.00010	7.97%
Calcium,7440-70-2†	10060.2	7.6427	mg/L	0.02531	7.6427	mg/L	0.02531	0.33%
Chromium,7440-47-3†	2540.9	0.0154	mg/L	0.00025	0.0154	mg/L	0.00025	1.60%
Cobalt,7440-48-4†	751.5	0.0098	mg/L	0.00036	0.0098	mg/L	0.00036	3.68%
Copper,7440-50-8†	13578.9	0.0318	mg/L	0.00064	0.0318	mg/L	0.00064	2.00%
Iron,7439-89-6†	1636.6	5.2231	mg/L	0.08518	5.2231	mg/L	0.08518	1.63%
Lead,7439-92-1†	762.3	0.0328	mg/L	0.00050	0.0328	mg/L	0.00050	1.52%
Magnesium,7439-95-4†	85.9	1.2713	mg/L	0.00464	1.2713	mg/L	0.00464	0.36%
Manganese,7439-96-5†	194210.3	0.1561	mg/L	0.00162	0.1561	mg/L	0.00162	1.04%
Molybdenum,7439-98-7†	2043.6	0.0739	mg/L	0.00080	0.0739	mg/L	0.00080	1.08%
Nickel,7440-02-0†	11470.8	0.1239	mg/L	0.00070	0.1239	mg/L	0.00070	0.57%
Potassium,7440-09-7†	47847.3	8.2647	mg/L	0.23748	8.2647	mg/L	0.23748	2.87%
Selenium,7782-49-2†	-64.5	-0.0204	mg/L	0.00097	-0.0204	mg/L	0.00097	4.74%
Silver,7440-22-4†	47.4	0.0010	mg/L	0.00004	0.0010	mg/L	0.00004	4.21%
Sodium,7440-23-5†	Saturated2							
Saturated in preshot (code 2)								
Strontium,7440-24-6†	13980.5	0.0645	mg/L	0.00163	0.0645	mg/L	0.00163	2.53%
Thallium,7440-28-0†	-3.3	-0.0017	mg/L	0.00185	-0.0017	mg/L	0.00185	108.71%
Tin,7440-31-5†	-175.4	-0.0170	mg/L	0.00161	-0.0170	mg/L	0.00161	9.48%
Titanium,7440-32-6†	69114.3	0.0832	mg/L	0.00010	0.0832	mg/L	0.00010	0.12%
Vanadium,7440-62-2†	141776.2	0.4513	mg/L	0.00535	0.4513	mg/L	0.00535	1.18%
Zinc,7440-66-6†	12681.8	0.0746	mg/L	0.00050	0.0746	mg/L	0.00050	0.67%
Zirconium,7440-67-7†	4010.1	0.0075	mg/L	0.00043	0.0075	mg/L	0.00043	5.82%

Sequence No.: 10
Sample ID: 101531
Analyst:
Nebulizer Back Pressure: 199.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 45
Date Collected: 05/30/2003 13:22:09
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101531

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81555.5	100.08	%	0.631				0.63%
Ar 420.067 R	685302.3	82.382	%	0.1553				0.19%
Scandium-IS	7375414.5	101.56	%	0.903				0.89%
Yttrium,7440-65-5A	3809751.9	101.35	%	0.867				0.86%
Yttrium,7440-65-5R	70708.8	86.800	%	1.4323				1.65%
Aluminum,7429-90-5†	-0.4	-0.0023	mg/L	0.04146	-0.0023	mg/L	0.04146	>999.9%
Antimony,7440-36-0†	-0.7	-0.0002	mg/L	0.00059	-0.0002	mg/L	0.00059	351.00%
Arsenic,7440-38-2†	1.7	0.0008	mg/L	0.00186	0.0008	mg/L	0.00186	219.58%
Barium,7440-39-3†	6.9	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	151.33%
Beryllium,7440-41-7†	44.6	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	69.51%
Boron,7440-42-8†	841.6	0.0182	mg/L	0.00071	0.0182	mg/L	0.00071	3.91%
Cadmium,7440-43-9†	-266.1	-0.0010	mg/L	0.00003	-0.0010	mg/L	0.00003	3.04%
Calcium,7440-70-2†	-5.3	-0.0040	mg/L	0.00755	-0.0040	mg/L	0.00755	186.51%
Chromium,7440-47-3†	-20.0	-0.0001	mg/L	0.00058	-0.0001	mg/L	0.00058	467.49%
Cobalt,7440-48-4†	-15.0	-0.0002	mg/L	0.00009	-0.0002	mg/L	0.00009	47.11%
Copper,7440-50-8†	-177.3	-0.0004	mg/L	0.00022	-0.0004	mg/L	0.00022	53.18%
Iron,7439-89-6†	7.1	0.0228	mg/L	0.00318	0.0228	mg/L	0.00318	13.94%
Lead,7439-92-1†	-37.8	-0.0016	mg/L	0.00021	-0.0016	mg/L	0.00021	13.25%
Magnesium,7439-95-4†	-0.1	-0.0010	mg/L	0.04228	-0.0010	mg/L	0.04228	>999.9%
Manganese,7439-96-5†	2028.9	0.0016	mg/L	0.00044	0.0016	mg/L	0.00044	27.02%
Molybdenum,7439-98-7†	30.3	0.0011	mg/L	0.00042	0.0011	mg/L	0.00042	38.33%
Nickel,7440-02-0†	11.2	0.0001	mg/L	0.00026	0.0001	mg/L	0.00026	217.15%
Potassium,7440-09-7†	2834.8	0.4897	mg/L	0.05465	0.4897	mg/L	0.05465	11.16%
Selenium,7782-49-2†	-7.7	-0.0027	mg/L	0.00276	-0.0027	mg/L	0.00276	103.49%
Silver,7440-22-4†	-354.5	-0.0008	mg/L	0.00023	-0.0008	mg/L	0.00023	28.19%
Sodium,7440-23-5†	67803.3	8.6710	mg/L	1.47558	8.6710	mg/L	1.47558	17.02%
Strontium,7440-24-6†	-132.1	-0.0006	mg/L	0.00004	-0.0006	mg/L	0.00004	6.94%
Thallium,7440-28-0†	0.5	0.0003	mg/L	0.00056	0.0003	mg/L	0.00056	213.92%
Tin,7440-31-5†	8.6	0.0009	mg/L	0.00090	0.0009	mg/L	0.00090	102.75%
Titanium,7440-32-6†	178.8	0.0002	mg/L	0.00047	0.0002	mg/L	0.00047	216.47%
Vanadium,7440-62-2†	66.2	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	10.86%
Zinc,7440-66-6†	1095.2	0.0066	mg/L	0.00011	0.0066	mg/L	0.00011	1.73%
Zirconium,7440-67-7†	-142.1	-0.0003	mg/L	0.00004	-0.0003	mg/L	0.00004	13.91%

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Sequence No.: 11
Sample ID: 101532
Analyst:
Nebulizer Back Pressure: 198.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 46
Date Collected: 05/30/2003 13:29:19

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101532

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82081.4	100.72	%	0.568				0.56%
Ar 420.067 R	693529.2	83.371	%	0.0580				0.07%
Scandium-IS	7088912.5	97.618	%	0.4584				0.47%
Yttrium,7440-65-5A	3588121.9	95.455	%	0.9885				1.04%
Yttrium,7440-65-5R	70201.9	86.177	%	0.4434				0.51%
Aluminum,7429-90-5†	1746.2	10.155	mg/L	0.0135	10.155	mg/L	0.0135	0.13%
Antimony,7440-36-0†	4106.8	0.9976	mg/L	0.01302	0.9976	mg/L	0.01302	1.31%
Arsenic,7440-38-2†	2107.4	1.0658	mg/L	0.01025	1.0658	mg/L	0.01025	0.96%
Barium,7440-39-3†	239604.2	1.0135	mg/L	0.00187	1.0135	mg/L	0.00187	0.18%
Beryllium,7440-41-7†	5545263.3	1.0298	mg/L	0.01238	1.0298	mg/L	0.01238	1.20%
Boron,7440-42-8†	238361.2	5.1426	mg/L	0.01209	5.1426	mg/L	0.01209	0.23%
Cadmium,7440-43-9†	271613.0	0.9879	mg/L	0.00067	0.9879	mg/L	0.00067	0.07%
Calcium,7440-70-2†	13417.4	10.184	mg/L	0.0062	10.184	mg/L	0.0062	0.06%
Chromium,7440-47-3†	164638.4	1.0071	mg/L	0.00163	1.0071	mg/L	0.00163	0.16%
Cobalt,7440-48-4†	76282.9	1.0132	mg/L	0.00152	1.0132	mg/L	0.00152	0.15%
Copper,7440-50-8†	445572.7	1.0227	mg/L	0.00225	1.0227	mg/L	0.00225	0.22%
Iron,7439-89-6†	3242.6	10.351	mg/L	0.0094	10.351	mg/L	0.0094	0.09%
Lead,7439-92-1†	23461.1	1.0034	mg/L	0.01092	1.0034	mg/L	0.01092	1.09%
Magnesium,7439-95-4†	630.5	9.3087	mg/L	0.03579	9.3087	mg/L	0.03579	0.38%
Manganese,7439-96-5†	1264737.1	1.0159	mg/L	0.00120	1.0159	mg/L	0.00120	0.12%
Molybdenum,7439-98-7†	27580.4	0.9979	mg/L	0.01180	0.9979	mg/L	0.01180	1.18%
Nickel,7440-02-0†	93654.0	1.0110	mg/L	0.00309	1.0110	mg/L	0.00309	0.31%
Potassium,7440-09-7†	128005.3	22.109	mg/L	0.0859	22.109	mg/L	0.0859	0.39%
Selenium,7782-49-2†	2914.6	1.0210	mg/L	0.01229	1.0210	mg/L	0.01229	1.20%
Silver,7440-22-4†	440508.2	1.0084	mg/L	0.00300	1.0084	mg/L	0.00300	0.30%

Sodium,7440-23-5†	343648.2	43.945 mg/L	0.2318	43.945 mg/L	0.2318	0.53%
Strontium,7440-24-6†	188490.6	0.8720 mg/L	0.00822	0.8720 mg/L	0.00822	0.94%
Thallium,7440-28-0†	1938.0	0.9981 mg/L	0.00796	0.9981 mg/L	0.00796	0.80%
Tin,7440-31-5†	9355.5	0.9643 mg/L	0.01095	0.9643 mg/L	0.01095	1.14%
Titanium,7440-32-6†	816967.7	0.9833 mg/L	0.00254	0.9833 mg/L	0.00254	0.26%
Vanadium,7440-62-2†	317301.3	1.0104 mg/L	0.00164	1.0104 mg/L	0.00164	0.16%
Zinc,7440-66-6†	164273.7	0.9868 mg/L	0.00265	0.9868 mg/L	0.00265	0.27%
Zirconium,7440-67-7†	580171.2	1.0898 mg/L	0.00443	1.0898 mg/L	0.00443	0.41%

==========

Sequence No.: 12
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 198.0 kPa
Sample Wt:
Dilution: R/R

Autosampler Location: 7
Date Collected: 05/30/2003 13:36:30
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	83021.2	101.88	%	0.274				0.27%
Ar 420.067 R	712826.8	85.691	%	0.0666				0.08%
Scandium-IS	7150117.6	98.461	%	0.4171				0.42%
Yttrium,7440-65-5A	3626953.4	96.488	%	0.4360				0.45%
Yttrium,7440-65-5R	69545.6	85.372	%	0.6361				0.75%
Aluminum,7429-90-5†	884.0	5.1419	mg/L	0.07208	5.1419	mg/L	0.07208	1.40%
QC value within limits for Aluminum,7429-90-5 Recovery = 102.84%								
Antimony,7440-36-0†	40.9	-0.0027	mg/L	0.00289	-0.0027	mg/L	0.00289	107.97%
Arsenic,7440-38-2†	1065.8	0.5387	mg/L	0.00445	0.5387	mg/L	0.00445	0.83%
QC value within limits for Arsenic,7440-38-2 Recovery = 107.75%								
Barium,7440-39-3†	119819.2	0.5068	mg/L	0.00031	0.5068	mg/L	0.00031	0.06%
QC value within limits for Barium,7440-39-3 Recovery = 101.36%								
Beryllium,7440-41-7†	2747369.8	0.5103	mg/L	0.00311	0.5103	mg/L	0.00311	0.61%
QC value within limits for Beryllium,7440-41-7 Recovery = 102.06%								
Boron,7440-42-8†	1802.7	0.0372	mg/L	0.00276	0.0372	mg/L	0.00276	7.41%
Cadmium,7440-43-9†	137930.4	0.5017	mg/L	0.00057	0.5017	mg/L	0.00057	0.11%
QC value within limits for Cadmium,7440-43-9 Recovery = 100.33%								
Calcium,7440-70-2†	6938.2	5.2698	mg/L	0.04559	5.2698	mg/L	0.04559	0.87%
QC value within limits for Calcium,7440-70-2 Recovery = 105.40%								
Chromium,7440-47-3†	82841.6	0.5068	mg/L	0.00066	0.5068	mg/L	0.00066	0.13%
QC value within limits for Chromium,7440-47-3 Recovery = 101.36%								
Cobalt,7440-48-4†	38328.0	0.5101	mg/L	0.00208	0.5101	mg/L	0.00208	0.41%
QC value within limits for Cobalt,7440-48-4 Recovery = 102.02%								
Copper,7440-50-8†	218000.5	0.5005	mg/L	0.00097	0.5005	mg/L	0.00097	0.19%
QC value within limits for Copper,7440-50-8 Recovery = 100.11%								
Iron,7439-89-6†	1666.0	5.3178	mg/L	0.06524	5.3178	mg/L	0.06524	1.23%
QC value within limits for Iron,7439-89-6 Recovery = 106.36%								
Lead,7439-92-1†	12038.2	0.5150	mg/L	0.00159	0.5150	mg/L	0.00159	0.31%
QC value within limits for Lead,7439-92-1 Recovery = 102.99%								
Magnesium,7439-95-4†	325.5	4.8035	mg/L	0.02508	4.8035	mg/L	0.02508	0.52%
QC value within limits for Magnesium,7439-95-4 Recovery = 96.07%								
Manganese,7439-96-5†	634671.0	0.5098	mg/L	0.00073	0.5098	mg/L	0.00073	0.14%
QC value within limits for Manganese,7439-96-5 Recovery = 101.95%								
Molybdenum,7439-98-7†	37.9	0.0014	mg/L	0.00081	0.0014	mg/L	0.00081	59.84%
Nickel,7440-02-0†	47026.2	0.5077	mg/L	0.00032	0.5077	mg/L	0.00032	0.06%
QC value within limits for Nickel,7440-02-0 Recovery = 101.54%								
Potassium,7440-09-7†	65656.8	11.341	mg/L	0.0255	11.341	mg/L	0.0255	0.22%
QC value greater than the upper limit for Potassium,7440-09-7 Recovery = 113.41%								
Selenium,7782-49-2†	1466.3	0.5137	mg/L	0.00202	0.5137	mg/L	0.00202	0.39%
QC value within limits for Selenium,7782-49-2 Recovery = 102.73%								
Silver,7440-22-4†	220024.9	0.5037	mg/L	0.00055	0.5037	mg/L	0.00055	0.11%
QC value within limits for Silver,7440-22-4 Recovery = 100.73%								
Sodium,7440-23-5†	176538.3	22.575	mg/L	0.0413	22.575	mg/L	0.0413	0.18%
QC value greater than the upper limit for Sodium,7440-23-5 Recovery = 112.88%								
Strontium,7440-24-6†	96597.9	0.4469	mg/L	0.00306	0.4469	mg/L	0.00306	0.69%
QC value less than the lower limit for Strontium,7440-24-6 Recovery = 89.38%								
Thallium,7440-28-0†	985.7	0.5076	mg/L	0.00331	0.5076	mg/L	0.00331	0.65%
QC value within limits for Thallium,7440-28-0 Recovery = 101.53%								
Tin,7440-31-5†	21.0	0.0023	mg/L	0.00111	0.0023	mg/L	0.00111	47.47%
Titanium,7440-32-6†	772.2	0.0009	mg/L	0.00008	0.0009	mg/L	0.00008	9.12%
Vanadium,7440-62-2†	158383.6	0.5041	mg/L	0.00025	0.5041	mg/L	0.00025	0.05%
QC value within limits for Vanadium,7440-62-2 Recovery = 100.82%								

Zinc,7440-66-6†	83500.2	0.5009 mg/L	0.00095	0.5009 mg/L	0.00095	0.19%

QC value within limits for Zinc,7440-66-6 Recovery = 100.17%

Zirconium,7440-67-7†	263861.5	0.4957 mg/L	0.00427	0.4957 mg/L	0.00427	0.86%

QC value within limits for Zirconium,7440-67-7 Recovery = 99.14%

QC Failed. Continue with analysis.

Analysis Begun

Start Time: 05/30/2003 13:50:56
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

Method Loaded
Method Name: ICP5
IEC File: 2030114 IEC.iec
Method Description: ICP5

Method Last Saved: 05/30/2003 13:50:47
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Aluminum,7429-90-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Antimony,7440-36-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Ar 363.268 A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ar 420.067 R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Arsenic,7440-38-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Barium,7440-39-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Beryllium,7440-41-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Boron,7440-42-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cadmium,7440-43-9	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Calcium,7440-70-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Chromium,7440-47-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cobalt,7440-48-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Copper,7440-50-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Iron,7439-89-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Lead,7439-92-1	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Lithium,7439-93-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Magnesium,7439-95-4	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Manganese,7439-96-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Molybdenum,7439-98-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Nickel,7440-02-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Phosphorus,7723-14-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Potassium,7440-09-7	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Scandium-IS	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Selenium,7782-49-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Silicon,7440-21-3	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	No
Silver,7440-22-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Sodium,7440-23-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Strontium,7440-24-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Thallium,7440-28-0	Lin, Calc Int	Peak Height	Axial	Yttrium,7440-65-5A	No
Tin,7440-31-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Titanium,7440-32-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Vanadium,7440-62-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Yttrium,7440-65-5A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Yttrium,7440-65-5R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Zinc,7440-66-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Zirconium,7440-67-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes

Sequence No.: 1
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 198.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 05/30/2003 13:50:57

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82568.7	101.32	%	0.281				0.28%
Ar 420.067 R	717568.4	86.261	%	0.0901				0.10%
Scandium-IS	7273318.3	100.16	%	0.175				0.17%
Yttrium,7440-65-5A	3708348.7	98.654	%	0.1868				0.19%
Yttrium,7440-65-5R	68817.2	84.478	%	0.1939				0.23%

Aluminum,7429-90-5†	888.0	5.1654 mg/L	0.05156	5.1654 mg/L	0.05156	1.00%
QC value within limits for Aluminum,7429-90-5 Recovery = 103.31%						
Antimony,7440-36-0†	37.7	-0.0033 mg/L	0.00115	-0.0033 mg/L	0.00115	35.00%
Arsenic,7440-38-2†	1034.7	0.5232 mg/L	0.00467	0.5232 mg/L	0.00467	0.89%
QC value within limits for Arsenic,7440-38-2 Recovery = 104.63%						
Barium,7440-39-3†	118162.0	0.4998 mg/L	0.00192	0.4998 mg/L	0.00192	0.38%
QC value within limits for Barium,7440-39-3 Recovery = 99.96%						
Beryllium,7440-41-7†	2689772.1	0.4996 mg/L	0.00101	0.4996 mg/L	0.00101	0.20%
QC value within limits for Beryllium,7440-41-7 Recovery = 99.92%						
Boron,7440-42-8†	655.9	0.0124 mg/L	0.00113	0.0124 mg/L	0.00113	9.09%
Cadmium,7440-43-9†	135838.7	0.4941 mg/L	0.00249	0.4941 mg/L	0.00249	0.50%
QC value within limits for Cadmium,7440-43-9 Recovery = 98.81%						
Calcium,7440-70-2†	7100.5	5.3932 mg/L	0.01572	5.3932 mg/L	0.01572	0.29%
QC value within limits for Calcium,7440-70-2 Recovery = 107.86%						
Chromium,7440-47-3†	81574.9	0.4990 mg/L	0.00142	0.4990 mg/L	0.00142	0.29%
QC value within limits for Chromium,7440-47-3 Recovery = 99.80%						
Cobalt,7440-48-4†	37638.3	0.5009 mg/L	0.00241	0.5009 mg/L	0.00241	0.48%
QC value within limits for Cobalt,7440-48-4 Recovery = 100.18%						
Copper,7440-50-8†	211809.7	0.4863 mg/L	0.00325	0.4863 mg/L	0.00325	0.67%
QC value within limits for Copper,7440-50-8 Recovery = 97.27%						
Iron,7439-89-6†	1681.9	5.3683 mg/L	0.01519	5.3683 mg/L	0.01519	0.28%
QC value within limits for Iron,7439-89-6 Recovery = 107.37%						
Lead,7439-92-1†	11995.3	0.5131 mg/L	0.00170	0.5131 mg/L	0.00170	0.33%
QC value within limits for Lead,7439-92-1 Recovery = 102.63%						
Magnesium,7439-95-4†	321.2	4.7410 mg/L	0.05163	4.7410 mg/L	0.05163	1.09%
QC value within limits for Magnesium,7439-95-4 Recovery = 94.82%						
Manganese,7439-96-5†	632652.3	0.5081 mg/L	0.00070	0.5081 mg/L	0.00070	0.14%
QC value within limits for Manganese,7439-96-5 Recovery = 101.63%						
Molybdenum,7439-98-7†	12.7	0.0004 mg/L	0.00053	0.0004 mg/L	0.00053	120.95%
Nickel,7440-02-0†	46370.1	0.5006 mg/L	0.00242	0.5006 mg/L	0.00242	0.48%
QC value within limits for Nickel,7440-02-0 Recovery = 100.12%						
Potassium,7440-09-7†	65423.3	11.301 mg/L	0.0719	11.301 mg/L	0.0719	0.64%
QC value greater than the upper limit for Potassium,7440-09-7 Recovery = 113.01%						
Selenium,7782-49-2†	1411.0	0.4944 mg/L	0.00498	0.4944 mg/L	0.00498	1.01%
QC value within limits for Selenium,7782-49-2 Recovery = 98.88%						
Silver,7440-22-4†	214323.3	0.4906 mg/L	0.00219	0.4906 mg/L	0.00219	0.45%
QC value within limits for Silver,7440-22-4 Recovery = 98.13%						
Sodium,7440-23-5†	173913.8	22.240 mg/L	0.1530	22.240 mg/L	0.1530	0.69%
QC value greater than the upper limit for Sodium,7440-23-5 Recovery = 111.20%						
Strontium,7440-24-6†	94307.1	0.4363 mg/L	0.00353	0.4363 mg/L	0.00353	0.81%
QC value less than the lower limit for Strontium,7440-24-6 Recovery = 87.26%						
Thallium,7440-28-0†	961.6	0.4952 mg/L	0.00171	0.4952 mg/L	0.00171	0.35%
QC value within limits for Thallium,7440-28-0 Recovery = 99.04%						
Tin,7440-31-5†	31.1	0.0034 mg/L	0.00032	0.0034 mg/L	0.00032	9.41%
Titanium,7440-32-6†	547.0	0.0007 mg/L	0.00027	0.0007 mg/L	0.00027	41.57%
Vanadium,7440-62-2†	154761.4	0.4926 mg/L	0.00232	0.4926 mg/L	0.00232	0.47%
QC value within limits for Vanadium,7440-62-2 Recovery = 98.51%						
Zinc,7440-66-6†	82032.1	0.4920 mg/L	0.00279	0.4920 mg/L	0.00279	0.57%
QC value within limits for Zinc,7440-66-6 Recovery = 98.40%						
Zirconium,7440-67-7†	260520.6	0.4894 mg/L	0.00305	0.4894 mg/L	0.00305	0.62%
QC value within limits for Zirconium,7440-67-7 Recovery = 97.88%						

QC Failed. Continue with analysis.

