United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 426
Main Post-East Area

NJDEP UST Registration No. 90010-40
Dicar No. 97-05-01-1403-18

December 2001

1.2 SITE DESCRIPTION

Building 426 is located in the Main Post-East area of the Fort Monmouth Army Base. UST No. 90010-40 was located southwest of Building 426 and appurtenant copper piping ran approximately ten (10) feet east from the excavation to Building 426 (Figure 2).

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 426. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The Main Post, Charles Wood, and the Evans areas are located in what may be referred to as the Outer Coastal Plain subprovince, or the Outer Lowlands.

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, and gravel. These formations typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapecza, 1989). These sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

The formations record several major transgressive/regressive cycles and contain units which are generally thicker to the southeast and reflect a deeper water environment. More than 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are usually aquifers (e.g., Englishtown and Kirkwood Formations, and the Cohansey Sand) while the transgressive deposits act as confining units (e.g., the Merchantville, Marshalltown, and Navesink Formations). The individual thicknesses for these units vary greatly (i.e., from several feet to several hundred feet). The Coastal Plain deposits thicken to the southeast from the Fall Line to greater than 6,500 feet in Cape May County (Brown and Zapecza, 1990).

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey, medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

The Tinton sand conformably overlies the Red Bank Sand and ranges from a clayey medium to very coarse grained feldspathic quartz and glauconite sand to a glauconitic

coarse sand. The color varies from dark yellowish orange or light brown to moderate brown and from light olive to grayish olive. Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard).

Hydrogeology

The water table aquifer in the Main Post area is identified as part of the "composite confining units," or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation.

Based on records of wells drilled in the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank and Tinton Sands may produce 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

Due to the proximity of the Atlantic Ocean to Fort Monmouth, shallow groundwater may be tidally influenced and may flow toward creeks and brooks as the tide goes out, and away from creeks and brooks as the tide comes in. However, an abundance of clay lenses and sand deposits were noted in borings installed throughout Fort Monmouth. Therefore, the direction of shallow groundwater should be determined on a case-by-case basis.

Shallow groundwater is locally influenced within the Main Post area by the following factors:

- tidal influence (based on proximity to the Atlantic Ocean, rivers, and tributaries)
- topography
- nature of the fill material within the Main Post area
- presence of clay and silt lenses in the natural overburden deposits
- local groundwater recharge areas (i.e., streams, lakes)

Due to the fluvial nature of the overburden deposits (i.e., sand and clay lenses), shallow groundwater flow direction is best determined on a case-by-case basis. This is consistent with lithologies observed in borings installed within the Main Post area, which primarily consisted of fine-to-medium grained sands, with occasional lenses or laminations of gravel silt and/or clay.

Building 426 is located approximately 600 feet south of Parkers Creek, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 426 is anticipated to be to the north.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory, a NJDEP-certified testing laboratory. All sampling was performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator according to the methods described in the NJDEP *Field Sampling Procedures Manual* (1992). Sampling frequency and parameters analyzed complied with the NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (October 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. The Fort Monmouth DPW Environmental Office maintains all records of the Site Investigation activities.

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using visual observations to identify potentially contaminated material. Soil excavated from around the tank-exhibited evidence of potential contamination. Soils were removed from the excavation until no evidence of contamination remained. Groundwater was encountered at 6.0 feet below ground surface and sheen was observed on groundwater.

2.3 SOIL SAMPLING

Following the removal of the UST, associated piping, and potentially contaminated soils, post-excavation soil samples were collected. On May 5, 1997, samples 426-A through 426-E were collected from the excavation sidewalls at a total of six (6) locations 3 to 4 feet bgs. Following additional soil excavation on May 7, 1997, soil samples 426-A1 through 426-J were collected at depths ranging from 4 to 7.5' BGS. Review of the data indicated that additional soil removal was necessary. On November 11, 1997, soil samples 426-A through 426-J were collected from depths of 5.5 feet along the sidewalls and 8' at the base of the excavation. Four soil samples, 426-A through 426-D, were collected December 2, 1997 at depths of 5 and 8 feet along the sidewalls and base, respectively. The following day, December 3, 1997, two additional samples, 426-A and 426-B were collected. Four samples were collected years later, on April 21, 2001 in order to analyze the status of the site soil. All samples were analyzed for TPHC and total solids. Select soil samples were also submitted for VOC analysis.

U.S. Army personnel in accordance with the NJDEP Technical Requirements and the NJDEP Field Sampling Procedures Manual performed the site assessment. A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using NJDEP *Field Sampling Procedures Manual* (1992) standard sampling procedures. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected. All samples were analyzed for TPH and total solids. Select samples were also analyzed for the presence of VOCs. The post-excavation sampling results were compared to the NJDEP residential direct contact, soil cleanup criteria (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Tables 2 and 3. Soil sample locations are illustrated on Figure 3. The analytical data package is provided in Appendix D.

The initial round of post-excavation soil sampling was conducted May 5, 1997. TPH results of the six soil samples, 426-A through 426-E, ranged from 196.73 mg/kg at 426-C to 14,003.95 mg/kg at 426-B1. Two of the soil sample TPH results exceeded the NJDEP soil cleanup criteria of 10,000 mg/kg. Sample 426-B1 was also analyzed for VOCs. It contained several compounds at concentrations exceeding the cleanup criteria. Based on those results additional soil removal was conducted. May 7, 1997 ten samples, 426-A1 through 426-G and 426-J, were collected from the new extent of the excavation and two samples, 426-h and 426-I, were collected from along the piping. Two of the soil samples, 426-E and 426-F exceeded the soil standards for TPH. All three samples, 426-E, 426-F, and 426-G2, that were analyzed for VOCs contained compounds that exceeded the standards.

Local utilities including water, sanitary sewer and gas lines created obstacles for the additional soil excavation required at the site. However, after slow, careful soil removal, additional impacted soil was removed and new post-excavation soil samples were collected adjacent to the sanitary sewer and water lines. Soil samples, 426-A through 426-J, collected on November 3, 1997, contained TPH concentrations ranging from 74.71 mg/kg to 310.14 mg/kg. Samples, 426-A through 426-D, collected December 2, 1997 contained concentrations ranging from undetected to 6,413.79 at 426-C. The soil sample 426-C was analyzed for VOCs and contained total xylenes that exceeded the cleanup criteria.

Finally, following additional utility work and soil removal from the area of 426-C, post-excavation soil samples were collected from the UST excavation and from below piping associated with the UST On April 21,2001. All of the samples contained concentrations of TPHC ranging from non-detect to 199.68 mg/kg, all below the NJDEP soil cleanup criteria. Subsequently, none of these samples were analyzed for VOCs.

3.2 GROUNDWATER SAMPLING RESULTS

No compounds were detected in the samples collected from Building 426 on October 16, 1999, and December 4, 1999.

A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 3 and the groundwater sampling locations are shown on Figure

5. The analytical data package is provided in Appendix F. The full data package, including quality control is on file at U.S. Army Fort Monmouth located in Fort Monmouth, New Jersey.

Groundwater samples collected on October 16, 1999, and December 4, 1999, were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 426 were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soil with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected at Building 426 on October 16, 1999, and December 4, 1999, groundwater quality at Building 426 was either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment of UST No. 90010-40 at Building 426.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 426, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
426-A	5/5/97	5/7/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-B1	5/5/97	5/7/97	Soil	Post-Excavation	TPH,VOC	OQA-QAM-025
426-B2	5/5/97	5/7/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-C	5/5/97	5/7/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-D	5/5/97	5/7/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-E	5/5/97	5/7/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-A1	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-A2	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-B	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-C	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-D	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-E	5/7/97	5/9/97	Soil	Post-Excavation	TPH, VOC	OQA-QAM-025
426-F	5/7/97	5/9/97	Soil	Post-Excavation	TPH, VOC	OQA-QAM-025
426-G1	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-G2	5/7/97	5/9/97	Soil	Post-Excavation	TPH, VOC	OQA-QAM-025
426-H	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-I	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-J	5/7/97	5/9/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-A	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-B	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-C	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-D	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-E	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-F	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-G	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-H	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-I	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-J	11/13/97	11/14/97	Soil	Post-Excavation	TPH	OQA-QAM-025

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 426, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
426-A	12/2/97	12/3/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-B	12/2/97	12/3/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-C	12/2/97	12/3/97	Soil	Post-Excavation	TPH, VOC	OQA-QAM-025
426-D	12/2/97	12/3/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-A	12/3/97	12/4/97	Soil	Post-Excavation	TPH	OQA-QAM-025
426-B	12/3/97	12/4/97	Soil	Post-Excavation	TPH	OQA-QAM-025
1C	4/21/01	4/25/01	Soil	Post-Excavation	TPH	OQA-QAM-025
2E	4/21/01	4/25/01	Soil	Post-Excavation	TPH	OQA-QAM-025
3D	4/21/01	4/25/01	Soil	Post-Excavation	TPH	OQA-QAM-025
4C	4/21/01	4/25/01	Soil	Post-Excavation	TPH	OQA-QAM-025

Note:
*VOCs: Volatile Organic Compounds plus 15 tentatively identified compounds
*SVOCs: Semivolatile organic compounds plus 15 tentatively identified compounds
**PPNDP: Passively Placed Narrow Diameter Point

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS FOR TPH and TOTAL SOLIDS
BUILDING 426, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
426-A(4')	2508.01	5/5/97	5/7/97	Total Solid	--	--	78.21	--	--
				TPHC	185	yes	2919.50	10,000	No
426-B1(3')	2508.02	5/5/97	5/7/97	Total Solid	--	--	83.40	--	--
				TPHC	178	yes	14003.95	10,000	YES
426-B2(4')	2508.03	5/5/97	5/7/97	Total Solid	--	--	79.22	--	--
				TPHC	189	yes	1908.33	10,000	No
426-C(4')	2508.04	5/5/97	5/7/97	Total Solid	--	--	82.04	--	--
				TPHC	189	yes	196.73	10,000	No
426-D(4')	2508.05	5/5/97	5/7/97	Total Solid	--	--	82.54	--	--
				TPHC	187	yes	6435.03	10,000	No
426-E(4')	2508.06	5/5/97	5/7/97	Total Solid	--	--	84.73	--	--
				TPHC	184	Yes	256.15	10,000	No
426-A1(4')	2511.01	5/7/97	5/9/97	Total Solid	--	--	80.75	--	--
				TPHC	189	Yes	3391.31	10,000	No
426-A2(7.5')	2511.02	5/7/97	5/9/97	Total Solid	--	--	83.51	--	--
				TPHC	181	Yes	4774.44	10,000	No
426-B(4.0')	2511.03	5/7/97	5/9/97	Total Solid	--	--	85.19	--	--
				TPHC	179	Yes	ND	10,000	No
426-C(7.5')	2511.04	5/7/97	5/9/97	Total Solid	--	--	82.32	--	--
				TPHC	187	Yes	2901.42	10,000	No
426-D(7.5')	2511.05	5/7/97	5/9/97	Total Solid	--	--	82.14	--	--
				TPHC	187	Yes	4474.81	10,000	No
426-E(4')	2511.06	5/7/97	5/9/97	Total Solid	--	--	79.46	--	--
				TPHC	189	Yes	15680.93	10,000	YES
426-F(4')	2511.07	5/7/97	5/9/97	Total Solid	--	--	83.28	--	--
				TPHC	186	Yes	11056.39	10,000	YES
426-G1(6')	2511.08	5/7/97	5/9/97	Total Solid	--	--	91.16	--	--
				TPHC	173	Yes	7325.39	10,000	No

426-G2(7')	2511.09	5/7/97	5/9/97	Total Solid	--	--	88.76	--	--
				TPHC	176	Yes	8778.91	10,000	No
426-H(piping)	2511.10	5/7/97	5/9/97	Total Solid	--	--	83.91	--	--
				TPHC	185	Yes	ND	10,000	No
426-I(piping)	2511.11	5/7/97	5/9/97	Total Solid	--	--	84.18	--	--
				TPHC	185	Yes	ND	10,000	No
426-J(7.5')	2511.12	5/7/97	5/9/97	Total Solid	--	--	80.67	--	--
				TPHC	193	Yes	7924.35	10,000	No
426-A(8')	3158.01	11/13/97	11/14/97	Total Solid	--	--	80.17	--	--
				TPHC	191	Yes	310.14	10,000	No
426-B(8')	3158.02	11/13/97	11/14/97	Total Solid	--	--	82.43	--	--
				TPHC	187	Yes	ND	10,000	No
426-C(8')	3158.03	11/13/97	11/14/97	Total Solid	--	--	77.17	--	--
				TPHC	195	Yes	234.75	10,000	No
426-D(8')	3158.04	11/13/97	11/14/97	Total Solid	--	--	77.09	--	--
				TPHC	198	Yes	ND	10,000	No
426-E(8')	3158.05	11/13/97	11/14/97	Total Solid	--	--	80.97	--	--
				TPHC	192	Yes	ND	10,000	No
426-F(8')	3158.06	11/13/97	11/14/97	Total Solid	--	--	74.71	--	--
				TPHC	203	Yes	ND	10,000	No
426-G(8')	3158.07	11/13/97	11/14/97	Total Solid	--	--	80.29	--	--
				TPHC	189	Yes	ND	10,000	No
426-H(5.5')	3158.08	11/13/97	11/14/97	Total Solid	--	--	91.32	--	--
				TPHC	169	Yes	ND	10,000	No
426-I(5.5')	3158.09	11/13/97	11/14/97	Total Solid	--	--	88.68	--	--
				TPHC	175	Yes	ND	10,000	No
426-J(5.5')	3158.10	11/13/97	11/14/97	Total Solid	--	--	84.28	--	--
				TPHC	184	Yes	ND	10,000	No
426-A(8')	3187.01	12/2/97	12/3/97	Total Solid	--	--	84.09	--	--
				TPHC	184	Yes	297.90	10,000	No
426-B(8')	3187.02	12/2/97	12/3/97	Total Solid	--	--	84.59	--	--
				TPHC	184	Yes	ND	10,000	No
426-C(5.5')	3187.03	12/2/97	12/3/97	Total Solid	--	--	83.43	--	--
				TPHC	179	Yes	6413.79	10,000	No
426-D(5.5')	3187.04	12/2/97	12/3/97	Total Solid	--	--	82.92	--	--
				TPHC	185	Yes	187.30	10,000	No
426-A(8')	3193.01	12/3/97	12/4/97	Total Solid	--	--	85.00	--	--
				TPHC	178	Yes	ND	10,000	No
426-B(5.5')	3193.02	12/3/97	12/4/97	Total Solid	--	--	78.01	--	--
				TPHC	192	Yes	ND	10,000	No
1C(6')	1606901	4/21/01	4/25/01	Total Solid	--	--	87.48	--	--

				TPHC	178	Yes	255.11	10,000	No
2E(6')	1606902	4/21/01	4/25/01	Total Solid	--	--	84.89	--	--
				TPHC	182	Yes	234.15	10,000	No
3D(6')	1606903	4/21/01	4/25/01	Total Solid	--	--	95.47	--	--
				TPHC	161	Yes	170.65	10,000	No
4C(6')	1606904	4/21/01	4/25/01	Total Solid	--	--	85.44	--	--
				TPHC	181	Yes	614.93	10,000	No

Note:

* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

ND Not detected above stated method detection limit

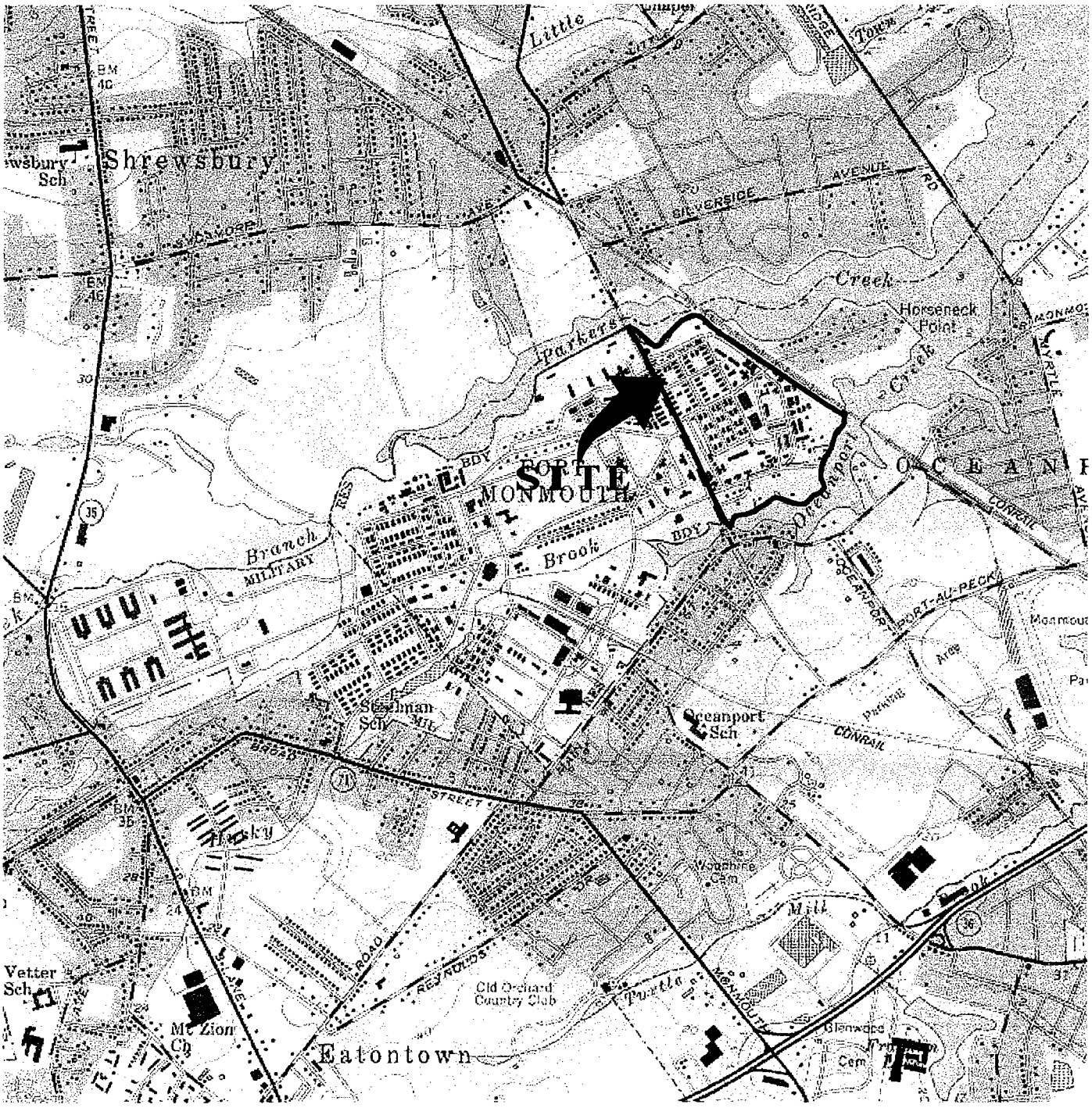
TPHC Total Petroleum Hydrocarbons

-- Not Applicable

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS for VOCs
BUILDING 426, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Sample depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters Detected	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
426-B1	2508.02	5/5/97	5/7/97	Acetone	140	1000	NO
				Methylene Chloride	30	210	NO
				Benzene	110	13	YES
				Toluene	430	1000	NO
				Tetrachloroethene	10	4	YES
				Ethylbenezene	3600E	1000	YES
				Total Xylenes	10200E	1000	YES
426-E	2511.06	5/7/97	5/9/97	Acetone	890	1000	NO
				Mthylene Chloride	39	210	NO
				Benzene	52	13	YES
				Toluene	140	1000	NO
				Ethylbenzene	640	1000	NO
				Total Xylenes	1630	1000	YES
426-F	2511.07	5/7/97	5/9/97	Acetone	68	1000	NO
				Ethylbenzene	1200E	1000	YES
				Total Xylenes	1500E	1000	YES
426-G2	2511.09	5/7/97	5/9/97	Mehtylene Chloride	41	210	NO
				Benzene	160	13	YES
				Toluene	1400E	1000	YES
				Ethylbenzene	1700E	1000	YES
426-C	3187.03	12/2/97	12/3/97	Total Xylenes	4600	1000	YES

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 426
Main-Post East
Fort Monmouth Army Base
Monmouth County, NJ

VERSAR
Engineers, Managers, Scientists, & Planners
Bristol, PA

Scale: 1" = 2000'	Date: Dec. 2001

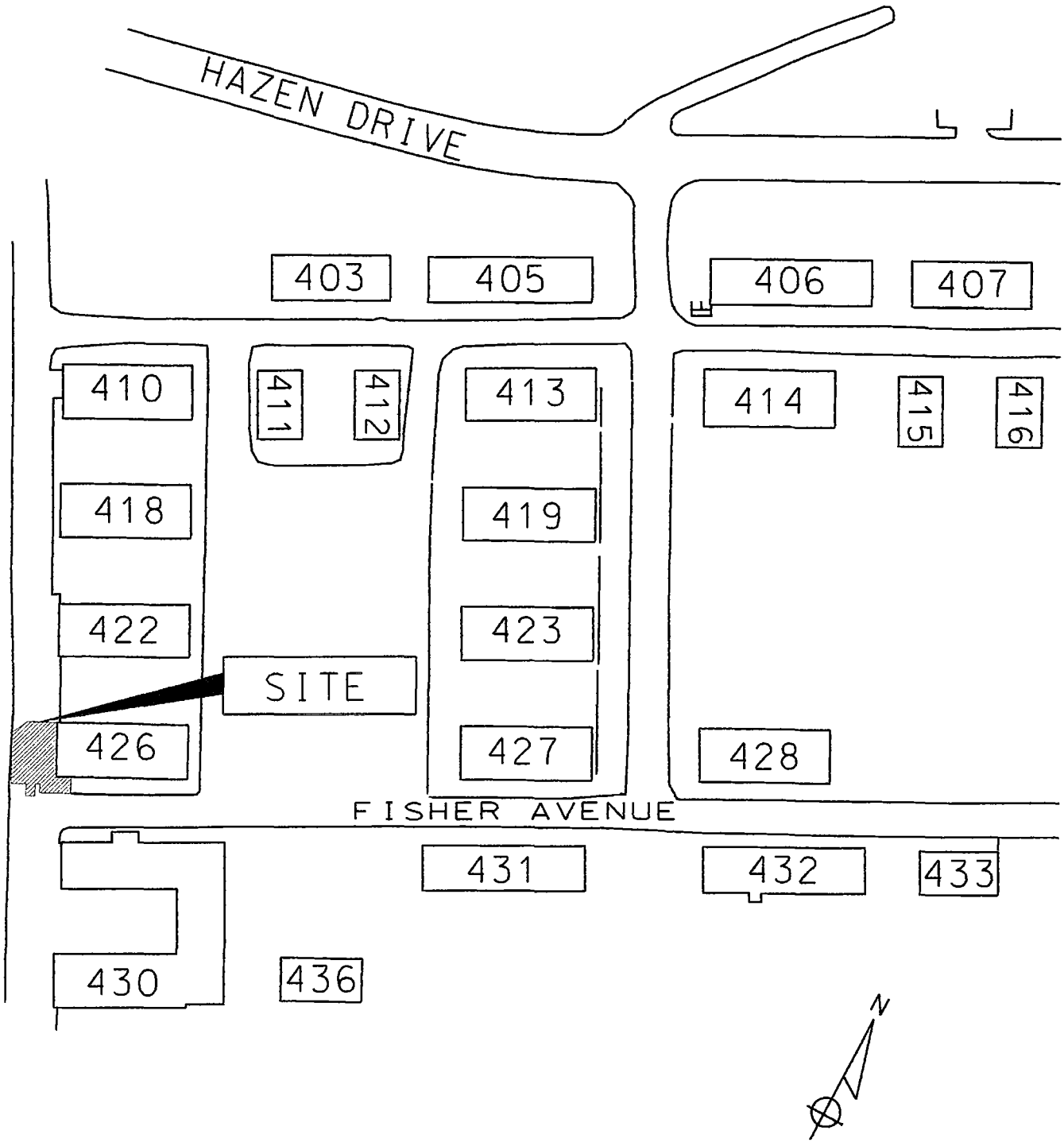


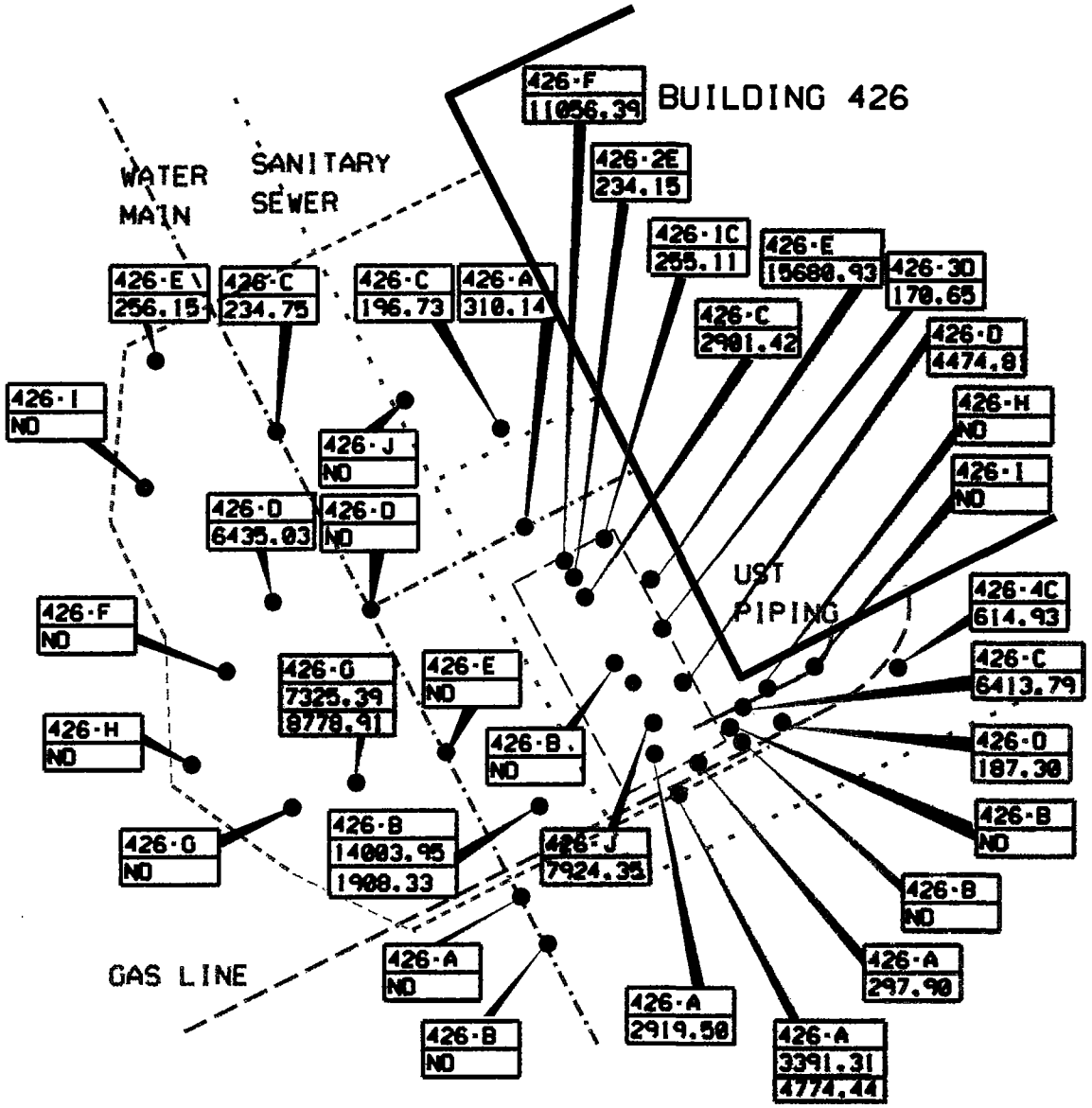
FIGURE 2
SITE MAP
BUILDING 426
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=100'

DATE: MAY 1997

426 FIG 2



LEGEND

- SOIL SAMPLE LOCATION (5/5/97)
- SOIL SAMPLE LOCATION (5/7/97)
- SOIL SAMPLE LOCATION (11/13/97)
- SOIL SAMPLE LOCATION (12/2/97)
- SOIL SAMPLE LOCATION (12/3/97)
- SOIL SAMPLE LOCATION (4/21/01)
- GROUNDWATER SAMPLE LOCATION (2/15/00 AND 3/18/00)

426-1C / 255.11 SAMPLE LOCATION IDENTIFICATION / CONCENTRATION OF TPH IN MG/KG

APPROXIMATE LIMIT OF EXCAVATION

N

FIGURE 3
SOIL SAMPLE LOCATION MAP
BUILDING 426
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1" = 10' | DATE: JAN 2002

F114 017

APPENDIX A

NJDEP UST REPORT CERTIFICATION FORM

(12/97) **New Jersey Department of Environmental Protection**

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New Jersey
Facility Street Address : Directorate of Public Works Building 173
Municipality: Oceanport County: Monmouth

Block: _____ Lot(s): _____ Telephone Number : 732-532-6224

B. Owner (RP)'s Name: _____

Street Address: _____ City : _____

State: _____ Zip: _____ Telephone Number : _____

C. (Check as appropriate)

- ☐ Site Investigation Report (SIR) $500 Fee
- ☐ Remedial Investigation Report (RIR) $1000 Fee

D. (Complete all that apply)

- Assigned Case Manager: Ian Curtis, Federal Case Manager
- UST Registration Number : 0090010-40
- Incident Report Number : 97-05-01-1403-18
- Tank Closure Number: _____

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E .....Yes No

Name: Dinker Desai Signature: _____ UST Cert. No.: _____

Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: N/A – U.S. Army

Firm Address: Directorate of Public Works Buildings 173 City: Fort Monmouth

State:NJ Zip:07703 Telephone Number : 732-532-6224

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)]as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, 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."

