RMT®
Integrated Environmental Solutions

222 South Riverside Plaza
Suite 820
Chicago, IL 60606
Telephone: 312-575-0200
Fax: 312-575-0300

Andy - enjoy!

QUARTERLY MONITORING REPORT
3RD QUARTER 2000

L.E.CARPENTER & COMPANY
WHARTON, NEW JERSEY

USEPA ID# NJD002168748

October 2000

Nicholas J. Clevett
Project Manager

Jim Dexter

James J. Dexter
Senior Hydrogeologist

346045

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Section 1
Introduction

RMT, Inc. (RMT), on behalf of our client, has prepared this Quarterly Monitoring Report for the L.E. Carpenter (LEC) site ("the site" or "the subject site") located at 170 North Main Street, Wharton, New Jersey (Figure 1). Quarterly monitoring events are performed at the site to comply with paragraph 35 of the 1986 Administrative Consent Order issued to L.E. Carpenter by the New Jersey Department of Environmental Protection (NJDEP). This report provides a summary of activities completed during 3rd quarter 2000, to include routine quarterly groundwater monitoring and monthly free product recovery activities. In addition, this report includes summaries of additional site activities performed during 3rd quarter 2000, and activities scheduled for commencement during 4th quarter 2000. This report has been certified as in accordance with requirements outlined in N.J.A.C 7:26E-1.5(a). The report certification is presented as Appendix A.

During 3rd quarter 2000, RMT, on behalf of LEC, conducted the following:

- Continued monthly mobile free product recovery utilizing enhanced fluid recovery (EFR) or vacuum enhanced recovery (VER) techniques in accordance with the NJDEP approval letter dated August 20, 1997 (Ref. Section 2).
- Continued quarterly groundwater monitoring activities as required under the Administrative Consent Order (Ref. Sections 3 and 4).
- Conducted a conference call on July 31, 2000 with the NJDEP, the United States Environmental Protection Agency (USEPA) Region II, and RMT to discuss ongoing issues regarding other site specific areas of environmental concern, including free product recovery and groundwater impact (Ref. Section 5).
- Prepared a workplan to evaluate additional technologies to enhance on-site free product recovery (Ref. Section 5).
- Prepared a workplan to delineate and characterize elevated lead concentrations in on-site soils (Ref. Section 5).

A discussion of these activities is provided in the referenced sections.

Section 2
Monthly EFR Activities

2.1 Introduction

In August 1997, the NJDEP approved the Remedial Action Plan (RAP) which described free product removal using enhanced fluid recovery (EFR) for the eastern portion of the subject site (east of the rail spur right-of-way). EFR is conducted by applying a vacuum to product recovery wells to primarily remove free phase product, in addition to limited volumes of contaminated groundwater and contaminant vapors, within vadose zone and capillary fringe soils. As the result of increased aeration, this procedure enhances any natural biodegredation that may be occurring in the soil and groundwater. The locations of the twenty-eight (28) EFR wells purged during each monthly EFR event and all groundwater monitoring wells are shown in Figure 2.

Monthly EFR events conducted by RMT during 3rd quarter 2000 were performed on July 18, 2000, August 17, 2000, and September 18, 2000. Prior to conducting EFR, the free product thickness in each recovery well (where applicable) was measured. Free product measurements were recorded to determine appropriate placement of the drop pipe in order to maximize free product recovery. Free product thickness measurements recorded during 3rd quarter 2000 are presented in Table 1. Additionally, Table 1 provides a cumulative breakdown of additional EFR specific information such as minimum and maximum free product thickness levels (ft), associated waste management costs, and extracted product and groundwater volumes (gallons) to date.

During 3rd quarter 2000, EFR activities were conducted utilizing a Nortech, Inc. 55B vacuum head apparatus capable of producing a vacuum of 17-inches of mercury (in Hg) at 100 cubic feet per minute (cfm). This unit is connected to a fitted 55-gallon drum, and braced to a mobile 4-wheel drive vehicle. When compared to the previously utilized vacuum trucks, use of this system has enabled the EFR subcontractor (CEMCO) to get closer to each individual EFR well head, minimizing potential losses in the system previously experienced due to the use of greater lengths of extraction hose, while maximizing the maneuverability of the drop pipe. Use of this system has resulted in a more efficient EFR event, minimizing the volume of groundwater extracted. During 3rd quarter 2000, the average ratio of extracted groundwater to free product was approximately 0.1 gallons/gallon. Historically (November 1997 to December 1999), the ratio of extracted groundwater to free product was 4.7 gallons/gallon.

Once the extraction apparatus is full (approximately 55-gallons), the free product and limited volume of groundwater is transferred to an on-site 550-gallon aboveground storage tank (AST) equipped with secondary containment for satellite storage. The fluids generated during 2nd quarter 2000 and July and August 2000 EFR events, including purged groundwater generated during groundwater monitoring activities, were managed by Cycle Chem/ Clean Venture on August 17th, 2000. A total of 250 gallons of fluids were removed from the site after the August 17th, 2000 event, and transported to the CycleChem/ Clean Venture disposal facility in Elizabeth, New Jersey.

2.2 Apparent or Freestanding Product Trends

The following sections describe apparent or freestanding product trends in the western, central, and eastern portions of the free product area. Apparent or freestanding product refers to a volume (gal) of free product occupying the casings of each EFR well. Total apparent free product represents the sum of product volumes from each EFR well within all three segregated regions (eastern, central and western). It should be noted that apparent product thickness is not necessarily representative of the actual free product thickness or volume that exists within the formation. RMT previously evaluated actual free product thickness and volume in our report entitled Free Product Volume Analysis (May 2000).

2.2.1 Western Region of Free Product

In the western portion of the free product area (EFR wells 1, 2, 3, 17, 18, 20, 21, and 28), there was an increase in the total volume of apparent free product measured throughout 3rd quarter 2000. Apparent free product volume increased from 4.77 gallons in July 2000 to 5.25 gallons in September 2000. Most noticeable free product thickness increases were found in EFR Wells 21 and 28. Apparent free product volume in the western region appears to have decreased throughout the first three quarters of 2000.

2.2.2 Central Region of Free Product

In the central portion of the free product area (EFR wells 4, 5, 6, 7, 19, 22, 23, 24, 25, 26, and 27), there was a decrease in the total volume of apparent free product measured throughout 3rd quarter 2000. Apparent free product volume decreased from 3.71 gallons in July 2000 to 3.09 gallons in September 2000. In general, apparent free product volume in the central region appears to be decreasing.

2.2.3 Eastern Region of Free Product

In the eastern portion of the free product area (EFR wells 8, 9, 10, 11, 12, 13, 14, 15, and 16), there was a decrease in the total volume of apparent free product measured throughout 3rd quarter 2000. Apparent free product volume decreased from 5.26 gallons in July 2000 to 5.09 gallons in September 2000. In general, apparent free product volume in the eastern region appears to be decreasing.

2.2.4 Site Total Apparent Free Product Area

The total apparent free product volume on the site, accounting for all 28 EFR wells, decreased slightly over the course of the 3rd quarter from 13.74 gallons in July to 13.44 gallons in September. The total free standing product trend chart indicates a steady decrease in the volume of apparent free product existing on-site throughout the use of the monthly EFR (21.60 gallons in November 1997 to 13.44 gallons in September 2000). A cumulative breakdown of free product thickness and standing product volumes specific to each region is presented in Table 2. Additionally, charts for each free product region (western, central, and eastern), and for the site as a whole, that graphically display apparent free product volume fluctuations over time, and free standing product fluctuations trends are presented in Appendix B. Figure 3 shows iso-thickness contours and the lateral extent of apparent free product on-site for each of the three 3rd quarter EFR events.

2.3 Recovered Free Product Volume Estimations

After the completion of each EFR event, the total volume of extracted fluid was determined by gauging the 55-gallon vacuum head drum previously mentioned in section 2.1 with an oil/water interface probe. The drum was allowed to stabilize for one hour prior to gauging to allow for separation of emulsified product resulting from aggressive recovery. Gauging was conducted on a level surface and recorded thicknesses were converted to volumes based on a conversion of 1.65 gallons per inch of fluid thickness in the 55-gallon drum. Recovered free product volume was determined by subtracting the volume of water from the total fluid volume. Vapor phase product volume was estimated based on vacuum head airflow (in cfm) and vented contaminant concentrations (in ppm) obtained during extraction at each EFR well. The volume (combined liquid and vapor phase) of free product extracted during each month's EFR event is presented in Table 3.

During 3rd quarter 2000, a total of 100 gallons of fluid were removed as the result of EFR activities, of which, approximately 94 gallons was measurable free phase product as

determined by vacuum head drum gauging. Since initiation in December 1997, site EFR activities have removed approximately 13,798 gallons of total fluids, of which, approximately 2,711 gallons was measurable free phase product (Ref. Table 1).

Section 3
Quarterly Groundwater Monitoring

Groundwater monitoring activities were conducted on July 31st, 2000, in accordance with the procedures contained in the NJDEP's "Field Sampling Procedures Manual" dated May 1992. Monitoring wells MW-4, MW-11D(R), MW-14I, MW-15S, MW-15I, MW-21, MW-22(R), and MW-25(R) were purged utilizing a peristaltic pump to remove at least three well volumes prior to sampling. During the well purge process, indicator parameters were monitored and recorded so that a representative sample of the formation water was collected for analysis. Monitoring well sample data for 3rd quarter 2000 is presented as Appendix C. Once the wells were purged, samples were collected using Teflon coated plastic bailers. Monitoring wells were sampled and analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and bis (2-ethylhexyl) phthalate (DEHP) per the current groundwater monitoring protocol presented as Table 4. Locations of the quarterly monitoring wells are shown on Figure 2.

A sample duplicate, a field blank and a trip blank were collected to satisfy quality control requirements. The trip blank was prepared by the laboratory and remained with the sample containers until the samples were returned to the laboratory. The duplicate was collected from monitoring well MW-25R (duplicate sample No. MW-25RD) and analyzed for DEHP. The field blank was collected by pouring distilled water through a Teflon coated bailer to verify that the field equipment was not adversely impacting the samples and decontamination procedures were adequate. Any sampling equipment used at each well was decontaminated prior to each use utilizing a soap and water wash and distilled water rinse. No BTEX or DEHP concentrations were detected in either the trip or field blanks above method detection levels.

The results of the chemical analyses were compared to New Jersey Class IIa Groundwater Quality Standards (NJGQS) and the Discharge Criteria presented in the Record of Decision (ROD DC) dated April 20, 1994. The presence of BTEX and DEHP was not detected at concentrations above NJGQS in samples collected from MW-4, MW-11(DR) MW-14I, MW-15S, MW-15I, MW-21, MW-25(R) and the duplicate sample MW-25RD.

Monitoring well MW-22(R) exhibited concentrations of total xylenes (4,800 µg/L) and ethylbenzene (1,000 µg/L), exceeding the NJGQS of 40 µg/L and 700 µg/L, respectively. Evaluation of quarterly data collected after the contaminant concentration peaks revealed during the late 1997 and early 1998, indicates a steady decline in contaminant concentrations at this sampling location. Additionally, concentrations of BTEX and DEHP at downgradient monitoring location MW-25(R) have not exceeded NJGQS since 1997, and contaminant

concentration further downgradient at MW-21 have never exceeded NJGQS since sampling began at this location in 1st quarter 1999. Contaminant concentration trends at all three locations will continue to be closely monitored. Concentration trends for contaminants of concern detected at MW-22(R) and MW-25(R) are presented as Appendix D.

Historical groundwater monitoring data, to include the results from 3rd quarter 2000 sampling, are presented in Table 5 with corresponding analytical laboratory reports presented as Appendix E. Severn Trent Services of Edison, New Jersey performed all site sampling activities and laboratory analyses.

Section 4
Water Table Elevations

On July 31st, 2000, Severn Trent Services measured static groundwater levels from 72 different locations throughout the site (not to include the EFR wells) to evaluate the groundwater flow pattern in the shallow aquifer system (see Table 6). Severn Trent Services noted that 10 of the 72 locations monitored contained a measurable thickness of free phase product. Figure 4 displays the site wide water table potentiometric surface, and indicates that groundwater flow direction in the shallow aquifer east of the rail spur is similar to that observed historically (generally toward the east). Figure 5 displays the water table potentiometric surface in the MW19/Hot Spot 1 area (northwest corner of the subject site), and indicates that groundwater flow direction in the shallow aquifer underlying this area is towards the northeast.

Section 5
Site Investigation and Remedial Actions

The following section briefly outlines additional activities and scopes of work performed at various on-site areas of environmental concern during 3rd quarter 2000, and summarizes future activities associated with each area.

Agency draft comments were received on July 10, 2000 regarding the following RMT letter reports of May 15, 2000: Lead Hot Spot(s) B and C; the NJDEP Review of the MW19/Hot Spot 1 Area Remedial Investigation Report; and Free Product Remedial Alternatives Analysis. On July 31, 2000, LEC conducted a conference with the NJDEP, the USEPA Region II, and RMT to discuss the following prior to the issuance of final agency comments:

1. Continued investigation at the MW19/Hot Spot 1 Area to further delineate dissolved phase groundwater impacts.
2. Continued delineation of lead impacted soils in Hot Spot(s) B and C soils.
3. The results of the Free Product Volume Analysis (RMT, May 2000), and the investigation and potential implementation of a more aggressive free product recovery alternative.
4. The viability of Remediation by Natural Attenuation (RNA) as a possible remedial alternative for on-site dissolved phase shallow groundwater contamination.

On August 1, 2000 both agencies issued final response letters regarding the above-mentioned site-specific environmental issues. Based on discussions held during the July 31, 2000 conference call and issues raised in the final agency response letters, RMT, on behalf of LEC, has prepared or is preparing the following workplans:

1. The Work Plan to Evaluate Additional Technologies to Enhance On-Site Free Product Recovery (RMT, August 15, 2000).
2. The Work Plan for Delineating and Characterizing Elevated Lead Concentrations in Soil (RMT, September 6, 2000).
3. A work plan to continue groundwater investigation in the shallow aquifer underlying the MW19/Hot Spot 1 Area.
4. A workplan to address the agency comments raised in the August 1, 2000 response letter regarding remediation of the dissolved portion of the groundwater plume by natural attenuation.

Both workplans outlined in items 3 and 4 will be submitted under separate cover during 4th quarter 2000.

To date, LEC awaits agency approval of the workplans submitted on August 15, 2000 and September 6, 2000.

NOTE:

MAP OBTAINED FROM UNITED STATES GEOLOGICAL SURVEY DOVER, NEW JERSEY 7.5 MINUTE SERIES QUADRANGLE (TOPOGRAPHIC), 1981.

N

0 2000 4000

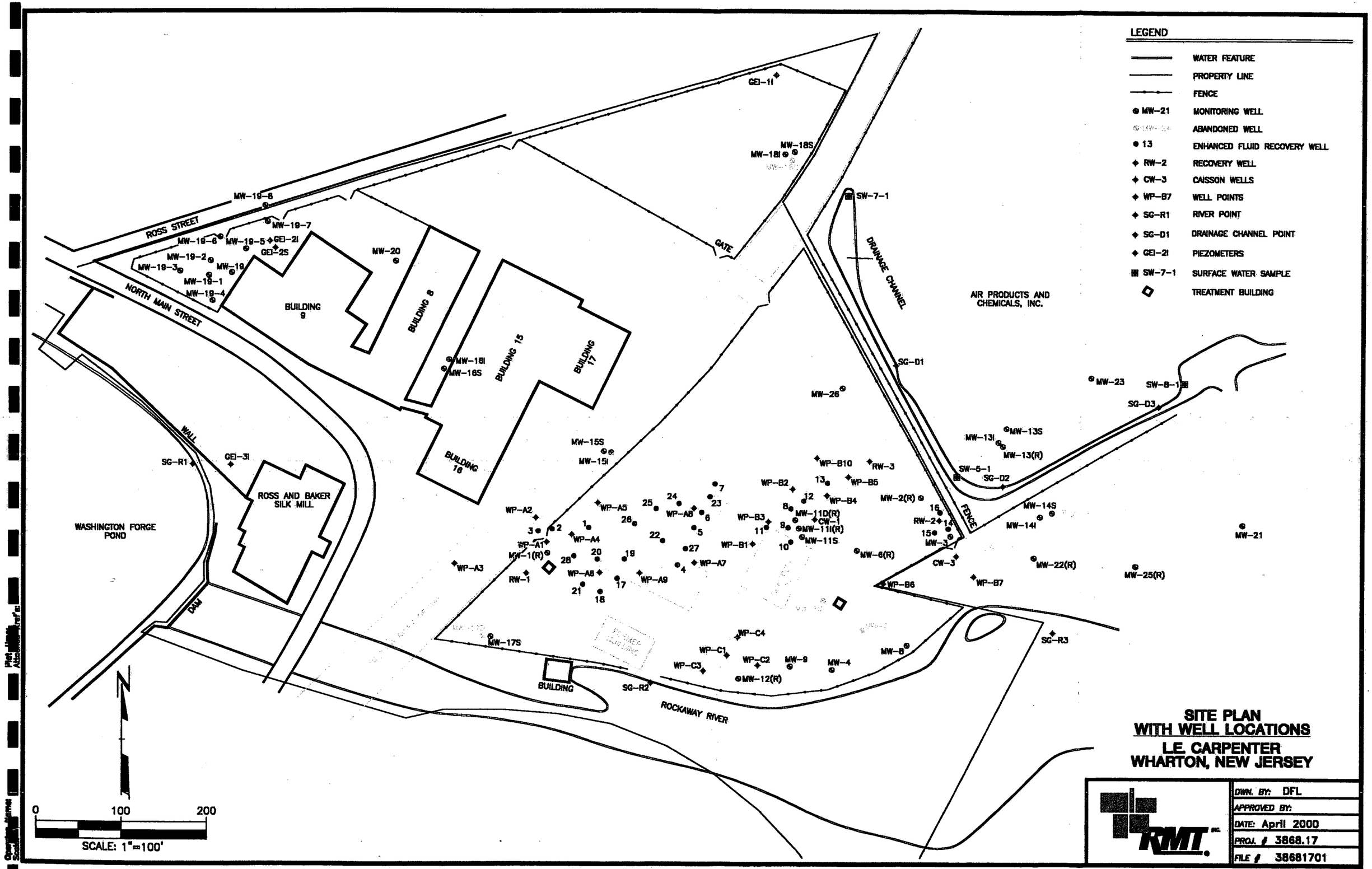
SCALE: 1"=2000'

SITE LOCATION MAP
L.E. CARPENTER AND COMPANY
WHARTON, NEW JERSEY

RMT

DWN. BY:	DAY
APPROVED BY:	G. Kenoyer
DATE:	5/2/00
PROJ. #	3863.17
FILE #	38681704

FIGURE 1

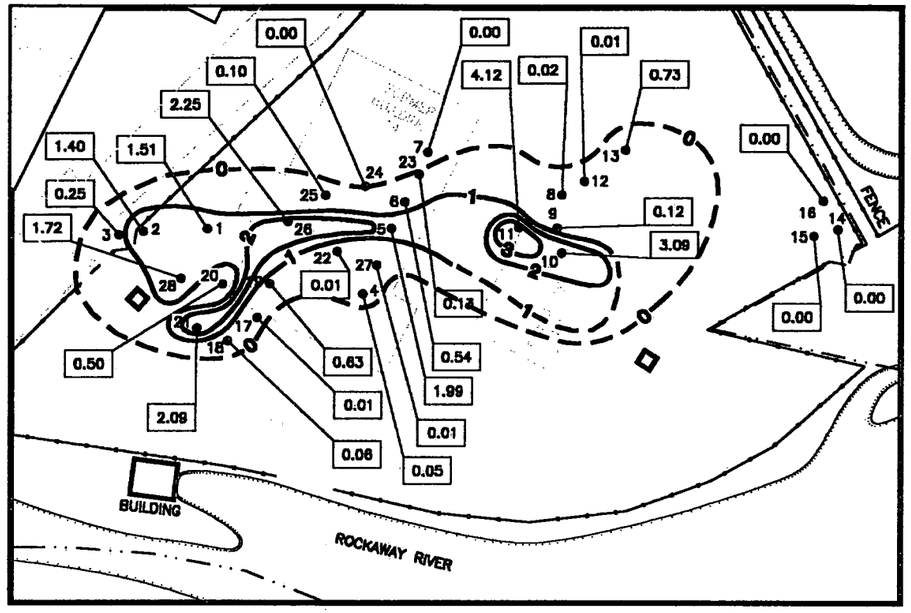


SITE PLAN
WITH WELL LOCATIONS
LE. CARPENTER
WHARTON, NEW JERSEY

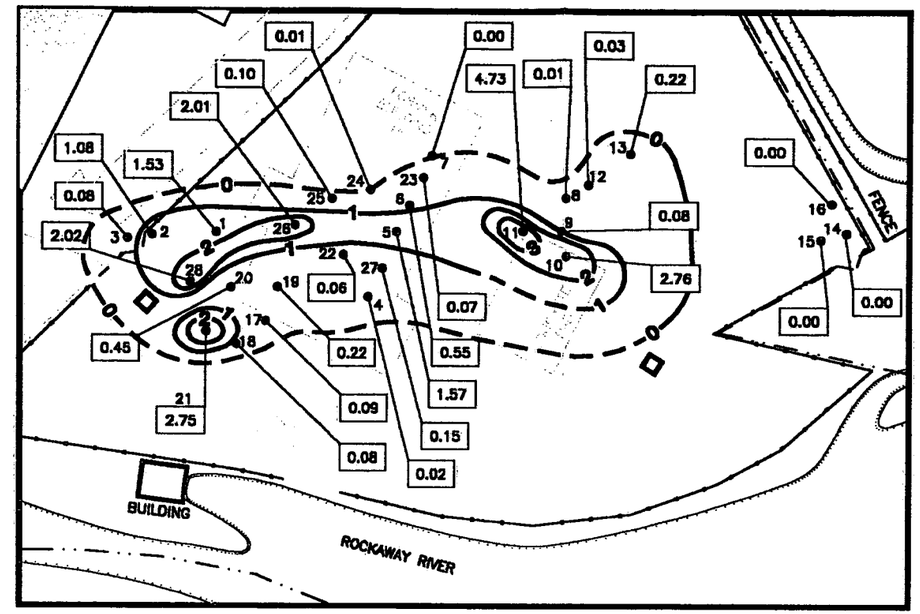
RMT INC.

DWN. BY:	DFL
APPROVED BY:	
DATE:	April 2000
PROJ. #	3868.17
FILE #	38681701

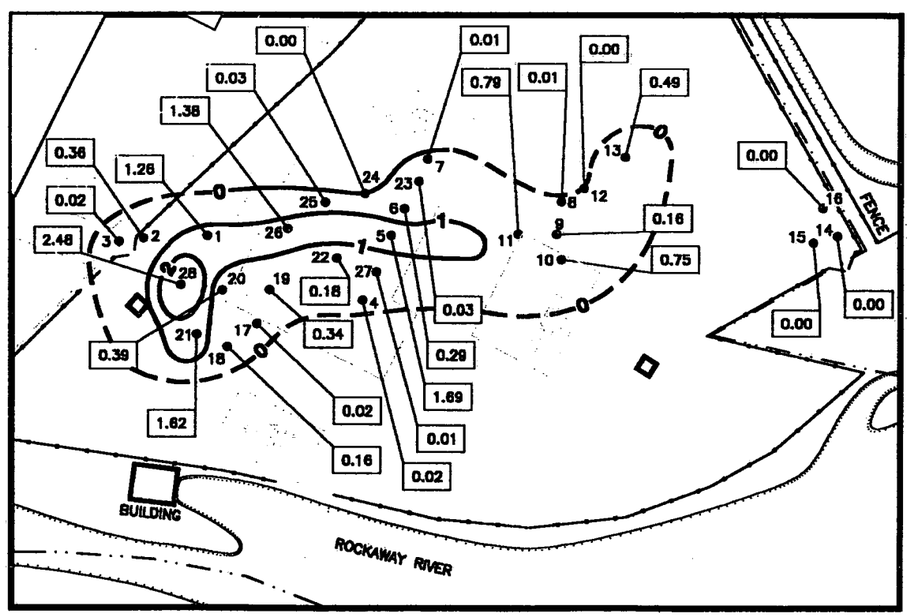
FIGURE 2



PRODUCT THICKNESS (FT), JULY 18, 2000



PRODUCT THICKNESS (FT), SEPTEMBER 18, 2000



PRODUCT THICKNESS (FT), AUGUST 17, 2000

LEGEND

- WATER FEATURE
- PROPERTY LINE
- FENCE
- ● 13 ENHANCED FLUID RECOVERY WELL (EFR)
- [1.22] PRODUCT THICKNESS MEASURED IN WELL (FT)
- ◇ TREATMENT BUILDING
- 1 PRODUCT THICKNESS CONTOURS (FT)

N

0 100' 200'

SCALE IN FEET

LE CARPENTER
WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING
3rd QUARTER 2000

DRAWN BY:	SJL	PROJECT NUMBER:	3868.17
CHECKED BY:	JO	FILE NUMBER:	38681707.DWG
APPROVED BY:		DATE:	OCTOBER 2000

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
P.O. BOX 991 48106-0991
PHONE: 734-971-7080
FAX: 734-971-9022

FIGURE 3

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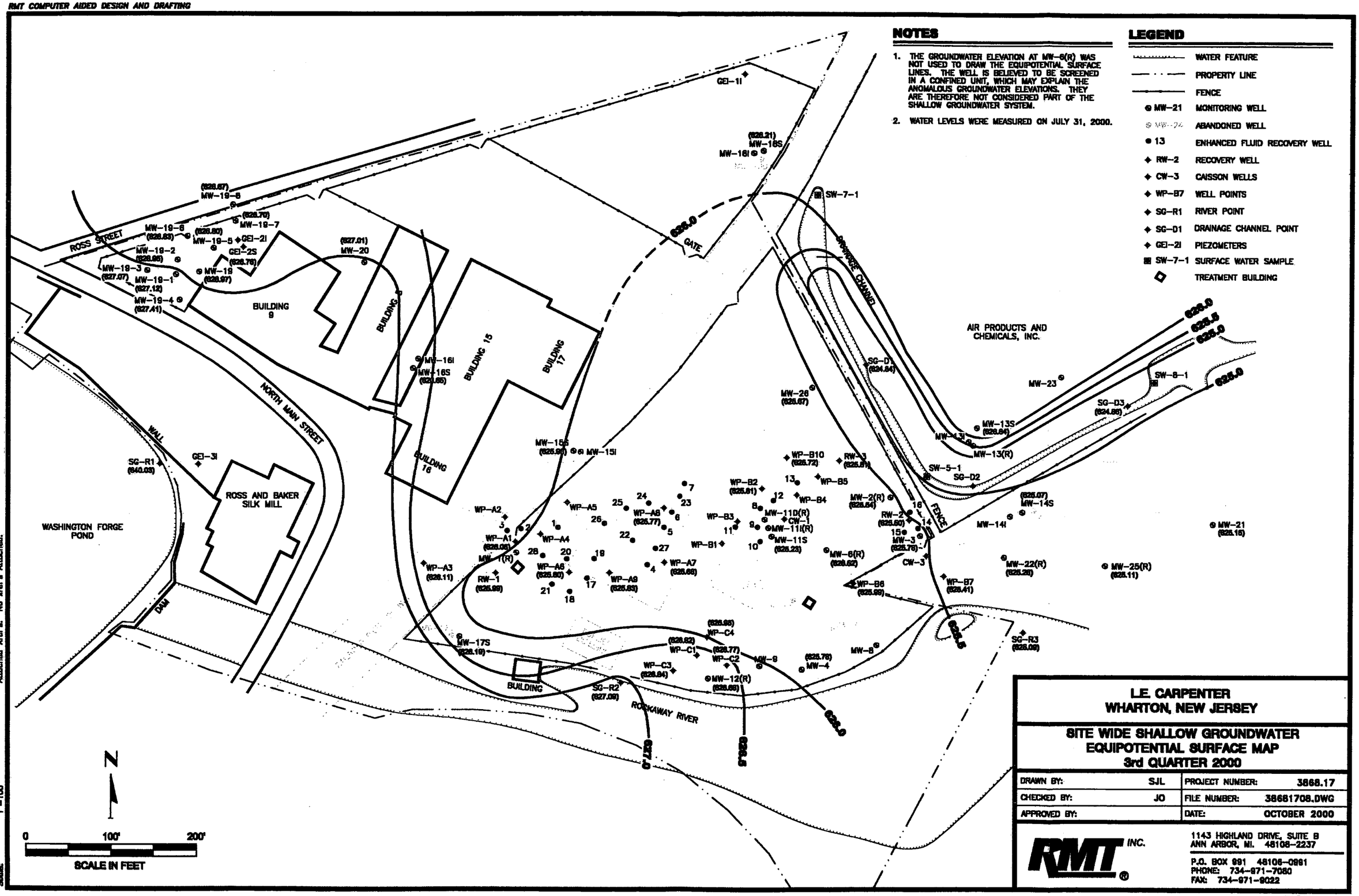
RMT COMPUTER AIDED DESIGN AND DRAFTING

NOTES

1. THE GROUNDWATER ELEVATION AT MW-6(R) WAS NOT USED TO DRAW THE EQUIPOTENTIAL SURFACE LINES. THE WELL IS BELIEVED TO BE SCREENED IN A CONFINED UNIT, WHICH MAY EXPLAIN THE ANOMALOUS GROUNDWATER ELEVATIONS. THEY ARE THEREFORE NOT CONSIDERED PART OF THE SHALLOW GROUNDWATER SYSTEM.
2. WATER LEVELS WERE MEASURED ON JULY 31, 2000.

LEGEND

- WATER FEATURE
- PROPERTY LINE
- FENCE
- MW-21 MONITORING WELL
- MW-22 ABANDONED WELL
- 13 ENHANCED FLUID RECOVERY WELL
- RW-2 RECOVERY WELL
- CW-3 CAISSON WELLS
- WP-B7 WELL POINTS
- SG-R1 RIVER POINT
- SG-D1 DRAINAGE CHANNEL POINT
- GEI-2I PIEZOMETERS
- SW-7-1 SURFACE WATER SAMPLE
- TREATMENT BUILDING



L.E. CARPENTER
WHARTON, NEW JERSEY

SITE WIDE SHALLOW GROUNDWATER EQUIPOTENTIAL SURFACE MAP
3rd QUARTER 2000

DRAWN BY:	SJL	PROJECT NUMBER:	3868.17
CHECKED BY:	JO	FILE NUMBER:	38681708.DWG
APPROVED BY:		DATE:	OCTOBER 2000

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
P.O. BOX 991 48106-0991
PHONE: 734-971-7080
FAX: 734-971-9022

FIGURE 4

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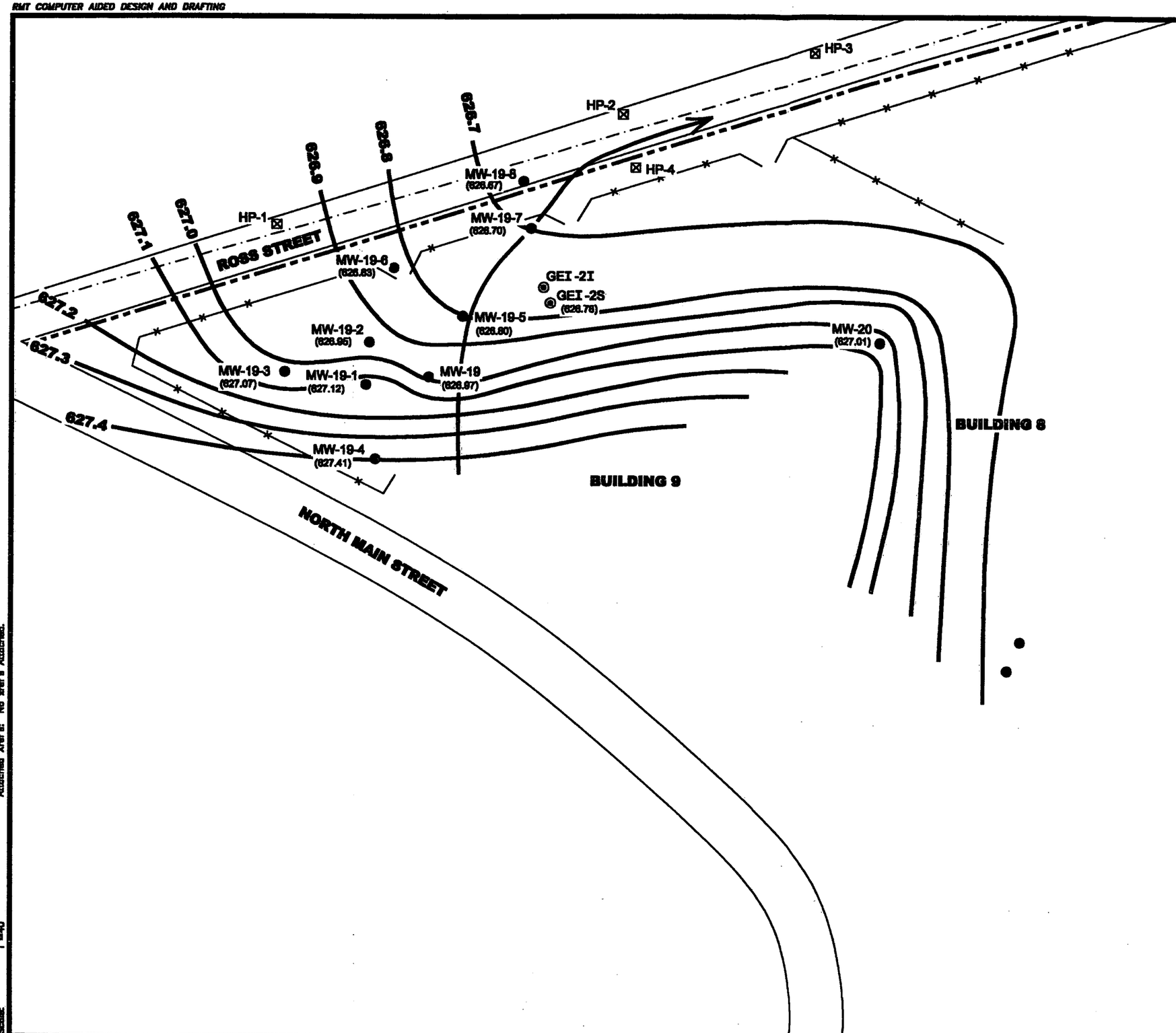

LEGEND

- APPROXIMATE PROPERTY LINE
- FENCE LINE
- APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626 — GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- MW-19-7 (626.69) — MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (626.31) — GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- HP-3 — APPROXIMATE LOCATIONS OF HYDROPUNCH SAMPLES

NOTES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON JULY 31, 2000.

N

0 40' 80'

SCALE IN FEET

L.E. CARPENTER
WHARTON, NEW JERSEY

MW-19 HOT SPOT SHALLOW GROUNDWATER ELEVATION CONTOURS

DRAWN BY:	SJL	PROJECT NUMBER:	3868.17
CHECKED BY:	JDD	FILE NUMBER:	38681709.DWG
APPROVED BY:		DATE:	OCTOBER 2000

RMT INC.
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
P.O. BOX 991 48106-0991
PHONE: 734-971-7080
FAX: 734-971-9022

FIGURE 5

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Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

EFR Event Date / Well No.	Development November 21, 1997 Feet of Product	EFR #1 December 9, 1997 Feet of Product	EFR #2 January 7, 1998 Feet of Product	EFR #3 January 22, 1998 Feet of Product	EFR #4 February 17, 1998 Feet of Product	EFR #5 March 13, 1998 Feet of Product	EFR #6 March 27, 1998 Feet of Product	EFR #7 April 24, 1998 Feet of Product	EFR #8 May 29, 1998 Feet of Product	EFR #9 June 30, 1998 Feet of Product	EFR #10 July 31, 1998 Feet of Product	EFR #11[4] August 24, 1998 Feet of Product	EFR #12 September 17, 1998 Feet of Product	EFR #13 October 22, 1998 Feet of Product	EFR #14 November 20, 1998 Feet of Product	EFR #15 December 18, 1998 Feet of Product	EFR #16 January 13, 1999 Feet of Product	EFR #17 February 18, 1999 Feet of Product
EFR-1	1.64	1.53	1.94	0.36	2.48	0.93	0.94	1.42	1.55	2.11	1.28	1.22	1.71	1.59	1.71	1.57	0.53	1.79
EFR-2	1.55	1.50	1.86	0.06	2.20	2.96	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41	0.95	1.40
EFR-3	0.85	1.02	1.27	–	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.93	1.03	1.01	1.19	1.18	1.14	1.01
EFR-4	1.03	2.27	0.54	0.07	0.30	–	–	–	–	0.03	0.38	1.23	2.40	2.17	1.75	1.79	0.73	0.10
EFR-5	4.03	3.74	4.25	0.32	3.29	3.39	1.71	2.71	2.02	1.86	2.38	2.52	2.33	2.52	2.19	2.28	2.68	3.47
EFR-6	0.72	1.00	1.24	–	2.27	1.71	1.17	2.23	1.55	1.56	1.96	1.56	1.42	1.25	1.29	1.38	0.49	0.84
EFR-7	0.17	0.09	0.16	–	–	–	–	–	–	0.02	0.02	0.03	0.07	0.05	0.20	0.16	0.02	0.04
EFR-8	0.00	0.00	0.00	–	0.08	–	–	–	–	0.03	0.04	0.08	0.13	0.09	0.07	0.03	0.12	–
EFR-9	0.00	1.10	1.79	1.15	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.98	1.23	1.31	1.26	1.86	0.74	0.49
EFR-10	5.20	5.80	6.42	2.34	7.47	7.06	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.98	3.99	3.68	5.79
EFR-11	3.07	4.04	4.28	5.64	4.47	4.32	4.67	5.91	5.73	6.08	4.73	4.47	3.95	4.06	3.65	3.52	2.42	4.69
EFR-12	0.04	0.03	0.00	–	0.07	–	–	–	0.02	0.28	0.22	0.28	0.24	0.15	0.29	0.17	0.04	0.11
EFR-13	0.48	0.56	1.33	0.05	1.28	1.07	1.07	0.67	–	0.90	0.56	0.48	0.66	0.82	1.13	1.30	0.22	1.19
EFR-14	0.10	0.16	0.00	–	–	–	–	–	–	–	-	–	–	–	–	–	–	–
EFR-15	0.09	0.12	0.27	–	0.06	–	–	–	–	0.03	0.02	0.03	0.03	0.12	0.12	0.32	0.11	0.07
EFR-16	0.00	0.00	0.00	–	–	–	–	–	–	–	-	–	–	–	–	–	–	–
EFR-17	0.04	0.17	1.56	0.39	0.17	0.08	–	0.09	–	0.02	0.37	0.29	0.46	0.56	0.71	0.53	0.26	0.08
EFR-18	0.10	0.10	0.09	–	–	–	–	–	–	0.01	0.08	0.14	0.48	0.68	0.98	1.08	0.56	0.11
EFR-19	0.54	2.80	1.89	0.49	1.95	1.63	1.44	0.88	0.65	0.42	0.90	1.26	1.68	1.95	2.31	2.44	1.83	1.68
EFR-20	0.40	0.34	0.95	0.47	0.27	–	–	0.04	0.24	0.37	0.65	0.63	0.79	1.24	1.85	2.11	0.65	1.33
EFR-21	2.36	2.40	2.71	2.74	2.74	4.14	3.97	4.23	3.98	3.29	1.97	1.87	1.86	1.77	1.67	1.62	1.21	1.43
EFR-22	3.78	4.10	0.05	4.81	3.40	4.69	3.42	1.82	1.22	0.96	2.86	2.87	2.97	2.83	2.58	2.27	2.06	0.84
EFR-23	0.00	0.06	0.06	–	0.02	–	–	–	–	0.05	0.11	0.08	0.27	1.03	3.07	2.29	1.55	0.91
EFR-24	0.00	0.00	0.00	–	–	–	–	–	–	–	-	–	–	0.03	0.12	0.14	0.38	0.06
EFR-25	2.95	3.00	3.55	0.26	4.15	3.11	0.72	0.82	0.79	0.78	0.60	0.41	0.29	0.41	1.33	1.58	1.05	1.75
EFR-26	2.20	2.05	2.66	0.29	2.30	2.12	1.43	1.32	1.95	1.21	2.06	1.58	1.17	1.24	1.08	1.09	0.73	0.55
EFR-27	0.15	0.02	2.71	0.02	0.74	–	–	0.03	–	0.02	0.33	0.45	1.49	0.54	0.47	0.51	0.09	0.12
EFR-28	2.20	2.30	1.78	0.48	2.60	3.20	3.48	4.40	3.16	2.61	1.47	1.73	1.69	1.83	1.79	1.74	1.03	1.29
MIN (ft)	0.00	0.00	0.00	0.02	0.02	0.08	0.03	0.03	0.02	0.01	0.02	0.03	0.03	0.03	0.07	0.03	0.02	0.04
MAX (ft)	5.20	5.80	6.42	5.64	7.47	7.06	6.05	6.71	5.73	6.08	4.94	4.52	4.34	4.38	3.98	3.99	3.68	5.79
Average (ft)	1.20	1.44	1.55	1.17	1.92	2.79	2.21	2.01	1.94	1.25	1.22	1.23	1.36	1.34	1.47	1.48	0.97	1.25
Total Free Product (ft)	33.69	40.30	43.36	19.94	44.05	44.68	33.10	36.24	31.07	31.16	30.38	30.73	33.90	34.92	38.30	38.36	25.27	31.14
Total Standing Free Product Volume (gal)	21.60	25.83	27.79	12.78	28.24	28.64	21.22	23.23	19.92	19.97	19.47	19.70	22.04	22.70	24.90	24.93	16.43	20.24
Estimated Total Free Product Removed from Vacuum Truck Gauging plus Vapor Phase Calcs (gal) [1]	315.00	250.00	210.00	80.00	120.00	130.00	100.00	110.00	95.00	105.00	76.00	55.00	60.00	15.00	25.00	51.00	23.00	74.00
Total EFR Extraction Volume (gal)	2350.00	1410.00	376.00	256.00	314.00	300.00	339.00	403.00	390.00	561.00	211.00	220.00	329.00	212.00	120.00	256.00	234.00	498.00
Groundwater Extraction Volume (gal) per each EFR Event [7]																		
Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* [9]	-	-	-	-	-	338	150	600	70	110	71	-	110	-	-	110	-	235
Total Volume Removed from Site (gal) *(Invoiced volume)* [8]	2,350	1,410	376	256	314	638	489	1,003	460	671	282	220	439	212	120	256	234	733
Cumulative Total Free Product Removed (gal)	315	565	775	855	975	1,105	1,205	1,315	1,410	1,515	1,591	1,646	1,706	1,721	1,746	1,797	1,820	1,894
Extraction, Transportation & Disposal Cost[2]	$ 3,976.37	$ 2,742.62	$ 1,130.50	$ 1,130.50	$ 1,219.12	$ 1,431.87	$ 1,541.31	$ 2,038.43	$ 1,240.75	$ 1,347.68	$ 1,324.62	$ 1,838.93	$ 1,383.18	$ 915.25	$ 915.00	$ 973.00	$ 1,156.62	$ 1,641.56
Unit Cost per gal[3]	$ 1.69	$ 1.95	$ 3.01	$ 4.42	$ 3.88	$ 2.24	$ 3.15	$ 2.03	$ 2.70	$ 2.01	$ 4.70	$ 8.36	$ 3.15	$ 4.32	$ 7.63	$ 3.80	$ 4.94	$ 2.24

Notes:

Product thickness was determined prior to the EFR event.

gal = gallon

All EFR Wells are 4 inch in diameter

EFR events 13 and 14 product removal was low due to significant quantities of product remaining emulsified as the result of a short vac truck standing time prior to gauging

Product removal estimate does not take into account a % of product remaining emulsified do to high agitation

(1) Estimated free product (gal) based on Vacuum Truck gauging (interface probe) directly after each EFR Event (See Table 3)

(2) Total invoiced disposal cost for EFR event (product and groundwater) and monitoring well purge water from 1/4ly well development and monitoring activities *(if applicable)*

(3) Total Cost per gallon includes product transportation & disposal, manifest prep, & regulatory admin. fee for combined EFR and GW purge water drum volumes *(if applicable)*

(4) EFR # 11 free product volume was 55 gal and contained PCBs (approx. weight 455lbs total @ specific gravity of 8.18 lbs/gal). Disposal costs were significantly higher due to PCB content

(5) EFR # 23 cost and unit cost higher than normal due to additional vac truck trans and mob time. As the vac truck was broken when it reached the site, a 3 hour credit will be applied to next months EFR T&D bill.

(6) Free product is being stored in an on-site 550-gallon AST equipped with secondary containment. AST contents will be drained with a vacuum truck and transported by CycleChem/CleanVentures every 90 days for appropriate management along with groundwater resulting from well purge activities.

(7) Volume of ground water collected during each EFR event. Volume estimated using an oil/water interface probe on the 55-gal extraction drum. Method began 1st quarter of 2000, when the use of more efficient extraction equipment was utilized.

(8) Those volumes that are totaled over a three month period (beginning 1st quarter 2000) is that volume specific to each of the EFR event it represents.