Sequence No.: 2
Sample ID: 1802
Analyst:
Nebulizer Back Pressure: 198.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 05/30/2003 13:58:17

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1802

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82901.4	101.73	%	0.751				0.74%
Ar 420.067 R	717877.0	86.298	%	0.0404				0.05%
Scandium-IS	7125264.1	98.118	%	5.2837				5.39%
Yttrium,7440-65-5A	3730952.9	99.255	%	3.5339				3.56%
Yttrium,7440-65-5R	71964.6	88.341	%	0.3113				0.35%
Aluminum,7429-90-5†	0.6	0.0025	mg/L	0.02940	0.0025	mg/L	0.02940	>999.9%
Antimony,7440-36-0†	2020.6	0.5034	mg/L	0.01362	0.5034	mg/L	0.01362	2.70%
QC value within limits for Antimony,7440-36-0 Recovery = 100.68%								

Arsenic,7440-38-2†	4.7	0.0024 mg/L	0.00303	0.0024 mg/L	0.00303	126.74%
Barium,7440-39-3†	18.3	0.0001 mg/L	0.00003	0.0001 mg/L	0.00003	41.98%
Beryllium,7440-41-7†	1076.9	0.0001 mg/L	0.00004	0.0001 mg/L	0.00004	46.12%
Boron,7440-42-8†	119960.5	2.5898 mg/L	0.08318	2.5898 mg/L	0.08318	3.21%
QC value within limits for Boron,7440-42-8 Recovery = 103.59%						
Cadmium,7440-43-9†	-304.3	-0.0011 mg/L	0.00006	-0.0011 mg/L	0.00006	5.37%
Calcium,7440-70-2†	-5.9	-0.0083 mg/L	0.00313	-0.0083 mg/L	0.00313	37.92%
Chromium,7440-47-3†	85.3	0.0005 mg/L	0.00063	0.0005 mg/L	0.00063	131.92%
Cobalt,7440-48-4†	68.7	-0.0002 mg/L	0.00013	-0.0002 mg/L	0.00013	73.15%
Copper,7440-50-8†	724.0	0.0015 mg/L	0.00094	0.0015 mg/L	0.00094	63.52%
Iron,7439-89-6†	6.4	0.0208 mg/L	0.00385	0.0208 mg/L	0.00385	18.49%
Lead,7439-92-1†	-59.7	-0.0026 mg/L	0.00017	-0.0026 mg/L	0.00017	6.45%
Magnesium,7439-95-4†	1.5	0.0235 mg/L	0.01937	0.0235 mg/L	0.01937	82.31%
Manganese,7439-96-5†	862.2	0.0007 mg/L	0.00017	0.0007 mg/L	0.00017	22.91%
Molybdenum,7439-98-7†	14409.2	0.5214 mg/L	0.01691	0.5214 mg/L	0.01691	3.24%
QC value within limits for Molybdenum,7439-98-7 Recovery = 104.27%						
Nickel,7440-02-0†	22.2	0.0002 mg/L	0.00027	0.0002 mg/L	0.00027	129.74%
Potassium,7440-09-7†	160.8	0.0273 mg/L	0.02767	0.0273 mg/L	0.02767	101.46%
Selenium,7782-49-2†	8.5	0.0030 mg/L	0.00178	0.0030 mg/L	0.00178	59.68%
Silver,7440-22-4†	1445.6	0.0033 mg/L	0.00011	0.0033 mg/L	0.00011	3.36%
Sodium,7440-23-5†	6186.7	0.7912 mg/L	0.02522	0.7912 mg/L	0.02522	3.19%
Strontium,7440-24-6†	-87.5	-0.0004 mg/L	0.00013	-0.0004 mg/L	0.00013	31.65%
Thallium,7440-28-0†	-8.4	-0.0043 mg/L	0.00025	-0.0043 mg/L	0.00025	5.72%
Tin,7440-31-5†	4963.6	0.5114 mg/L	0.01701	0.5114 mg/L	0.01701	3.33%
QC value within limits for Tin,7440-31-5 Recovery = 102.29%						
Titanium,7440-32-6†	433333.9	0.5215 mg/L	0.02442	0.5215 mg/L	0.02442	4.68%
QC value within limits for Titanium,7440-32-6 Recovery = 104.31%						
Vanadium,7440-62-2†	329.8	0.0013 mg/L	0.00055	0.0013 mg/L	0.00055	43.09%
Zinc,7440-66-6†	-614.4	-0.0030 mg/L	0.00029	-0.0030 mg/L	0.00029	9.64%
Zirconium,7440-67-7†	306943.2	0.5766 mg/L	0.02115	0.5766 mg/L	0.02115	3.67%

All analytes passed QC.

Sequence No.: 3
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 14:05:49

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82183.0	100.85	%	0.419				0.42%
Ar 420.067 R	722190.7	86.817	%	0.0677				0.08%
Scandium-IS	7281666.9	100.27	%	0.922				0.92%
Yttrium,7440-65-5A	3755428.6	99.906	%	0.8780				0.88%
Yttrium,7440-65-5R	71924.7	88.292	%	0.0637				0.07%
Aluminum,7429-90-5†	-4.3	-0.0253	mg/L	0.04804	-0.0253	mg/L	0.04804	189.62%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								
Antimony,7440-36-0†	-3.2	-0.0008	mg/L	0.00054	-0.0008	mg/L	0.00054	68.57%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	4.7	0.0023	mg/L	0.00058	0.0023	mg/L	0.00058	25.17%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	17.6	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	50.05%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	37.3	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	567.02%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	1209.8	0.0261	mg/L	0.00122	0.0261	mg/L	0.00122	4.69%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	-261.8	-0.0010	mg/L	0.00006	-0.0010	mg/L	0.00006	6.65%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	-11.8	-0.0089	mg/L	0.00460	-0.0089	mg/L	0.00460	51.45%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated								
Chromium,7440-47-3†	19.0	0.0001	mg/L	0.00037	0.0001	mg/L	0.00037	318.42%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	-5.4	-0.0001	mg/L	0.00005	-0.0001	mg/L	0.00005	71.14%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	-83.8	-0.0002	mg/L	0.00021	-0.0002	mg/L	0.00021	111.55%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	4.7	0.0149	mg/L	0.01213	0.0149	mg/L	0.01213	81.30%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated								

Lead,7439-92-1†	-6.7	-0.0003 mg/L	0.00091	-0.0003 mg/L	0.00091	313.77%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated						
Magnesium,7439-95-4†	-0.7	-0.0108 mg/L	0.01775	-0.0108 mg/L	0.01775	163.89%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated						
Manganese,7439-96-5†	790.1	0.0006 mg/L	0.00010	0.0006 mg/L	0.00010	15.00%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated						
Molybdenum,7439-98-7†	34.7	0.0013 mg/L	0.00008	0.0013 mg/L	0.00008	6.10%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated						
Nickel,7440-02-0†	46.5	0.0005 mg/L	0.00019	0.0005 mg/L	0.00019	38.06%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated						
Potassium,7440-09-7†	453.2	0.0783 mg/L	0.02357	0.0783 mg/L	0.02357	30.10%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated						
Selenium,7782-49-2†	-3.1	-0.0011 mg/L	0.00225	-0.0011 mg/L	0.00225	209.91%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated						
Silver,7440-22-4†	-77.1	-0.0002 mg/L	0.00030	-0.0002 mg/L	0.00030	172.40%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated						
Sodium,7440-23-5†	8235.7	1.0532 mg/L	0.03148	1.0532 mg/L	0.03148	2.99%
QC value greater than the upper limit for Sodium,7440-23-5 Recovery = Not calculated						
Strontium,7440-24-6†	-55.1	-0.0003 mg/L	0.00020	-0.0003 mg/L	0.00020	76.75%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated						
Thallium,7440-28-0†	-0.2	-0.0001 mg/L	0.00165	-0.0001 mg/L	0.00165	>999.9%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated						
Tin,7440-31-5†	17.1	0.0018 mg/L	0.00050	0.0018 mg/L	0.00050	28.55%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated						
Titanium,7440-32-6†	418.9	0.0005 mg/L	0.00012	0.0005 mg/L	0.00012	24.78%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated						
Vanadium,7440-62-2†	47.1	0.0001 mg/L	0.00028	0.0001 mg/L	0.00028	189.76%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated						
Zinc,7440-66-6†	-589.9	-0.0036 mg/L	0.00011	-0.0036 mg/L	0.00011	3.14%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated						
Zirconium,7440-67-7†	123.7	0.0002 mg/L	0.00009	0.0002 mg/L	0.00009	38.17%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated						

QC Failed. Continue with analysis.

Analysis Begun

Start Time: 05/30/2003 14:11:51
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

Method Loaded
Method Name: ICP5
IEC File: 2030114 IEC.iec
Method Description: ICP5

Method Last Saved: 05/30/2003 14:11:44
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Aluminum,7429-90-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Antimony,7440-36-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Ar 363.268 A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Ar 420.067 R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Arsenic,7440-38-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Barium,7440-39-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Beryllium,7440-41-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Boron,7440-42-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cadmium,7440-43-9	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Calcium,7440-70-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Chromium,7440-47-3	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Cobalt,7440-48-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Copper,7440-50-8	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Iron,7439-89-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Lead,7439-92-1	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Lithium,7439-93-2	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Magnesium,7439-95-4	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Manganese,7439-96-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Molybdenum,7439-98-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Nickel,7440-02-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Phosphorus,7723-14-0	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Potassium,7440-09-7	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Scandium-IS	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Selenium,7782-49-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Silicon,7440-21-3	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	No
Silver,7440-22-4	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Sodium,7440-23-5	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5R	Yes
Strontium,7440-24-6	Lin, Calc Int	Peak Area	Radial	Yttrium,7440-65-5A	Yes
Thallium,7440-28-0	Lin, Calc Int	Peak Height	Axial	Yttrium,7440-65-5A	No
Tin,7440-31-5	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Titanium,7440-32-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	No
Vanadium,7440-62-2	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Yttrium,7440-65-5A	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Yttrium,7440-65-5R	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Zinc,7440-66-6	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes
Zirconium,7440-67-7	Lin, Calc Int	Peak Area	Axial	Yttrium,7440-65-5A	Yes

Sequence No.: 1
Sample ID: 20305291105
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 47
Date Collected: 05/30/2003 14:11:51

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291105

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81415.1	99.907	%	0.6553				0.66%
Ar 420.067 R	716271.9	86.105	%	0.0987				0.11%
Scandium-IS	7478870.1	102.99	%	2.923				2.84%
Yttrium,7440-65-5A	3822194.4	101.68	%	2.726				2.68%
Yttrium,7440-65-5R	72521.6	89.025	%	0.8042				0.90%

Aluminum,7429-90-5†	75.8	0.4410 mg/L	0.01774	0.4410 mg/L	0.01774	4.02%
Antimony,7440-36-0†	-0.3	-0.0001 mg/L	0.00070	-0.0001 mg/L	0.00070	869.38%
Arsenic,7440-38-2†	-2.6	-0.0008 mg/L	0.00116	-0.0008 mg/L	0.00116	142.21%
Barium,7440-39-3†	11056.9	0.0468 mg/L	0.00223	0.0468 mg/L	0.00223	4.76%
Beryllium,7440-41-7†	571.1	0.0001 mg/L	0.00003	0.0001 mg/L	0.00003	25.11%
Boron,7440-42-8†	2483.9	0.0535 mg/L	0.00075	0.0535 mg/L	0.00075	1.40%
Cadmium,7440-43-9†	-236.1	-0.0009 mg/L	0.00004	-0.0009 mg/L	0.00004	4.22%
Calcium,7440-70-2†	29480.2	22.399 mg/L	0.3950	22.399 mg/L	0.3950	1.76%
Chromium,7440-47-3†	247.5	0.0015 mg/L	0.00073	0.0015 mg/L	0.00073	48.99%
Cobalt,7440-48-4†	-8.1	-0.0001 mg/L	0.00011	-0.0001 mg/L	0.00011	90.35%
Copper,7440-50-8†	-162.8	-0.0003 mg/L	0.00075	-0.0003 mg/L	0.00075	245.17%
Iron,7439-89-6†	114.8	0.3672 mg/L	0.01170	0.3672 mg/L	0.01170	3.19%
Lead,7439-92-1†	-39.2	-0.0015 mg/L	0.00009	-0.0015 mg/L	0.00009	6.00%
Magnesium,7439-95-4†	61.3	0.9052 mg/L	0.02420	0.9052 mg/L	0.02420	2.67%
Manganese,7439-96-5†	7879.2	0.0064 mg/L	0.00019	0.0064 mg/L	0.00019	2.96%
Molybdenum,7439-98-7†	65.5	0.0022 mg/L	0.00017	0.0022 mg/L	0.00017	7.69%
Nickel,7440-02-0†	44.5	0.0005 mg/L	0.00004	0.0005 mg/L	0.00004	8.55%
Potassium,7440-09-7†	13414.9	2.3164 mg/L	0.01575	2.3164 mg/L	0.01575	0.68%
Selenium,7782-49-2†	-15.0	-0.0050 mg/L	0.00159	-0.0050 mg/L	0.00159	31.56%
Silver,7440-22-4†	-406.0	-0.0009 mg/L	0.00049	-0.0009 mg/L	0.00049	55.35%
Sodium,7440-23-5†	30901.3	3.9509 mg/L	0.02966	3.9509 mg/L	0.02966	0.75%
Strontium,7440-24-6†	8211.1	0.0374 mg/L	0.00146	0.0374 mg/L	0.00146	3.90%
Thallium,7440-28-0†	-1.3	-0.0007 mg/L	0.00070	-0.0007 mg/L	0.00070	103.42%
Tin,7440-31-5†	80.9	0.0078 mg/L	0.00192	0.0078 mg/L	0.00192	24.64%
Titanium,7440-32-6†	6514.1	0.0078 mg/L	0.00064	0.0078 mg/L	0.00064	8.13%
Vanadium,7440-62-2†	3341.2	0.0106 mg/L	0.00116	0.0106 mg/L	0.00116	10.94%
Zinc,7440-66-6†	108.2	-0.0005 mg/L	0.00036	-0.0005 mg/L	0.00036	71.30%
Zirconium,7440-67-7†	887.1	0.0017 mg/L	0.00016	0.0017 mg/L	0.00016	9.37%

Sequence No.: 2
Sample ID: 20305291108
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 48
Date Collected: 05/30/2003 14:19:03
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291108

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81724.6	100.29	%	0.309				0.31%
Ar 420.067 R	725393.6	87.202	%	0.0299				0.03%
Scandium-IS	7266482.3	100.06	%	2.784				2.78%
Yttrium,7440-65-5A	3724885.3	99.094	%	2.5109				2.53%
Yttrium,7440-65-5R	73754.6	90.539	%	1.6269				1.80%
Aluminum,7429-90-5†	71.6	0.4161	mg/L	0.01332	0.4161	mg/L	0.01332	3.20%
Antimony,7440-36-0†	-2.7	-0.0007	mg/L	0.00074	-0.0007	mg/L	0.00074	107.64%
Arsenic,7440-38-2†	-1.5	-0.0003	mg/L	0.00284	-0.0003	mg/L	0.00284	>999.9%
Barium,7440-39-3†	11809.5	0.0500	mg/L	0.00109	0.0500	mg/L	0.00109	2.19%
Beryllium,7440-41-7†	412.5	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	51.18%
Boron,7440-42-8†	2344.5	0.0505	mg/L	0.00120	0.0505	mg/L	0.00120	2.37%
Cadmium,7440-43-9†	-262.1	-0.0010	mg/L	0.00007	-0.0010	mg/L	0.00007	7.26%
Calcium,7440-70-2†	30474.2	23.155	mg/L	0.4375	23.155	mg/L	0.4375	1.89%
Chromium,7440-47-3†	303.0	0.0018	mg/L	0.00043	0.0018	mg/L	0.00043	23.48%
Cobalt,7440-48-4†	-1.0	0.0000	mg/L	0.00011	0.0000	mg/L	0.00011	341.32%
Copper,7440-50-8†	154.9	0.0004	mg/L	0.00074	0.0004	mg/L	0.00074	173.29%
Iron,7439-89-6†	118.2	0.3779	mg/L	0.00526	0.3779	mg/L	0.00526	1.39%
Lead,7439-92-1†	-36.6	-0.0014	mg/L	0.00060	-0.0014	mg/L	0.00060	43.27%
Magnesium,7439-95-4†	67.7	1.0004	mg/L	0.02740	1.0004	mg/L	0.02740	2.74%
Manganese,7439-96-5†	8341.1	0.0068	mg/L	0.00008	0.0068	mg/L	0.00008	1.23%
Molybdenum,7439-98-7†	65.2	0.0022	mg/L	0.00033	0.0022	mg/L	0.00033	15.25%
Nickel,7440-02-0†	32.4	0.0003	mg/L	0.00041	0.0003	mg/L	0.00041	117.93%
Potassium,7440-09-7†	13309.9	2.2982	mg/L	0.04878	2.2982	mg/L	0.04878	2.12%
Selenium,7782-49-2†	-11.5	-0.0038	mg/L	0.00272	-0.0038	mg/L	0.00272	71.13%
Silver,7440-22-4†	-294.8	-0.0006	mg/L	0.00003	-0.0006	mg/L	0.00003	5.19%
Sodium,7440-23-5†	29882.5	3.8205	mg/L	0.08667	3.8205	mg/L	0.08667	2.27%
Strontium,7440-24-6†	9058.0	0.0413	mg/L	0.00102	0.0413	mg/L	0.00102	2.46%
Thallium,7440-28-0†	-2.4	-0.0012	mg/L	0.00007	-0.0012	mg/L	0.00007	5.67%
Tin,7440-31-5†	77.1	0.0074	mg/L	0.00029	0.0074	mg/L	0.00029	3.90%
Titanium,7440-32-6†	7898.9	0.0095	mg/L	0.00071	0.0095	mg/L	0.00071	7.51%
Vanadium,7440-62-2†	3864.7	0.0123	mg/L	0.00095	0.0123	mg/L	0.00095	7.71%
Zinc,7440-66-6†	49.0	-0.0009	mg/L	0.00043	-0.0009	mg/L	0.00043	48.49%

Zirconium,7440-67-7†	779.1	0.0015 mg/L	0.00022	0.0015 mg/L	0.00022	14.85%

Sequence No.: 3
Sample ID: 20305291106
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 49
Date Collected: 05/30/2003 14:26:14
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291106