Name (Print or Type): James Ott Title: Directorate of Public Works

Signature: _____

Company Name: U.S. Army Fort Monmouth Date: _____

APPENDIX B

WASTE MANIFEST

Date _____ Cust. Phone _____

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

616 13113

Driver On _____ Off _____

er's Name _____

B. 426

Price Per Ton _____

Supplies

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Rec'd By _____

Weigher _____

Other Products Always Available
- Fuel Oil
- Hardware
- Lawn & Garden Suppli
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

22.84 TONS

Gross lb.
Tare lb.
Net lb.

ctions

d prices are for street curb delivery, except where the curb and sidewalk are entirely bridged ed and a suitable road provided to actual point of unloading inside of curb. We will assume no ty for any damages where delivery is made inside of curb.

CUSTOMER CC

Date _____ Cust. Phone _____

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

616 13114

Driver On _____ Off _____

er's Name _____

B. 426

Price Per Ton _____

Supplies

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Rec'd By _____

Weigher _____

Other Products Always Available
- Fuel Oil
- Hardware
- Lawn & Garden Suppli
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

21.74 TONS

Gross lb.
Tare lb.
Net lb.

ctions

d prices are for street curb delivery, except where the curb and sidewalk are entirely bridged ed and a suitable road provided to actual point of unloading inside of curb. We will assume no ty for any damages where delivery is made inside of curb.

CUSTOMER CC

Date _____ Cust. Phone _____

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

L+R 13151

Driver On _____ Off _____

er's Name _____

B. 426

Price Per Ton _____

Supplies

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Other Products Always Available
- Fuel Oil
- Hardware
- Lawn & Garden Supp
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone

DATE TIME

22.13 TONS

Gross lb.
Tare lb.
Net lb.

ctions

Date _____ Cust. Phone _____

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

6M

13152

Driver On _____ Off _____

er's Name _____
s _____
_____
_____

Price Per Ton _____

Supplies

_____ _____
_____ _____

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Suppl
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

Gross lb. _____
Tare lb. _____
Net lb. _____

ctions _____

ed prices are for street curb delivery, except where the curb and sidewalk are entirely bridged cted and a suitable road provided to actual point of unloading inside of curb. We will assume no ility for any damages where delivery is made ins de of curb.

Rec'd By _____

Weigher _____

CUSTOMER CC

Date _____ Cust. Phone _____

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13177

Driver On _____ Off _____

r's Name _____
_____
_____

Price Per Ton _____

Supplies

_____ _____
_____ _____

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

Gross lb. _____
Tare lb. _____
Net lb. _____

uctions _____

prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb We will assume no for any damages where delivery is made inside of curb.

Rec'd By _____

Weigher _____

CUSTOMER COP

Cust. Phone _____

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13178

Driver On _____ Off _____

Name _____
_____
_____

Price Per Ton _____

Supplies

_____ _____
_____ _____

Price _____

Tax _____

Sub Total _____

Del. Chg. _____

TOTAL _____

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone

DATE TIME

Gross lb. _____
Tare lb. _____
Net lb. _____

ctions _____

APPENDIX C

UST DISPOSAL CERTIFICATE

THIS CHECK IS DELIVERED FOR PAYMENT ON THE FOLLOWING ACCOUNTS.

DATE		AMOUNT	
TOTAL OF INVOICES			
LESS ___ % DISCOUNT			
LESS FREIGHT			
LESS			
TOTAL DEDUCTIONS			
AMOUNT OF CHECK			

MAZZA & SONS, INC.
RECYCLING DIVISION
3230 SHAFPO RD.
TINTON FALLS, NJ 07753

1196

55-7233/2212

DATE 5/30/97.

PAY TO THE ORDER OF Tecom Vinnell $ 212.80

Two Hundred Twelve + 80/100. DOLLARS

Sovereign Bank

Security features included. Details on back.

⑈001196⑈ ⑆221272332⑆000 10910992866⑈

MP

51

MAZZA & SONS, INC.

Metal Recyclers
3230 Shafto Rd.
Tinton Falls, NJ
(908) 922-9292

NO. 293

DATE: 30 May 97

B.426

Customer's Name Tecom Vinnell

Address _____

	Weight	Price
Cast Iron		
Steel Turnt		23.50
Lt. Iron		
Copper #1		
Copper #2		

14780 LB

12680 LB

2100

30

Ck# 1196

	Weight	Price
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Battery		
TOTAL AMOUNT:		73.50

Weigher _____ Customer _____

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

APPENDIX D
UNDER
A SEPARATE
COVER

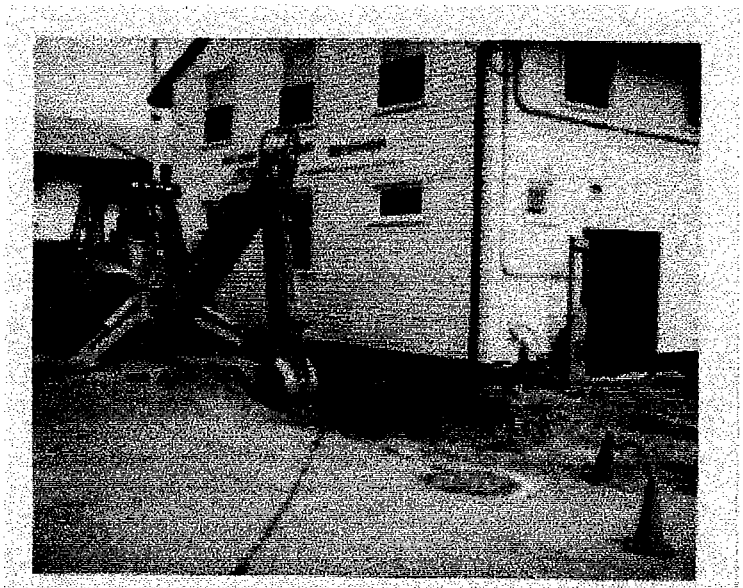
APPENDIX E

GROUNDWATER ANALYTICAL DATA PACKAGE

APPENDIX E
UNDER
A SEPARATE
COVER

APPENDIX F

PHOTOGRAPHS



MAY 01, 1997

PHOTOGRAPHIC LOG

UST NO. 90010-40

Building 426
Main Post-East
Fort Monmouth

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA

APPENDIX D

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
96-1262
Bldg..426

Project # 2508
Date Rec. 05/06/97
Date Comp. 05/09/97
Released by:

Daniel K. Wright
Laboratory Director

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	✓	__
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	✓	__
5. IR Spectra submitted for standards, blanks, & samples	__	NA __
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met.	__	✓

2504.57 200%
High TPH matrix interference BS = 102%

RPD = 64% matrix interference

(If not met, list number of days exceeded for each sample)

Additional Comments:

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: GENE LESINSKI – DPW
Phone #: 532-0989
( )DERA (X)OMA ( )Other:
Project No:
Location: B. 426
Samplers Name / Company : GARY DiMARTINIS – TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	6 Solids	Mansel	VOA's	To be Determined				Comments: Remarks / Preservation Method
2508.01	426-A	5-5-97	1312	SOIL	2	X	X	X	X				40	4' DEPTH *
.02	426-B1		1334										60	3' DEPTH
.03	426-B2		1348										80	4' DEPTH
.04	426-C		1447										ND	4' DEPTH
.05	426-D		1506										90	4' DEPTH
.06	426-E		1518										ND	4' DEPTH
.07	426-DUP		—										—	FIELD DUPLICATE
.08	426-FB		1530	AQ									—	FIELD BLANK (*), HCl

NOTE: OVA (#A52114) CALIBRATED @ 95ppm CH4 + ZERO(0) AIR AT 1300 HRS ON 5/5/97 BY G. DiMARTINIS.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	5/6/97 1145	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: ( )Standard 4 wks, (X)Rush 5 Days, ( )ASAP Verbal ____ Hrs.

Remarks:
DEDICATED SAMPLING TOOLS USED.

print legibly

Custody.xls5/1/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Lab. ID # :**	2508
	DPW. SELFM-PW-EV	**Date Rec'd:**	06-May-97
	Bldg. 173	**Analysis Start:**	07-May-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	09-May-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B426

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2508.01	426-A	**1.00**	16.27	78.21	185	**2919.50**
2508.02	426-B1	**1.00**	15.84	83.40	178	**14003.95**
2508.03	426-B2	**1.00**	15.71	79.22	189	**1908.33**
2508.04	426-C	**1.00**	15.18	82.04	189	**196.73**
2508.05	426-D	**1.00**	15.25	82.54	187	**6435.03**
2508.06	426-E	**1.00**	15.06	84.73	184	**256.15**
2508.07	426-DUP	**1.00**	15.34	82.17	186	**18502.72**
METHOD BLANK	7-May-97	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997

Calibration Files
1 =T01046.D 2 =T01045.D 3 =T01042.D
4 =T01041.D 5 =T01040.D

	Compound	1	2	3	4	5	Avg	%RSD
1) s	o-terphenyl	4.421	3.506	3.685	3.771	3.467	3.770 E4	10.22
2) t	tphc	7.383	5.401	5.059	5.716	4.569	5.626 E4	19.03

(#) = Out of Range

1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\970509\T01271.D Vial: 1
Acq On : 9 May 97 5:08 pm Operator:
Sample : 50 ppm std Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	s	o-terphenyl	37.699	36.724 E3	2.6	100	-0.08
2	t	tphc	56.257	48.719 E3	13.4	96	-0.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\970509\T01282.D Vial: 1
Acq On : 10 May 97 12:38 am Operator:
Sample : 50 ppm std Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	s	o-terphenyl	37.699	38.122 E3	-1.1	103	-0.08
2	t	tphc	56.257	51.480 E3	8.5	102	-0.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Matrix Spike Recovery Report

Lab. ID # : 2508

Location #: B426

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
2508.07MS	630	4665.14	5932.18	201.12	75-125
2508.07MSD	630	4665.14	3971.42	-110.11	75-125

RPD	684.00	20.00

6/4/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Blank Spike Recovery Report

Lab. ID # : 2508

Location #: B426

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	7-May-97	630	643.71	102.18	75-125

6/4/97

12

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01279.D Vial: 21
Acq On : 9 May 97 10:37 pm Operator:
Sample : 2508.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:03 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.30f	422137	9.649	mg/L	m
	Target Compounds					
2)	t tphc	11.42	39836940	743.194	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

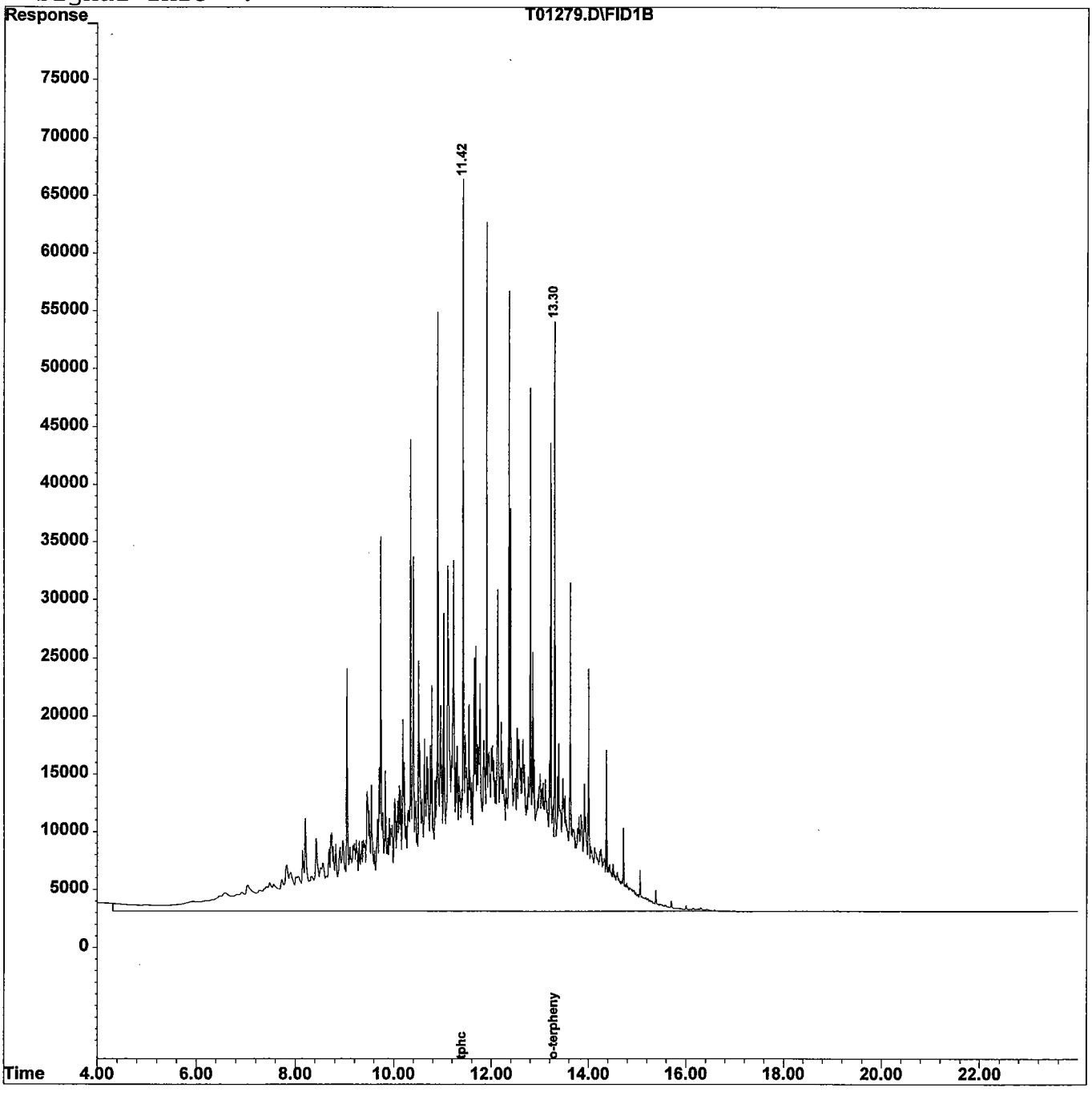
13

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01279.D Vial: 21
Acq On : 9 May 97 10:37 pm Operator:
Sample : 2508.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:03 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



14

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01280.D Vial: 22
Acq On : 9 May 97 11:17 pm Operator:
Sample : 2508.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:04 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.31f	509621	12.167	mg/L	m
	Target Compounds					
2)	t tphc	11.43	176509251	3708.409	mg/L	m

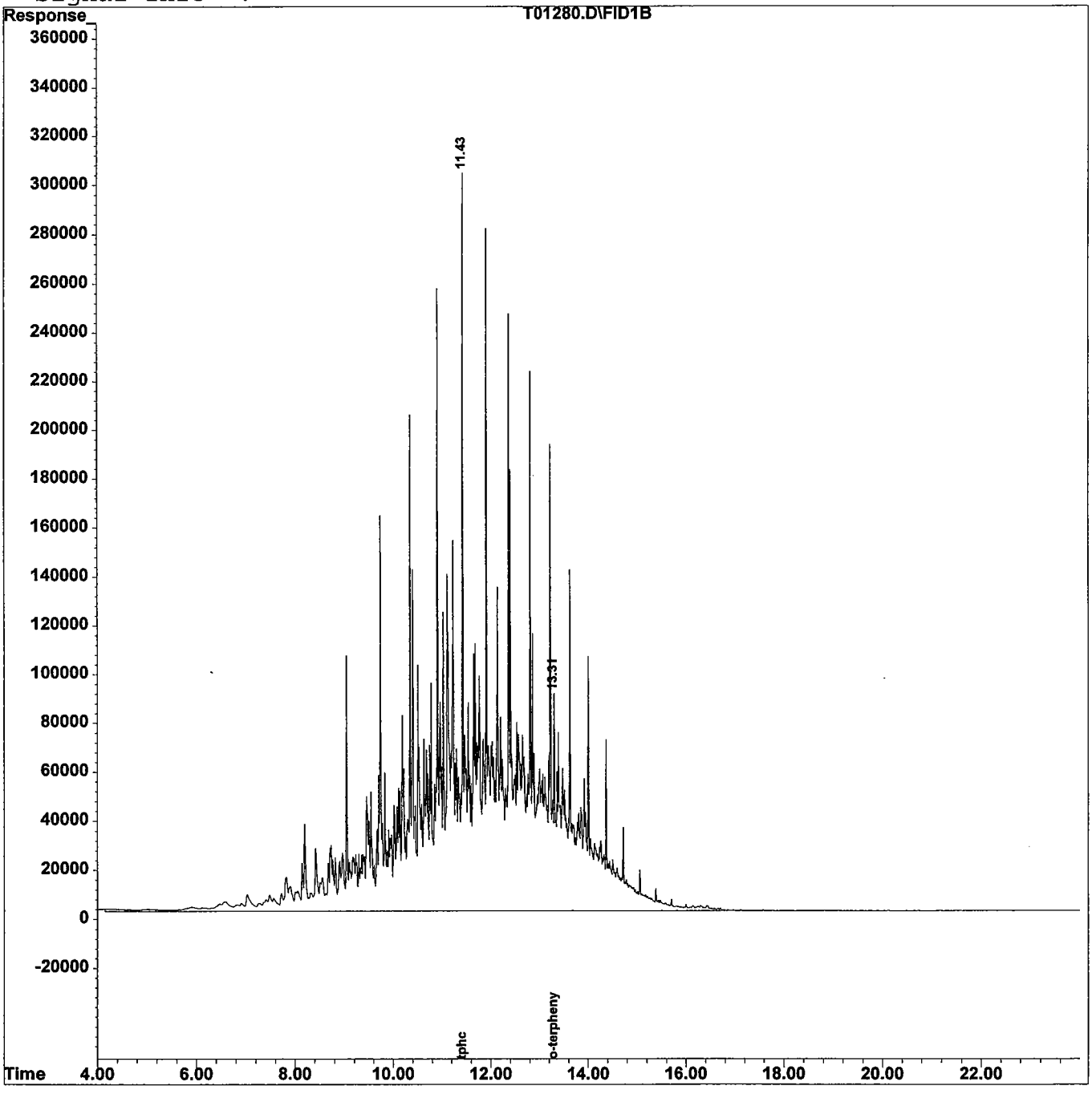
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01280.D Vial: 22
Acq On : 9 May 97 11:17 pm Operator:
Sample : 2508.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:04 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



16

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01281.D Vial: 23
Acq On : 9 May 97 11:58 pm Operator:
Sample : 2508.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:05 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.30f	406086	9.187	mg/L	m
	Target Compounds					
2)	t tphc	13.30	27494968	475.425	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

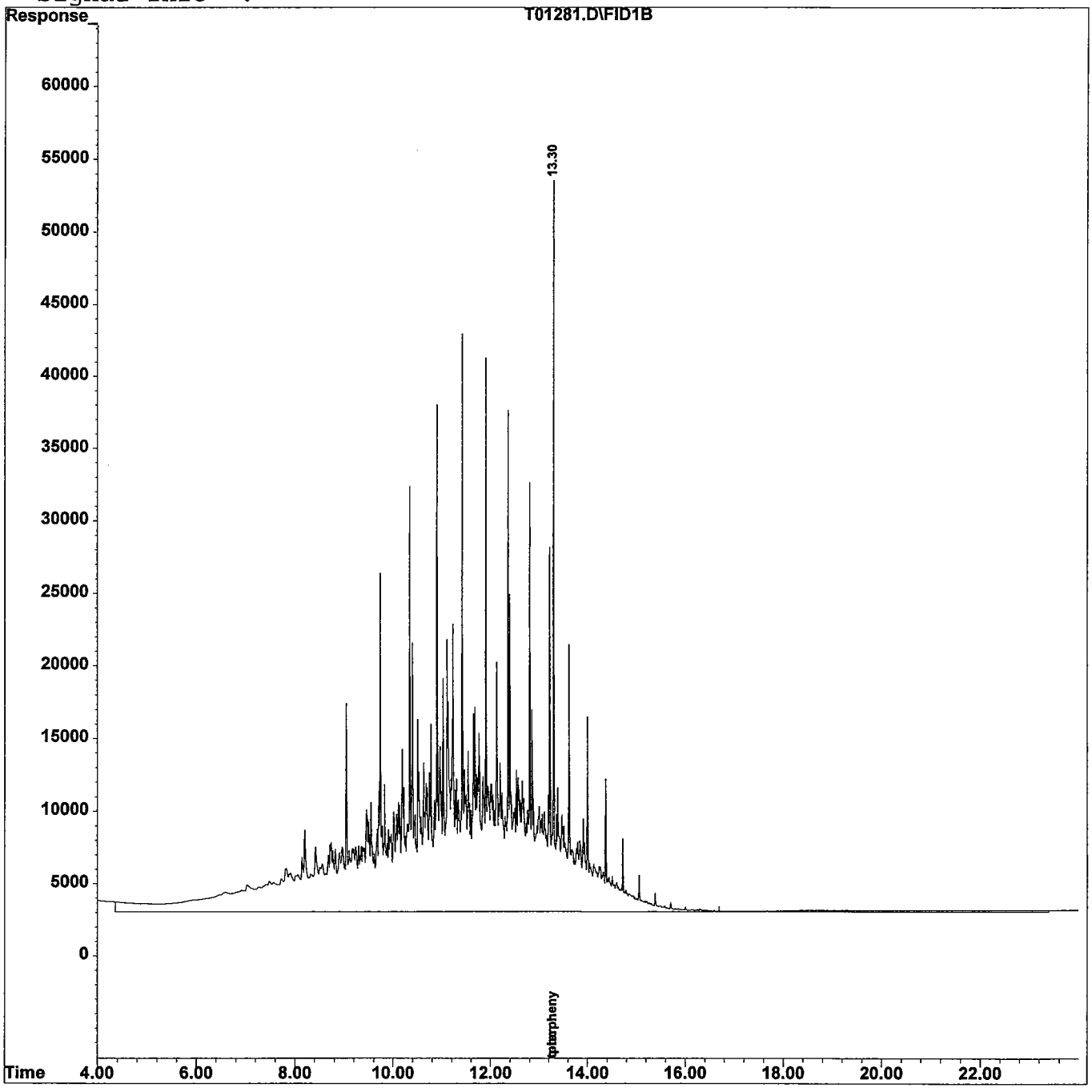
17

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01281.D Vial: 23
Acq On : 9 May 97 11:58 pm Operator:
Sample : 2508.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:05 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



18

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01283.D Vial: 25
Acq On : 10 May 97 1:19 am Operator:
Sample : 2508.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:08 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1)	s o-terphenyl	13.30f	381155	8.470 mg/L m
	Target Compounds			
2)	t tphc	13.30	7868230	49.607 mg/L m