(9) Purge water removal volume as of 1st quarter 2000 estimated by subtracting the free product volume and extracted groundwater volume from each of the representative EFR event from the total removal volume manifested for a specific disposal event

10/11/2000 11:11 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

EFR Event Date / Well No.	EFR #18 March 24, 1999 Feet of Product	EFR #19 April 19, 1999 Feet of Product	EFR #20 May 18, 1999 Feet of Product	EFR #21 June 22, 1999 Feet of Product	EFR #22 July 28, 1999 Feet of Product	EFR #23 (7) August 27, 1999 Feet of Product	EFR #24 September 22, 1999 Feet of Product	EFR #25 October 27, 1999 Feet of Product	EFR #26 November 30, 1999 Feet of Product	EFR #27 December 16, 1999 Feet of Product	EFR #28 January 28, 2000 Feet of Product	EFR #29 February 18, 2000 Feet of Product	EFR #30 March 24, 2000 Feet of Product	EFR #31 April 19, 2000 Feet of Product	EFR #32 May 18, 2000 Feet of Product	EFR #33 June 16, 2000 Feet of Product	EFR #34 July 18, 2000 Feet of Product	EFR #35 August 17, 2000 Feet of Product
EFR-1	3.68	1.13	1.09	1.15	1.49	1.27	1.94	1.63	1.47	1.20	1.22	0.85	1.86	1.59	1.54	2.10	1.51	1.26
EFR-2	2.42	1.46	1.22	0.92	1.21	1.00	0.63	1.35	1.28	1.40	0.06	1.04	2.25	2.00	1.64	1.89	1.40	0.36
EFR-3	1.63	0.36	0.25	0.86	0.88	1.03	0.74	0.69	0.47	0.02	0.51	0.07	0.08	0.09	0.62	1.02	0.25	0.02
EFR-4	0.14	0.08	0.05	0.03	0.44	0.99	0.51	0.11	0.03	0.58	0.51	0.48	0.11	0.11	0.41	0.22	0.05	0.02
EFR-5	6.15	2.65	2.61	2.66	2.66	1.57	1.77	3.23	2.99	1.27	2.95	2.46	2.91	2.54	1.84	2.34	1.99	1.69
EFR-6	0.88	0.61	1.07	1.16	1.51	0.91	0.15	0.86	0.63	0.33	1.07	0.77	0.29	0.31	0.49	0.27	0.54	0.29
EFR-7	0.04	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35	0.01	0.02	0.00	0.00	0.01
EFR-8	0.03	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.06	0.08	0.03	0.05	0.03	0.02	0.01
EFR-9	0.06	0.11	0.32	0.49	1.16	0.56	0.41	0.28	0.10	0.15	0.13	0.08	0.19	0.02	0.06	0.06	0.12	0.16
EFR-10	5.52	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50	4.50	1.36	2.50	3.09	0.75
EFR-11	2.84	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.95	2.41	2.95	2.93	2.49	4.12	0.79
EFR-12	0.05	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.67	0.01	0.03	0.49	0.46	0.10	0.19	0.01	0.01	0.00
EFR-13	0.15	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.26	0.36	0.34	0.48	0.47	0.69	0.55	0.73	0.49
EFR-14	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-15	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00	0.00
EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-17	0.06	0.06	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.25	0.11	0.32	0.04	0.16	0.65	0.04	0.01	0.02
EFR-18	-	0.06	0.16	0.46	0.96	1.37	0.61	0.36	0.77	0.05	0.20	0.05	0.12	0.04	0.32	0.01	0.06	0.16
EFR-19	0.52	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25	0.60	0.98	0.17	0.63	0.34
EFR-20	0.88	0.43	0.89	0.87	1.59	1.86	0.47	1.92	1.36	0.75	1.08	2.58	0.64	0.42	0.54	0.33	0.30	0.39
EFR-21	2.62	2.35	1.49	1.46	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04	2.86	2.47	3.02	2.09	1.62
EFR-22	0.34	0.95	1.39	1.93	1.47	1.41	0.17	2.22	1.76	0.53	0.82	0.58	0.09	0.16	0.05	0.05	0.01	0.18
EFR-23	0.47	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.46	0.06	0.06	0.01	0.13	0.03
EFR-24	0.00	0.00	0.00	0.08	0.08	0.05	0.00	0.00	0.04	0.13	0.11	0.07	0.58	0.02	0.03	0.00	0.00	0.00
EFR-25	1.19	1.08	0.76	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58	0.21	0.10	0.03	0.10	0.03
EFR-26	0.45	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.54	1.10	1.33	1.68	2.02	1.44	2.25	1.38
EFR-27	0.00	0.00	0.02	0.03	0.17	0.21	0.06	0.01	0.01	0.01	0.02	0.14	0.20	0.01	0.03	0.04	0.01	0.01
EFR-28	1.71	1.65	1.46	1.25	1.67	1.78	0.38	2.19	0.96	1.42	1.33	1.00	2.30	2.42	1.81	2.68	1.72	2.48
MIN (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX (ft)	6.15	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	4.95	3.50	4.50	2.93	3.02	4.12	2.48
Average (ft)	1.22	0.79	0.79	0.88	1.18	0.94	0.57	1.06	0.88	0.58	0.87	0.89	0.88	0.84	0.75	0.76	0.76	0.45
Total Free Product (ft)	31.84	22.00	22.20	24.54	33.11	26.36	15.94	29.68	24.59	16.37	24.34	24.79	24.62	23.38	20.91	21.30	21.14	12.49
Total Standing Free Product Volume (gal)	20.70	14.30	14.43	15.95	21.52	17.13	10.36	19.29	15.98	10.64	15.82	16.11	16.00	15.20	13.59	13.85	13.74	8.12
Estimated Total Free Product Removed from Vacuum Truck Gauging plus Vapor Phase Calcs (gal) (1)	40.00	59.24	47.20	38.51	54.48	36.00	44.00	54.73	44.79	49.34	36.96	43.73	37.95	45.45	45.50	45.45	46.38	22.05
Total EFR Extraction Volume (gal)	683.00	904.76	360.00	564.26	725.54	298.00	239.00	265.00	249.07	350.00	40.92	46.20	52.80	47.11	46.49	47.11	48.03	25.35
Groundwater Extraction Volume (gal) per each EFR Event (7)											3.96	2.48	14.85	1.65	0.99	0.83	1.65	3.30
Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* (9)	-	139	-	-	374	-	-	199	82	-	328				76			
Total Volume Removed from Site (gal) *(Invoiced volume)* (8)	683	1,044	360	564	1,100	298	239	464	331	350	538				250			
Cumulative Total Free Product Removed (gal)	1,934	1,993	2,040	2,079	2,133	2,169	2,213	2,268	2,313	2,362	2,399	2,443	2,481	2,526	2,572	2,617	2,664	2,686
Extraction, Transportation & Disposal Cost(2)	$ 1,703.44	$ 2,049.75	$ 930.31	$ 1,598.13	$ 2,165.75	$ 2,162.12	$ 995.81	$ 1,288.50	$ 1,028.93	$ 968.87	$ 1,045.62				$ 795.13			
Unit Cost per gal(3)	$ 2.49	$ 1.96	$ 2.58	$ 2.83	$ 1.97	$ 7.26	$ 4.17	$ 2.78	$ 3.11	$ 2.77	$ 1.94				$ 3.18			

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

EFR Event Date / Well No.	EFR #36 September 18, 2000 Feet of Product	EFR AVERAGES	EFR TOTALS
EFR-1	1.53		
EFR-2	1.08		
EFR-3	0.08		
EFR-4	0.02		
EFR-5	1.57		
EFR-6	0.55		
EFR-7	0.00		
EFR-8	0.01		
EFR-9	0.08		
EFR-10	2.76		
EFR-11	4.73		
EFR-12	0.03		
EFR-13	0.22		
EFR-14	0.00		
EFR-15	0.00		
EFR-16	0.00		
EFR-17	0.09		
EFR-18	0.08		
EFR-19	0.22		
EFR-20	0.45		
EFR-21	2.75		
EFR-22	0.06		
EFR-23	0.07		
EFR-24	0.01		
EFR-25	0.10		
EFR-26	2.01		
EFR-27	0.15		
EFR-28	2.02		
MIN (ft)	0.00		
MAX (ft)	4.73		
Average (ft)	0.74		
Total Free Product (ft)	20.67		
Total Standing Free Product Volume (gal)	13.44		
Estimated Total Free Product Removed from Vacuum Truck Gauging plus Vapor Phase Calcs (gal) (1)	25.07	73	2,711
Total EFR Extraction Volume (gal)	26.31	373	13,798
Groundwater Extraction Volume (gal) per each EFR Event (7)	1.24	3	31
Estimated Volume Removed Resulting from Drum Purging (GW purge water) *if applicable* (9)	-	200	2,993
Total Volume Removed from Site (gal) *(Invoiced volume)* (8)	On-Site Satellite Storage (6)	556	16,684
Cumulative Total Free Product Removed (gal)	2,711	N/A	2711
Extraction, Transportation & Disposal Cost(2)	-	$ 1,489.32	$ 44,679.67
Unit Cost per gal(3)	-	$ 3.44	N/A

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

	EFR Event Date	11/21/97	12/9/97	1/7/98	2/16/98	3/16/98	3/27/98	4/24/98	5/29/98	6/30/98	7/31/98	8/24/98	9/17/98	10/22/98	11/20/98	12/18/98
	Well No.															
		11/21/97	12/9/97	1/7/98	2/16/98	3/16/98	3/27/98	4/24/98	5/29/98	6/30/98	7/31/98	8/24/98	9/17/98	10/22/98	11/20/98	12/18/98
	EFR-1	1.64	1.53	1.94	2.48	0.93	0.94	1.42	1.55	2.11	1.28	1.22	1.71	1.59	1.71	1.57
	EFR-2	1.55	1.50	1.86	2.20	2.96	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41
	EFR-3	0.85	1.02	1.27	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.93	1.03	1.01	1.19	1.18
	EFR-17	0.04	0.17	1.56	0.17	0.08	--	0.09	--	0.02	0.37	0.29	0.46	0.56	0.71	0.53
	EFR-18	0.10	0.10	0.09	--	--	--	--	--	0.01	0.08	0.14	0.48	0.68	0.98	1.08
	EFR-20	0.40	0.34	0.95	0.27	--	--	0.04	0.24	0.37	0.65	0.63	0.79	1.24	1.85	2.11
	EFR-21	2.36	2.40	2.71	2.74	4.14	3.97	4.23	3.98	3.29	1.97	1.87	1.86	1.77	1.67	1.62
Western Plume	EFR-28	2.20	2.30	1.78	2.60	3.20	3.48	4.40	3.16	2.61	1.47	1.73	1.69	1.83	1.79	1.74
Total Free Product (ft)		9.14	9.36	12.16	12.04	12.50	11.34	13.07	11.56	10.96	7.66	7.90	9.23	9.97	11.41	11.24
Total Free Product (gal)		5.86	6.00	7.79	7.72	8.01	7.27	8.38	7.41	7.03	4.91	5.06	6.00	6.48	7.42	7.31
		11/21/97	12/9/97	1/7/98	2/16/98	3/16/98	3/27/98	4/24/98	5/29/98	6/30/98	7/31/98	8/24/98	9/17/98	10/22/98	11/20/98	12/18/98
	EFR-4	1.03	2.27	0.54	0.30	--	--	--	--	0.03	0.38	1.23	2.40	2.17	1.75	1.79
	EFR-5	4.03	3.74	4.25	3.29	3.39	1.71	2.71	2.02	1.86	2.38	2.52	2.33	2.52	2.19	2.28
	EFR-6	0.72	1.00	1.24	2.27	1.71	1.17	2.23	1.55	1.56	1.96	1.56	1.42	1.25	1.29	1.38
	EFR-7	0.17	0.09	0.16	--	--	--	--	--	0.02	0.02	0.03	0.07	0.05	0.20	0.16
	EFR-19	0.54	2.80	1.89	1.95	1.63	1.44	0.88	0.65	0.42	0.9	1.26	1.68	1.95	2.31	2.44
	EFR-22	3.78	4.10	0.05	3.40	4.69	3.42	1.82	1.22	0.96	2.86	2.87	2.97	2.83	2.58	2.27
	EFR-23	0.00	0.06	0.06	0.02	--	--	--	--	0.05	0.11	0.08	0.27	1.03	3.07	2.29
	EFR-24	0.00	0.00	0.00	--	--	--	--	--	--	-	--	--	0.03	0.12	0.14
	EFR-25	2.95	3.00	3.55	4.15	3.11	0.72	0.82	0.79	0.78	0.6	0.41	0.29	0.41	1.33	1.58
	EFR-26	2.20	2.05	2.66	2.30	2.12	1.43	1.32	1.95	1.21	2.06	1.58	1.17	1.24	1.08	1.09
Central Plume	EFR-27	0.15	0.02	2.71	0.74	--	--	0.03	--	0.02	0.33	0.45	1.49	0.54	0.47	0.51
Total Free Product (ft)		15.57	19.13	17.11	18.42	16.65	9.89	9.81	8.18	6.91	11.60	11.99	14.09	14.02	16.39	15.93
Total Free Product (gal)		9.98	12.26	10.97	11.81	10.67	6.34	6.29	5.24	4.43	7.44	7.69	9.16	9.11	10.65	10.35
		11/21/97	12/9/97	1/7/98	2/16/98	3/16/98	3/27/98	4/24/98	5/29/98	6/30/98	7/31/98	8/24/98	9/17/98	10/22/98	11/20/98	12/18/98
	EFR-8	0.00	0.00	0.00	0.08	--	--	--	--	0.03	0.04	0.08	0.13	0.09	0.07	0.03
	EFR-9	0.00	1.10	1.79	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.98	1.23	1.31	1.26	1.86
	EFR-10	5.20	5.80	6.42	7.47	7.06	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.98	3.99
	EFR-11	3.07	4.04	4.28	4.47	4.32	4.67	5.91	5.73	6.08	4.73	4.47	3.95	4.06	3.65	3.52
	EFR-12	0.04	0.03	0.00	0.07	--	--	--	0.02	0.28	0.22	0.28	0.24	0.15	0.29	0.17
	EFR-13	0.48	0.56	1.33	1.28	1.07	1.07	0.67	--	0.9	0.56	0.48	0.66	0.82	1.13	1.30
	EFR-14	0.10	0.16	0.00	--	--	--	--	--	--	-	--	--	--	--	--
	EFR-15	0.09	0.12	0.27	0.06	--	--	--	--	0.03	0.02	0.03	0.03	0.12	0.12	0.32
Eastern Plume	EFR-16	0.00	0.00	0.00	--	--	--	--	--	--	-	--	--	--	--	--
Total Free Product (ft)		8.98	11.81	14.09	13.59	15.53	11.87	13.36	11.33	13.29	11.12	10.84	10.58	10.93	10.50	11.19
Total Free Product (gal)		5.76	7.57	9.03	8.71	9.95	7.61	8.56	7.26	8.52	7.13	6.95	6.88	7.10	6.83	7.27
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		21.60	25.83	27.79	28.24	28.64	21.22	23.23	19.92	19.97	19.47	19.70	22.04	22.70	24.90	24.93

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

	EFR Event Date	1/13/99	2/17/99	3/23/99	4/19/99	5/18/99	6/22/99	7/28/99	8/27/99	9/22/99	10/27/99	11/30/99	12/16/99	1/28/00	2/18/00	3/24/00
	Well No.															
		1/13/99	2/17/99	3/23/99	4/19/99	5/18/99	6/22/99	7/28/99	8/27/99	9/22/99	10/27/99	11/30/99	12/16/99	1/28/00	2/18/00	3/24/00
	EFR-1	0.53	1.79	3.68	1.13	1.09	1.15	1.49	1.27	1.94	1.63	1.47	1.20	1.22	0.85	1.86
	EFR-2	0.95	1.40	2.42	1.46	1.22	0.92	1.21	1.00	0.63	1.35	1.28	1.40	0.06	1.04	2.25
	EFR-3	1.14	1.01	1.63	0.36	0.25	0.86	0.88	1.03	0.74	0.69	0.47	0.02	0.51	0.07	0.08
	EFR-17	0.26	0.08	0.06	0.06	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.25	0.11	0.32	0.04
	EFR-18	0.56	0.11	0.00	0.06	0.16	0.46	0.96	1.37	0.61	0.36	0.77	0.05	0.20	0.05	0.12
	EFR-20	0.65	1.33	0.88	0.43	0.89	0.87	1.59	1.86	0.47	1.92	1.36	0.75	1.08	2.58	0.64
	EFR-21	1.21	1.43	2.62	2.35	1.49	1.46	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04
Western Plume	EFR-28	1.03	1.29	1.71	1.65	1.46	1.25	1.67	1.78	0.38	2.19	0.96	1.42	1.33	1.00	2.30
Total Free Product (ft)		6.33	8.44	13.00	7.50	6.64	7.09	9.76	9.71	5.88	10.52	7.95	6.79	6.43	7.25	10.33
Total Free Product (gal)		4.11	5.49	8.45	4.88	4.32	4.61	6.34	6.31	3.82	6.84	5.17	4.41	4.18	4.71	6.71
		1/13/99	2/17/99	3/23/99	4/19/99	5/18/99	6/22/99	7/28/99	8/27/99	9/22/99	10/27/99	11/30/99	12/16/99	1/28/00	2/18/00	3/24/00
	EFR-4	0.73	0.10	0.14	0.08	0.05	0.03	0.44	0.99	0.51	0.11	0.03	0.58	0.51	0.48	0.11
	EFR-5	2.68	3.47	6.15	2.65	2.61	2.66	2.66	1.57	1.77	3.23	2.99	1.27	2.95	2.46	2.91
	EFR-6	0.49	0.84	0.88	0.61	1.07	1.16	1.51	0.91	0.15	0.86	0.63	0.33	1.07	0.77	0.29
	EFR-7	0.02	0.04	0.04	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35
	EFR-19	1.83	1.68	0.52	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25
	EFR-22	2.06	0.84	0.34	0.95	1.39	1.93	1.47	1.41	0.17	2.22	1.76	0.53	0.82	0.58	0.09
	EFR-23	1.55	0.91	0.47	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.46
	EFR-24	0.38	0.06	0.00	0.00	0.00	0.08	0.08	0.05	0.00	0.00	0.04	0.13	0.11	0.07	0.58
	EFR-25	1.05	1.75	1.19	1.08	0.76	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58
	EFR-26	0.73	0.55	0.45	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.54	1.10	1.33
Central Plume	EFR-27	0.09	0.12	0.00	0.00	0.02	0.03	0.17	0.21	0.06	0.01	0.01	0.01	0.02	0.14	0.20
Total Free Product (ft)		11.61	10.36	10.18	6.85	7.98	9.34	13.76	10.44	3.80	9.48	8.11	4.89	9.38	8.05	7.15
Total Free Product (gal)		7.55	6.73	6.62	4.45	5.19	6.07	8.94	6.79	2.47	6.16	5.27	3.18	6.10	5.23	4.65
		1/13/99	2/17/99	3/23/99	4/19/99	5/18/99	6/22/99	7/28/99	8/27/99	9/22/99	10/27/99	11/30/99	12/16/99	1/28/00	2/18/00	3/24/00
	EFR-8	0.12	--	0.03	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.06	0.08
	EFR-9	0.74	0.49	0.06	0.11	0.32	0.49	1.16	0.56	0.41	0.28	0.10	0.15	0.13	0.08	0.19
	EFR-10	3.68	5.79	5.52	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50
	EFR-11	2.42	4.69	2.84	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.95	2.41
	EFR-12	0.04	0.11	0.05	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.67	0.01	0.03	0.49	0.46
	EFR-13	0.22	1.19	0.15	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.26	0.36	0.34	0.48
	EFR-14	--	--	-	-	-	-	-	-	-	-	-	-	-	-	-
	EFR-15	0.11	0.07	0.01	0.01	-	-	-	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02
Eastern Plume	EFR-16	--	--	-	0.00	-	-	-	-	-	-	-	-	-	-	-
Total Free Product (ft)		7.33	12.34	8.66	7.65	7.58	8.11	9.59	6.21	6.26	9.68	8.53	4.69	8.53	9.49	7.14
Total Free Product (gal)		4.76	8.02	5.63	4.97	4.93	5.27	6.23	4.04	4.07	6.29	5.54	3.05	5.54	6.17	4.64
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		16.43	20.24	20.70	14.30	14.43	15.95	21.52	17.13	10.36	19.29	15.98	10.64	15.82	16.11	16.00

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

	EFR Event Date	4/19/00	5/18/00	6/16/00	7/18/00	8/17/00	9/18/00
	Well No.						
		4/19/00	5/18/00	6/16/00	7/18/00	8/17/00	9/18/00
	EFR-1	1.59	1.54	2.10	1.51	1.26	1.53
	EFR-2	2.00	1.64	1.89	1.40	0.36	1.08
	EFR-3	0.09	0.62	1.02	0.25	0.02	0.08
	EFR-17	0.16	0.65	0.04	0.01	0.02	0.09
	EFR-18	0.04	0.32	0.01	0.06	0.16	0.08
	EFR-20	0.42	0.54	0.33	0.30	0.39	0.45
	EFR-21	2.86	2.47	3.02	2.09	1.62	2.75
Western Plume	EFR-28	2.42	1.81	2.68	1.72	2.48	2.02
Total Free Product (ft)		9.58	9.59	11.09	7.34	6.31	8.08
Total Free Product (gal)		6.23	6.23	7.21	4.77	4.10	5.25
		4/19/00	5/18/00	6/16/00	7/18/00	8/17/00	9/18/00
	EFR-4	0.11	0.41	0.22	0.05	0.02	0.02
	EFR-5	2.54	1.84	2.34	1.99	1.69	1.57
	EFR-6	0.31	0.49	0.27	0.54	0.29	0.55
	EFR-7	0.01	0.02	-	-	0.01	-
	EFR-19	0.60	0.98	0.17	0.63	0.34	0.22
	EFR-22	0.16	0.05	0.05	0.01	0.18	0.06
	EFR-23	0.06	0.06	0.01	0.13	0.03	0.07
	EFR-24	0.02	0.03	-	-	-	0.01
	EFR-25	0.21	0.10	0.03	0.10	0.03	0.10
	EFR-26	1.68	2.02	1.44	2.25	1.38	2.01
Central Plume	EFR-27	0.01	0.03	0.04	0.01	0.01	0.15
Total Free Product (ft)		5.71	6.03	4.57	5.71	3.98	4.76
Total Free Product (gal)		3.71	3.92	2.97	3.71	2.59	3.09
		4/19/00	5/18/00	6/16/00	7/18/00	8/17/00	9/18/00
	EFR-8	0.03	0.05	0.03	0.02	0.01	0.01
	EFR-9	0.02	0.06	0.06	0.12	0.16	0.08
	EFR-10	4.50	1.36	2.50	3.09	0.75	2.76
	EFR-11	2.95	2.93	2.49	4.12	0.79	4.73
	EFR-12	0.10	0.19	0.01	0.01	0.00	0.03
	EFR-13	0.47	0.69	0.55	0.73	0.49	0.22
	EFR-14	-	-	-	-	-	-
	EFR-15	0.02	0.01	-	-	-	-
Eastern Plume	EFR-16	-	-	-	-	-	-
Total Free Product (ft)		8.09	5.29	5.64	8.09	2.20	7.83
Total Free Product (gal)		5.26	3.44	3.67	5.26	1.43	5.09
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		15.20	13.59	13.85	13.74	8.12	13.44

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #34 DATE 18-Jul-00

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT TICKNESS (ft)
EFR-1	10.26	11.77	1.51
EFR-2	10.88	12.28	1.40
EFR-3	10.9	11.15	0.25
EFR-4	12.39	12.44	0.05
EFR-5	10.63	12.62	1.99
EFR-6	10.26	10.8	0.54
EFR-7	7.11	7.11	0.00
EFR-8	6.24	6.26	0.02
EFR-9	6.49	6.61	0.12
EFR-10	7.15	10.24	3.09
EFR-11	6.68	10.8	4.12
EFR-12	5.77	5.78	0.01
EFR-13	5.28	6.01	0.73
EFR-14	5.13	5.13	0.00
EFR-15	4.48	4.48	0.00
EFR-16	5.05	5.05	0.00
EFR-17	9.65	9.66	0.01
EFR-18	9.66	9.72	0.06
EFR-19	12.57	13.2	0.63
EFR-20	10.75	11.05	0.30
EFR-21	9.13	11.22	2.09
EFR-22	12.65	12.66	0.01
EFR-23	9	9.13	0.13
EFR-24	12.02	12.02	0.00
EFR-25	11.72	11.82	0.10
EFR-26	13.29	15.54	2.25
EFR-27	12.04	12.05	0.01
EFR-28	9.7	11.42	1.72

Total Volume Of Free Standing Product (gal) 13.74

CEMCO FIELD TECHNICIAN: Gary Pizzuti

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #34 **18-Jul-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	7.0	0.1167	6,560	100	17	100	32.01	3.7350
EFR-2	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-3	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-4	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-5	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-6	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-7	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-8	1.0	0.0167	1,378	21	17	100	6.72	0.1120
EFR-9	2.0	0.0333	1,181	18	17	100	5.76	0.1921
EFR-10	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-11	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-12	0.5	0.0083	459	7	17	100	2.24	0.0187
EFR-13	3.0	0.0500	394	6	17	100	1.92	0.0960
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-18	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-19	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-20	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-21	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-22	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-23	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-24	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-25	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-26	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-27	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-28	10.0	0.1667	6,560	100	17	100	32.01	5.3357
Total EFR Time (hrs)		1.9500	AVG ppm	5501.45			TOTAL (LBS)	59.3785
							TOTAL VAPOR PHASE VOLUME (GAL)	7.6041

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

ppm_v =	Parts per Million by Volume		
Flow =	Cubic feet per minute (CFM)	350	
Molar Mass (MM) =	Molecular Weight (lb/lb-mole) =	292	(2)
IGC =	Ideal Gas Constant (359 ft^3/lb-mole) =	359	
LEL =	Free Product Mixture =	0.656	(1)
SG =	Specific Gravity =	0.9363	(3)

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (ppm_v \times (60\ \text{min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359\ ft^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	23.50
Groundwater Thickness (in)	1.00
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	38.78
Total Groundwater Volume (gal)	1.65
Ratio Groundwater to Free Product (gal/gal)	0.04

		Y (gal)
Total Recovered Groundwater Volume (gal)		1.65
Total Recovered Free Product Volume (gal)		38.78
Total Recovered Fluids Volume (gal)		40.43
TOTAL EFR PRODUCT VOLUME		46.38 GAL

Date	18-Jul-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #35 DATE 17-Aug-00

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT TICKNESS (ft)
EFR-1	7.55	8.81	1.26
EFR-2	8.31	8.67	0.36
EFR-3	8.2	8.22	0.02
EFR-4	9.23	9.25	0.02
EFR-5	8.22	9.91	1.69
EFR-6	7.88	8.17	0.29
EFR-7	4.31	4.32	0.01
EFR-8	4.01	4.02	0.01
EFR-9	4.21	4.37	0.16
EFR-10	4.95	5.7	0.75
EFR-11	4.42	5.21	0.79
EFR-12	3.58	3.58	0.00
EFR-13	3.17	3.66	0.49
EFR-14	3.15	3.15	0.00
EFR-15	2.48	2.48	0.00
EFR-16	3.73	3.73	0.00
EFR-17	6.81	6.83	0.02
EFR-18	6.95	7.11	0.16
EFR-19	9.82	10.16	0.34
EFR-20	7.95	8.34	0.39
EFR-21	6.56	8.18	1.62
EFR-22	9.98	10.16	0.18
EFR-23	6.35	6.38	0.03
EFR-24	9.49	9.49	0.00
EFR-25	9.08	9.11	0.03
EFR-26	10.9	12.28	1.38
EFR-27	9.4	9.41	0.01
EFR-28	7.02	9.5	2.48

Total Volume Of Free Standing Product (gal) 8.12

CEMCO FIELD TECHNICIAN: Gary Pizzuti

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #35 **17-Aug-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-2	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-3	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-4	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-5	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-6	2.0	0.0333	2,034	31	17	100	9.92	0.3308
EFR-7	0.5	0.0083	1,443	22	17	100	7.04	0.0587
EFR-8	0.5	0.0083	0	0	17	100	0.00	0.0000
EFR-9	0.5	0.0083	197	3	17	100	0.96	0.0080
EFR-10	5.0	0.0833	1,115	17	17	100	5.44	0.4535
EFR-11	5.0	0.0833	1,509	23	17	100	7.36	0.6136
EFR-12	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-13	1.0	0.0167	131	2	17	100	0.64	0.0107
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-18	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-19	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-20	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-21	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-22	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-23	0.5	0.0083	2,034	31	17	100	9.92	0.0827
EFR-24	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-25	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-26	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-27	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-28	20.0	0.3333	6,560	100	17	100	32.01	10.6714
Total EFR Time (hrs)		1.4750	AVG ppm	4559.20			TOTAL (LBS)	40.7755
							TOTAL VAPOR PHASE VOLUME (GAL)	5.2218

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

ppm_v =	Parts per Million by Volume		
Flow =	Cubic feet per minute (CFM)	350	
Molar Mass (MM) =	Molecular Weight (lb/lb-mole) =	292	(2)
IGC =	Ideal Gas Constant (359 ft^3/lb-mole) =	359	
LEL =	Free Product Mixture =	0.656	(1)
SG =	Specific Gravity =	0.9363	(3)

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (ppm_v \times (60\ \text{min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359\ ft^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	10.20
Groundwater Thickness (in)	2.00
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	16.83
Total Groundwater Volume (gal)	3.30
Ratio Groundwater to Free Product (gal/gal)	0.20

	Y (gal)
Total Recovered Groundwater Volume (gal)	3.30
Total Recovered Free Product Volume (gal)	16.83
Total Recovered Fluids Volume (gal)	20.13
TOTAL EFR PRODUCT VOLUME	22.05 GAL

Date	18-Jul-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #36 DATE 18-Sep-00

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT TICKNESS (ft)
EFR-1	10.09	11.62	1.53
EFR-2	10.7	11.78	1.08
EFR-3	10.67	10.75	0.08
EFR-4	12.14	12.16	0.02
EFR-5	10.45	12.02	1.57
EFR-6	10.07	10.62	0.55
EFR-7	6.69	6.69	0.00
EFR-8	6.05	6.06	0.01
EFR-9	6.33	6.41	0.08
EFR-10	6.99	9.75	2.76
EFR-11	6.45	11.18	4.73
EFR-12	6.58	6.61	0.03
EFR-13	5.15	5.37	0.22
EFR-14	4.94	4.94	0.00
EFR-15	4.33	4.33	0.00
EFR-16	4.89	4.89	0.00
EFR-17	9.43	9.52	0.09
EFR-18	9.45	9.53	0.08
EFR-19	12.35	12.57	0.22
EFR-20	10.55	11	0.45
EFR-21	8.65	11.4	2.75
EFR-22	12.49	12.55	0.06
EFR-23	8.81	8.88	0.07
EFR-24	11.79	11.8	0.01
EFR-25	11.52	11.62	0.10
EFR-26	13.12	15.13	2.01
EFR-27	11.8	11.95	0.15
EFR-28	9.41	11.43	2.02

Total Volume Of Free Standing Product (gal) 13.44

CEMCO FIELD TECHNICIAN: Gary Pizzuti

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #36 **18-Sep-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-2	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-3	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-4	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-5	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-6	2.0	0.0333	2,034	31	17	100	9.92	0.3308
EFR-7	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-8	0.5	0.0083	4,789	73	17	100	23.37	0.1948
EFR-9	1.0	0.0167	394	6	17	100	1.92	0.0320
EFR-10	10.0	0.1667	3,411	52	17	100	16.65	2.7746
EFR-11	10.0	0.1667	4,789	73	17	100	23.37	3.8951
EFR-12	2.0	0.0333	66	1	17	100	0.32	0.0107
EFR-13	1.0	0.0167	0	0	17	100	0.00	0.0000
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-18	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-19	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-20	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-21	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-22	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-23	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-24	0.5	0.0083	0	100	17	100	0.00	0.0000
EFR-25	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-26	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-27	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-28	10.0	0.1667	6,560	100	17	100	32.01	5.3357
Total EFR Time (hrs)		1.5083	AVG ppm	5173.45			TOTAL (LBS)	41.1197
							TOTAL VAPOR PHASE VOLUME (GAL)	5.2658

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Analyte LELs: DEHP @ 0.3% ; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

ppm_v =	Parts per Million by Volume		
Flow =	Cubic feet per minute (CFM)	350	
Molar Mass (MM) =	Molecular Weight (lb/lb-mole) =	292	(2)
IGC =	Ideal Gas Constant (359 ft^3/lb-mole) =	359	
LEL =	Free Product Mixture =	0.656	(1)
SG =	Specific Gravity =	0.9363	(3)

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (ppm_v \times (60\ \text{min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359\ ft^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	12.00
Groundwater Thickness (in)	0.75
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	19.80
Total Groundwater Volume (gal)	1.24
Ratio Groundwater to Free Product (gal/gal)	0.06

	Y (gal)
Total Recovered Groundwater Volume (gal)	1.24
Total Recovered Free Product Volume (gal)	19.80
Total Recovered Fluids Volume (gal)	21.04
TOTAL EFR PRODUCT VOLUME	25.07 GAL

Date	18-Jul-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 4

L.E. CARPENTER - WHARTON, NEW JERSEY

REVISED QUARTERLY MONITORING PROTOCOL

Per NJDEP Letter Dated Aug 17, 1999

Monitoring Well	Bottom of Well (ft)	Analytical Parameters	Rational	Comments
MW-14I	40.96', 2"	BTEX(1) DEHP(2)	Analytical results will identify the migration of the dissolved groundwater plume in the Intermediate Aquifer Zone downgradient of the site (Wharton Enterprise property)	Original Monitoring Well
MW-15S	17.47', 4"	BTEX(1) DEHP(2)	Analytical results will identify if the dissolved groundwater plume is migrating through this portion of the shallow aquifer zone (on the rail spur right-of-way)	Original Monitoring Well
MW-15I	38.34', 2"	BTEX(1) DEHP(2)	Analytical results will identify the migration of the dissolved groundwater plume through the Intermediate Aquifer Zone in the is area (on rail spur right-of-way)	Original Monitoring Well
MW-22R	11', 2"	BTEX(1) DEHP(2)	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site (Wharton Enterprise property).	Original Monitoring Well
MW-25R	11', 2"	BTEX(1) DEHP(1)	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site. East of MW-22R (Wharton Enterprise property).	DEHP sampling required quarterly as opposed to semi annually per Nov 23, 1998 NJDEP Letter.
MW-17S(3)	13.4', 4"	BTEX DEHP	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone.	Original Monitoring Well
MW-4	27', 2"	BTEX(1) DEHP(2)	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone (south portion of subject site, bordering on the Rockaway River)	Original Monitoring Well
MW-11D(R)	161'	BTEX(1) DEHP(1)	Analytical results from this well identify potential contamination of deep aquifer. This well lies in the center of the free product plume.	New well added to monitoring protocol as of May 21, 1999 NJDEP Letter (review of 1st quarter monitoring report). Well exhibited DEHP contamination potentially as the result of draw down during well installation. Well will be sampled for both monitoring program parameters (BTEX & DEHP) per NJDEP letter dated Aug 17, 1999
MW-21	15.0'	BTEX(1) DEHP(1)	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone. Additionally, data from this well is used to track the potential migratory trend from MW-25 (Eastern most portion of the subject site)	New well added to monitoring protocol as of Nov 23, 1998 NJDEP Letter.

NOTES
(1) Sample Collected Every Quarter
(2) Sample Collected Bi-annually, 2nd and 4th quarter.
(3) Well sampled bi-annually, 2nd and 4th quarter.

QA/QC PROTOCOL
One (1) field blank will be collected for each parameter per each event (an additional 8 samples - 4 BTEX and 4 DEHP)
One (1) trip blank will be collected, alternating parameters per each event (an additional 4 samples - 2 BTEX and 2 DEHP)
One (1) duplicate sample will be collected from alternating wells and analyzed for alternating parameters (2 BTEX and 2 DEHP)

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
MW-4	1995	1	ND	26	ND	32	**25,000**	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES
		2	ND	16	ND	13	**46,000**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		3	ND	9.7	ND	8.7	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	8.8	ND	11	**17,000**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	1996	1	ND	24	ND	**47**	NS	NO	NO	NO	YES	–	NO	NO	NO	YES	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	6.8	ND	4.3	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	2.3	ND	ND	**11,000**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	1997	1	ND	3.5	ND	1.8	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	1.2	ND	4.2	**120**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		3	ND	2.2	ND	12.6	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	1.0	ND	1.4	**710**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		3	ND	1.9	ND	1.2	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	9.3	ND	3.3	**650**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	1999	1	ND	1.1	ND	2.5	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	0.66	ND	ND	**3,000**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		2 duplicate	ND	0.43	ND	ND	**4,400**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		3	ND	3.10	ND	2.9	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	0.51	ND	ND	**4,000**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	2000	1	ND	0.54	ND	1.6	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	0.3	ND	ND	**480**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
MW-11(DR) (2)(3)	1999	1	ND	ND	ND	ND	**64**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		1 duplicate	ND	ND	ND	ND	20	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3(3)	NS	NS	NS	NS	**59**	–	–	–	–	YES	–	–	–	–	YES
		3 duplicate	NS	NS	NS	NS	13	–	–	–	–	NO	–	–	–	–	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Field ID: MW-11DD	2 duplicate	ND	ND	ND	ND	NR	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	ND	ND	ND	ND	3.4	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
MW-14I	1995	1	ND	0.4	ND	1.2	**140**	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	2.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	2.7	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	**1.2**	22.1	ND	**176**	NS	YES	NO	NO	YES	–	YES	NO	NO	YES	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	0.34	ND	2	24	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
MW-15S	1995	1	ND	ND	ND	ND	2.4	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1996	1	ND	33	ND	**83**	NS	NO	NO	NO	YES	–	NO	NO	NO	YES	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	0.21	ND	1.7	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	1.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	1.4	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	1.3	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
MW-15I	1995	1	ND	ND	ND	ND	250	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
		2	ND	ND	ND	ND	7.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	2.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	1.7	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4 duplicate	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	2.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2 duplicate	ND	ND	ND	ND	3.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	0.53	11	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4 duplicate	ND	0.2	ND	0.8	9.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	4.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
MW-17S (4)	1995	1	ND	0.6	0.3	1.9	11	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	0.2	ND	0.18	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		4	ND	ND	ND	0.63	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1996	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		4	ND	ND	ND	ND	1.5	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	ND	ND	1.2	6.1	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
		4	ND	ND	ND	ND	6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		4	ND	ND	ND	ND	40	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	2000	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
MW-21 (1)	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		1 duplicate	NS	NS	NS	NS	ND	–	–	–	–	NO	–	–	–	–	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
MW-22(R)	1995	1	ND	57	ND	**260**	**6,500**	NO	NO	NO	YES	YES	NO	NO	NO	YES	YES
		2	ND	311	ND	**955**	**380**	NO	NO	NO	YES	YES	NO	NO	NO	YES	YES
		3	ND	171	ND	**693**	NS	NO	NO	NO	YES	–	NO	NO	NO	YES	–
		4	ND	123	ND	**494**	**320**	NO	NO	NO	YES	YES	NO	NO	NO	YES	YES
	1996	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	359	ND	**1,320**	NS	NO	NO	NO	YES	–	NO	YES	NO	YES	–
		4	ND	320	ND	**1,330**	ND	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
	1997	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	**5,730**	ND	**32,900**	**7,500**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
		3	ND	**11,400**	348	**66,000**	NS	NO	YES	NO	YES	–	NO	YES	NO	YES	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	**4,070**	348	**20,600**	NS	NO	YES	NO	YES	–	NO	YES	NO	YES	–
		2	ND	**2,260**	ND	**11,300**	**5,800**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3 duplicate	ND	**2,510**	ND	**11,000**	NS	NO	YES	NO	YES	–	NO	YES	NO	YES	–
		4	ND	**1,650**	ND	**7,230**	**1,100**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
	1999	1	ND	18	ND	**84**	NS	NO	NO	NO	YES	–	NO	NO	NO	YES	–
		2	ND	**1,600**	ND	**7,600**	**670**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
		3	ND	**1,200**	42	**5,200**	NS	NO	YES	NO	YES	–	NO	YES	NO	YES	–
		4	ND	**810**	ND	**3,300**	**1200**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
		4 duplicate	ND	**840**	ND	**3,400**	**1600**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
	2000	1	ND	360	ND	**1,400**	NS	NO	NO	NO	YES	–	NO	YES	NO	YES	–
Dillution Factor 50		2	ND	**820**	ND	**3,600**	**92**	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
Dillution Factor 200		3	ND	1,000	ND	4,800	NS	NO	YES	NO	YES	–	NO	YES	NO	YES	–
MW-25(R)	1995	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	68	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES
	1996	1	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	0.34	ND	2.2	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	13.5	ND	89	63	NO	NO	NO	YES	YES	NO	NO	NO	YES	YES
		3	ND	4.1	ND	30.7	NS	NO	NO	NO	NO	–	NO	NO	NO	YES	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	0.33	ND	1.5	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		1 duplicate	ND	0.39	ND	0.94	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	5.3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	14	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	0.39	ND	1.4	9.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Field ID: MW-25RD	3 duplicate	NS	NS	NS	NS	ND	–	–	–	–	NO	–	–	–	–	NO
Trip Blank	1995	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?					ABOVE ROD DISCHARGE CRITERIA ?				
	YEAR	QUARTER	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	bis-2-Ethylhexylphthalate (DEHP) ug/l	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
NJDEP GWQS			1	700	1,000	40	30										
ROD DISCHARGE CRITERIA			1	350	500	20	30										
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	NS	1.3	NO	NO	NO	–	NO	NO	NO	NO	–	NO
	1999	1	ND	ND	ND	NS	ND	NO	NO	NO	–	NO	NO	NO	NO	–	NO
		2	ND	ND	ND	NS	ND	NO	NO	NO	–	NO	NO	NO	NO	–	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
	2000	1	NS	NS	NS	NS	ND	–	–	–	–	NO	–	–	–	–	NO
		1	NS	NS	NS	NS	ND	–	–	–	–	NO	–	–	–	–	NO
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	NS	NS	NS	NS	ND	–	–	–	–	NO	–	–	–	–	NO
Field Blank	1995	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	0.73	ND	ND	1.3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1997	1	ND	ND	0.2	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	NS	NS	NS	NS	NS	–	–	–	–	–	–	–	–	–	–
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		4	ND	ND	ND	ND	1.3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		1	ND	ND	ND	ND	NS	NO	NO	NO	NO	–	NO	NO	NO	NO	–
		1	NS	NS	NS	NS	3.2	–	–	–	–	NO	–	–	–	–	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

LEGEND
mg/L = micrograms per liter
NJGWQS = New Jersey Groundwater Quality Standards
ROD: Record of Decision
NA = Not Applicable
NS = Not Sampled
ND: No Detection
duplicate = Duplicate sample
NR = Not Run

Values in BOLD FONT are above BOTH the NJDEP GWQS and the ROD Discharge Criteria
– Used when comparison against known standards does not apply as the well was not sampled (NS) for a specif

Sampling Notes:
(1) MW-21 Quarterly sampling required for both DEHP and BTEX as of NJDEP letter dated Nov 23, 1998
(2) MW-11(IR) & MW-11(DR) sampled for both DEHP and BTEX per NJDEP letter dated Nov 23, 1998 (one time sample round- baseline concentration)
(3) MW-11D required to be sampled quarterly per NJDEP letter dated August 17, 1999. Third quarter 1999 sampling was performed prior to receiving the NJDEP letter. Subsequently, the well was only sampled for DEHP. Starting 4th quarter 1999, MW-11D will be sampled for both DEHP and BTEX.
(4) Well sampled Biannually - 2nd and 4th Quarter Only as of the beginning of 1998

Table 6
Water Level Elevations - 3rd QUARTER 2000
L.E. Carpenter, Wharton, New Jersey