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81727.9	100.29	%	0.193				0.19%
Ar 420.067 R	718142.4	86.330	%	0.0424				0.05%
Scandium-IS	7128713.5	98.166	%	0.8686				0.88%
Yttrium,7440-65-5A	3634335.1	96.685	%	0.8838				0.91%
Yttrium,7440-65-5R	71068.1	87.241	%	0.8778				1.01%
Aluminum,7429-90-5†	1942.2	11.295	mg/L	0.1652	11.295	mg/L	0.1652	1.46%
Antimony,7440-36-0†	4524.4	1.1002	mg/L	0.01036	1.1002	mg/L	0.01036	0.94%
Arsenic,7440-38-2†	2245.7	1.1359	mg/L	0.01480	1.1359	mg/L	0.01480	1.30%
Barium,7440-39-3†	262005.5	1.1082	mg/L	0.01617	1.1082	mg/L	0.01617	1.46%
Beryllium,7440-41-7†	5870217.1	1.0901	mg/L	0.01435	1.0901	mg/L	0.01435	1.32%
Boron,7440-42-8†	261401.5	5.6397	mg/L	0.09094	5.6397	mg/L	0.09094	1.61%
Cadmium,7440-43-9†	283580.2	1.0314	mg/L	0.01605	1.0314	mg/L	0.01605	1.56%
Calcium,7440-70-2†	44194.2	33.568	mg/L	0.2828	33.568	mg/L	0.2828	0.84%
Chromium,7440-47-3†	173528.5	1.0614	mg/L	0.01746	1.0614	mg/L	0.01746	1.64%
Cobalt,7440-48-4†	80601.5	1.0705	mg/L	0.01628	1.0705	mg/L	0.01628	1.52%
Copper,7440-50-8†	469252.6	1.0771	mg/L	0.01641	1.0771	mg/L	0.01641	1.52%
Iron,7439-89-6†	3585.8	11.447	mg/L	0.1477	11.447	mg/L	0.1477	1.29%
Lead,7439-92-1†	24575.6	1.0513	mg/L	0.00974	1.0513	mg/L	0.00974	0.93%
Magnesium,7439-95-4†	741.0	10.942	mg/L	0.0566	10.942	mg/L	0.0566	0.52%
Manganese,7439-96-5†	1346190.8	1.0815	mg/L	0.01607	1.0815	mg/L	0.01607	1.49%
Molybdenum,7439-98-7†	30103.7	1.0890	mg/L	0.01107	1.0890	mg/L	0.01107	1.02%
Nickel,7440-02-0†	98770.6	1.0662	mg/L	0.01791	1.0662	mg/L	0.01791	1.68%
Potassium,7440-09-7†	149573.6	25.834	mg/L	0.1506	25.834	mg/L	0.1506	0.58%
Selenium,7782-49-2†	3064.7	1.0738	mg/L	0.01388	1.0738	mg/L	0.01388	1.29%
Silver,7440-22-4†	465282.0	1.0651	mg/L	0.01321	1.0651	mg/L	0.01321	1.24%
Sodium,7440-23-5†	373942.6	47.818	mg/L	0.3573	47.818	mg/L	0.3573	0.75%
Strontium,7440-24-6†	213232.3	0.9859	mg/L	0.01093	0.9859	mg/L	0.01093	1.11%
Thallium,7440-28-0†	2042.0	1.0516	mg/L	0.00910	1.0516	mg/L	0.00910	0.87%
Tin,7440-31-5†	10350.0	1.0661	mg/L	0.00993	1.0661	mg/L	0.00993	0.93%
Titanium,7440-32-6†	891719.9	1.0732	mg/L	0.01648	1.0732	mg/L	0.01648	1.54%
Vanadium,7440-62-2†	338964.3	1.0793	mg/L	0.01608	1.0793	mg/L	0.01608	1.49%
Zinc,7440-66-6†	173457.3	1.0408	mg/L	0.01630	1.0408	mg/L	0.01630	1.57%
Zirconium,7440-67-7†	630029.6	1.1834	mg/L	0.01756	1.1834	mg/L	0.01756	1.48%

Sequence No.: 4
Sample ID: 20305291107
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 50
Date Collected: 05/30/2003 14:33:26
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291107

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81858.6	100.45	%	0.170				0.17%
Ar 420.067 R	721188.2	86.696	%	0.1038				0.12%
Scandium-IS	7025054.7	96.738	%	1.7680				1.83%
Yttrium,7440-65-5A	3588624.7	95.469	%	1.4708				1.54%
Yttrium,7440-65-5R	70860.5	86.986	%	0.7963				0.92%
Aluminum,7429-90-5†	1952.1	11.352	mg/L	0.1048	11.352	mg/L	0.1048	0.92%
Antimony,7440-36-0†	4591.3	1.1161	mg/L	0.01368	1.1161	mg/L	0.01368	1.23%
Arsenic,7440-38-2†	2305.5	1.1662	mg/L	0.00737	1.1662	mg/L	0.00737	0.63%
Barium,7440-39-3†	269221.1	1.1388	mg/L	0.01795	1.1388	mg/L	0.01795	1.58%
Beryllium,7440-41-7†	5999739.8	1.1142	mg/L	0.02147	1.1142	mg/L	0.02147	1.93%
Boron,7440-42-8†	270277.5	5.8313	mg/L	0.07870	5.8313	mg/L	0.07870	1.35%
Cadmium,7440-43-9†	292271.3	1.0630	mg/L	0.01721	1.0630	mg/L	0.01721	1.62%
Calcium,7440-70-2†	44344.1	33.681	mg/L	0.1896	33.681	mg/L	0.1896	0.56%

Chromium,7440-47-3†	178528.3	1.0920 mg/L	0.01835	1.0920 mg/L	0.01835	1.68%
Cobalt,7440-48-4†	83144.1	1.1042 mg/L	0.01806	1.1042 mg/L	0.01806	1.64%
Copper,7440-50-8†	483790.3	1.1104 mg/L	0.01852	1.1104 mg/L	0.01852	1.67%
Iron,7439-89-6†	3635.0	11.604 mg/L	0.1229	11.604 mg/L	0.1229	1.06%
Lead,7439-92-1†	25004.4	1.0696 mg/L	0.01436	1.0696 mg/L	0.01436	1.34%
Magnesium,7439-95-4†	765.9	11.309 mg/L	0.1258	11.309 mg/L	0.1258	1.11%
Manganese,7439-96-5†	1385922.4	1.1134 mg/L	0.01835	1.1134 mg/L	0.01835	1.65%
Molybdenum,7439-98-7†	30639.3	1.1084 mg/L	0.01605	1.1084 mg/L	0.01605	1.45%
Nickel,7440-02-0†	101536.8	1.0961 mg/L	0.01691	1.0961 mg/L	0.01691	1.54%
Potassium,7440-09-7†	151233.8	26.121 mg/L	0.1173	26.121 mg/L	0.1173	0.45%
Selenium,7782-49-2†	3134.7	1.0983 mg/L	0.01471	1.0983 mg/L	0.01471	1.34%
Silver,7440-22-4†	476967.8	1.0919 mg/L	0.01618	1.0919 mg/L	0.01618	1.48%
Sodium,7440-23-5†	378802.2	48.440 mg/L	0.2542	48.440 mg/L	0.2542	0.52%
Strontium,7440-24-6†	218727.0	1.0113 mg/L	0.01188	1.0113 mg/L	0.01188	1.18%
Thallium,7440-28-0†	2080.7	1.0716 mg/L	0.01509	1.0716 mg/L	0.01509	1.41%
Tin,7440-31-5†	10524.2	1.0842 mg/L	0.01441	1.0842 mg/L	0.01441	1.33%
Titanium,7440-32-6†	916490.2	1.1031 mg/L	0.01884	1.1031 mg/L	0.01884	1.71%
Vanadium,7440-62-2†	349024.1	1.1114 mg/L	0.01860	1.1114 mg/L	0.01860	1.67%
Zinc,7440-66-6†	179382.8	1.0765 mg/L	0.01840	1.0765 mg/L	0.01840	1.71%
Zirconium,7440-67-7†	646745.9	1.2148 mg/L	0.02069	1.2148 mg/L	0.02069	1.70%

Sequence No.: 5
Sample ID: 101548
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 51
Date Collected: 05/30/2003 14:40:38

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 101548

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81820.4	100.40	%	0.660				0.66%
Ar 420.067 R	727407.1	87.444	%	0.1742				0.20%
Scandium-IS	7097745.1	97.739	%	1.2229				1.25%
Yttrium,7440-65-5A	3623840.8	96.406	%	1.6249				1.69%
Yttrium,7440-65-5R	69515.8	85.335	%	1.1352				1.33%
Aluminum,7429-90-5†	1798.8	10.461	mg/L	0.1424	10.461	mg/L	0.1424	1.36%
Antimony,7440-36-0†	4215.6	1.0253	mg/L	0.01138	1.0253	mg/L	0.01138	1.11%
Arsenic,7440-38-2†	2086.1	1.0550	mg/L	0.01029	1.0550	mg/L	0.01029	0.98%
Barium,7440-39-3†	242270.0	1.0248	mg/L	0.01248	1.0248	mg/L	0.01248	1.22%
Beryllium,7440-41-7†	5446399.9	1.0114	mg/L	0.02428	1.0114	mg/L	0.02428	2.40%
Boron,7440-42-8†	248476.3	5.3609	mg/L	0.05650	5.3609	mg/L	0.05650	1.05%
Cadmium,7440-43-9†	262885.8	0.9561	mg/L	0.01100	0.9561	mg/L	0.01100	1.15%
Calcium,7440-70-2†	43301.7	32.890	mg/L	0.0740	32.890	mg/L	0.0740	0.23%
Chromium,7440-47-3†	161039.1	0.9850	mg/L	0.01299	0.9850	mg/L	0.01299	1.32%
Cobalt,7440-48-4†	74668.5	0.9916	mg/L	0.01251	0.9916	mg/L	0.01251	1.26%
Copper,7440-50-8†	432961.2	0.9938	mg/L	0.01299	0.9938	mg/L	0.01299	1.31%
Iron,7439-89-6†	3372.9	10.767	mg/L	0.1393	10.767	mg/L	0.1393	1.29%
Lead,7439-92-1†	22572.9	0.9656	mg/L	0.01169	0.9656	mg/L	0.01169	1.21%
Magnesium,7439-95-4†	702.2	10.369	mg/L	0.1840	10.369	mg/L	0.1840	1.77%
Manganese,7439-96-5†	1245498.1	1.0006	mg/L	0.01283	1.0006	mg/L	0.01283	1.28%
Molybdenum,7439-98-7†	28049.4	1.0147	mg/L	0.01248	1.0147	mg/L	0.01248	1.23%
Nickel,7440-02-0†	91365.4	0.9863	mg/L	0.01212	0.9863	mg/L	0.01212	1.23%
Potassium,7440-09-7†	141867.3	24.503	mg/L	0.0979	24.503	mg/L	0.0979	0.40%
Selenium,7782-49-2†	2861.8	1.0027	mg/L	0.00990	1.0027	mg/L	0.00990	0.99%
Silver,7440-22-4†	430237.2	0.9849	mg/L	0.01057	0.9849	mg/L	0.01057	1.07%
Sodium,7440-23-5†	353844.4	45.248	mg/L	0.1563	45.248	mg/L	0.1563	0.35%
Strontium,7440-24-6†	198487.1	0.9177	mg/L	0.02810	0.9177	mg/L	0.02810	3.06%
Thallium,7440-28-0†	1883.4	0.9699	mg/L	0.01356	0.9699	mg/L	0.01356	1.40%
Tin,7440-31-5†	9657.4	0.9948	mg/L	0.01123	0.9948	mg/L	0.01123	1.13%
Titanium,7440-32-6†	839796.8	1.0108	mg/L	0.01270	1.0108	mg/L	0.01270	1.26%
Vanadium,7440-62-2†	313322.7	0.9977	mg/L	0.01359	0.9977	mg/L	0.01359	1.36%
Zinc,7440-66-6†	160640.0	0.9638	mg/L	0.01075	0.9638	mg/L	0.01075	1.11%
Zirconium,7440-67-7†	591545.9	1.1112	mg/L	0.01525	1.1112	mg/L	0.01525	1.37%

Sequence No.: 6
Sample ID: 101547
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:

Autosampler Location: 52
Date Collected: 05/30/2003 14:47:52

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:

Dilution: 5X Data Type: Original

Mean Data: 101547

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82299.9	100.99	%	0.090				0.09%
Ar 420.067 R	733422.0	88.167	%	0.2196				0.25%
Scandium-IS	7400050.0	101.90	%	0.212				0.21%
Yttrium,7440-65-5A	3802465.5	101.16	%	0.178				0.18%
Yttrium,7440-65-5R	74357.3	91.278	%	1.7428				1.91%
Aluminum,7429-90-5†	19.5	0.1132	mg/L	0.01779	0.5658	mg/L	0.08895	15.72%
Antimony,7440-36-0†	4.2	0.0010	mg/L	0.00132	0.0052	mg/L	0.00659	126.38%
Arsenic,7440-38-2†	2.7	0.0014	mg/L	0.00274	0.0071	mg/L	0.01368	193.69%
Barium,7440-39-3†	2251.3	0.0095	mg/L	0.00017	0.0476	mg/L	0.00084	1.77%
Beryllium,7440-41-7†	516.6	0.0001	mg/L	0.00001	0.0005	mg/L	0.00005	10.53%
Boron,7440-42-8†	2922.2	0.0631	mg/L	0.00381	0.3153	mg/L	0.01906	6.05%
Cadmium,7440-43-9†	-255.6	-0.0009	mg/L	0.00003	-0.0047	mg/L	0.00015	3.25%
Calcium,7440-70-2†	5941.5	4.5144	mg/L	0.05364	22.572	mg/L	0.2682	1.19%
Chromium,7440-47-3†	33.0	0.0002	mg/L	0.00010	0.0010	mg/L	0.00052	52.75%
Cobalt,7440-48-4†	-3.5	-0.0001	mg/L	0.00012	-0.0003	mg/L	0.00061	224.29%
Copper,7440-50-8†	14.6	0.0001	mg/L	0.00032	0.0003	mg/L	0.00158	631.82%
Iron,7439-89-6†	28.7	0.0919	mg/L	0.00697	0.4594	mg/L	0.03484	7.58%
Lead,7439-92-1†	-46.0	-0.0019	mg/L	0.00057	-0.0096	mg/L	0.00287	29.84%
Magnesium,7439-95-4†	16.3	0.2413	mg/L	0.02916	1.2067	mg/L	0.14581	12.08%
Manganese,7439-96-5†	1852.1	0.0015	mg/L	0.00002	0.0076	mg/L	0.00011	1.47%
Molybdenum,7439-98-7†	79.0	0.0028	mg/L	0.00018	0.0141	mg/L	0.00090	6.40%
Nickel,7440-02-0†	49.3	0.0005	mg/L	0.00009	0.0027	mg/L	0.00046	17.43%
Potassium,7440-09-7†	2655.7	0.4586	mg/L	0.01914	2.2928	mg/L	0.09572	4.17%
Selenium,7782-49-2†	0.2	0.0001	mg/L	0.00175	0.0005	mg/L	0.00874	>999.9%
Silver,7440-22-4†	-339.5	-0.0008	mg/L	0.00031	-0.0038	mg/L	0.00155	40.72%
Sodium,7440-23-5†	7289.8	0.9321	mg/L	0.01612	4.6603	mg/L	0.08060	1.73%
Strontium,7440-24-6†	1644.6	0.0075	mg/L	0.00020	0.0374	mg/L	0.00099	2.66%
Thallium,7440-28-0†	0.5	0.0002	mg/L	0.00095	0.0012	mg/L	0.00474	405.76%
Tin,7440-31-5†	15.8	0.0015	mg/L	0.00030	0.0077	mg/L	0.00152	19.80%
Titanium,7440-32-6†	2901.1	0.0035	mg/L	0.00018	0.0175	mg/L	0.00092	5.26%
Vanadium,7440-62-2†	777.8	0.0025	mg/L	0.00029	0.0124	mg/L	0.00144	11.65%
Zinc,7440-66-6†	-758.4	-0.0048	mg/L	0.00009	-0.0241	mg/L	0.00044	1.82%
Zirconium,7440-67-7†	275.0	0.0005	mg/L	0.00012	0.0026	mg/L	0.00062	23.90%

Sequence No.: 7
Sample ID: 20305291109
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 53
Date Collected: 05/30/2003 14:55:05
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291109

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81870.4	100.47	%	0.775				0.77%
Ar 420.067 R	729669.9	87.716	%	0.0814				0.09%
Scandium-IS	7156873.2	98.554	%	5.5390				5.62%
Yttrium,7440-65-5A	3726257.8	99.130	%	3.8180				3.85%
Yttrium,7440-65-5R	73958.3	90.789	%	1.9627				2.16%
Aluminum,7429-90-5†	62.1	0.3615	mg/L	0.02635	0.3615	mg/L	0.02635	7.29%
Antimony,7440-36-0†	2.5	0.0006	mg/L	0.00075	0.0006	mg/L	0.00075	117.74%
Arsenic,7440-38-2†	-0.5	0.0000	mg/L	0.00159	0.0000	mg/L	0.00159	>999.9%
Barium,7440-39-3†	1766.8	0.0075	mg/L	0.00029	0.0075	mg/L	0.00029	3.85%
Beryllium,7440-41-7†	367.8	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	69.05%
Boron,7440-42-8†	2592.9	0.0560	mg/L	0.00207	0.0560	mg/L	0.00207	3.70%
Cadmium,7440-43-9†	-220.5	-0.0008	mg/L	0.00003	-0.0008	mg/L	0.00003	3.49%
Calcium,7440-70-2†	22891.9	17.394	mg/L	0.7096	17.394	mg/L	0.7096	4.08%
Chromium,7440-47-3†	176.1	0.0011	mg/L	0.00096	0.0011	mg/L	0.00096	90.74%
Cobalt,7440-48-4†	-7.4	-0.0001	mg/L	0.00013	-0.0001	mg/L	0.00013	99.37%
Copper,7440-50-8†	112.7	0.0003	mg/L	0.00078	0.0003	mg/L	0.00078	289.46%
Iron,7439-89-6†	15.4	0.0497	mg/L	0.01087	0.0497	mg/L	0.01087	21.85%
Lead,7439-92-1†	-23.3	-0.0008	mg/L	0.00080	-0.0008	mg/L	0.00080	94.71%
Magnesium,7439-95-4†	22.0	0.3251	mg/L	0.08669	0.3251	mg/L	0.08669	26.66%
Manganese,7439-96-5†	1408.4	0.0012	mg/L	0.00009	0.0012	mg/L	0.00009	7.50%
Molybdenum,7439-98-7†	81.2	0.0028	mg/L	0.00035	0.0028	mg/L	0.00035	12.45%

Nickel,7440-02-0†	54.1	0.0006 mg/L	0.00027	0.0006 mg/L	0.00027	46.27%
Potassium,7440-09-7†	6838.7	1.1806 mg/L	0.00779	1.1806 mg/L	0.00779	0.66%
Selenium,7782-49-2†	-9.7	-0.0033 mg/L	0.00066	-0.0033 mg/L	0.00066	19.94%
Silver,7440-22-4†	-281.2	-0.0006 mg/L	0.00002	-0.0006 mg/L	0.00002	3.46%
Sodium,7440-23-5†	15858.8	2.0275 mg/L	0.04164	2.0275 mg/L	0.04164	2.05%
Strontium,7440-24-6†	5030.5	0.0228 mg/L	0.00092	0.0228 mg/L	0.00092	4.05%
Thallium,7440-28-0†	1.9	0.0010 mg/L	0.00079	0.0010 mg/L	0.00079	81.75%
Tin,7440-31-5†	70.5	0.0069 mg/L	0.00011	0.0069 mg/L	0.00011	1.65%
Titanium,7440-32-6†	10609.1	0.0128 mg/L	0.00064	0.0128 mg/L	0.00064	5.03%
Vanadium,7440-62-2†	1461.7	0.0047 mg/L	0.00133	0.0047 mg/L	0.00133	28.61%
Zinc,7440-66-6†	41.9	-0.0006 mg/L	0.00033	-0.0006 mg/L	0.00033	58.04%
Zirconium,7440-67-7†	419.9	0.0008 mg/L	0.00006	0.0008 mg/L	0.00006	7.56%

Sequence No.: 8
Sample ID: 20305291110
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 54
Date Collected: 05/30/2003 15:02:35
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291110