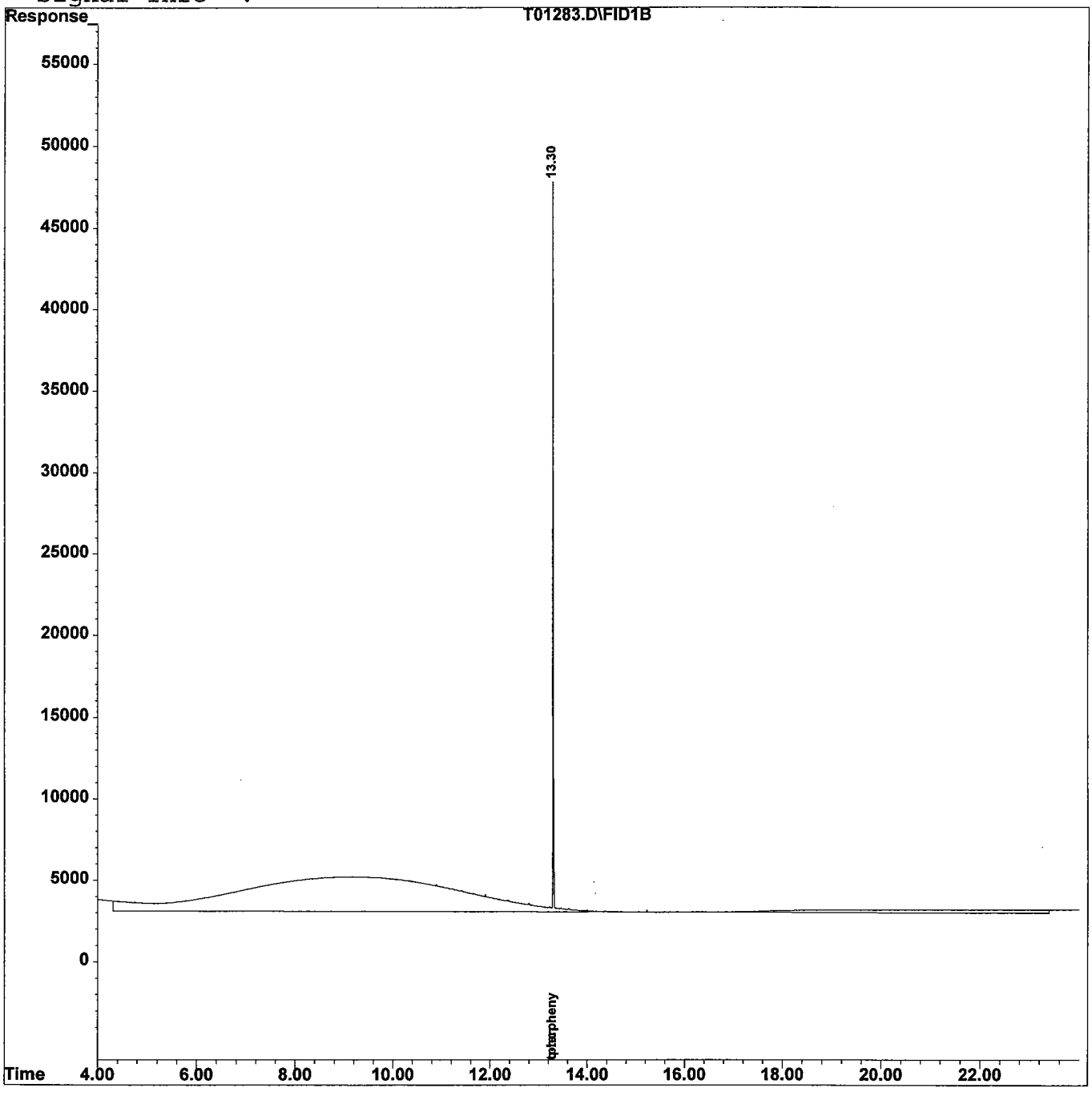
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01283.D Vial: 25
Acq On : 10 May 97 1:19 am Operator:
Sample : 2508.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:08 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01284.D Vial: 26
Acq On : 10 May 97 1:59 am Operator:
Sample : 2508.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:09 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.30f	407287	9.222	mg/L	m
	Target Compounds					
2)	t tphc	11.42	80077909	1616.254	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

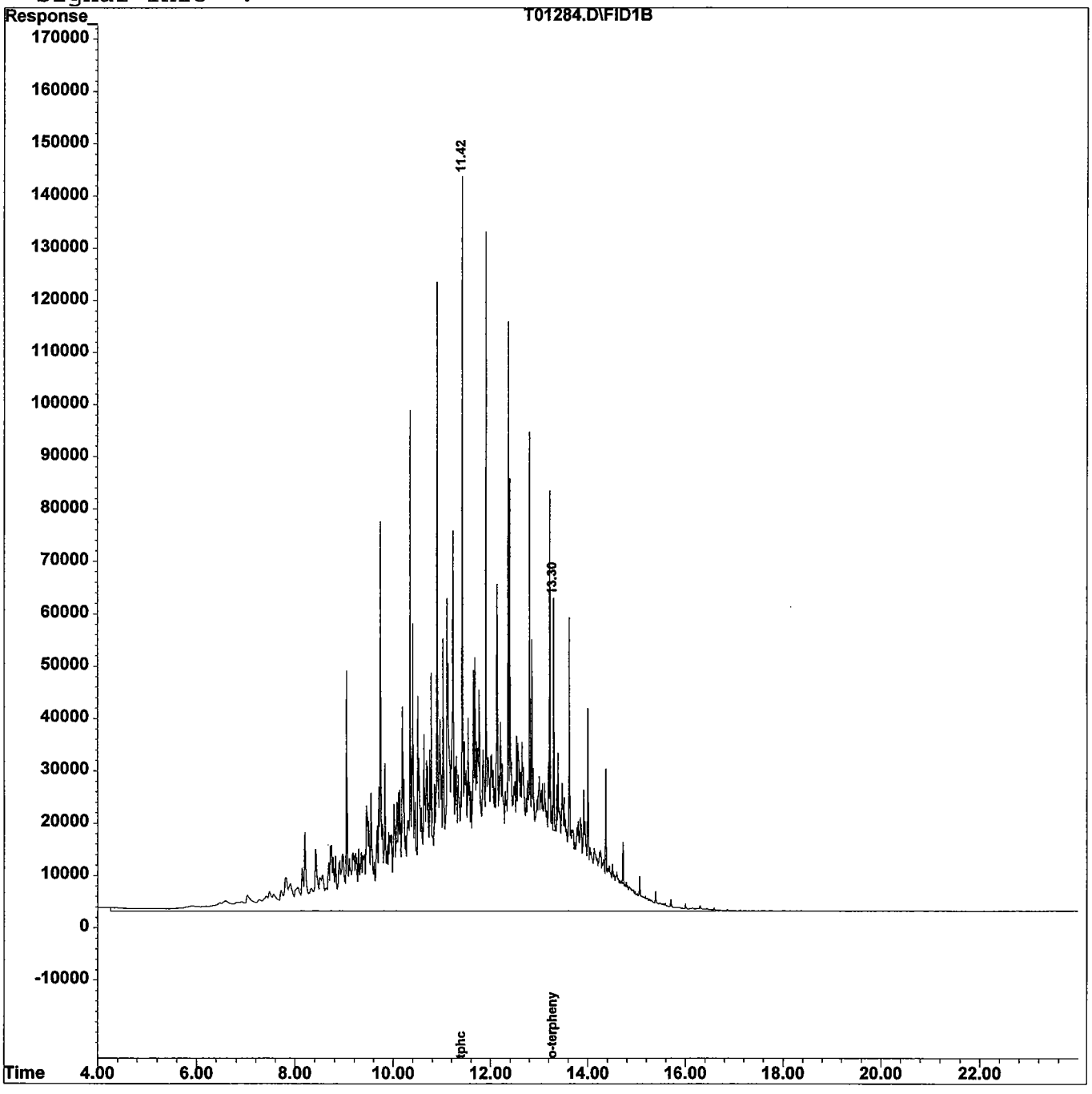
21

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01284.D Vial: 26
Acq On : 10 May 97 1:59 am Operator:
Sample : 2508.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:09 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01285.D Vial: 27
Acq On : 10 May 97 2:39 am Operator:
Sample : 2508.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:10 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) s	o-terphenyl	13.30f	389699	8.716 mg/L m
	Target Compounds			
2) t	tphc	13.30	7081318	32.535 mg/L m

(f)=RT Delta > 1/2 Window (m)=manual int.

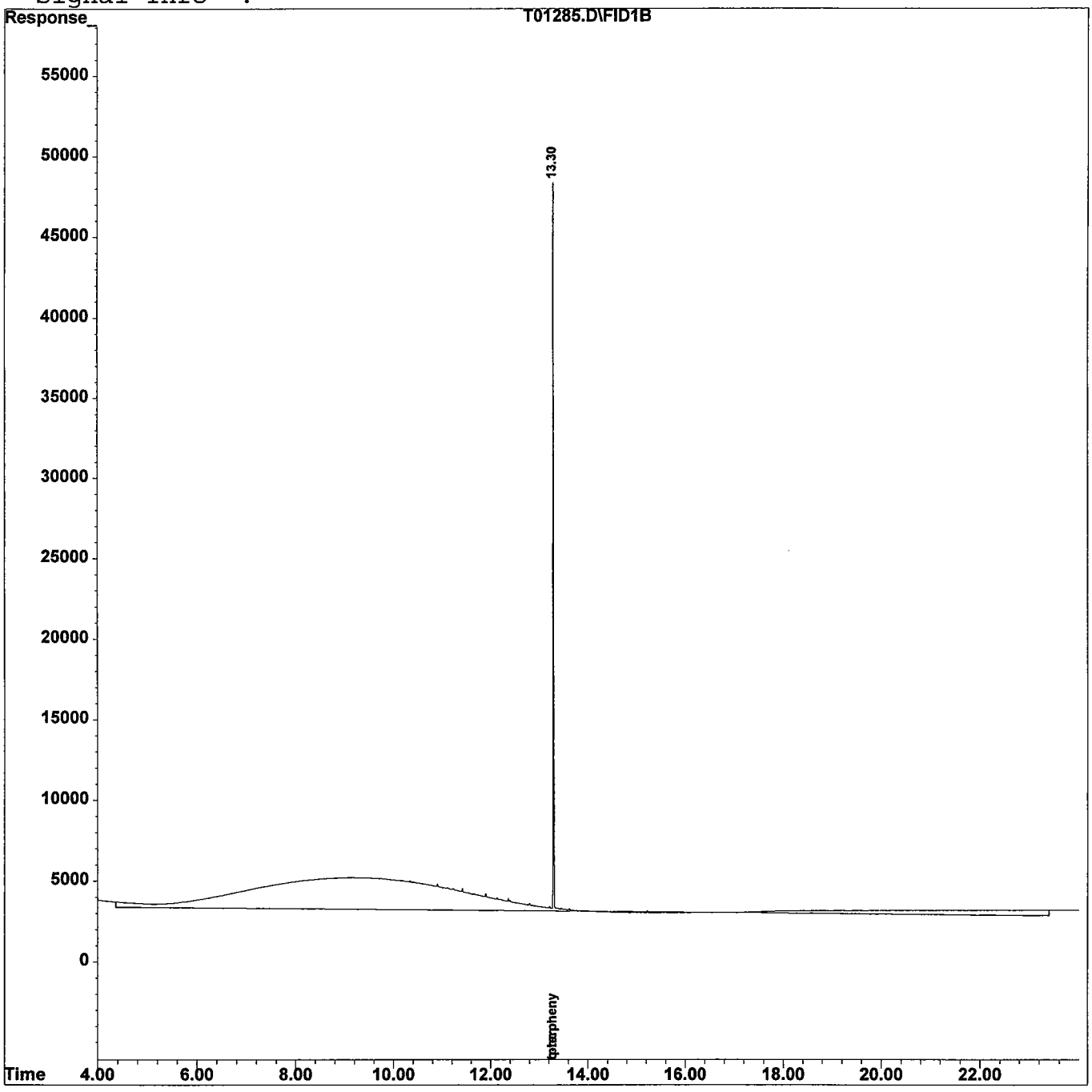
23

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01285.D Vial: 27
Acq On : 10 May 97 2:39 am Operator:
Sample : 2508.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:10 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970509\T01286.D Vial: 28
Acq On : 10 May 97 3:19 am Operator:
Sample : 2508.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:11 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.31f	450601	10.468	mg/L	m
	Target Compounds					
2)	t tphc	11.43	220606791	4665.140	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

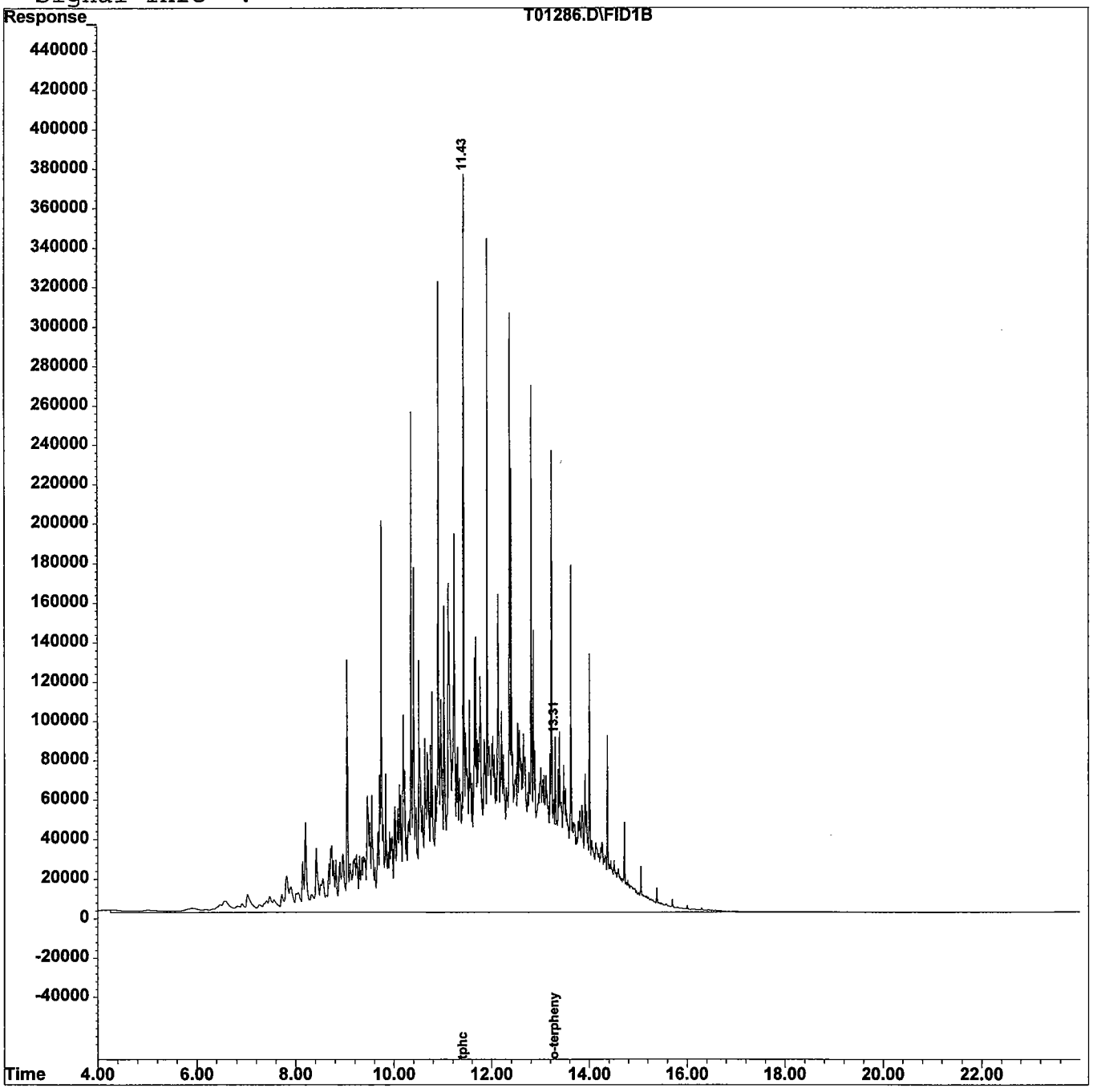
26

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970509\T01286.D Vial: 28
Acq On : 10 May 97 3:19 am Operator:
Sample : 2508.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 12 11:11 1997 Quant Results File: TPH5.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH5.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed Apr 16 08:30:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH5.M

Volume Inj. :
Signal Phase :
Signal Info :



26

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1.	Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	✓
2.	Table of Contents submitted	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	✓
4.	Document paginated and legible	✓
5.	Chain of Custody submitted	✓
6.	Samples submitted to lab within 48 hours of sample collection	✓
7.	Methodology Summary submitted	✓
8.	Laboratory Chronicle and Holding Time Check submitted	✓
9.	Results submitted on a dry weight basis	✓
10.	Method Detection Limits submitted	✓
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	✓

Laboratory Manager or Environmental Consultant's Signature 

Date 1/26/96

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - EPA Method 8240
B.426

Project # 2508
Date Rec. 05/06/97
Date Compl. 05/19/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) — Y

2. Retention times for chromatograms provided — Y

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — Y
   b. DFTPP Meet Criteria —

4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series — Y

5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — Y

6. GC/MS Calibration Requirements

   a. Calibration Check Compounds Meet Criteria — Y
   b. System Performance Check Compounds Meet Criteria — Y

7. Blank Contamination - If yes, List compounds and concentrations in each blank: — N

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

8. Surrogate Recoveries Meet Criteria — Y

   If not met, list those compounds and their recoveries which fall outside the acceptable range:

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

   If not met, were the calculations checked and the results qualified as "estimated"? — Y

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria — Y
   (If not met, list those compounds and their recoveries which fall outside the acceptable range)

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

Daily Blank

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V00820.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	7	U
107131	Acrylonitrile	7	U
75650	tert-Butyl alcohol	13	U
1634044	Methyl-tert-Butyl ether	3	U
108203	Di-isopropyl ether	2	U
	Dichlorodifluoromethane	4	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	3	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	3	U
75-69-4	Trichlorofluoromethane	2	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	2	U
156-60-5	trans-1,2-Dichloroethene	2	U
75-35-3	1,1-Dichloroethane	1	U
108-05-4	Vinyl Acetate	3	U
78-93-3	2-Butanone	3	U
	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
75-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	2	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
110-75-8	2-Chloroethyl vinyl ether	2	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-Pentanone	2	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	2	U
79-00-5	1,1,2-Trichloroethane	2	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	2	U
126-48-1	Dibromochloromethane	2	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-B1

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2508.02

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00821.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	35	U
107131	Acrylonitrile	35	U
75650	tert-Butyl alcohol	65	U
1634044	Methyl-tert-Butyl ether	15	U
108203	Di-isopropyl ether	10	U
	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	15	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	15	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	140	
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	30	
156-60-5	trans-1,2-Dichloroethene	10	U
75-35-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl Acetate	15	U
78-93-3	2-Butanone	15	U
	cis-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
75-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	110	
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
110-75-8	2-Chloroethyl vinyl ether	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	430	
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	
591-78-6	2-Hexanone	10	U
126-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	3600	E

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-B1

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2508.02

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00821.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	5800	E
1330-20-7	o-Xylene	4400	E
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	15	U
106-46-7	1,4-Dichlorobenzene	15	U
95-50-1	1,2-Dichlorobenzene	15	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-B1DL

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2508.02

Sample wt/vol: 0.1 (g/ml) G Lab File ID: V00825.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	350	U
107131	Acrylonitrile	350	U
75650	tert-Butyl alcohol	650	U
1634044	Methyl-tert-Butyl ether	150	U
108203	Di-isopropyl ether	100	U
	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl Chloride	150	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	150	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	270	
75-15-0	Carbon Disulfide	50	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-35-3	1,1-Dichloroethane	50	U
108-05-4	Vinyl Acetate	150	U
78-93-3	2-Butanone	150	U
	cis-1,2-Dichloroethene	50	U
67-66-3	Chloroform	50	U
75-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	86	
107-06-2	1,2-Dichloroethane	100	U
79-01-6	Trichloroethene	50	U
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
110-75-8	2-Chloroethyl vinyl ether	100	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	320	
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	50	U
591-78-6	2-Hexanone	100	U
126-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	2900	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-B1DL

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2508.02

Sample wt/vol: 0.1 (g/ml) G Lab File ID: V00825.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	5200	
1330-20-7	o-Xylene	3700	
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	150	U
106-46-7	1,4-Dichlorobenzene	150	U
95-50-1	1,2-Dichlorobenzene	150	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

Daily Blank

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V00820.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

426-B1

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2508.02

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00821.D

Level: (low/med) LOW Date Received: 05/06/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 15

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000589-43-5	Hexane, 2,4-dimethyl-	21.96	610	JN
2. 000108-87-2	Cyclohexane, methyl-	22.52	2100	JN
3. 000592-27-8	Heptane, 2-methyl-	23.45	2800	JN
4.	unknown hydrocarbon	23.58	1100	J
5. 000589-81-1	Heptane, 3-methyl-	23.89	2500	JN
6.	unknown hydrocarbon	24.00	470	J
7. 000638-04-0	Cyclohexane, 1,3-dimethyl-, cis-	24.85	2200	JN
8. 000111-65-9	Octane	25.01	3400	JN
9. 000111-84-2	Nonane	28.86	440	JN
10.	unknown hydrocarbon	30.96	720	J
11. 000124-18-5	Decane	32.23	570	JN
12. 000620-14-4	Benzene, 1-ethyl-3-methyl-	32.84	490	JN
13. 000526-73-8	Benzene, 1,2,3-trimethyl-	34.04	440	JN
14. 001120-21-4	Undecane	35.24	700	JN
15. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	35.78	440	JN

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration

Calibration Files
50 =V00775.D 10 =V00777.D 20 =V00776.D
100 =V00774.D 200 =V00773.D =

		Compound	50	10	20	100	200	Avg	%RSD
1)	I	Bromochloromethane	----------	ISTD	----------				
2)	t	Acrolein	0.806	0.787	0.738	0.753	0.628	0.742	9.36
3)	t	Acrylonitrile	1.704	1.559	1.514	1.656	1.386	1.564	7.99
4)	t	tert-Butyl alcohol	0.572	0.523	0.545	0.638	0.432	0.542	13.87
5)	t	Methyl-tert-Butyl e	7.056	7.560	6.771	7.110	6.563	7.012	5.39
6)	t	Di-isopropyl ether	1.498	1.501	1.348	1.609	1.462	1.484	6.31
7)	T	Dichlorodifluoromet	2.593	2.482	2.236	2.441	2.291	2.409	6.02
8)	TP	Chloromethane	4.590	5.218	4.539	4.375	4.075	4.559	9.20
9)	TC	Vinyl Chloride	1.916	2.176	1.861	1.656	1.412	1.804	15.92
10)	T	Bromomethane	1.842	1.783	2.249	1.627	1.140	1.728	23.21
11)	T	Chloroethane	1.841	1.788	1.622	1.742	1.619	1.722	5.77
12)	T	Trichlorofluorometh	3.530	3.591	3.195	3.308	3.070	3.339	6.60
13)	MC	1,1-Dichloroethene	4.029	3.951	3.488	3.563	3.441	3.694	7.44
14)	T	Acetone	1.533	1.706	1.448	1.468	1.148	1.461	13.83
15)	T	Carbon Disulfide	8.422	8.408	7.411	7.704	7.441	7.877	6.40
16)	T	Methylene Chloride	2.904	3.543	2.865	2.578	2.444	2.867	14.81
17)	T	trans-1,2-Dichloroe	3.832	3.893	3.420	3.395	3.284	3.565	7.78
18)	TP	1,1-Dichloroethane	4.818	4.827	4.332	4.369	4.192	4.508	6.54
19)	T	Vinyl Acetate	8.359	8.802	8.244	8.223	7.467	8.219	5.85
20)	T	2-Butanone	2.333	2.141	2.157	2.436	1.868	2.187	9.91
21)	T	cis-1,2-Dichloroeth	3.880	3.961	3.487	3.476	3.362	3.633	7.38
22)	TC	Chloroform	4.251	4.264	3.774	3.827	3.715	3.966	6.78
23)	T	1,1,1-Trichloroetha	3.140	3.156	2.797	2.958	2.865	2.983	5.40
24)	T	Carbon Tetrachlorid	1.910	2.060	1.841	1.953	1.878	1.928	4.38
25)	S	1,2-Dichloroethane-	2.899	2.968	2.908	2.709	2.602	2.817	5.50
26)	I	1,4-Difluorobenzene	----------	ISTD	----------				
27)	TM	Benzene	1.454	1.489	1.387	1.450	1.452	1.446	2.57
28)	T	1,2-Dichloroethane	0.448	0.455	0.434	0.465	0.479	0.456	3.72
29)	TM	Trichloroethene	0.378	0.392	0.356	0.360	0.372	0.372	3.86
30)	TC	1,2-Dichloropropane	0.386	0.385	0.366	0.382	0.385	0.381	2.15
31)	T	Bromodichloromethan	0.420	0.423	0.410	0.440	0.443	0.427	3.30
32)	T	2-Chloroethyl vinyl	0.132	0.128	0.115	0.161	0.152	0.138	13.57
33)	T	cis-1,3-Dichloropro	0.431	0.413	0.401	0.492	0.522	0.452	11.68
34)	T	4-Methyl-2-Pentanon	0.179	0.139	0.140	0.199	0.166	0.165	15.68
35)	S	Toluene-d8	0.884	0.793	0.726	1.048	0.937	0.878	14.26
36)	TCM	Toluene	0.999	0.862	0.744	1.205	1.081	0.979	18.49
37)	I	Chlorobenzene-d5	----------	ISTD	----------				
38)	T	trans-1,3-Dichlorop	2.193	2.076	2.329	2.079	2.566	2.248	9.13
39)	T	1,1,2-Trichloroetha	1.863	2.021	2.056	1.495	1.707	1.828	12.70
40)	T	Tetrachloroethene	1.487	1.460	1.444	1.326	1.500	1.443	4.80