WELL LOCATION	WELL TYPE	BASELINE LOCATION				WELL INSTALLATION AND CONSTRUCTION INFORMATION										GEODETIC LOCATION		ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION						
						MANAGING CONSULTANT	INSTALLATION DATE	TOTAL WELL DEPTH (FT)	WELL DIAMETER (IN)	SCREEN MATERIAL	SLOT SIZE (IN)	TOP OF SCREEN (FT)	BOTTOM OF SCREEN (FT)	SCREENED INTERVAL (FT)	AQUIFER SYSTEM	LATITUDE	LONGITUDE	GROUND	OUTER CASING	INNER WELL	MEAS. DATE	PRODUCT DEPTH	WATER DEPTH	PRODUCT ELEVATION	WATER ELEVATION	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ELEVATIONS [2]
CW-1	Caisson Well	North	162.99	East	203.83	ROY F. WESTON	-	-	-	-	-	-	-	-	-	40° 54' 14.2"	74° 34' 34.7"	630.83	634.35		31-Jul-00	-	6.91	-	623.92	-	-
CW-3	Caisson Well	North	198.46	East	373.37	ROY F. WESTON		-	-	-	-	-	-	-	-	40° 54' 13.6"	74° 34' 32.5"	628.63	633.30		31-Jul-00	-	7.15	-	621.48	-	-
GEI-1I	Piezometer	North	607.06	West	69.57	ROY F. WESTON	April to October 1989	44.34	2.00	PVC	0.02	31.62	41.62	10.00	I	40° 54' 19.3"	74° 34' 35.3"	628.44	630.93	630.78	31-Jul-00	-	4.73	-	626.05	-	-
GEI-2I	Piezometer	North	168.56	West	516.79	ROY F. WESTON	April to October 1989	46.28	2.00	PVC	0.02	31.50	41.50	10.00	I	40° 54' 17.4"	74° 34' 43.1"	635.92	638.35	638.20	31-Jul-00	-	11.04	-	627.16	-	-
GEI-2S	Piezometer	North	164.27	West	507.48	ROY F. WESTON	April to October 1989	22.21	2.00	PVC	0.02	10.00	20.00	10.00	S	40° 54' 17.3"	74° 34' 43.0"	635.46	637.87	637.67	31-Jul-00	-	10.89	-	626.78	-	-
GEI-3I	Piezometer	South	86.67	West	441.14	ROY F. WESTON	April to October 1989	53.29	2.00	PVC	0.02	30.00	40.00	10.00	I	40° 54' 14.8"	74° 34' 43.7"	637.56	639.99	639.85	31-Jul-00	-	13.85	-	626.00	-	-
MW-1(R)	Monitoring Well	South	13.7	West	61.04	ROY F. WESTON	February 3, 1996	22.50	4.00	STEEL	0.01	7.00	22.50	15.50	S	40° 54' 13.6"	74° 34' 38.8"	635.79	635.78	635.47	31-Jul-00	9.57	10.01	625.90	625.46	0.44	625.87
MW-2(R)	Monitoring Well	North	241.17	East	304.79	ROY F. WESTON	January 30, 1995	13.00	2.00	PVC	0.01	2.00	12.00	10.00	S	40° 54' 14.4"	74° 34' 33.1"	629.06	632.28	632.14	31-Jul-00	-	6.60	-	625.54	-	-
MW-3	Monitoring Well	North	216.23	East	356.38	WEHRAN ENG.	May 15, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	40° 54' 14.0"	74° 34' 32.6"	628.64	632.27	632.56	31-Jul-00	-	6.78	-	625.78	-	-
MW-4 [3]	Monitoring Well	North	13.34	East	300.92	WEHRAN ENG.	May 20, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	40° 54' 12.4"	74° 34' 34.4"	628.86	632.31	632.50	31-Jul-00	-	6.72	-	625.78	-	-
MW-6(R)	Monitoring Well	North	151.9	East	264.4	ROY F. WESTON	January 25, 1995	10.98	2.00	PVC	0.02	0.98	10.98	10.00	S	40° 54' 13.8"	74° 34' 34.1"	629.82	632.64	632.42	31-Jul-00	-	5.90	-	626.52	-	-
MW-8 [3]	Monitoring Well	North	78.56	East	367.34	GROUNDWATER TECHNOLOGIES	1983	19.00	2.00	STEEL	0.02	0.00	19.00	19.00	S	40° 54' 12.7"	74° 34' 33.3"	627.99	630.56	628.79	31-Jul-00	-	2.74	-	626.05	-	-
MW-9 [3]	Monitoring Well	South	4.77	East	252.41	GROUNDWATER TECHNOLOGIES	1983	20.50	2.00	STEEL	0.02	0.50	20.00	19.50	S	40° 54' 12.5"	74° 34' 35.1"	629.21	631.69	630.18	31-Jul-00	-	4.03	-	626.15	-	-
MW-11S	Monitoring Well	North	137.25	East	199.33	ROY F. WESTON	April to October 1989	14.73	4.00	STEEL	0.02	4.37	14.41	10.00	S	40° 54' 14.0"	74° 34' 34.9"	631.23	633.26	632.96	31-Jul-00	7.35	13.33	625.61	619.63	5.98	625.23
MW-11I(R)	Monitoring Well	North	147.83	East	195.43	RMT, INC.	February 20, 1998	52.00	2.00	STEEL	0.01	42.00	52.00	10.00	I	40° 54' 14.1"	74° 34' 34.9"	630.89	633.67	633.33	31-Jul-00	-	7.60	-	625.73	-	-
MW-11D(R) [3]	Monitoring Well	North	152.3	East	189.41	RMT, INC.	February 20, 1998	157.00	2.00	STEEL	0.01	147.00	157.00	10.00	D	40° 54' 14.2"	74° 34' 34.9"	630.66	633.35	633.09	31-Jul-00	-	5.39	-	627.70	-	-
MW-12S(R)	Monitoring Well	South	45.27	East	206.49	ROY F. WESTON	May 7, 1996	14.45	4.00	PVC	0.02	2.45	14.45	12.00	S	40° 54' 12.3"	74° 34' 35.9"	632.17	634.86	634.33	31-Jul-00	-	7.65	-	626.68	-	-
MW-13S	Monitoring Well	North	359.57	East	360.32	ROY F. WESTON	April to October 1989	16.39	4.00	STEEL	0.02	5.37	15.14	10.00	S	40° 54' 15.3"	74° 34' 31.7"	628.34	631.40	631.23	31-Jul-00	-	4.39	-	626.84	-	-
MW-13S(R)	Monitoring Well	North	338.93	East	365.76	ROY F. WESTON	January 27, 1995	17.00	2.00	PVC	0.01	2.00	12.00	10.00	S	40° 54' 15.0"	74° 34' 31.8"	628.26	630.96	630.59	31-Jul-00	-	5.12	-	625.47	-	-
MW-13I	Monitoring Well	North	340.76	East	358.82	ROY F. WESTON	July 31, 1989	46.30	2.00	STEEL	0.02	35.22	45.26	10.00	I	40° 54' 15.1"	74° 34' 31.9"	628.36	630.88	630.66	31-Jul-00	-	5.10	-	625.56	-	-
MW-14S	Monitoring Well	North	294.9	East	452.42	ROY F. WESTON	April to October 1989	15.46	4.00	STEEL	0.02	3.42	13.46	10.00	S	40° 54' 14.3"	74° 34' 31.0"	625.78	628.63	628.41	31-Jul-00	-	3.34	-	625.07	-	-
MW-14I [3]	Monitoring Well	North	284.3	East	441.91	ROY F. WESTON	April to October 1989	44.30	2.00	STEEL	0.02	33.22	43.26	10.00	I	40° 54' 14.2"	74° 34' 31.2"	625.93	628.32	628.23	31-Jul-00	-	2.84	-	625.39	-	-
MW-15S [3]	Monitoring Well	North	121.88	West	55.54	ROY F. WESTON	April to October 1989	25.94	4.00	STEEL	0.02	9.37	19.41	10.00	S	40° 54' 15.0"	74° 34' 38.0"	634.83	637.03	636.77	31-Jul-00	-	10.82	-	625.95	-	-
MW-15I [3]	Monitoring Well	North	125.48	West	46.56	ROY F. WESTON	July 17, 1989	43.92	2.00	STEEL	0.02	30.55	40.26	10.00	I	40° 54' 15.0"	74° 34' 37.9"	634.74	636.88	636.66	31-Jul-00	-	10.71	-	625.95	-	-
MW-16S	Monitoring Well	North	125.49	West	267.06	ROY F. WESTON	April to October 1989	23.90	4.00	STEEL	0.02	7.37	17.41	10.00	S	40° 54' 15.9"	74° 34' 40.4"	632.57	634.69	634.47	31-Jul-00	-	7.82	-	626.65	-	-
MW-16I	Monitoring Well	North	138.04	West	266.53	ROY F. WESTON	April to October 1989	46.53	2.00	STEEL	0.02	32.22	42.26	10.00	I	40° 54' 16.0"	74° 34' 40.3"	632.43	635.08	634.96	31-Jul-00	-	8.56	-	626.40	-	-
MW-17S [3]	Monitoring Well	South	131.11	West	76.99	ROY F. WESTON	April to October 1989	15.04	4.00	STEEL	0.02	5.20	15.24	10.00	S	40° 54' 12.8"	74° 34' 39.7"	632.95	634.92	634.79	31-Jul-00	-	8.60	-	626.19	-	-
MW-18S	Monitoring Well	North	536.89	West	10.38	ROY F. WESTON	April to October 1989	15.04	2.00	STEEL	0.02	4.37	14.41	10.00	S	40° 54' 18.4"	74° 34' 35.0"	628.22	631.48	631.26	31-Jul-00	-	5.05	-	626.21	-	-
MW-18I	Monitoring Well	North	529.37	West	19.13	ROY F. WESTON	April to October 1989	44.69	2.00	STEEL	0.02	34.22	44.26	10.00	I	40° 54' 18.4"	74° 34' 35.2"	628.35	631.19	631.04	31-Jul-00	-	5.45	-	625.59	-	-
MW-19	Monitoring Well	North	115.39	West	540.93	ROY F. WESTON	May 20, 1991	17.00	4.00	STEEL	0.02	7.00	17.00	10.00	S	40° 54' 17.1"	74° 34' 43.7"	636.72	639.24	638.88	31-Jul-00	-	11.91	-	626.97	-	-
MW-19-1	Monitoring Well	North	101.08	West	563.76	RMT, INC.	February 17, 1998	17.00	4.00	STEEL	0.01	6.00	15.50	9.50	S	40° 54' 17.0"	74° 34' 44.0"	636.50	639.26	638.86	31-Jul-00	-	11.74	-	627.12	-	-
MW-19-2	Monitoring Well	North	117.42	West	569.74	RMT, INC.	February 17, 1998	16.00	4.00	STEEL	0.01	6.00	16.00	10.00	S	40° 54' 17.2"	74° 34' 44.0"	637.05	639.36	638.76	31-Jul-00	-	11.81	-	626.95	-	-
MW-19-3	Monitoring Well	North	90.55	West	595.86	RMT, INC.	February 18, 1998	16.00	4.00	STEEL	0.01	6.00	15.50	9.50	S	40° 54' 17.1"	74° 34' 44.5"	637.54	640.04	639.65	31-Jul-00	-	12.58	-	627.07	-	-
MW-19-4	Monitoring Well	North	76.99	West	546.79	RMT, INC.	February 18, 1998	16.00	4.00	STEEL	0.01	6.00	15.50	9.50	S	40° 54' 16.7"	74° 34' 44.0"	636.27	638.44	637.74	31-Jul-00	-	10.33	-	627.41	-	-
MW-19-5	Monitoring Well	North	148.06	West	538.99	RMT, INC.	February 18, 1998	16.00	2.00	PVC	0.01	6.00	15.50	9.50	S	40° 54' 17.3"	74° 34' 43.5"	636.39	639.07	638.74	31-Jul-00	-	11.94	-	626.80	-	-
MW-19-6 [4]	Monitoring Well	North	147.68	West	569.68	RMT, INC.	October 28, 1999	20.00	2.00	STEEL	0.02	10.00	20.00	10.00	S	40° 54' 17.5"	74° 34' 43.8"	636.78	636.78	636.44	31-Jul-00	-	9.61	-	626.83	-	-
MW-19-7 [4]	Monitoring Well	North	188.83	West	524.71	RMT, INC.	October 29, 1999	20.00	2.00	STEEL	0.02	10.00	20.00	10.00	S	40° 54' 17.6"	74° 34' 43.1"	636.00	636.00	635.60	31-Jul-00	-	8.90	-	626.70	-	-
MW-19-8 [4]	Monitoring Well	North	204.72	West	541.62	RMT, INC.	October 28, 1999	20.00	2.00	STEEL	0.02	11.00	20.00	9.00	S	40° 54' 17.8"	74° 34' 43.2"	636.44	636.44	635.96	31-Jul-00	-	9.29	-	626.67	-	-
MW-20	Monitoring Well	North	213.31	West	374.3	ROY F. WESTON	May 21, 1991	14.00	4.00	STEEL	0.02	4.00	14.00	10.00	S	40° 54' 17.2"	74° 34' 41.2"	634.82	637.03	636.77	31-Jul-00	-	9.76	-	627.01	-	-
MW-21 [3]	Monitoring Well	North	381.34	East	657.52	ROY F. WESTON	May 22, 1991	15.00	4.00	STEEL	0.02	5.00	15.00	10.00	S	40° 54' 14.1"	74° 34' 28.2"	625.17	629.09	628.80	31-Jul-00	-	3.65	-	625.15	-	-
MW-22(R) [3]	Monitoring Well	North	239.64	East	463.71	ROY F. WESTON	July 22, 1997	7.50	2.00	STEEL	-	-	-	-	S	40° 54' 13.7"	74° 34' 31.2"	625.94	628.31	628.13	31-Jul-00	-	2.87	-	625.26	-	-
MW-23	Monitoring Well	North	457.09	East	422.75	ROY F. WESTON	January 6, 1992	6.00	2.00	STEEL	0.02	1.00	6.00	5.00	S	40° 54' 15.8"	74° 34' 30.5"	628.70	630.95	630.64	31-Jul-00				NAS		
MW-25(R) [3]	Monitoring Well	North	289.44	East	560.77	ROY F. WESTON	July 22, 1997	10.00	2.00	STEEL	-	-	-	-	S	40° 54' 13.7"	74° 34' 29.8"	625.25	627.37	627.22	31-Jul-00	-	2.11	-	625.11	-	-
MW-26	Monitoring Well	North	314.59	East	164.12	ROY F. WESTON	May 8, 1996	11.80	4.00	PVC	0.02	1.80	11.80	10.00	S	40° 54' 15.7"	74° 34' 34.3"	630.84	634.39	633.26	31-Jul-00	-	7.59	-	625.67	-	-
RW-1	Recovery Well	South	45.79	West	72.28	ROY F. WESTON	June 17, 1991	30.00	8.00	STEEL	0.02	5.00	30.00	25.00	S	40° 54' 13.6"	74° 34' 39.1"	635.19	637.81	637.38	31-Jul-00	11.37	11.63	626.01	625.75	0.26	625.99
RW-2	Recovery Well	North	227.13	East	336.63	ROY F. WESTON	June 22, 1991	30.00	8.00	STEEL	0.02	3.00	30.00	27.00	S	40° 54' 14.2"	74° 34' 32.8"	629.80	631.78	631.68	31-Jul-00	-	6.18	-	625.50	-	-
RW-3	Recovery Well	North	252.47	East	231.34	ROY F. WESTON	June 21, 1991	28.00	8.00	STEEL	0.02	3.00	28.00	25.00	S	40° 54' 14.9"	74° 34' 33.9"	629.89	632.15	631.99	31-Jul-00	-	6.18	-	625.81	-	-
SG-D1 [1]	Drainage Channel Staff Guage	North	368.55	East	210.99	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	626.41	-	-	31-Jul-00	-	1.76	-	624.84	-	-
SG-D2 [1]	Drainage Channel Staff Guage	North	294.3	East	383	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	626.86	-	-	31-Jul-00				MISSING		
SG-D3 [1]	Drainage Channel Staff Guage	North	463.66	East	507.64	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	626.43	-	-	31-Jul-00	-	1.76	-	624.86	-	-
SG-R1 [1]	Rockaway River Staff Guage	South	104.76	West	482.39	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	641.52	-	-	31-Jul-00	-	1.84	-	640.03	-	-
SG-R2 [1]	Rockaway River Staff Guage	South	94.68	East	116.36	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	628.84	-	-	31-Jul-00	-	1.58	-	627.09	-	-
SG-R3 [1]	Rockaway River Staff Guage	North	169.54	East	518.22	RMT, INC.	November-98	NA	NA	NA	NA	NA	NA	NA	NA	-	-	627.38	-	-	31-Jul-00	-	1.04	-	625.09	-	-
WP-A1	Area A Well Point	South	2.54	West	67.45	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 13.9"	74° 34' 38.8"	636.29	636.32	635.81	31-Jul-00	9.66	10.71	626.15	625.10	1.05	626.08
WP-A2	Area A Well Point	North	17.62	West	91.63	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.2"	74° 34' 39.0"	637.31	639.62	639.19	31-Jul-00				BENT WELL CASING - NOT EVALUATED		
WP-A3	Area A Well Point	South	73.41	West	153.46	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 13.7"	74° 34' 40.3"	635.97	635.97	635.56	31-Jul-00	-	9.45	-	626.11	-	-
WP-A4	Area A Well Point	North	18.63	West	45	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.0"	74° 34' 38.5"	635.63	635.66	635.10	31-Jul-00	10.73	13.28	624.37	621.82	2.55	624.21
WP-A5	Area A Well Point	North	65.54	West	33.98	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.4"	74° 34' 38.1"	635.70		637.85	31-Jul-00	-	11.79	-	626.06	-	-
WP-A6	Area A Well Point	South	6.64	East	4.69	ROY F. WESTON	1993	13.00	2.00	PVC	-	3.00	13.00	10.00	S	40° 54' 13.6"	74° 34' 38.0"	634.95		637.28	31-Jul-00	11.25	14.81	626.03	622.47	3.56	625.80
WP-A7	Area A Well Point	North	53.25	East	98.79	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 13.7"	74° 34' 36.6"	632.94		634.88	31-Jul-00	9.14	10.46	625.74	624.42	1.32	625.66
WP-A8	Area A Well Point	North	110.26	East	69.94	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.3"	74° 34' 36.6"	634.70		637.56	31-Jul-00	11.78	11.91	625.78	625.65	0.13	625.77
WP-A9	Area A Well Point	North	13.71	East	46.84	ROY F. WESTON	1993	16.00	2.00	PVC	-	6.00	16.00	10.00	S	40° 54' 13.6"	74° 34' 37.4"	637.22		639.32	31-Jul-00	13.38	15.17	625.94	624.15	1.79	625.83
WP-B1	Area B Well Point	North	104.02	East	150.76	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 13.9"	74° 34' 35.7"	631.85		633.65	31-Jul-00	-	6.05	-	627.60	-	-
WP-B2	Area B Well Point	North	182.49	East	164.38	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.5"	74° 34' 35.1"	630.48	632.58	632.25	31-Jul-00	-	6.44	-	625.81	-	-
WP-B3	Area B Well Point	North	135.12	East	157.58	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.2"	74° 34' 35.4"	631.71		633.33	31-Jul-00	-	6.66	-	626.67	-	-
WP-B4	Area B Well Point	North	193.87	East	204.21	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.5"	74° 34' 34.5"	629.93		632.56	31-Jul-00	6.57	-	-	-	-	All Product
WP-B5	Area B Well Point	North	224.46	East	216.97	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.7"	74° 34' 34.2"	630.03		632.11	31-Jul-00	-	5.44	-	626.67	-	-

Prepared By: Nicholas J. Clevett
RMT, Inc. Project Manager

Table 6
Water Level Elevations - 3rd QUARTER 2000
L.E. Carpenter, Wharton, New Jersey

WELL LOCATION	WELL TYPE	BASELINE LOCATION				WELL INSTALLATION AND CONSTRUCTION INFORMATION										GEODETIC LOCATION		ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION						
						MANAGING CONSULTANT	INSTALLATION DATE	TOTAL WELL DEPTH (FT)	WELL DIAMETER (IN)	SCREEN MATERIAL	SLOT SIZE (IN)	TOP OF SCREEN (FT)	BOTTOM OF SCREEN (FT)	SCREENED INTERVAL (FT)	AQUIFER SYSTEM	LATITUDE	LONGITUDE	GROUND	OUTER CASING	INNER WELL	MEAS. DATE	PRODUCT DEPTH	WATER DEPTH	PRODUCT ELEVATION	WATER ELEVATION	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ELEVATIONS (2)
WP-B6	Area B Well Point	North	120.98	East	310.48	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 13.4"	74° 34' 33.7"	629.72		631.86	31-Jul-00	-	5.87	-	625.99	-	-
WP-B7	Area B Well Point	North	186.28	East	402.8	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 13.5"	74° 34' 32.3"	627.62		629.49	31-Jul-00	-	4.08	-	625.41	-	-
WP-B10	Area B Well Point	North	228.07	East	174.18	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 14.9"	74° 34' 34.7"	630.42	633.12	632.74	31-Jul-00	-	7.02	-	625.72	-	-
WP-C1	Area C Well Point	South	26.69	East	182.1	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 12.6"	74° 34' 36.1"	632.81		633.51	31-Jul-00	-	6.69	-	626.82	-	-
WP-C2	Area C Well Point	South	20.92	East	219.91	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 12.5"	74° 34' 35.6"	633.02		634.46	31-Jul-00	-	7.69	-	626.77	-	-
WP-C3	Area C Well Point	South	58.35	East	165.76	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 12.4"	74° 34' 36.4"	631.00		632.64	31-Jul-00	-	5.80	-	626.84	-	-
WP-C4	Area C Well Point	South	2.11	East	183.73	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	40° 54' 12.8"	74° 34' 35.9"	632.44		633.27	31-Jul-00	-	7.32	-	625.95	-	-

(1) Elevation measured at the top of a 3.33 ft. Staff gauge. Water depth based on a visual observation of the water level on the Staff gauge.
(2) Corrected water level elevations utilize an average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1(R); EFR-11 & WP-A8)
(3) Wells included in the quarterly sampling program. Depth to water recorded before purging
(4) Wells installed during new RI efforts per NJDEP and EPA request to further delineate MW19/Hot Spot 1 Area
(5) No boring log or well construction diagram available. Well specific information determined from Weston Geologic Cross Section

S: Shallow Aquifer System
I: Intermediate Aquifer System
D: Deep Aquifer System
R: Replacement Well
NA8: Not Assessable
REM: Removed

All WP series wells finished elevation is 2 feet above nominal grade. Total depth of well only accounts for subsurface structure
Blank Cells for Roy F. Weston wells indicates that no information was available for review by RMT, Inc.
Wells MW-1A, MW5, MW-7, MW-10, MW-11I, MW-11D, MW-14D, MW-17D, MW-18D; MW-22, MW-24, MW-25, WP-B8, Wp-D1, PZ-6A, PZ-2A(R), PZ-2AS, RW-1 have been abandoned
Wells MW-11I(R), MW11-D(R), MW-1(R), MW-2(R), MW-6(R), MW-22(R), and MW-25(R) are replacement wells

Prepared By: Nicholas J. Clevett
RMT, Inc. Project Manager

Appendix A
Report Certification

CERTIFICATION

In accordance with N.J.A.C. 7:26E-1.5(a):

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Cristopher R. Anderson

PRINTED NAME

Director Environmental Services

TITLE

L. E. Carpenter Company

COMPANY

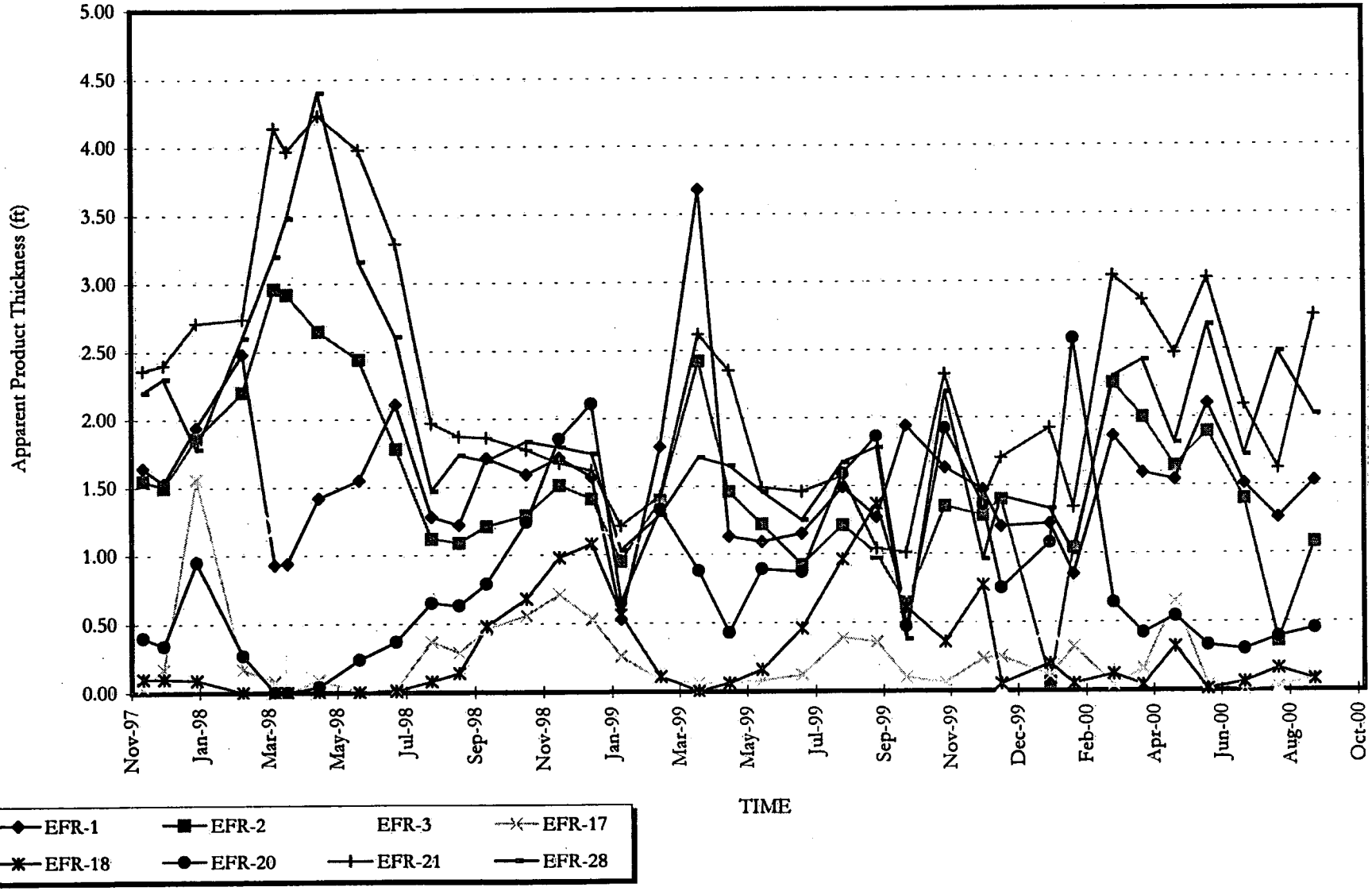
SIGNATURE

October 26, 2000

DATE

Appendix B
Apparent Free Product Volume Trend Charts

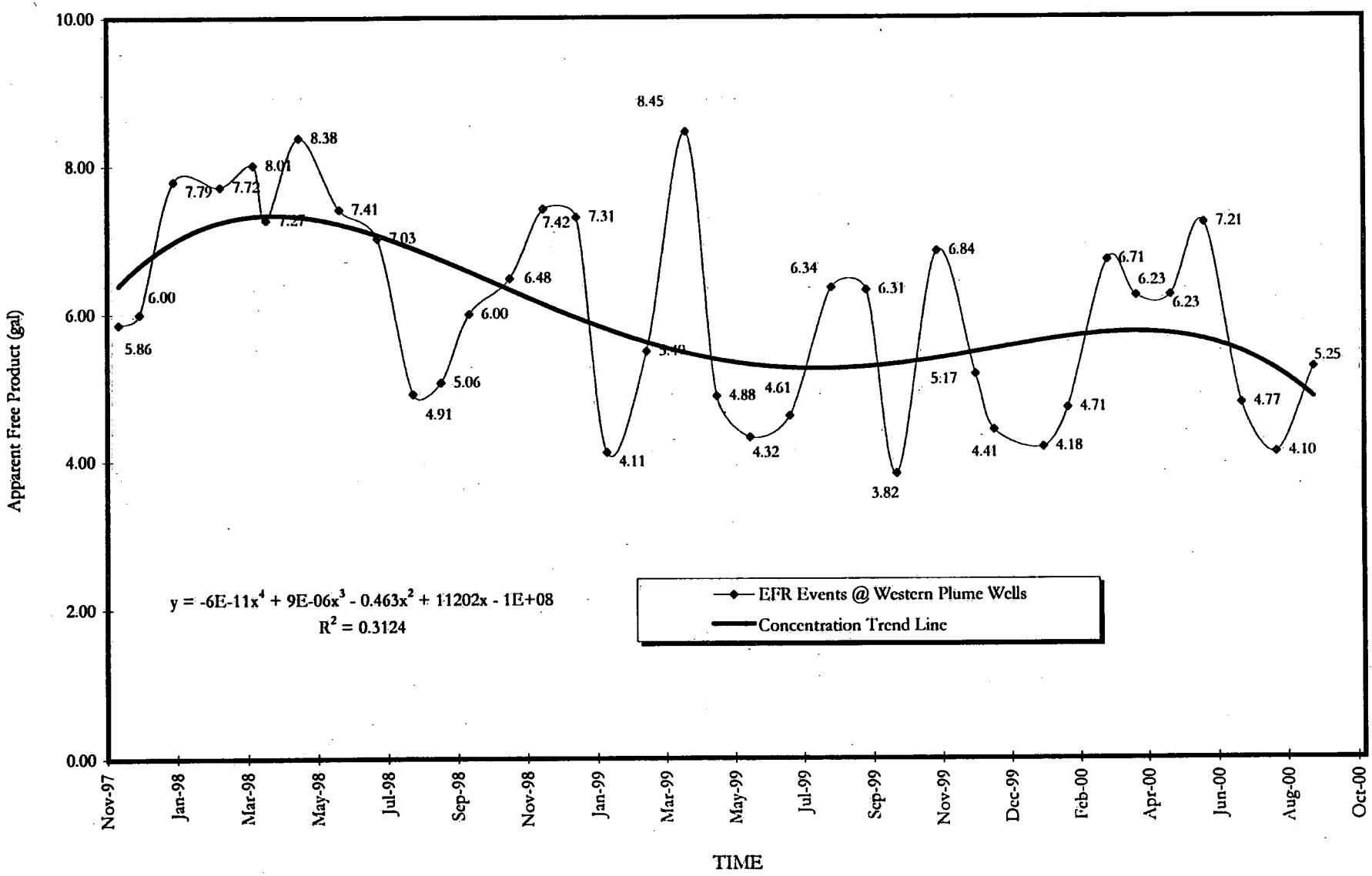
Apparent Free Product Thickness vs. Time
Western Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/20001:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

H:/data/projects/lecarpen/quarters/Freeprdt.xls/Chart (Western)

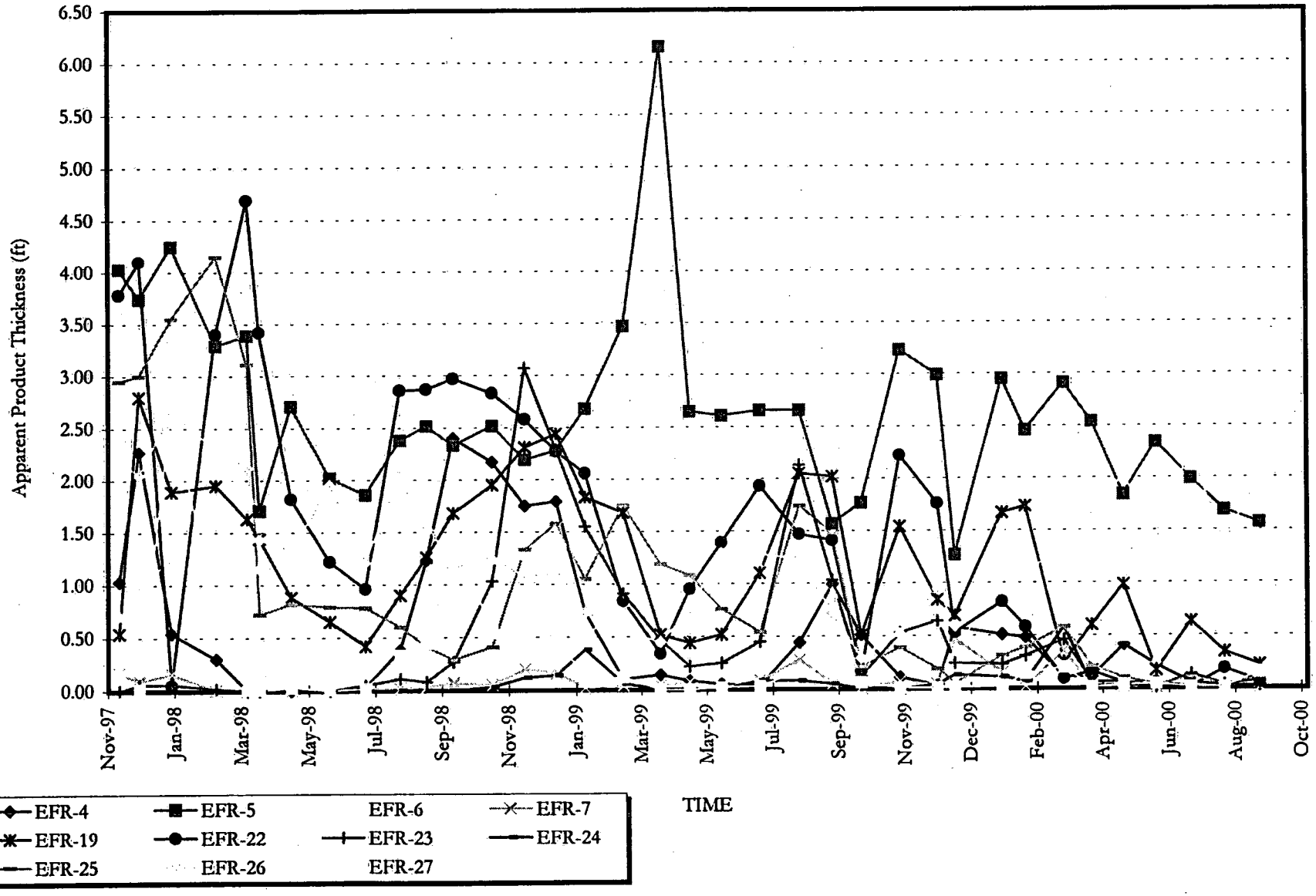
Apparent Free Product Volume vs. Time
Western Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/20001:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

H:/data/projects/lecarpen/quarters/Freeprdt.xls/stand_prod_western trend

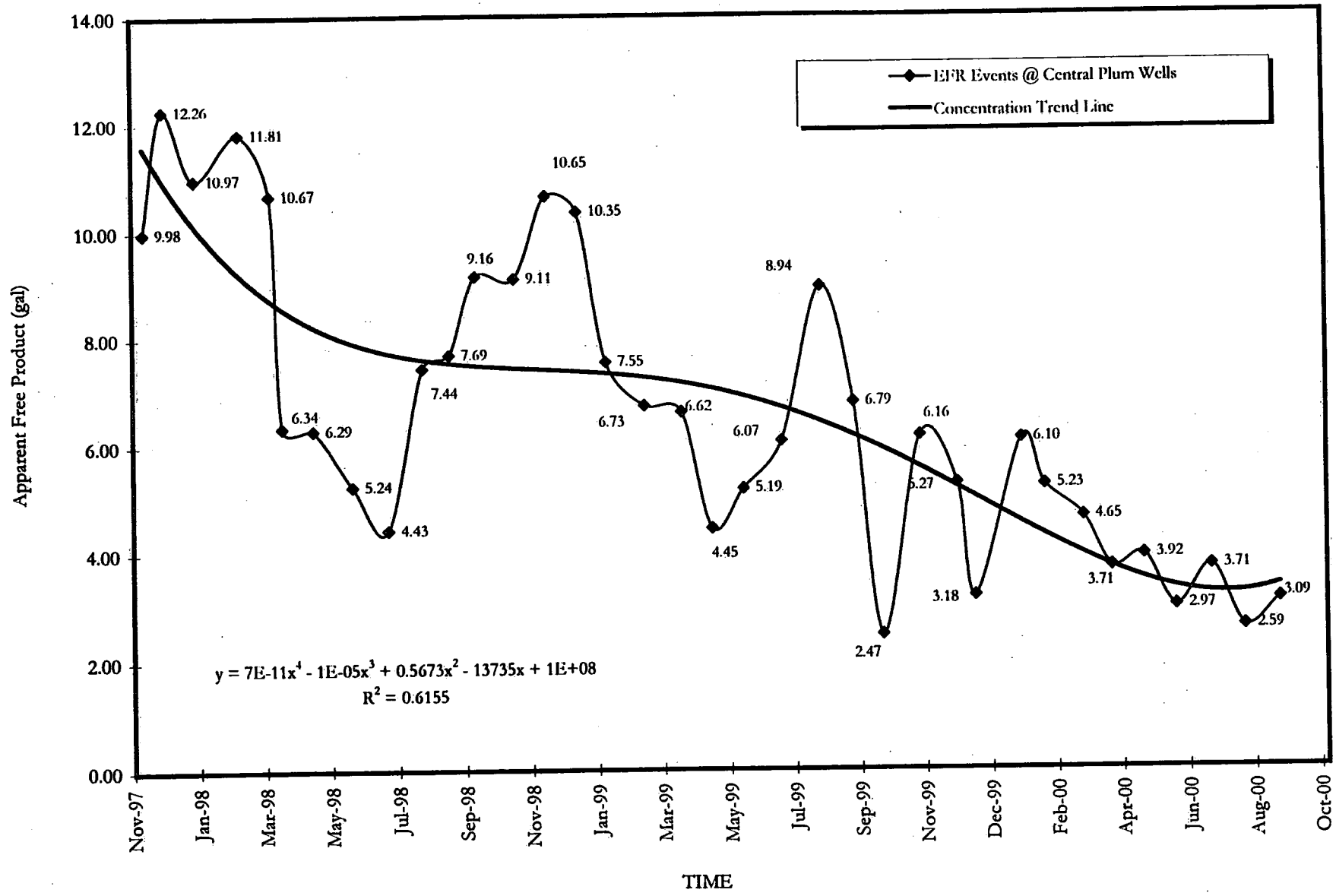
Apparent Free Product Thickness vs. Time
Central Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/20001:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

T000386817-001.DOCChart (Central)

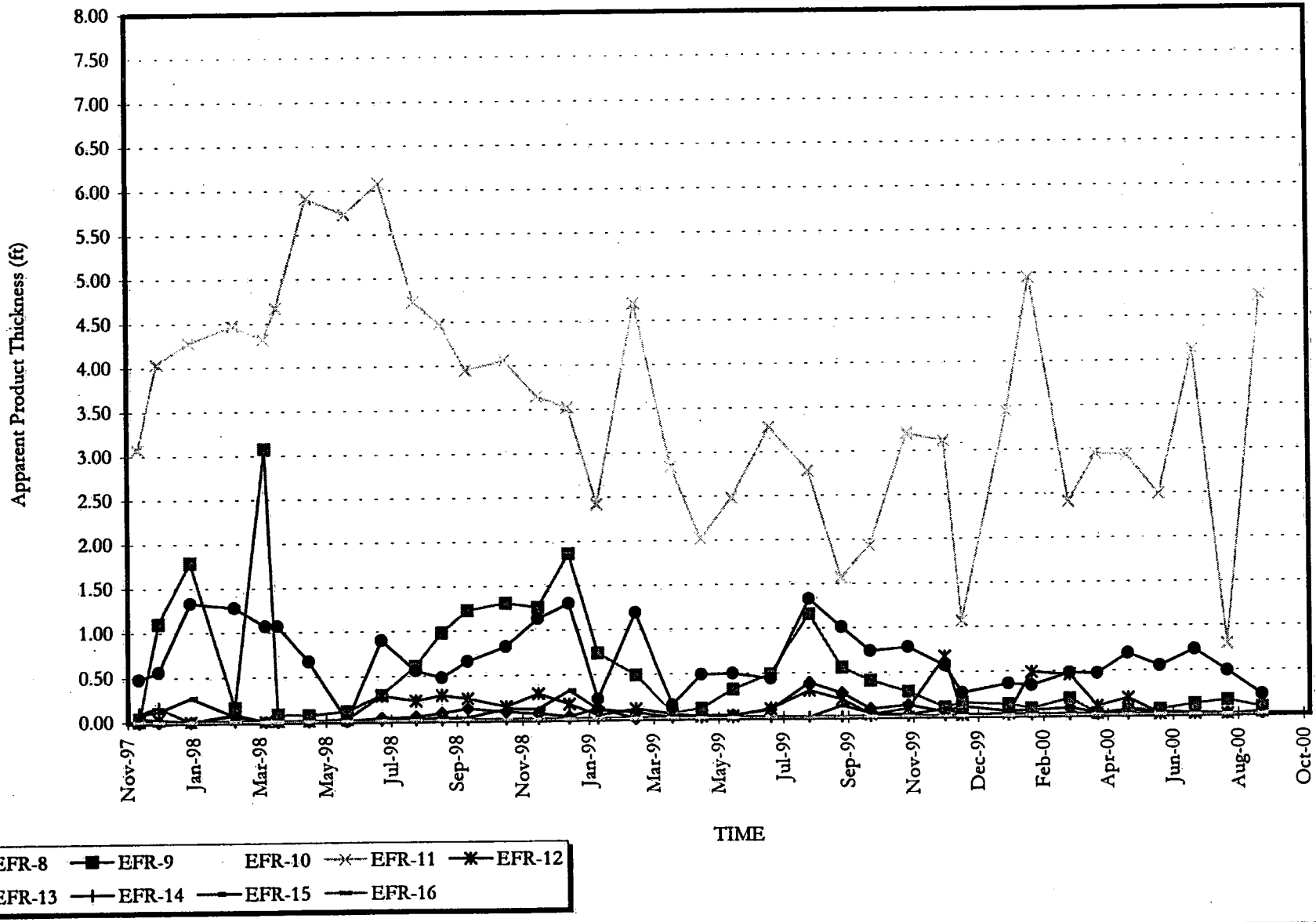
Apparent Free Product Volume vs. Time
Central Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/2000 1:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

H:/data/projects/lecarpen/quarters/Freeprdt.xls/stand_prod_central.trend

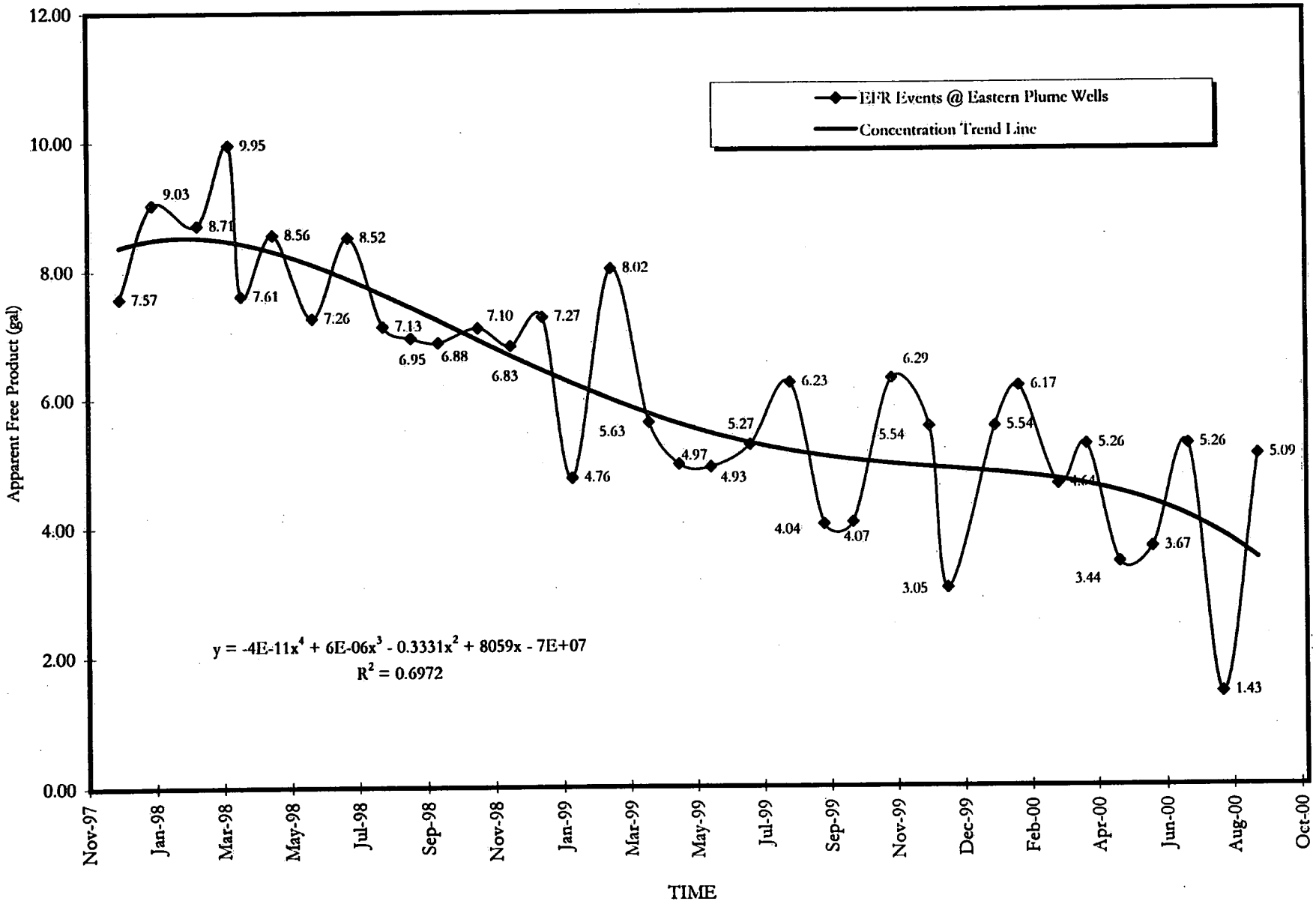
Apparent Free Product Thickness vs. Time
Eastern Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/20001:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

H:/data/projects/lecarpen/quarters/Freeprdt.xls/Chart (Eastern)

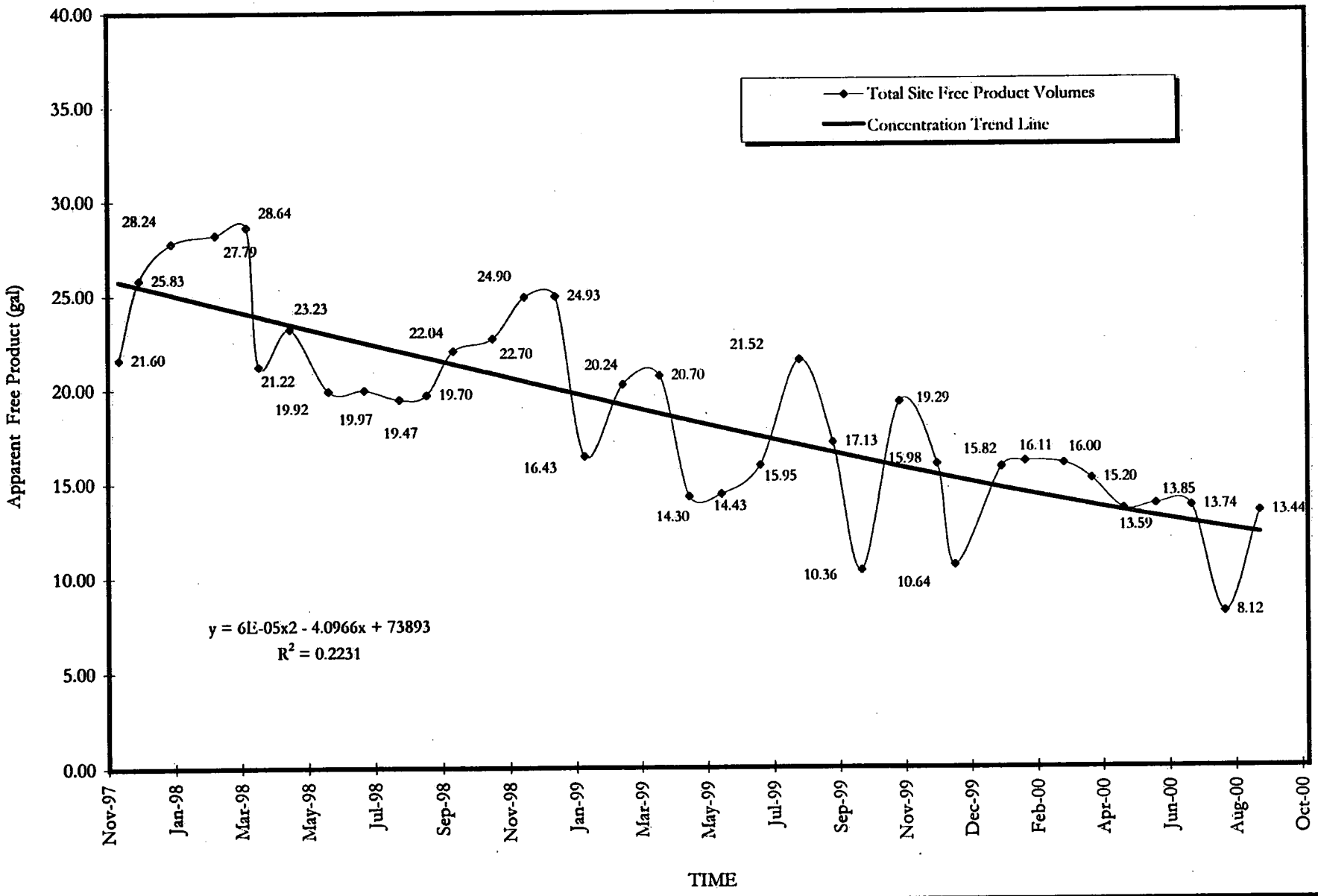
Apparent Free Product Volume vs. Time
Eastern Portion of Plume
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/2000 1:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

I:/data/projects/lecarpen/quarters/Freeprdt.xls/stand_prod_eastern trend

Total Site Apparent Free Product Volume vs. Time
L.E. Carpenter, Wharton, New Jersey
Through 3rd Quarter 2000



09/29/20001:15 PM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

H:/data/projects/lecarpen/quarters/Freeprdt.xls/Total Site Product Trend

Appendix C
Monitoring Well Sampling Data

Monitoring Well Data

Client: Residual Management Tech. Project: LE Carpenter

Job No: C436 Date Sampled: 7/31/00 Analyst: R. Toogood

Well ID	MW15s	MW15I	mw11d	MW14I	MW22	MW25	MW21	MW4
Depth to Water From TOC feet (before purging)	10.82	10.71	5.39	2.84	2.87	2.11	3.65	6.72
Depth to Water From TOC feet (after purging)	10.87	11.74	5.56	2.95	6.78	4.98	3.68	7.12
Depth to Water From TOC feet (before sampling)	10.83	10.75	5.44	2.84	2.92	2.30	3.65	6.75
Depth to Bottom From TOC feet	19.48	40.14	161.25	43.32	8.81	9.11	14.68	18.31
PID Reading from Well Casing (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
pH before Purge	6.58	6.84	9.92	8.06	6.90	7.09	7.90	6.57
Temp. before Purge (°C)	18.3	18.6	19.0	18.6	18.4	20.3	19.1	21.5
Diss. Oxygen before Purge (ppm)	4.11	5.74	3.51	4.01	1.01	1.51	2.59	1.28
Cond. before Purge (umhos/cm)	427	512	590	618	860	807	742	674
Water Volume in Well (gal.)	5.65	4.80	25.44	6.61	0.97	1.14	7.20	1.86
Purge Method	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump
Purge Start Time	10:03	10:06	10:44	12:05	12:09	12:19	12:55	13:47
Purge End Time	10:22	10:21	11:46	12:24	12:14	12:27	13:16	13:59
Purge Rate (gpm)	0.9	1.0	1.2	1.0	0.6	0.5	1.0	0.5
Volume Purged (gal.)	17	15	77	20	3	4	22	6
pH after Purge	6.87	7.19	9.60	7.96	6.95	7.09	7.35	6.54
Temp. after Purge (°C)	16.6	16.2	17.4	15.9	18.1	18.4	18.9	19.3
Diss. Oxygen after Purge (ppm)	2.51	1.28	4.31	3.00	0.64	2.02	1.46	1.04
Cond. after Purge (umhos/cm)	551	690	585	480	745	742	1052	602
pH after Sample	6.82	7.26	8.95	7.74	6.98	7.11	7.48	6.58
Temp. after Sample (°C)	17.3	15.7	17.4	17.1	17.7	18.0	18.7	19.8
Diss. Oxygen after Sampling (ppm)	2.86	1.50	4.41	3.20	0.98	2.28	2.95	1.23
Cond. after Sample (umhos/cm)	556	776	563	494	710	705	1003	596
Sampling Method	Teflon Bailer	Teflon Bailer	Teflon Bailer	Teflon Bailer	Teflon Bailer	Teflon Bailer	Teflon Bailer	Teflon Bailer
Time of Sampling	10:31	10:25	11:25	12:30	12:37	12:43	13:17	14:08

Appendix D
MW-22R & MW-25R Groundwater Concentration Trend Analysis

MW-22R
BTEX and DEHP Concentration(s) Trend Analysis

	ANALYTE				
Sampling Date(s)	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	DEHP (ug/L)
21-Feb-95	ND	57	ND	260	6500
13-Jun-95	ND	311	ND	955	380
13-Sep-95	ND	171	ND	693	NS
07-Dec-95	ND	123	ND	494	320
17-Sep-96	ND	359	ND	1320	NS
12-Dec-96	ND	320	ND	1330	ND
14-Aug-97	ND	5,730	ND	32,900	7,500
03-Oct-97	ND	11,400	348	66,000	NS
12-Mar-98	ND	4,070	348	20,600	NS
26-Aug-98	ND	2,260	ND	11,300	5,800
28-Aug-98	ND	1,880	ND	10,300	NS
18-Dec-98	ND	1,650	ND	7,230	1,100
21-Jan-99	ND	18	ND	84	NS
15-Apr-99	ND	1,600	ND	7,600	670
22-Jul-99	ND	1,200	ND	5,200	NS
25-Oct-99	ND	810	ND	3,300	1,200
17-Jan-00	ND	360	ND	1,400	NS
13-Apr-00	ND	820	ND	3,600	92
31-Jul-00	ND	1,000	ND	4,800	NS