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	80831.4	99.191	%	0.4493				0.45%
Ar 420.067 R	727352.3	87.437	%	0.0565				0.06%
Scandium-IS	7358219.1	101.33	%	0.538				0.53%
Yttrium,7440-65-5A	3757292.9	99.956	%	0.5183				0.52%
Yttrium,7440-65-5R	75284.7	92.417	%	2.5852				2.80%
Aluminum,7429-90-5†	89.3	0.5192	mg/L	0.00408	0.5192	mg/L	0.00408	0.79%
Antimony,7440-36-0†	1.4	0.0003	mg/L	0.00074	0.0003	mg/L	0.00074	226.89%
Arsenic,7440-38-2†	4.4	0.0024	mg/L	0.00157	0.0024	mg/L	0.00157	64.62%
Barium,7440-39-3†	3306.4	0.0140	mg/L	0.00014	0.0140	mg/L	0.00014	1.00%
Beryllium,7440-41-7†	314.3	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	23.99%
Boron,7440-42-8†	2813.2	0.0607	mg/L	0.00007	0.0607	mg/L	0.00007	0.12%
Cadmium,7440-43-9†	-256.0	-0.0009	mg/L	0.00004	-0.0009	mg/L	0.00004	4.38%
Calcium,7440-70-2†	60285.9	45.805	mg/L	1.5875	45.805	mg/L	1.5875	3.47%
Chromium,7440-47-3†	225.0	0.0013	mg/L	0.00016	0.0013	mg/L	0.00016	12.18%
Cobalt,7440-48-4†	-16.1	-0.0002	mg/L	0.00021	-0.0002	mg/L	0.00021	90.51%
Copper,7440-50-8†	24.8	0.0001	mg/L	0.00014	0.0001	mg/L	0.00014	185.97%
Iron,7439-89-6†	17.6	0.0580	mg/L	0.00631	0.0580	mg/L	0.00631	10.88%
Lead,7439-92-1†	385.2	0.0168	mg/L	0.00051	0.0168	mg/L	0.00051	3.04%
Magnesium,7439-95-4†	408.1	6.0223	mg/L	0.06990	6.0223	mg/L	0.06990	1.16%
Manganese,7439-96-5†	36794.9	0.0298	mg/L	0.00007	0.0298	mg/L	0.00007	0.24%
Molybdenum,7439-98-7†	87.6	0.0028	mg/L	0.00008	0.0028	mg/L	0.00008	2.79%
Nickel,7440-02-0†	26.7	0.0003	mg/L	0.00019	0.0003	mg/L	0.00019	73.86%
Potassium,7440-09-7†	8689.6	1.4988	mg/L	0.05680	1.4988	mg/L	0.05680	3.79%
Selenium,7782-49-2†	-14.6	-0.0050	mg/L	0.00175	-0.0050	mg/L	0.00175	34.80%
Silver,7440-22-4†	-337.1	-0.0008	mg/L	0.00011	-0.0008	mg/L	0.00011	13.82%
Sodium,7440-23-5†	44467.8	5.6840	mg/L	0.19009	5.6840	mg/L	0.19009	3.34%
Strontium,7440-24-6†	15003.0	0.0682	mg/L	0.00067	0.0682	mg/L	0.00067	0.98%
Thallium,7440-28-0†	-2.3	-0.0012	mg/L	0.00044	-0.0012	mg/L	0.00044	36.19%
Tin,7440-31-5†	105.2	0.0097	mg/L	0.00010	0.0097	mg/L	0.00010	1.07%
Titanium,7440-32-6†	5116.2	0.0062	mg/L	0.00013	0.0062	mg/L	0.00013	2.12%
Vanadium,7440-62-2†	1141.4	0.0037	mg/L	0.00034	0.0037	mg/L	0.00034	9.14%
Zinc,7440-66-6†	121.0	-0.0014	mg/L	0.00006	-0.0014	mg/L	0.00006	4.00%
Zirconium,7440-67-7†	624.0	0.0012	mg/L	0.00010	0.0012	mg/L	0.00010	8.81%

Sequence No.: 9
Sample ID: 20305291111
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 55
Date Collected: 05/30/2003 15:09:49
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291111

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	81323.6	99.795	%	0.5511				0.55%
Ar 420.067 R	736547.1	88.542	%	0.0526				0.06%

Scandium-IS	7495856.7	103.22 %	2.307			2.24%
Yttrium,7440-65-5A	3871397.2	102.99 %	2.210			2.15%
Yttrium,7440-65-5R	76015.5	93.314 %	2.2025			2.36%
Aluminum,7429-90-5†	-1.1	-0.0062 mg/L	0.01511	-0.0062 mg/L	0.01511	243.62%
Antimony,7440-36-0†	-5.4	-0.0013 mg/L	0.00075	-0.0013 mg/L	0.00075	56.12%
Arsenic,7440-38-2†	0.7	0.0003 mg/L	0.00034	0.0003 mg/L	0.00034	107.08%
Barium,7440-39-3†	29.6	0.0001 mg/L	0.00001	0.0001 mg/L	0.00001	11.60%
Beryllium,7440-41-7†	338.0	0.0001 mg/L	0.00002	0.0001 mg/L	0.00002	25.63%
Boron,7440-42-8†	1147.1	0.0248 mg/L	0.00030	0.0248 mg/L	0.00030	1.20%
Cadmium,7440-43-9†	-243.2	-0.0009 mg/L	0.00005	-0.0009 mg/L	0.00005	5.10%
Calcium,7440-70-2†	38.4	0.0292 mg/L	0.00246	0.0292 mg/L	0.00246	8.41%
Chromium,7440-47-3†	-60.5	-0.0004 mg/L	0.00062	-0.0004 mg/L	0.00062	168.64%
Cobalt,7440-48-4†	-8.7	-0.0001 mg/L	0.00007	-0.0001 mg/L	0.00007	63.77%
Copper,7440-50-8†	-378.1	-0.0009 mg/L	0.00020	-0.0009 mg/L	0.00020	22.63%
Iron,7439-89-6†	7.1	0.0227 mg/L	0.01327	0.0227 mg/L	0.01327	58.59%
Lead,7439-92-1†	-17.9	-0.0008 mg/L	0.00059	-0.0008 mg/L	0.00059	76.76%
Magnesium,7439-95-4†	4.5	0.0668 mg/L	0.01956	0.0668 mg/L	0.01956	29.27%
Manganese,7439-96-5†	906.8	0.0007 mg/L	0.00016	0.0007 mg/L	0.00016	21.93%
Molybdenum,7439-98-7†	17.8	0.0006 mg/L	0.00022	0.0006 mg/L	0.00022	34.41%
Nickel,7440-02-0†	26.2	0.0003 mg/L	0.00030	0.0003 mg/L	0.00030	106.41%
Potassium,7440-09-7†	-44.2	-0.0076 mg/L	0.01219	-0.0076 mg/L	0.01219	159.71%
Selenium,7782-49-2†	0.1	0.0000 mg/L	0.00192	0.0000 mg/L	0.00192	>999.9%
Silver,7440-22-4†	-398.8	-0.0009 mg/L	0.00004	-0.0009 mg/L	0.00004	4.50%
Sodium,7440-23-5†	2635.8	0.3371 mg/L	0.02841	0.3371 mg/L	0.02841	8.43%
Strontium,7440-24-6†	45.1	0.0002 mg/L	0.00022	0.0002 mg/L	0.00022	107.43%
Thallium,7440-28-0†	-1.6	-0.0008 mg/L	0.00071	-0.0008 mg/L	0.00071	87.00%
Tin,7440-31-5†	21.5	0.0022 mg/L	0.00089	0.0022 mg/L	0.00089	40.80%
Titanium,7440-32-6†	-300.1	-0.0004 mg/L	0.00045	-0.0004 mg/L	0.00045	124.61%
Vanadium,7440-62-2†	-115.4	-0.0004 mg/L	0.00049	-0.0004 mg/L	0.00049	131.87%
Zinc,7440-66-6†	-45.3	-0.0003 mg/L	0.00020	-0.0003 mg/L	0.00020	70.35%
Zirconium,7440-67-7†	44.7	0.0001 mg/L	0.00014	0.0001 mg/L	0.00014	169.43%

Sequence No.: 10
Sample ID: 20305291104
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 56
Date Collected: 05/30/2003 15:16:57
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291104

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	81242.6	99.695	%	0.3689				0.37%
Ar 420.067 R	728673.7	87.596	%	0.2175				0.25%
Scandium-IS	7347028.3	101.17	%	0.515				0.51%
Yttrium,7440-65-5A	3760393.9	100.04	%	0.500				0.50%
Yttrium,7440-65-5R	75803.2	93.053	%	1.1392				1.22%
Aluminum,7429-90-5†	253.1	1.4735	mg/L	0.03285	1.4735	mg/L	0.03285	2.23%
Antimony,7440-36-0†	-3.3	-0.0008	mg/L	0.00091	-0.0008	mg/L	0.00091	109.60%
Arsenic,7440-38-2†	0.8	0.0009	mg/L	0.00115	0.0009	mg/L	0.00115	128.75%
Barium,7440-39-3†	770.3	0.0032	mg/L	0.00005	0.0032	mg/L	0.00005	1.70%
Beryllium,7440-41-7†	177.7	0.0000	mg/L	0.00000	0.0000	mg/L	0.00000	15.72%
Boron,7440-42-8†	1551.4	0.0331	mg/L	0.00029	0.0331	mg/L	0.00029	0.87%
Cadmium,7440-43-9†	-247.1	-0.0010	mg/L	0.00007	-0.0010	mg/L	0.00007	6.80%
Calcium,7440-70-2†	37071.9	28.168	mg/L	0.3004	28.168	mg/L	0.3004	1.07%
Chromium,7440-47-3†	388.2	0.0023	mg/L	0.00023	0.0023	mg/L	0.00023	9.69%
Cobalt,7440-48-4†	-8.4	-0.0001	mg/L	0.00008	-0.0001	mg/L	0.00008	63.55%
Copper,7440-50-8†	374.0	0.0011	mg/L	0.00024	0.0011	mg/L	0.00024	21.45%
Iron,7439-89-6†	414.6	1.3240	mg/L	0.02352	1.3240	mg/L	0.02352	1.78%
Lead,7439-92-1†	-17.9	-0.0004	mg/L	0.00061	-0.0004	mg/L	0.00061	134.81%
Magnesium,7439-95-4†	31.7	0.4696	mg/L	0.03102	0.4696	mg/L	0.03102	6.61%
Manganese,7439-96-5†	2275.7	0.0020	mg/L	0.00007	0.0020	mg/L	0.00007	3.46%
Molybdenum,7439-98-7†	62.9	0.0020	mg/L	0.00028	0.0020	mg/L	0.00028	13.67%
Nickel,7440-02-0†	39.9	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	32.95%
Potassium,7440-09-7†	9222.4	1.5919	mg/L	0.02133	1.5919	mg/L	0.02133	1.34%
Selenium,7782-49-2†	-19.0	-0.0060	mg/L	0.00273	-0.0060	mg/L	0.00273	45.47%
Silver,7440-22-4†	-655.8	-0.0013	mg/L	0.00037	-0.0013	mg/L	0.00037	27.74%
Sodium,7440-23-5†	20543.2	2.6261	mg/L	0.02670	2.6261	mg/L	0.02670	1.02%
Strontium,7440-24-6†	7010.1	0.0317	mg/L	0.00023	0.0317	mg/L	0.00023	0.74%
Thallium,7440-28-0†	-2.3	-0.0012	mg/L	0.00092	-0.0012	mg/L	0.00092	78.02%
Tin,7440-31-5†	85.6	0.0082	mg/L	0.00029	0.0082	mg/L	0.00029	3.49%

Titanium,7440-32-6†	6909.6	0.0083 mg/L	0.00089	0.0083 mg/L	0.00089	10.76%
Vanadium,7440-62-2†	849.7	0.0026 mg/L	0.00026	0.0026 mg/L	0.00026	9.92%
Zinc,7440-66-6†	2254.3	0.0119 mg/L	0.00011	0.0119 mg/L	0.00011	0.90%
Zirconium,7440-67-7†	639.5	0.0012 mg/L	0.00003	0.0012 mg/L	0.00003	2.56%

Sequence No.: 11
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 05/30/2003 15:24:04

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82851.7	101.67	%	0.358				0.35%
Ar 420.067 R	735294.0	88.392	%	0.0822				0.09%
Scandium-IS	7156130.5	98.543	%	0.8899				0.90%
Yttrium,7440-65-5A	3654270.7	97.215	%	0.7857				0.81%
Yttrium,7440-65-5R	71191.0	87.392	%	0.6717				0.77%
Aluminum,7429-90-5†	883.6	5.1397	mg/L	0.08461	5.1397	mg/L	0.08461	1.65%
QC value within limits for Aluminum,7429-90-5 Recovery = 102.79%								
Antimony,7440-36-0†	40.7	-0.0028	mg/L	0.00249	-0.0028	mg/L	0.00249	88.07%
Arsenic,7440-38-2†	1043.3	0.5277	mg/L	0.00511	0.5277	mg/L	0.00511	0.97%
QC value within limits for Arsenic,7440-38-2 Recovery = 105.53%								
Barium,7440-39-3†	119959.8	0.5074	mg/L	0.01273	0.5074	mg/L	0.01273	2.51%
QC value within limits for Barium,7440-39-3 Recovery = 101.48%								
Beryllium,7440-41-7†	2699823.8	0.5015	mg/L	0.00411	0.5015	mg/L	0.00411	0.82%
QC value within limits for Beryllium,7440-41-7 Recovery = 100.30%								
Boron,7440-42-8†	733.1	0.0141	mg/L	0.00037	0.0141	mg/L	0.00037	2.62%
Cadmium,7440-43-9†	138214.0	0.5027	mg/L	0.01386	0.5027	mg/L	0.01386	2.76%
QC value within limits for Cadmium,7440-43-9 Recovery = 100.54%								
Calcium,7440-70-2†	6885.9	5.2301	mg/L	0.02067	5.2301	mg/L	0.02067	0.40%
QC value within limits for Calcium,7440-70-2 Recovery = 104.60%								
Chromium,7440-47-3†	83386.5	0.5101	mg/L	0.01341	0.5101	mg/L	0.01341	2.63%
QC value within limits for Chromium,7440-47-3 Recovery = 102.02%								
Cobalt,7440-48-4†	38359.4	0.5105	mg/L	0.01338	0.5105	mg/L	0.01338	2.62%
QC value within limits for Cobalt,7440-48-4 Recovery = 102.10%								
Copper,7440-50-8†	217988.8	0.5005	mg/L	0.01309	0.5005	mg/L	0.01309	2.62%
QC value within limits for Copper,7440-50-8 Recovery = 100.10%								
Iron,7439-89-6†	1650.0	5.2667	mg/L	0.06378	5.2667	mg/L	0.06378	1.21%
QC value within limits for Iron,7439-89-6 Recovery = 105.33%								
Lead,7439-92-1†	12208.2	0.5222	mg/L	0.01195	0.5222	mg/L	0.01195	2.29%
QC value within limits for Lead,7439-92-1 Recovery = 104.45%								
Magnesium,7439-95-4†	325.1	4.7987	mg/L	0.08111	4.7987	mg/L	0.08111	1.69%
QC value within limits for Magnesium,7439-95-4 Recovery = 95.97%								
Manganese,7439-96-5†	631539.8	0.5073	mg/L	0.00408	0.5073	mg/L	0.00408	0.81%
QC value within limits for Manganese,7439-96-5 Recovery = 101.45%								
Molybdenum,7439-98-7†	18.3	0.0006	mg/L	0.00049	0.0006	mg/L	0.00049	77.17%
Nickel,7440-02-0†	47309.1	0.5107	mg/L	0.01354	0.5107	mg/L	0.01354	2.65%
QC value within limits for Nickel,7440-02-0 Recovery = 102.15%								
Potassium,7440-09-7†	63354.2	10.943	mg/L	0.2548	10.943	mg/L	0.2548	2.33%
QC value within limits for Potassium,7440-09-7 Recovery = 109.43%								
Selenium,7782-49-2†	1438.2	0.5039	mg/L	0.00196	0.5039	mg/L	0.00196	0.39%
QC value within limits for Selenium,7782-49-2 Recovery = 100.77%								
Silver,7440-22-4†	219836.7	0.5032	mg/L	0.01242	0.5032	mg/L	0.01242	2.47%
QC value within limits for Silver,7440-22-4 Recovery = 100.65%								
Sodium,7440-23-5†	166268.8	21.262	mg/L	0.5082	21.262	mg/L	0.5082	2.39%
QC value within limits for Sodium,7440-23-5 Recovery = 106.31%								
Strontium,7440-24-6†	98818.5	0.4572	mg/L	0.01114	0.4572	mg/L	0.01114	2.44%
QC value within limits for Strontium,7440-24-6 Recovery = 91.44%								
Thallium,7440-28-0†	972.3	0.5007	mg/L	0.00224	0.5007	mg/L	0.00224	0.45%
QC value within limits for Thallium,7440-28-0 Recovery = 100.14%								
Tin,7440-31-5†	27.8	0.0030	mg/L	0.00072	0.0030	mg/L	0.00072	23.79%
Titanium,7440-32-6†	408.0	0.0005	mg/L	0.00036	0.0005	mg/L	0.00036	72.56%
Vanadium,7440-62-2†	158200.7	0.5035	mg/L	0.01307	0.5035	mg/L	0.01307	2.60%
QC value within limits for Vanadium,7440-62-2 Recovery = 100.71%								
Zinc,7440-66-6†	84108.9	0.5045	mg/L	0.01385	0.5045	mg/L	0.01385	2.75%
QC value within limits for Zinc,7440-66-6 Recovery = 100.91%								
Zirconium,7440-67-7†	266886.6	0.5014	mg/L	0.01732	0.5014	mg/L	0.01732	3.46%
QC value within limits for Zirconium,7440-67-7 Recovery = 100.27%								

All analytes passed QC.

Sequence No.: 12
Sample ID: 1802
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 05/30/2003 15:31:23
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1802

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82589.7	101.35	%	0.633				0.62%
Ar 420.067 R	740934.5	89.070	%	0.0360				0.04%
Scandium-IS	7398082.0	101.88	%	0.651				0.64%
Yttrium,7440-65-5A	3794921.3	100.96	%	0.593				0.59%
Yttrium,7440-65-5R	72945.4	89.545	%	2.1120				2.36%
Aluminum,7429-90-5†	3.3	0.0185	mg/L	0.02046	0.0185	mg/L	0.02046	110.73%
Antimony,7440-36-0†	1994.8	0.4970	mg/L	0.00107	0.4970	mg/L	0.00107	0.21%
QC value within limits for Antimony,7440-36-0 Recovery = 99.40%								
Arsenic,7440-38-2†	2.2	0.0012	mg/L	0.00249	0.0012	mg/L	0.00249	212.13%
Barium,7440-39-3†	14.7	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	32.57%
Beryllium,7440-41-7†	1405.4	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	10.63%
Boron,7440-42-8†	115963.3	2.5035	mg/L	0.01666	2.5035	mg/L	0.01666	0.67%
QC value within limits for Boron,7440-42-8 Recovery = 100.14%								
Cadmium,7440-43-9†	-292.2	-0.0011	mg/L	0.00004	-0.0011	mg/L	0.00004	3.44%
Calcium,7440-70-2†	-3.6	-0.0064	mg/L	0.00720	-0.0064	mg/L	0.00720	111.90%
Chromium,7440-47-3†	59.5	0.0003	mg/L	0.00018	0.0003	mg/L	0.00018	56.75%
Cobalt,7440-48-4†	62.0	-0.0002	mg/L	0.00006	-0.0002	mg/L	0.00006	25.35%
Copper,7440-50-8†	439.7	0.0008	mg/L	0.00018	0.0008	mg/L	0.00018	21.34%
Iron,7439-89-6†	2.3	0.0079	mg/L	0.00426	0.0079	mg/L	0.00426	54.14%
Lead,7439-92-1†	-67.5	-0.0030	mg/L	0.00070	-0.0030	mg/L	0.00070	23.46%
Magnesium,7439-95-4†	3.4	0.0524	mg/L	0.01306	0.0524	mg/L	0.01306	24.94%
Manganese,7439-96-5†	513.0	0.0005	mg/L	0.00004	0.0005	mg/L	0.00004	9.79%
Molybdenum,7439-98-7†	13941.5	0.5044	mg/L	0.00280	0.5044	mg/L	0.00280	0.56%
QC value within limits for Molybdenum,7439-98-7 Recovery = 100.89%								
Nickel,7440-02-0†	14.7	0.0001	mg/L	0.00016	0.0001	mg/L	0.00016	127.10%
Potassium,7440-09-7†	-202.0	-0.0354	mg/L	0.00355	-0.0354	mg/L	0.00355	10.04%
Selenium,7782-49-2†	3.1	0.0011	mg/L	0.00098	0.0011	mg/L	0.00098	90.56%
Silver,7440-22-4†	1326.2	0.0030	mg/L	0.00024	0.0030	mg/L	0.00024	7.98%
Sodium,7440-23-5†	1605.3	0.2053	mg/L	0.02966	0.2053	mg/L	0.02966	14.45%
Strontium,7440-24-6†	-80.0	-0.0004	mg/L	0.00012	-0.0004	mg/L	0.00012	33.51%
Thallium,7440-28-0†	-6.9	-0.0035	mg/L	0.00088	-0.0035	mg/L	0.00088	24.85%
Tin,7440-31-5†	4869.6	0.5017	mg/L	0.00177	0.5017	mg/L	0.00177	0.35%
QC value within limits for Tin,7440-31-5 Recovery = 100.34%								
Titanium,7440-32-6†	419829.2	0.5053	mg/L	0.00106	0.5053	mg/L	0.00106	0.21%
QC value within limits for Titanium,7440-32-6 Recovery = 101.06%								
Vanadium,7440-62-2†	88.5	0.0005	mg/L	0.00015	0.0005	mg/L	0.00015	30.75%
Zinc,7440-66-6†	-686.7	-0.0034	mg/L	0.00007	-0.0034	mg/L	0.00007	1.94%
Zirconium,7440-67-7†	296788.0	0.5575	mg/L	0.00527	0.5575	mg/L	0.00527	0.94%

All analytes passed QC.