(#) = Out of Range

16

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration

Calibration Files
50 =V00775.D 10 =V00777.D 20 =V00776.D
100 =V00774.D 200 =V00773.D =

		Compound	50	10	20	100	200	Avg	%RSD
41)	T	2-Hexanone	1.873	1.703	1.749	1.854	1.536	1.743	7.78
42)	T	Dibromochloromethan	1.612	1.637	1.778	1.370	1.608	1.601	9.16
43)	TMP	Chlorobenzene	3.014	2.925	2.702	2.970	3.027	2.928	4.52
44)	TC	Ethylbenzene	3.881	4.434	3.750	3.816	3.896	3.956	6.92
45)	T	m+p-Xylenes	1.411	1.759	1.437	1.352	1.399	1.472	11.11
46)	T	o-Xylene	3.170	4.060	3.359	2.912	3.038	3.307	13.66
47)	T	Styrene	2.259	2.933	2.306	2.073	2.147	2.344	14.60
48)	TP	Bromoform	0.918	0.841	0.887	0.798	0.890	0.867	5.45
49)	S	Bromofluorobenzene	1.147	1.369	1.218	1.139	1.267	1.228	7.71
50)	TP	1,1,2,2-Tetrachloro	2.243	2.137	2.246	2.049	1.955	2.126	5.92
51)	T	1,3-Dichlorobenzene	1.705	2.360	1.999	1.250	1.320	1.727	26.98
52)	T	1,4-Dichlorobenzene	1.946	2.712	2.343	1.351	1.429	1.956	29.87
53)	T	1,2-Dichlorobenzene	1.898	2.582	2.221	1.350	1.407	1.892	27.88

(#) = Out of Range

Continuing Calibration Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration

Continuing Calibration File: V00819.D

Min. RRF : 0.050 Min. Rel. Area : 25%
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%
1	I	Bromochloromethane	1.000	1.000	0.0	60
2	t	Acrolein	0.742	1.023	-37.8#	10#
3	t	Acrylonitrile	1.564	2.221	-42.1#	10#
4	t	tert-Butyl alcohol	0.542	0.323	40.3#	4#
5	t	Methyl-tert-Butyl ether	7.012	5.303	24.4	5#
6	t	Di-isopropyl ether	1.484	1.453	2.1	6#
7	T	Dichlorodifluoromethane	2.409	2.870	-19.2	7#
8	TP	Chloromethane	4.559	3.855	15.5	6#
9	TC	Vinyl Chloride	1.804	1.700	5.8	7#
10	T	Bromomethane	1.728	1.342	22.3	7#
11	T	Chloroethane	1.722	1.435	16.7	5#
12	T	Trichlorofluoromethane	3.339	3.099	7.2	6#
13	MC	1,1-Dichloroethene	3.694	3.068	16.9	5#
14	T	Acetone	1.461	1.403	4.0	7#
15	T	Carbon Disulfide	7.877	6.844	13.1	5#
16	T	Methylene Chloride	2.867	2.276	20.6	6#
17	T	trans-1,2-Dichloroethene	3.565	2.596	27.2	5#
18	TP	1,1-Dichloroethane	4.508	3.500	22.4	5#
19	T	Vinyl Acetate	8.219	5.885	28.4	5#
20	T	2-Butanone	2.187	1.525	30.3	5#
21	T	cis-1,2-Dichloroethene	3.633	2.834	22.0	5#
22	TC	Chloroform	3.966	2.943	25.8#	5#
23	T	1,1,1-Trichloroethane	2.983	2.480	16.9	5#
24	T	Carbon Tetrachloride	1.928	1.996	-3.5	6#
25	S	1,2-Dichloroethane-d4	2.817	2.295	18.5	53
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	60
27	TM	Benzene	1.446	1.222	15.5	5#
28	T	1,2-Dichloroethane	0.456	0.391	14.4	5#
29	TM	Trichloroethene	0.372	0.300	19.2	5#
30	TC	1,2-Dichloropropane	0.381	0.339	11.0	5#
31	T	Bromodichloromethane	0.427	0.385	9.8	5#
32	T	2-Chloroethyl vinyl ether	0.138	0.259	-88.0#	10#
33	T	cis-1,3-Dichloropropene	0.452	0.536	-18.7	6#
34	T	4-Methyl-2-Pentanone	0.165	0.176	-6.6	6#
35	S	Toluene-d8	0.878	1.102	-25.5	70
36	TCM	Toluene	0.979	1.196	-22.3	7#
37	I	Chlorobenzene-d5	1.000	1.000	0.0	87
38	T	trans-1,3-Dichloropropene	2.248	1.966	12.6	7#
39	T	1,1,2-Trichloroethane	1.828	1.072	41.4#	5#
40	T	Tetrachloroethene	1.443	1.102	23.6	6#

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration

Continuing Calibration File: V00819.D

Min. RRF : 0.050 Min. Rel. Area : 25%
Max. RRF Dev : 35% Max. Rel. Area : 200%

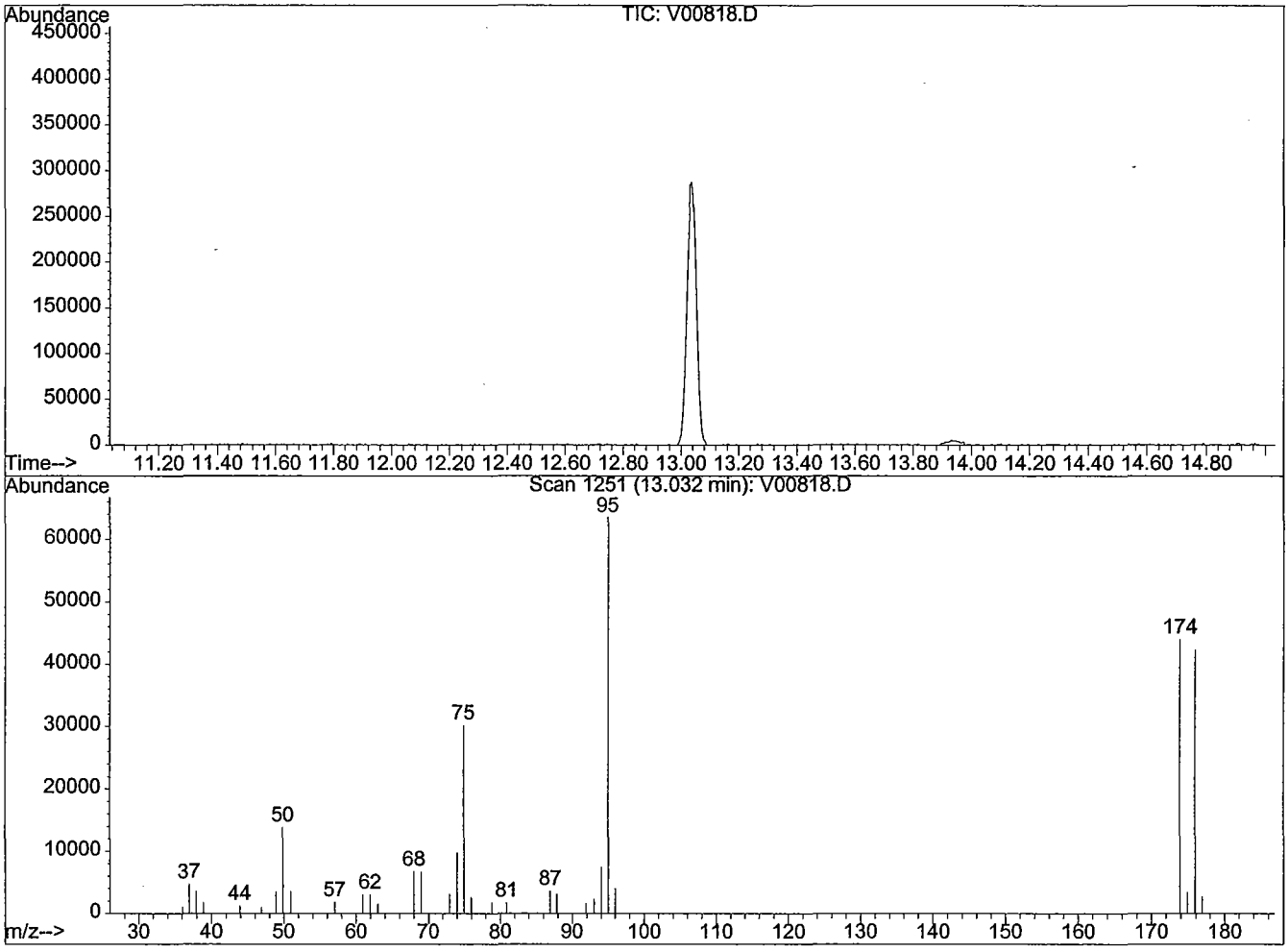
		Compound	AvgRF	CCRF	%Dev	Area%
41	T	2-Hexanone	1.743	1.401	19.6	8#
42	T	Dibromochloromethane	1.601	1.154	27.9	6#
43	TMP	Chlorobenzene	2.928	2.831	3.3	8#
44	TC	Ethylbenzene	3.956	5.206	-31.6#	12#
45	T	m+p-Xylenes	1.472	1.935	-31.5	12#
46	T	o-Xylene	3.307	4.145	-25.3	12#
47	T	Styrene	2.344	3.283	-40.1#	13#
48	TP	Bromoform	0.867	0.754	13.0	7#
49	S	Bromofluorobenzene	1.228	1.755	-42.9#	120
50	TP	1,1,2,2-Tetrachloroethane	2.126	1.788	15.9	8#
51	T	1,3-Dichlorobenzene	1.727	2.242	-29.8	15#
52	T	1,4-Dichlorobenzene	1.956	2.544	-30.1	15#
53	T	1,2-Dichlorobenzene	1.892	2.363	-24.9	15#

(#) = Out of Range SPCC's out = 0 CCC's out = 2

BFB

Data File : C:\HPCHEM\1\DATA\970519\V00818.D
Acq On : 19 May 1997 9:38
Sample : BFB Tune
Misc : 100-29-26/1260032
MS Integration Params: gases.p
Method : C:\HPCHEM\1\METHODS\M62427.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP

Vial: 1
Operator: Paul Skelt
Inst : GC/MS Ins
Multiplr: 1.00



Spectrum Information: Scan 1251

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	13790	PASS
75	95	30	60	47.5	30168	PASS
95	95	100	100	100.0	63536	PASS
96	95	5	9	6.4	4071	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	69.2	43992	PASS
175	174	5	9	7.9	3461	PASS
176	174	95	101	96.2	42336	PASS
177	176	5	9	6.4	2717	PASS

V00818.D M62427.M Thu Jan 15 09:58:22 1998

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID.

Daily Blank

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Lab File ID: V00820.D Lab Sample ID: Daily Blank

Date Analyzed: 05/19/97 Time Analyzed: 11:10

GC Column: Rtx502.2 ID: 0.25 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMSVoa

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	426-B1	2508.02	V00821.D	12:09
02	426-B1DL	2508.02	V00825.D	15:54

COMMENTS:

Spike Recovery and RPD Summary Report - Soil

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jan 13 09:23:08 1998
Response via : Initial Calibration

Non-Spiked Sample: V00786.D

	Spike Sample	Spike Duplicate Sample
File ID :	V00787.D	V00788.D
Sample :	2493.10MS	2493.10MSD
Acq Time:	6 May 1997 22:10	6 May 1997 22:57

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	20	18	20	90	99	9	14	61-145
Benzene	0.0	20	21	23	106	114	7	11	76-127
Trichloroethene	0.0	20	21	23	104	113	9	14	71-120
Toluene	0.0	20	18	19	88	93	6	13	76-125
Chlorobenzene	0.0	20	21	19	104	96	8	13	75-130

- Fails Limit Check

M82405.M Fri Jan 16 09:11:34 1998

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Lab File ID (Standard): V00819.D Date Analyzed: 05/19/97

Instrument ID: GCMSVoa Time Analyzed: 10:13

GC Column: Rtx502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	72413	18.84	461177	21.44	120455	29.27
	UPPER LIMIT	144826	18.34	922354	20.94	240910	28.77
	LOWER LIMIT	36207	19.34	230589	21.94	60228	29.77
	EPA SAMPLE NO.						
01	DAILY BLANK	108430	18.84	672360	21.44	176187	29.27
02	426-B1	92177	18.84	538286	21.43	141352	29.27
03	426-B1DL	90002	18.86	534333	21.44	175727	29.27

IS1 BCM = Bromochloromethane

IS2 DFB = 1,4-Difluorobenzene

IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP # 13461

Project: Case No.: 2508 Location: B.426 SDG No.:

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	DAILY BLANK	100	99	100	0
02	426-B1	88	146*	375*	2
03	426-B1DL	86	141*	171*	2

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(70-121)
SMC2	TOL	=	Toluene-d8	(81-117)
SMC3	BFB	=	Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00820.D Vial: 17
Acq On : 19 May 1997 11:10 Operator: Paul Skelton
Sample : Daily Blank Inst : GC/MS Ins
Misc : Daily Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 15 10:23 1998 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\970519\V00819.D
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.84	128	108430	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.44	114	672360	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.27	119	176187	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.39	65	249985	30.14	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 100.47%			
35) Toluene-d8	25.43	98	730370	29.58	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.60%			
49) Bromofluorobenzene	32.28	95	309414	30.02	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.07%			

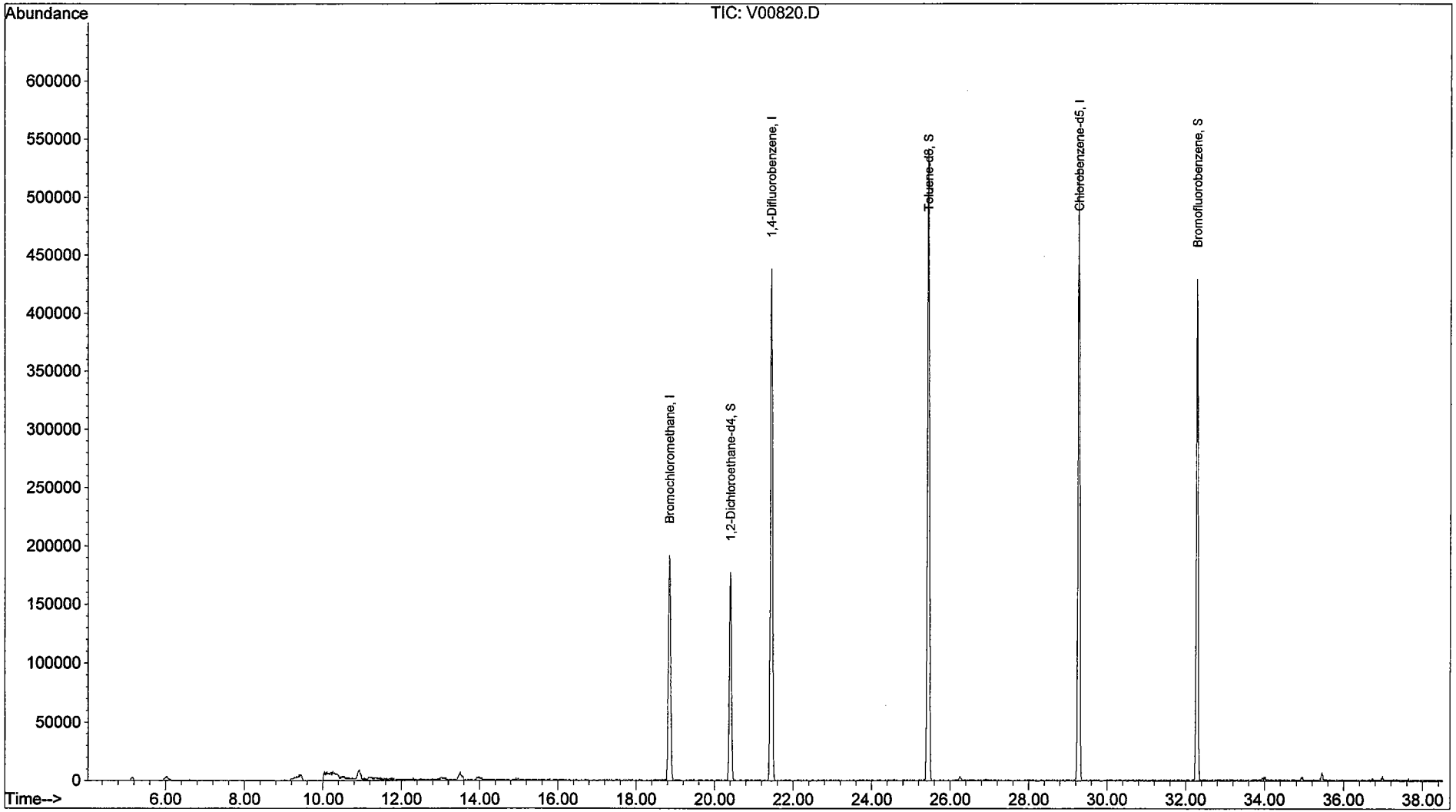
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970519\V00820.D Vial: 17
Acq On : 19 May 1997 11:10 Operator: Paul Skelton
Sample : Daily Blank Inst : GC/MS Ins
Misc : Daily Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 15 10:23 1998 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\970519\V00819.D



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00821.D Vial: 9
Acq On : 19 May 1997 12:09 Operator: Paul Skelton
Sample : 2508.02 Inst : GC/MS Ins
Misc : 426-B1 Multiplr: 1.00
MS Integration Params: NA
Quant Time: Aug 8 8:28 1997 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.84	128	92177	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.43	114	538286	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	141352	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.39	65	229761	26.54	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 88.47%			
35) Toluene-d8	25.43	98	690102	43.83	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 146.10%#			
49) Bromofluorobenzene	32.29	95	651010	112.51	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 375.03%#			
Target Compounds						Qvalue
14) Acetone	11.19	43	123171	27.45	ug/L	92
16) Methylene Chloride	13.52	84	53728	6.10	ug/L	99
27) Benzene	20.71	78	548697	21.14	ug/L	96
36) Toluene	25.64	91	1517461	86.43	ug/L	100
40) Tetrachloroethene	27.31	166	13671	2.01	ug/L	99
44) Ethylbenzene	29.45	91	13590837	729.21	ug/L	98
45) m+p-Xylenes	29.65	106	7981885	1151.17	ug/L	96
46) o-Xylene	30.76	91	13728076	880.91	ug/L	97

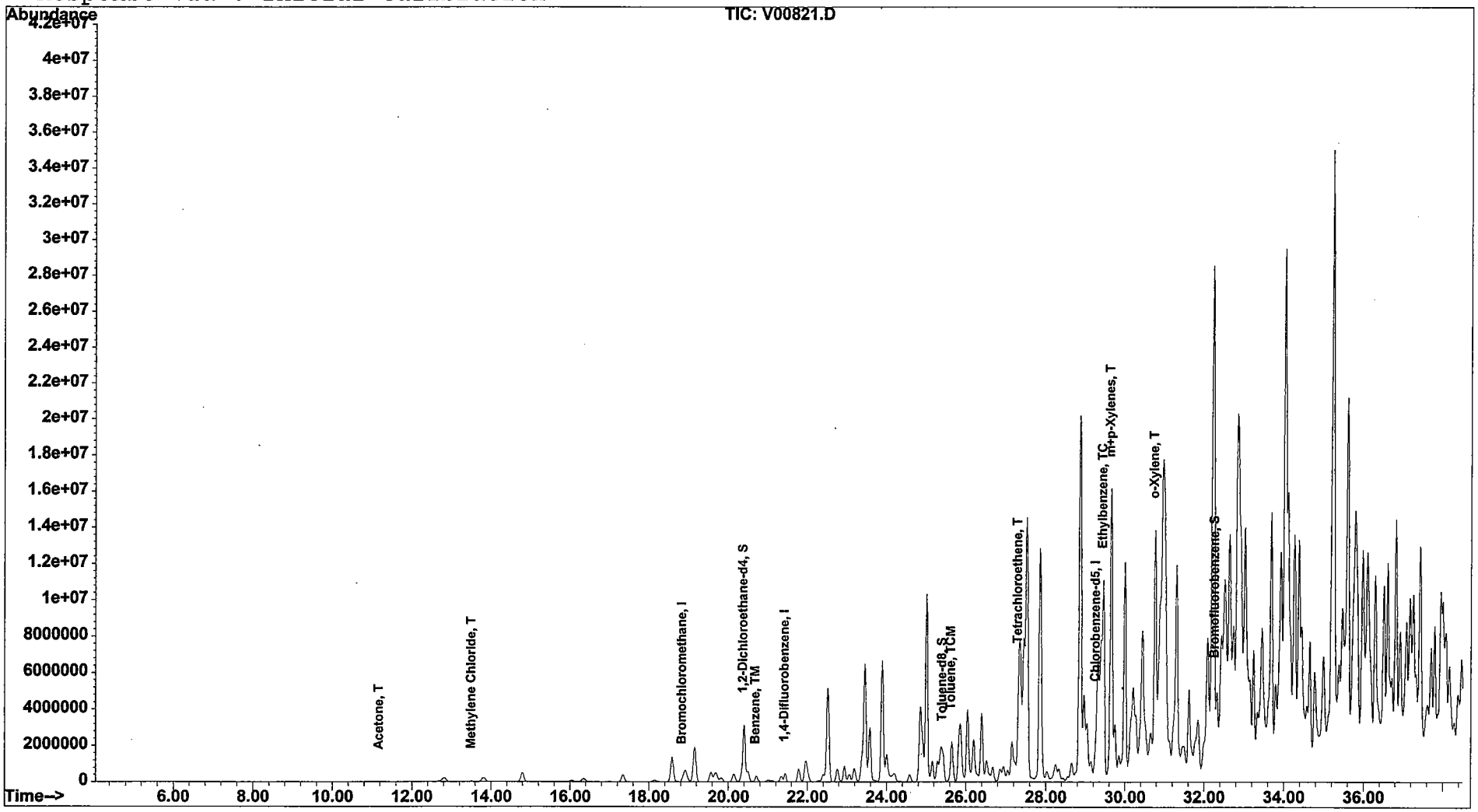
(#) = qualifier out of range (m) = manual integration

27

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970519\V00821.D Vial: 9
Acq On : 19 May 1997 12:09 Operator: Paul Skelton
Sample : 2508.02 Inst : GC/MS Ins
Misc : 426-B1 Multiplr: 1.00
MS Integration Params: NA
Quant Time: Aug 8 8:28 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M62418.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jul 29 12:02:43 1997
Response via : Initial Calibration



28

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00825.D Vial: 3
Acq On : 19 May 1997 15:54 Operator: Paul Skelton
Sample : 2508.02 Inst : GC/MS Ins
Misc : 426-B1 Multiplr: 1.00
MS Integration Params: NA
Quant Time: Aug 8 8:45 1997 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

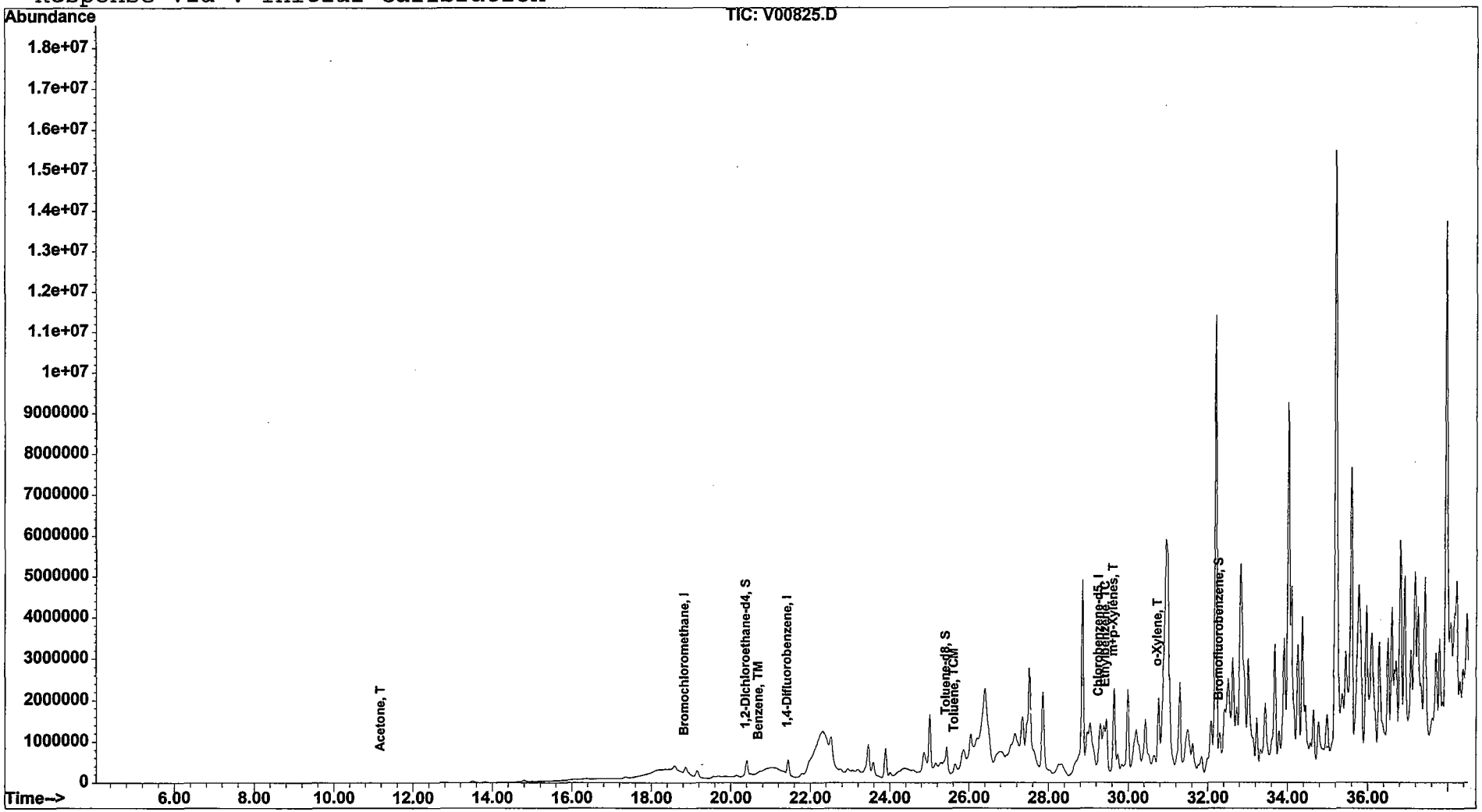
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.86	128	90002	30.00	ug/L	0.02
26) 1,4-Difluorobenzene	21.44	114	534333	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	175727	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.40	65	218718	25.88	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 86.27%			
35) Toluene-d8	25.43	98	663251	42.43	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 141.43%#			
49) Bromofluorobenzene	32.29	95	369348	51.35	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 171.17%#			
Target Compounds						Qvalue
14) Acetone	11.20	43	23424	5.35	ug/L #	51
27) Benzene	20.71	78	44362	1.72	ug/L #	1
36) Toluene	25.64	91	110562	6.34	ug/L	95
44) Ethylbenzene	29.45	91	1322222	57.07	ug/L	97
45) m+p-Xylenes	29.64	106	904772	104.96	ug/L	97
46) o-Xylene	30.75	91	1446081	74.64	ug/L	97

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970519\V00825.D Vial: 3
Acq On : 19 May 1997 15:54 Operator: Paul Skelton
Sample : 2508.02 Inst : GC/MS Ins
Misc : 426-B1 Multiplr: 1.00
MS Integration Params: NA
Quant Time: Aug 8 8:45 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M62418.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jul 29 12:02:43 1997
Response via : Initial Calibration



30

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

		Indicate* Yes, No, N/A
1.	Cover Page, Title Page listing Lab Certification #, facility name & address, & data of report submitted	Y
2.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	Y
3.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s Lab ID's submitted	Y
4.	Document bound, paginated and legible	Y
5.	Chain of Custody submitted	Y
6.	Samples submitted to lab within 48 hours of sample collection	Y
7.	Methodology Summary submitted	Y
8.	Results submitted on a dry weight basis	Y
9.	Method Detection Limits	Y
10.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	Y

Laboratory Manager or Environmental Consultant's Signature _____

Date 1/29/96

Laboratory Certification # 13461

- *Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
96-1262
Bldg..426

Project # 2511
Date Rec. 05/07/97
Date Comp. 05/14/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	X
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	X	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). 25(1,13 135% (MSD + Blank Spike in range)	A	__
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		A
5. IR Spectra submitted for standards, blanks, & samples	__ NA	__
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	A
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)	__	A

Additional Comments: _____

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: GENE LESINSKI - DPW
Phone #: 532-0989
( )DERA (X)OMA ( )Other:
Project No: 0750 -
Location: B. 426
Samplers Name / Company : GARY DiMARTINIS / TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% SOLIDS	MUNSEL	VOLATILES TO BE DETERMINED	OVA	Remarks / Preservation Method
2511 .01	426-A1	5-7-97	0808	SOIL	2	X	X	X	X	7	SIDEWALL @ 4.0' *
.02	426-A2		0905							80	SIDEWALL @ 7.5'
.03	426-B		0815							ND	SIDEWALL @ 4.0'
.04	426-C		0848							20	EXC. FLOOR @ 7.5'
.05	426-D		~~0912~~ HD							60	SIDEWALL @ 7.5'
.06	426-E		0932							80	SIDEWALL @ 4.0'
.07	426-F		0950							100	SIDEWALL @ 4.0'
.08	426-G1		1102							90	6.0' DEPTH
.09	426-G2		1116							90	7.0' DEPTH
.10	426-H		1128							ND	Piping Run @ 1.0'
.11	426-I		1134							ND	Piping Run @ 1.0'
.12	426-J		0857							200	EXC. FLOOR @ 7.5'
.13	426-DUP		—			↓	↓	↓	↓	—	FIELD DUPLICATE
.14	426-FB		1005	AQ					X	—	FIELD BLANK (HCl)

Comments: * = SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	5-7-97 1530	[signature] 5-7-97			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: ( )Standard 4 wks, (X)Rush 5 Days, ( )ASAP Verbal ___ Hrs.