NJGWQS (ug/l)	1	700	1000	40	30
ROD Discharge Criteria (ug/l)	1	350	500	20	30

NOTES

Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

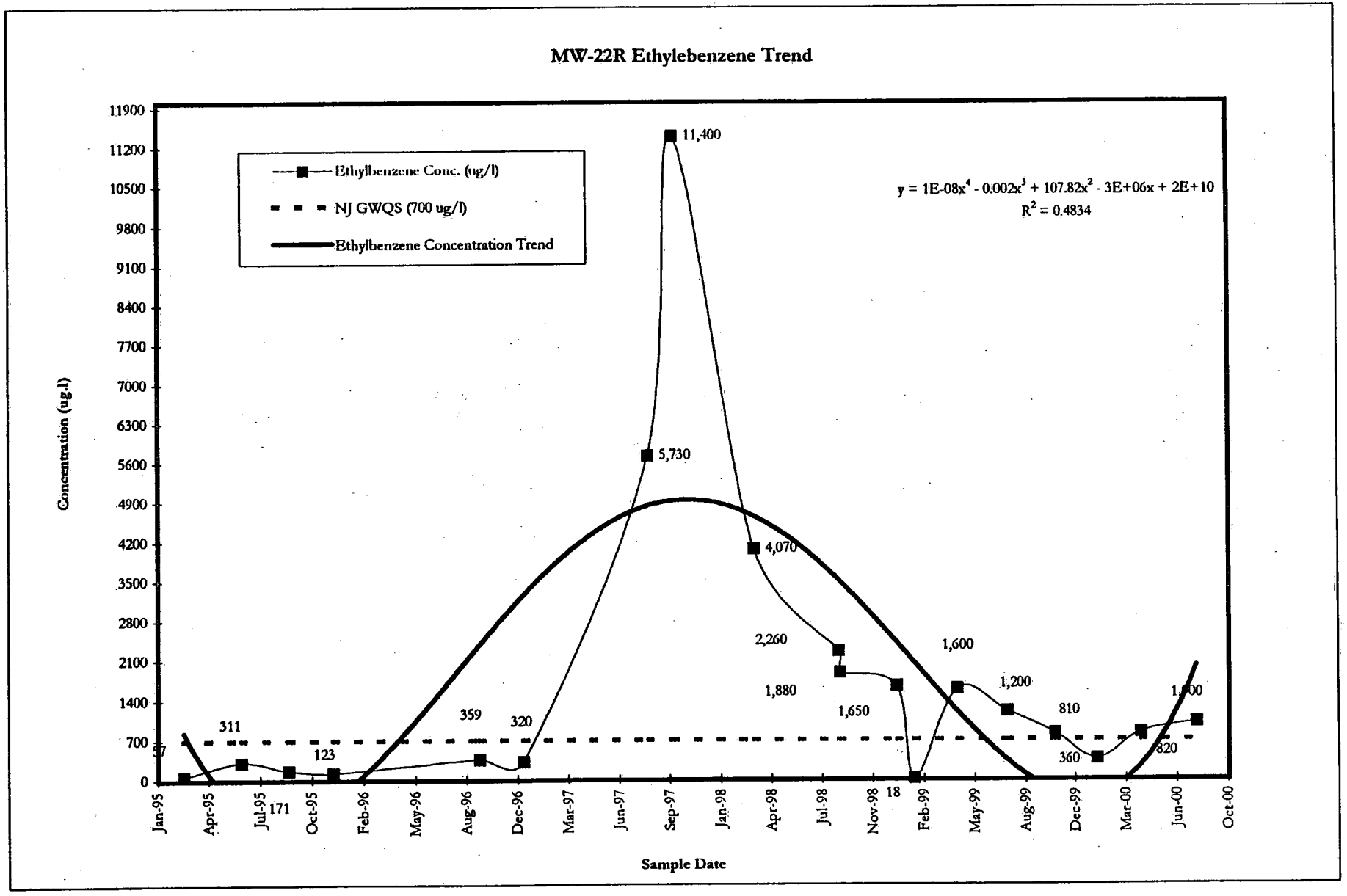
ND = Not detected above method detection limits

NS = Not Sampled

09/29/2000 11:27 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. Project Manager

T000386817-005DOCMW-22(R) Tracking

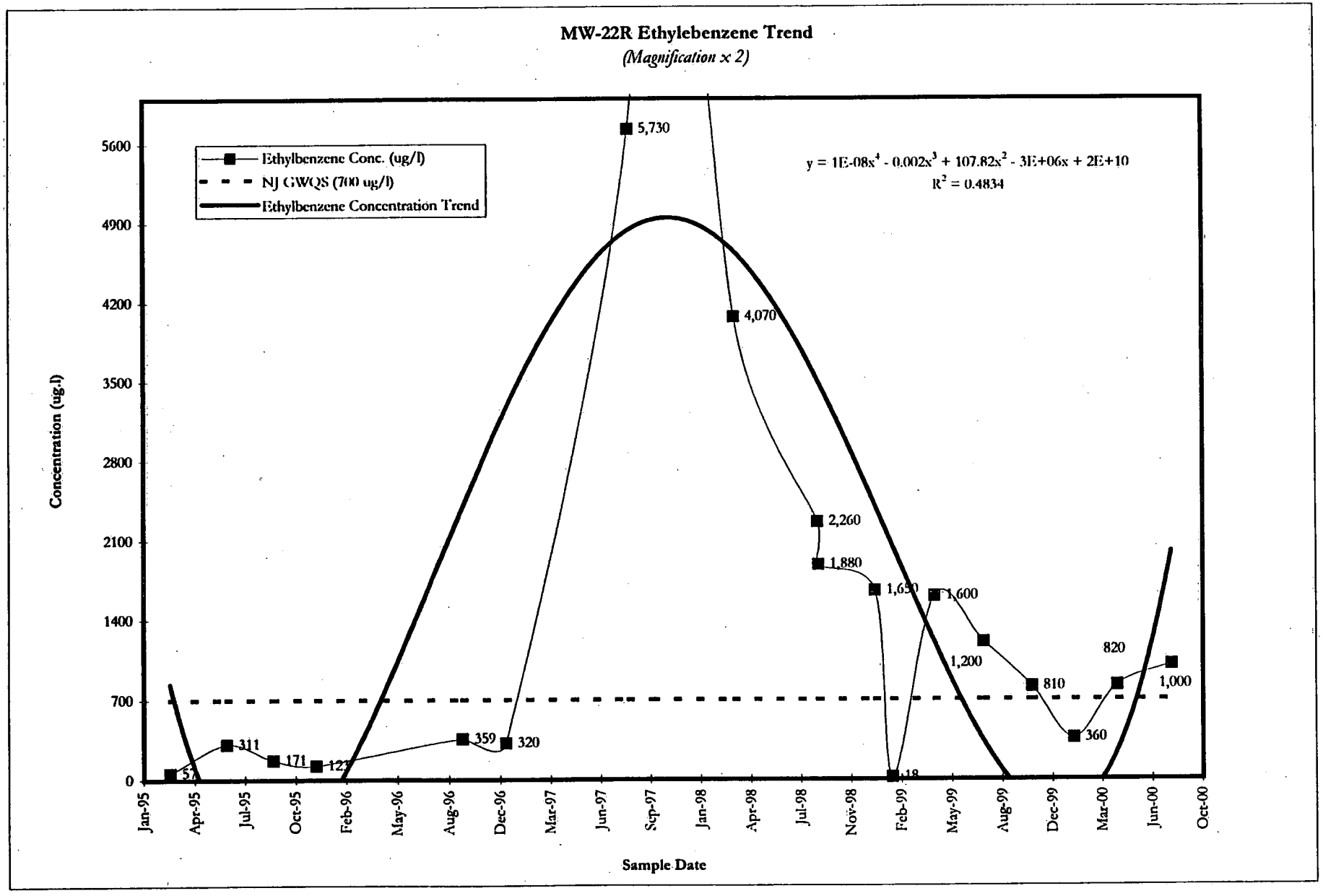
MW-22R
CONTAMINANT OF CONCERN
Concentration vs. Time



09/29/200011:41 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

T000386817-005.DOCMW-22(R) Ethylbenz Conc. Chart Chart 3

MW-22R
CONTAMINANT OF CONCERN
Concentration vs. Time



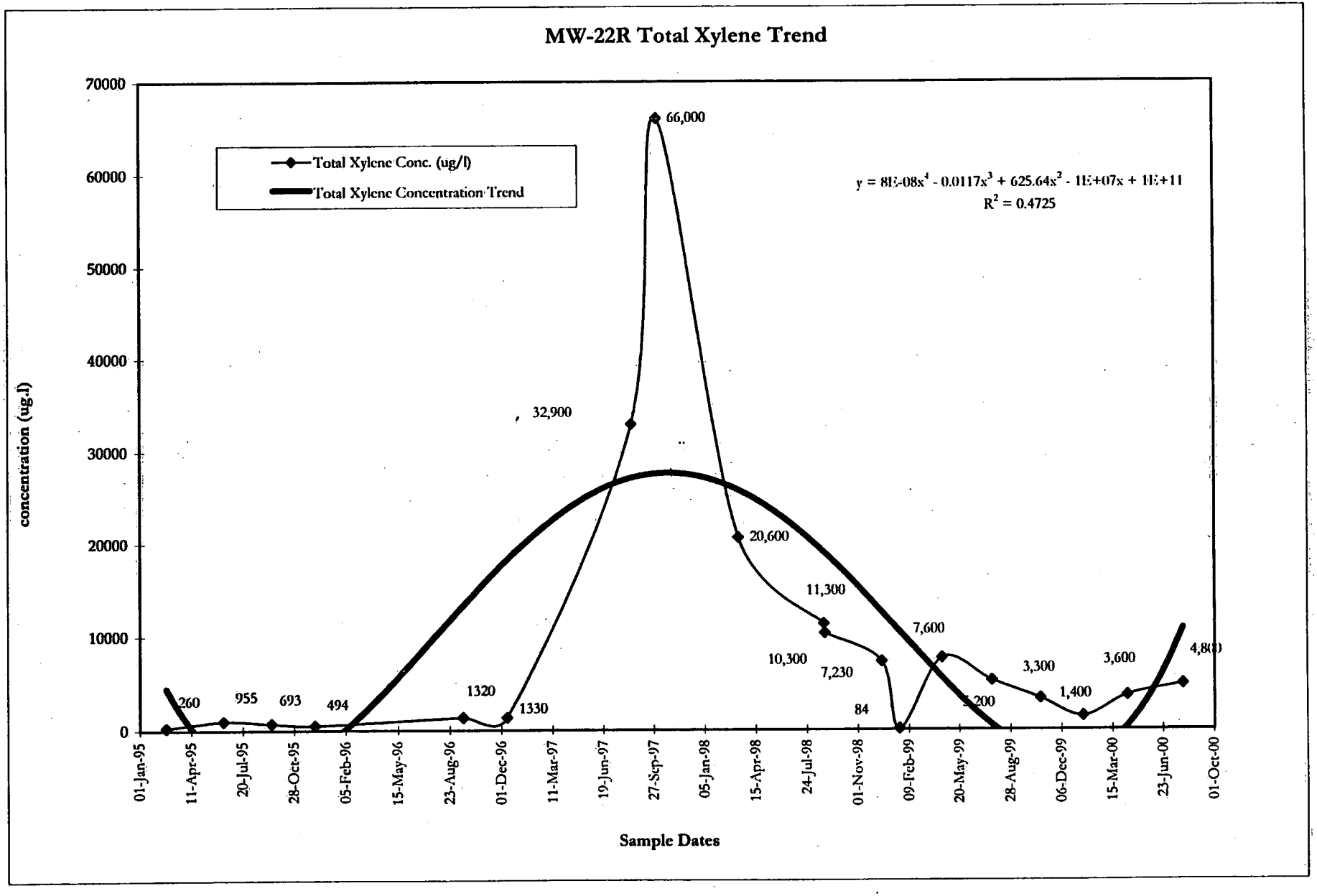
09/29/200011:41 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

MW-22(R) Ethylbenz Conc. Chart Chart 4MW-22(R) Ethylbenz Conc. Chart Chart 4

MW-22R

CONTAMINANTS OF CONCERN

Concentration vs. Time



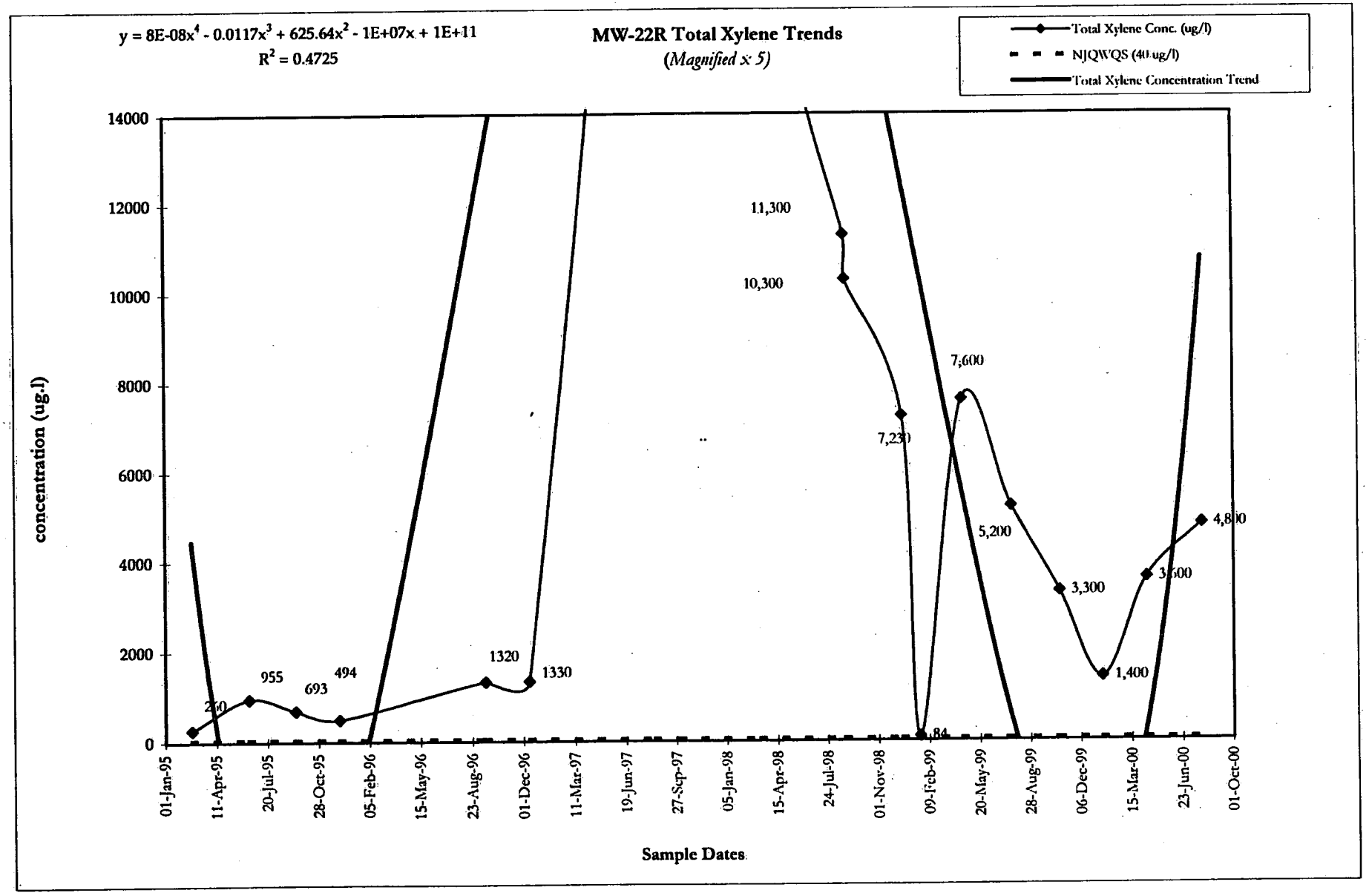
09/29/2000 11:41 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

T000386817-005.DOCMW-22R Total Xylene Conc. Chart Chart 1025

MW-22R

CONTAMINANTS OF CONCERN

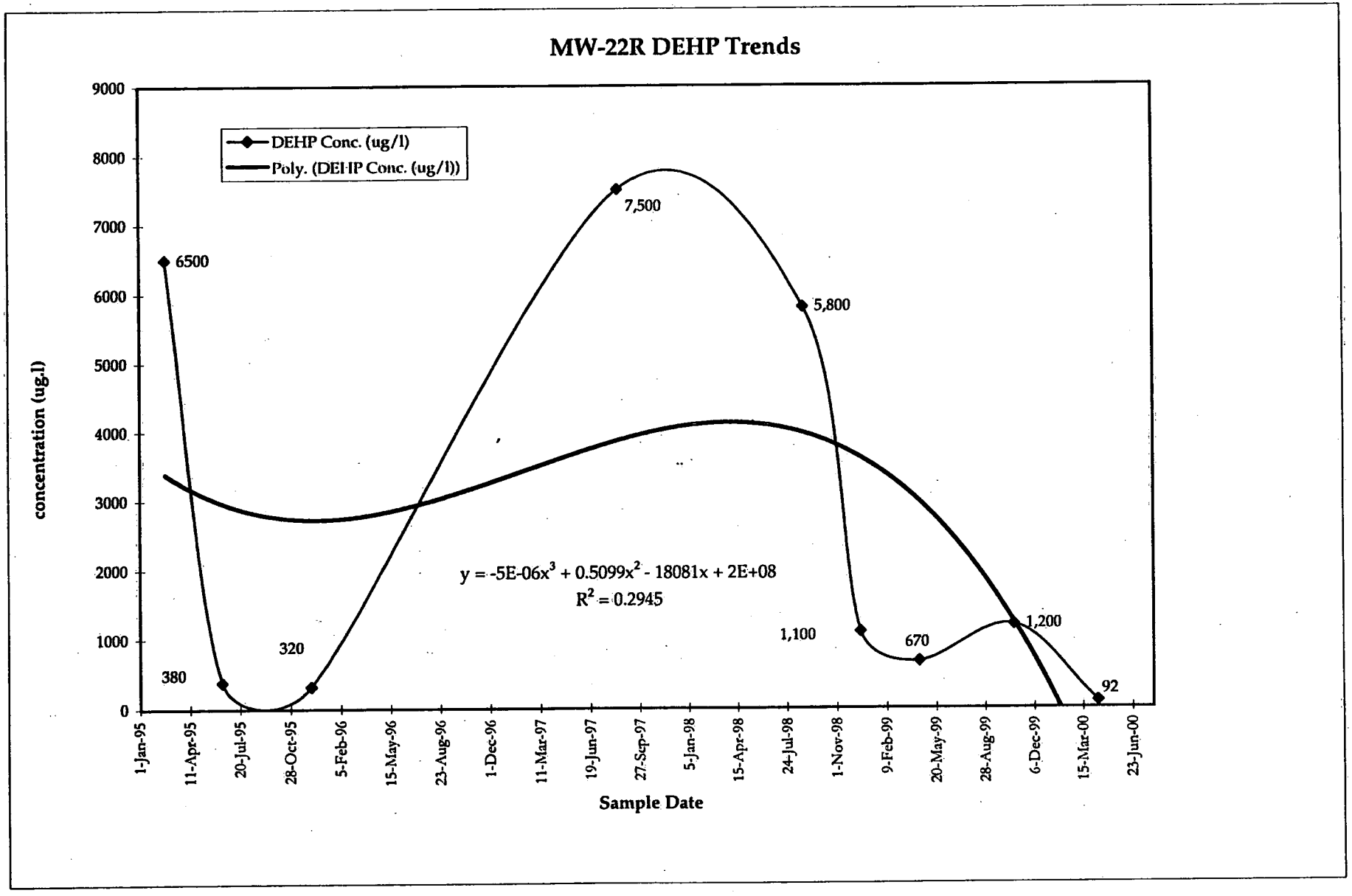
Concentration vs. Time



09/29/2000 11:41 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

h:\data\projects\lecarpen\quarters\gwresult\qtrqwsam\MW-22R Total Xylene Conc. Chart Chart 1026\MW-22R Total Xylene Conc. Chart Chart 1026

MW-22R
Contaminants of Concern
Concentration vs. Time



MW-25R
BTEX and DEHP Concentration(s) Trend Analysis

	ANALYTE				
Sampling Date(s)	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	DEHP (ug/L)
01-Apr-95	ND	ND	ND	ND	1.6
01-Jul-95	ND	ND	ND	ND	NS
07-Dec-95	ND	ND	ND	ND	**68**
17-Sep-96	ND	0.34	ND	2.2	NS
12-Dec-96	ND	ND	ND	ND	ND
01-Jan-97	ND	ND	ND	ND	NS
01-Apr-97	ND	13.5	ND	**89**	**63**
01-Jul-97	ND	4.1	ND	**30.7**	NS
12-Mar-98	ND	0.33	ND	1.5	NS
01-Apr-98	ND	ND	ND	ND	5.3
28-Aug-98	ND	ND	ND	ND	NS
18-Dec-98	ND	ND	ND	ND	1.9
21-Jan-99	ND	ND	ND	ND	ND
15-Apr-99	ND	ND	ND	14	ND
22-Jul-99	ND	0.39	ND	1.4	9.6
25-Oct-99	ND	ND	ND	ND	ND
17-Jan-00	ND	ND	ND	ND	ND
13-Apr-00	ND	ND	ND	ND	ND
31-Jul-00	ND	ND	ND	ND	ND

NJGWQS (ug/l)	NA	700	1000	40	30
ROD Discharge Criteria (ug/l)	NA	350	500	20	30

NOTES

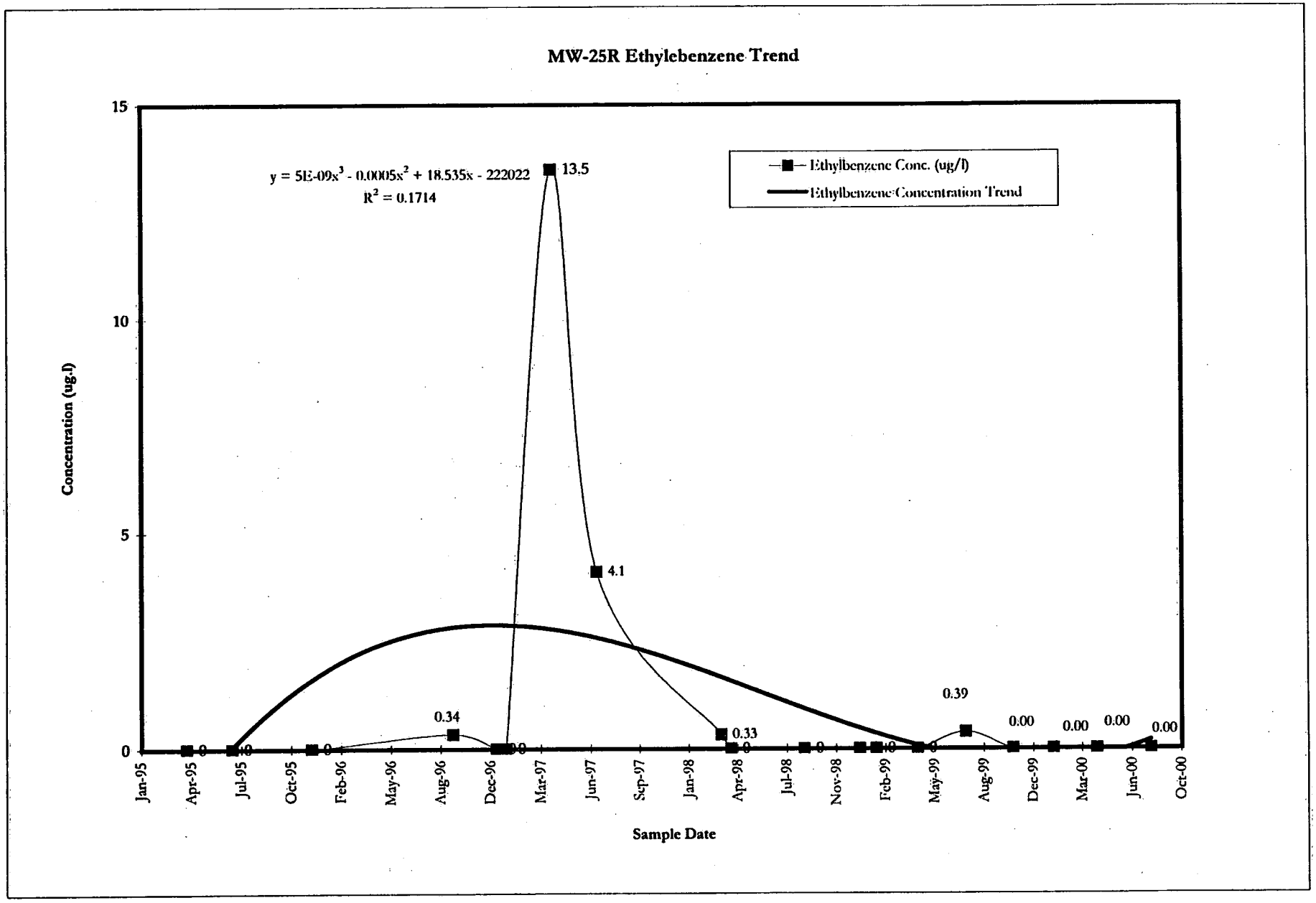
Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

ND = Not detected above method detection limits

NS = Not Sampled

09/29/2000 11:29 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

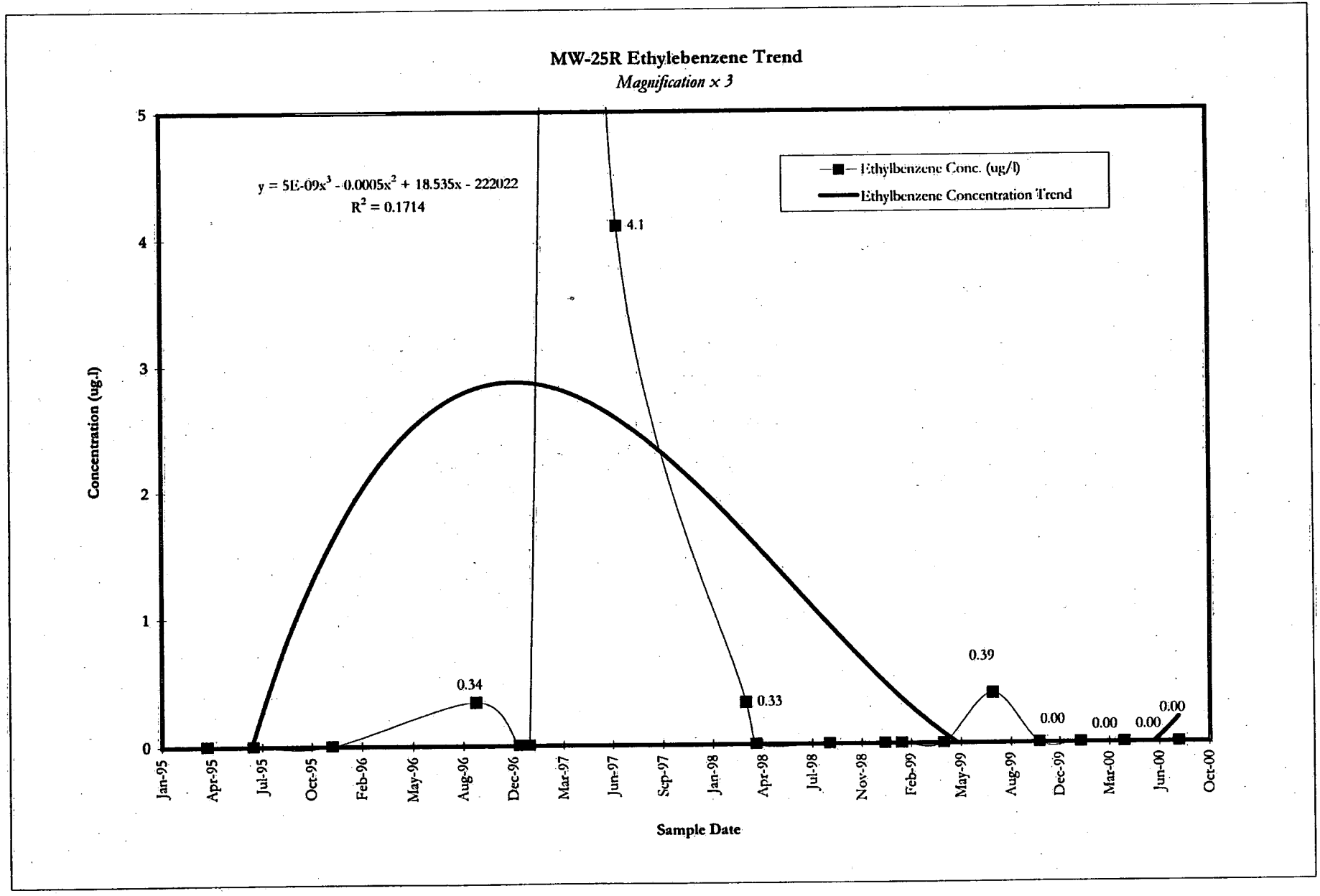
MW-25R
CONTAMINANT OF CONCERN
Concentration vs. Time



09/29/2000 11:42 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

MW-25R Ethylbenzene Conc. Chart Chart 4MW-25R Ethylbenzene Conc. Chart Chart 4

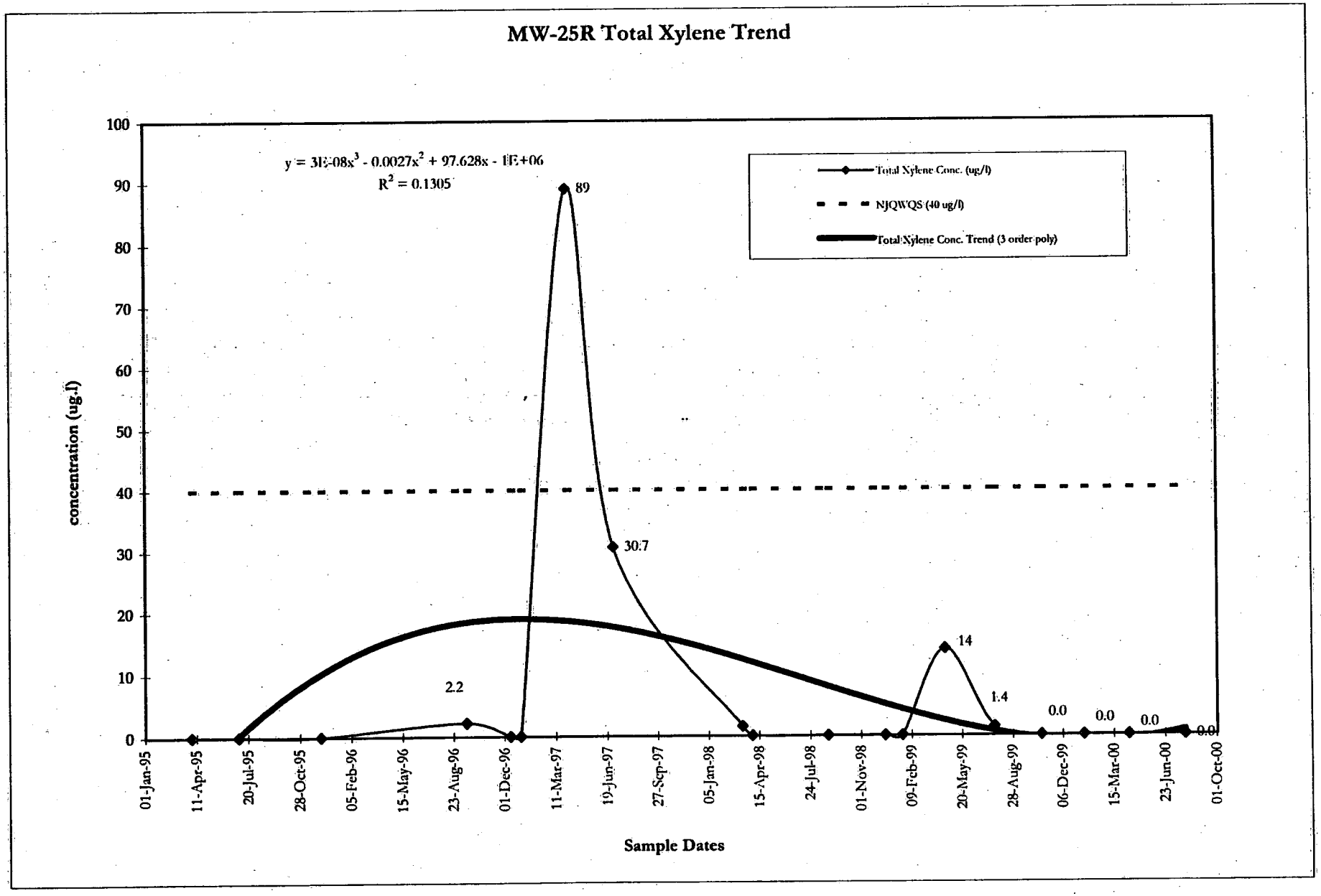
MW-25R
CONTAMINANT OF CONCERN
Concentration vs. Time



09/29/200011:42 AM
Prepared By:Nicholas J. Clevett
RMT, Inc. - Project Manager

MW-25R Ethylbenzene Conc. Chart Chart 3MW-25R Ethylbenzene Conc. Chart Chart 3

MW-25R
CONTAMINANTS OF CONCERN
Concentration vs. Time



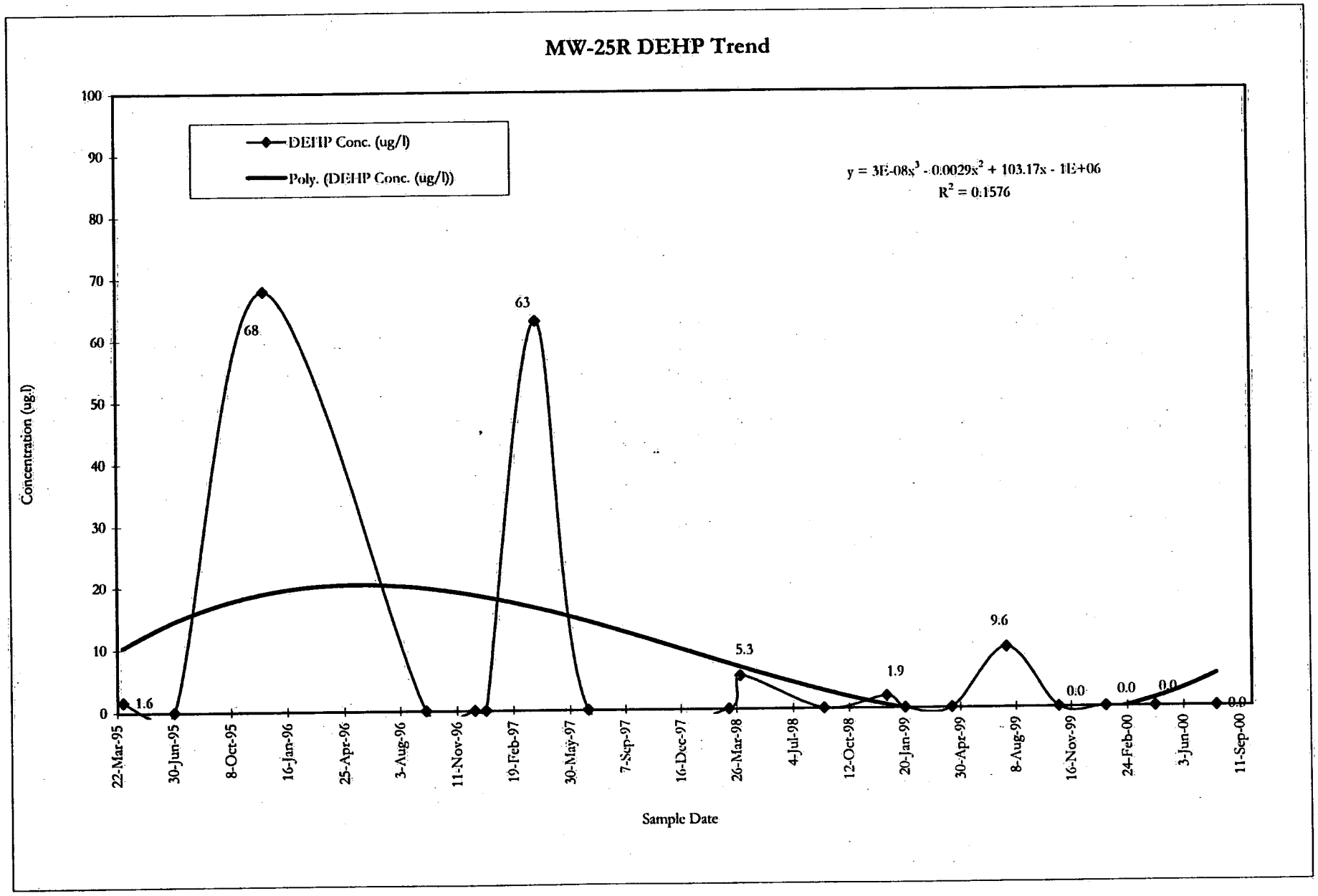
09/29/2000 11:42 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

h:\data\projects\lecarpen\quarters\gwresult\qtrqwsam\MW-25R Total Xylene Conc. Chart Chart 2\MW-25R Total Xylene Conc. Chart Chart 2

MW-25R

CONTAMINANT OF CONCERN

Concentration vs. Time



09/29/2000 11:42 AM
Prepared By: Nicholas J. Clevett
RMT, Inc. - Project Manager

h:\data\projects\lecarpen\quarters\gwresult\qtrqwsam\MW-25R DEHP Conc. Chart Chart 1\MW-25R DEHP Conc. Chart Chart 1

Appendix E
Analytical Results
Severn Trent Services Laboratory Report

SEVERN
TRENT
SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

August 24, 2000

Residuals Management Technologies, Inc.
222 South Riverside Plaza
Suite 280
Chicago, IL 60606

Attention: Mr. Nick Clevett

Re: Job No. C436 - L.E. Carpenter

Dear Mr. Clevett:

Enclosed are the results you requested for the following sample(s) received at our laboratory on July 31, 2000:

Lab No.	Client ID	Analysis Required
220381	Trip_Blank	bis-2-Ethylhexylphthalate
220382	MW-15s	BTEX (GC)
220383	MW-15I	BTEX (GC)
220384	MW-11d	BTEX (GC), bis-2-Ethylhexylphthalate
220385	MW-14I	BTEX (GC)
220386	MW-22	BTEX (GC)
220387	MW-25r	BTEX (GC), bis-2-Ethylhexylphthalate
220388	MW-25rd	bis-2-Ethylhexylphthalate
220389	MW-21	BTEX (GC), bis-2-Ethylhexylphthalate
220390	MW-4	BTEX (GC)
220391	Field_Blank	BTEX (GC), bis-2-Ethylhexylphthalate

An invoice for our services is also enclosed. If you have any questions please contact your Project Manager, Paul Simms, at (732) 549-3900.

Very truly yours,

Michael J. Urban
Laboratory Manager

SEVERN TRENT SERVICES

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SEVERN TRENT SERVICES

Client ID: Trip_Blank
Site: L.E. Carpenter

Lab Sample No: 220381
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8063.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

SEVERN TRENT SERVICES

Client ID: MW-15s
Site: L.E. Carpenter

Lab Sample No: 220382
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4197.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-15I
Site: L.E. Carpenter

Lab Sample No: 220383
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4198.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-11d
Site: L.E. Carpenter

Lab Sample No: 220384
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8064.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	3.4	2.0

SEVERN TRENT SERVICES

Client ID: MW-11d
Site: L.E. Carpenter

Lab Sample No: 220384
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4199.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-14I
Site: L.E. Carpenter

Lab Sample No: 220385
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4200.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-22
Site: L.E. Carpenter

Lab Sample No: 220386
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4196.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	50
Toluene	ND	54
Ethylbenzene	1000	54
Xylene (Total)	4800	50

SEVERN TRENT SERVICES

Client ID: MW-25r
Site: L.E. Carpenter

Lab Sample No: 220387
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8065.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

SEVERN TRENT SERVICES

Client ID: MW-25r
Site: L.E. Carpenter

Lab Sample No: 220387
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4201.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-25rd
Site: L.E. Carpenter

Lab Sample No: 220388
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8066.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

SEVERN TRENT SERVICES

Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 220389
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4202.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 220389
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8067.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

SEVERN TRENT SERVICES

Client ID: MW-4
Site: L.E. Carpenter

Lab Sample No: 220390
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4203.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

SEVERN TRENT SERVICES

Client ID: Field_Blank
Site: L.E. Carpenter

Lab Sample No: 220391
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8068.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

SEVERN TRENT SERVICES

Client ID: Field_Blank
Site: L.E. Carpenter

Lab Sample No: 220391
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4204.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

STL - Envirotech
777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Nicholas J. Clevett
Company: RMT, Inc.
Address: 222 South Riverside Plaza Suite 820
City: Chicago State: IL
Phone: (312) 575 0200 Fax: (312) 409 0200

Samplers Name (Printed): R. Tougard M. Morse
P.O. #:

Site/Project Identification: LE Carpenter
State (Location of site): NJ: [X] NY: [ ] Other:
Regulatory Program:

Analysis Turnaround Time
Standard [X]
Rush Charges Authorized For:
2 Week [ ]
1 Week [ ]
Other [ ] _____

LAB USE ONLY
Project No:
Job No: C436

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	BTEX	DEHP	Sample Numbers
Trip Blank	7/31/00	630	Aq	1		X	220881
MW15S		1031		3	X		220882
MW15I		1025		3	X		220883
MW11d		1132		4	X	X	220884
MW14I		1230		3	X		220885
MW22		1237		3	X		220886
MW25R		1243		4	X	X	220887
MW25Rd		17		1		X	220888
MW21		1317		4	X	X	220889
MW4		1408		3	X		220890

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil:
Water:

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1) R. Tougard	STL	7/31/00 1530	1) [signature]	STL
2)			2)	
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

STL - Envirotech
777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice)	Samplers Name (Printed)	Site/Project Identification
Nicholas J. Clevett	R. Rayond M. Mix	LF Carpenter
Company: RMT, Inc.	P.O. #	State (Location of site): NJ: [X] NY: [ ] Other:
Address: 222 S. Riverside Plaza Suite 820		Regulatory Program:
City: Chicago State: IL 60605		
Phone Fax		

Analysis Turnaround Time
Standard [X]
Rush Charges Authorized For:
2 Week [ ]
1 Week [ ]
Other [ ] ______

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: C436

Sample Identification	Date	Time	Matrix	No. of Cont.	BTEX	DEHP										Sample Numbers
Field Blank	7/31/03	1407	H₂O	3	X	X										220391

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other ______, 7 = Other ______
Soil:
Water: 1,2 | 1

Special Instructions ______

Water Metals Filtered (Yes/No)? ______

Relinquished by	Company	Date / Time	Received by	Company
1) R. Raymond	STL	7/31/03 / 1530	1) [signature]	STL
2)		/	2)	
3)		/	3)	
4)		/	4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: C436 **Site:** L.E. Carpenter

Client: Residuals Management Technologies, Inc.

BNAMS

WATER - 625

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
220381	7/31/2000	7/31/2000	8-3-00	SW	8-15-00	LZ	5653
220384	7/31/2000	7/31/2000					
220387	7/31/2000	7/31/2000					
220388	7/31/2000	7/31/2000					
220389	7/31/2000	7/31/2000					
220391	7/31/2000	7/31/2000					

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: C436 **Site:** L.E. Carpenter

Client: Residuals Management Technologies, Inc.

VOAGC

602

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
220382	7/31/2000	7/31/2000			8/2/00	SP	7065
220383	7/31/2000	7/31/2000					
220384	7/31/2000	7/31/2000					
220385	7/31/2000	7/31/2000					
220386	7/31/2000	7/31/2000					
220387	7/31/2000	7/31/2000					
220389	7/31/2000	7/31/2000					
220390	7/31/2000	7/31/2000					
220391	7/31/2000	7/31/2000					

Water Levels L.E. Carpenter Site Date: 7/31/00

Well ID	Product	Depth to Water
MW-1 (R)	9.57	10.01
MW-2 (R)	N	6.60
MW-3	N	6.78
MW-4	N	6.72
MW-6 (R)	N	5.90
MW-8	N	2.74
MW-9	N	4.03
MW-11S	7.35	13.33
MW-11IR	N	7.60
MW-11DR	N	5.39
MW-12R	N	7.65
MW-13S	N	4.39
MW-13(R)	N	5.12
MW-13I	N	5.10
MW-14S	N	3.34
MW-14I	N	2.84
MW-15S	N	10.82
MW-15I	N	10.71
MW-16S	N	7.82
MW-16I	N	8.56
MW-17S	N	8.60
MW-18S	N	5.05
MW-18I	N	5.45
MW-19	N	11.91
MW-19-1	N	11.74
MW-19-2	N	11.81
MW-19-3	N	12.58
MW-19-4	N	10.33
MW-19-5	N	11.94
MW-19-6	N	9.61
MW-19-7	N	8.90
MW-19-8	N	9.29
MW-20	N	9.76
MW-21	N	3.65
MW-22 (R)	N	2.87
MW-23	N	Not Accessable
MW-25 (R)	N	2.11
MW-26	N	7.59
RW-1	11.37	11.63
RW-2	N	6.18
RW-3	N	6.18
CW-1	N	6.91
CW-3	N	7.15
GEI-1I	N	4.73
GEI-2S	N	10.89
GEI-2I	N	11.04
GEI-3I	N	13.85
WP-A1	9.66	10.71
WP-A2	NA	NA

Well ID	Product	Depth to Water
WP-A3	N	9.45
WP-A4	10.73	13.28
WP-A5	N	11.79
WP-A6	11.25	14.81
WP-A7	9.14	10.46
WP-A8	11.78	11.91
WP-A9	13.38	15.17
WP-B1	N	6.05
WP-B2	N	6.44
WP-B3	N	6.66
WP-B4	6.57	(all product)
WP-B5	N	5.44
WP-B6	N	5.87
WP-B7	N	4.08
WP-B10	N	7.02
WP-C1	N	6.69
WP-C2	N	7.69
WP-C3	N	5.80
WP-C4	N	7.32
SG-D1	N	1.76
SG-D2	N	Missing
SG-D3	N	1.76
SG-R1	N	1.84
SG-R2	N	1.58
SG-R3	N	1.04
RP-O2	*	*
RP-O3	*	*
RP-O4	*	*
EFR-1	*	*
EFR-2	*	*
EFR-3	*	*
EFR-4	*	*
EFR-5	*	*
EFR-6	*	*
EFR-7	*	*
EFR-8	*	*
EFR-9	*	*
EFR-10	*	*
EFR-11	*	*
EFR-12	*	*
EFR-13	*	*
EFR-14	*	*
EFR-15	*	*
EFR-16	*	*
EFR-17	*	*
EFR-18	*	*
EFR-19	*	*
EFR-20	*	*
EFR-21	*	*

Well ID	Product	Depth to Water
EFR-22	*	*
EFR-23	*	*
EFR-24	*	*
EFR-25	*	*
EFR-26	*	*
EFR-27	*	*
EFR-28	*	*

* Measurements Collected by RMT on later date

Monitoring Well Data

Client: Residual Management Tech.