Sequence No.: 13
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 15:38:39
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	82067.8	100.71	%	0.129				0.13%
Ar 420.067 R	738040.1	88.722	%	0.1806				0.20%
Scandium-IS	7296963.2	100.48	%	0.329				0.33%
Yttrium,7440-65-5A	3773680.0	100.39	%	0.336				0.33%
Yttrium,7440-65-5R	72021.7	88.411	%	0.4358				0.49%
Aluminum,7429-90-5†	-5.8	-0.0339	mg/L	0.00876	-0.0339	mg/L	0.00876	25.85%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								

Antimony,7440-36-0†	-4.1	-0.0010 mg/L	0.00224	-0.0010 mg/L	0.00224	218.71%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated						
Arsenic,7440-38-2†	4.8	0.0023 mg/L	0.00169	0.0023 mg/L	0.00169	73.02%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated						
Barium,7440-39-3†	5.8	0.0000 mg/L	0.00004	0.0000 mg/L	0.00004	149.97%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated						
Beryllium,7440-41-7†	195.3	0.0000 mg/L	0.00002	0.0000 mg/L	0.00002	45.17%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated						
Boron,7440-42-8†	1189.3	0.0257 mg/L	0.00119	0.0257 mg/L	0.00119	4.64%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated						
Cadmium,7440-43-9†	-266.6	-0.0010 mg/L	0.00001	-0.0010 mg/L	0.00001	0.63%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated						
Calcium,7440-70-2†	-25.1	-0.0191 mg/L	0.00603	-0.0191 mg/L	0.00603	31.57%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated						
Chromium,7440-47-3†	-49.6	-0.0003 mg/L	0.00025	-0.0003 mg/L	0.00025	81.36%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated						
Cobalt,7440-48-4†	1.0	0.0000 mg/L	0.00024	0.0000 mg/L	0.00024	>999.9%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated						
Copper,7440-50-8†	-147.0	-0.0003 mg/L	0.00017	-0.0003 mg/L	0.00017	49.64%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated						
Iron,7439-89-6†	2.7	0.0085 mg/L	0.00677	0.0085 mg/L	0.00677	79.55%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated						
Lead,7439-92-1†	-14.6	-0.0006 mg/L	0.00037	-0.0006 mg/L	0.00037	58.90%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated						
Magnesium,7439-95-4†	0.4	0.0060 mg/L	0.02625	0.0060 mg/L	0.02625	440.58%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated						
Manganese,7439-96-5†	717.6	0.0006 mg/L	0.00005	0.0006 mg/L	0.00005	8.97%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated						
Molybdenum,7439-98-7†	42.3	0.0015 mg/L	0.00040	0.0015 mg/L	0.00040	26.02%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated						
Nickel,7440-02-0†	24.6	0.0003 mg/L	0.00028	0.0003 mg/L	0.00028	104.45%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated						
Potassium,7440-09-7†	-236.8	-0.0409 mg/L	0.01794	-0.0409 mg/L	0.01794	43.87%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated						
Selenium,7782-49-2†	-4.6	-0.0016 mg/L	0.00157	-0.0016 mg/L	0.00157	96.76%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated						
Silver,7440-22-4†	-226.7	-0.0005 mg/L	0.00002	-0.0005 mg/L	0.00002	4.23%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated						
Sodium,7440-23-5†	1994.1	0.2550 mg/L	0.01456	0.2550 mg/L	0.01456	5.71%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated						
Strontium,7440-24-6†	-81.4	-0.0004 mg/L	0.00024	-0.0004 mg/L	0.00024	64.95%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated						
Thallium,7440-28-0†	0.0	0.0000 mg/L	0.00115	0.0000 mg/L	0.00115	>999.9%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated						
Tin,7440-31-5†	5.8	0.0006 mg/L	0.00080	0.0006 mg/L	0.00080	134.58%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated						
Titanium,7440-32-6†	-22.8	0.0000 mg/L	0.00009	0.0000 mg/L	0.00009	335.29%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated						
Vanadium,7440-62-2†	-73.7	-0.0002 mg/L	0.00027	-0.0002 mg/L	0.00027	114.92%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated						
Zinc,7440-66-6†	-684.0	-0.0041 mg/L	0.00004	-0.0041 mg/L	0.00004	0.99%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated						
Zirconium,7440-67-7†	101.6	0.0002 mg/L	0.00003	0.0002 mg/L	0.00003	15.25%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated						

All analytes passed QC.

Sequence No.: 14
Sample ID: 20305291103
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 57
Date Collected: 05/30/2003 15:45:49

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Analysis Begun

Start Time: 05/30/2003 15:47:57
Logged In Analyst: met
Spectrometer Model: Optima 4300 DV

Plasma On Time: 05/30/2003 07:32:41
Technique: ICP Continuous
Autosampler Model: AS-91

Sample Information File: C:\Win32\Sample Information\1824.sif
Results Data Set: 2030530 A
Results Library: c:\win32\Results\Results.mdb

Sequence No.: 1
Sample ID: 20305291103
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 57
Date Collected: 05/30/2003 15:47:57

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291103

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81533.5	100.05	%	0.811				0.81%
Ar 420.067 R	731926.8	87.987	%	0.0789				0.09%
Scandium-IS	7130092.0	98.185	%	6.4611				6.58%
Yttrium,7440-65-5A	3650825.8	97.123	%	6.2459				6.43%
Yttrium,7440-65-5R	74299.8	91.208	%	0.3435				0.38%
Aluminum,7429-90-5†	471.2	2.7439	mg/L	0.02394	2.7439	mg/L	0.02394	0.87%
Antimony,7440-36-0†	-3.5	-0.0008	mg/L	0.00029	-0.0008	mg/L	0.00029	34.97%
Arsenic,7440-38-2†	3.4	0.0026	mg/L	0.00144	0.0026	mg/L	0.00144	54.71%
Barium,7440-39-3†	690.7	0.0029	mg/L	0.00026	0.0029	mg/L	0.00026	8.94%
Beryllium,7440-41-7†	280.6	0.0000	mg/L	0.00006	0.0000	mg/L	0.00006	160.66%
Boron,7440-42-8†	1656.2	0.0356	mg/L	0.00112	0.0356	mg/L	0.00112	3.14%
Cadmium,7440-43-9†	-266.5	-0.0010	mg/L	0.00010	-0.0010	mg/L	0.00010	9.88%
Calcium,7440-70-2†	27485.9	20.884	mg/L	0.1953	20.884	mg/L	0.1953	0.93%
Chromium,7440-47-3†	814.4	0.0049	mg/L	0.00142	0.0049	mg/L	0.00142	29.10%
Cobalt,7440-48-4†	12.2	0.0000	mg/L	0.00003	0.0000	mg/L	0.00003	100.87%
Copper,7440-50-8†	643.8	0.0015	mg/L	0.00173	0.0015	mg/L	0.00173	113.44%
Iron,7439-89-6†	66.9	0.2141	mg/L	0.00520	0.2141	mg/L	0.00520	2.43%
Lead,7439-92-1†	128.4	0.0059	mg/L	0.00121	0.0059	mg/L	0.00121	20.31%
Magnesium,7439-95-4†	40.1	0.5935	mg/L	0.03758	0.5935	mg/L	0.03758	6.33%
Manganese,7439-96-5†	10797.2	0.0088	mg/L	0.00076	0.0088	mg/L	0.00076	8.69%
Molybdenum,7439-98-7†	85.0	0.0029	mg/L	0.00030	0.0029	mg/L	0.00030	10.51%
Nickel,7440-02-0†	59.0	0.0006	mg/L	0.00029	0.0006	mg/L	0.00029	46.64%
Potassium,7440-09-7†	7332.4	1.2656	mg/L	0.01532	1.2656	mg/L	0.01532	1.21%
Selenium,7782-49-2†	-11.4	-0.0035	mg/L	0.00141	-0.0035	mg/L	0.00141	40.15%
Silver,7440-22-4†	-273.2	-0.0006	mg/L	0.00063	-0.0006	mg/L	0.00063	106.85%
Sodium,7440-23-5†	12926.3	1.6521	mg/L	0.01472	1.6521	mg/L	0.01472	0.89%
Strontium,7440-24-6†	8205.8	0.0374	mg/L	0.00294	0.0374	mg/L	0.00294	7.85%
Thallium,7440-28-0†	-3.1	-0.0016	mg/L	0.00038	-0.0016	mg/L	0.00038	24.00%
Tin,7440-31-5†	62.6	0.0065	mg/L	0.00102	0.0065	mg/L	0.00102	15.58%
Titanium,7440-32-6†	49766.8	0.0599	mg/L	0.00619	0.0599	mg/L	0.00619	10.34%
Vanadium,7440-62-2†	3725.3	0.0119	mg/L	0.00220	0.0119	mg/L	0.00220	18.49%
Zinc,7440-66-6†	653.5	0.0030	mg/L	0.00101	0.0030	mg/L	0.00101	33.92%
Zirconium,7440-67-7†	1631.5	0.0031	mg/L	0.00009	0.0031	mg/L	0.00009	2.88%

Sequence No.: 2
Sample ID: 20305291102
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 58
Date Collected: 05/30/2003 15:55:04

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291102

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81129.1	99.556	%	0.2151				0.22%
Ar 420.067 R	728625.0	87.590	%	0.2108				0.24%
Scandium-IS	7246970.1	99.794	%	1.5067				1.51%

Yttrium,7440-65-5A	3698636.0	98.395	%	1.4785			1.50%
Yttrium,7440-65-5R	72756.9	89.314	%	0.8687			0.97%
Aluminum,7429-90-5†	82.6	0.4799	mg/L	0.01695	0.4799	mg/L	0.01695	3.53%
Antimony,7440-36-0†	3.8	0.0009	mg/L	0.00241	0.0009	mg/L	0.00241	259.60%
Arsenic,7440-38-2†	6.9	0.0036	mg/L	0.00246	0.0036	mg/L	0.00246	67.63%
Barium,7440-39-3†	3390.7	0.0143	mg/L	0.00023	0.0143	mg/L	0.00023	1.62%
Beryllium,7440-41-7†	3.0	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	>999.9%
Boron,7440-42-8†	2040.6	0.0440	mg/L	0.00072	0.0440	mg/L	0.00072	1.63%
Cadmium,7440-43-9†	-283.5	-0.0010	mg/L	0.00004	-0.0010	mg/L	0.00004	4.03%
Calcium,7440-70-2†	62228.1	47.281	mg/L	1.0200	47.281	mg/L	1.0200	2.16%
Chromium,7440-47-3†	306.4	0.0018	mg/L	0.00022	0.0018	mg/L	0.00022	11.83%
Cobalt,7440-48-4†	-9.4	-0.0001	mg/L	0.00015	-0.0001	mg/L	0.00015	106.93%
Copper,7440-50-8†	113.9	0.0003	mg/L	0.00046	0.0003	mg/L	0.00046	164.81%
Iron,7439-89-6†	18.4	0.0608	mg/L	0.00749	0.0608	mg/L	0.00749	12.33%
Lead,7439-92-1†	398.4	0.0174	mg/L	0.00044	0.0174	mg/L	0.00044	2.51%
Magnesium,7439-95-4†	417.5	6.1607	mg/L	0.05480	6.1607	mg/L	0.05480	0.89%
Manganese,7439-96-5†	38127.8	0.0309	mg/L	0.00066	0.0309	mg/L	0.00066	2.15%
Molybdenum,7439-98-7†	77.9	0.0024	mg/L	0.00024	0.0024	mg/L	0.00024	9.82%
Nickel,7440-02-0†	28.7	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	28.31%
Potassium,7440-09-7†	9008.6	1.5539	mg/L	0.00554	1.5539	mg/L	0.00554	0.36%
Selenium,7782-49-2†	-10.2	-0.0035	mg/L	0.00152	-0.0035	mg/L	0.00152	43.50%
Silver,7440-22-4†	-470.2	-0.0011	mg/L	0.00046	-0.0011	mg/L	0.00046	42.59%
Sodium,7440-23-5†	44930.8	5.7431	mg/L	0.01994	5.7431	mg/L	0.01994	0.35%
Strontium,7440-24-6†	15049.6	0.0683	mg/L	0.00168	0.0683	mg/L	0.00168	2.45%
Thallium,7440-28-0†	-2.7	-0.0014	mg/L	0.00013	-0.0014	mg/L	0.00013	9.24%
Tin,7440-31-5†	110.1	0.0102	mg/L	0.00034	0.0102	mg/L	0.00034	3.40%
Titanium,7440-32-6†	5729.4	0.0069	mg/L	0.00042	0.0069	mg/L	0.00042	6.07%
Vanadium,7440-62-2†	1380.2	0.0045	mg/L	0.00047	0.0045	mg/L	0.00047	10.58%
Zinc,7440-66-6†	196.6	-0.0010	mg/L	0.00023	-0.0010	mg/L	0.00023	22.85%
Zirconium,7440-67-7†	482.2	0.0009	mg/L	0.00022	0.0009	mg/L	0.00022	24.27%

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Sequence No.: 3
Sample ID: 20305291101
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 59
Date Collected: 05/30/2003 16:02:14

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305291101

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81227.4	99.677	%	0.2635				0.26%
Ar 420.067 R	731724.5	87.963	%	0.2335				0.27%
Scandium-IS	7293067.8	100.43	%	0.588				0.59%
Yttrium,7440-65-5A	3718485.5	98.923	%	1.0672				1.08%
Yttrium,7440-65-5R	74069.6	90.925	%	1.2159				1.34%
Aluminum,7429-90-5†	56.7	0.3293	mg/L	0.04398	0.3293	mg/L	0.04398	13.36%
Antimony,7440-36-0†	-5.9	-0.0015	mg/L	0.00205	-0.0015	mg/L	0.00205	139.36%
Arsenic,7440-38-2†	4.5	0.0024	mg/L	0.00109	0.0024	mg/L	0.00109	44.76%
Barium,7440-39-3†	1036.3	0.0044	mg/L	0.00004	0.0044	mg/L	0.00004	0.81%
Beryllium,7440-41-7†	-54.4	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	79.63%
Boron,7440-42-8†	1234.8	0.0266	mg/L	0.00097	0.0266	mg/L	0.00097	3.63%
Cadmium,7440-43-9†	-254.8	-0.0009	mg/L	0.00004	-0.0009	mg/L	0.00004	4.47%
Calcium,7440-70-2†	47990.1	36.464	mg/L	0.7172	36.464	mg/L	0.7172	1.97%
Chromium,7440-47-3†	233.8	0.0014	mg/L	0.00025	0.0014	mg/L	0.00025	17.84%
Cobalt,7440-48-4†	2.8	0.0000	mg/L	0.00014	0.0000	mg/L	0.00014	804.62%
Copper,7440-50-8†	118.7	0.0003	mg/L	0.00022	0.0003	mg/L	0.00022	78.62%
Iron,7439-89-6†	11.9	0.0392	mg/L	0.00482	0.0392	mg/L	0.00482	12.30%
Lead,7439-92-1†	11.9	0.0008	mg/L	0.00063	0.0008	mg/L	0.00063	80.70%
Magnesium,7439-95-4†	36.1	0.5354	mg/L	0.03675	0.5354	mg/L	0.03675	6.86%
Manganese,7439-96-5†	2702.3	0.0023	mg/L	0.00006	0.0023	mg/L	0.00006	2.76%
Molybdenum,7439-98-7†	110.7	0.0037	mg/L	0.00031	0.0037	mg/L	0.00031	8.43%
Nickel,7440-02-0†	54.0	0.0006	mg/L	0.00015	0.0006	mg/L	0.00015	26.67%
Potassium,7440-09-7†	8259.6	1.4254	mg/L	0.02366	1.4254	mg/L	0.02366	1.66%
Selenium,7782-49-2†	-21.5	-0.0074	mg/L	0.00064	-0.0074	mg/L	0.00064	8.64%
Silver,7440-22-4†	-371.5	-0.0008	mg/L	0.00040	-0.0008	mg/L	0.00040	47.51%
Sodium,7440-23-5†	13877.0	1.7734	mg/L	0.01740	1.7734	mg/L	0.01740	0.98%
Strontium,7440-24-6†	8340.6	0.0376	mg/L	0.00060	0.0376	mg/L	0.00060	1.60%
Thallium,7440-28-0†	-3.7	-0.0019	mg/L	0.00295	-0.0019	mg/L	0.00295	155.70%
Tin,7440-31-5†	101.9	0.0096	mg/L	0.00017	0.0096	mg/L	0.00017	1.76%
Titanium,7440-32-6†	7842.8	0.0094	mg/L	0.00027	0.0094	mg/L	0.00027	2.90%

Vanadium,7440-62-2†	1699.0	0.0054 mg/L	0.00015	0.0054 mg/L	0.00015	2.85%
Zinc,7440-66-6†	709.7	0.0025 mg/L	0.00023	0.0025 mg/L	0.00023	9.19%
Zirconium,7440-67-7†	513.5	0.0010 mg/L	0.00012	0.0010 mg/L	0.00012	12.77%

Sequence No.: 4
Sample ID: 20305283301
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 60
Date Collected: 05/30/2003 16:09:40
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305283301

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	77968.7	95.678	%	0.2860				0.30%
Ar 420.067 R	661219.7	79.487	%	1.1524				1.45%
Scandium-IS	6148421.0	84.667	%	0.7499				0.89%
Yttrium,7440-65-5A	3135813.2	83.423	%	0.7356				0.88%
Yttrium,7440-65-5R	66193.4	81.257	%	0.7169				0.88%
Aluminum,7429-90-5†	78393.9	456.59	mg/L	3.364	456.59	mg/L	3.364	0.74%
Antimony,7440-36-0†	-101.9	-0.0143	mg/L	0.00074	-0.0143	mg/L	0.00074	5.18%
Arsenic,7440-38-2†	977.5	0.5830	mg/L	0.00456	0.5830	mg/L	0.00456	0.78%
Barium,7440-39-3†	1829.2	0.0071	mg/L	0.00011	0.0071	mg/L	0.00011	1.61%
Beryllium,7440-41-7†	-866.5	-0.0002	mg/L	0.00002	-0.0002	mg/L	0.00002	12.37%
Boron,7440-42-8†	3999514.1	86.334	mg/L	0.2135	86.334	mg/L	0.2135	0.25%
Cadmium,7440-43-9†	-1368.0	-0.0030	mg/L	0.00006	-0.0030	mg/L	0.00006	1.86%
Calcium,7440-70-2†	1094.9	0.8197	mg/L	0.01198	0.8197	mg/L	0.01198	1.46%
Chromium,7440-47-3†	519.0	-0.0137	mg/L	0.00033	-0.0137	mg/L	0.00033	2.42%
Cobalt,7440-48-4†	88.1	0.0002	mg/L	0.00008	0.0002	mg/L	0.00008	47.05%
Copper,7440-50-8†	3068.9	0.0131	mg/L	0.00016	0.0131	mg/L	0.00016	1.21%
Iron,7439-89-6†	118.3	0.3572	mg/L	0.00423	0.3572	mg/L	0.00423	1.18%
Lead,7439-92-1†	-569.8	0.0331	mg/L	0.00049	0.0331	mg/L	0.00049	1.48%
Magnesium,7439-95-4†	4.5	0.0665	mg/L	0.01394	0.0665	mg/L	0.01394	20.95%
Manganese,7439-96-5†	8327.2	0.0115	mg/L	0.00004	0.0115	mg/L	0.00004	0.32%
Molybdenum,7439-98-7†	25411.9	0.9194	mg/L	0.00997	0.9194	mg/L	0.00997	1.08%
Nickel,7440-02-0†	15783.5	0.1688	mg/L	0.00187	0.1688	mg/L	0.00187	1.11%
Potassium,7440-09-7†	141410.2	24.413	mg/L	0.2079	24.413	mg/L	0.2079	0.85%
Selenium,7782-49-2†	-15.1	0.0590	mg/L	0.00324	0.0590	mg/L	0.00324	5.49%
Silver,7440-22-4†	381.9	0.0010	mg/L	0.00014	0.0010	mg/L	0.00014	14.85%
Sodium,7440-23-5†	Saturated2							
Saturated in preshot (code 2)								
Strontium,7440-24-6†	2084.3	0.0096	mg/L	0.00022	0.0096	mg/L	0.00022	2.29%
Thallium,7440-28-0†	-4.9	-0.0025	mg/L	0.00180	-0.0025	mg/L	0.00180	70.81%
Tin,7440-31-5†	40.0	0.0119	mg/L	0.00130	0.0119	mg/L	0.00130	10.94%
Titanium,7440-32-6†	7290.5	0.0088	mg/L	0.00049	0.0088	mg/L	0.00049	5.61%
Vanadium,7440-62-2†	16461.1	0.0524	mg/L	0.00091	0.0524	mg/L	0.00091	1.74%
Zinc,7440-66-6†	1559.5	0.0082	mg/L	0.00012	0.0082	mg/L	0.00012	1.43%
Zirconium,7440-67-7†	4035.6	0.0076	mg/L	0.00086	0.0076	mg/L	0.00086	11.32%

Sequence No.: 5
Sample ID: 20305293201
Analyst:
Nebulizer Back Pressure: 197.0 kPa
Sample Wt:
Dilution: 1X

Autosampler Location: 61
Date Collected: 05/30/2003 16:16:50
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 20305293201