Remarks:

NOTE: OVA CALIBRATED W/95PPM CH_4 + ZERO (A) AIR @ 0800 HRS. ON 5-7-97 by G. DiMARTINIS (#AS1903)

print legibly

Custody.xls5/1/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Blank Spike Recovery Report

Lab. ID # : 2511

Location #: B.426

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	9-May-97	630	674.74	107.10	75-125

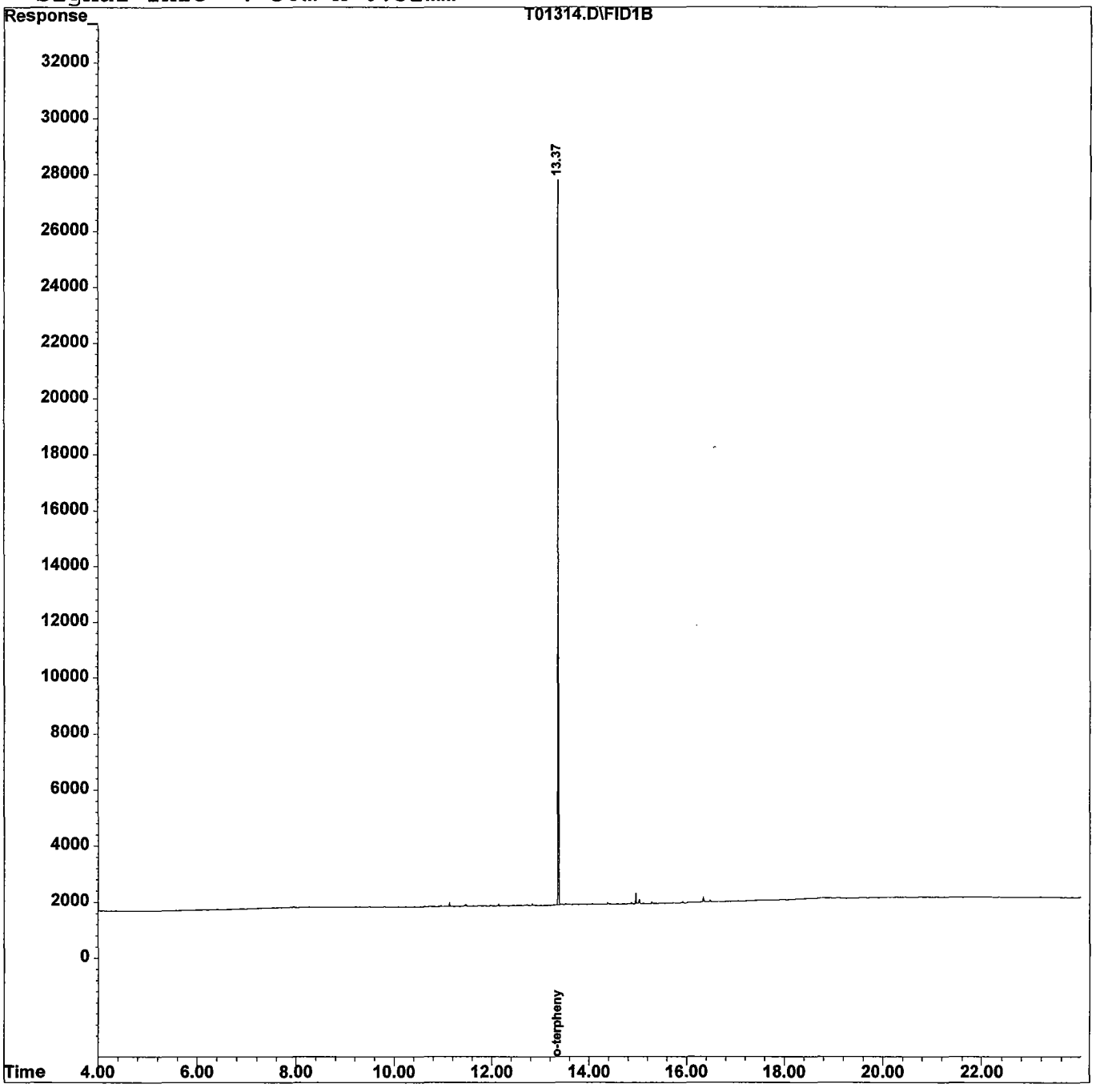
7/11/97

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01314.D Vial: 20
Acq On : 14 May 97 6:55 pm Operator:
Sample : 2511.03 Inst : FID/TCD
Misc : 426-B Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:08 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



14

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01316.D Vial: 22
Acq On : 14 May 97 8:19 pm Operator:
Sample : 2511.05 Inst : FID/TCD
Misc : 426-D Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:09 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	235452	9.729	mg/L	m
	Target Compounds					
2)	t tphc	13.37	25417473	1124.544	mg/L	m

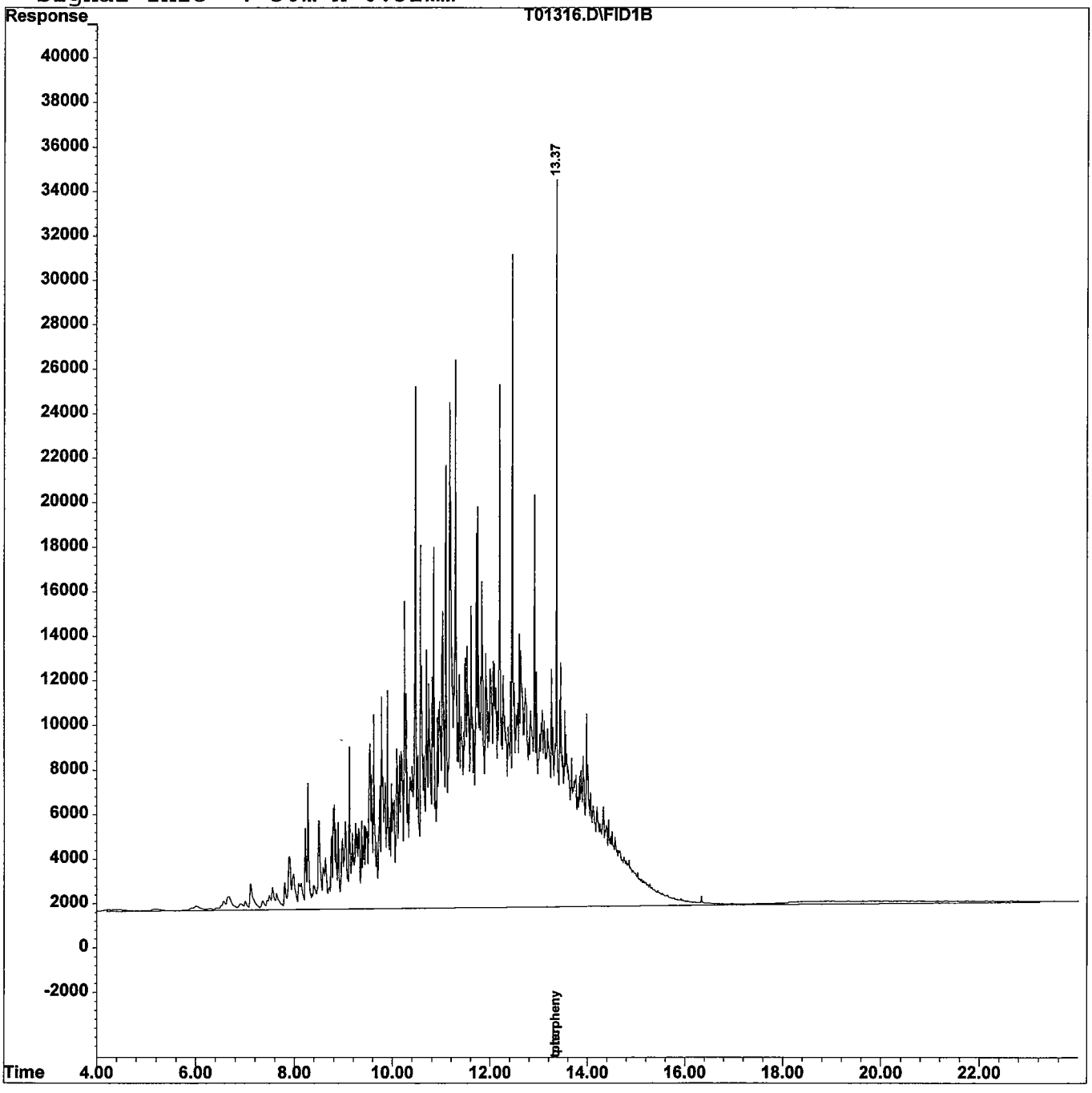
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01316.D Vial: 22
Acq On : 14 May 97 8:19 pm Operator:
Sample : 2511.05 Inst : FID/TCD
Misc : 426-D Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:09 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



26

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01317.D Vial: 23
Acq On : 14 May 97 9:01 pm Operator:
Sample : 2511.06 Inst : FID/TCD
Misc : 426-E Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:10 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	232298	9.598	mg/L	m
	Target Compounds					
2)	t tphc	11.49	84007736	3910.310	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.
T01317.D TPH6.M Thu May 15 09:10:19 1997 Page 1

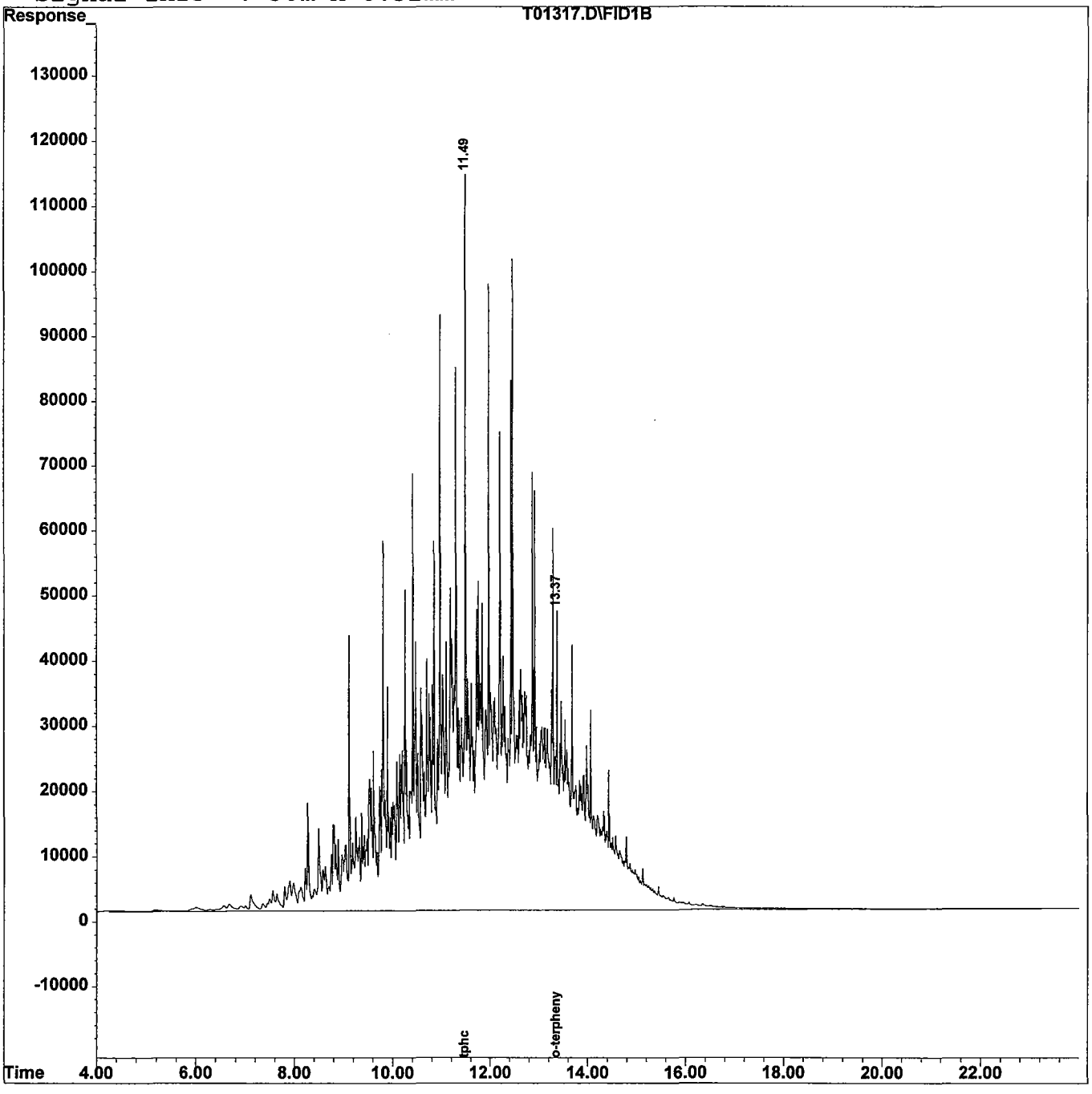
25

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01317.D Vial: 23
Acq On : 14 May 97 9:01 pm Operator:
Sample : 2511.06 Inst : FID/TCD
Misc : 426-E Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:10 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



24

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01318.D Vial: 24
Acq On : 14 May 97 9:42 pm Operator:
Sample : 2511.07 Inst : FID/TCD
Misc : 426-F Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:10 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	231939	9.584	mg/L	m
	Target Compounds					
2)	t tphc	11.49	60677959	2801.059	mg/L	m

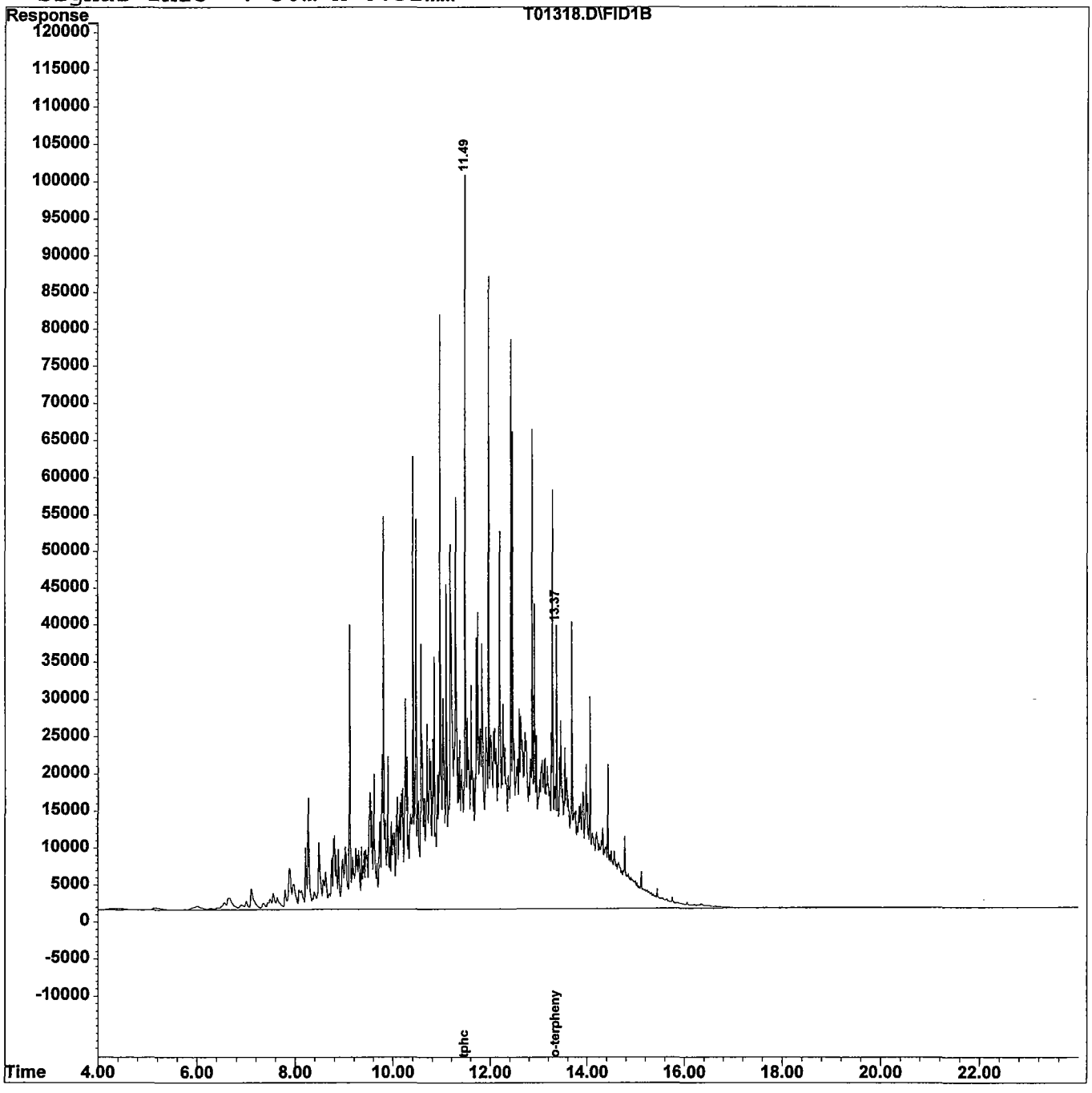
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01318.D Vial: 24
Acq On : 14 May 97 9:42 pm Operator:
Sample : 2511.07 Inst : FID/TCD
Misc : 426-F Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:10 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



26

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01319.D Vial: 25
Acq On : 14 May 97 10:24 pm Operator:
Sample : 2511.08 Inst : FID/TCD
Misc : 426-G1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:11 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	243291	10.053	mg/L	m
	Target Compounds					
2)	t tphc	11.49	43711860	1994.379	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

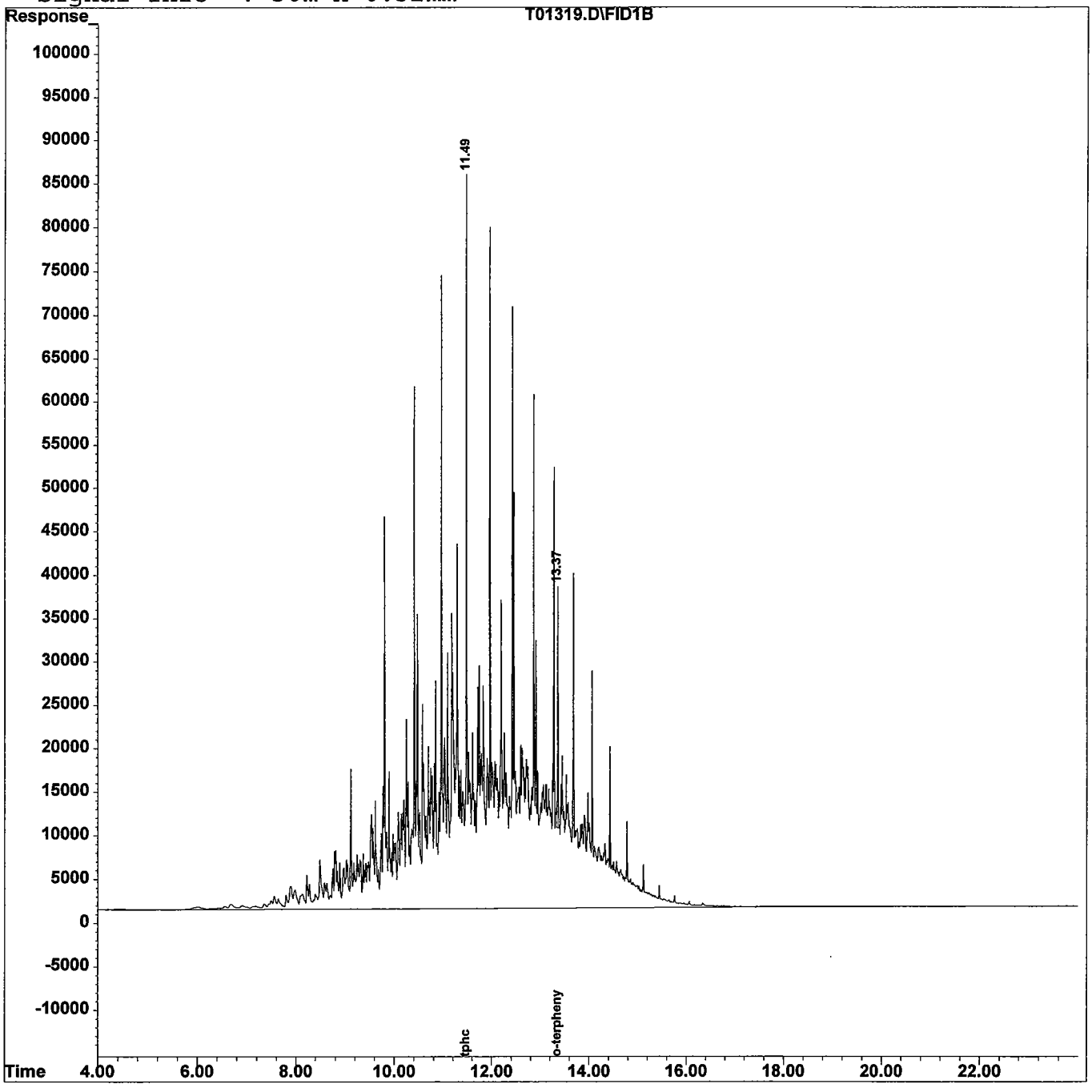
21

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01319.D Vial: 25
Acq On : 14 May 97 10:24 pm Operator:
Sample : 2511.08 Inst : FID/TCD
Misc : 426-G1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:11 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01320.D Vial: 26
Acq On : 14 May 97 11:05 pm Operator:
Sample : 2511.09 Inst : FID/TCD
Misc : 426-G2 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:11 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	231262	9.556	mg/L	m
	Target Compounds					
2)	t tphc	11.49	51131726	2347.168	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