Project: LE Carpenter

Date Sampled: 7/31/00

Job No.: C436

Name of Analyst: Richard Toogood

Names & Signatures of Samplers: Richard Toogood

Matt Morse

Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

	Water Test Method		Solid Test Method	
Element	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability	- Method 1020A
Corrosivity	- Water pH Method 9040B Soil pH Method 9045C
Reactivity	- Chapter 7, Section 7.3.3 and 7.3.4 respectively for hydrogen cyanide and hydrogen sulfide release
Toxicity	- TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

NON-CONFORMANCE SUMMARY

STL Envirotech Job Number: C436

Volatile Organics Analysis:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

Page 1 of 2

Non-conformance Summary, Page 2 of 2
STL Envirotech Job Number: C436

Metals Analysis:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Total Petroleum Hydrocarbons:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

General Chemistry/Disposal Parameters:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Signature of Laboratory Manager: _____ Date: 8-24-00

Client ID: **Trip_Blank**
Site: L.E. Carpenter

Lab Sample No: **220381**
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8063.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8063.d
Report Date: 08-Aug-2000 14:35

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8063.d
Lab Smp Id: 220381 Client Smp ID: Trip_Blank
Inj Date : 05-AUG-2000 06:57
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220381;1000;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50
Processing Host: hpd1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)

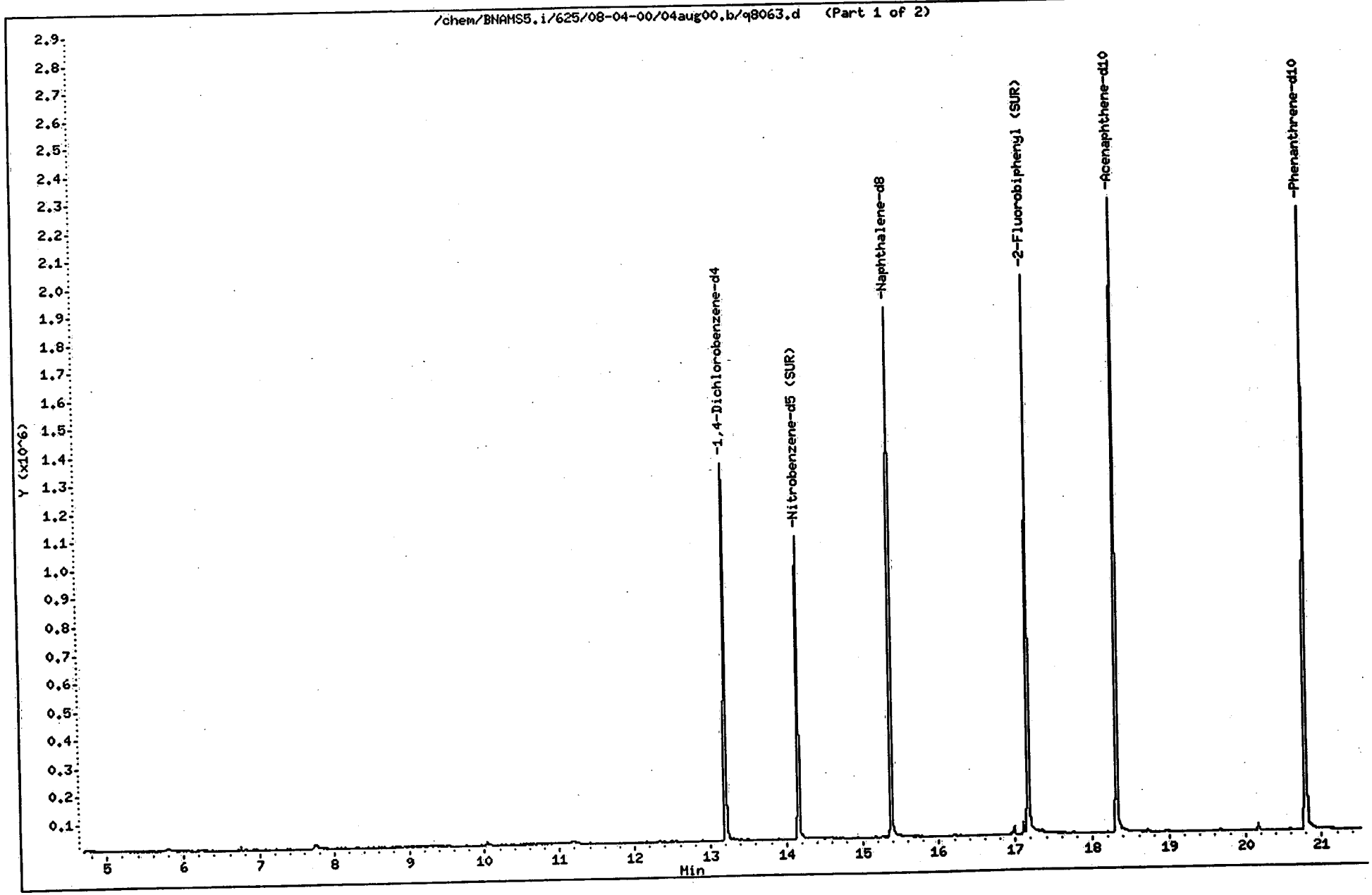
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.204	13.210	(1.000)	310157	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.163	14.162	(0.920)	407852	36.8454	74
* 80 Naphthalene-d8	136	15.386	15.385	(1.000)	1305739	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.175	17.174	(0.938)	849514	34.9789	70
* 82 Acenaphthene-d10	164	18.320	18.326	(1.000)	741823	40.0000	
* 83 Phenanthrene-d10	188	20.802	20.809	(1.000)	1457149	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.428	23.420	(0.927)	1462350	50.2212	100
* 81 Chrysene-d12	240	25.274	25.287	(1.000)	1326963	40.0000	
* 84 Perylene-d12	264	29.080	29.101	(1.000)	1034149	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8063.d
Date : 05-AUG-2000 06:57
Client ID: Trip_Blank
Sample Info: 220381;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

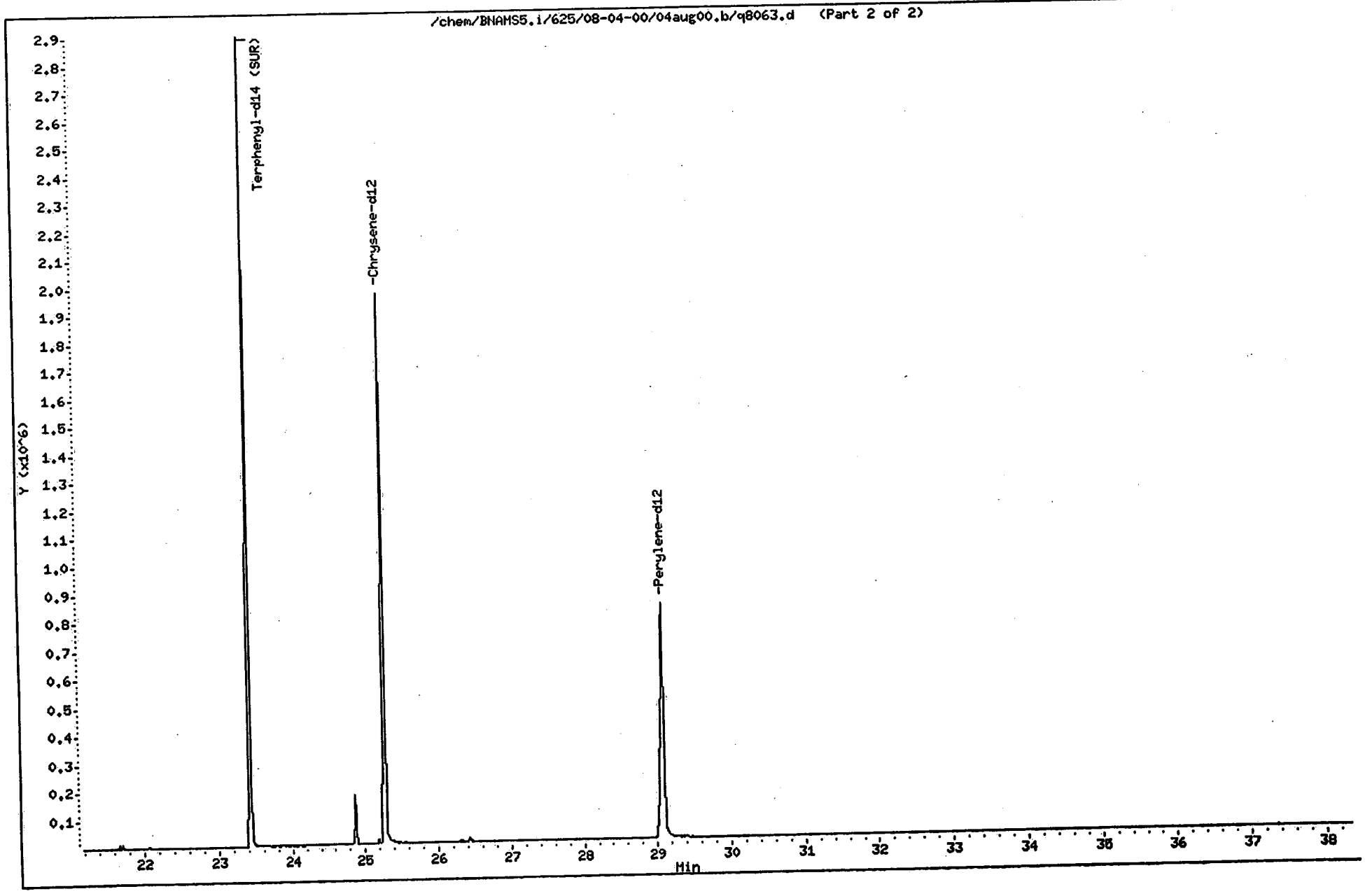
Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8063.d
Date : 05-AUG-2000 06:57
Client ID: Trip_Blank
Sample Info: 220381;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53



Client ID: **MW-11d**
Site: L.E. Carpenter

Lab Sample No: **220384**
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8064.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	3.4	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8064.d
Report Date: 08-Aug-2000 14:35

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8064.d
Lab Smp Id: 220384 Client Smp ID: MW-11d
Inj Date : 05-AUG-2000 07:44
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220384;1000;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50
Processing Host: hpd1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)

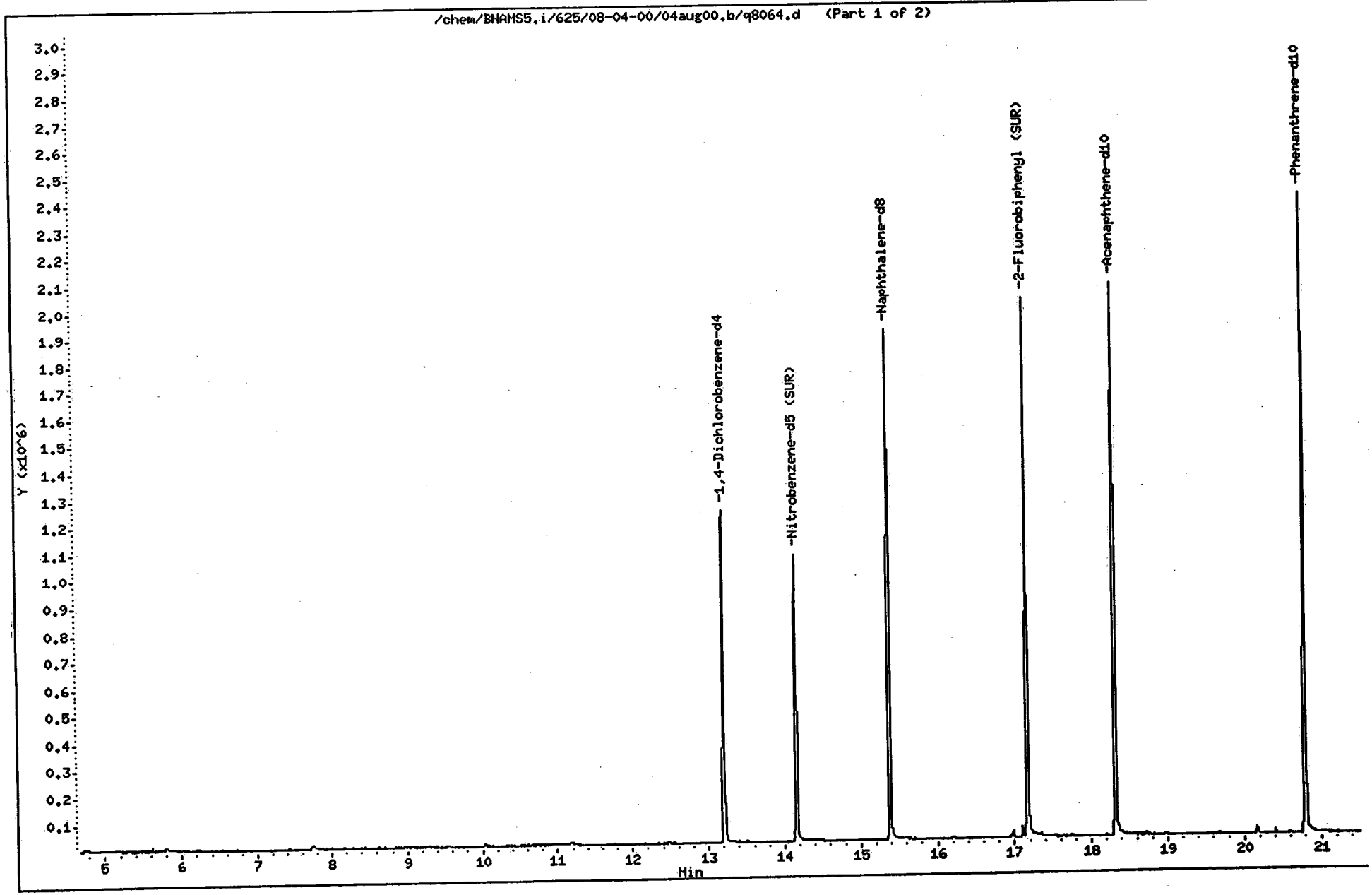
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.209	13.210	(1.000)	286623	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.160	14.162	(0.920)	401091	38.9294	78
* 80 Naphthalene-d8	136	15.384	15.385	(1.000)	1215353	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.172	17.174	(0.938)	837020	34.9529	70
* 82 Acenaphthene-d10	164	18.317	18.326	(1.000)	731457	40.0000	
* 83 Phenanthrene-d10	188	20.800	20.809	(1.000)	1424409	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.425	23.420	(0.927)	1461389	50.4795	100
63 bis(2-Ethylhexyl)phthalate	149	25.186	25.194	(0.997)	50398	1.67615	3.4
* 81 Chrysene-d12	240	25.271	25.287	(1.000)	1319306	40.0000	
* 84 Perylene-d12	264	29.078	29.101	(1.000)	1017367	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8064.d
Date : 05-AUG-2000 07:44
Client ID: MW-11d
Sample Info: 220384;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

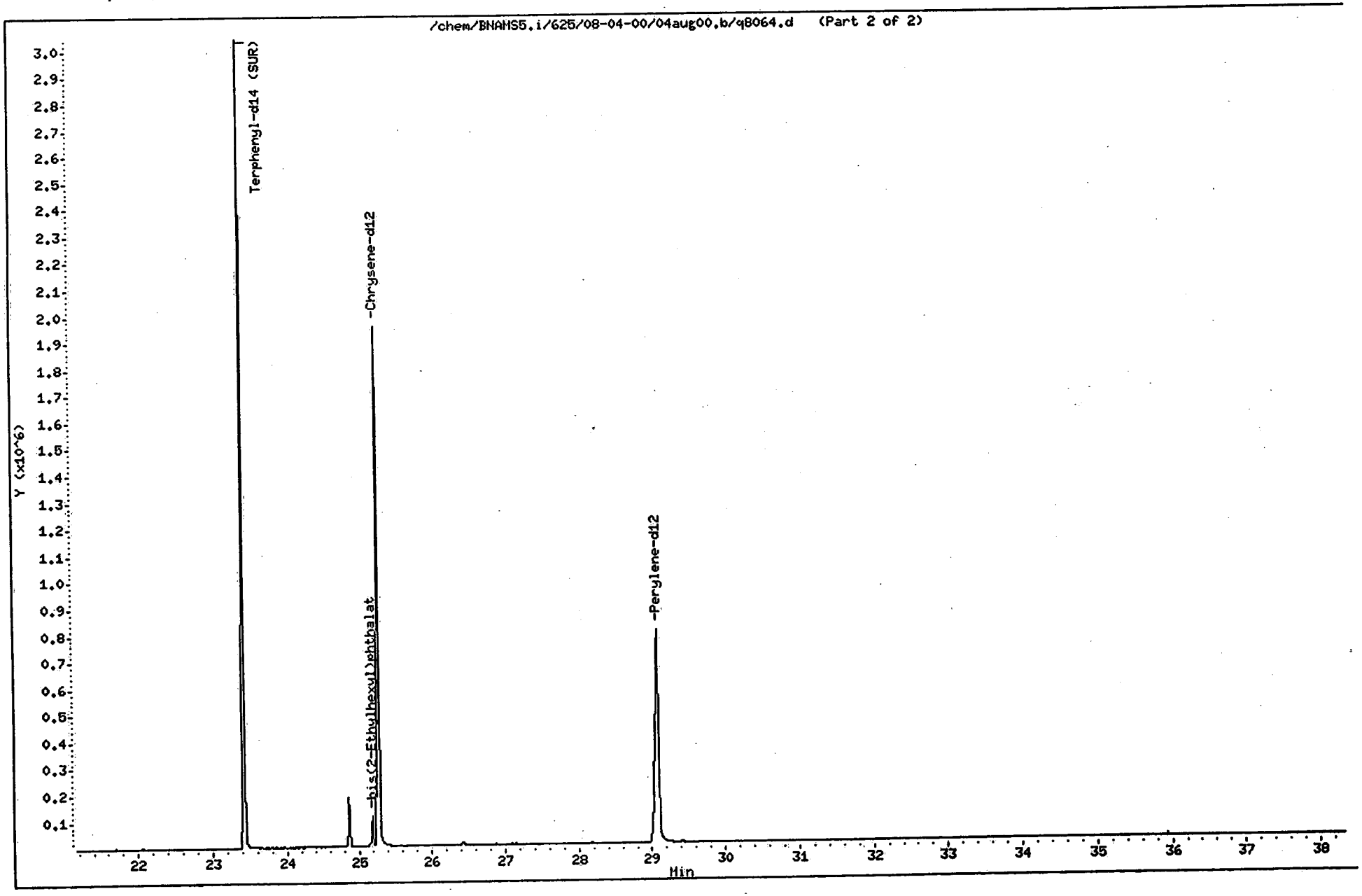
Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8064.d
Date : 05-AUG-2000 07:44
Client ID: MW-11d
Sample Info: 220384;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8064.d

Date : 05-AUG-2000 07:44

Client ID: MW-11d

Instrument: BNAMS5.i

Sample Info: 220384;1000;2;1;;

Purge Volume: 1000.0

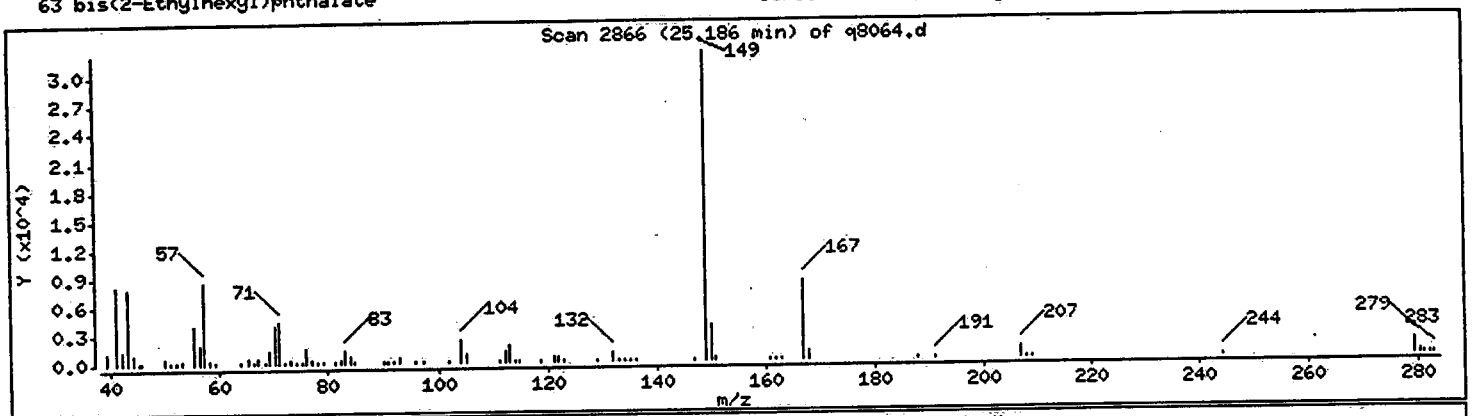
Operator: BNAMS 1

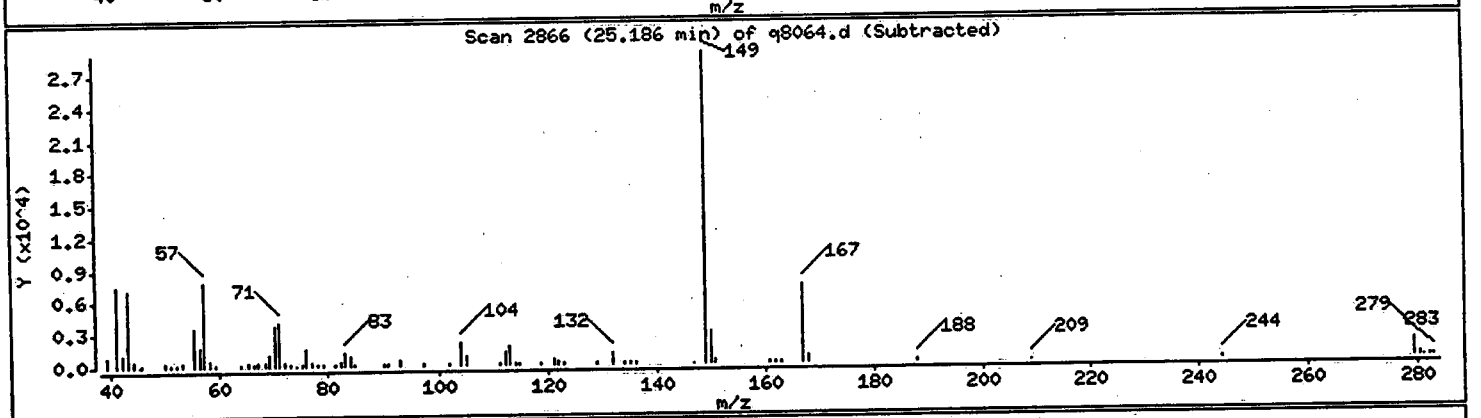
Column phase: DB-5

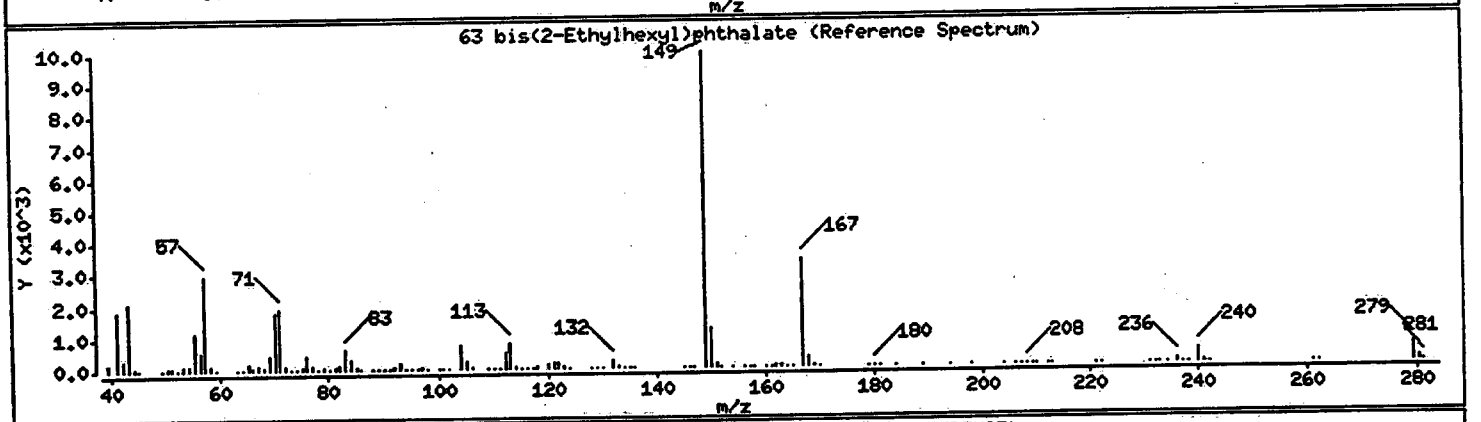
Column diameter: 0.53

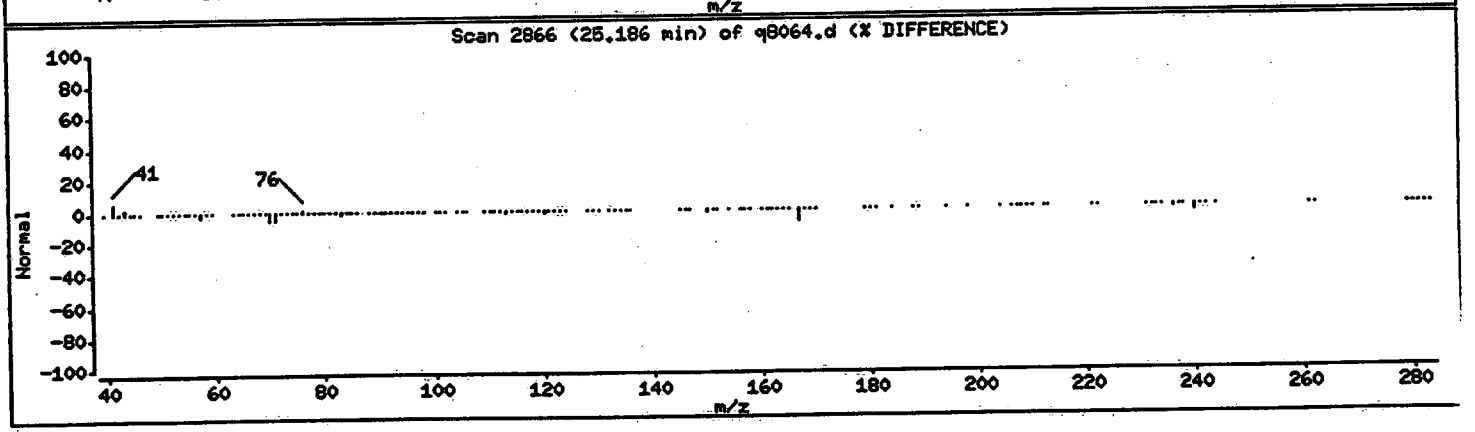
63 bis(2-Ethylhexyl)phthalate

Concentration: 3.4 ug/L









Client ID: MW-25r
Site: L.E. Carpenter

Lab Sample No: 220387
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8065.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8065.d
Report Date: 08-Aug-2000 14:35

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8065.d
Lab Smp Id: 220387 Client Smp ID: MW-25r
Inj Date : 05-AUG-2000 08:31
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220387;1000;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50
Processing Host: hpd1

LZ

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)

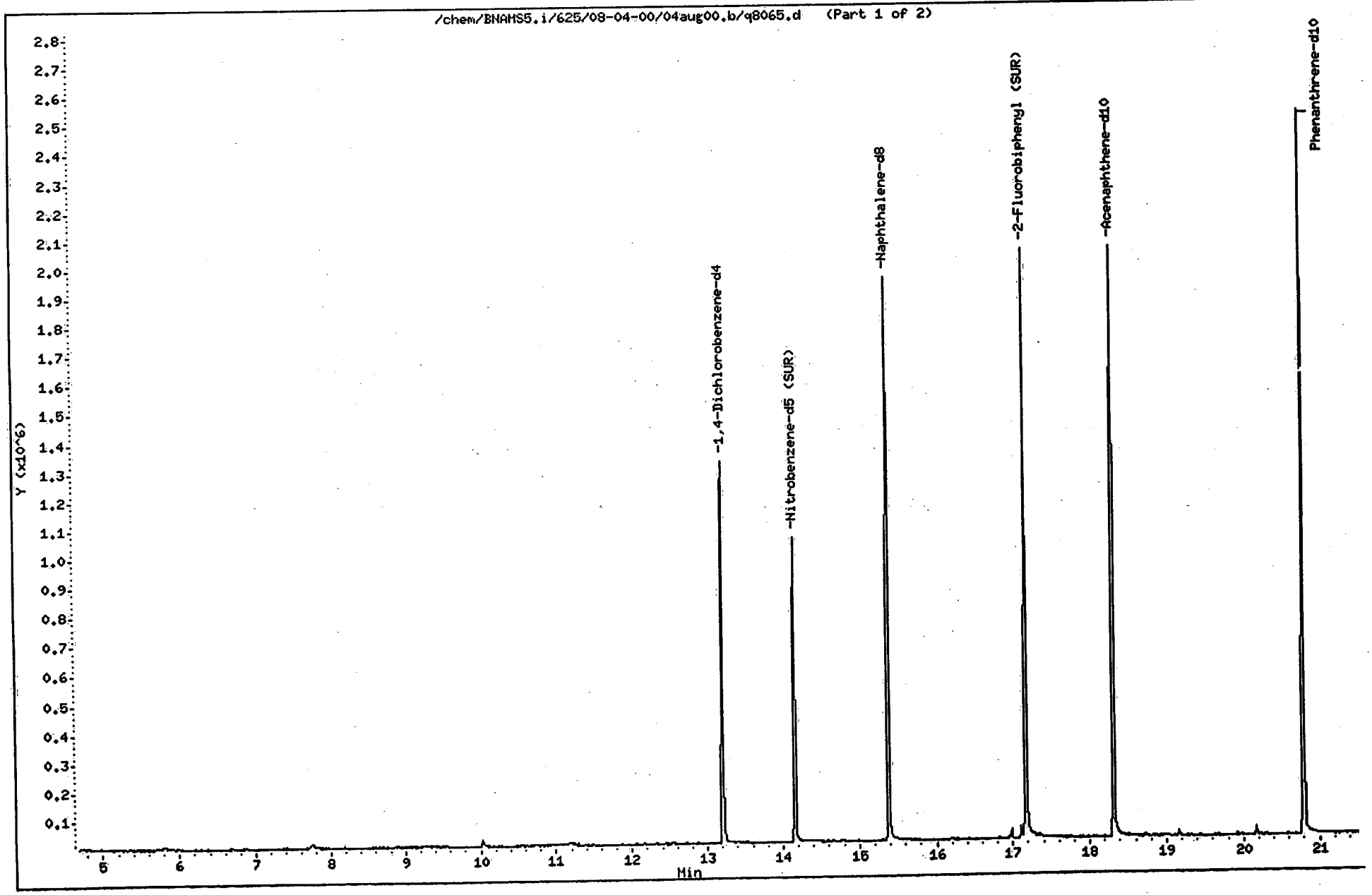
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.209	13.210	(1.000)	299500	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.160	14.162	(0.920)	385792	35.8007	72
* 80 Naphthalene-d8	136	15.384	15.385	(1.000)	1271157	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.172	17.174	(0.938)	870168	36.1225	72
* 82 Acenaphthene-d10	164	18.317	18.326	(1.000)	735802	40.0000	
* 83 Phenanthrene-d10	188	20.800	20.809	(1.000)	1433214	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.426	23.420	(0.927)	1360763	46.9285	94
* 81 Chrysene-d12	240	25.272	25.287	(1.000)	1321417	40.0000	
* 84 Perylene-d12	264	29.085	29.101	(1.000)	1011168	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8065.d
Date : 05-AUG-2000 08:31
Client ID: MW-25r
Sample Info: 220387;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

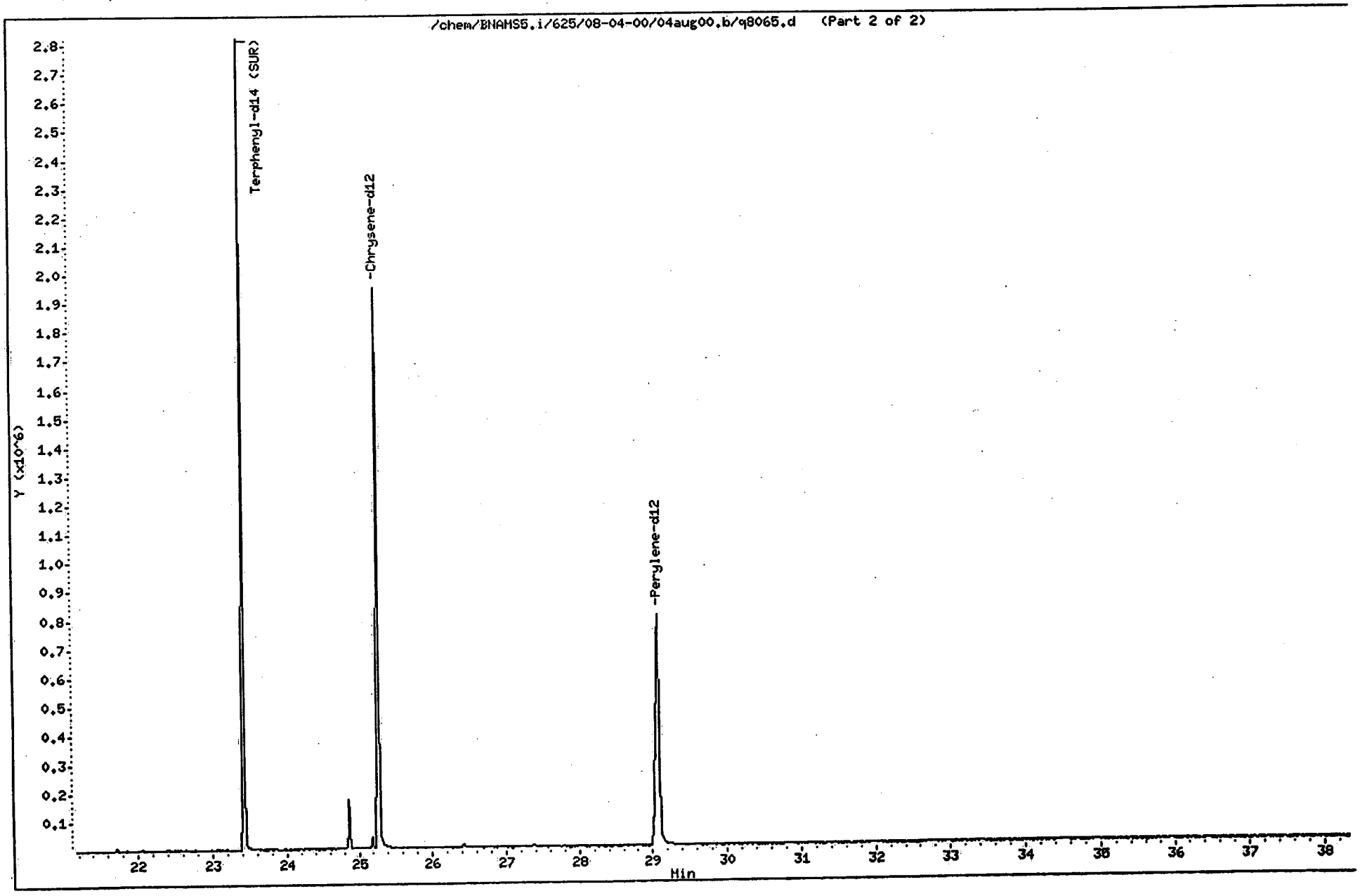
Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8065.d
Date : 05-AUG-2000 08:31
Client ID: MW-25r
Sample Info: 220387;1000;2;1;;
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53



Client ID: **MW-25rd**
Site: L.E. Carpenter

Lab Sample No: **220388**
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8066.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8066.d
Report Date: 08-Aug-2000 14:36

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8066.d
Lab Smp Id: 220388 Client Smp ID: MW-25rd
Inj Date : 05-AUG-2000 09:17
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220388;970;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50
Processing Host: hpd1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	970.00000	Volume of sample extracted (mL)

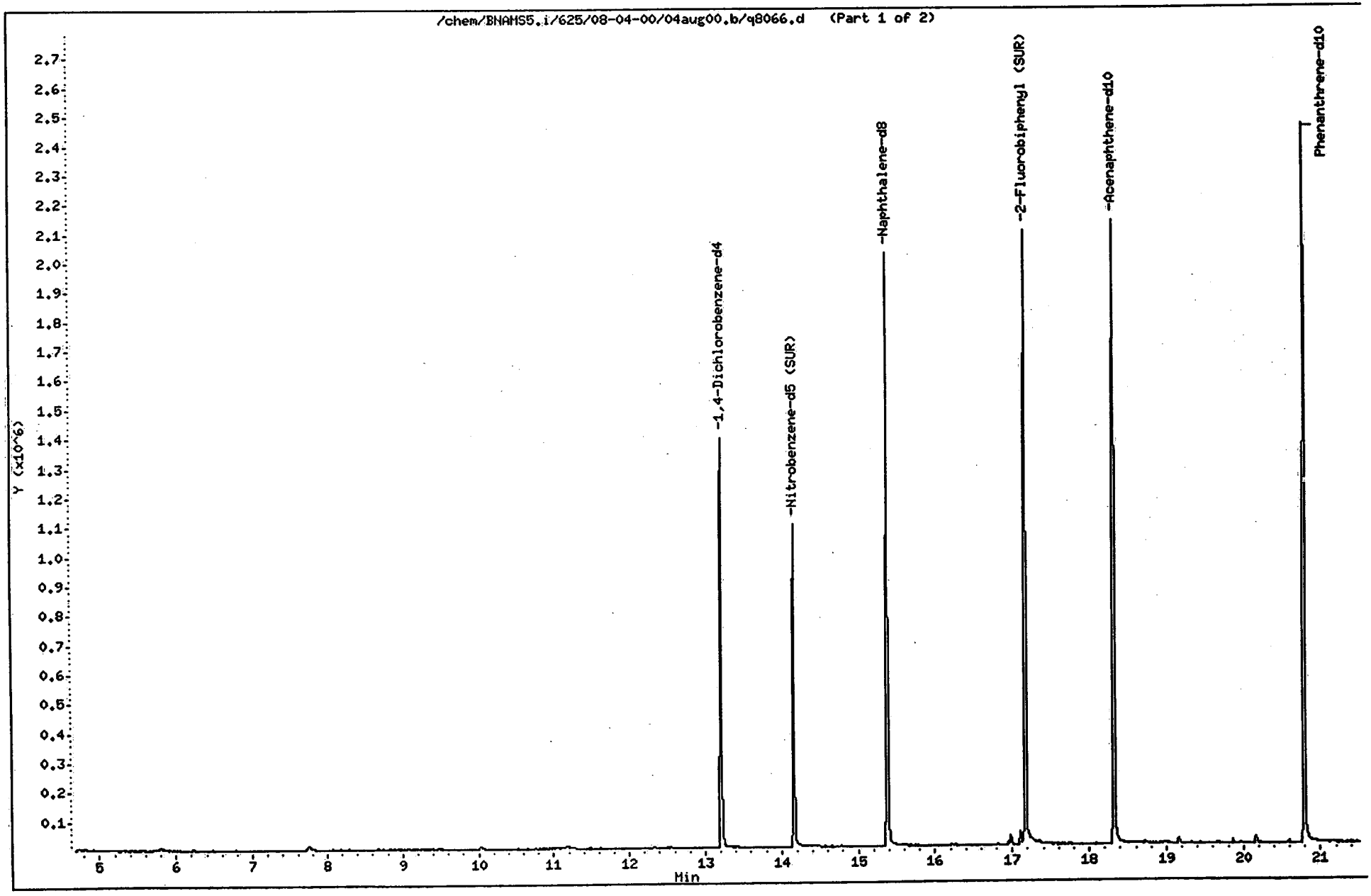
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.208	13.210	(1.000)	298991	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.160	14.162	(0.920)	409126	37.7837	78
* 80 Naphthalene-d8	136	15.383	15.385	(1.000)	1277293	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.172	17.174	(0.938)	896645	36.4275	75
* 82 Acenaphthene-d10	164	18.316	18.326	(1.000)	751843	40.0000	
* 83 Phenanthrene-d10	188	20.799	20.809	(1.000)	1447190	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.425	23.420	(0.927)	1384065	47.0263	97
* 81 Chrysene-d12	240	25.271	25.287	(1.000)	1341251	40.0000	
* 84 Perylene-d12	264	29.084	29.101	(1.000)	1040932	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8066.d
Date : 05-AUG-2000 09:17
Client ID: MW-25rd
Sample Info: 220388;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53

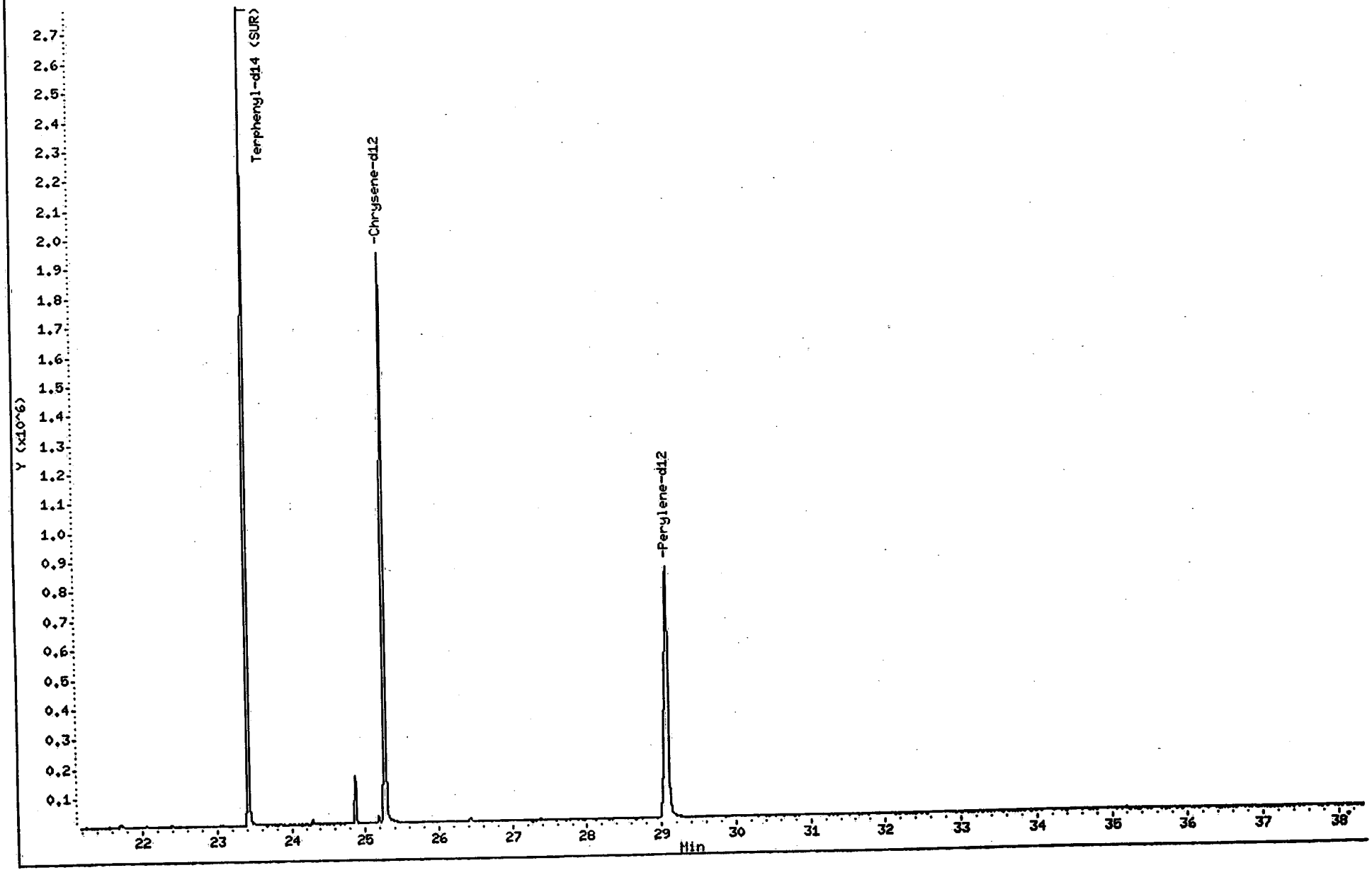


Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8066.d
Date : 05-AUG-2000 09:17
Client ID: MW-25rd
Sample Info: 220388;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53

/chem/BNAMS5.i/625/08-04-00/04aug00.b/q8066.d (Part 2 of 2)



Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 220389
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8067.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8067.d
Report Date: 08-Aug-2000 14:36

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8067.d
Lab Smp Id: 220389 Client Smp ID: MW-21
Inj Date : 05-AUG-2000 10:04
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220389;970;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50
Processing Host: hpd1

12

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	970.00000	Volume of sample extracted (mL)

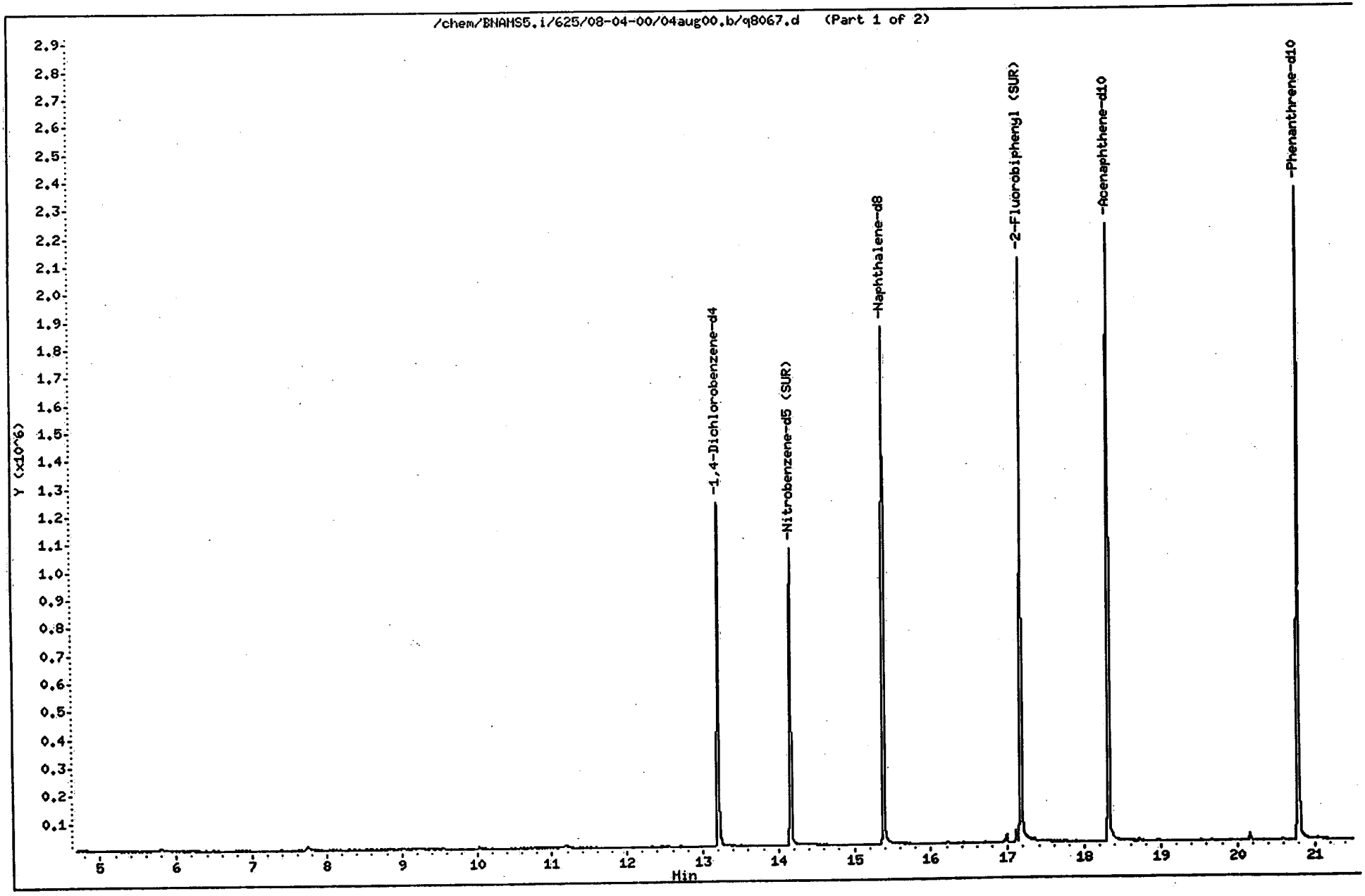
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.210	13.210	(1.000)	285191	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.161	14.162	(0.920)	390236	37.1901	77
* 80 Naphthalene-d8	136	15.385	15.385	(1.000)	1237763	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.173	17.174	(0.938)	857294	36.1326	74
* 82 Acenaphthene-d10	164	18.318	18.326	(1.000)	724713	40.0000	
* 83 Phenanthrene-d10	188	20.801	20.809	(1.000)	1428350	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.426	23.420	(0.927)	1424880	49.9401	100
* 81 Chrysene-d12	240	25.272	25.287	(1.000)	1300240	40.0000	
* 84 Perylene-d12	264	29.079	29.101	(1.000)	992270	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8067.d
Date : 05-AUG-2000 10:04
Client ID: MW-21
Sample Info: 220389;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53