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	78766.6	96.657	%	0.3809				0.39%
Ar 420.067 R	667659.4	80.261	%	0.2820				0.35%
Scandium-IS	6521735.5	89.807	%	0.7668				0.85%
Yttrium,7440-65-5A	3308153.3	88.007	%	0.7491				0.85%
Yttrium,7440-65-5R	66372.6	81.477	%	0.6561				0.81%
Aluminum,7429-90-5†	59030.3	343.81	mg/L	5.399	343.81	mg/L	5.399	1.57%
Antimony,7440-36-0†	-78.4	-0.0114	mg/L	0.00136	-0.0114	mg/L	0.00136	11.96%
Arsenic,7440-38-2†	874.2	0.5088	mg/L	0.01154	0.5088	mg/L	0.01154	2.27%
Barium,7440-39-3†	10877.4	0.0455	mg/L	0.00045	0.0455	mg/L	0.00045	0.99%
Beryllium,7440-41-7†	205.1	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	151.08%

Boron,7440-42-8†	3330452.7	71.892 mg/L	0.0707	71.892 mg/L	0.0707	0.10%
Cadmium,7440-43-9†	-962.5	-0.0021 mg/L	0.00005	-0.0021 mg/L	0.00005	2.42%
Calcium,7440-70-2†	6102.4	4.6258 mg/L	0.02571	4.6258 mg/L	0.02571	0.56%
Chromium,7440-47-3†	2364.6	0.0017 mg/L	0.00050	0.0017 mg/L	0.00050	29.68%
Cobalt,7440-48-4†	256.0	0.0026 mg/L	0.00009	0.0026 mg/L	0.00009	3.44%
Copper,7440-50-8†	12664.6	0.0335 mg/L	0.00088	0.0335 mg/L	0.00088	2.62%
Iron,7439-89-6†	487.8	1.5420 mg/L	0.01510	1.5420 mg/L	0.01510	0.98%
Lead,7439-92-1†	389.8	0.0599 mg/L	0.00017	0.0599 mg/L	0.00017	0.28%
Magnesium,7439-95-4†	501.8	7.4014 mg/L	0.14610	7.4014 mg/L	0.14610	1.97%
Manganese,7439-96-5†	263161.0	0.2150 mg/L	0.00226	0.2150 mg/L	0.00226	1.05%
Molybdenum,7439-98-7†	24008.5	0.8687 mg/L	0.00759	0.8687 mg/L	0.00759	0.87%
Nickel,7440-02-0†	14127.9	0.1513 mg/L	0.00095	0.1513 mg/L	0.00095	0.63%
Potassium,7440-09-7†	123954.6	21.400 mg/L	0.5656	21.400 mg/L	0.5656	2.64%
Selenium,7782-49-2†	-7.9	0.0459 mg/L	0.00150	0.0459 mg/L	0.00150	3.27%
Silver,7440-22-4†	442.1	0.0012 mg/L	0.00018	0.0012 mg/L	0.00018	14.95%
Sodium,7440-23-5†	Saturated2					
Saturated in preshot (code 2)						
Strontium,7440-24-6†	7020.1	0.0324 mg/L	0.00044	0.0324 mg/L	0.00044	1.37%
Thallium,7440-28-0†	-8.6	-0.0044 mg/L	0.00138	-0.0044 mg/L	0.00138	31.13%
Tin,7440-31-5†	33.0	0.0096 mg/L	0.00081	0.0096 mg/L	0.00081	8.44%
Titanium,7440-32-6†	41811.9	0.0503 mg/L	0.00051	0.0503 mg/L	0.00051	1.01%
Vanadium,7440-62-2†	32815.9	0.1045 mg/L	0.00130	0.1045 mg/L	0.00130	1.25%
Zinc,7440-66-6†	12546.4	0.0747 mg/L	0.00074	0.0747 mg/L	0.00074	1.00%
Zirconium,7440-67-7†	1894.3	0.0035 mg/L	0.00023	0.0035 mg/L	0.00023	6.53%

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Sequence No.: 6
Sample ID: 101523
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 62
Date Collected: 05/30/2003 16:24:01

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101523

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81152.4	99.585	%	0.3453				0.35%
Ar 420.067 R	699619.5	84.103	%	0.2202				0.26%
Scandium-IS	7528538.2	103.67	%	0.239				0.23%
Yttrium,7440-65-5A	3864900.2	102.82	%	0.208				0.20%
Yttrium,7440-65-5R	72278.4	88.726	%	1.0777				1.21%
Aluminum,7429-90-5†	3.2	0.0189	mg/L	0.00949	0.7556	mg/kg	0.37964	50.24%
Antimony,7440-36-0†	-8.4	-0.0021	mg/L	0.00144	-0.0827	mg/kg	0.05762	69.68%
Arsenic,7440-38-2†	6.1	0.0030	mg/L	0.00117	0.1203	mg/kg	0.04670	38.83%
Barium,7440-39-3†	1.7	0.0000	mg/L	0.00002	0.0003	mg/kg	0.00085	298.62%
Beryllium,7440-41-7†	108.8	0.0000	mg/L	0.00001	0.0008	mg/kg	0.00060	73.96%
Boron,7440-42-8†	31844.1	0.6875	mg/L	0.07137	27.499	mg/kg	2.8548	10.38%
Cadmium,7440-43-9†	-271.9	-0.0010	mg/L	0.00003	-0.0396	mg/kg	0.00124	3.14%
Calcium,7440-70-2†	-13.4	-0.0102	mg/L	0.00355	-0.4069	mg/kg	0.14200	34.90%
Chromium,7440-47-3†	-101.9	-0.0006	mg/L	0.00010	-0.0250	mg/kg	0.00390	15.63%
Cobalt,7440-48-4†	-10.5	-0.0001	mg/L	0.00012	-0.0055	mg/kg	0.00464	83.58%
Copper,7440-50-8†	-410.7	-0.0009	mg/L	0.00011	-0.0376	mg/kg	0.00445	11.82%
Iron,7439-89-6†	5.0	0.0160	mg/L	0.00705	0.6384	mg/kg	0.28184	44.15%
Lead,7439-92-1†	-43.3	-0.0018	mg/L	0.00062	-0.0740	mg/kg	0.02470	33.39%
Magnesium,7439-95-4†	2.6	0.0391	mg/L	0.01055	1.5624	mg/kg	0.42202	27.01%
Manganese,7439-96-5†	516.8	0.0004	mg/L	0.00005	0.0166	mg/kg	0.00216	12.99%
Molybdenum,7439-98-7†	46.2	0.0017	mg/L	0.00016	0.0669	mg/kg	0.00636	9.51%
Nickel,7440-02-0†	26.1	0.0003	mg/L	0.00024	0.0113	mg/kg	0.00941	83.46%
Potassium,7440-09-7†	1578.0	0.2726	mg/L	0.00790	10.904	mg/kg	0.3161	2.90%
Selenium,7782-49-2†	-3.7	-0.0013	mg/L	0.00195	-0.0515	mg/kg	0.07805	151.61%
Silver,7440-22-4†	-435.9	-0.0010	mg/L	0.00021	-0.0398	mg/kg	0.00853	21.44%
Sodium,7440-23-5†	21448.4	2.7429	mg/L	0.07943	109.72	mg/kg	3.177	2.90%
Strontium,7440-24-6†	-105.5	-0.0005	mg/L	0.00013	-0.0195	mg/kg	0.00513	26.29%
Thallium,7440-28-0†	-2.5	-0.0013	mg/L	0.00177	-0.0508	mg/kg	0.07088	139.58%
Tin,7440-31-5†	1.6	0.0002	mg/L	0.00073	0.0063	mg/kg	0.02929	463.05%
Titanium,7440-32-6†	-259.1	-0.0003	mg/L	0.00018	-0.0125	mg/kg	0.00730	58.50%
Vanadium,7440-62-2†	-45.8	-0.0001	mg/L	0.00025	-0.0059	mg/kg	0.01012	172.18%
Zinc,7440-66-6†	-43.1	-0.0003	mg/L	0.00007	-0.0107	mg/kg	0.00273	25.52%
Zirconium,7440-67-7†	-108.8	-0.0002	mg/L	0.00006	-0.0082	mg/kg	0.00226	27.62%

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Sequence No.: 7

Autosampler Location: 63

Sample ID: 101524
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Date Collected: 05/30/2003 16:31:11

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101524

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81908.0	100.51	%	0.379				0.38%
Ar 420.067 R	702568.4	84.458	%	0.0397				0.05%
Scandium-IS	7163073.7	98.639	%	0.2556				0.26%
Yttrium,7440-65-5A	3662707.1	97.440	%	0.5142				0.53%
Yttrium,7440-65-5R	69080.6	84.801	%	0.8982				1.06%
Aluminum,7429-90-5†	1756.5	10.215	mg/L	0.1063	408.61	mg/kg	4.252	1.04%
Antimony,7440-36-0†	4197.4	1.0207	mg/L	0.00324	40.826	mg/kg	0.1296	0.32%
Arsenic,7440-38-2†	2023.5	1.0240	mg/L	0.00897	40.960	mg/kg	0.3588	0.88%
Barium,7440-39-3†	233905.1	0.9894	mg/L	0.00361	39.575	mg/kg	0.1443	0.36%
Beryllium,7440-41-7†	5256053.2	0.9761	mg/L	0.00938	39.042	mg/kg	0.3752	0.96%
Boron,7440-42-8†	258075.4	5.5682	mg/L	0.02805	222.73	mg/kg	1.122	0.50%
Cadmium,7440-43-9†	270335.6	0.9832	mg/L	0.00526	39.330	mg/kg	0.2105	0.54%
Calcium,7440-70-2†	13507.4	10.252	mg/L	0.0373	410.08	mg/kg	1.494	0.36%
Chromium,7440-47-3†	161372.5	0.9871	mg/L	0.00463	39.484	mg/kg	0.1852	0.47%
Cobalt,7440-48-4†	74508.8	0.9895	mg/L	0.00415	39.580	mg/kg	0.1660	0.42%
Copper,7440-50-8†	428483.4	0.9835	mg/L	0.00490	39.339	mg/kg	0.1960	0.50%
Iron,7439-89-6†	3257.6	10.399	mg/L	0.0287	415.95	mg/kg	1.148	0.28%
Lead,7439-92-1†	23045.5	0.9857	mg/L	0.00521	39.428	mg/kg	0.2085	0.53%
Magnesium,7439-95-4†	614.0	9.0652	mg/L	0.11728	362.61	mg/kg	4.691	1.29%
Manganese,7439-96-5†	1232406.9	0.9900	mg/L	0.00450	39.599	mg/kg	0.1800	0.45%
Molybdenum,7439-98-7†	28300.2	1.0239	mg/L	0.00492	40.957	mg/kg	0.1970	0.48%
Nickel,7440-02-0†	91332.8	0.9860	mg/L	0.00440	39.438	mg/kg	0.1759	0.45%
Potassium,7440-09-7†	126997.2	21.935	mg/L	0.2903	877.41	mg/kg	11.611	1.32%
Selenium,7782-49-2†	2830.1	0.9915	mg/L	0.00936	39.661	mg/kg	0.3746	0.94%
Silver,7440-22-4†	426811.7	0.9771	mg/L	0.00462	39.082	mg/kg	0.1846	0.47%
Sodium,7440-23-5†	327275.1	41.851	mg/L	0.5543	1674.1	mg/kg	22.17	1.32%
Strontium,7440-24-6†	179146.8	0.8288	mg/L	0.00472	33.152	mg/kg	0.1888	0.57%
Thallium,7440-28-0†	1916.4	0.9869	mg/L	0.00688	39.477	mg/kg	0.2751	0.70%
Tin,7440-31-5†	9789.0	1.0088	mg/L	0.00571	40.353	mg/kg	0.2285	0.57%
Titanium,7440-32-6†	843538.7	1.0153	mg/L	0.00467	40.610	mg/kg	0.1869	0.46%
Vanadium,7440-62-2†	310363.1	0.9883	mg/L	0.00420	39.531	mg/kg	0.1681	0.43%
Zinc,7440-66-6†	168583.3	1.0129	mg/L	0.00448	40.515	mg/kg	0.1792	0.44%
Zirconium,7440-67-7†	599300.2	1.1257	mg/L	0.00534	45.029	mg/kg	0.2136	0.47%

Sequence No.: 8
Sample ID: 20305231201
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 64
Date Collected: 05/30/2003 16:38:23

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 20305231201

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81054.5	99.465	%	0.5095				0.51%
Ar 420.067 R	709363.8	85.275	%	0.1011				0.12%
Scandium-IS	7573600.1	104.29	%	0.961				0.92%
Yttrium,7440-65-5A	3871165.4	102.99	%	0.288				0.28%
Yttrium,7440-65-5R	73573.3	90.316	%	0.3213				0.36%
Aluminum,7429-90-5†	1.3	0.0075	mg/L	0.00865	0.2984	mg/kg	0.34612	115.98%
Antimony,7440-36-0†	5.6	0.0014	mg/L	0.00068	0.0558	mg/kg	0.02731	48.94%
Arsenic,7440-38-2†	-59.7	-0.0292	mg/L	0.00114	-1.1700	mg/kg	0.04549	3.89%
Barium,7440-39-3†	72.2	0.0003	mg/L	0.00005	0.0122	mg/kg	0.00212	17.38%
Beryllium,7440-41-7†	167.2	0.0000	mg/L	0.00002	0.0012	mg/kg	0.00078	63.01%
Boron,7440-42-8†	10439.3	0.2254	mg/L	0.00555	9.0148	mg/kg	0.22217	2.46%
Cadmium,7440-43-9†	-263.8	-0.0010	mg/L	0.00009	-0.0384	mg/kg	0.00368	9.59%
Calcium,7440-70-2†	153.9	0.1169	mg/L	0.00528	4.6756	mg/kg	0.21117	4.52%
Chromium,7440-47-3†	-29.8	-0.0002	mg/L	0.00026	-0.0074	mg/kg	0.01051	142.48%
Cobalt,7440-48-4†	-15.4	-0.0002	mg/L	0.00025	-0.0082	mg/kg	0.01012	123.95%
Copper,7440-50-8†	25.0	0.0001	mg/L	0.00020	0.0021	mg/kg	0.00786	371.15%
Iron,7439-89-6†	3.5	0.0113	mg/L	0.00782	0.4510	mg/kg	0.31279	69.35%

Lead,7439-92-1†	-24.3	-0.0010 mg/L	0.00031	-0.0415 mg/kg	0.01234	29.70%
Magnesium,7439-95-4†	5.3	0.0787 mg/L	0.07933	3.1478 mg/kg	3.17316	100.81%
Manganese,7439-96-5†	4046.3	0.0032 mg/L	0.00004	0.1300 mg/kg	0.00158	1.22%
Molybdenum,7439-98-7†	111.2	0.0040 mg/L	0.00030	0.1610 mg/kg	0.01186	7.37%
Nickel,7440-02-0†	67.1	0.0007 mg/L	0.00023	0.0290 mg/kg	0.00940	32.43%
Potassium,7440-09-7†	890.1	0.1538 mg/L	0.01905	6.1501 mg/kg	0.76218	12.39%
Selenium,7782-49-2†	6.6	0.0023 mg/L	0.00169	0.0923 mg/kg	0.06773	73.36%
Silver,7440-22-4†	-299.3	-0.0007 mg/L	0.00025	-0.0273 mg/kg	0.00990	36.23%
Sodium,7440-23-5†	11675.1	1.4930 mg/L	0.03007	59.722 mg/kg	1.2028	2.01%
Strontium,7440-24-6†	-48.7	-0.0002 mg/L	0.00016	-0.0091 mg/kg	0.00658	71.95%
Thallium,7440-28-0†	-5.0	-0.0026 mg/L	0.00203	-0.1027 mg/kg	0.08119	79.08%
Tin,7440-31-5†	43.2	0.0044 mg/L	0.00094	0.1760 mg/kg	0.03770	21.42%
Titanium,7440-32-6†	-158.6	-0.0002 mg/L	0.00036	-0.0076 mg/kg	0.01425	186.57%
Vanadium,7440-62-2†	124.7	0.0004 mg/L	0.00014	0.0159 mg/kg	0.00545	34.32%
Zinc,7440-66-6†	32396.9	0.1955 mg/L	0.00135	7.8209 mg/kg	0.05416	0.69%
Zirconium,7440-67-7†	2557.6	0.0048 mg/L	0.00081	0.1922 mg/kg	0.03255	16.93%

Sequence No.: 9
Sample ID: 101525
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 65
Date Collected: 05/30/2003 16:45:51

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101525

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	80409.6	98.673	%	0.0719				0.07%
Ar 420.067 R	707256.3	85.021	%	0.0627				0.07%
Scandium-IS	7483611.8	103.05	%	0.677				0.66%
Yttrium,7440-65-5A	3885586.2	103.37	%	0.536				0.52%
Yttrium,7440-65-5R	74324.6	91.238	%	0.1320				0.14%
Aluminum,7429-90-5†	2.5	0.0140	mg/L	0.03738	0.5594	mg/kg	1.49517	267.29%
Antimony,7440-36-0†	0.6	0.0005	mg/L	0.00050	0.0192	mg/kg	0.02014	105.09%
Arsenic,7440-38-2†	-40.2	-0.0196	mg/L	0.00199	-0.7851	mg/kg	0.07957	10.14%
Barium,7440-39-3†	134.0	0.0006	mg/L	0.00010	0.0227	mg/kg	0.00389	17.14%
Beryllium,7440-41-7†	695.4	0.0001	mg/L	0.00002	0.0030	mg/kg	0.00087	29.43%
Boron,7440-42-8†	11755.3	0.2538	mg/L	0.01706	10.151	mg/kg	0.6823	6.72%
Cadmium,7440-43-9†	-272.5	-0.0010	mg/L	0.00001	-0.0397	mg/kg	0.00046	1.15%
Calcium,7440-70-2†	158.1	0.1183	mg/L	0.00234	4.7328	mg/kg	0.09356	1.98%
Chromium,7440-47-3†	-66.2	-0.0004	mg/L	0.00007	-0.0172	mg/kg	0.00288	16.70%
Cobalt,7440-48-4†	28.9	-0.0001	mg/L	0.00019	-0.0049	mg/kg	0.00780	159.26%
Copper,7440-50-8†	223.4	0.0004	mg/L	0.00004	0.0166	mg/kg	0.00145	8.72%
Iron,7439-89-6†	3.7	0.0121	mg/L	0.00827	0.4860	mg/kg	0.33100	68.11%
Lead,7439-92-1†	-29.1	-0.0013	mg/L	0.00052	-0.0515	mg/kg	0.02068	40.20%
Magnesium,7439-95-4†	6.5	0.0970	mg/L	0.04291	3.8817	mg/kg	1.71626	44.21%
Manganese,7439-96-5†	7314.4	0.0059	mg/L	0.00004	0.2358	mg/kg	0.00146	0.62%
Molybdenum,7439-98-7†	73.5	0.0027	mg/L	0.00016	0.1063	mg/kg	0.00639	6.01%
Nickel,7440-02-0†	18.5	0.0002	mg/L	0.00016	0.0074	mg/kg	0.00625	84.50%
Potassium,7440-09-7†	554.5	0.0955	mg/L	0.01184	3.8213	mg/kg	0.47349	12.39%
Selenium,7782-49-2†	4.4	0.0015	mg/L	0.00078	0.0618	mg/kg	0.03121	50.51%
Silver,7440-22-4†	-494.1	-0.0011	mg/L	0.00026	-0.0451	mg/kg	0.01029	22.79%
Sodium,7440-23-5†	8493.9	1.0862	mg/L	0.00318	43.449	mg/kg	0.1272	0.29%
Strontium,7440-24-6†	-59.4	-0.0003	mg/L	0.00026	-0.0111	mg/kg	0.01042	93.61%
Thallium,7440-28-0†	-8.1	-0.0042	mg/L	0.00074	-0.1673	mg/kg	0.02973	17.77%
Tin,7440-31-5†	8.3	0.0033	mg/L	0.00026	0.1313	mg/kg	0.01030	7.85%
Titanium,7440-32-6†	200639.1	0.2415	mg/L	0.00022	9.6593	mg/kg	0.00871	0.09%
Vanadium,7440-62-2†	47.6	0.0003	mg/L	0.00023	0.0102	mg/kg	0.00928	91.25%
Zinc,7440-66-6†	30979.6	0.1873	mg/L	0.00060	7.4928	mg/kg	0.02387	0.32%
Zirconium,7440-67-7†	921.5	0.0017	mg/L	0.00014	0.0680	mg/kg	0.00563	8.27%

Sequence No.: 10
Sample ID: 101526
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 66
Date Collected: 05/30/2003 16:53:19