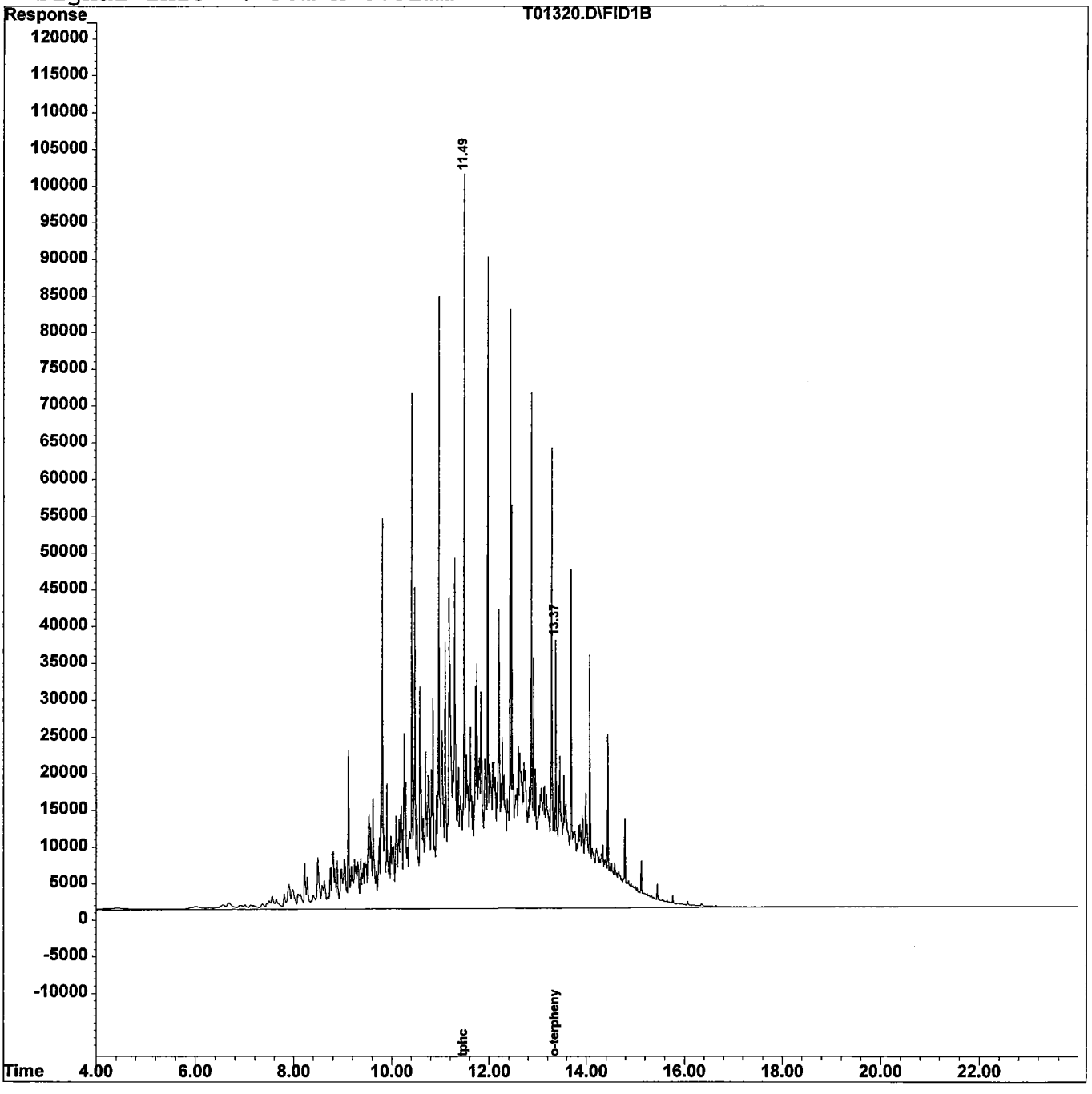
24

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01320.D Vial: 26
Acq On : 14 May 97 11:05 pm Operator:
Sample : 2511.09 Inst : FID/TCD
Misc : 426-G2 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:11 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



30

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01321.D Vial: 27
Acq On : 14 May 97 11:47 pm Operator:
Sample : 2511.10 Inst : FID/TCD
Misc : 426-H Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:12 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) s o-terphenyl	13.37	233492	9.648	mg/L	m
Target Compounds					
2) t tphc	13.37	1184190	N.D.	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

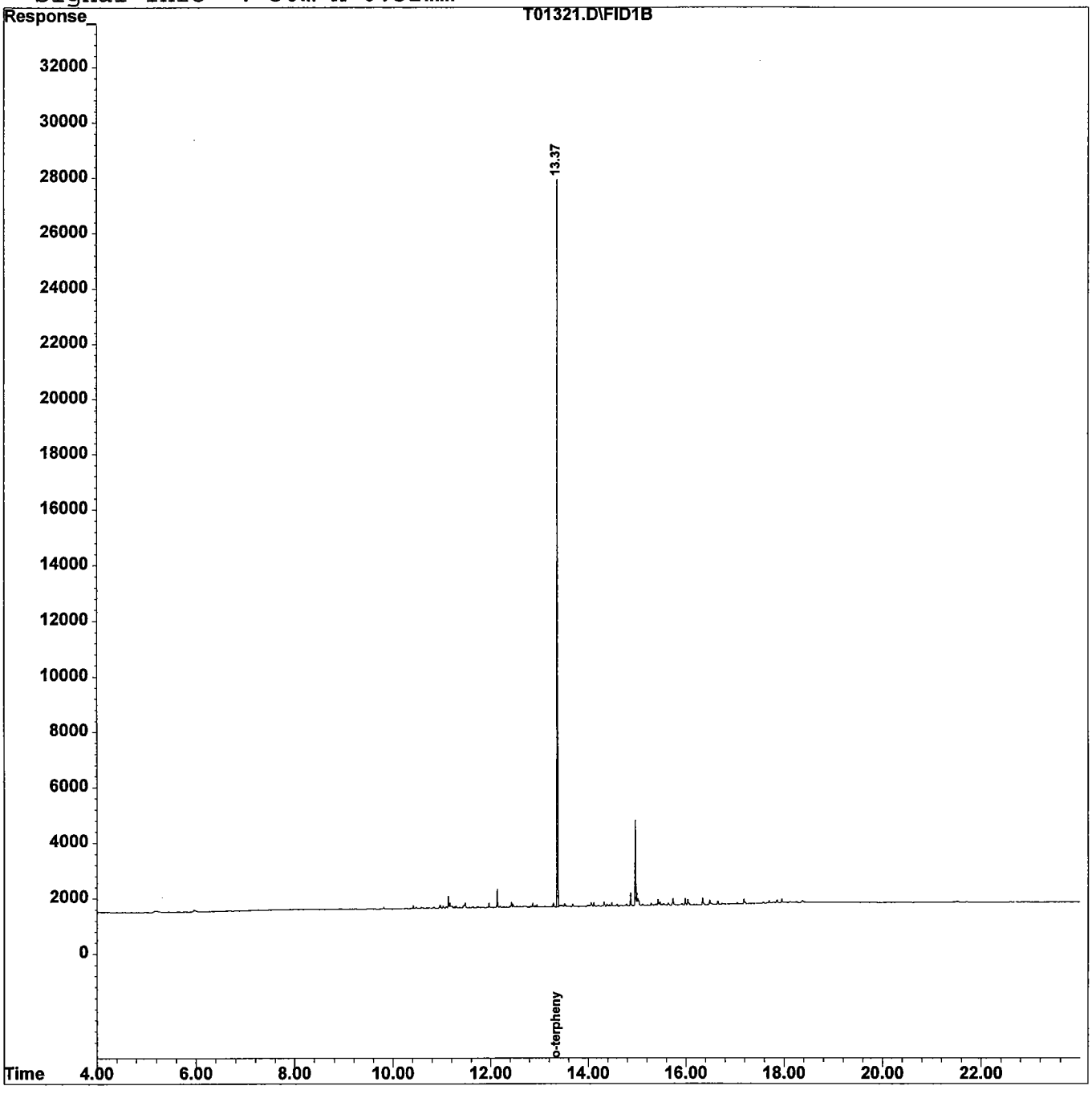
3

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01321.D Vial: 27
Acq On : 14 May 97 11:47 pm Operator:
Sample : 2511.10 Inst : FID/TCD
Misc : 426-H Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:12 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



32

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01323.D Vial: 29
Acq On : 15 May 97 1:09 am Operator:
Sample : 2511.11 Inst : FID/TCD
Misc : 426-I Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:13 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	240520	9.938	mg/L	m
	Target Compounds					
2)	t tphc	13.37	1307765	N.D.	mg/L	m

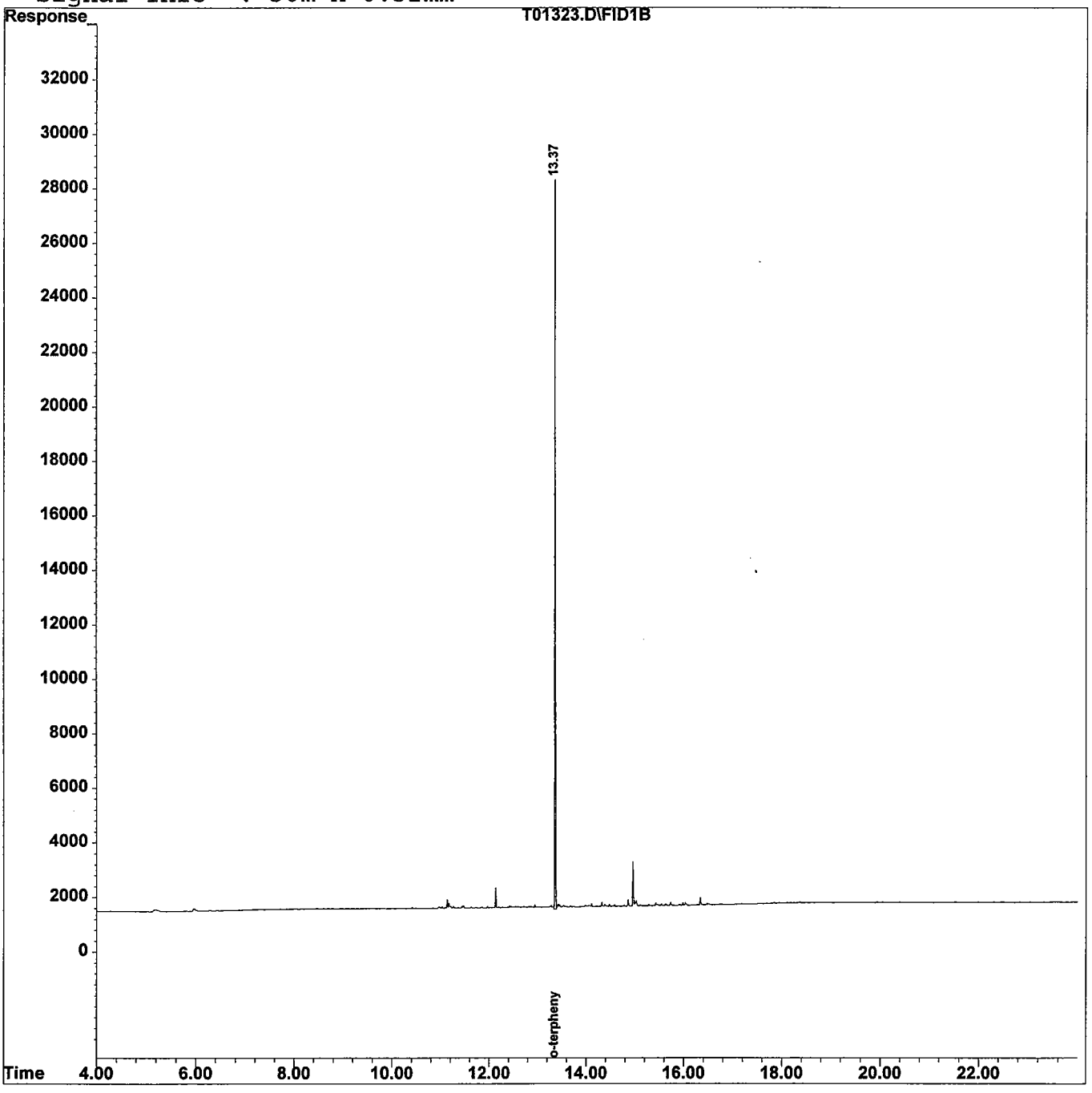
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01323.D Vial: 29
Acq On : 15 May 97 1:09 am Operator:
Sample : 2511.11 Inst : FID/TCD
Misc : 426-I Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:13 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01324.D Vial: 30
Acq On : 15 May 97 1:50 am Operator:
Sample : 2511.12 Inst : FID/TCD
Misc : 426-J Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:14 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	234277	9.680	mg/L	m
	Target Compounds					
2)	t tphc	11.49	42334364	1928.884	mg/L	m

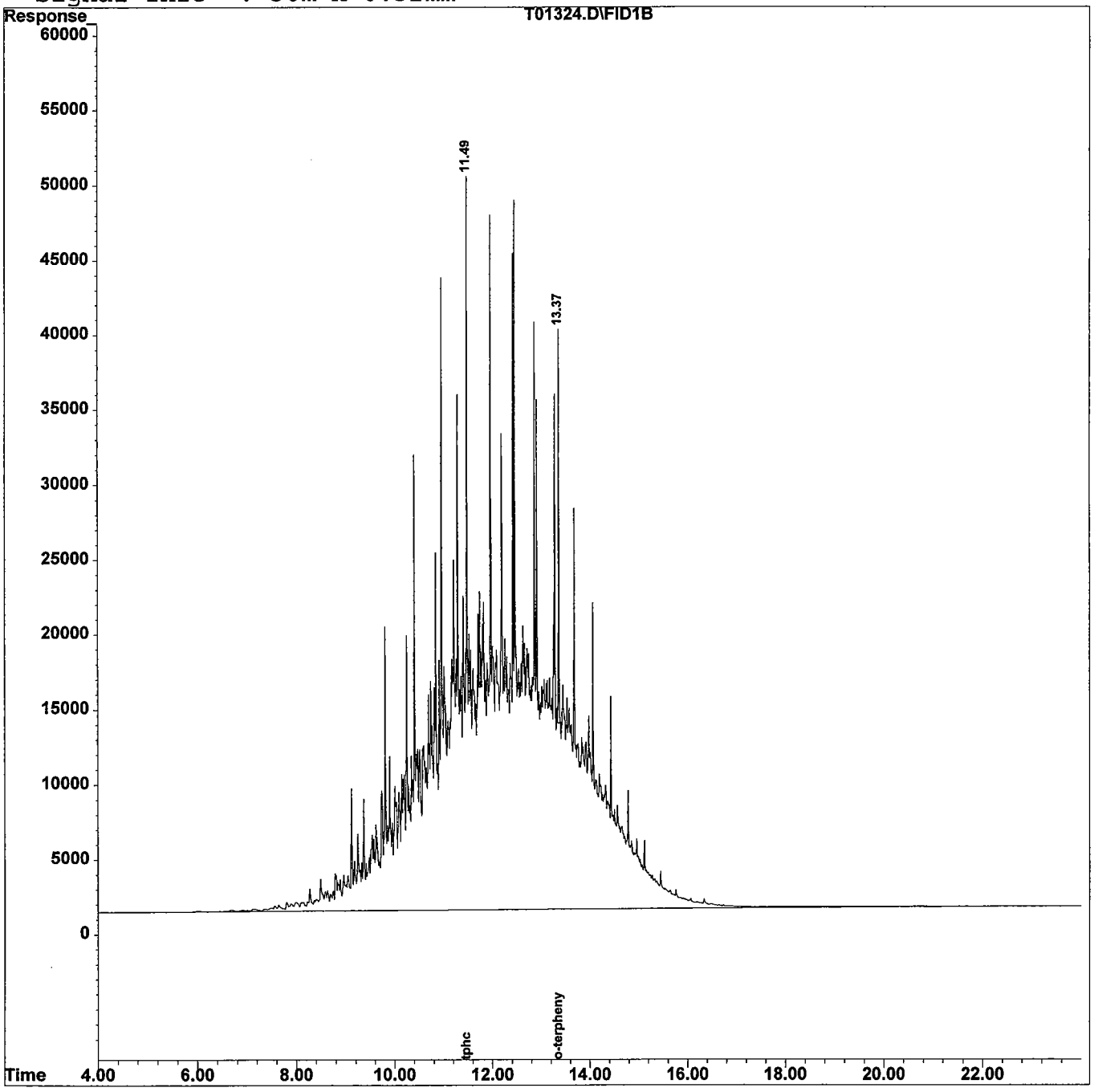
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01324.D Vial: 30
Acq On : 15 May 97 1:50 am Operator:
Sample : 2511.12 Inst : FID/TCD
Misc : 426-J Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:14 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



36

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970513\T01325.D Vial: 31
Acq On : 15 May 97 2:32 am Operator:
Sample : 2511.13 Inst : FID/TCD
Misc : 426-DUP Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:16 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Initial Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1)	s o-terphenyl	13.37	235921	9.748	mg/L	m
	Target Compounds					
2)	t tphc	13.37	2643050	41.698	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

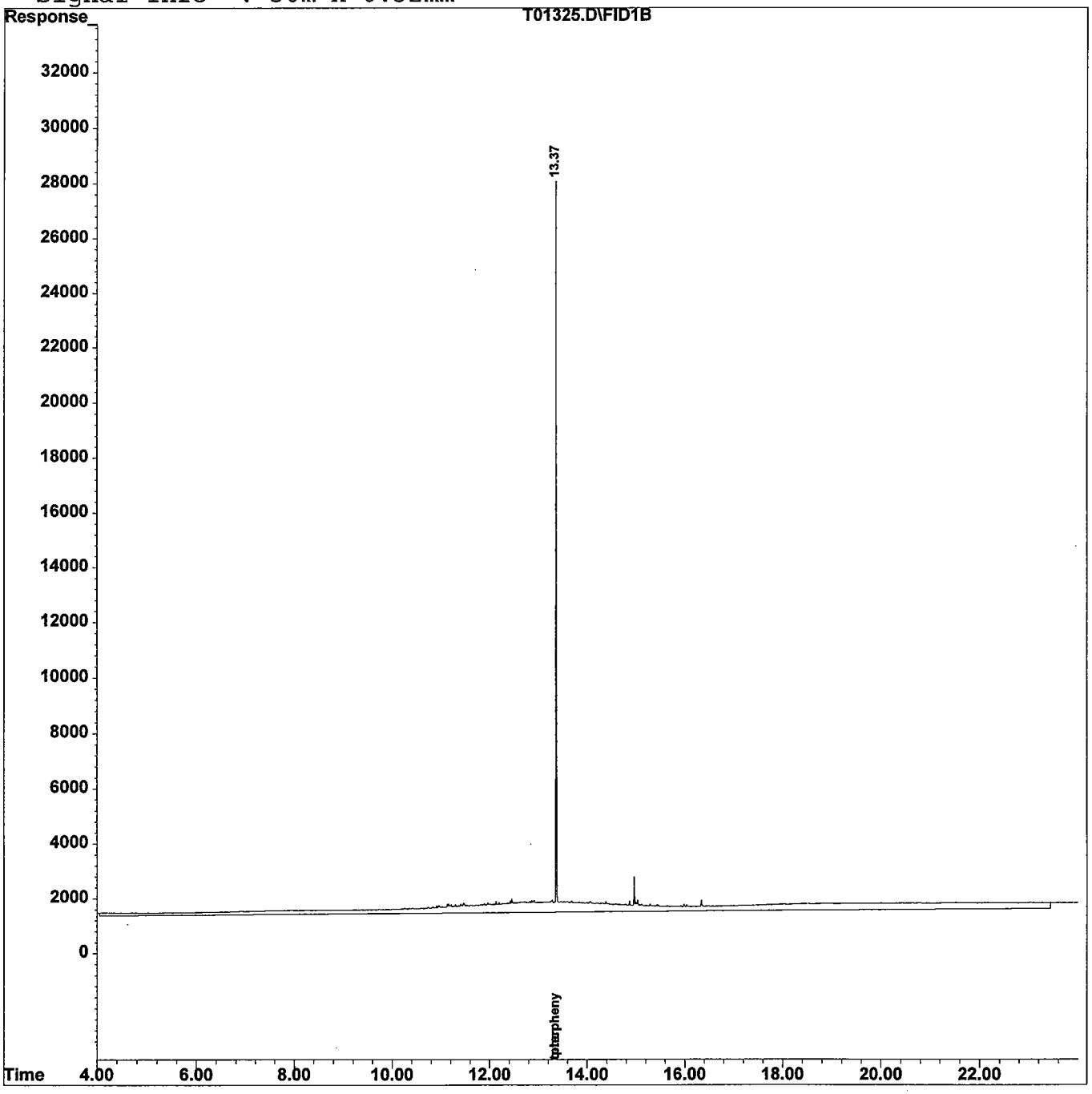
57

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970513\T01325.D Vial: 31
Acq On : 15 May 97 2:32 am Operator:
Sample : 2511.13 Inst : FID/TCD
Misc : 426-DUP Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 15 9:16 1997 Quant Results File: TPH6.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH6.M (Chemstation Integrator)
Title : TPHC Calibration 01/17/97
Last Update : Wed May 14 11:00:14 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH6.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



38

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis ✓
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 1 / 28 / 94

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - EPA Method 8240

B.426

Project # 2511
Date Rec. 05/07/97
Date Compl. 05/19/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) — Y

2. Retention times for chromatograms provided — Y

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — Y
   b. DFTPP Meet Criteria —

4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series — Y

5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — Y

6. GC/MS Calibration Requirements

   a. Calibration Check Compounds Meet Criteria — Y
   b. System Performance Check Compounds Meet Criteria — Y

7. Blank Contamination - If yes, List compounds and concentrations in each blank: — N

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

8. Surrogate Recoveries Meet Criteria — Y

   If not met, list those compounds and their recoveries which fall outside the acceptable range:

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

   If not met, were the calculations checked and the results qualified as "estimated"? —

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) — Y

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

4

GC/MS Analysis Conformance/Non-Conformance Summary (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Y
    (If not met, list those compounds which fall outside the acceptable range)
    a. VOA Fraction_____
    b. B/N Fraction_____
    c. Acid Fraction_____

11. Extraction Holding Time Met — —

    If not met, list number of days exceeded for each sample: ___
    _____
    _____

12. Analysis Holding Time Met — Y

    If not met, list number of days exceeded for each sample: ___
    _____
    _____

Additional Comments:

_____
_____
_____

Laboratory Manager : _____ Date: 1-20-94

5

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: GENE LESINSKI - DPW
Phone #: 532-0989
( )DERA (X)OMA ( )Other:_____
Project No: 0750 -
Location: B. 426
Samplers Name / Company : GARY DiMARTINIS / TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids	Munsel	Volatiles To Be Determined				OVA	Remarks / Preservation Method
2511 .01	426-A1	5-7-97	0808	SOIL	2	X	X	X	X				7	SIDEWALL @ 4.0' *
.02	426-A2		0905										80	SIDEWALL @ 7.5'
.03	426-B		0815										ND	SIDEWALL @ 4.0'
.04	426-C		0848										20	EXC. FLOOR @ 7.5'
.05	426-D		~~0912~~ 0912 HC										60	SIDEWALL @ 7.5'
.06	426-E		0932										80	SIDEWALL @ 4.0'
.07	426-F		0950										100	SIDEWALL @ 4.0'
.08	426-G1		1102										90	6.0' DEPTH
.09	426-G2		1116										90	7.0' DEPTH
.10	426-H		1128										ND	Piping Run @ 1.0'
.11	426-I		1134										ND	Piping Run @ 1.0'
.12	426-J		0857										200	EXC. FLOOR @ 7.5'
.13	426-DUP		—	↓	↓	↓	↓	↓	↓				—	FIELD DUPLICATE
.14	426-FB	↓	1005	AQ	↓				X				—	FIELD BLANK (HCl)

Comments: * = SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	5-7-97 1530	[signature] 5-7-97			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (_)Standard 4 wks. (X)Rush 5 Days. (_)ASAP Verbal ____ Hrs.