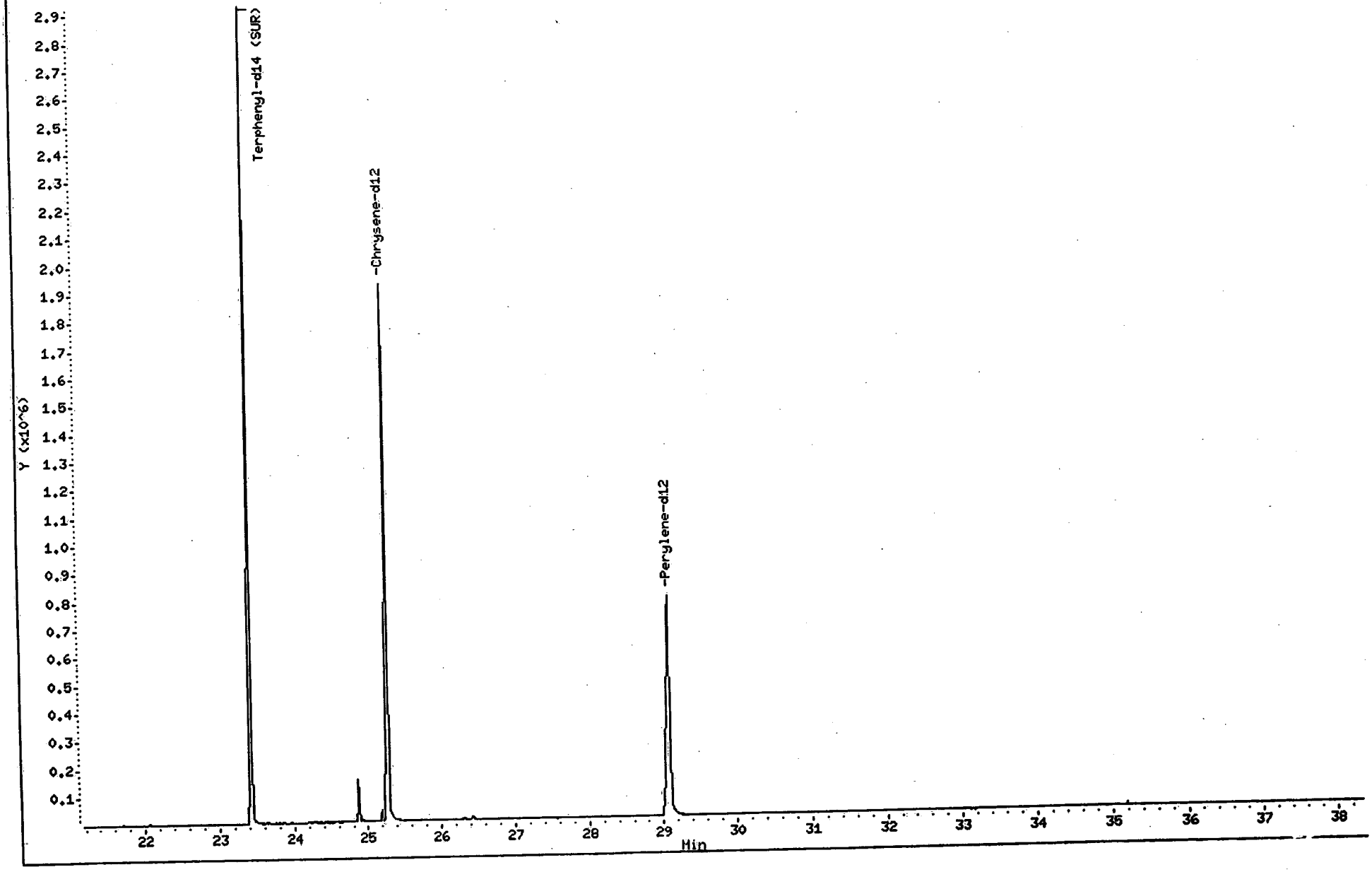


Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8067.d
Date : 05-AUG-2000 10:04
Client ID: MW-21
Sample Info: 220389;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53

/chem/BNAMS5.i/625/08-04-00/04aug00.b/q8067.d (Part 2 of 2)



Client ID: **Field_Blank**
Site: L.E. Carpenter

Lab Sample No: **220391**
Lab Job No: C436

Date Sampled: 07/31/00
Date Received: 07/31/00
Date Extracted: 08/03/00
Date Analyzed: 08/05/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8068.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8068.d
Report Date: 08-Aug-2000 14:36

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8068.d
Lab Smp Id: 220391 Client Smp ID: Field_Blank
Inj Date : 05-AUG-2000 10:50
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : 220391;970;2;1;;
Misc Info : C436;PPBN;5653;143
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BIS2PHTHb.sub
Target Version: 3.50 12
Processing Host: hpd1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	970.00000	Volume of sample extracted (mL)

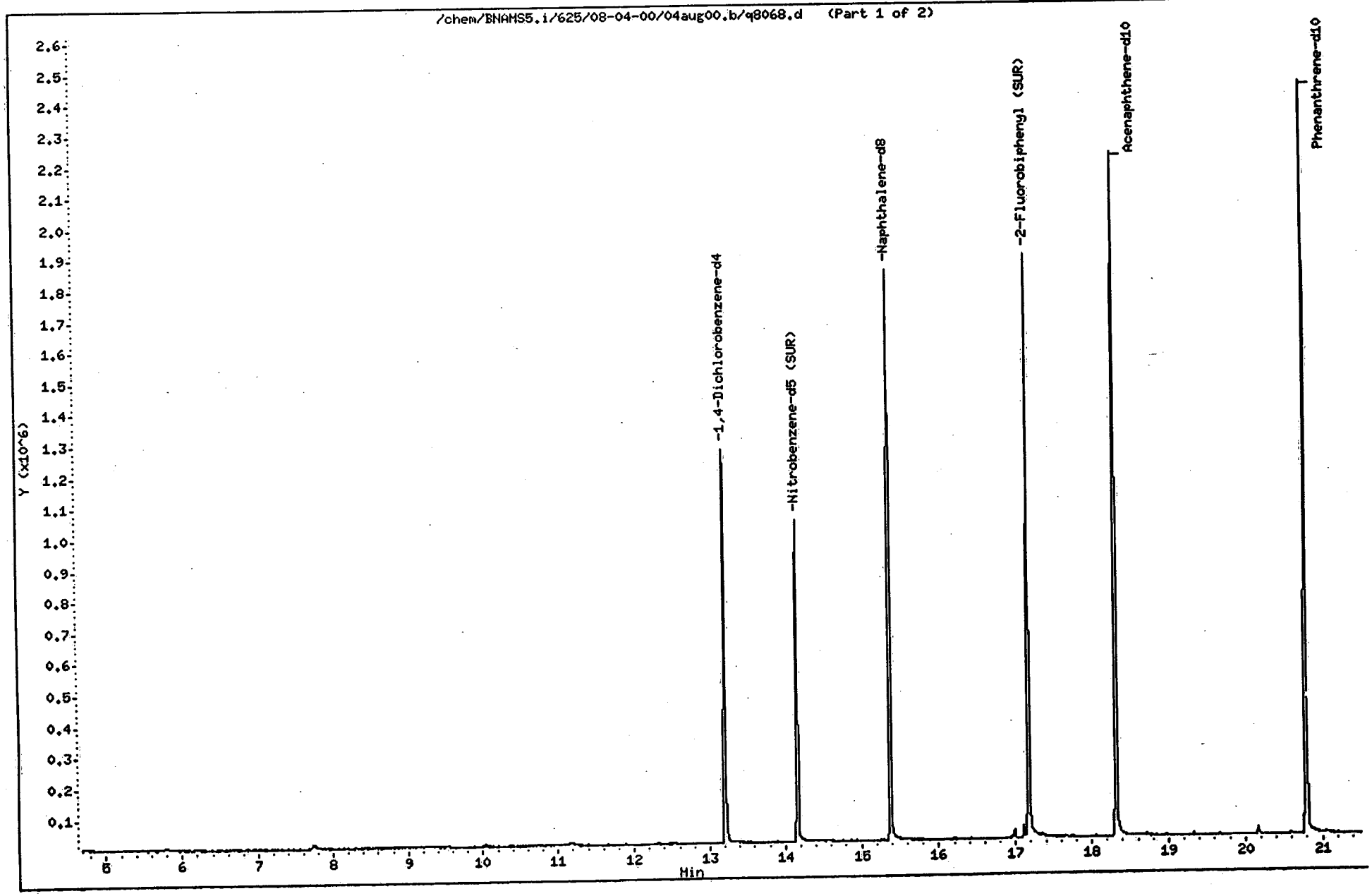
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.203	13.210	(1.000)	285754	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.162	14.162	(0.920)	389257	36.4021	75
* 80 Naphthalene-d8	136	15.385	15.385	(1.000)	1261386	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.174	17.174	(0.938)	789673	32.3779	67
* 82 Acenaphthene-d10	164	18.318	18.326	(1.000)	744962	40.0000	
* 83 Phenanthrene-d10	188	20.801	20.809	(1.000)	1462806	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.427	23.420	(0.927)	1359081	46.6693	96
* 81 Chrysene-d12	240	25.273	25.287	(1.000)	1327114	40.0000	
* 84 Perylene-d12	264	29.086	29.101	(1.000)	1014128	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8068.d
Date : 05-AUG-2000 10:50
Client ID: Field_Blank
Sample Info: 220391;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

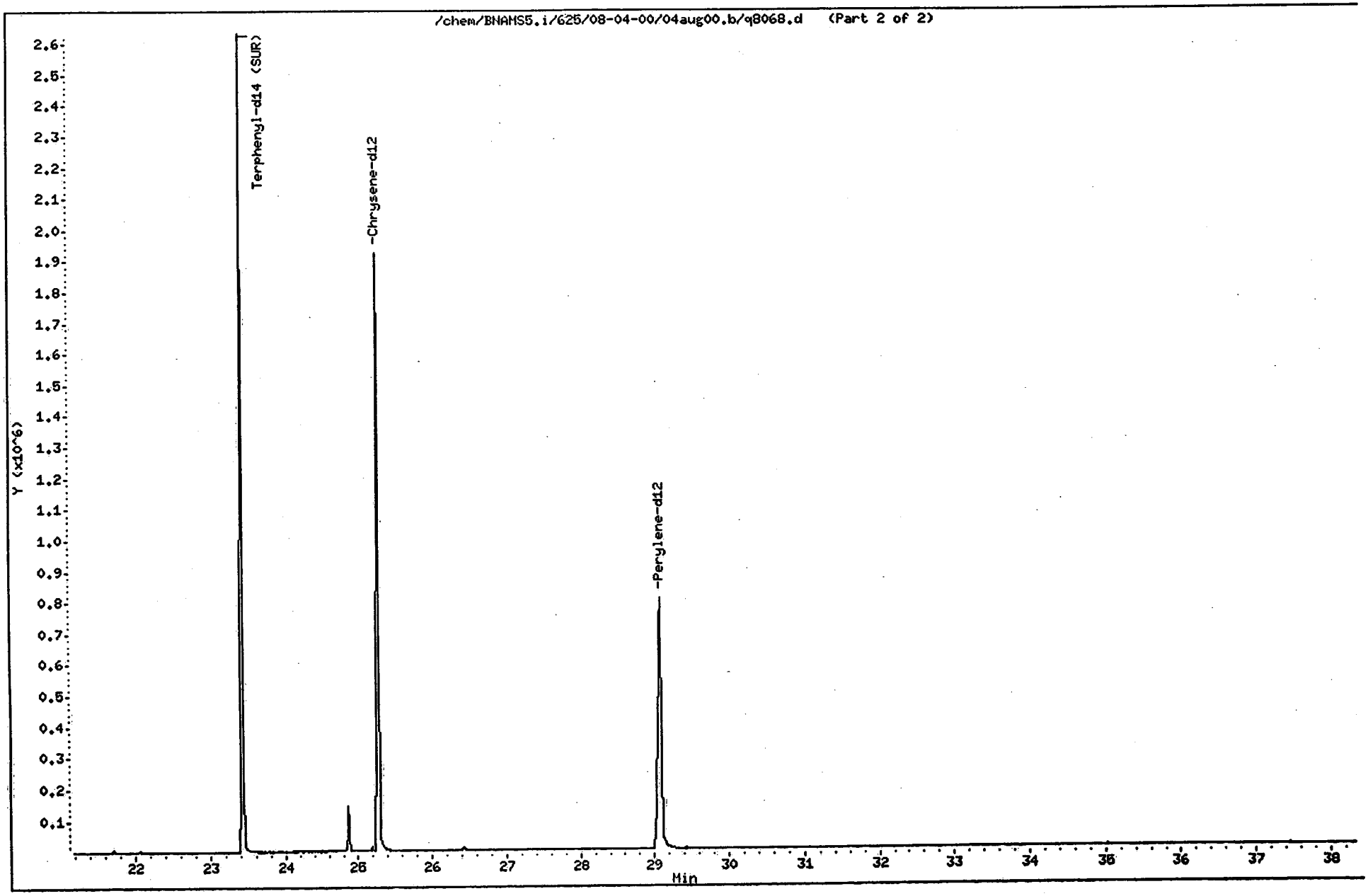
Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8068.d
Date : 05-AUG-2000 10:50
Client ID: Field_Blank
Sample Info: 220391;970;2;1;;
Purge Volume: 970.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: Q8043

DFTPP Injection Date: 08/04/00

Instrument ID: BNAMS5

DFTPP Injection Time: 1546

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.5
68	Less than 2.0% of mass 69	0.1 (0.2)1
69	Mass 69 relative abundance	53.3
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	40.0 - 60.0% of mass 198	52.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	21.7
365	Greater than 1.0% of mass 198	2.32
441	0.0 - 100.0% of mass 443	11.9 (81.5)2
442	40.0 - 110.0% of mass 198	76.8
443	17.0 - 23.0% of mass 442	14.6 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

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

	CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	QSTD050	QSTD050	Q8044	08/04/00	1606
02	QSTD120	QSTD120	Q8045	08/04/00	1653
03	QSTD010	QSTD010	Q8046	08/04/00	1740
04	QSTD080	QSTD080	Q8047	08/04/00	1827
05	QSTD020	QSTD020	Q8048	08/04/00	1914
06	WB216	WB216	Q8050	08/04/00	2048
07	TRIP_BLANK	220381	Q8063	08/05/00	0657
08	MW-11D	220384	Q8064	08/05/00	0744
09	MW-25R	220387	Q8065	08/05/00	0831
10	MW-25RD	220388	Q8066	08/05/00	0917
11	MW-21	220389	Q8067	08/05/00	1004
12	FIELD_BLANK	220391	Q8068	08/05/00	1050
13					
14					
15					
16					
17					
18					

page 1 of 1

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8043.d

Date : 04-AUG-2000 15:46

Client ID:

Instrument: BNAMS5.i

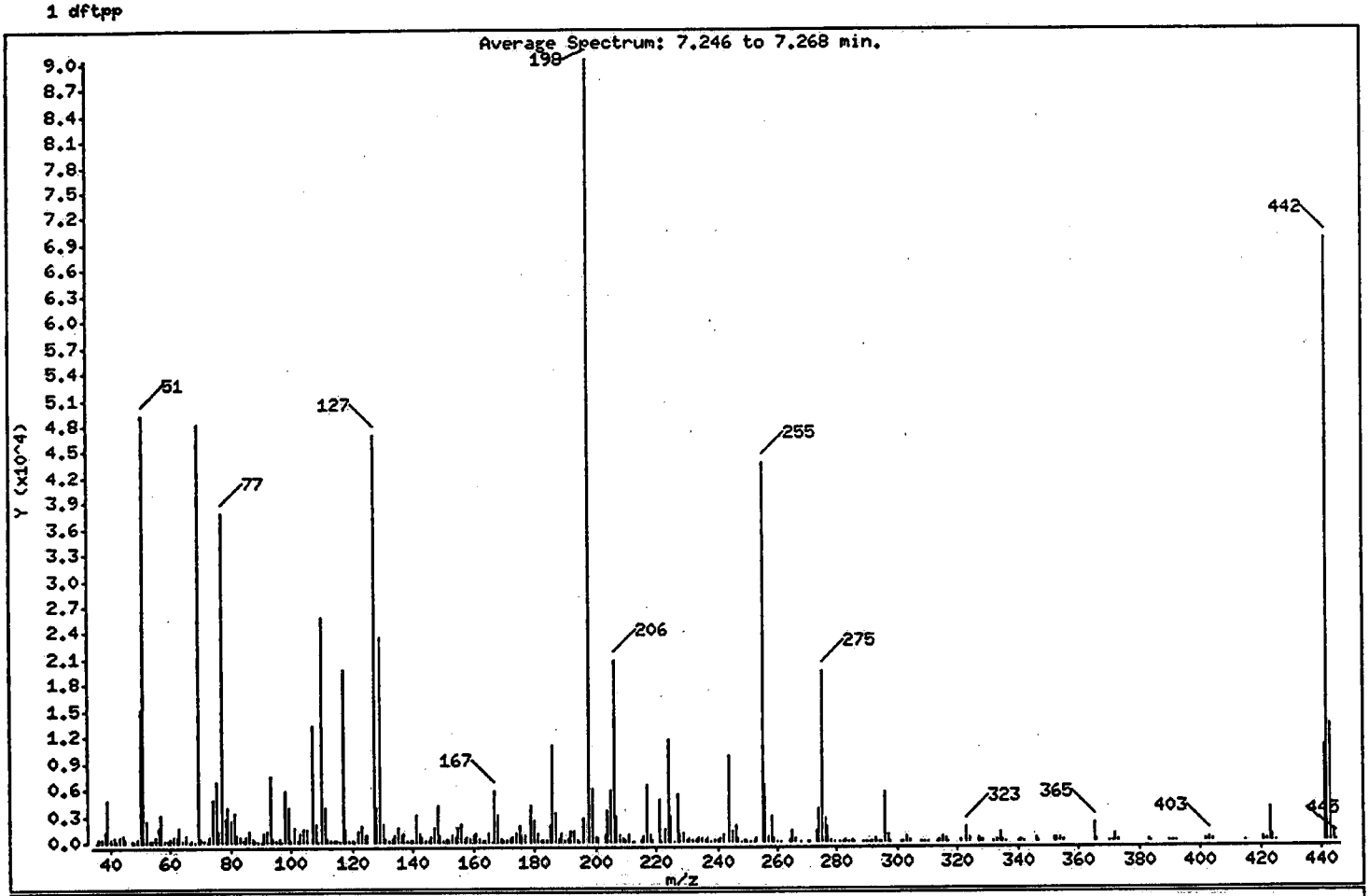
Sample Info: QDFT217A

Operator: BNA2

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	54.53
68	Less than 2.00% of mass 69	0.09 (0.16)
69	Mass 69 relative abundance	53.29
70	Less than 2.00% of mass 69	0.42 (0.80)
127	40.00 - 60.00% of mass 198	51.99
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.57
275	10.00 - 30.00% of mass 198	21.71
365	Greater than 1.00% of mass 198	2.32
441	0.01 - 100.00% of mass 443	11.91 (81.46)
442	40.00 - 110.00% of mass 198	76.76
443	17.00 - 23.00% of mass 442	14.62 (19.04)

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8043.d

Date : 04-AUG-2000 15:46

Client ID:

Instrument: BNAMS5.i

Sample Info: QDFT217A

Operator: BNA2

Column phase: DB-5

Column diameter: 0.25

Data File: q8043.d

Spectrum: Average Spectrum: 7.246 to 7.268 min.

Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	89	113.00	197	191.00	460	278.00	266
36.00	375	114.00	154	192.00	1309	279.00	62
37.00	416	115.00	243	193.00	1290	281.00	34
38.00	1217	116.00	85	194.00	269	282.00	39
39.00	4828	117.00	19776	195.00	85	283.00	179
40.00	419	118.00	1469	196.00	2637	284.00	93
41.00	643	119.00	255	198.00	90376	285.00	294
42.00	302	120.00	182	199.00	5942	286.00	35
43.00	705	121.00	67	200.00	560	289.00	48
44.00	746	122.00	1336	201.00	480	290.00	34
45.00	314	123.00	1790	203.00	836	291.00	35
47.00	106	124.00	836	204.00	3432	292.00	62
48.00	70	125.00	784	205.00	5739	293.00	444
49.00	343	127.00	46984	206.00	20832	294.00	67
50.00	15091	128.00	3969	207.00	2973	295.00	39
51.00	49280	129.00	23384	208.00	843	296.00	5629
52.00	2397	130.00	2028	209.00	320	297.00	801
53.00	241	131.00	467	210.00	164	298.00	40
54.00	125	132.00	238	211.00	856	301.00	46
55.00	726	133.00	367	212.00	70	302.00	67
56.00	1660	134.00	766	213.00	97	303.00	557
57.00	3205	135.00	1693	215.00	291	304.00	150
58.00	287	136.00	736	216.00	598	308.00	47
59.00	135	137.00	1104	217.00	6530	309.00	54
60.00	327	138.00	124	218.00	888	310.00	47
61.00	551	139.00	169	219.00	122	313.00	40
62.00	669	140.00	177	221.00	4826	314.00	233
63.00	1765	141.00	3198	222.00	74	315.00	599
64.00	285	142.00	980	223.00	1540	316.00	317
65.00	778	143.00	568	224.00	11635	317.00	52
66.00	34	144.00	267	225.00	2853	321.00	159
67.00	299	145.00	163	226.00	39	323.00	1664
68.00	78	146.00	522	227.00	5483	324.00	344
69.00	48152	147.00	1582	228.00	892	327.00	368
70.00	384	148.00	4138	229.00	1039	328.00	165

Data File: /chem/BNAHS5.i/625/08-04-00/04aug00.b/q8043.d

Date : 04-AUG-2000 15:46

Client ID:

Instrument: BNAHS5.i

Sample Info: QDFT217A

Operator: BNA2

Column phase: DB-5

Column diameter: 0.25

Data File: q8043.d

Spectrum: Average Spectrum: 7.246 to 7.268 min.

Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	144	149.00	740	230.00	229	332.00	84
72.00	93	150.00	181	231.00	432	333.00	108
73.00	669	151.00	437	232.00	113	334.00	987
74.00	4752	152.00	279	233.00	106	335.00	277
75.00	6784	153.00	820	234.00	350	336.00	34
76.00	1270	154.00	626	235.00	373	340.00	34
77.00	37792	155.00	1561	236.00	268	341.00	231
78.00	2618	156.00	2071	237.00	358	342.00	48
79.00	3999	157.00	454	238.00	35	346.00	396
80.00	2544	158.00	544	239.00	260	347.00	40
81.00	3240	159.00	405	240.00	219	352.00	497
82.00	865	160.00	926	241.00	321	353.00	368
83.00	661	161.00	1114	242.00	759	354.00	503
84.00	159	162.00	327	244.00	9799	355.00	117
85.00	722	163.00	146	245.00	1218	365.00	2101
86.00	1259	164.00	160	246.00	1959	366.00	311
87.00	489	165.00	1120	247.00	416	370.00	48
88.00	205	166.00	55	248.00	61	371.00	75
89.00	66	167.00	5862	249.00	302	372.00	834
90.00	40	168.00	3111	250.00	47	373.00	199
91.00	1040	169.00	431	251.00	51	383.00	262
92.00	1149	170.00	232	252.00	79	384.00	52
93.00	7492	171.00	266	253.00	321	390.00	99
94.00	514	172.00	432	255.00	43632	391.00	74
95.00	250	173.00	541	256.00	6418	392.00	34
96.00	357	174.00	1093	257.00	541	402.00	302
97.00	67	175.00	1775	258.00	2903	403.00	437
98.00	5765	176.00	591	259.00	484	404.00	178
99.00	3917	177.00	816	260.00	50	415.00	35
100.00	311	179.00	4155	261.00	73	421.00	476
101.00	1662	180.00	2475	264.00	145	422.00	264
102.00	174	181.00	1052	265.00	1260	423.00	3788
103.00	973	182.00	160	266.00	314	424.00	679
104.00	1358	183.00	111	268.00	74	425.00	50
105.00	1366	184.00	213	270.00	38	441.00	10762

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8043.d

Date : 04-AUG-2000 15:46

Client ID:

Instrument: BNAMS5.i

Sample Info: QDFT217A

Operator: BNA2

Column phase: DB-5

Column diameter: 0.25

Data File: q8043.d

Spectrum: Average Spectrum: 7.246 to 7.268 min.

Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	13303	185.00	1780	271.00	77	442.00	69376
108.00	2101	186.00	11007	273.00	1341	443.00	13212
109.00	37	187.00	3263	274.00	3730	444.00	1246
110.00	25768	188.00	323	275.00	19616	445.00	58
111.00	4009	189.00	980	276.00	2705		
112.00	509	190.00	198	277.00	1674		

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8043.d

Date : 04-AUG-2000 15:46

Client ID:

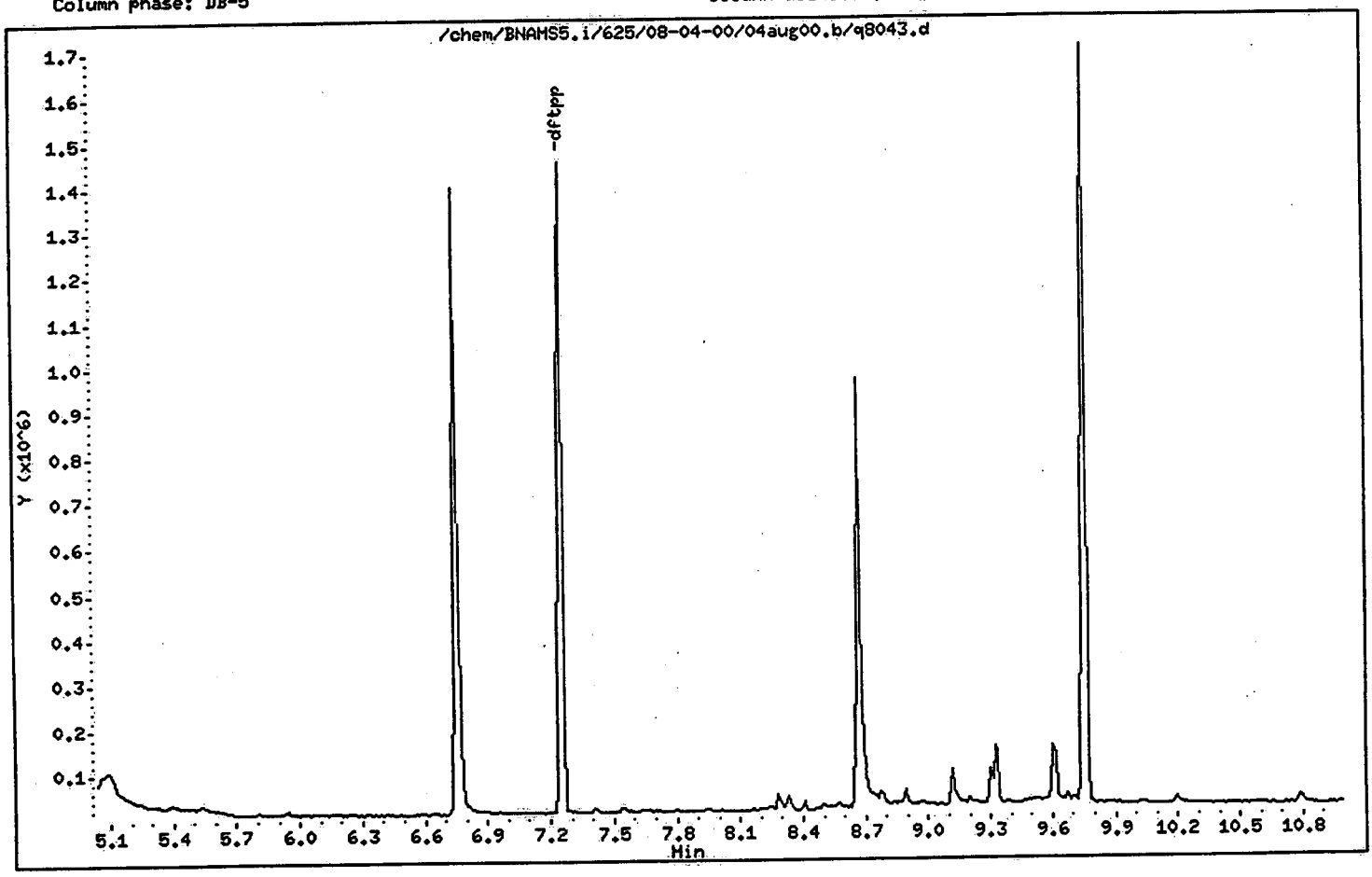
Instrument: BNAMS5.i

Sample Info: QDFT217A

Operator: BNA2

Column phase: DB-5

Column diameter: 0.25



LAB SAMPLE NO.

WB216

SEMIVOLATILE METHOD BLANK SUMMARY

Matrix: WATER

Level: LOW

Instrument ID: BNAMS5

Date Analyzed: 08/04/00

Time Analyzed: 2048

Lab File ID: Q8050

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	DATE ANALYZED
01	TRIP_BLANK	220381	Q8063	08/05/00
02	MW-11D	220384	Q8064	08/05/00
03	MW-25R	220387	Q8065	08/05/00
04	MW-25RD	220388	Q8066	08/05/00
05	MW-21	220389	Q8067	08/05/00
06	FIELD_BLANK	220391	Q8068	08/05/00
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08				
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30				

COMMENTS:

Client ID: **WB216**
Site:

Lab Sample No: **WB216**
Lab Job No: C436

Date Sampled: _____
Date Received: _____
Date Extracted: 08/03/00
Date Analyzed: 08/04/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8050.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Phenol	ND	1.0
2-Chlorophenol	ND	1.9
2-Methylphenol	ND	2.0
4-Methylphenol	ND	1.9
2-Nitrophenol	ND	1.7
2,4-Dimethylphenol	ND	1.3
2,4-Dichlorophenol	ND	1.3
4-Chloro-3-methylphenol	ND	1.9
2,4,6-Trichlorophenol	ND	0.6
2,4,5-Trichlorophenol	ND	0.6
2,4-Dinitrophenol	ND	1.1
4-Nitrophenol	ND	1.0
4,6-Dinitro-2-methylphenol	ND	1.3
Pentachlorophenol	ND	1.6
Benzoic Acid	ND	2.8
N-Nitrosodimethylamine	ND	0.5
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	0.6
1,4-Dichlorobenzene	ND	0.6
1,2-Dichlorobenzene	ND	0.6
bis(2-chloroisopropyl)ether	ND	1.1
N-Nitroso-di-n-propylamine	ND	0.8
Hexachloroethane	ND	0.7
Nitrobenzene	ND	0.8
Isophorone	ND	0.9
bis(2-Chloroethoxy)methane	ND	0.9
1,2,4-Trichlorobenzene	ND	0.6
Naphthalene	ND	0.8
4-Chloroaniline	ND	0.8
Hexachlorobutadiene	ND	0.6
2-Methylnaphthalene	ND	0.6
Hexachlorocyclopentadiene	ND	0.9
2-Chloronaphthalene	ND	0.8
2-Nitroaniline	ND	0.7

Client ID: **WB216**
Site:

Lab Sample No: **WB216**
Lab Job No: C436

Date Sampled: _____
Date Received: _____
Date Extracted: 08/03/00
Date Analyzed: 08/04/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8050.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Dimethylphthalate	ND	0.5
Acenaphthylene	ND	0.5
2,6-Dinitrotoluene	ND	0.7
3-Nitroaniline	ND	0.4
Acenaphthene	ND	0.6
Dibenzofuran	ND	0.4
2,4-Dinitrotoluene	ND	0.6
Diethylphthalate	ND	0.4
4-Chlorophenyl-phenylether	ND	0.5
Fluorene	ND	0.7
4-Nitroaniline	ND	0.6
N-Nitrosodiphenylamine	ND	0.6
4-Bromophenyl-phenylether	ND	1.2
Hexachlorobenzene	ND	0.6
Phenanthrene	ND	0.5
Anthracene	ND	0.3
Carbazole	ND	0.6
Di-n-butylphthalate	ND	0.5
Fluoranthene	ND	0.5
Pyrene	ND	0.6
Benzidine	ND	13
Butylbenzylphthalate	ND	0.7
3,3'-Dichlorobenzidine	ND	4.7
Benzo(a)anthracene	ND	0.4
Chrysene	ND	0.6
bis(2-Ethylhexyl)phthalate	ND	2.0
Di-n-octylphthalate	ND	0.3
Benzo(b)fluoranthene	ND	0.4
Benzo(k)fluoranthene	ND	0.6
Benzo(a)pyrene	ND	0.2
Indeno(1,2,3-cd)pyrene	ND	0.5
Dibenz(a,h)anthracene	ND	0.3
Benzo(g,h,i)perylene	ND	0.4
Pyridine	ND	0.6

Client ID: WB216
Site:

Lab Sample No: WB216
Lab Job No: C436

Date Sampled: _____
Date Received: _____
Date Extracted: 08/03/00
Date Analyzed: 08/04/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8050.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 625

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Aniline	ND	1.0
Benzyl Alcohol	ND	0.8
1,2-Diphenylhydrazine	ND	0.5
Diphenyl	ND	0.7
Diphenyl Ether	ND	10
Acetophenone	ND	1.0
N,N-Dimethylaniline	ND	0.7
1,4-Dioxane	ND	0.6
2,3,7,8-TCDD (screen)	ND	1.0
Benzaldehyde	ND	1.8
Caprolactum	ND	0.2
Atrazine	ND	1.0

Client ID: **WB216**
Site:

Lab Sample No: **WB216**
Lab Job No: C436

Date Sampled: _____
Date Received: _____
Date Extracted: 08/03/00
Date Analyzed: 08/04/00
GC Column: DB-5
Instrument ID: BNAMS5.i
Lab File ID: q8050.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 625

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown Organic Acid	18.18	10	
2.			
3.			
4.			
5.			
6.			
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30.			

TOTAL ESTIMATED CONCENTRATION 10.0

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8050.d
Report Date: 07-Aug-2000 13:48

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8050.d
Lab Smp Id: WB216 Client Smp ID: BNA
Inj Date : 04-AUG-2000 20:48
Operator : BNAMS 1 Inst ID: BNAMS5.i
Smp Info : WB216;1000;2;1
Misc Info : ;BNA;;;
Comment :
Method : /chem/BNAMS5.i/625/08-04-00/04aug00.b/BNA625b.m
Meth Date : 07-Aug-2000 11:59 zhang Quant Type: ISTD
Cal Date : 04-AUG-2000 19:14 Cal File: q8048.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)

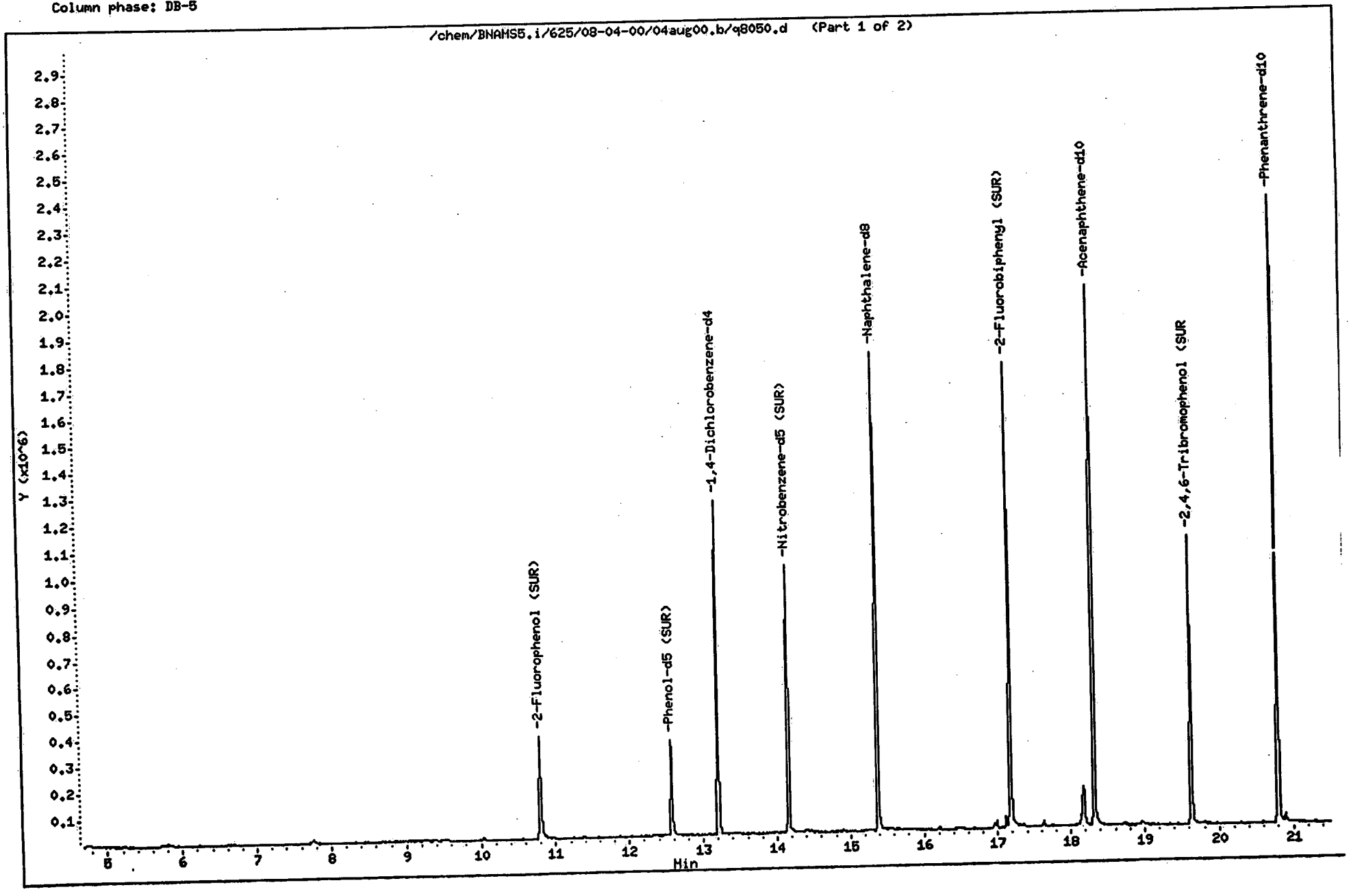
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
$ 16 2-Fluorophenol (SUR)	112	10.798	10.799	(0.817)	188216	24.1728	48
$ 17 Phenol-d5 (SUR)	99	12.572	12.581	(0.952)	171990	16.4321	33
* 79 1,4-Dichlorobenzene-d4	152	13.209	13.210	(1.000)	267018	40.0000	
$ 76 Nitrobenzene-d5 (SUR)	82	14.160	14.162	(0.920)	368966	37.7425	75
* 80 Naphthalene-d8	136	15.384	15.385	(1.000)	1153170	40.0000	
$ 77 2-Fluorobiphenyl (SUR)	172	17.180	17.174	(0.938)	786709	34.3708	69
* 82 Acenaphthene-d10	164	18.324	18.326	(1.000)	699134	40.0000	
$ 18 2,4,6-Tribromophenol (SUR)	330	19.634	19.635	(1.071)	170028	42.3551	85
* 83 Phenanthrene-d10	188	20.800	20.809	(1.000)	1343971	40.0000	
$ 78 Terphenyl-d14 (SUR)	244	23.426	23.420	(0.927)	1395109	47.8276	96
* 81 Chrysene-d12	240	25.279	25.287	(1.000)	1329303	40.0000	
* 84 Perylene-d12	264	29.092	29.101	(1.000)	1176534	40.0000	

Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8050.d
Date : 04-AUG-2000 20:48
Client ID: BNA
Sample Info: WB216;1000;2;1
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

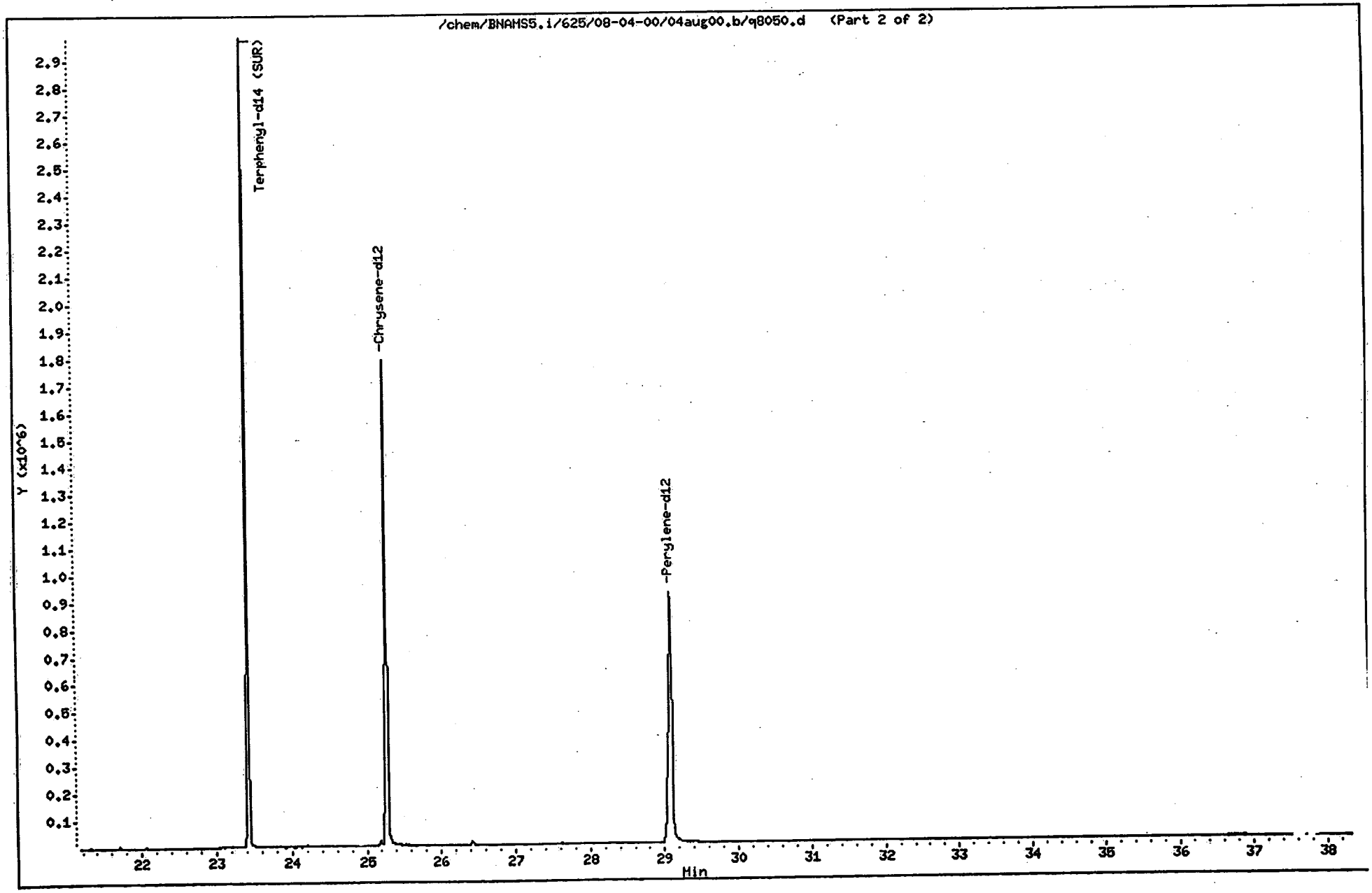
Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8050.d
Date : 04-AUG-2000 20:48
Client ID: BNA
Sample Info: WB216;1000;2;1
Purge Volume: 1000.0
Column phase: DB-5

Instrument: BNAMS5.i

Operator: BNAMS 1
Column diameter: 0.53



Data File: /chem/BNAMS5.i/625/08-04-00/04aug00.b/q8050.d

Date : 04-AUG-2000 20:48

Client ID: BNA

Instrument: BNAMS5.i

Sample Info: WB216;1000;2;1

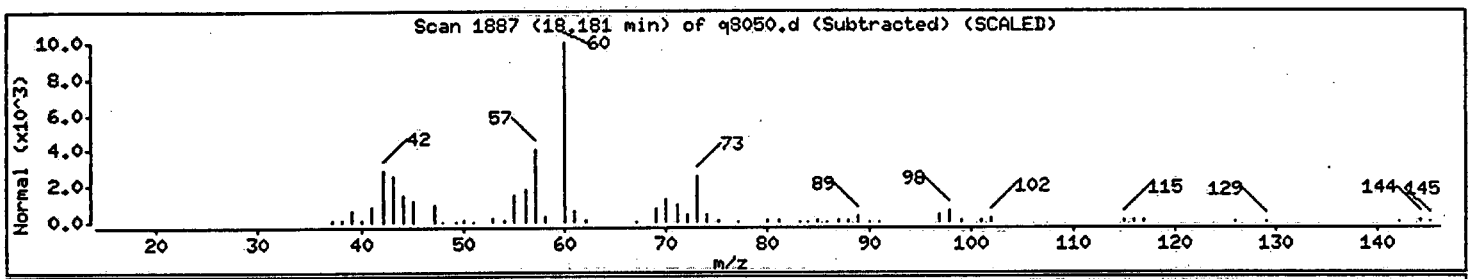
Purge Volume: 1000.0

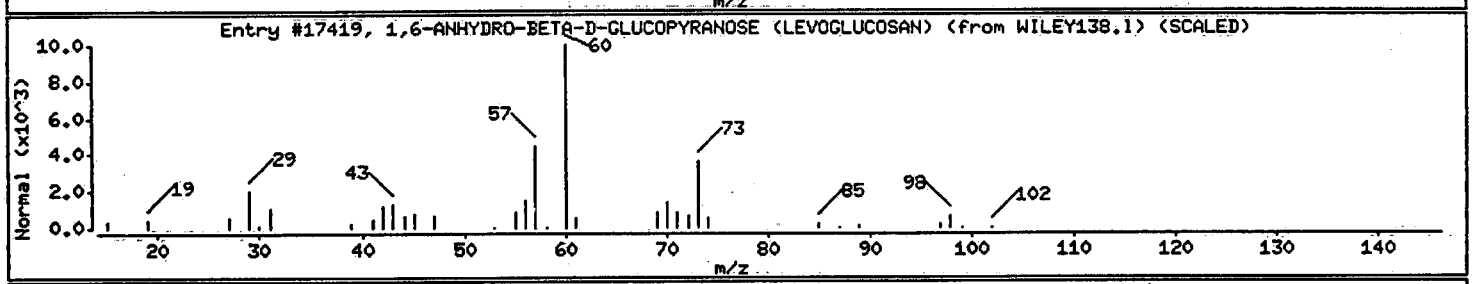
Operator: BNAMS 1

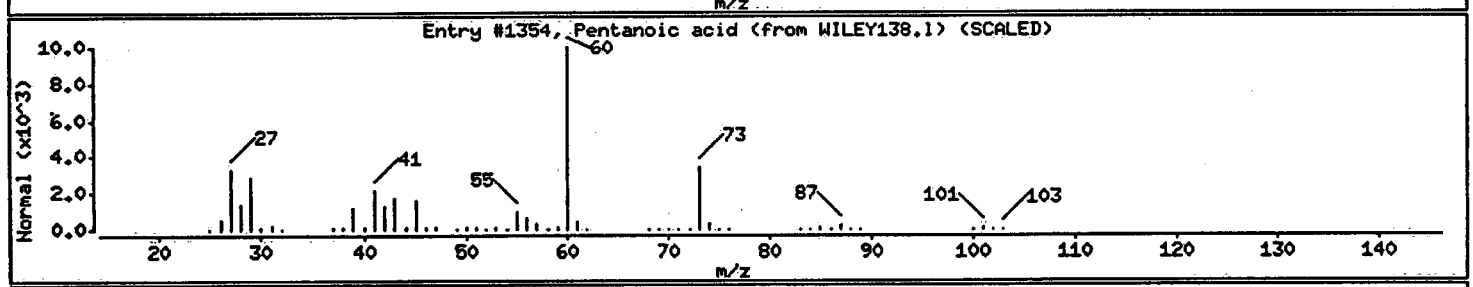
Column phase: DB-5

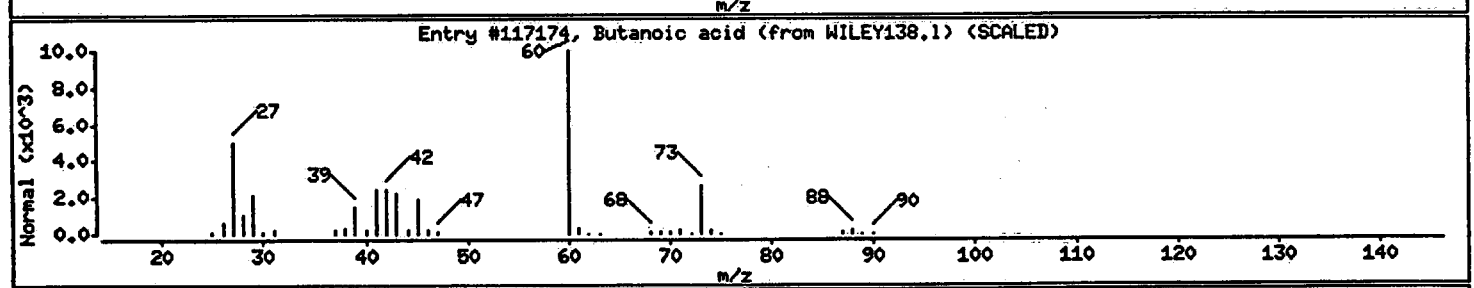
Column diameter: 0.53

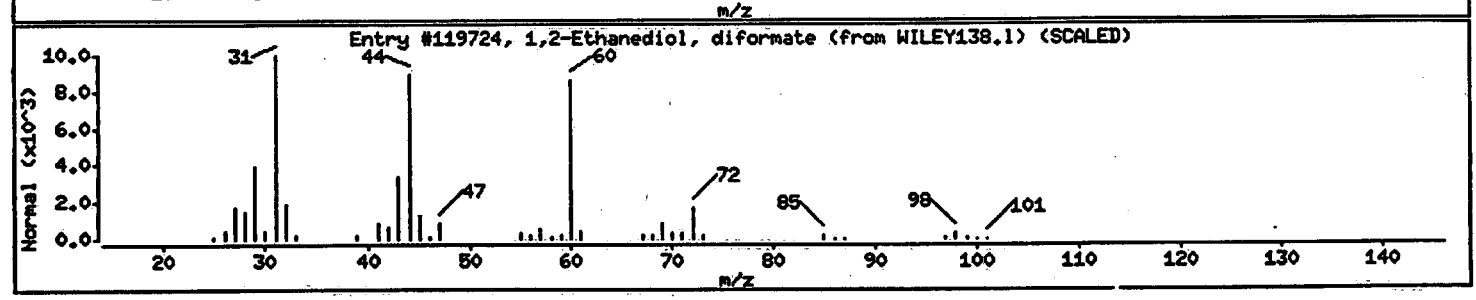
Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Organic Acid						
1,6-ANHYDRO-BETA-D-GLUCOPYRANOSE (LEVOGL	498-07-7	WILEY138.1	17419	72	C6H1005	162
Pentanoic acid	109-52-4	WILEY138.1	1354	40	C5H1002	102
Butanoic acid	107-92-6	WILEY138.1	117174	38	C4H802	88
1,2-Ethanediol, diformate	629-15-2	WILEY138.1	119724	28	C4H604	118











SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

LAB FILE ID: RRF10: Q8046 RRF20: Q8048 RRF50: Q8044
RRF80: Q8047 RRF120: Q8045

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Phenol	1.663	1.766	1.736	1.714	1.741
2-Chlorophenol	1.440	1.534	1.546	1.555	1.615
2-Methylphenol	1.233	1.306	1.280	1.264	1.299
4-Methylphenol	1.291	1.381	1.341	1.310	1.210
2-Nitrophenol	0.215	0.230	0.229	0.231	0.239
2,4-Dimethylphenol	0.305	0.320	0.318	0.321	0.340
2,4-Dichlorophenol	0.272	0.291	0.293	0.310	0.327
4-Chloro-3-methylphenol	0.299	0.314	0.306	0.312	0.305
2,4,6-Trichlorophenol	0.367	0.392	0.402	0.417	0.448
2,4,5-Trichlorophenol	0.402	0.416	0.439	0.450	0.485
2,4-Dinitrophenol	0.141	0.187	0.214	0.219	0.229
4-Nitrophenol	0.247	0.255	0.253	0.244	0.256
4,6-Dinitro-2-methylphenol	0.134	0.152	0.159	0.163	0.175
Pentachlorophenol	0.113	0.134	0.154	0.159	0.173
Benzoic Acid	0.162	0.169	0.191	0.160	0.156
N-Nitrosodimethylamine	0.617	0.645	0.687	0.698	0.712
bis(2-Chloroethyl)ether	1.405	1.422	1.378	1.332	1.335
1,3-Dichlorobenzene	1.496	1.512	1.506	1.495	1.565
1,4-Dichlorobenzene	1.546	1.564	1.543	1.556	1.624
1,2-Dichlorobenzene	1.474	1.500	1.468	1.465	1.558
bis(2-chloroisopropyl)ether	2.737	2.763	2.616	2.363	2.243
N-Nitroso-di-n-propylamine	0.880	0.873	0.824	0.796	0.797
Hexachloroethane	0.640	0.661	0.650	0.635	0.660
Nitrobenzene	0.423	0.432	0.408	0.408	0.419
Isophorone	0.622	0.628	0.605	0.601	0.624
bis(2-Chloroethoxy)methane	0.411	0.409	0.390	0.379	0.393
1,2,4-Trichlorobenzene	0.307	0.314	0.310	0.327	0.352
Naphthalene	1.074	1.066	1.036	1.088	1.109
4-Chloroaniline	0.266	0.399	0.396	0.398	0.404
Hexachlorobutadiene	0.169	0.173	0.177	0.187	0.192
2-Methylnaphthalene	0.672	0.697	0.676	0.711	0.719
Hexachlorocyclopentadiene	0.108	0.130	0.213	0.210	0.261
2-Chloronaphthalene	1.069	1.068	1.069	1.122	1.141
2-Nitroaniline	0.374	0.378	0.351	0.336	0.346
Dimethylphthalate	1.506	1.528	1.466	1.537	1.619
Acenaphthylene	1.805	1.798	1.759	1.841	1.864
2,6-Dinitrotoluene	0.354	0.375	0.356	0.364	0.384
3-Nitroaniline	0.284	0.339	0.343	0.359	0.350
Acenaphthene	1.114	1.137	1.118	1.168	1.173

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

LAB FILE ID: RRF10: Q8046 RRF20: Q8048 RRF50: Q8044
RRF80: Q8047 RRF120: Q8045

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Dibenzofuran	1.585	1.610	1.556	1.635	1.693
2,4-Dinitrotoluene	0.467	0.495	0.483	0.485	0.520
Diethylphthalate	1.598	1.664	1.571	1.651	1.680
4-Chlorophenyl-phenylether	0.603	0.653	0.650	0.684	0.658
Fluorene	1.303	1.359	1.338	1.398	1.374
4-Nitroaniline	0.356	0.401	0.367	0.343	0.329
N-Nitrosodiphenylamine	0.474	0.478	0.488	0.519	0.534
4-Bromophenyl-phenylether	0.183	0.190	0.200	0.212	0.223
Hexachlorobenzene	0.222	0.230	0.238	0.250	0.263
Phenanthrene	0.929	0.934	0.973	0.994	1.020
Anthracene	0.936	0.959	0.980	1.008	1.033
Carbazole	0.902	0.934	0.913	0.888	0.920
Di-n-butylphthalate	1.454	1.493	1.499	1.546	1.538
Fluoranthene	1.019	1.052	1.076	1.118	1.119
Pyrene	1.034	1.042	1.066	1.045	1.082
Benzidine	0.064	0.226	0.104	0.146	0.044
Butylbenzylphthalate	0.666	0.684	0.671	0.675	0.679
3,3'-Dichlorobenzidine	0.366	0.425	0.408	0.358	0.278
Benzo(a)anthracene	0.994	1.010	0.995	1.039	1.077
Chrysene	0.917	0.952	0.967	0.982	0.991
bis(2-Ethylhexyl)phthalate	0.983	0.994	0.960	0.816	0.804
Di-n-octylphthalate	1.884	1.990	2.024	2.149	2.245
Benzo(b)fluoranthene	1.091	1.133	1.169	1.265	1.448
Benzo(k)fluoranthene	1.138	1.251	1.260	1.331	1.343
Benzo(a)pyrene	1.027	1.094	1.113	1.156	1.254
Indeno(1,2,3-cd)pyrene	0.861	0.946	0.998	1.077	1.226
Dibenz(a,h)anthracene	0.880	0.976	0.996	1.047	1.155
Benzo(g,h,i)perylene	0.968	1.026	1.051	1.060	1.112
Pyridine	0.846	1.009	1.052	1.087	1.173
Aniline	1.535	1.773	1.720	1.753	1.724
Benzyl Alcohol	0.877	0.943	0.924	0.925	0.958
1,2-Diphenylhydrazine	0.676	0.681	0.648	0.643	0.653
Diphenyl	1.358	1.414	1.394	1.435	1.407
Diphenyl Ether	0.743	0.748	0.734	0.776	0.785
Acetophenone	1.972	2.016	1.945	1.911	1.862
N,N-Dimethylaniline	2.102	2.143	2.044	2.060	2.060
1,4-Dioxane	0.394	0.399	0.394	0.382	0.426
2,3,7,8-TCDD (screen)			0.146		
Benzaldehyde	0.941	0.810	0.441	0.504	0.248

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

LAB FILE ID: RRF10: Q8046 RRF20: Q8048 RRF50: Q8044
RRF80: Q8047 RRF120: Q8045

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Caprolactum	0.130	0.143	0.131	0.132	0.123
Atrazine	0.191	0.192	0.187	0.186	0.195
2-Fluorophenol (SUR)	1.095	1.142	1.174	1.182	1.240
Phenol-d5 (SUR)	1.488	1.588	1.589	1.580	1.594
2,4,6-Tribromophenol (SUR)	0.201	0.220	0.224	0.246	0.258
Nitrobenzene-d5 (SUR)	0.331	0.346	0.339	0.336	0.344
2-Fluorobiphenyl (SUR)	1.232	1.279	1.325	1.354	1.358
Terphenyl-d14 (SUR)	0.839	0.870	0.919	0.884	0.877

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Phenol	AVRG	1.72403924	2.3*
2-Chlorophenol	AVRG	1.53830643	4.1*
2-Methylphenol	AVRG	1.27659087	2.3*
4-Methylphenol	AVRG	1.30663519	4.9*
2-Nitrophenol	AVRG	0.22890611	3.8*
2,4-Dimethylphenol	AVRG	0.32070542	3.8*
2,4-Dichlorophenol	AVRG	0.29875294	6.9*
4-Chloro-3-methylphenol	AVRG	0.30715052	2.0*
2,4,6-Trichlorophenol	AVRG	0.40514182	7.4*
2,4,5-Trichlorophenol	AVRG	0.43844759	7.3*
2,4-Dinitrophenol	AVRG	0.19803568	17.8**
4-Nitrophenol	AVRG	0.25080530	2.1**
4,6-Dinitro-2-methylphenol	AVRG	0.15662818	9.7*
Pentachlorophenol	AVRG	0.14654905	15.9*
Benzoic Acid	AVRG	0.16777710	8.3*
N-Nitrosodimethylamine	AVRG	0.67195030	5.9**
bis(2-Chloroethyl)ether	AVRG	1.37457784	3.0*
1,3-Dichlorobenzene	AVRG	1.51458868	1.9*
1,4-Dichlorobenzene	AVRG	1.56659510	2.1*
1,2-Dichlorobenzene	AVRG	1.49277666	2.6*
bis(2-chloroisopropyl)ether	AVRG	2.54446795	9.1*
N-Nitroso-di-n-propylamine	AVRG	0.83408592	4.8**
Hexachloroethane	AVRG	0.64936612	1.8*
Nitrobenzene	AVRG	0.41808109	2.5*
Isophorone	AVRG	0.61612103	2.0*
bis(2-Chloroethoxy)methane	AVRG	0.39643142	3.4*
1,2,4-Trichlorobenzene	AVRG	0.32240599	5.7*
Naphthalene	AVRG	1.07446137	2.5*
4-Chloroaniline	AVRG	0.37247027	16.0*
Hexachlorobutadiene	AVRG	0.17954027	5.4*
2-Methylnaphthalene	AVRG	0.69524294	3.0*
Hexachlorocyclopentadiene	AVRG	0.18430177	34.4**
2-Chloronaphthalene	AVRG	1.09393395	3.2*
2-Nitroaniline	AVRG	0.35722781	5.2*
Dimethylphthalate	AVRG	1.53134603	3.7*
Acenaphthylene	AVRG	1.81328388	2.2*
2,6-Dinitrotoluene	AVRG	0.36647609	3.5*
3-Nitroaniline	AVRG	0.33491555	8.8*
Acenaphthene	AVRG	1.14200269	2.4*

* Compound with required maximum % RSD value.
** Compound with required minimum RRF value.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Dibenzofuran	AVRG	1.61605090	3.2*
2,4-Dinitrotoluene	AVRG	0.49008475	4.0*
Diethylphthalate	AVRG	1.63278893	2.8*
4-Chlorophenyl-phenylether	AVRG	0.64965667	4.5*
Fluorene	AVRG	1.35418751	2.6*
4-Nitroaniline	AVRG	0.35913787	7.6*
N-Nitrosodiphenylamine	AVRG	0.49866010	5.3*
4-Bromophenyl-phenylether	AVRG	0.20154975	8.1*
Hexachlorobenzene	AVRG	0.24058458	6.8*
Phenanthrene	AVRG	0.97008872	4.0*
Anthracene	AVRG	0.98324971	3.9*
Carbazole	AVRG	0.91150584	1.9*
Di-n-butylphthalate	AVRG	1.50611332	2.5*
Fluoranthene	AVRG	1.07699196	4.0*
Pyrene	AVRG	1.05380733	1.9*
Benzidine	AVRG	0.11704150	62.0*
Butylbenzylphthalate	AVRG	0.67488410	1.0*
3,3'-Dichlorobenzidine	AVRG	0.36717267	15.6*
Benzo(a)anthracene	AVRG	1.02272773	3.4*
Chrysene	AVRG	0.96197779	3.0*
bis(2-Ethylhexyl)phthalate	AVRG	0.91162349	10.3*
Di-n-octylphthalate	AVRG	2.05842214	6.8*
Benzo(b)fluoranthene	AVRG	1.22098669	11.6*
Benzo(k)fluoranthene	AVRG	1.26474766	6.5*
Benzo(a)pyrene	AVRG	1.12904296	7.4*
Indeno(1,2,3-cd)pyrene	AVRG	1.02166148	13.6*
Dibenz(a,h)anthracene	AVRG	1.01100773	9.9*
Benzo(g,h,i)perylene	AVRG	1.04343293	5.0*
Pyridine	AVRG	1.03341847	11.7*
Aniline	AVRG	1.70099945	5.6*
Benzyl Alcohol	AVRG	0.92540526	3.3*
1,2-Diphenylhydrazine	AVRG	0.66029424	2.6*
Diphenyl	AVRG	1.40177556	2.0**
Diphenyl Ether	AVRG	0.75701626	2.9**
Acetophenone	AVRG	1.94119006	3.0**
N,N-Dimethylaniline	AVRG	2.08172631	2.0**
1,4-Dioxane	AVRG	0.39907448	4.1**
2,3,7,8-TCDD (screen)	AVRG	0.14578188	0.0*
Benzaldehyde	AVRG	0.58871486	47.9*

* Compound with required maximum % RSD value.
** Compound with required minimum RRF value.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 625

Instrument ID: BNAMS5

Calibration Date(s): 08/04/00 08/04/00

Calibration Time(s): 1606 1914

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Caprolactum	AVRG	0.13178639	5.6*
Atrazine	AVRG	0.19012480	1.8*
2-Fluorophenol (SUR)	AVRG	1.16640379	4.6*
Phenol-d5 (SUR)	AVRG	1.56793604	2.9*
2,4,6-Tribromophenol (SUR)	AVRG	0.22967519	9.8*
Nitrobenzene-d5 (SUR)	AVRG	0.33909590	1.8*
2-Fluorobiphenyl (SUR)	AVRG	1.30955658	4.1*
Terphenyl-d14 (SUR)	AVRG	0.87773918	3.3*

* Compound with required maximum % RSD value.
** Compound with required minimum RRF value.

SEMI-VOLATILE SURROGATE RECOVERY
METHOD 625

Matrix: WATER Level: LOW Lab Job No: C436

	LAB SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
01	WB216	48	33	85	75	69	96	0
02	220381				74	70	100	0
03	220384				78	70	101	0
04	220387				72	72	94	0
05	220388				76	73	94	0
06	220389				74	72	100	0
07	220391				73	65	93	0
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

		QC LIMITS
S1	= 2-Fluorophenol	(4- 80)
S2	= Phenol-d5	(10- 53)
S3	= 2,4,6-Tribromophenol	(47-136)
S4	= Nitrobenzene-d5	(59-117)
S5	= 2-Fluorobiphenyl	(44-120)
S6	= Terphenyl-d14	(56-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SEMI-VOLATILE SPIKE RECOVERY SUMMARY
METHOD 625

Matrix: WATER

Level: LOW

Matrix Spike - Lab Sample No.: 220350

MS Sample from Lab Job No: C425

QA Batch: 5653

Compound	MS % REC.	BS % REC.	LIMITS
bis(2-Chloroethyl)ether	90	100	12-158
1,3-Dichlorobenzene	74	80	0-172
1,4-Dichlorobenzene	75	82	20-124
1,2-Dichlorobenzene	79	88	32-129
bis(2-chloroisopropyl)ether	96	110	36-166
N-Nitroso-di-n-propylamine	99	110	0-230
Hexachloroethane	62	66	40-113
Nitrobenzene	89	95	35-180
Isophorone	45	48	21-196
bis(2-Chloroethoxy)methane	95	100	33-184
1,2,4-Trichlorobenzene	81	85	44-142
Naphthalene	90	97	21-133
Hexachlorobutadiene	57	62	24-116
2-Chloronaphthalene	92	94	60-118
Dimethylphthalate	12	4	0-112
Acenaphthylene	91	94	33-145
2,6-Dinitrotoluene	99	100	50-158
Acenaphthene	99	100	47-145
2,4-Dinitrotoluene	100	100	39-139
Diethylphthalate	51	32	0-114
4-Chlorophenyl-phenylether	100	100	25-158
Fluorene	100	100	59-121
4-Bromophenyl-phenylether	98	100	53-127
Hexachlorobenzene	98	96	0-152
Phenanthrene	100	100	54-120
Anthracene	99	100	27-133
Di-n-butylphthalate	81	76	1-118
Fluoranthene	100	100	26-137
Pyrene	97	99	52-115
Butylbenzylphthalate	55	58	0-152

* Values outside of QC limits

SEMI-VOLATILE SPIKE RECOVERY SUMMARY
METHOD 625

Matrix: WATER

Level: LOW

Matrix Spike - Lab Sample No.: 220350

MS Sample from Lab Job No: C425

QA Batch: 5653

Compound	MS % REC.	BS % REC.	LIMITS
3,3'-Dichlorobenzidine	110	120	0-262
Benzo(a)anthracene	98	95	33-143
Chrysene	100	98	17-168
bis(2-Ethylhexyl)phthalate	100	100	8-158
Di-n-octylphthalate	95	91	4-146
Benzo(b)fluoranthene	96	92	24-159
Benzo(k)fluoranthene	99	95	11-162
Benzo(a)pyrene	93	90	17-163
Indeno(1,2,3-cd)pyrene	95	94	0-171
Dibenz(a,h)anthracene	94	92	0-227
Benzo(g,h,i)perylene	94	92	0-219

* Values outside of QC limits

Spike Recovery: 0 out of 82 outside limits

COMMENTS:

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): Q8044 Date Analyzed: 08/04/00

Instrument ID: BNAMS5 Time Analyzed: 1606

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(CRY) AREA #	RT #
	12 HOUR STD	293156	13.22	1274327	15.39	1394412	25.30
	UPPER LIMIT	586312	13.72	2548654	15.89	2788824	25.80
	LOWER LIMIT	146578	12.72	637164	14.89	697206	24.80
	LABORATORY SAMPLE NO.						
01	WB216	267018	13.21	1153170	15.38	1329303	25.28
02	220381	310157	13.20	1305739	15.39	1326963	25.27
03	220384	286623	13.21	1215353	15.38	1319306	25.27
04	220387	299500	13.21	1271157	15.38	1321417	25.27
05	220388	298991	13.21	1277293	15.38	1341251	25.27
06	220389	285191	13.21	1237763	15.38	1300240	25.27
07	220391	285754	13.20	1261386	15.38	1327114	25.27
08							
09							
10							
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17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (CRY) = Chrysene-d12

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 internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): Q8044 Date Analyzed: 08/04/00

Instrument ID: BNAMS5 Time Analyzed: 1606

		IS4(ANT) AREA #	RT #	IS5(PHN) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	728866	18.33	1366732	20.81	1176122	29.11
	UPPER LIMIT	1457732	18.83	2733464	21.31	2352244	29.61
	LOWER LIMIT	364433	17.83	683366	20.31	588061	28.61
	LABORATORY SAMPLE NO.						
01	WB216	699134	18.32	1343971	20.80	1176534	29.09
02	220381	741823	18.32	1457149	20.80	1034149	29.08
03	220384	731457	18.32	1424409	20.80	1017367	29.08
04	220387	735802	18.32	1433214	20.80	1011168	29.08
05	220388	751843	18.32	1447190	20.80	1040932	29.08
06	220389	724713	18.32	1428350	20.80	992270	29.08
07	220391	744962	18.32	1462806	20.80	1014128	29.09
08							
09							
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18							
19							
20							
21							
22							

IS4 (ANT) = Acenaphthene-d10
IS5 (PHN) = Phenanthrene-d10
IS6 (PRY) = Perylene-d12

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 internal standard area values with an asterisk.
* Values outside of QC limits.

Client ID: **MW-15s**
Site: L.E. Carpenter

Lab Sample No: **220382**
Lab Job No: C436

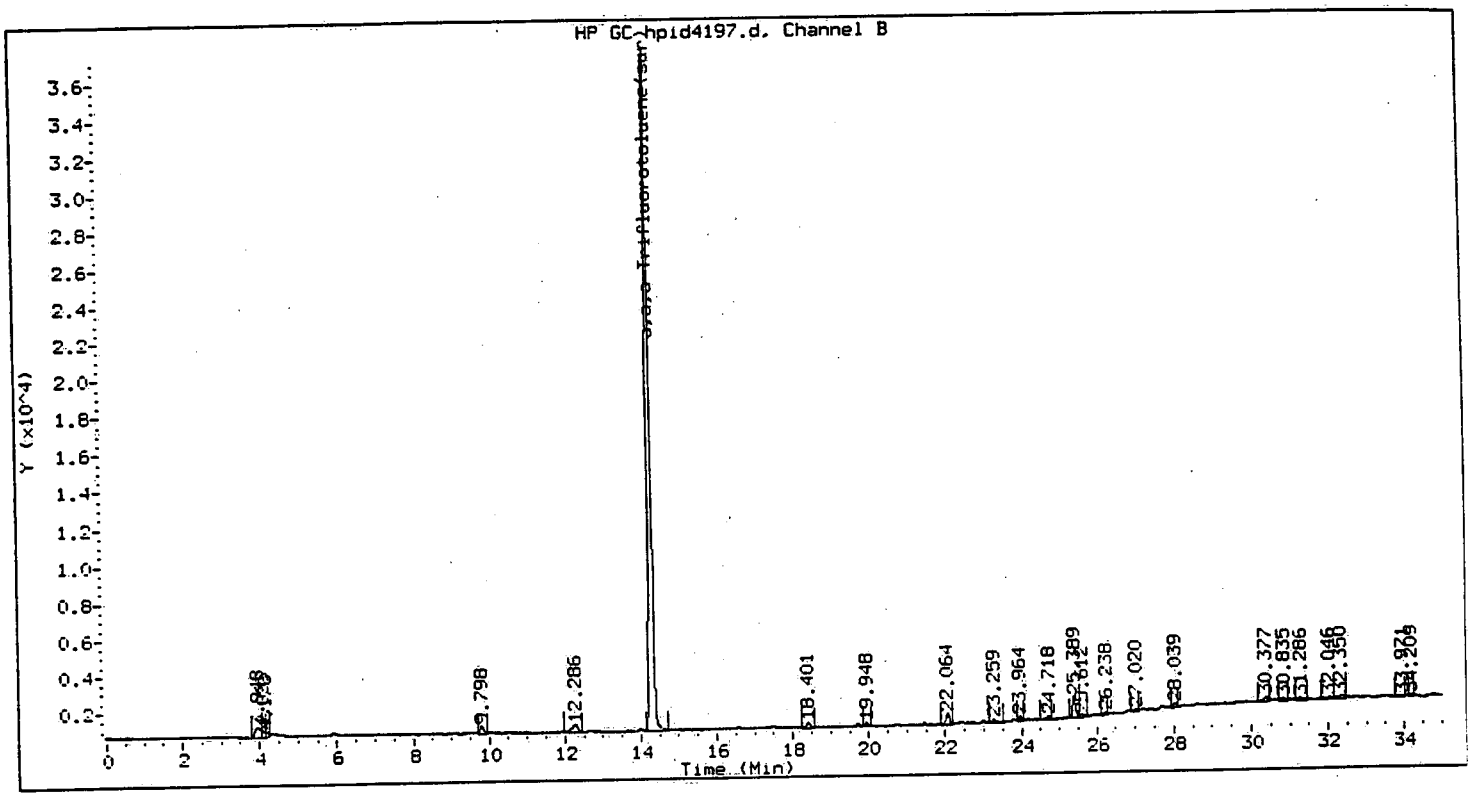
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4197.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4197.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220382 58
Lab ID : 220382
Inj Date : 02-AUG-2000 14:03
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.295	14.305	0.010	1093388	31.678	31.678

Client ID: MW-15I
Site: L.E. Carpenter

Lab Sample No: 220383
Lab Job No: C436

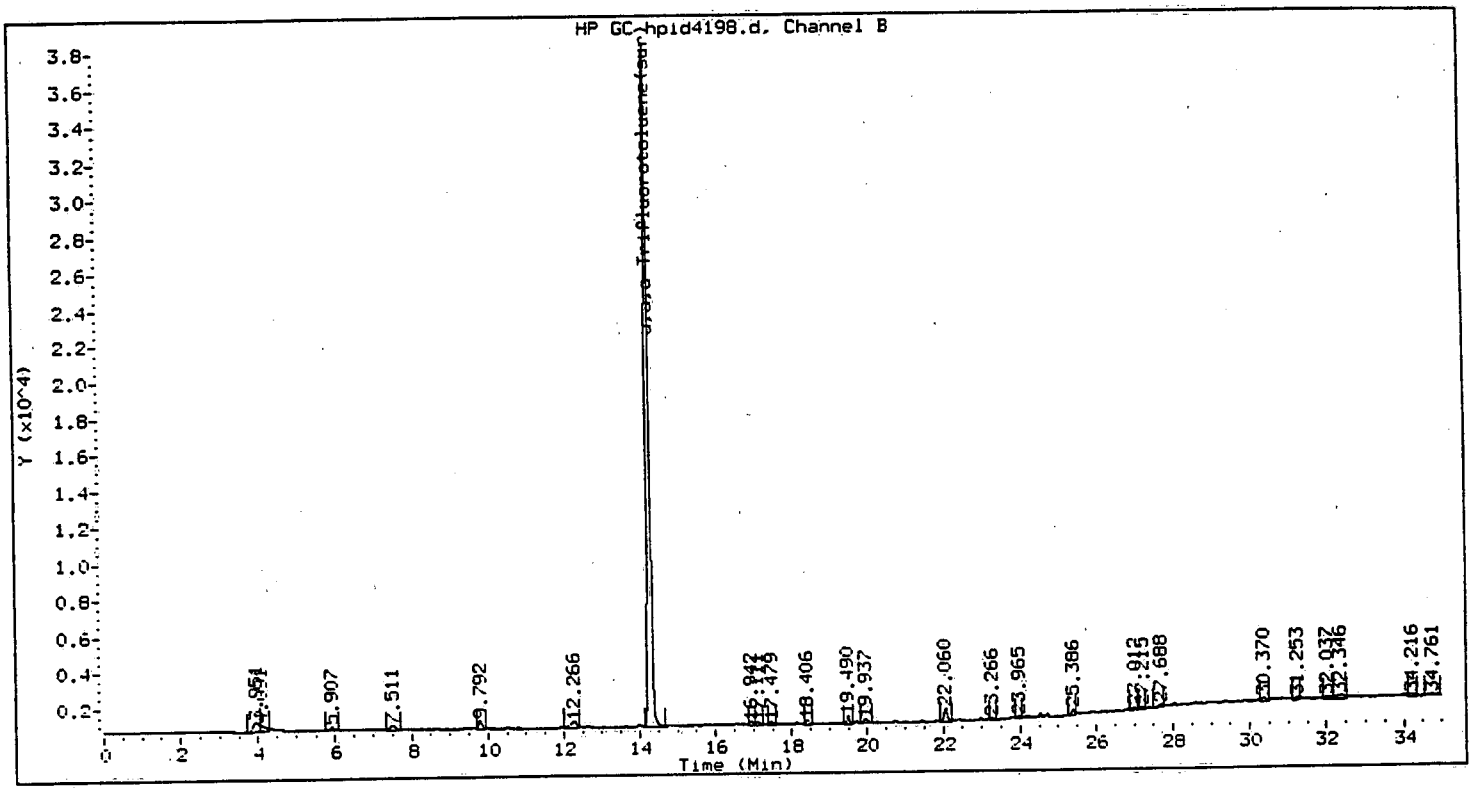
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4198.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4198.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220383 5x
Lab ID : 220383
Inj Date : 02-AUG-2000 14:44
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.289	14.305	0.016	1111868	32.213	32.213

Client ID: **MW-11d**
Site: L.E. Carpenter

Lab Sample No: **220384**
Lab Job No: C436

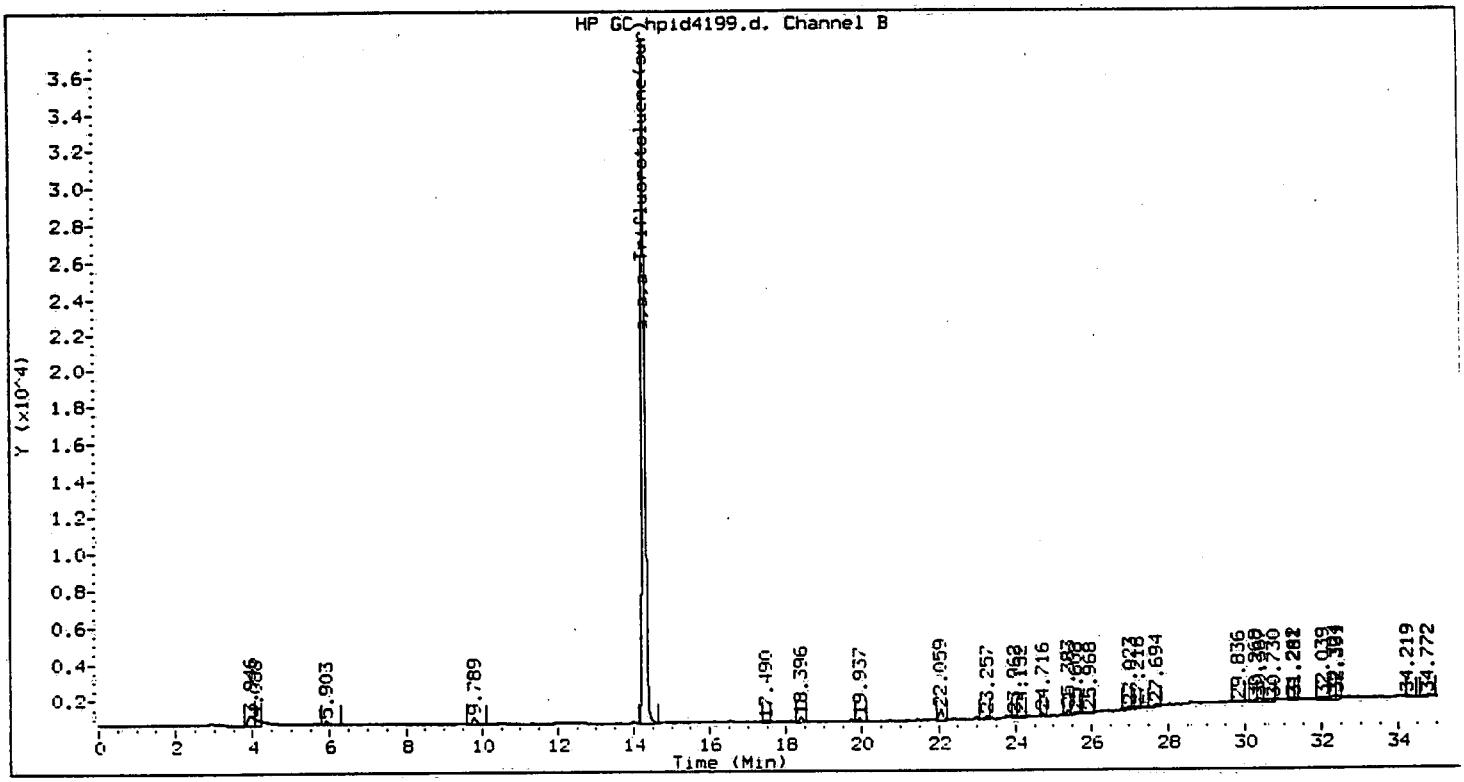
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4199.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4199.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220384 SR
Lab ID : 220384
Inj Date : 02-AUG-2000 15:26
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.288	14.305	0.017	1104518	32.000	32.000

Client ID: **MW-14I**
Site: L.E. Carpenter

Lab Sample No: **220385**
Lab Job No: C436

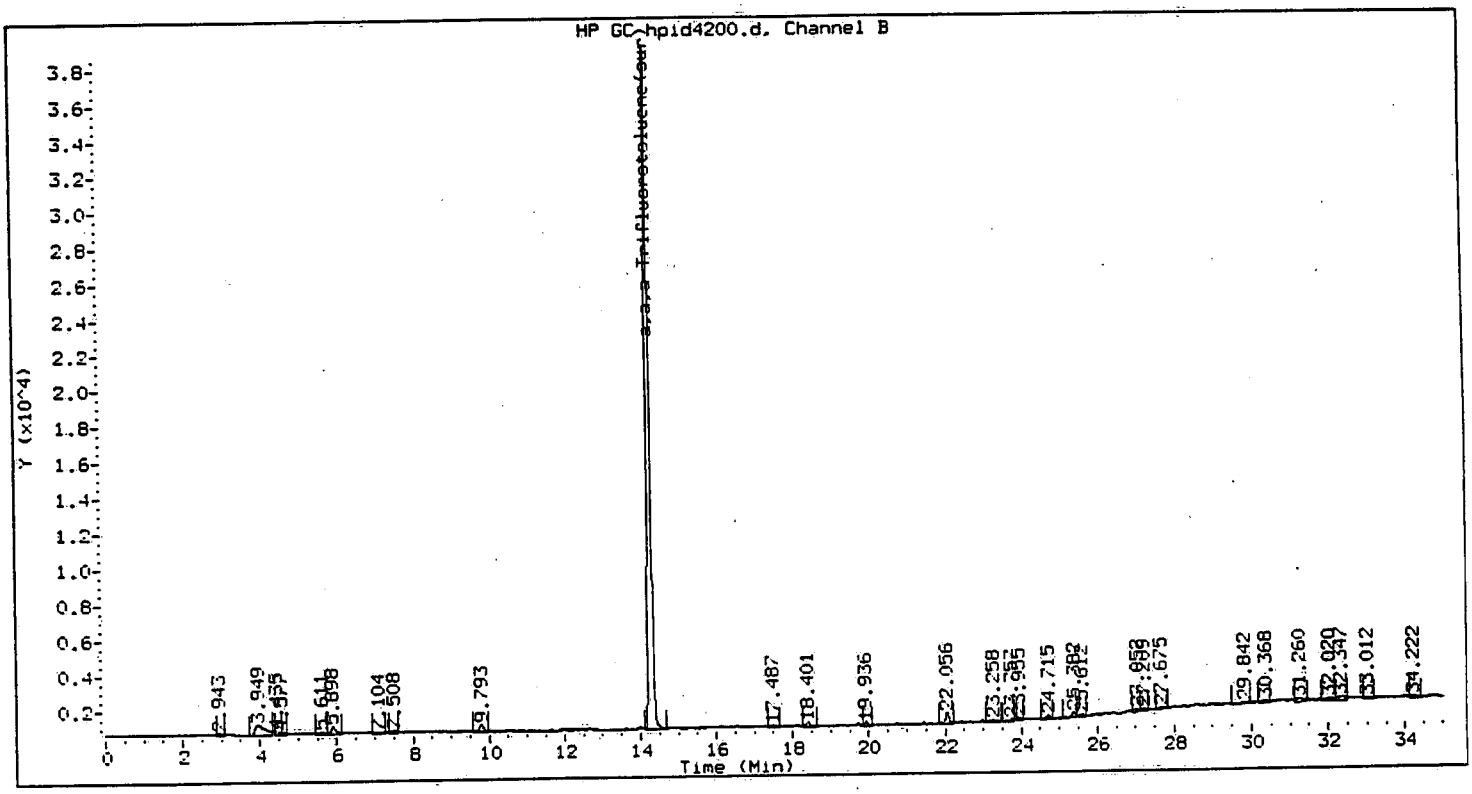
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4200.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4200.d
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220385
Lab ID : 220385
Inj Date : 02-AUG-2000 16:07
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.286	14.305	0.018	1130139	32.743	32.743

Client ID: **MW-22**
Site: L.E. Carpenter

Lab Sample No: **220386**
Lab Job No: C436

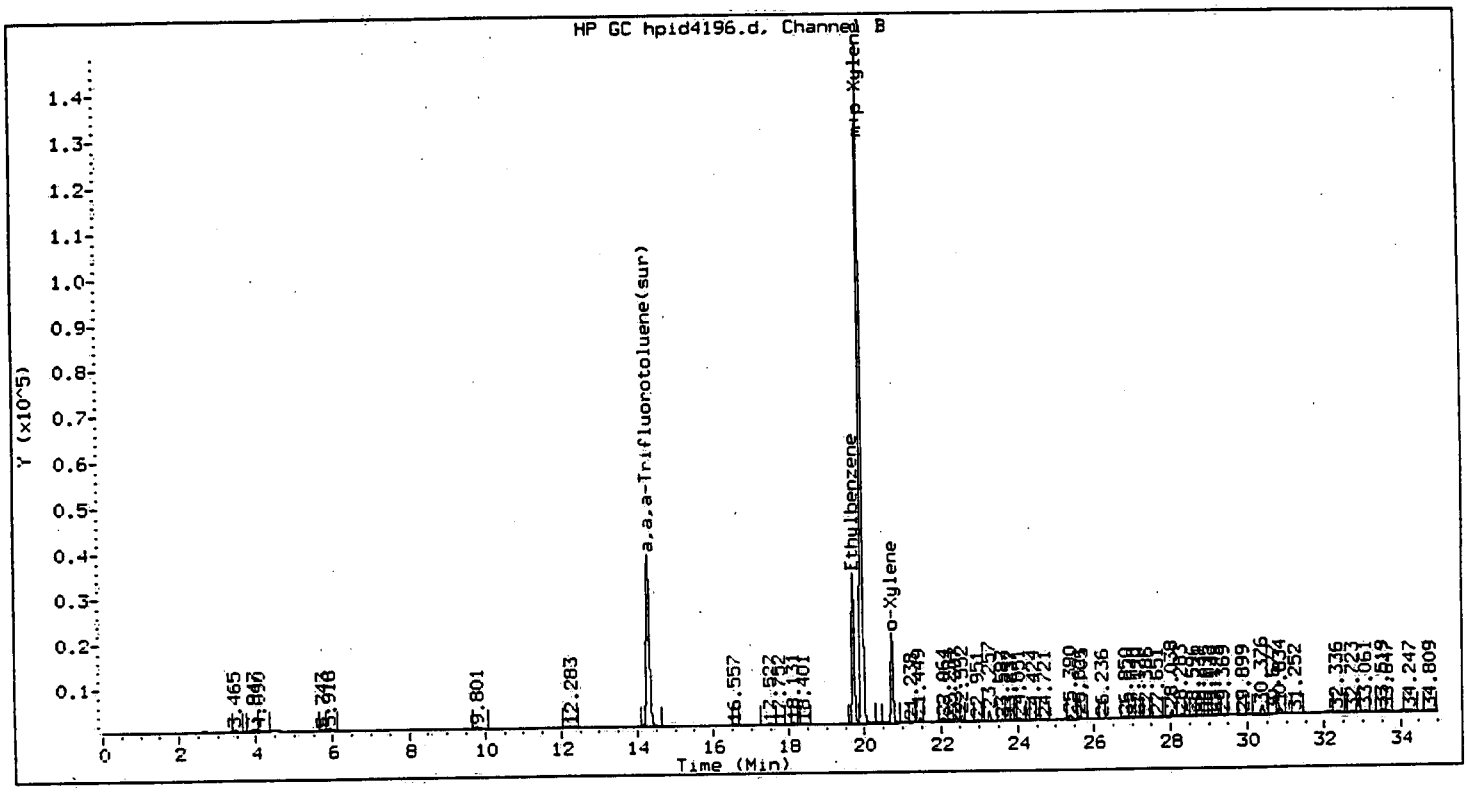
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4196.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	50
Toluene	ND	54
Ethylbenzene	1000	54
Xylene (Total)	4800	50

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4196.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220386;;200
Lab ID : 220386
Inj Date : 02-AUG-2000 13:22
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 200
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
m+p-Xylene	19.945	19.959	0.014	3012897	20.526	4105.206
o-Xylene	20.734	20.742	0.009	398337	2.920	583.940
Ethylbenzene	19.715	19.725	0.010	670662	5.241	1048.224
Xylene (Total)	25.019	25.019	0.000	3411234	23.799	4759.871
a,a,a-Trifluorotoluene(sur)	14.297	14.305	0.008	1127853	32.677	32.677

Client ID: **MW-25r**
Site: L.E. Carpenter

Lab Sample No: **220387**
Lab Job No: C436

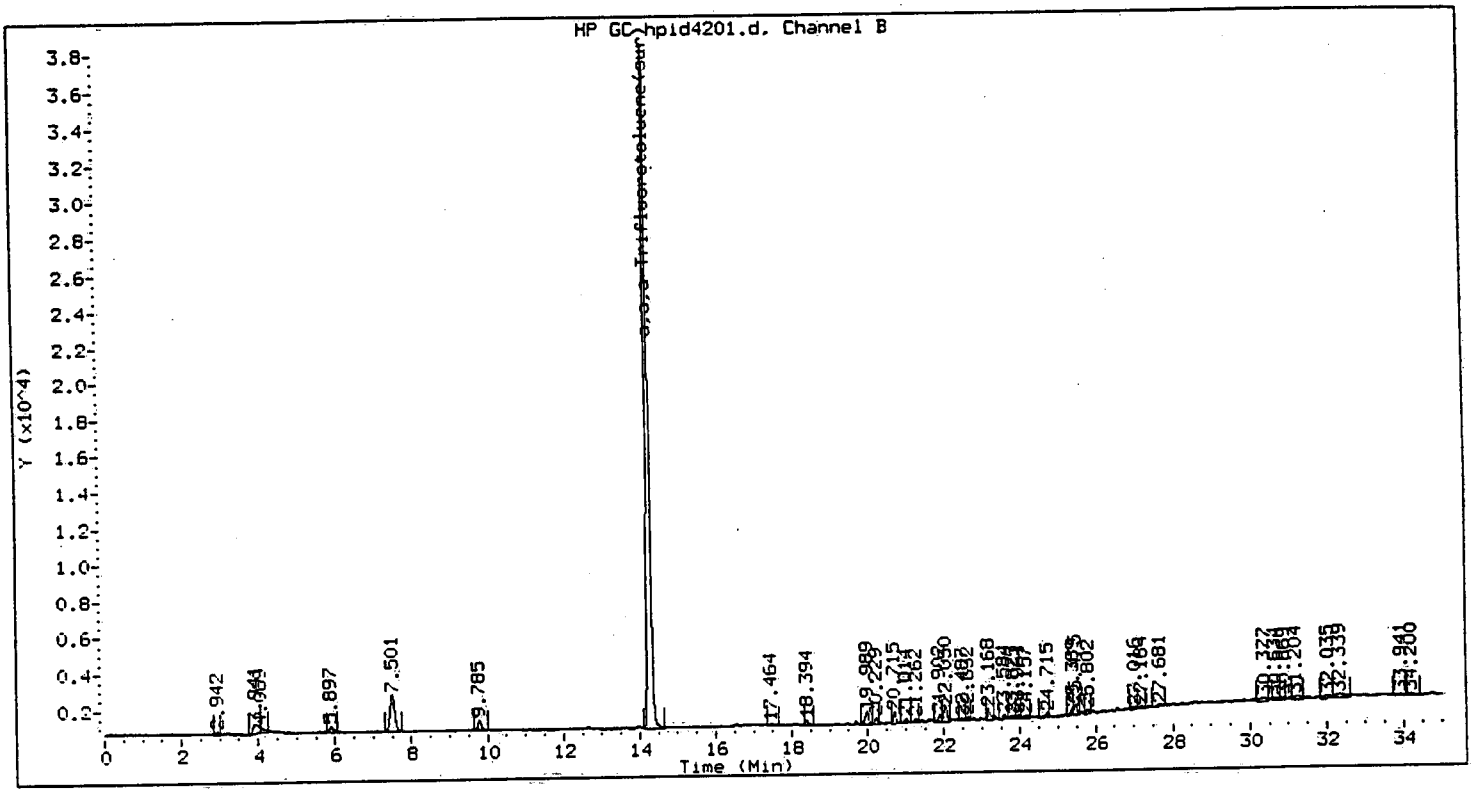
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4201.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4201.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220387 58
Lab ID : 220387
Inj Date : 02-AUG-2000 16:49
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.283	14.305	0.021	1110098	32.162	32.162

Client ID: MW-21
Site: L.E. Carpenter

Lab Sample No: 220389
Lab Job No: C436

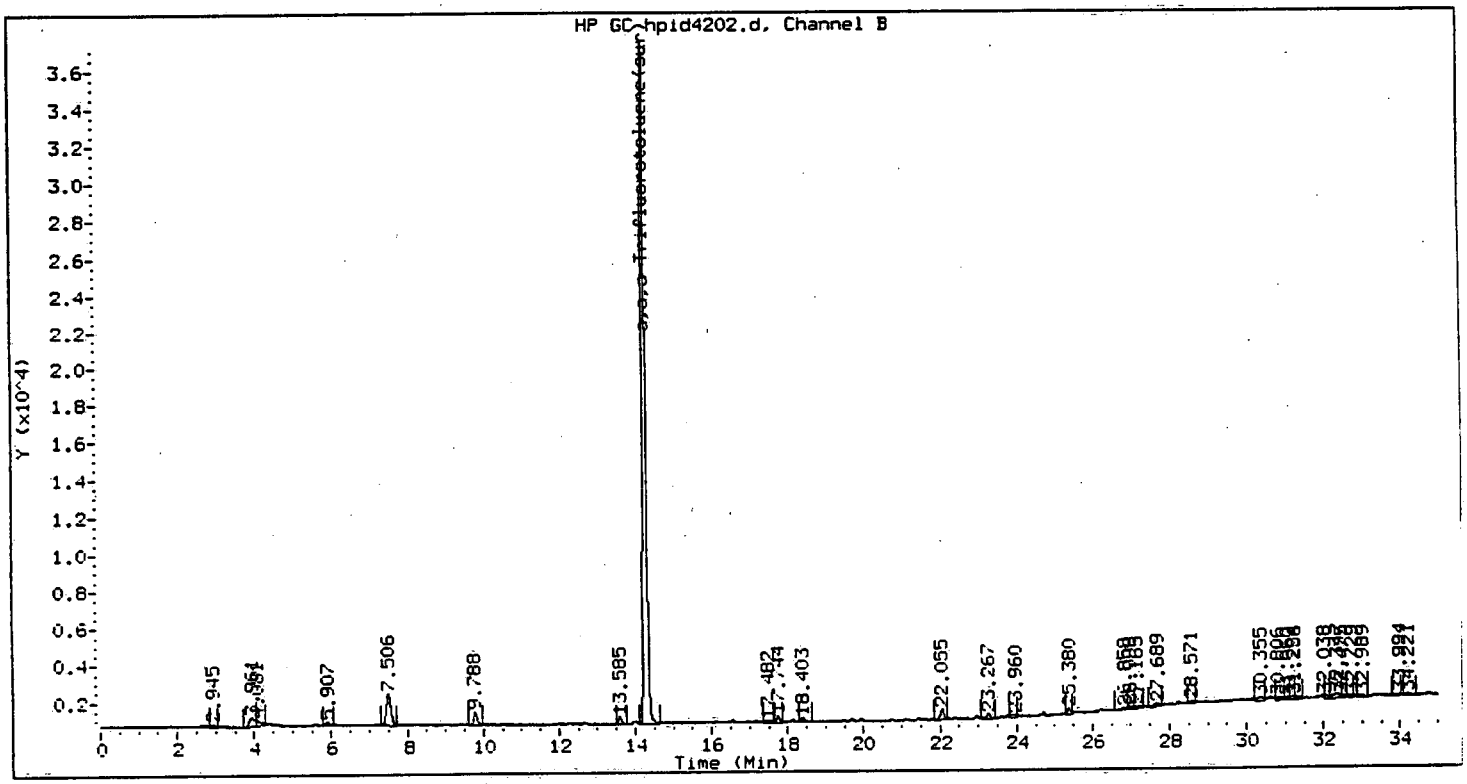
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4202.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4202.d Page 1
Report Date 08/03/2000 07:39



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220389 SP
Lab ID : 220389
Inj Date : 02-AUG-2000 17:32
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.282	14.305	0.023	1086904	31.490	31.490