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101526

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81078.2	99.494	%	0.2728				0.27%
Ar 420.067 R	708391.4	85.158	%	0.1078				0.13%
Scandium-IS	7305847.1	100.61	%	0.320				0.32%
Yttrium,7440-65-5A	3674964.6	97.766	%	0.5569				0.57%
Yttrium,7440-65-5R	70802.1	86.914	%	0.2722				0.31%
Aluminum,7429-90-5†	1616.1	9.3987	mg/L	0.04679	375.95	mg/kg	1.872	0.50%
Antimony,7440-36-0†	3869.9	0.9403	mg/L	0.01267	37.610	mg/kg	0.5069	1.35%
Arsenic,7440-38-2†	1885.5	0.9548	mg/L	0.01666	38.190	mg/kg	0.6662	1.74%
Barium,7440-39-3†	222452.6	0.9409	mg/L	0.00097	37.637	mg/kg	0.0387	0.10%
Beryllium,7440-41-7†	5091446.5	0.9455	mg/L	0.00647	37.820	mg/kg	0.2589	0.68%
Boron,7440-42-8†	235008.4	5.0704	mg/L	0.01377	202.82	mg/kg	0.551	0.27%
Cadmium,7440-43-9†	251442.6	0.9145	mg/L	0.00231	36.581	mg/kg	0.0925	0.25%
Calcium,7440-70-2†	12709.2	9.6462	mg/L	0.03296	385.85	mg/kg	1.318	0.34%
Chromium,7440-47-3†	153780.4	0.9407	mg/L	0.00196	37.626	mg/kg	0.0784	0.21%
Cobalt,7440-48-4†	71828.9	0.9540	mg/L	0.00195	38.158	mg/kg	0.0779	0.20%
Copper,7440-50-8†	425797.5	0.9773	mg/L	0.00074	39.091	mg/kg	0.0295	0.08%
Iron,7439-89-6†	3047.4	9.7278	mg/L	0.04913	389.11	mg/kg	1.965	0.51%
Lead,7439-92-1†	21733.6	0.9295	mg/L	0.01252	37.181	mg/kg	0.5007	1.35%
Magnesium,7439-95-4†	587.1	8.6688	mg/L	0.02924	346.75	mg/kg	1.170	0.34%
Manganese,7439-96-5†	1179981.5	0.9478	mg/L	0.00125	37.914	mg/kg	0.0502	0.13%
Molybdenum,7439-98-7†	26641.3	0.9639	mg/L	0.01231	38.556	mg/kg	0.4925	1.28%
Nickel,7440-02-0†	86128.3	0.9298	mg/L	0.00220	37.191	mg/kg	0.0881	0.24%
Potassium,7440-09-7†	118940.5	20.544	mg/L	0.0730	821.74	mg/kg	2.922	0.36%
Selenium,7782-49-2†	2693.0	0.9434	mg/L	0.01035	37.736	mg/kg	0.4142	1.10%
Silver,7440-22-4†	44537.0	0.1034	mg/L	0.00183	4.1349	mg/kg	0.07325	1.77%
Sodium,7440-23-5†	309211.3	39.542	mg/L	0.0416	1581.7	mg/kg	1.66	0.11%
Strontium,7440-24-6†	176382.9	0.8160	mg/L	0.00467	32.641	mg/kg	0.1869	0.57%
Thallium,7440-28-0†	1342.9	0.6916	mg/L	0.00516	27.663	mg/kg	0.2064	0.75%
Tin,7440-31-5†	9247.8	0.9530	mg/L	0.01303	38.121	mg/kg	0.5213	1.37%
Titanium,7440-32-6†	794774.3	0.9566	mg/L	0.00128	38.263	mg/kg	0.0513	0.13%
Vanadium,7440-62-2†	295657.0	0.9415	mg/L	0.00105	37.659	mg/kg	0.0418	0.11%
Zinc,7440-66-6†	195315.8	1.1746	mg/L	0.00165	46.984	mg/kg	0.0659	0.14%
Zirconium,7440-67-7†	563935.4	1.0593	mg/L	0.00114	42.372	mg/kg	0.0457	0.11%

Sequence No.: 11
Sample ID: 1800
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 05/30/2003 17:00:31
Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1800

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81420.1	99.913	%	0.3740				0.37%
Ar 420.067 R	711325.9	85.510	%	0.0302				0.04%
Scandium-IS	7403531.8	101.95	%	0.234				0.23%
Yttrium,7440-65-5A	3765026.0	100.16	%	0.243				0.24%
Yttrium,7440-65-5R	73005.1	89.619	%	0.3138				0.35%
Aluminum,7429-90-5†	871.2	5.0678	mg/L	0.07138	5.0678	mg/L	0.07138	1.41%
QC value within limits for Aluminum,7429-90-5 Recovery = 101.36%								
Antimony,7440-36-0†	40.0	-0.0027	mg/L	0.00186	-0.0027	mg/L	0.00186	69.63%
Arsenic,7440-38-2†	1020.4	0.5161	mg/L	0.00258	0.5161	mg/L	0.00258	0.50%
QC value within limits for Arsenic,7440-38-2 Recovery = 103.22%								
Barium,7440-39-3†	117803.9	0.4983	mg/L	0.00770	0.4983	mg/L	0.00770	1.54%
QC value within limits for Barium,7440-39-3 Recovery = 99.66%								
Beryllium,7440-41-7†	2684988.7	0.4987	mg/L	0.00054	0.4987	mg/L	0.00054	0.11%
QC value within limits for Beryllium,7440-41-7 Recovery = 99.74%								
Boron,7440-42-8†	9679.0	0.2073	mg/L	0.00959	0.2073	mg/L	0.00959	4.63%
Cadmium,7440-43-9†	135902.6	0.4943	mg/L	0.00807	0.4943	mg/L	0.00807	1.63%
QC value within limits for Cadmium,7440-43-9 Recovery = 98.86%								
Calcium,7440-70-2†	6746.4	5.1242	mg/L	0.04334	5.1242	mg/L	0.04334	0.85%
QC value within limits for Calcium,7440-70-2 Recovery = 102.48%								
Chromium,7440-47-3†	81424.8	0.4981	mg/L	0.00771	0.4981	mg/L	0.00771	1.55%
QC value within limits for Chromium,7440-47-3 Recovery = 99.62%								
Cobalt,7440-48-4†	37880.6	0.5041	mg/L	0.00851	0.5041	mg/L	0.00851	1.69%
QC value within limits for Cobalt,7440-48-4 Recovery = 100.83%								
Copper,7440-50-8†	219013.8	0.5028	mg/L	0.00961	0.5028	mg/L	0.00961	1.91%
QC value within limits for Copper,7440-50-8 Recovery = 100.57%								

Iron,7439-89-6†	1617.0	5.1614 mg/L	0.05562	5.1614 mg/L	0.05562	1.08%
QC value within limits for Iron,7439-89-6 Recovery = 103.23%						
Lead,7439-92-1†	12010.0	0.5138 mg/L	0.00838	0.5138 mg/L	0.00838	1.63%
QC value within limits for Lead,7439-92-1 Recovery = 102.75%						
Magnesium,7439-95-4†	315.2	4.6524 mg/L	0.02553	4.6524 mg/L	0.02553	0.55%
QC value within limits for Magnesium,7439-95-4 Recovery = 93.05%						
Manganese,7439-96-5†	629225.1	0.5054 mg/L	0.00042	0.5054 mg/L	0.00042	0.08%
QC value within limits for Manganese,7439-96-5 Recovery = 101.08%						
Molybdenum,7439-98-7†	63.7	0.0023 mg/L	0.00052	0.0023 mg/L	0.00052	22.93%
Nickel,7440-02-0†	46493.8	0.5019 mg/L	0.00891	0.5019 mg/L	0.00891	1.78%
QC value within limits for Nickel,7440-02-0 Recovery = 100.39%						
Potassium,7440-09-7†	61754.1	10.667 mg/L	0.0249	10.667 mg/L	0.0249	0.23%
QC value within limits for Potassium,7440-09-7 Recovery = 106.67%						
Selenium,7782-49-2†	1420.9	0.4978 mg/L	0.00305	0.4978 mg/L	0.00305	0.61%
QC value within limits for Selenium,7782-49-2 Recovery = 99.56%						
Silver,7440-22-4†	216521.9	0.4956 mg/L	0.00761	0.4956 mg/L	0.00761	1.54%
QC value within limits for Silver,7440-22-4 Recovery = 99.13%						
Sodium,7440-23-5†	166596.4	21.304 mg/L	0.0205	21.304 mg/L	0.0205	0.10%
QC value within limits for Sodium,7440-23-5 Recovery = 106.52%						
Strontium,7440-24-6†	95447.1	0.4416 mg/L	0.00252	0.4416 mg/L	0.00252	0.57%
QC value less than the lower limit for Strontium,7440-24-6 Recovery = 88.32%						
Thallium,7440-28-0†	982.7	0.5061 mg/L	0.00410	0.5061 mg/L	0.00410	0.81%
QC value within limits for Thallium,7440-28-0 Recovery = 101.22%						
Tin,7440-31-5†	24.5	0.0027 mg/L	0.00043	0.0027 mg/L	0.00043	16.00%
Titanium,7440-32-6†	281.1	0.0003 mg/L	0.00014	0.0003 mg/L	0.00014	41.54%
Vanadium,7440-62-2†	154873.5	0.4929 mg/L	0.00882	0.4929 mg/L	0.00882	1.79%
QC value within limits for Vanadium,7440-62-2 Recovery = 98.59%						
Zinc,7440-66-6†	83033.7	0.4981 mg/L	0.00832	0.4981 mg/L	0.00832	1.67%
QC value within limits for Zinc,7440-66-6 Recovery = 99.62%						
Zirconium,7440-67-7†	258454.5	0.4855 mg/L	0.00399	0.4855 mg/L	0.00399	0.82%
QC value within limits for Zirconium,7440-67-7 Recovery = 97.11%						

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: 1802
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 05/30/2003 17:07:36

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1802

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81573.0	100.10	%	0.066				0.07%
Ar 420.067 R	714928.0	85.943	%	0.0765				0.09%
Scandium-IS	7484890.4	103.07	%	0.468				0.45%
Yttrium,7440-65-5A	3834595.4	102.01	%	0.436				0.43%
Yttrium,7440-65-5R	73919.0	90.740	%	0.7490				0.83%
Aluminum,7429-90-5†	2.9	0.0161	mg/L	0.01092	0.0161	mg/L	0.01092	67.70%
Antimony,7440-36-0†	2007.7	0.5002	mg/L	0.00279	0.5002	mg/L	0.00279	0.56%
QC value within limits for Antimony,7440-36-0 Recovery = 100.04%								
Arsenic,7440-38-2†	3.1	0.0016	mg/L	0.00318	0.0016	mg/L	0.00318	200.97%
Barium,7440-39-3†	34.9	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	120.56%
Beryllium,7440-41-7†	1691.7	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	6.03%
Boron,7440-42-8†	124989.2	2.6984	mg/L	0.01074	2.6984	mg/L	0.01074	0.40%
QC value within limits for Boron,7440-42-8 Recovery = 107.94%								
Cadmium,7440-43-9†	-271.1	-0.0010	mg/L	0.00002	-0.0010	mg/L	0.00002	1.89%
Calcium,7440-70-2†	30.3	0.0194	mg/L	0.00707	0.0194	mg/L	0.00707	36.46%
Chromium,7440-47-3†	-57.6	-0.0004	mg/L	0.00015	-0.0004	mg/L	0.00015	37.82%
Cobalt,7440-48-4†	64.0	-0.0002	mg/L	0.00021	-0.0002	mg/L	0.00021	98.38%
Copper,7440-50-8†	386.6	0.0007	mg/L	0.00019	0.0007	mg/L	0.00019	27.34%
Iron,7439-89-6†	5.5	0.0180	mg/L	0.00327	0.0180	mg/L	0.00327	18.19%
Lead,7439-92-1†	-54.7	-0.0024	mg/L	0.00068	-0.0024	mg/L	0.00068	28.22%
Magnesium,7439-95-4†	-1.5	-0.0196	mg/L	0.01203	-0.0196	mg/L	0.01203	61.49%
Manganese,7439-96-5†	843.4	0.0007	mg/L	0.00002	0.0007	mg/L	0.00002	2.93%
Molybdenum,7439-98-7†	14283.5	0.5168	mg/L	0.00086	0.5168	mg/L	0.00086	0.17%
QC value within limits for Molybdenum,7439-98-7 Recovery = 103.36%								
Nickel,7440-02-0†	-0.3	0.0000	mg/L	0.00014	0.0000	mg/L	0.00014	430.66%
Potassium,7440-09-7†	139.1	0.0235	mg/L	0.02500	0.0235	mg/L	0.02500	106.20%
Selenium,7782-49-2†	5.0	0.0018	mg/L	0.00088	0.0018	mg/L	0.00088	49.77%
Silver,7440-22-4†	1141.1	0.0026	mg/L	0.00016	0.0026	mg/L	0.00016	6.06%

Sodium,7440-23-5†	5119.8	0.6548 mg/L	0.06207	0.6548 mg/L	0.06207	9.48%
Strontium,7440-24-6†	-72.5	-0.0003 mg/L	0.00023	-0.0003 mg/L	0.00023	67.14%
Thallium,7440-28-0†	-5.7	-0.0030 mg/L	0.00065	-0.0030 mg/L	0.00065	22.00%
Tin,7440-31-5†	4880.1	0.5028 mg/L	0.00238	0.5028 mg/L	0.00238	0.47%
QC value within limits for Tin,7440-31-5 Recovery = 100.55%						
Titanium,7440-32-6†	419885.1	0.5054 mg/L	0.00035	0.5054 mg/L	0.00035	0.07%
QC value within limits for Titanium,7440-32-6 Recovery = 101.07%						
Vanadium,7440-62-2†	26.6	0.0003 mg/L	0.00028	0.0003 mg/L	0.00028	93.20%
Zinc,7440-66-6†	-591.5	-0.0029 mg/L	0.00011	-0.0029 mg/L	0.00011	3.82%
Zirconium,7440-67-7†	302465.0	0.5682 mg/L	0.00285	0.5682 mg/L	0.00285	0.50%

All analytes passed QC.

Sequence No.: 13
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt:
Dilution: RR

Autosampler Location: 1
Date Collected: 05/30/2003 17:14:51

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Calib Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	81188.8	99.629	%	0.1783				0.18%
Ar 420.067 R	711238.4	85.500	%	0.1149				0.13%
Scandium-IS	7361569.8	101.37	%	0.498				0.49%
Yttrium,7440-65-5A	3831064.0	101.92	%	0.841				0.83%
Yttrium,7440-65-5R	73441.5	90.154	%	0.6025				0.67%
Aluminum,7429-90-5†	2.2	0.0125	mg/L	0.01149	0.0125	mg/L	0.01149	91.64%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								
Antimony,7440-36-0†	0.3	0.0001	mg/L	0.00164	0.0001	mg/L	0.00164	>999.9%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	5.7	0.0028	mg/L	0.00098	0.0028	mg/L	0.00098	35.00%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	19.7	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	130.00%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	273.2	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	22.10%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	6518.2	0.1407	mg/L	0.00242	0.1407	mg/L	0.00242	1.72%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	-234.7	-0.0009	mg/L	0.00005	-0.0009	mg/L	0.00005	5.68%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	-10.4	-0.0079	mg/L	0.00209	-0.0079	mg/L	0.00209	26.51%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated								
Chromium,7440-47-3†	-69.8	-0.0004	mg/L	0.00021	-0.0004	mg/L	0.00021	48.51%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	-3.6	0.0000	mg/L	0.00022	0.0000	mg/L	0.00022	480.66%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	-148.0	-0.0003	mg/L	0.00056	-0.0003	mg/L	0.00056	165.59%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	2.4	0.0076	mg/L	0.00490	0.0076	mg/L	0.00490	64.16%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated								
Lead,7439-92-1†	-12.7	-0.0005	mg/L	0.00027	-0.0005	mg/L	0.00027	49.68%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated								
Magnesium,7439-95-4†	3.7	0.0544	mg/L	0.03834	0.0544	mg/L	0.03834	70.45%
QC value greater than the upper limit for Magnesium,7439-95-4 Recovery = Not calculated								
Manganese,7439-96-5†	681.1	0.0005	mg/L	0.00001	0.0005	mg/L	0.00001	2.32%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated								
Molybdenum,7439-98-7†	44.8	0.0016	mg/L	0.00023	0.0016	mg/L	0.00023	14.37%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated								
Nickel,7440-02-0†	10.5	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	45.16%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated								
Potassium,7440-09-7†	333.3	0.0576	mg/L	0.01223	0.0576	mg/L	0.01223	21.25%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated								
Selenium,7782-49-2†	4.4	0.0016	mg/L	0.00191	0.0016	mg/L	0.00191	123.25%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated								
Silver,7440-22-4†	-398.8	-0.0009	mg/L	0.00011	-0.0009	mg/L	0.00011	11.91%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated								
Sodium,7440-23-5†	7032.6	0.8993	mg/L	0.07065	0.8993	mg/L	0.07065	7.86%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated								
Strontium,7440-24-6†	-83.6	-0.0004	mg/L	0.00026	-0.0004	mg/L	0.00026	67.48%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated								

Thallium,7440-28-0†	1.3	0.0007 mg/L	0.00101	0.0007 mg/L	0.00101 155.69%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated					
Tin,7440-31-5†	5.3	0.0005 mg/L	0.00128	0.0005 mg/L	0.00128 240.61%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated					
Titanium,7440-32-6†	-555.9	-0.0007 mg/L	0.00023	-0.0007 mg/L	0.00023 34.33%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated					
Vanadium,7440-62-2†	-4.2	0.0000 mg/L	0.00004	0.0000 mg/L	0.00004 324.13%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated					
Zinc,7440-66-6†	40.3	0.0002 mg/L	0.00008	0.0002 mg/L	0.00008 34.79%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated					
Zirconium,7440-67-7†	462.9	0.0009 mg/L	0.00010	0.0009 mg/L	0.00010 11.50%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated					

QC Failed. Retry.

Sequence No.: 14
Sample ID: 1900
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 05/30/2003 17:20:10

Nebulizer Flow: 0.52 L/min
Sample Prep Volume:
Data Type: Original

Mean Data: 1900

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Ar 363.268 A	81188.4	99.629	%	0.3550				0.36%
Ar 420.067 R	714813.1	85.930	%	0.1552				0.18%
Scandium-IS	7438939.4	102.44	%	0.955				0.93%
Yttrium,7440-65-5A	3851783.8	102.47	%	0.894				0.87%
Yttrium,7440-65-5R	73809.7	90.606	%	0.9164				1.01%
Aluminum,7429-90-5†	-3.9	-0.0227	mg/L	0.01517	-0.0227	mg/L	0.01517	66.85%
QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated								
Antimony,7440-36-0†	-1.9	-0.0004	mg/L	0.00091	-0.0004	mg/L	0.00091	202.68%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated								
Arsenic,7440-38-2†	3.5	0.0017	mg/L	0.00202	0.0017	mg/L	0.00202	116.51%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated								
Barium,7440-39-3†	9.6	0.0000	mg/L	0.00006	0.0000	mg/L	0.00006	153.26%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated								
Beryllium,7440-41-7†	235.9	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	96.00%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated								
Boron,7440-42-8†	5900.6	0.1274	mg/L	0.00023	0.1274	mg/L	0.00023	0.18%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated								
Cadmium,7440-43-9†	-253.1	-0.0009	mg/L	0.00003	-0.0009	mg/L	0.00003	3.03%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated								
Calcium,7440-70-2†	-6.9	-0.0053	mg/L	0.00216	-0.0053	mg/L	0.00216	40.96%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated								
Chromium,7440-47-3†	-101.4	-0.0006	mg/L	0.00019	-0.0006	mg/L	0.00019	30.01%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated								
Cobalt,7440-48-4†	-15.3	-0.0002	mg/L	0.00024	-0.0002	mg/L	0.00024	118.19%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated								
Copper,7440-50-8†	-201.5	-0.0005	mg/L	0.00010	-0.0005	mg/L	0.00010	22.44%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated								
Iron,7439-89-6†	6.9	0.0219	mg/L	0.00536	0.0219	mg/L	0.00536	24.45%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated								
Lead,7439-92-1†	-43.2	-0.0018	mg/L	0.00080	-0.0018	mg/L	0.00080	43.22%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated								
Magnesium,7439-95-4†	2.6	0.0389	mg/L	0.04691	0.0389	mg/L	0.04691	120.61%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated								
Manganese,7439-96-5†	811.5	0.0007	mg/L	0.00007	0.0007	mg/L	0.00007	11.42%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated								
Molybdenum,7439-98-7†	40.1	0.0015	mg/L	0.00012	0.0015	mg/L	0.00012	8.59%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated								
Nickel,7440-02-0†	22.7	0.0002	mg/L	0.00050	0.0002	mg/L	0.00050	203.75%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated								
Potassium,7440-09-7†	66.2	0.0114	mg/L	0.01199	0.0114	mg/L	0.01199	104.86%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated								
Selenium,7782-49-2†	-4.4	-0.0015	mg/L	0.00217	-0.0015	mg/L	0.00217	142.46%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated								
Silver,7440-22-4†	-566.5	-0.0013	mg/L	0.00013	-0.0013	mg/L	0.00013	10.41%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated								
Sodium,7440-23-5†	4887.0	0.6250	mg/L	0.02426	0.6250	mg/L	0.02426	3.88%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated								

Strontium,7440-24-6†	-88.2	-0.0004 mg/L	0.00004	-0.0004 mg/L	0.00004	9.45%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated						
Thallium,7440-28-0†	-0.6	-0.0003 mg/L	0.00131	-0.0003 mg/L	0.00131	410.07%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated						
Tin,7440-31-5†	11.7	0.0012 mg/L	0.00059	0.0012 mg/L	0.00059	49.45%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated						
Titanium,7440-32-6†	-358.6	-0.0004 mg/L	0.00010	-0.0004 mg/L	0.00010	23.82%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated						
Vanadium,7440-62-2†	1.1	0.0000 mg/L	0.00018	0.0000 mg/L	0.00018	>999.9%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated						
Zinc,7440-66-6†	-46.9	-0.0003 mg/L	0.00003	-0.0003 mg/L	0.00003	10.67%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated						
Zirconium,7440-67-7†	468.1	0.0009 mg/L	0.00011	0.0009 mg/L	0.00011	12.18%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated						

All analytes passed QC.