Remarks:

NOTE: OVA CALIBRATED W/ 95PPM CH4 + ZERO (0) AIR @ 0810 HRS ON 5-7-97 by G. DiMARTINIS (#AS1703)

print legibly

Custody.xls 5/1/97

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

Daily Blank

Lab Name: FMETL NJDEP # 13461

Project: 0750 Case No.: 2511 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V00820.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	7	U
107131	Acrylonitrile	7	U
75650	tert-Butyl alcohol	13	U
1634044	Methyl-tert-Butyl ether	3	U
108203	Di-isopropyl ether	2	U
	Dichlorodifluoromethane	4	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	3	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	3	U
75-69-4	Trichlorofluoromethane	2	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	2	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	2	U
156-60-5	trans-1,2-Dichloroethene	2	U
75-35-3	1,1-Dichloroethane	1	U
108-05-4	Vinyl Acetate	3	U
78-93-3	2-Butanone	3	U
	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
75-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	2	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
110-75-8	2-Chloroethyl vinyl ether	2	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-Pentanone	2	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	2	U
79-00-5	1,1,2-Trichloroethane	2	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	2	U
126-48-1	Dibromochloromethane	2	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

Daily Blank

Lab Name: FMETL NJDEP # 13461

Project: 0750 Case No.: 2511 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V00820.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 0 Date Analyzed: 05/19/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	3	U
1330-20-7	o-Xylene	2	U
100-42-5	Styrene	2	U
75-25-2	Bromoform	2	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
541-73-1	1,3-Dichlorobenzene	3	U
106-46-7	1,4-Dichlorobenzene	3	U
95-50-1	1,2-Dichlorobenzene	3	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: **426-E**

Lab Name: FMETL Project

NJDEP # 13461 Case No.: 2511 Location B426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2511.06

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00822.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 20.54 Date Analyzed: 05/19/97

GC Column: RTX-502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	310	U
107131	Acrylonitrile	310	U
75650	tert-Butyl alcohol	310	U
1634044	Methyl-tert-Butyl ether	310	U
108203	Di-isopropyl ether	310	U
	Dichlorodifluoromethane	31	U
74-87-3	Chloromethane	13	J
75-01-4	Vinyl Chloride	31	U
74-83-9	Bromomethane	31	U
75-00-3	Chloroethane	31	U
75-69-4	Trichlorofluoromethane	31	U
75-35-4	1,1-Dichloroethene	31	U
67-64-1	Acetone	890	
75-15-0	Carbon Disulfide	31	U
75-09-2	Methylene Chloride	39	
156-60-5	trans-1,2-Dichloroethene	31	U
75-35-3	1,1-Dichloroethane	31	U
108-05-4	Vinyl Acetate	31	U
78-93-3	2-Butanone	31	U
	cis-1,2-Dichloroethene	31	U
67-66-3	Chloroform	31	U
75-55-6	1,1,1-Trichloroethane	31	U
56-23-5	Carbon Tetrachloride	31	U
71-43-2	Benzene	52	
107-06-2	1,2-Dichloroethane	31	U
79-01-6	Trichloroethene	31	U
78-87-5	1,2-Dichloropropane	31	U
75-27-4	Bromodichloromethane	31	U
110-75-8	2-Chloroethyl vinyl ether	31	U
10061-01-5	cis-1,3-Dichloropropene	31	U
108-10-1	4-Methyl-2-Pentanone	31	U
108-88-3	Toluene	140	
10061-02-6	trans-1,3-Dichloropropene	31	U
79-00-5	1,1,2-Trichloroethane	31	U
127-18-4	Tetrachloroethene	31	U
591-78-6	2-Hexanone	31	U
126-48-1	Dibromochloromethane	31	U
108-90-7	Chlorobenzene	31	U
100-41-4	Ethylbenzene	640	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: **426-E**

Lab Name: FMETL Project

NJDEP # 13461 Case No.: 2511 Location B426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2511.06

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00822.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 20.54 Date Analyzed: 05/19/97

GC Column: RTX-502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	630	
1330-20-7	o-Xylene	1000	
100-42-5	Styrene	31	U
75-25-2	Bromoform	31	U
79-34-5	1,1,2,2-Tetrachloroethane	31	U
541-73-1	1,3-Dichlorobenzene	31	U
106-46-7	1,4-Dichlorobenzene	31	U
95-50-1	1,2-Dichlorobenzene	31	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: 426-F

Lab Name: FMETL Project

NJDEP # 13461 Case No.: 2511 Location B426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2511.07

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00823.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 16.72 Date Analyzed: 05/19/97

GC Column: RTX-502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	300	U
107131	Acrylonitrile	300	U
75650	tert-Butyl alcohol	300	U
1634044	Methyl-tert-Butyl ether	300	U
108203	Di-isopropyl ether	300	U
	Dichlorodifluoromethane	30	U
74-87-3	Chloromethane	30	U
75-01-4	Vinyl Chloride	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
75-69-4	Trichlorofluoromethane	30	U
75-35-4	1,1-Dichloroethene	30	U
67-64-1	Acetone	30	U
75-15-0	Carbon Disulfide	30	U
75-09-2	Methylene Chloride	41	
156-60-5	trans-1,2-Dichloroethene	30	U
75-35-3	1,1-Dichloroethane	30	U
108-05-4	Vinyl Acetate	30	U
78-93-3	2-Butanone	30	U
	cis-1,2-Dichloroethene	30	U
67-66-3	Chloroform	30	U
75-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon Tetrachloride	30	U
71-43-2	Benzene	160	
107-06-2	1,2-Dichloroethane	30	U
79-01-6	Trichloroethene	30	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	30	U
110-75-8	2-Chloroethyl vinyl ether	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
108-10-1	4-Methyl-2-Pentanone	30	U
108-88-3	Toluene	1400	E
10061-02-6	trans-1,3-Dichloropropene	30	U
79-00-5	1,1,2-Trichloroethane	30	U
127-18-4	Tetrachloroethene	30	U
591-78-6	2-Hexanone	30	U
126-48-1	Dibromochloromethane	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	1700	E

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: **426-F**

Lab Name: FMETL Project

NJDEP # 13461 Case No.: 2511 Location B426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2511.07

Sample wt/vol: 1.0 (g/ml) G Lab File ID: V00823.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 16.72 Date Analyzed: 05/19/97

GC Column: RTX-502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	4100	E
1330-20-7	o-Xylene	2700	E
100-42-5	Styrene	30	U
75-25-2	Bromoform	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U
541-73-1	1,3-Dichlorobenzene	30	U
106-46-7	1,4-Dichlorobenzene	30	U
95-50-1	1,2-Dichlorobenzene	30	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: **426-FDL**

Lab Name: FMETL Project

NJDEP # 13461 Case No.: 2511 Location B426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 2511.07

Sample wt/vol: 0.1 (g/ml) G Lab File ID: V00826.D

Level: (low/med) LOW Date Received: 05/07/97

% Moisture: not dec. 16.72 Date Analyzed: 05/19/97

GC Column: RTX-502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	3000	U
107131	Acrylonitrile	3000	U
75650	tert-Butyl alcohol	3000	U
1634044	Methyl-tert-Butyl ether	3000	U
108203	Di-isopropyl ether	3000	U
	Dichlorodifluoromethane	300	U
74-87-3	Chloromethane	300	U
75-01-4	Vinyl Chloride	300	U
74-83-9	Bromomethane	300	U
75-00-3	Chloroethane	300	U
75-69-4	Trichlorofluoromethane	300	U
75-35-4	1,1-Dichloroethene	300	U
67-64-1	Acetone	300	U
75-15-0	Carbon Disulfide	300	U
75-09-2	Methylene Chloride	300	U
156-60-5	trans-1,2-Dichloroethene	300	U
75-35-3	1,1-Dichloroethane	300	U
108-05-4	Vinyl Acetate	300	U
78-93-3	2-Butanone	300	U
	cis-1,2-Dichloroethene	300	U
67-66-3	Chloroform	300	U
75-55-6	1,1,1-Trichloroethane	300	U
56-23-5	Carbon Tetrachloride	300	U
71-43-2	Benzene	300	U
107-06-2	1,2-Dichloroethane	300	U
79-01-6	Trichloroethene	300	U
78-87-5	1,2-Dichloropropane	300	U
75-27-4	Bromodichloromethane	300	U
110-75-8	2-Chloroethyl vinyl ether	300	U
10061-01-5	cis-1,3-Dichloropropene	300	U
108-10-1	4-Methyl-2-Pentanone	300	U
108-88-3	Toluene	1100	
10061-02-6	trans-1,3-Dichloropropene	300	U
79-00-5	1,1,2-Trichloroethane	300	U
127-18-4	Tetrachloroethene	300	U
591-78-6	2-Hexanone	300	U
126-48-1	Dibromochloromethane	300	U
108-90-7	Chlorobenzene	300	U
100-41-4	Ethylbenzene	1000	

Spike Recovery and RPD Summary Report - Soil

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jan 13 09:23:08 1998
Response via : Initial Calibration

Non-Spiked Sample: V00786.D

	Spike Sample	Spike Duplicate Sample
File ID :	V00787.D	V00788.D
Sample :	2493.10MS	2493.10MSD
Acq Time:	6 May 1997 22:10	6 May 1997 22:57

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	20	18	20	90	99	9	14	61-145
Benzene	0.0	20	21	23	106	114	7	11	76-127
Trichloroethene	0.0	20	21	23	104	113	9	14	71-120
Toluene	0.0	20	18	19	88	93	6	13	76-125
Chlorobenzene	0.0	20	21	19	104	96	8	13	75-130

- Fails Limit Check

M82405.M Fri Jan 16 09:11:34 1998

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP # 13461

Project: 0750 Case No.: 2511 Location: B.426 SDG No.:

Lab File ID (Standard): V00819.D Date Analyzed: 05/19/97

Instrument ID: GCMSVoa Time Analyzed: 10:13

GC Column: Rtx502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	72413	18.84	461177	21.44	120455	29.27
	UPPER LIMIT	144826	18.34	922354	20.94	240910	28.77
	LOWER LIMIT	36207	19.34	230589	21.94	60228	29.77
	EPA SAMPLE NO.						
01	DAILY BLANK	108430	18.84	672360	21.44	176187	29.27
02	426-E	87503	18.85	551624	21.44	238685	29.27
03	426-F	84718	18.85	504081	21.44	280624 *	29.27
04	426-G2	81530	18.86	489034	21.44	209058	29.27
05	426-FDL	79761	18.86	506104	21.44	350476 *	29.27
06	426-G2DL	81026	18.86	485620	21.44	319717 *	29.27

IS1 BCM = Bromochloromethane

IS2 DFB = 1,4-Difluorobenzene

IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP # 13461

Project: 0750 Case No.: 2511 Location: B.426 SDG No.:

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	DAILY BLANK	100	99	100	0
02	426-E	176*	136*	108	2
03	426-F	175*	143*	100	2
04	426-G2	118	143*	211*	2
05	426-FDL	118	136*	96	1
06	426-G2DL	111	151*	112	1

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(70-121)
SMC2	TOL	=	Toluene-d8	(81-117)
SMC3	BFB	=	Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00820.D Vial: 17
Acq On : 19 May 1997 11:10 Operator: Paul Skelton
Sample : Daily Blank Inst : GC/MS Ins
Misc : Daily Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 15 10:23 1998 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\970519\V00819.D
DataAcq Meth : M82405

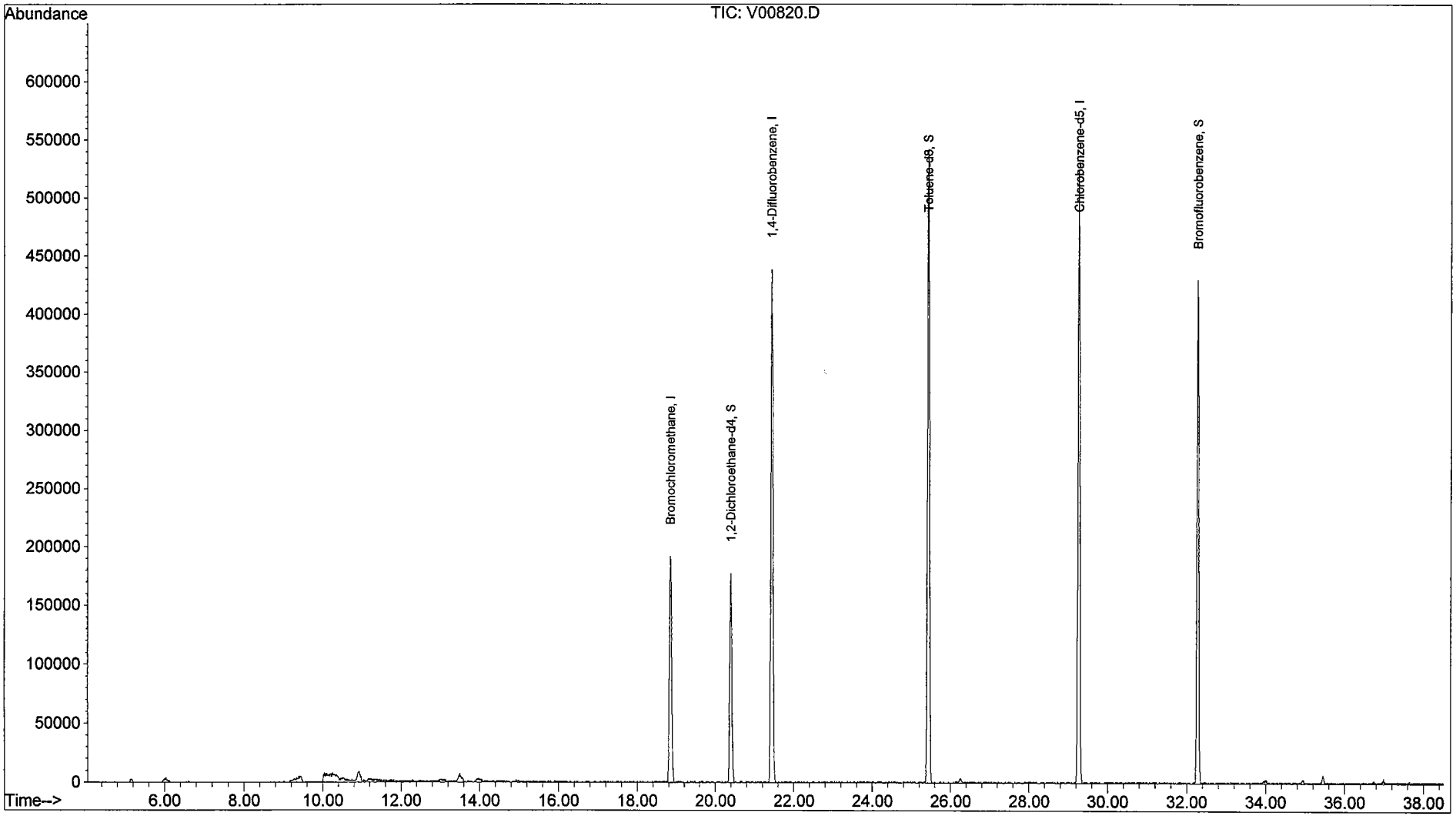
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.84	128	108430	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.44	114	672360	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.27	119	176187	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.39	65	249985	30.14	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 100.47%			
35) Toluene-d8	25.43	98	730370	29.58	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.60%			
49) Bromofluorobenzene	32.28	95	309414	30.02	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.07%			

Target Compounds Qvalue

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

Data File : C:\HPCHEM\1\DATA\970519\V00820.D Vial: 17
Acq On : 19 May 1997 11:10 Operator: Paul Skelton
Sample : Daily Blank Inst : GC/MS Ins
Misc : Daily Blank Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 15 10:23 1998 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\970519\V00819.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00822.D Vial: 10
Acq On : 19 May 97 12:56 pm Operator: Paul Skelton
Sample : 2511.06 Inst : GC/MS Ins
Misc : 426-E Multiplr: 1.00
Quant Time: Jun 10 9:53 1997 Quant Results File: M82405.RES

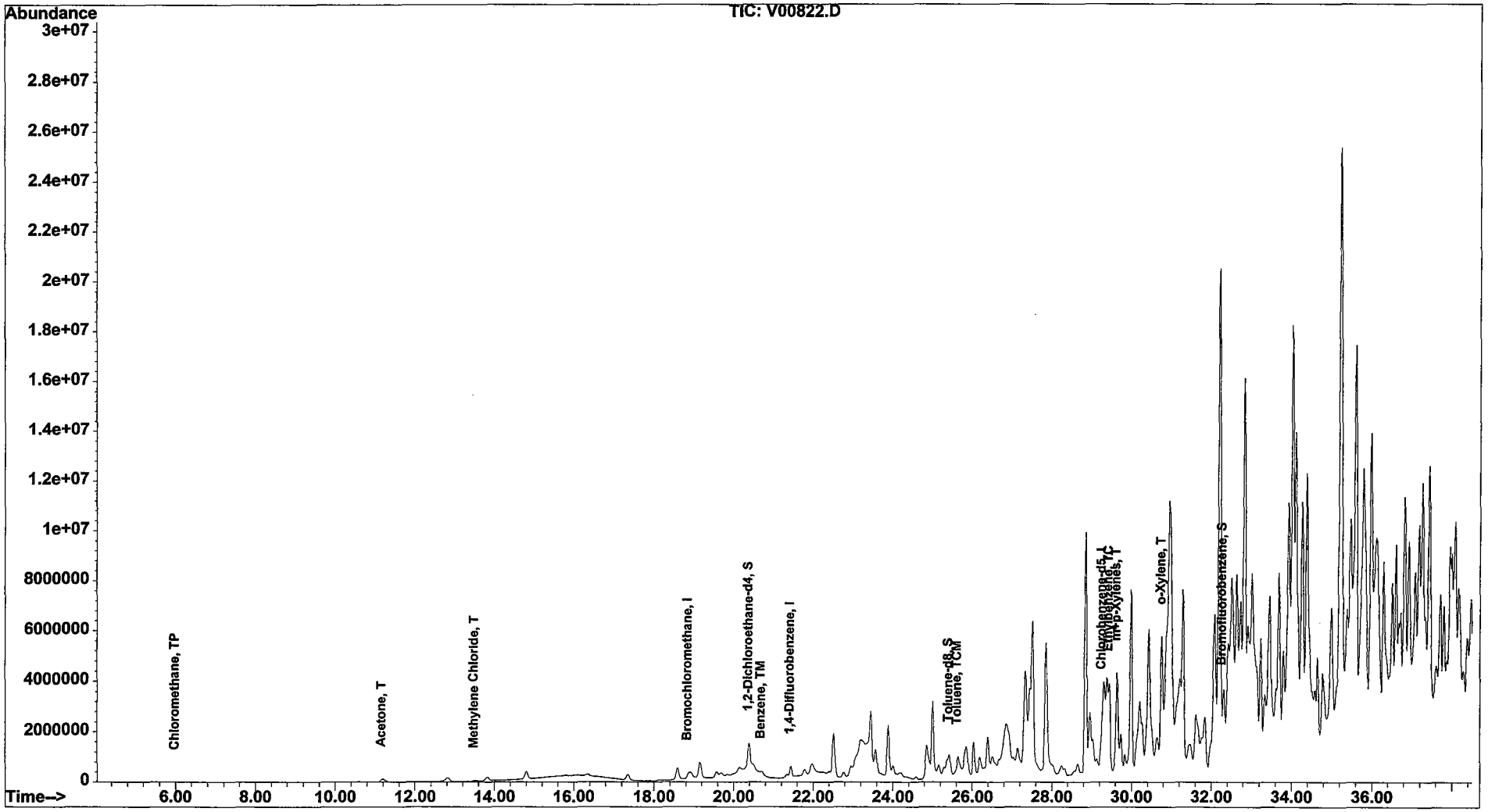
Quant Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.85	128	87503	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.44	114	551624	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	238685	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.40	65	434298	52.85	ug/L	0.00
Surrogate Spike 30.000	Range 76 - 114		Recovery = 176.17%#			
35) Toluene-d8	25.43	98	657673	40.76	ug/L	0.00
Surrogate Spike 30.000	Range 88 - 110		Recovery = 135.87%#			
49) Bromofluorobenzene	32.29	95	317924m	32.54	ug/L	0.00
Surrogate Spike 30.000	Range 86 - 115		Recovery = 108.47%			
Target Compounds						Qvalue
8) Chloromethane	6.00	50	27877	2.10	ug/L	85
14) Acetone	11.18	43	603453	141.65	ug/L	92
16) Methylene Chloride	13.51	84	51917	6.21	ug/L	91
27) Benzene	20.71	78	220655	8.30	ug/L #	55
36) Toluene	25.64	91	391102	21.74	ug/L	91
44) Ethylbenzene	29.45	91	3222407	102.39	ug/L	98
45) m+p-Xylenes	29.64	106	1165932	99.58	ug/L	97
46) o-Xylene	30.75	91	4180894	158.88	ug/L	98

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

Data File : C:\HPCHEM\1\DATA\970519\V00822.D Vial: 10
Acq On : 19 May 97 12:56 pm Operator: Paul Skelton
Sample : 2511.06 Inst : GC/MS Ins
Misc : 426-E Multiplr: 1.00
Quant Time: Jun 10 9:53 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Single Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00823.D Vial: 11
Acq On : 19 May 97 1:44 pm Operator: Paul Skelton
Sample : 2511.07 Inst : GC/MS Ins
Misc : 426-F Multiplr: 1.00
Quant Time: Jun 10 9:56 1997 Quant Results File: M82405.RES

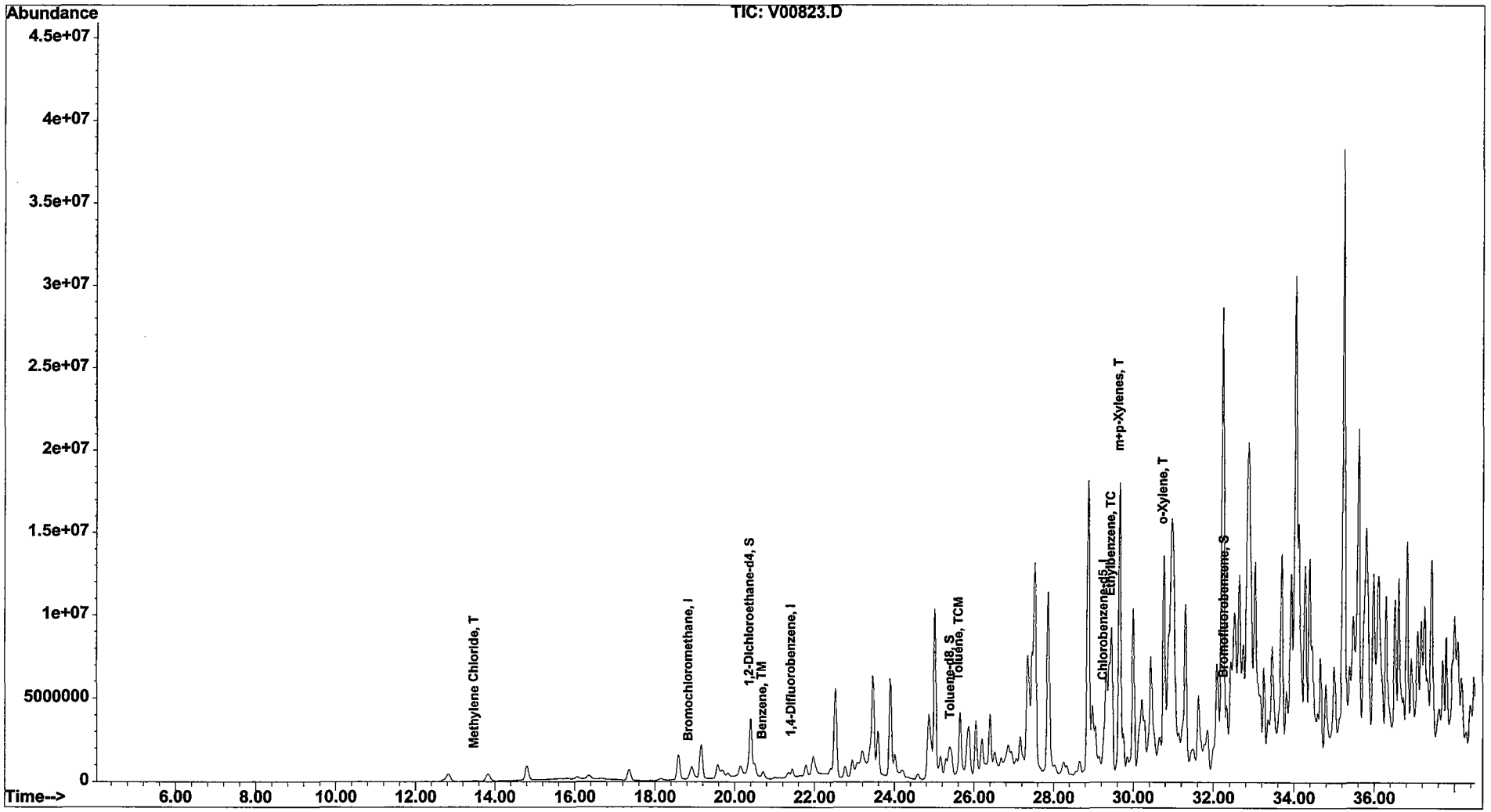
Quant Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.85	128	84718	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.44	114	504081	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	280624	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.40	65	416634	52.37	ug/L	0.00
Surrogate Spike 30.000	Range 76 - 114		Recovery = 174.57%#			
35) Toluene-d8	25.43	98	633971	42.99	ug/L	0.00
Surrogate Spike 30.000	Range 88 - 110		Recovery = 143.30%#			
49) Bromofluorobenzene	32.29	95	342980m	29.86	ug/L	0.02
Surrogate Spike 30.000	Range 86 - 115		Recovery = 99.53%			
Target Compounds						Qvalue
16) Methylene Chloride	13.50	84	55775	6.89	ug/L	95
27) Benzene	20.72	78	646958	26.62	ug/L	88
36) Toluene	25.65	91	3917343	238.25	ug/L	98
44) Ethylbenzene	29.46	91	10440166	282.16	ug/L	99
45) m+p-Xylenes	29.66	106	9401919	683.01	ug/L	94
46) o-Xylene	30.76	91	13874479	448.45	ug/L	96

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

Data File : C:\HPCHEM\1\DATA\970519\V00823.D Vial: 11
Acq On : 19 May 97 1:44 pm Operator: Paul Skelton
Sample : 2511.07 Inst : GC/MS Ins
Misc : 426-F Multiplr: 1.00
Quant Time: Jun 10 9:56 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Single Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00826.D Vial: 4
Acq On : 19 May 97 4:43 pm Operator: Paul Skelton
Sample : 2511.07 Inst : GC/MS Ins
Misc : 426-F Multiplr: 1.00
Quant Time: Jun 10 9:58 1997 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.86	128	79761	30.00	ug/L	0.02
26) 1,4-Difluorobenzene	21.44	114	506104	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	350476	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.40	65	264201	35.27	ug/L	0.00
Surrogate Spike 30.000	Range 76 - 114		Recovery = 117.57%#			
35) Toluene-d8	25.43	98	605458	40.90	ug/L	0.00
Surrogate Spike 30.000	Range 88 - 110		Recovery = 136.33%#			
49) Bromofluorobenzene	32.29	95	413905	28.85	ug/L	0.00
Surrogate Spike 30.000	Range 86 - 115		Recovery = 96.17%			
Target Compounds						Qvalue
36) Toluene	25.64	91	301995	18.29	ug/L	95
44) Ethylbenzene	29.45	91	796357	17.23	ug/L	99
45) m+p-Xylenes	29.64	106	930011	54.10	ug/L	97
46) o-Xylene	30.75	91	1261708	32.65	ug/L	97