Client ID: MW-4
Site: L.E. Carpenter

Lab Sample No: 220390
Lab Job No: C436

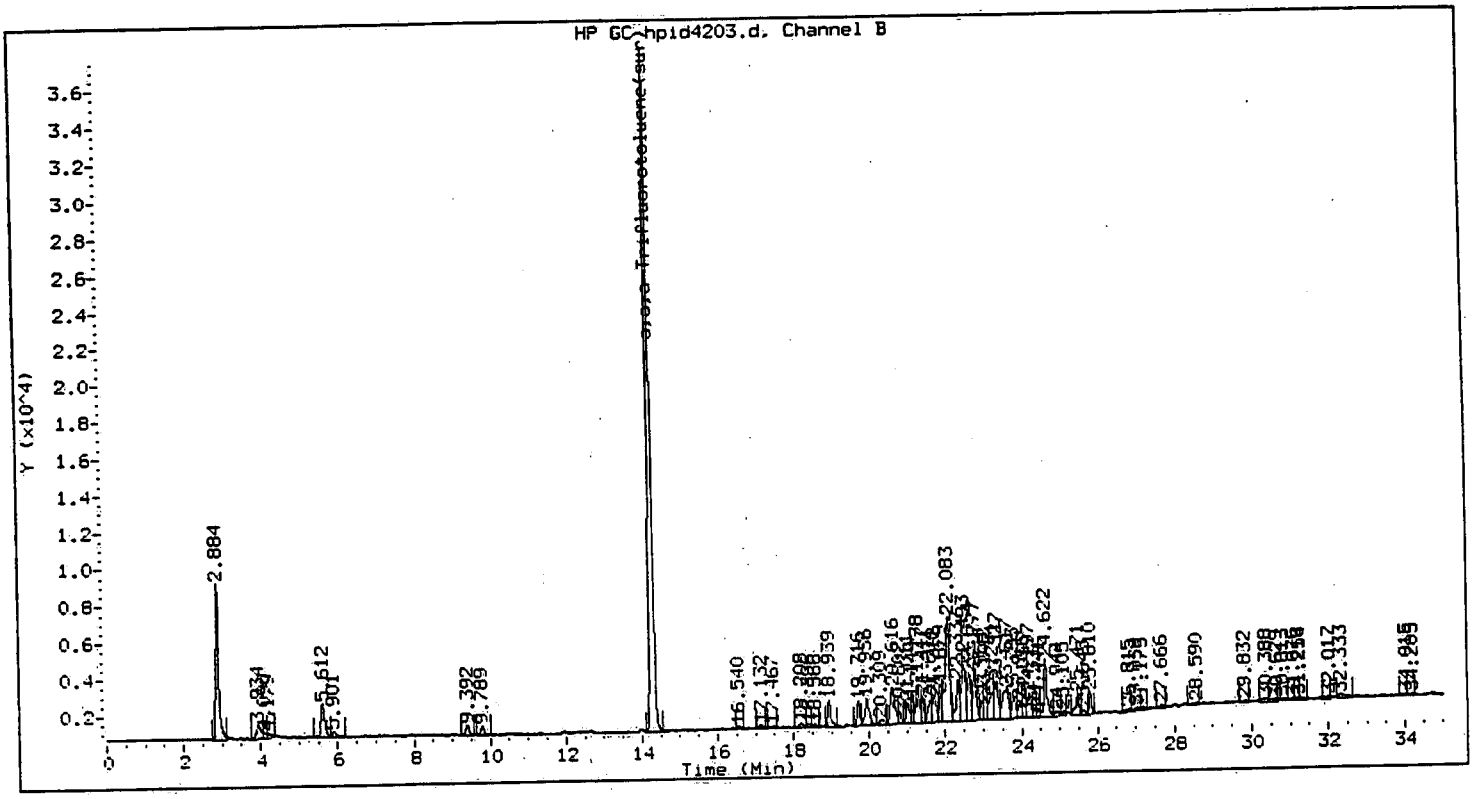
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4203.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4203.d Page 1
Report Date 08/03/2000 07:39



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220390
Lab ID : 220390 SR
Inj Date : 02-AUG-2000 18:14
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.279	14.305	0.025	1095930	31.752	31.752

Client ID: **Field_Blank**
Site: L.E. Carpenter

Lab Sample No: **220391**
Lab Job No: C436

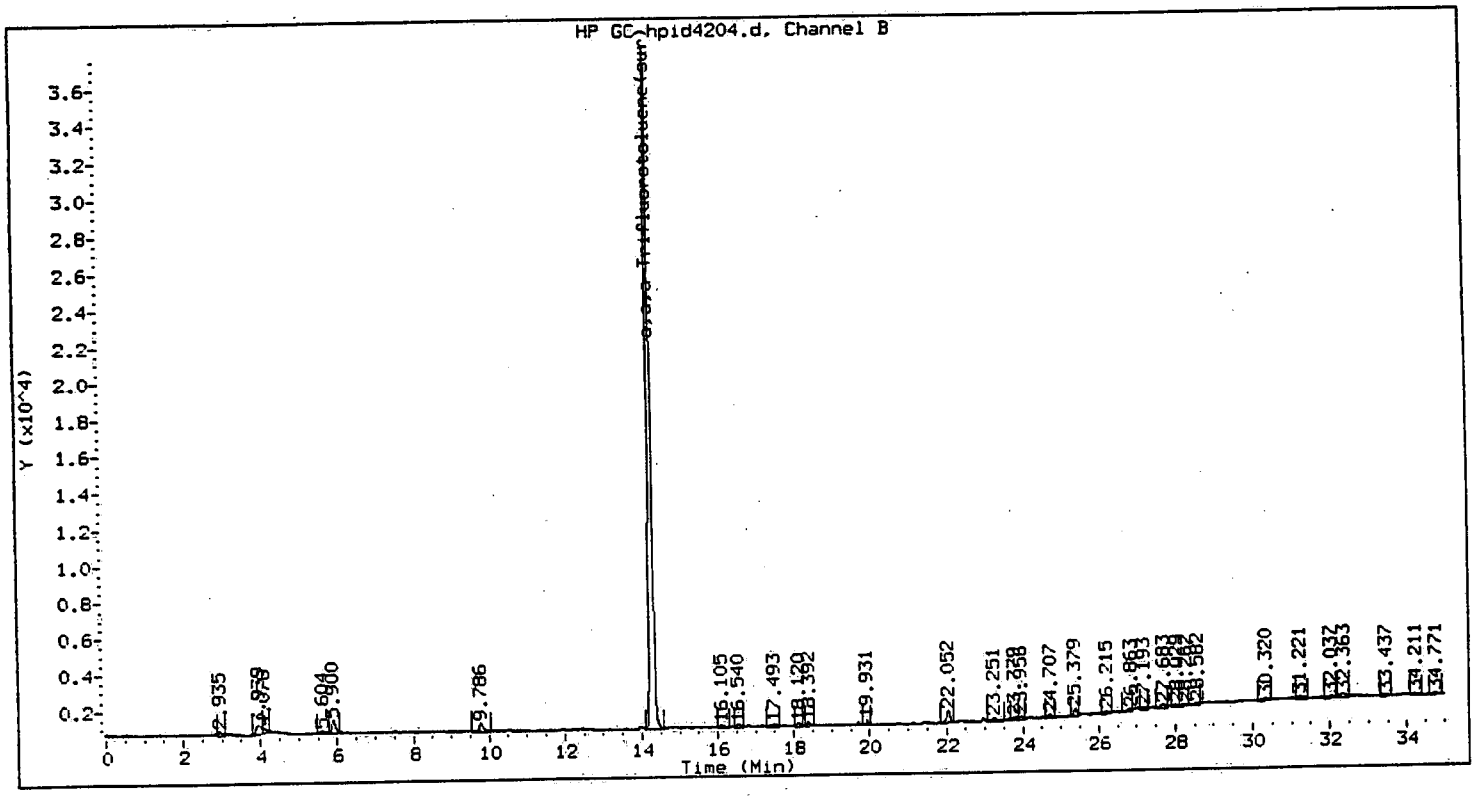
Date Sampled: 07/31/00
Date Received: 07/31/00
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4204.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4204.d
Report Date 08/03/2000 07:39



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : 220391 SP
Lab ID : 220391
Inj Date : 02-AUG-2000 18:55
Operator : SP
Cpnd Sublist: btex

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.281	14.305	0.024	1101579	31.915	31.915

LAB SAMPLE NO.

HG215

VOLATILE METHOD BLANK SUMMARY

Date Analyzed: 08/02/00

Instrument ID: VOAGC2

Time Analyzed: 1024

Lab File ID: HPID4192

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	MW-22	220386	HPID4196	1322
02	MW-15S	220382	HPID4197	1403
03	MW-15I	220383	HPID4198	1444
04	MW-11D	220384	HPID4199	1526
05	MW-14I	220385	HPID4200	1607
06	MW-25R	220387	HPID4201	1649
07	MW-21	220389	HPID4202	1732
08	MW-4	220390	HPID4203	1814
09	FIELD_BLANK	220391	HPID4204	1855
10	MW-22MS	220386MS	HPID4205	1937
11	MW-22MSD	220386MSD	HPID4206	2019
12				
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30				

COMMENTS:

Client ID: **HG215**
Site:

Lab Sample No: **HG215**
Lab Job No: C436

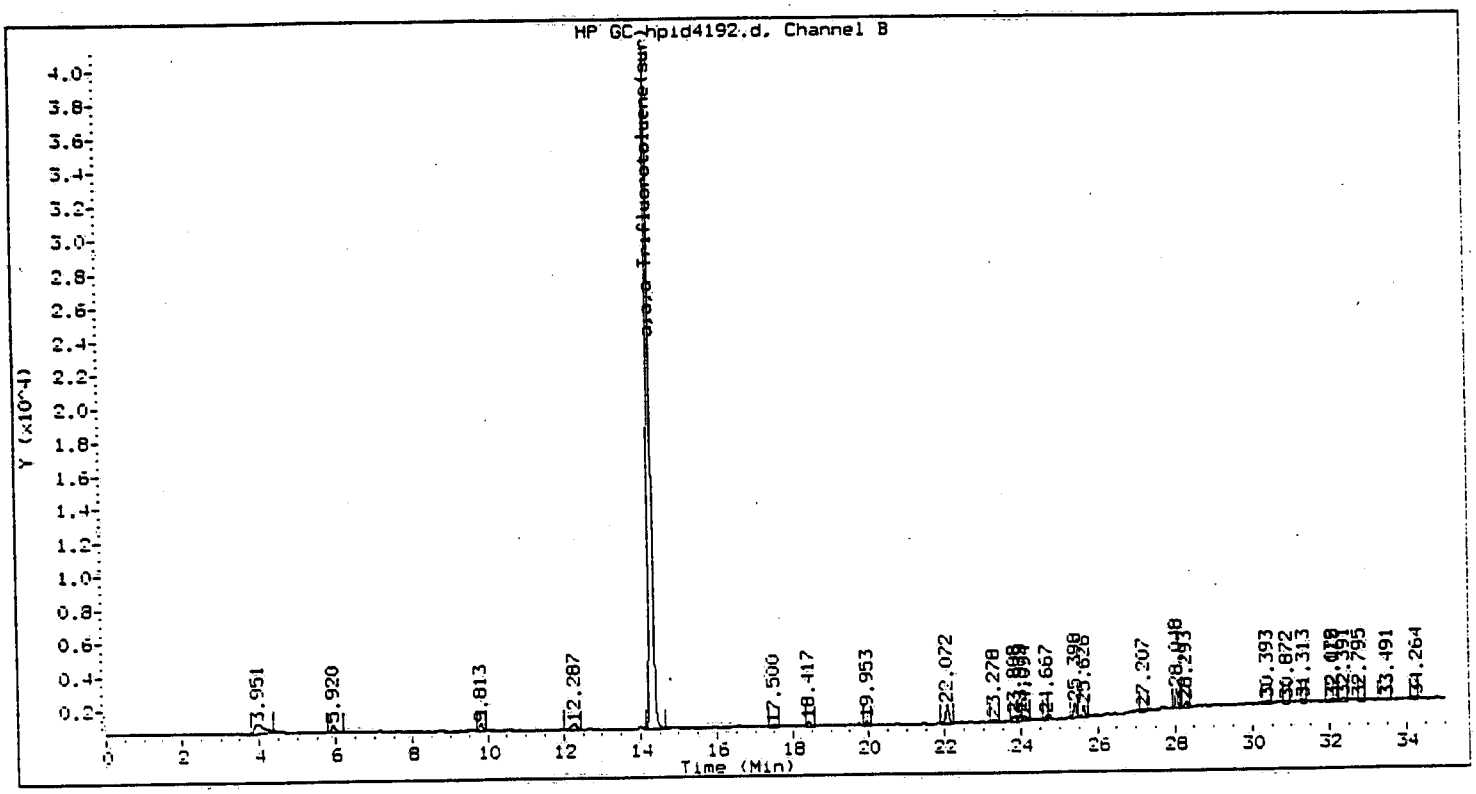
Date Sampled: _____
Date Received: _____
Date Analyzed: 08/02/00
GC Column: DB624
Instrument ID: VOAGC2.i
Lab File ID: hpid4192.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID
METHOD 602

Parameter	Analytical Result Units: ug/l	Method Detection Limit Units: ug/l
TBA	ND	20
MTBE	ND	0.24
DIPE	ND	0.28
Benzene	ND	0.25
Toluene	ND	0.27
Chlorobenzene	ND	0.25
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25
1,3-Dichlorobenzene	ND	0.25
1,4-Dichlorobenzene	ND	0.26
1,2-Dichlorobenzene	ND	0.25
Naphthalene	ND	0.16

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4192.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : HG215
Lab ID : HG215
Inj Date : 02-AUG-2000 10:24
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.306	14.305	0.002	1191807	34.529	34.529

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC2

Calibration Date(s): 07/31/00 07/31/00

Calibration Time(s): 0925 1205

LAB FILE ID: RRF2: HPID4141 RRF5: HPID4142 RRF10: HPID4143
RRF20: HPID4144 RRF40: HPID4145

COMPOUND	RRF2	RRF5	RRF10	RRF20	RRF40
TBA **	391	365	335	320	
MTBE	51246	53119	52640	53780	53689
DIPE	55885	60842	59673	60499	61781
Benzene	108818	120805	118134	119244	121608
Toluene	122619	131181	126711	127115	131831
Chlorobenzene	137356	154286	150894	153128	162006
Ethylbenzene	118147	131462	127622	127838	134739
Xylene (Total)	138954	145572	141287	141666	149185
1,3-Dichlorobenzene	153692	143144	140741	144697	159065
1,4-Dichlorobenzene	136588	140451	138369	141367	158515
1,2-Dichlorobenzene	108770	120272	118997	122225	135897
Naphthalene	124368	120373	118255	126432	146184
a,a,a-Trifluorotoluene(sur)	34177	34589	35495	34177	34141

** TBA Calibration Levels are RF200, RF400, RF1000, and RF2000

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC2

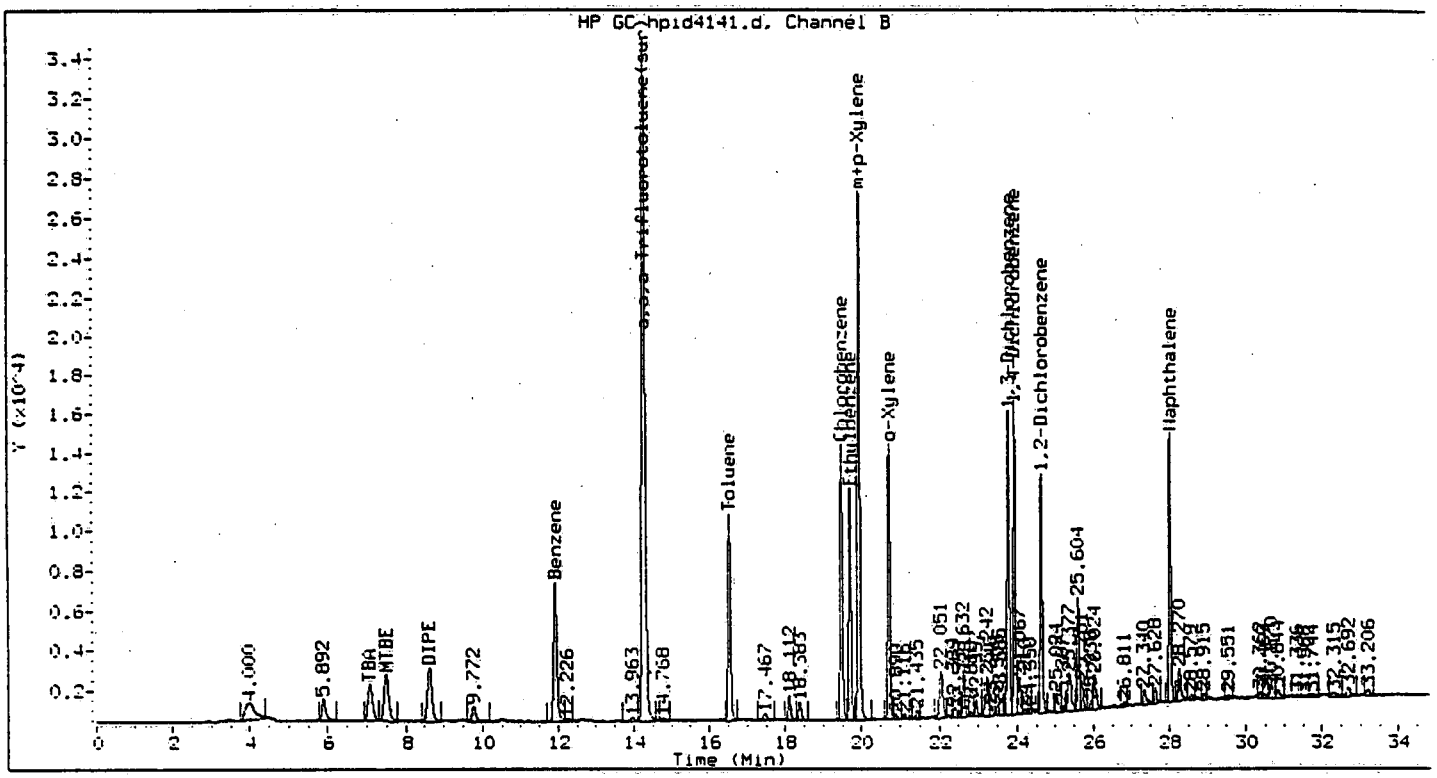
Calibration Date(s): 07/31/00 07/31/00

Calibration Time(s): 0925 1205

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
TBA **	AVRG	353	9.0*
MTBE	AVRG	52895	1.9*
DIPE	AVRG	59736	3.8*
Benzene	AVRG	117722	4.4*
Toluene	AVRG	127891	2.9*
Chlorobenzene	AVRG	151534	5.9*
Ethylbenzene	AVRG	127962	4.8*
Xylene (Total)	AVRG	143333	2.8*
1,3-Dichlorobenzene	AVRG	148268	5.2*
1,4-Dichlorobenzene	AVRG	143058	6.2*
1,2-Dichlorobenzene	AVRG	121232	8.0*
Naphthalene	AVRG	127122	8.8*
a,a,a-Trifluorotoluene(sur)	AVRG	34516	1.7*

** TBA Calibration Levels are RF200, RF400, RF1000, and RF2000
* Compounds with required maximum %RSD values.

Data File: /chem/VOAGC2.i/602/07-31-00/31JUL00.b/hpid4141.d Page 1
Report Date 08/01/2000 10:40



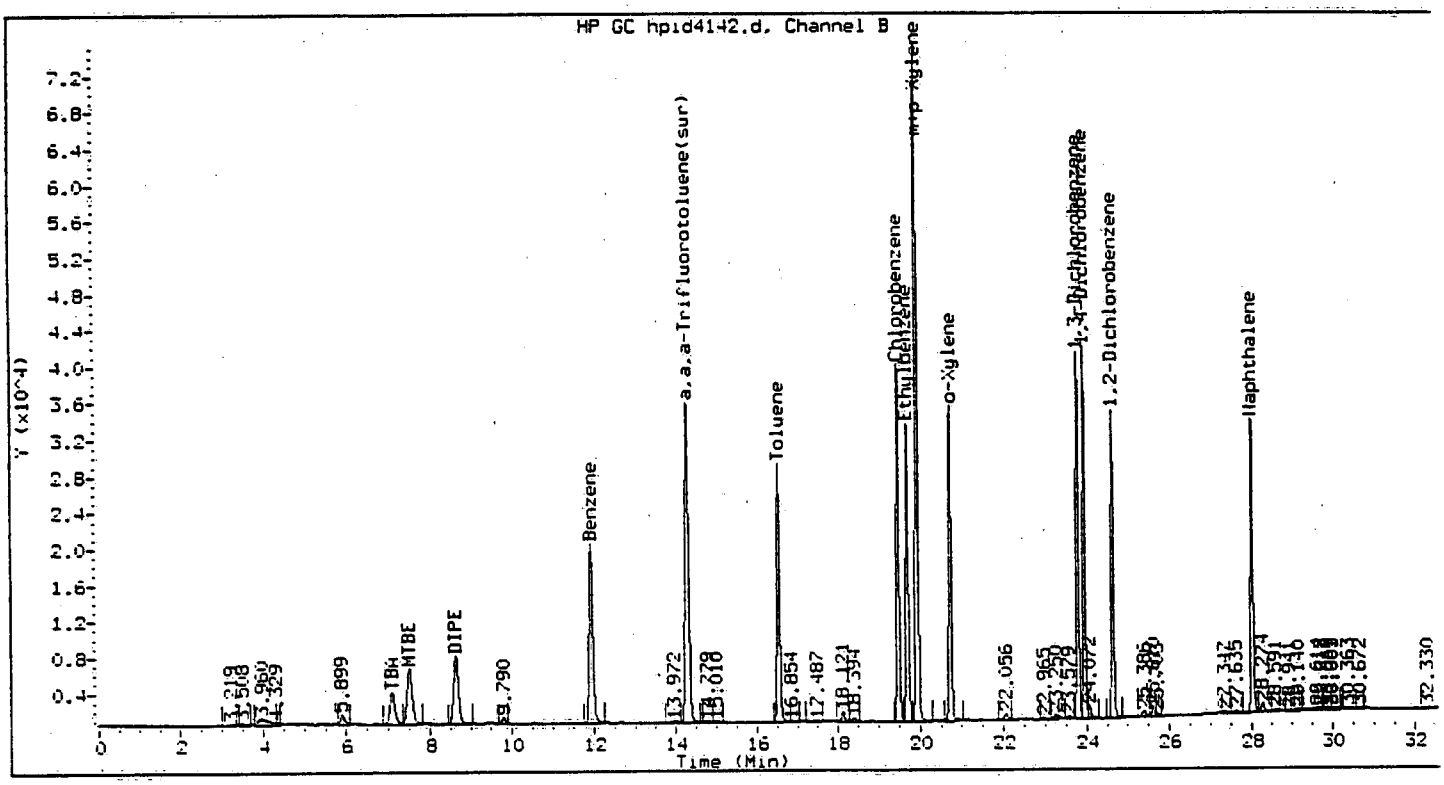
Method : /chem/VOAGC2.i/602/07-31-00/31JUL00.b/602_00.m
Sample Info : HSTD002
Lab ID : HSTD002
Inj Date : 31-JUL-2000 09:25
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_1

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.720	20.726	0.006	280422	2.000	2.000
m+p-Xylene	19.933	19.942	0.009	553305	4.000	4.000
TBA	7.083	7.094	0.011	78193	200.000	200.000
MTBE	7.496	7.506	0.010	102493	2.000	2.000
DIPE	8.627	8.639	0.012	111770	2.000	2.000
Benzene	11.926	11.942	0.015	217637	2.000	2.000
Toluene	16.535	16.545	0.011	245238	2.000	2.000
Chlorobenzene	19.476	19.485	0.009	274712	2.000	2.000
Ethylbenzene	19.699	19.708	0.009	236294	2.000	2.000

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	833727	6.000	6.000
1,3-Dichlorobenzene	23.788	23.795	0.007	307384	2.000	2.000
1,4-Dichlorobenzene	23.948	23.954	0.007	273177	2.000	2.000
1,2-Dichlorobenzene	24.640	24.646	0.006	217541	2.000	2.000
Naphthalene	28.023	28.027	0.003	248736	2.000	2.000
a,a,a-Trifluorotoluene(sur)	14.274	14.288	0.013	1025301	30.000	30.000

Data File: /chem/VOAGC2.i/602/07-31-00/31JUL00.b/hpid4142.d Page 1
Report Date 08/01/2000 10:40



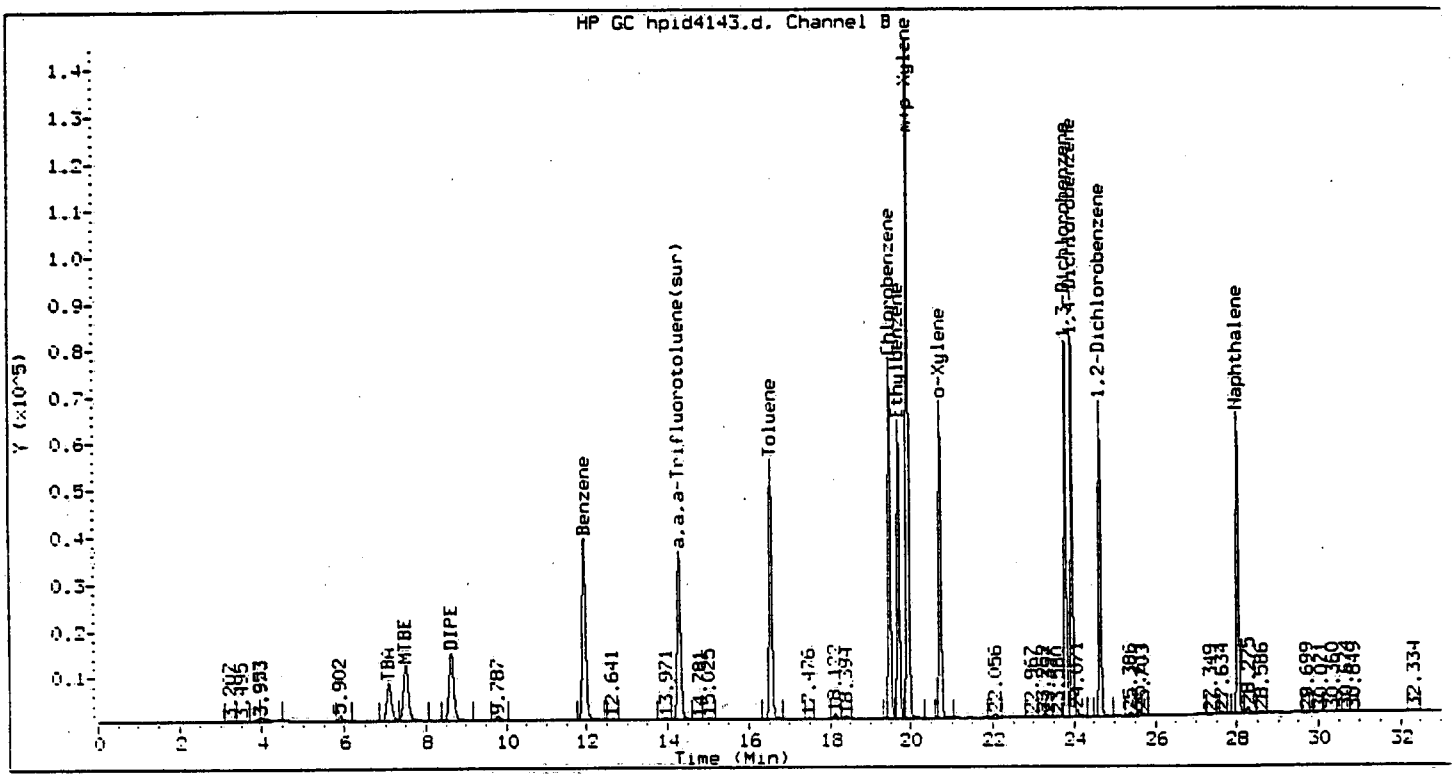
Method : /chem/VOAGC2.i/602/07-31-00/31JUL00.b/602_00.m
Sample Info : HSTD005
Lab ID : HSTD005
Inj Date : 31-JUL-2000 10:07
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_2

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.724	20.726	0.001	679845	4.923	4.923
m+p-Xylene	19.940	19.942	0.001	1503743	10.417	10.417
TBA	7.089	7.094	0.005	145950	386.193	386.193
MTBE	7.506	7.506	0.001	265593	5.090	5.090
DIPE	8.639	8.639	0.000	304212	5.212	5.212
Benzene	11.940	11.942	0.001	604026	5.261	5.261
Toluene	16.544	16.545	0.001	655904	5.169	5.169
Chlorobenzene	19.484	19.485	0.001	771431	5.290	5.290
Ethylbenzene	19.707	19.708	0.001	657308	5.267	5.267

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	2183588	15.349	15.349
1,3-Dichlorobenzene	23.795	23.795	0.000	715722	4.822	4.822
1,4-Dichlorobenzene	23.954	23.954	0.000	702254	5.070	5.070
1,2-Dichlorobenzene	24.645	24.646	0.001	601362	5.251	5.251
Naphthalene	28.028	28.027	0.001	601864	4.918	4.918
a,a,a-Trifluorotoluene(sur)	14.287	14.288	0.001	1037678	30.180	30.180

Data File: /chem/VOAGC2.i/602/07-31-00/31JUL00.b/hpid4143.d Page 1
Report Date 08/01/2000 10:40



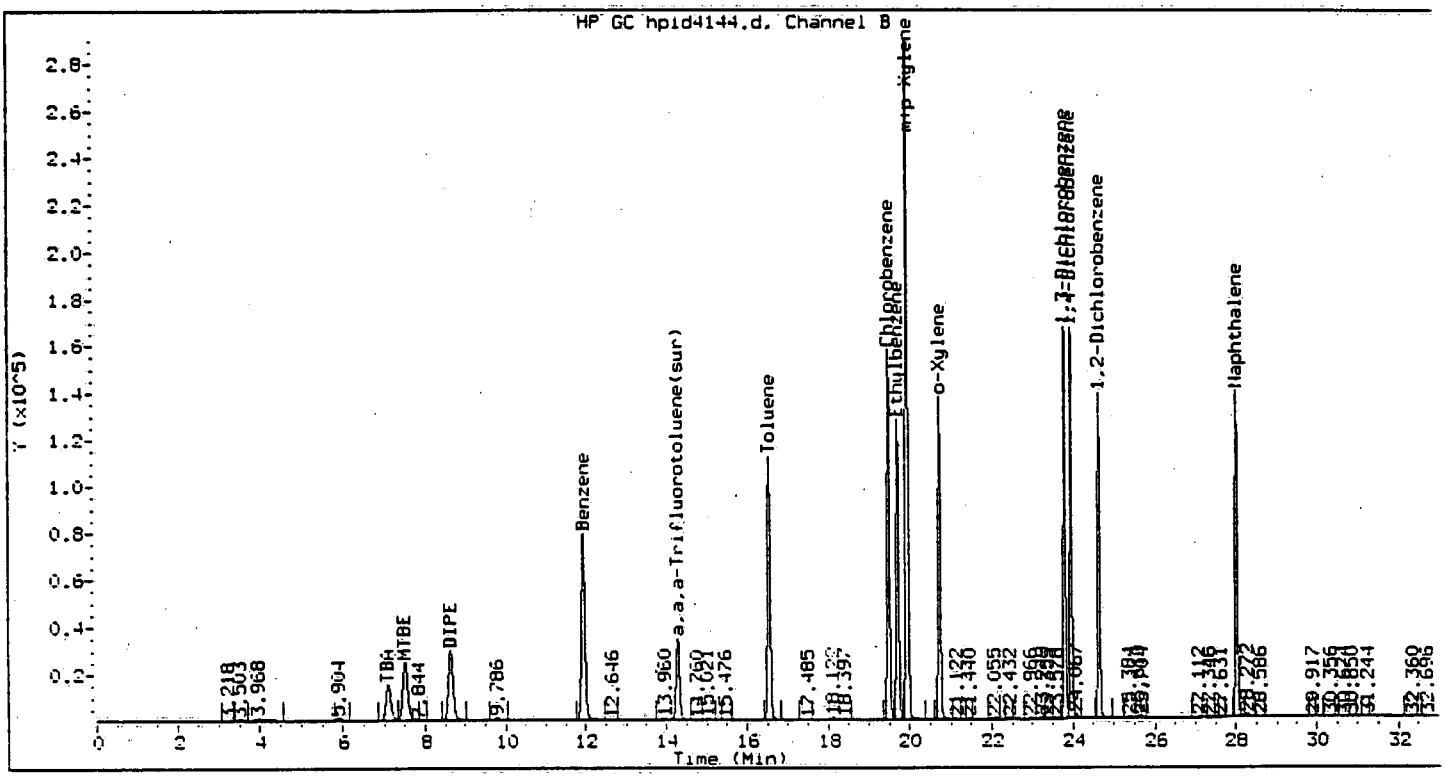
Method : /chem/VOAGC2.i/602/07-31-00/31JUL00.b/602_00.m
Sample Info : HSTD010
Lab ID : HSTD010
Inj Date : 31-JUL-2000 10:46
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_3

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.726	20.726	0.000	1318766	9.695	9.695
m+p-Xylene	19.942	19.942	0.000	2919844	20.151	20.151
TBA	7.090	7.094	0.003	334859	921.040	921.040
MTBE	7.506	7.506	0.000	526395	10.058	10.058
DIPE	8.639	8.639	0.000	596730	10.148	10.148
Benzene	11.942	11.942	0.000	1181337	10.191	10.191
Toluene	16.546	16.545	0.000	1267109	9.990	9.990
Chlorobenzene	19.484	19.485	0.000	1508944	10.229	10.229
Ethylbenzene	19.708	19.708	0.000	1276222	10.149	10.149

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	4238610	29.862	29.862
1,3-Dichlorobenzene	23.796	23.795	0.001	1407410	9.649	9.649
1,4-Dichlorobenzene	23.954	23.954	0.000	1383686	9.993	9.993
1,2-Dichlorobenzene	24.646	24.646	0.001	1189971	10.257	10.257
Naphthalene	28.030	28.027	0.003	1182547	9.773	9.773
a,a,a-Trifluorotoluene(sur)	14.287	14.288	0.000	1064838	30.640	30.640

Data File: /chem/VOAGC2.i/602/07-31-00/31JUL00.b/hpid4144.d Page 1
Report Date 08/01/2000 10:40



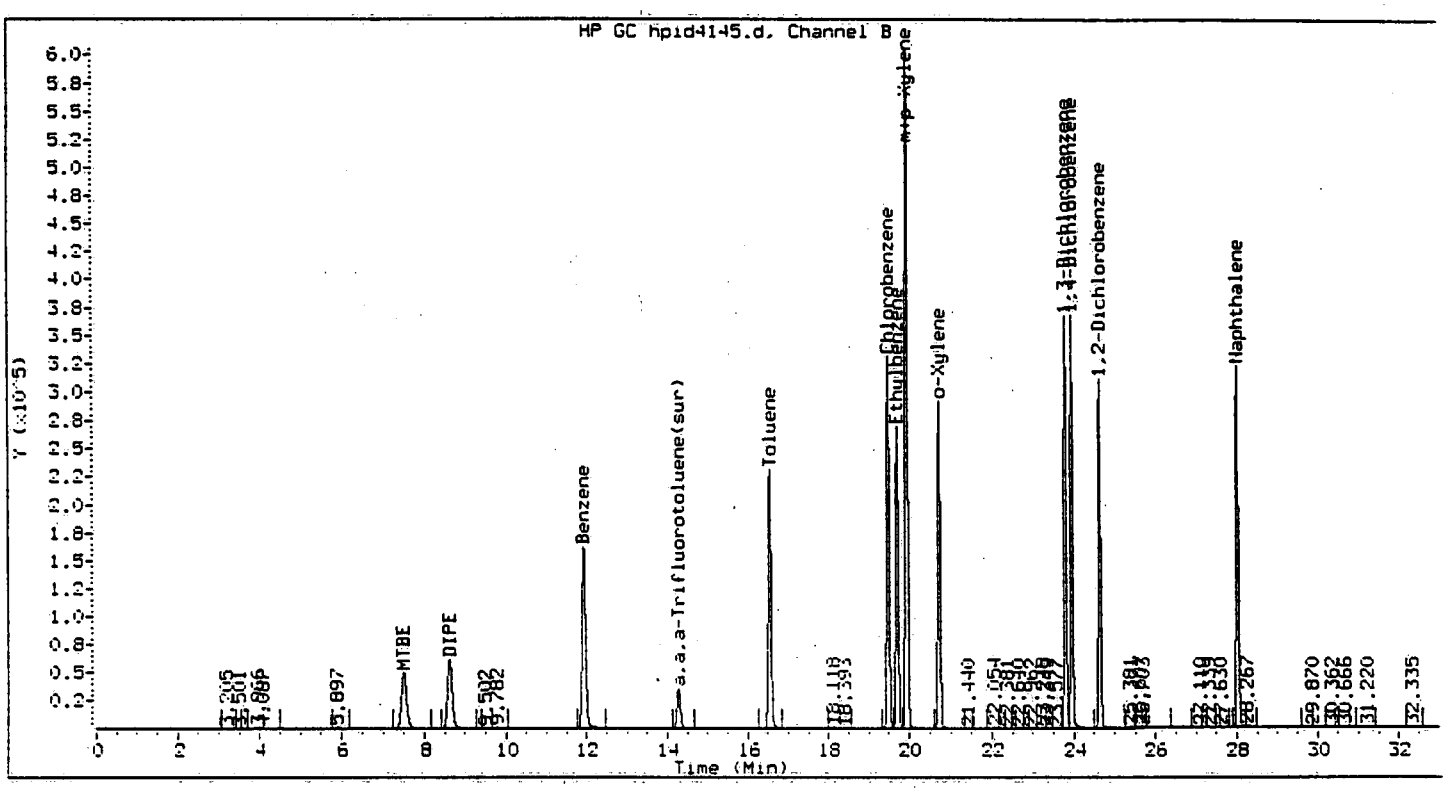
Method : /chem/VOAGC2.i/602/07-31-00/31JUL00.b/602_00.m
Sample Info : HSTD020
Lab ID : HSTD020
Inj Date : 31-JUL-2000 11:25
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.726	20.726	0.000	2658659	19.658	19.658
m+p-Xylene	19.942	19.942	0.000	5841333	40.235	40.235
TBA	7.094	7.094	0.000	639914	1814.515	1814.515
MTBE	7.506	7.506	0.000	1075595	20.411	20.411
DIPE	8.639	8.639	0.000	1209989	20.430	20.430
Benzene	11.942	11.942	0.000	2384876	20.427	20.427
Toluene	16.545	16.545	0.000	2542300	20.033	20.033
Chlorobenzene	19.485	19.485	0.000	3062558	20.566	20.566
Ethylbenzene	19.708	19.708	0.000	2556759	20.249	20.249

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	8499992	59.914	59.914
1,3-Dichlorobenzene	23.795	23.795	0.000	2893948	19.880	19.880
1,4-Dichlorobenzene	23.954	23.954	0.000	2827341	20.312	20.312
1,2-Dichlorobenzene	24.646	24.646	0.000	2444493	20.792	20.792
Naphthalene	28.027	28.027	0.000	2528649	20.666	20.666
a,a,a-Trifluorotoluene(sur)	14.288	14.288	0.000	1025310	29.625	29.625

Data File: /chem/VOAGC2.i/602/07-31-00/31JUL00.b/hpid4145.d Page 1
Report Date 08/01/2000 10:40



Method : /chem/VOAGC2.i/602/07-31-00/31JUL00.b/602_00.m
Sample Info : HSTD040
Lab ID : HSTD040
Inj Date : 31-JUL-2000 12:05
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_5

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.723	20.726	0.003	5646568	41.388	41.388
m+p-Xylene	19.939	19.942	0.003	12255596	83.494	83.494
MTBE	7.501	7.506	0.005	2147570	40.601	40.601
DIPE	8.633	8.639	0.006	2471231	41.369	41.369
Benzene	11.937	11.942	0.005	4864341	41.321	41.321
Toluene	16.542	16.545	0.004	5273257	41.232	41.232
Chlorobenzene	19.482	19.485	0.003	6480241	42.764	42.764
Ethylbenzene	19.705	19.708	0.003	5389557	42.119	42.119
Xylene (Total)	25.019	25.019	0.000	17902164	124.899	124.899

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1,3-Dichlorobenzene	23.793	23.795	0.002	6362609	42.913	42.913
1,4-Dichlorobenzene	23.952	23.954	0.002	6340600	44.322	44.322
1,2-Dichlorobenzene	24.643	24.646	0.003	5435871	44.838	44.838
Naphthalene	28.025	28.027	0.002	5847348	45.998	45.998
a,a,a-Trifluorotoluene(sur)	14.284	14.288	0.004	1024221	29.674	29.674

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK

Instrument ID: VOAGC2 Calibration Date: 08/02/00 Time: 0837

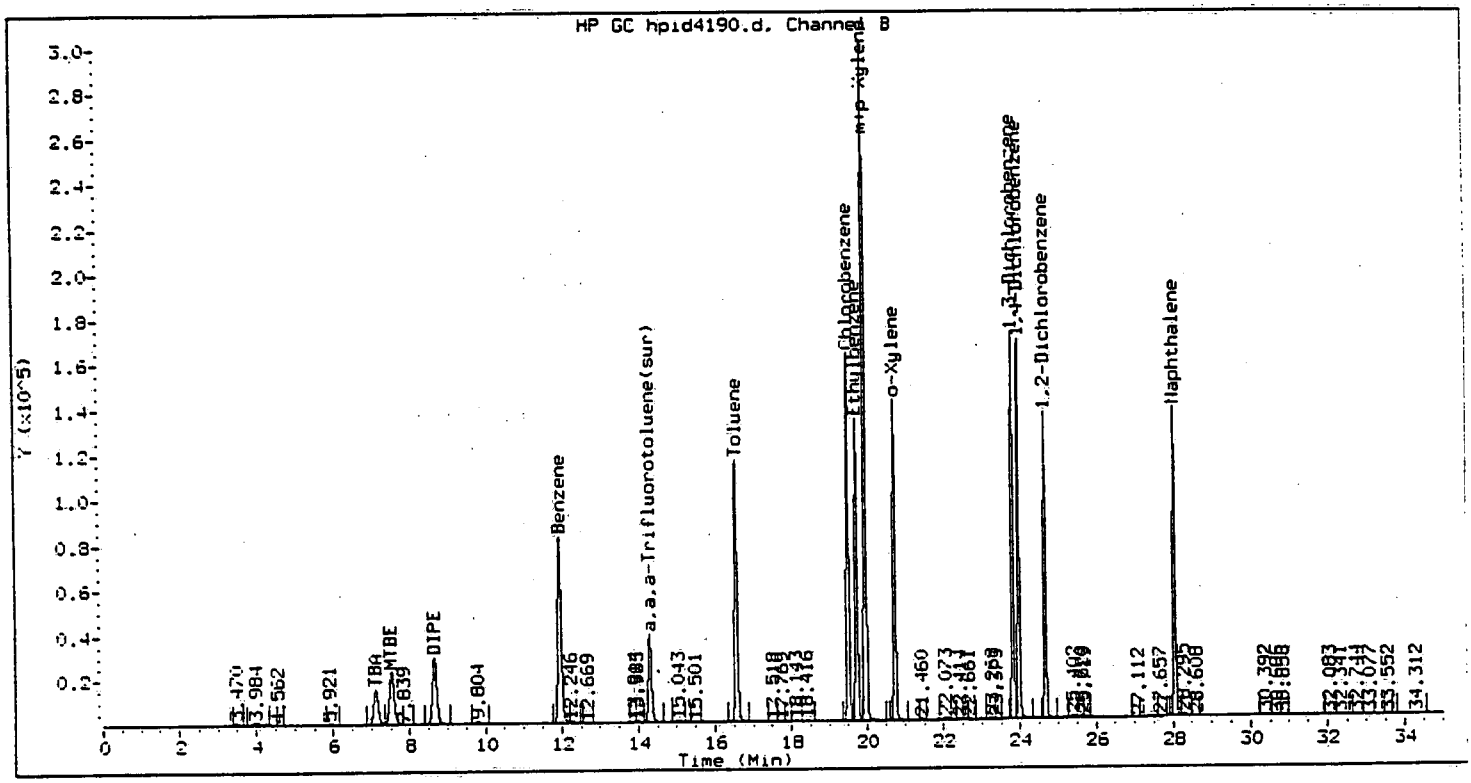
Lab File ID: HPID4190 Init. Calib. Date(s): 07/31/00 07/31/00

Heated Purge: (Y/N) N Init. Calib. Times: 0925 1205

COMPOUND	$\overline{RRF}$	RRF20	MIN RRF	%D	MAX %D
TBA **	352.66	324.24		8.0	50.0
MTBE	52894.72	50955.50		3.7	50.0
DIPE	59736.13	60166.20		-0.7	50.0
Benzene	117721.94	125265.95		-6.4	23.0
Toluene	127891.42	133372.25		-4.3	22.5
Chlorobenzene	151534.10	158724.75		-4.7	19.5
Ethylbenzene	127961.53	134655.60		-5.2	37.0
Xylene (Total)	143333.05	147229.28		-2.7	50.0
1,3-Dichlorobenzene	148268.00	149395.85		-0.8	27.5
1,4-Dichlorobenzene	143057.99	144899.30		-1.3	30.5
1,2-Dichlorobenzene	121232.29	119380.20		1.5	32.0
Naphthalene	127122.33	124664.30		1.9	50.0
a,a,a-Trifluorotoluene(sur)	34515.65	38879.97		-12.6	20.0

** TBA Continuing Calibration Level is RF2000.

Data File: /chem/VOAGC2.i/602/07-31-00/02AUG00.b/hpid4190.d Page 1
Report Date 08/03/2000 07:38



Method : /chem/VOAGC2.i/602/07-31-00/02AUG00.b/602_00.m
Sample Info : HSTD020
Lab ID : HSTD020
Inj Date : 02-AUG-2000 08:37
Operator : SP
Cpnd Sublist: all

Inst ID : VOAGC2.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CCALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
o-Xylene	20.742	20.742	0.000	2759382	20.226	20.226
m+p-Xylene	19.959	19.959	0.000	6074375	41.383	41.383
TBA	7.109	7.109	0.000	648476	1838.793	1838.793
MTBE	7.524	7.524	0.000	1019110	19.267	19.267
DIPE	8.656	8.656	0.000	1203324	20.144	20.144
Benzene	11.960	11.960	0.000	2505319	21.282	21.282
Toluene	16.563	16.563	0.000	2667445	20.857	20.857
Chlorobenzene	19.502	19.502	0.000	3174495	20.949	20.949
Ethylbenzene	19.725	19.725	0.000	2693112	21.046	21.046

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	8833757	61.631	61.631
1,3-Dichlorobenzene	23.814	23.814	0.000	2987917	20.152	20.152
1,4-Dichlorobenzene	23.972	23.972	0.000	2897986	20.257	20.257
1,2-Dichlorobenzene	24.664	24.664	0.000	2387604	19.694	19.694
Naphthalene	28.050	28.050	0.000	2493286	19.613	19.613
a,a,a-Trifluorotoluene(sur)	14.305	14.305	0.000	1166399	33.793	33.793

VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Matrix: WATER Level: LOW Lab Job No: C436

	LAB SAMPLE NO.	SMC1 #	SMC2 #	OTHER	TOT OUT
01	HG215	113			0
02	220386	109			0
03	220382	107			0
04	220383	107			0
05	220384	107			0
06	220385	110			0
07	220387	107			0
08	220389	103			0
09	220390	107			0
10	220391	107			0
11	220386MS	106			0
12	220386MSD	105			0
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

QC LIMITS

SMC1 = a,a,a-Trifluorotoluene (72-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

VOLATILE SPIKE RECOVERY SUMMARY
METHOD 602

Matrix: WATER

Level: LOW

Matrix Spike - Lab Sample No.: 220386

MS Sample from Lab Job No: C436

QA Batch: 7065

Compound	MS % REC.	BS % REC.	LIMITS
Benzene	102	105	39-150
Toluene	100	100	46-148
Chlorobenzene	100	100	55-135
Ethylbenzene	105	105	32-160
1,3-Dichlorobenzene	98	100	50-141
1,4-Dichlorobenzene	98	100	42-143
1,2-Dichlorobenzene	92	100	37-154

* Values outside of QC limits

Spike Recovery: 0 out of 14 outside limits

COMMENTS: _____