Sequence No.: 15
Sample ID: 101549
Analyst:
Nebulizer Back Pressure: 196.0 kPa
Sample Wt: 2.5 g
Dilution: 1X

Autosampler Location: 67
Date Collected: 05/30/2003 17:27:14

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101549

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Ar 363.268 A	81387.8	99.874	%	0.0767				0.08%
Ar 420.067 R	722472.2	86.850	%	0.0938				0.11%
Scandium-IS	7289902.2	100.39	%	0.168				0.17%
Yttrium,7440-65-5A	3706180.0	98.596	%	0.4163				0.42%
Yttrium,7440-65-5R	72495.4	88.993	%	1.5681				1.76%
Aluminum,7429-90-5†	1662.0	9.6651	mg/L	0.19299	386.60	mg/kg	7.720	2.00%
Antimony,7440-36-0†	4070.7	0.9893	mg/L	0.00894	39.570	mg/kg	0.3576	0.90%
Arsenic,7440-38-2†	1967.1	0.9959	mg/L	0.00916	39.837	mg/kg	0.3666	0.92%
Barium,7440-39-3†	230242.9	0.9739	mg/L	0.00219	38.955	mg/kg	0.0875	0.22%
Beryllium,7440-41-7†	5241379.9	0.9733	mg/L	0.00132	38.933	mg/kg	0.0529	0.14%
Boron,7440-42-8†	240580.8	5.1907	mg/L	0.02467	207.63	mg/kg	0.987	0.48%
Cadmium,7440-43-9†	263542.0	0.9585	mg/L	0.00366	38.342	mg/kg	0.1464	0.38%
Calcium,7440-70-2†	13047.7	9.9030	mg/L	0.16786	396.12	mg/kg	6.714	1.70%
Chromium,7440-47-3†	160378.7	0.9810	mg/L	0.00290	39.241	mg/kg	0.1159	0.30%
Cobalt,7440-48-4†	74639.1	0.9913	mg/L	0.00320	39.651	mg/kg	0.1280	0.32%
Copper,7440-50-8†	441523.5	1.0134	mg/L	0.00116	40.534	mg/kg	0.0464	0.11%
Iron,7439-89-6†	3127.1	9.9821	mg/L	0.20827	399.29	mg/kg	8.331	2.09%
Lead,7439-92-1†	22487.2	0.9618	mg/L	0.00744	38.470	mg/kg	0.2974	0.77%
Magnesium,7439-95-4†	611.5	9.0280	mg/L	0.03560	361.12	mg/kg	1.424	0.39%
Manganese,7439-96-5†	1223323.3	0.9827	mg/L	0.00152	39.306	mg/kg	0.0608	0.15%
Molybdenum,7439-98-7†	27979.6	1.0123	mg/L	0.00674	40.493	mg/kg	0.2697	0.67%
Nickel,7440-02-0†	89744.7	0.9688	mg/L	0.00398	38.752	mg/kg	0.1591	0.41%
Potassium,7440-09-7†	122953.3	21.237	mg/L	0.0276	849.46	mg/kg	1.105	0.13%
Selenium,7782-49-2†	2803.0	0.9819	mg/L	0.00853	39.275	mg/kg	0.3412	0.87%
Silver,7440-22-4†	350137.7	0.8018	mg/L	0.00524	32.071	mg/kg	0.2095	0.65%
Sodium,7440-23-5†	320910.8	41.038	mg/L	0.0560	1641.5	mg/kg	2.24	0.14%
Strontium,7440-24-6†	187302.1	0.8665	mg/L	0.01114	34.662	mg/kg	0.4457	1.29%
Thallium,7440-28-0†	1873.8	0.9650	mg/L	0.00578	38.599	mg/kg	0.2312	0.60%
Tin,7440-31-5†	9580.1	0.9873	mg/L	0.00706	39.492	mg/kg	0.2825	0.72%
Titanium,7440-32-6†	824382.9	0.9922	mg/L	0.00142	39.688	mg/kg	0.0570	0.14%
Vanadium,7440-62-2†	307453.5	0.9790	mg/L	0.00131	39.161	mg/kg	0.0525	0.13%
Zinc,7440-66-6†	191241.0	1.1499	mg/L	0.00380	45.994	mg/kg	0.1520	0.33%
Zirconium,7440-67-7†	586097.8	1.1009	mg/L	0.00075	44.037	mg/kg	0.0302	0.07%

Sequence No.: 16
Sample ID: 101550
Analyst:
Nebulizer Back Pressure: 195.0 kPa
Sample Wt: 2.5 g
Dilution: 5X

Autosampler Location: 68
Date Collected: 05/30/2003 17:34:26

Nebulizer Flow: 0.52 L/min
Sample Prep Volume: 100 mL
Data Type: Original

Mean Data: 101550

Mean Corrected	Calib	Sample

METALS PREPARATION LOG

ACID DIGESTION OF AQUEOUS SAMPLES

PREP METHOD: ICP 200.7 / 3010A
GFAA 2xx.x / 3020A , 7060A, 7740
HG 245.1 / 7470A

MOD BLOCK ID: A

DATE: 5-29-03
TIME: 14:45
ANALYST: JEL

257863

CLIENT	GCAL ID	ICP INITIAL VOLUME (ml)	ICP FINAL VOLUME (ml)	GFAA INITIAL VOLUME (ml)	GFAA FINAL VOLUME (ml)	HG INITIAL VOLUME (ml)	HG FINAL VOLUME (ml)
20030529 W2	MB	50	50	50	50	20	20
20030529 W2	LCS	50	50	50	50	20	20
C.Ham Hill	20030529 1105						
	20030529 1108 D						
	20030529 1106 MS						
	20030529 1107 MSD						
	20030529 1109						
	20030529 1110						
	20030529 1111						
	20030529 1104						
	20030529 1103						
	20030529 1102						
	20030529 1101						
[redacted]	~~20030528 [illegible]~~						
	~~20030529 [illegible]~~						

	ID/LOT NO.	VOLUME ADDED (uL)
ICP Spike	334-134-1	500
GFAA Spike	–	500
HG Spike	–	100
HG ICV	–	
H2SO4	–	
KMNO4	–	
K2S2O6	–	
HCl	334-15-17	
HNO3	334-15-20	
H2O2	–	

MERCURY CALIBRATION ID: _____
0.1 ppm CCV working solution: _____
0.1 ppm ICV working solution: _____

Calib. Blk	Conc. (ug/L)	Spk. Added	Final volume
Standard 1	0.20	40 uL	20 mL
Standard 2	0.50	100 uL	20 mL
Standard 3	2.00	400 uL	20 mL
Standard 4	5.00	1000 uL	20 mL
Standard 5	10.0	2000 uL	20 mL
ICV	5.00	1000 uL	20 mL

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
ICSA	106-11-1	Int. A	Spex	23-152AS 10-15-03	8 ml	200ml	varied	102-17-2	SAB	5-7-03	6-7-03
ICV 2	106-11-2	1000 ppm Al	Exaxal	021217 6-04	2ml	200 ml	varied	102-17-2	JAC	5-8-03	6-8-03
		K	Spex	9-03k 7-15-03							
		NA	Exaxal	030212 8-04							
		B	Spex	9-138 B 9-15-03	1 ml						
		B		9-63BA 10-15-03	200ul						
		Zr		9-169Zr 3-30-04							
		Sn	Exaxol	030212 8-04							
STD 1	106-11-3	GCALI-1	inorganic ventures	SMeB126044 8-1-03	2ml	200ml	varied	102-17-2	JAC	5-10-03	6-10-03
		1000 ppm Zr	Exaxol	030303 9-04	200ul						
STD 2	106-11-4	GCALI-2	inorganic ventures	SMeB126045 8-1-03	2ml	200ml	varied	102-17-2	JAC	5-10-03	6-10-03
Hg CCV	106-11-5	1000ppm Hg	Exaxol	030106 07/04	100 uL	100 ml	1 ppm		SAB2	5-12-03	6-12-03
Hg ICV	106-11-6	1000ppm Hg	CPI	1JH110 12/10/03	100 uL	100ml	1 ppm				
1.00 ppm AS, Se	106-11-7	1000 ppm AS	Spex	9-162AS 10-15-03	100 ul	100 ml	1 ppm	102-17-2	JAC	5-15-03	6-15-03
		1000 ppm Se		9-235e 10-15-03							
ICV 1	106-11-8	21 element mix	CPI	OK5054 3-30-04	2ml	200ml	1.00 ppm	102-17-2	JAC	5-15-03	6-15-03
		1000 ppm Ag	Exaxol	021217 6-04	200 ul						
				VOID	JAC	5-16-03					

000589

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
3020 Spike	106-12-1	1000 ppm AS	Spex	8-162 AS 10-15-03	400 ul	100 ml	4 ppm	2% HNO3	JAC	5-16-03	6-16-03
↓	↓	↓ Se	Spex	9-23Se 10-15-03	400 ul	↓	4 ppm	↓	↓	↓	↓
↓	↓	↓ Tl	Exaxol	030411 10-04	500 ul	↓	5 ppm	↓	↓	↓	↓
STD 2	106-12-2	GCALI-2	inorganic ventures	SMeB126045 8-03	2ml	200ml	varied	102-17-2	JAC	5-16-03	6-16-03
STD 1	106-12-3	GCALI-1	inorganic ventures	SMeB126044 8-03	2ml	200ml	varied	102-17-2	JAC	5-19-03	6-19-03
↓	↓	1000 ppm Zr	Exaxol	030303 9-04	200ul	↓	↓	↓	↓	↓	↓
ICSAB	106-12-4	Int A	Spex	23-152AS 10-15-03	8 ml	200 ml	varied	102-17-2	JAC	5-19-03	6-19-03
↓	↓	Analytes B	↓	22-67AS 11-30-03	2ml	↓	↓	↓	↓	↓	↓
↓	↓	Alt. Analytes B	↓	22-135AS 3-15-04	2ml	↓	↓	↓	↓	↓	↓
5/22/03	Dates	4/24/03 -	5/19/03	Reviewed	by	QA/QC	[illegible]				
STD 2	106-12-5	GCALI-2	inorganic ventures	SMeB126045 8-1-03	2ml	200ml	varied	102-17-2	JAC	5-25-03	6-25-03

000590

REAGENT LOGBOOK

STANDARD NAME	STD#	STOCK REAGENT	SUPPLIER	LOT#	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INIT	DATE PREPARED	EXP DATE
kmno4	334-13-1	Potassium Permanganate	Fisher	027060	100g	2000 ml			AEZ	2-20-03	2-20-04
Hno3	334-13-2	conc. Hno3	Fisher	1102080					AEZ	2-20-03	2-20-04
Hg cali CCV	334-13-3	1ppm Hg	in House	100-93-4	1ml	10 ml	0.1ppm		AEZ	2-21-03	3-21-03
Hg cali ICV	334-13-4	↓	↓	100-93-5	↓	↓	↓		↓	↓	↓
Hg cali CCV 0.2	334-13-5	1ppm Hg	in House	100-934	20 ul	100 ml			AEZ	2-24-03	3-24-03
0.5	334-13-6				50 ul						
1.0	334-13-7				100 ul						
5.0	334-13-8				500 ul						
10.0	334-13-9				1000 ul						
Hg cali ICV 5.0	334-13-10	↓	↓	106-93-5	500 ul	↓			↓	↓	↓
kmno4	334-13-11	Potassium Permanganate	Fisher	027060	100g	2000 ml			AEZ	2-24-03	2-24-04
k2s2o6	334-13-12	Potassium Persulfate	Fisher	026215	100g	2000 ml			AEZ	2-24-03	2-24-04
HCL	334-13-13	conc. HCL	Fisher	4102050					AEZ	2-28-03	2-28-04
Hno3	334-13-14	conc. Hno3	Fisher	1102100					AEZ	2-28-03	2-28-04
Hg Cali CCV	334-13-15	1 ppm Hg	In House	100-93-4	1 ml	10 ml	0.1 ppm	DI H2O	SAB2	3-3-03	3-10-03 SAB2 3-3-03
Hg Cali ICV	334-13-16	↓	↓	100-93-5	↓	↓	↓	↓	↓	↓	↓
I spike Gcal-1	334-13-17	3010 spike	Inorganic Ventures	S-MEB126044					AEZ	3-6-03	8-1-03
I spike Gcal-2	334-13-17 AEZ 3-6-03	↓	↓	S-MEB126045					↓	↓	↓
H2SO4	334-13-18	conc. H2SO4	Fisher	3102030					AEZ	3-10-03	3-10-04
Conc. Hno3	334-13-19	conc. Hno3	Fisher	1102100					AEZ	3-13-03	3-13-04
Hg cal ccv	334-13-20	1ppm Hg	in House	106-1-3	1ml	10 ml	0.1ppm		AEZ	3-14-03	4-14-03
Hg cali ICV	334-13-21	↓	↓	106-1-2	↓	↓	↓		↓	↓	↓

REAG LOG 1-6-95

000591

REAGENT LOGBOOK

STANDARD NAME	STD#	STOCK REAGENT	SUPPLIER	LOT#	WT/VOL g/ml	FINAL VOL(ml)	FINAL CONC	SOLVENT/ LOT#	INIT	DATE PREPARED	EXP DATE
HCL	334-15-1	CONC. HCL	Fisher	4102080					JEL	4-29-03	4-29-04
H_2SO_4	334-15-2	CONC. H_2SO_4	Fisher	3102030					JEL	4-29-03	4-29-04
HNO_3	334-15-3	CONC. HNO_3	Fisher	1103010					JEL	5-5-03	5-5-04
Hg Calib. ICV 0.2	334-15-4	1 ppm Hg	In-House	106-7-5	1 ml	10 ml	0.1 ppm		JEL	5-6-03	5-6-04
0.5	334-15-5										
2.0	334-15-6										
5.0	334-15-7										
10.0	334-15-8										
Hg Calib. ICV 5.0	334-15-9			106-7-4							
HNO_3	334-15-10	CONC. HNO_3	Fisher	1102120					JEL	5-7-03	5-7-04
HNO_3	334-15-11	CONC. HNO_3	Fisher	1103010					JEL	5-9-03	5-9-04
KMnO4	334-15-12	Potassium Permanganate	Fisher	027074 ~~100g~~ JEL	100g ~~2000 ml~~ 5-9-03	2000 ml			JEL	5-9-03	5-9-04
$K_2S_2O_8$	334-15-13	Potassium Persulfate	Fisher	026215	100g	2000 ml			JEL	5-9-03	5-9-04
HNO_3	334-15-14	CONC. HNO_3	Fisher	1102120					JEL	5-13-03	5-13-04
HNO3	334-15-15	CONC. HNO_3	Fisher	1103010					JEL	5-14-03	5-14-04
Hno3	334-15-16	Conc. Hno3	Fisher	1103010					AEL	5-16-03	5-16-04
HCL	JEL 5/16/03 334-15-17	CONC. HCL	Fisher	4102080					JEL	5-16-03	5-16-04
HNO_3	JEL 5/20/03 334-15-18	CONC. HNO_3	Fisher	1103010					JEL	5-20-03	5-20-04
HNO_3	334-15-19	CONC. HNO_3	Fisher	1103010					JEL	5/21/03	5/21/04

REAG LOG 1-6-95

000592

CH2M Hill / 9380 / 203052911 / Date: 6-5-03

CH2M Hill 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
171591-002 page 1 of 1

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 South Fuel Farm	171591	Gulf Coast Labs. Dano Merril	Randy Dumaop / J.A Jones Env. Services	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.):
South Fuel Farm Annual GW Sampling Event	0086	4726	Christelle Newsome / 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.):
Randy Dumaop	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 back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	TVOH by 601; 624 BTEX & MTBE by 602, 8021B	PAHs by 610	Lead by 6010B	TRPH by FL-PRO							SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	086-CEF43-2N-Q2-03-61	CEF-043-2N	W	05/27/03	16:40	III/C	14	3	2	1	2							Grab		-01
2	086-CEF43-6N-Q2-03-61	CEF-043-6N	W	05/27/03	16:00	III/C	14	3	2	1	2							Grab		-02
3	086-CEF43-7N-Q2-03-61	CEF-043-7N	W	05/27/03	15:05	III/C	14	3	2	1	2							Grab		-03
4	086-CEF43-9N-Q2-03-61	CEF-043-9N	W	05/27/03	14:30	III/C	14	3	2	1	2							Grab		-04
5	086-CEF43-33N-Q2-03-61	CEF-043-33N	W	05/28/03	14:50	III/C	14	9	6	3	6							Grab	MS/MSD	-05-06 -07-08
6	086-CEF43-38N-Q2-03-61	CEF-043-38N	W	05/28/03	15:45	III/C	14	3	2	1	2							Grab		-09
7	086-DUP-Q2-03-61	Duplicate	W	05/27/03	NA	III/C	14	3	2	1	2							Grab		-10
8	086-EQB-Q2-03-61	Equipment Blank	W	05/27/03		III/C	14	3	2	1	2							Grab		-11
9	086-TB-Q2-03-61	Trip Blank	W	NA	NA	III/C	14	3										Grab		-12
10																				

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express TRK #. 791600930637, 791600930681, 791600930729, 791600930740, 791600930762, 791600930800.(6 Coolers)	4°C Good

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature: R.Dumaop	5/28/2023	18:00	Printed Name and Signature: Federal Express	5/28/2003	18:00
Printed Name and Signature: Fed. Ex.	5-29-03	0930	Printed Name and Signature: Daria Haydel	5-29-03	0930
Printed Name and Signature:			Printed Name and Signature:		

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:	203052911	**Type:**	D
Desc:		**Report:**	REVIEW_RPT
Work ID:	Cecil Field - South Fuel Farm	**Status:**	WP
Project Seq:	12894	**Created:**	5/29/03 10:04
Client:	4380 - CH2M HILL Constructors Inc.	**QA:**	
Profile:	42891 - CTO 0086 - Cecil Field - South Fuel Farm	**PO:**	

WORKORDER SAMPLES

			pH PRESERVATIVE			VOA HEADSPACE			
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20305291101-1	40	HCL+SS	✓			✓			OK
20305291101-2	40	HCL+SS	✓			✓			OK
20305291101-3	LA	NONE			X			X	OK
20305291101-4	LA	H2SO4	✓					X	OK
20305291101-5	OC	HNO3	✓					X	OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20305291102-1	40	HCL+SS	✓			✓			OK
20305291102-2	40	HCL+SS	✓			✓			OK
20305291102-3	LA	NONE			X			X	OK
20305291102-4	LA	H2SO4	✓					X	OK
20305291102-5	OC	HNO3	✓					X	OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20305291103-1	40	HCL+SS	✓			✓			OK
20305291103-2	40	HCL+SS	✓			✓			OK
20305291103-3	LA	NONE			X			X	OK
20305291103-4	LA	H2SO4	✓					X	OK
20305291103-5	OC	HNO3	✓					X	OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20305291104-1	40	HCL+SS	✓			✓			OK
20305291104-2	40	HCL+SS	✓			✓			OK
20305291104-3	LA	NONE			X			X	OK
20305291104-4	LA	H2SO4	✓					X	OK
20305291104-5	OC	HNO3	✓					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
20305291105-1	40	HCL+SS	✓			✓			OK
20305291105-2	40	HCL+SS	✓			✓			OK
20305291105-3	LA	NONE			X			X	OK
20305291105-4	LA	H2SO4	✓					X	OK
20305291105-5	OC	HNO3	✓					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291106-1	40	HCL+SS	✓			✓			OK
20305291106-2	40	HCL+SS	✓			✓			OK
20305291106-3	LA	NONE			X			X	OK
20305291106-4	LA	H2SO4	✓					X	OK
20305291106-5	OC	HNO3	✓					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291107-1	40	HCL+SS	✓			✓			OK
20305291107-2	40	HCL+SS	✓			✓			OK
20305291107-3	LA	NONE			X			X	OK
20305291107-4	LA	H2SO4	✓					X	OK
20305291107-5	OC	HNO3	✓					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291108-1	OC	HNO3	✓					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291109-1	40	HCL+SS	✓			✓			OK
20305291109-2	40	HCL+SS	✓			✓			OK
20305291109-3	LA	NONE			X			X	OK
20305291109-4	LA	H2SO4	✓					X	OK
20305291109-5	OC	HNO3	✓					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291110-1	40	HCL+SS	✓			✓			OK
20305291110-2	40	HCL+SS	✓			✓			OK
20305291110-3	LA	NONE			X			X	OK
20305291110-4	LA	H2SO4	✓					X	OK
20305291110-5	OC	HNO3	✓					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
20305291111-1	40	HCL+SS	/			/			OK
20305291111-2	40	HCL+SS	/			/			OK
20305291111-3	LA	NONE			X			X	OK
20305291111-4	LA	H2SO4	/					X	OK
20305291111-5	OC	HNO3	/					X	OK

Container ID	Type	Preservative	A	U	N\A	A	U	N\A	CONTAINER CONDITION
20305291112-1	40	HCL+SS	/			/			OK
20305291112-2	40	HCL+SS	/			/			OK
20305291112-3	LA	NONE			X			X	OK
20305291112-4	LA	H2SO4	/					X	OK
20305291112-5	OC	HNO3	/					X	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

CUSTODIAN_____