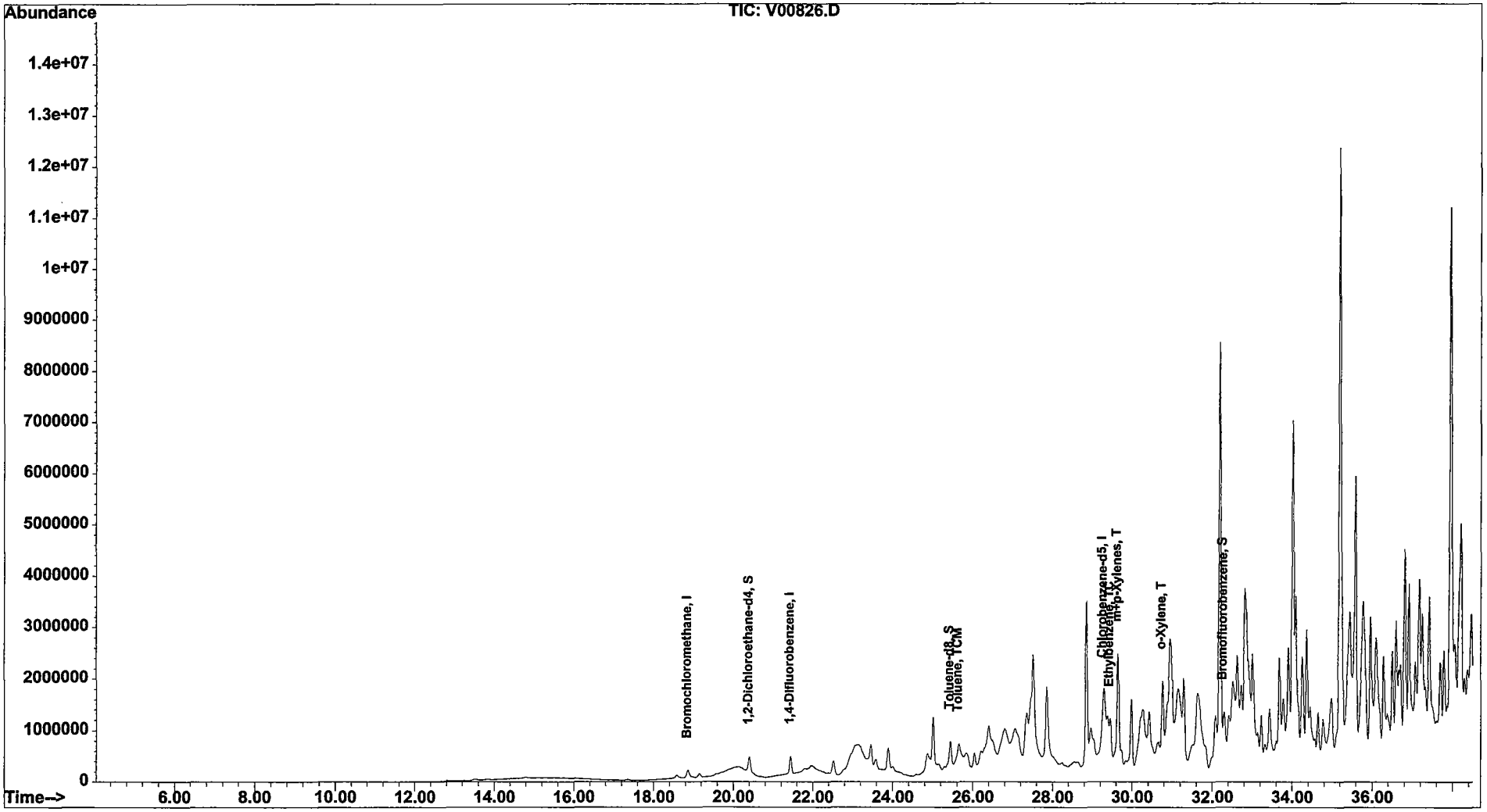
(#) = qualifier out of range (m) = manual integration

3

Quantitation Report

Data File : C:\HPCHEM\1\DATA\970519\V00826.D Vial: 4
Acq On : 19 May 97 4:43 pm Operator: Paul Skelton
Sample : 2511.07 Inst : GC/MS Ins
Misc : 426-F Multiplr: 1.00
Quant Time: Jun 10 9:58 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Single Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00824.D Vial: 12
Acq On : 19 May 97 2:32 pm Operator: Paul Skelton
Sample : 2511.09 Inst : GC/MS Ins
Misc : 426-G2 Multiplr: 1.00
Quant Time: Jun 10 10:00 1997 Quant Results File: M82405.RES

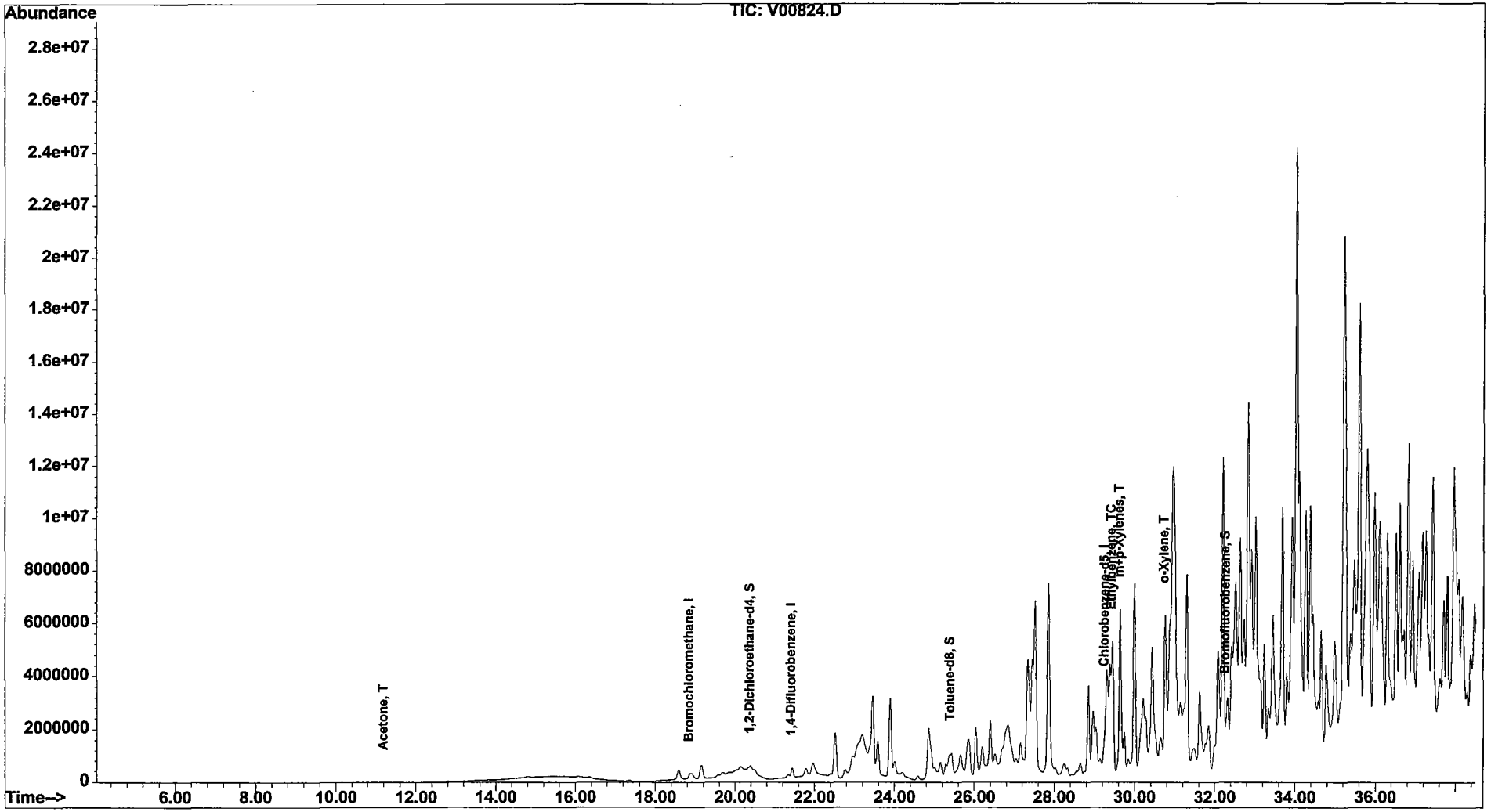
Quant Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.86	128	81530	30.00	ug/L	0.02
26) 1,4-Difluorobenzene	21.44	114	489034	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	209058	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.40	65	270646	35.35	ug/L	0.00
Surrogate Spike 30.000	Range 76 - 114		Recovery = 117.83%#			
35) Toluene-d8	25.43	98	615463	43.02	ug/L	0.00
Surrogate Spike 30.000	Range 88 - 110		Recovery = 143.40%#			
49) Bromofluorobenzene	32.29	95	540813	63.20	ug/L	0.00
Surrogate Spike 30.000	Range 86 - 115		Recovery = 210.67%#			
Target Compounds						Qvalue
14) Acetone	11.22	43	47642	12.00	ug/L	90
44) Ethylbenzene	29.45	91	5733329	207.99	ug/L	99
45) m+p-Xylenes	29.64	106	2451433	239.05	ug/L	96
46) o-Xylene	30.75	91	4930950	213.94	ug/L	98

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

Data File : C:\HPCHEM\1\DATA\970519\V00824.D Vial: 12
Acq On : 19 May 97 2:32 pm Operator: Paul Skelton
Sample : 2511.09 Inst : GC/MS Ins
Misc : 426-G2 Multiplr: 1.00
Quant Time: Jun 10 10:00 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Single Level Calibration



C.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\970519\V00827.D Vial: 5
Acq On : 19 May 97 5:31 pm Operator: Paul Skelton
Sample : 2511.09 Inst : GC/MS Ins
Misc : 426-G2 Multiplr: 1.00
Quant Time: Jun 10 10:01 1997 Quant Results File: M82405.RES

Quant Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Initial Calibration
DataAcq Meth : M82405

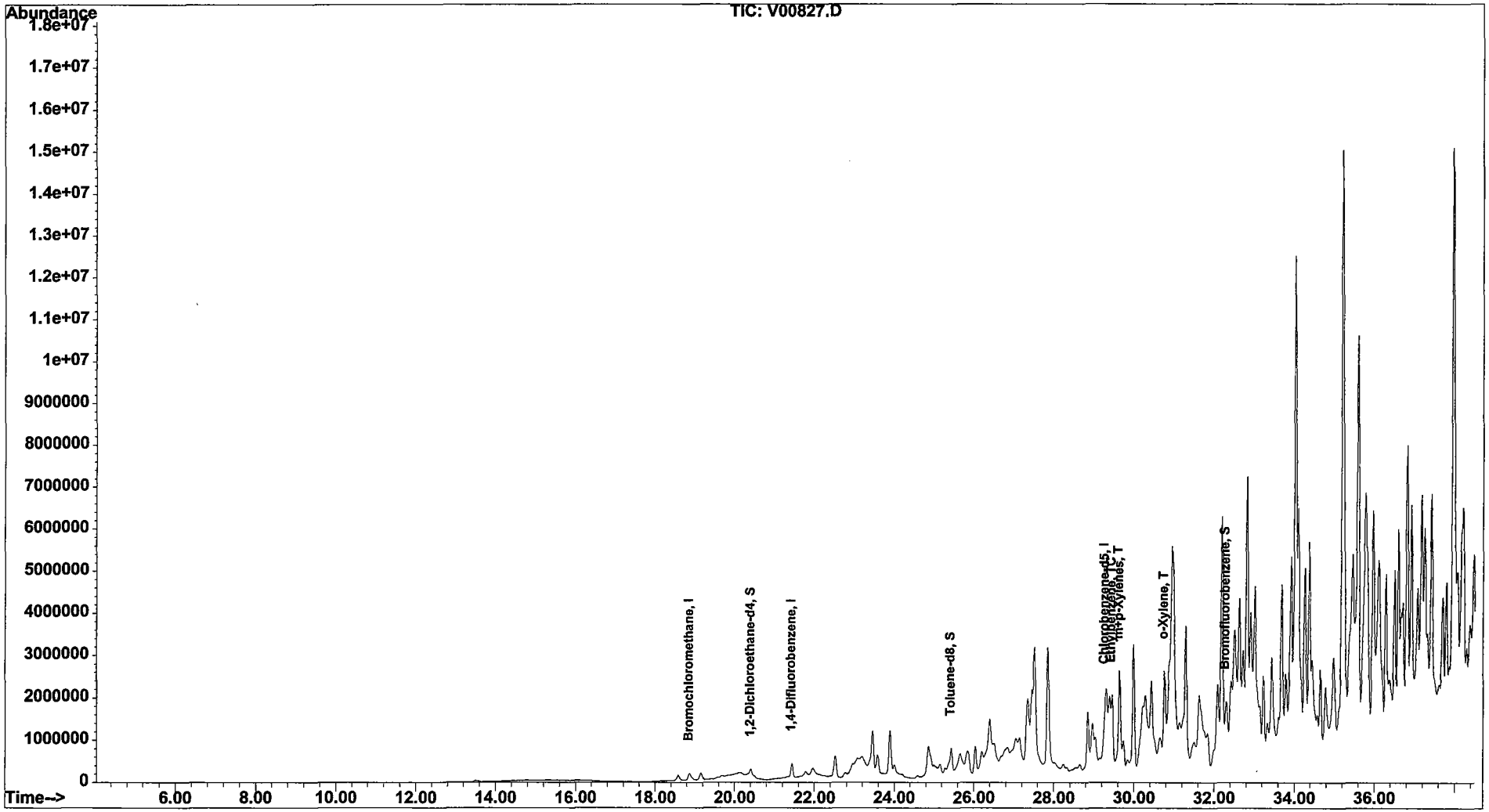
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.86	128	81026	30.00	ug/L	0.02
26) 1,4-Difluorobenzene	21.44	114	485620	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.27	119	319717	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.41	65	253351	33.30	ug/L	0.00
Surrogate Spike 30.000	Range 76 - 114		Recovery = 111.00%			
35) Toluene-d8	25.43	98	643510	45.30	ug/L	0.00
Surrogate Spike 30.000	Range 88 - 110		Recovery = 151.00%#			
49) Bromofluorobenzene	32.29	95	437825	33.45	ug/L	0.00
Surrogate Spike 30.000	Range 86 - 115		Recovery = 111.50%			
Target Compounds						Qvalue
44) Ethylbenzene	29.45	91	1703740	40.42	ug/L	99
45) m+p-Xylenes	29.63	106	772188	49.24	ug/L	98
46) o-Xylene	30.75	91	1545154	43.84	ug/L	98

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

42

Data File : C:\HPCHEM\1\DATA\970519\V00827.D Vial: 5
Acq On : 19 May 97 5:31 pm Operator: Paul Skelton
Sample : 2511.09 Inst : GC/MS Ins
Misc : 426-G2 Multiplr: 1.00
Quant Time: Jun 10 10:01 1997 Quant Results File: M82405.RES

Method : C:\HPCHEM\1\METHODS\M82405.M
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Tue Jun 10 08:55:18 1997
Response via : Single Level Calibration



LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

		Indicate* Yes, No, N/A
1.	Cover Page, Title Page listing Lab Certification #, facility name & address, & data of report submitted	Y
2.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	Y
3.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s Lab ID's submitted	Y
4.	Document bound, paginated and legible	Y
5.	Chain of Custody submitted	Y
6.	Samples submitted to lab within 48 hours of sample collection	Y
7.	Methodology Summary submitted	Y
8.	Results submitted on a dry weight basis	Y
9.	Method Detection Limits	Y
10.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	Y

Laboratory Manager of Environmental Consultant's Signature 

Date 1/20/26

Laboratory Certification # 13461

- *Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

4

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 426

Project # 3158
Date Rec. 11/14/97
Date Compl. 11/15/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	NA	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		✓
7. Analysis holding time met.		✓

(If not met, list number of days exceeded for each sample)

Additional Comments:

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: DPW-ENV
Phone #:
( )DERA (X)DMA ( )Other:

Project No: 98-0001
Location: B 426

Samplers Name / Company : GARY DIMARTINIS - TVS

Comments: *= SAMPLES KEPT BELOW 4°C

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: TPHC	% SOLIDS	MUNSELL					OVA	Remarks / Preservation Method
31580 01	426-A	11-13-97	1424	SOIL	1	X	X	X					1	EXC. FLOOR @ 8.0' *
02	B		1350										2	
03	C		1413										1	
04	D		1356										5	
05	E		1346										1	
06	F		1359										5	
07	G		1340										1	
08	H		1336										ND	SIDE WALL @ 5.5'
09	I		1405										ND	
10	J		1429										ND	
11	DUP		—										—	FIELD DUPLICATE

NOTE: OVA (#AS2114) CALIBRATED W/ 95ppm CH4 + ZERO (@) AIR @ 1330 HRS. ON 11-13-97 by G. DIMARTINIS.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	11-13-97 0922	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: ( )Standard 4 wks, (X)Rush ____ Days, (X)ASAP Verbal ____ Hrs.

Remarks: DEDICATED SAMPLING TOOLS USED.

print legibly

Custody.xls10/9/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Lab. ID # :**	3158
	DPW. SELFM-PW-EV	**Date Rec'd:**	14-Nov-97
	Bldg. 173	**Analysis Start:**	14-Nov-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	15-Nov-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	BLDG. 426

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3158.01	426-A	1.00	15.31	80.17	191	310.14
3158.02	426-B	1.00	15.28	82.43	187	ND
3158.03	426-C	1.00	15.61	77.17	195	234.75
3158.04	426-D	1.00	15.42	77.09	198	ND
3158.05	426-E	1.00	15.08	80.97	192	ND
3158.06	426-F	1.00	15.51	74.71	203	ND
3158.07	426-G	1.00	15.48	80.29	189	ND
3158.08	426-H	1.00	15.26	91.32	169	ND
3158.09	426-I	1.00	15.18	88.68	175	ND
3158.10	426-J	1.00	15.16	84.28	184	ND
3158.11	426-DUP	1.00	15.29	80.34	191	ND
METHOD BLANK	10-Nov-97	1.00	15.00	100.00	157	ND

ND = Not Detected
MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

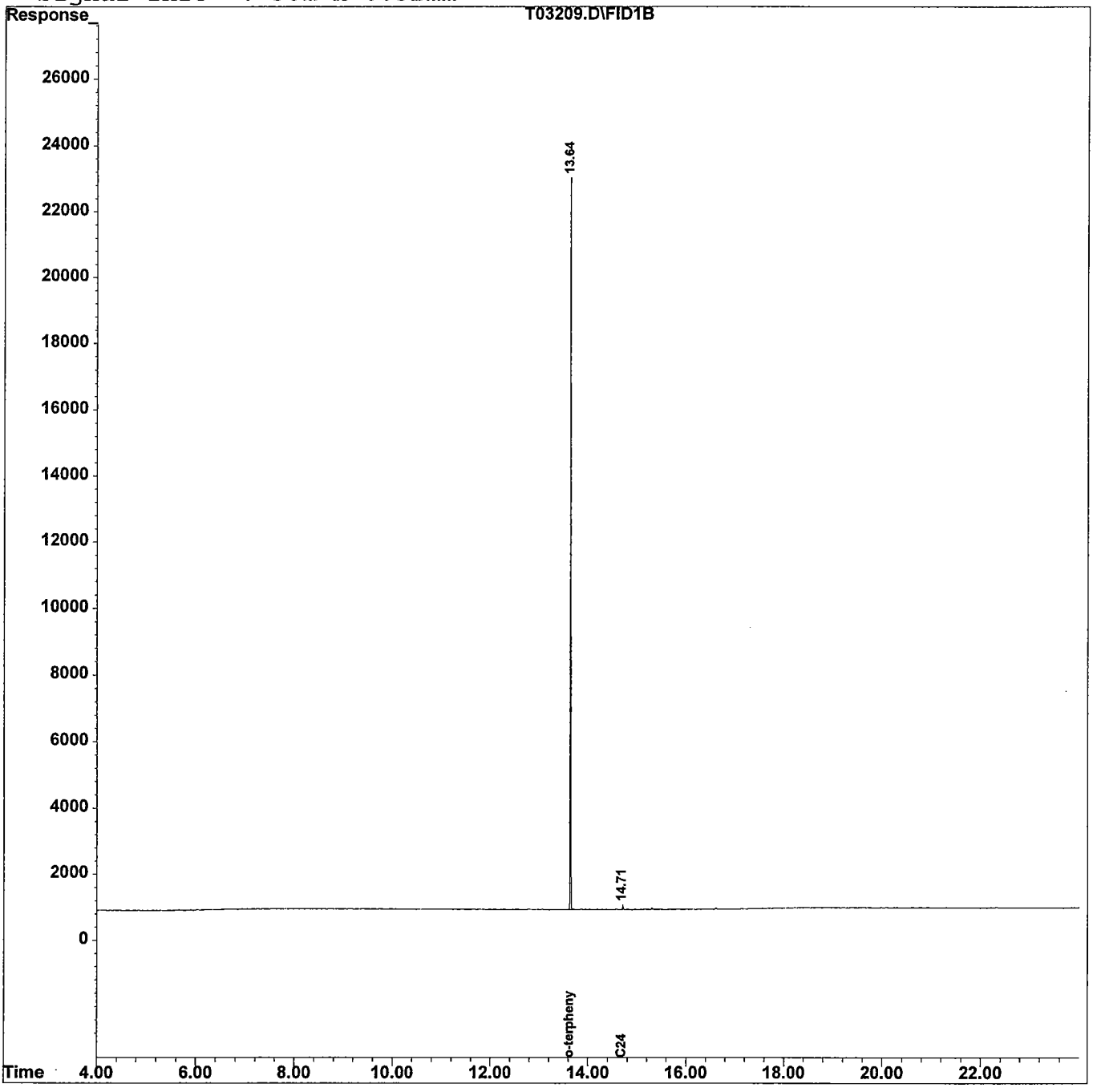
6

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03209.D Vial: 5
Acq On : 14 Nov 97 5:38 pm Operator: DEINHARDT
Sample : 3158.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 18:06 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03210.D Vial: 6
Acq On : 14 Nov 97 6:25 pm Operator: DEINHARDT
Sample : 3158.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 17 7:48 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
21) s	o-terphenyl	13.64	211319	12.593	mg/L	
Spiked Amount	10.000	Recovery	=	125.93%		
	Target Compounds					
1) t	C8	0.00	0	N.D.	mg/L	
2) t	C10	0.00	0	N.D.	mg/L	
3) t	C12	0.00	0	N.D.	mg/L	
4) t	C14	0.00	0	N.D.	mg/L	
5) t	C16	0.00	0	N.D.	mg/L	
6) t	C18	0.00	0	N.D.	mg/L	
7) t	C20	0.00	0	N.D.	mg/L	
8) t	C22	0.00	0	N.D.	mg/L	
9) t	C24	14.71	1418	0.093	mg/L	
10) t	C26	0.00	0	N.D.	mg/L	
11) t	C28	0.00	0	N.D.	mg/L	
12) t	C30	0.00	0	N.D.	mg/L	
13) t	C32	0.00	0	N.D.	mg/L	
14) t	C34	0.00	0	N.D.	mg/L	
15) t	C36	0.00	0	N.D.	mg/L	
16) t	C38	19.11	1224	0.355	mg/L	
17) t	C40	0.00	0	N.D.	mg/L	
18) t	c42	0.00	0	N.D.	mg/L	
19) T	Pristane	0.00	0	N.D.	mg/L	
20) T	Phytane	0.00	0	N.D.	mg/L	
22) t	TPHC - total	13.64	797158	56.556	mg/L	m

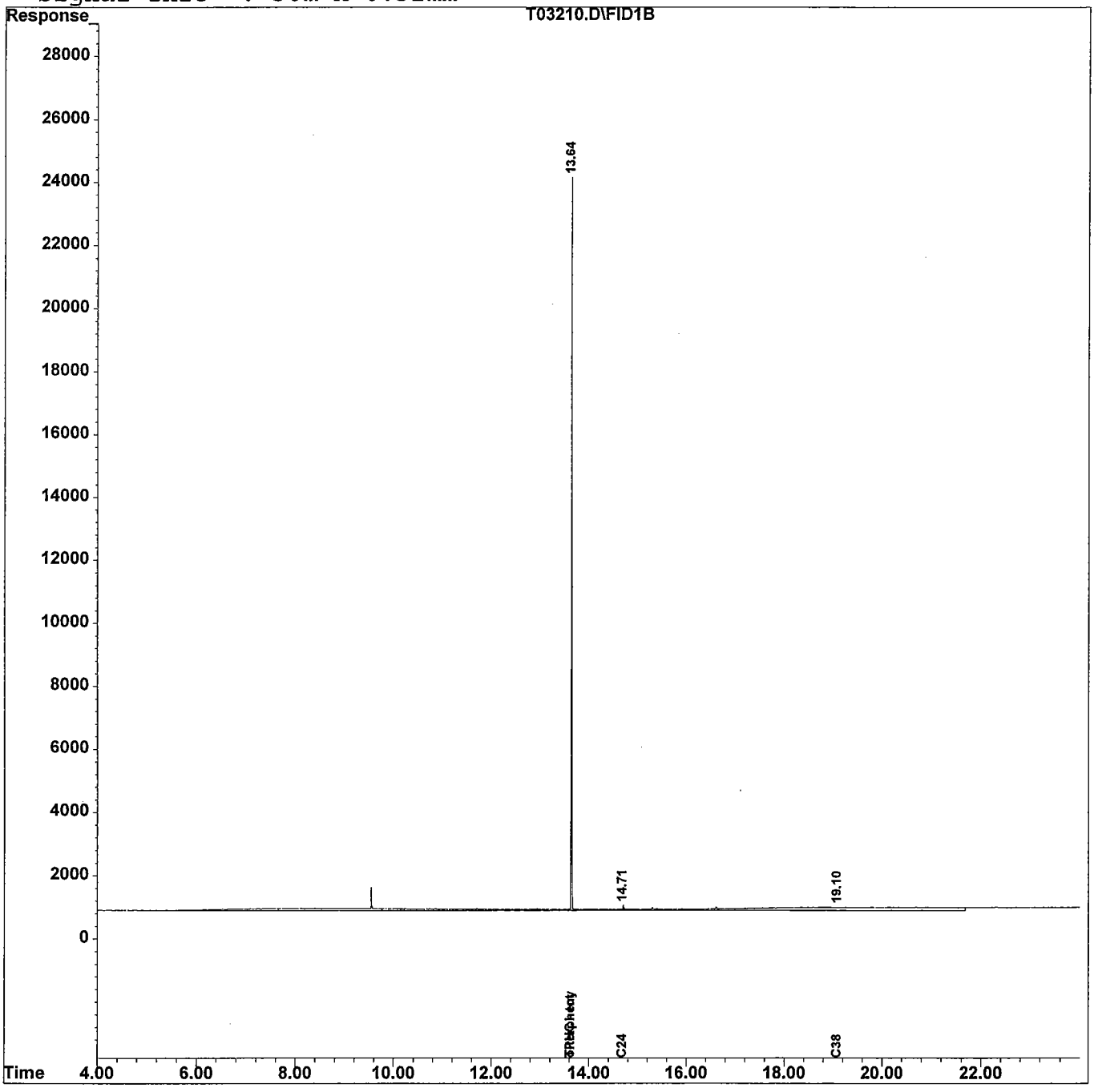
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03210.D Vial: 6
Acq On : 14 Nov 97 6:25 pm Operator: DEINHARDT
Sample : 3158.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 17 7:48 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03211.D Vial: 7
Acq On : 14 Nov 97 7:12 pm Operator: DEINHARDT
Sample : 3158.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 19:40 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	213349	12.714	mg/L
Spiked Amount	10.000	Recovery	=	127.14%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1203	0.079	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

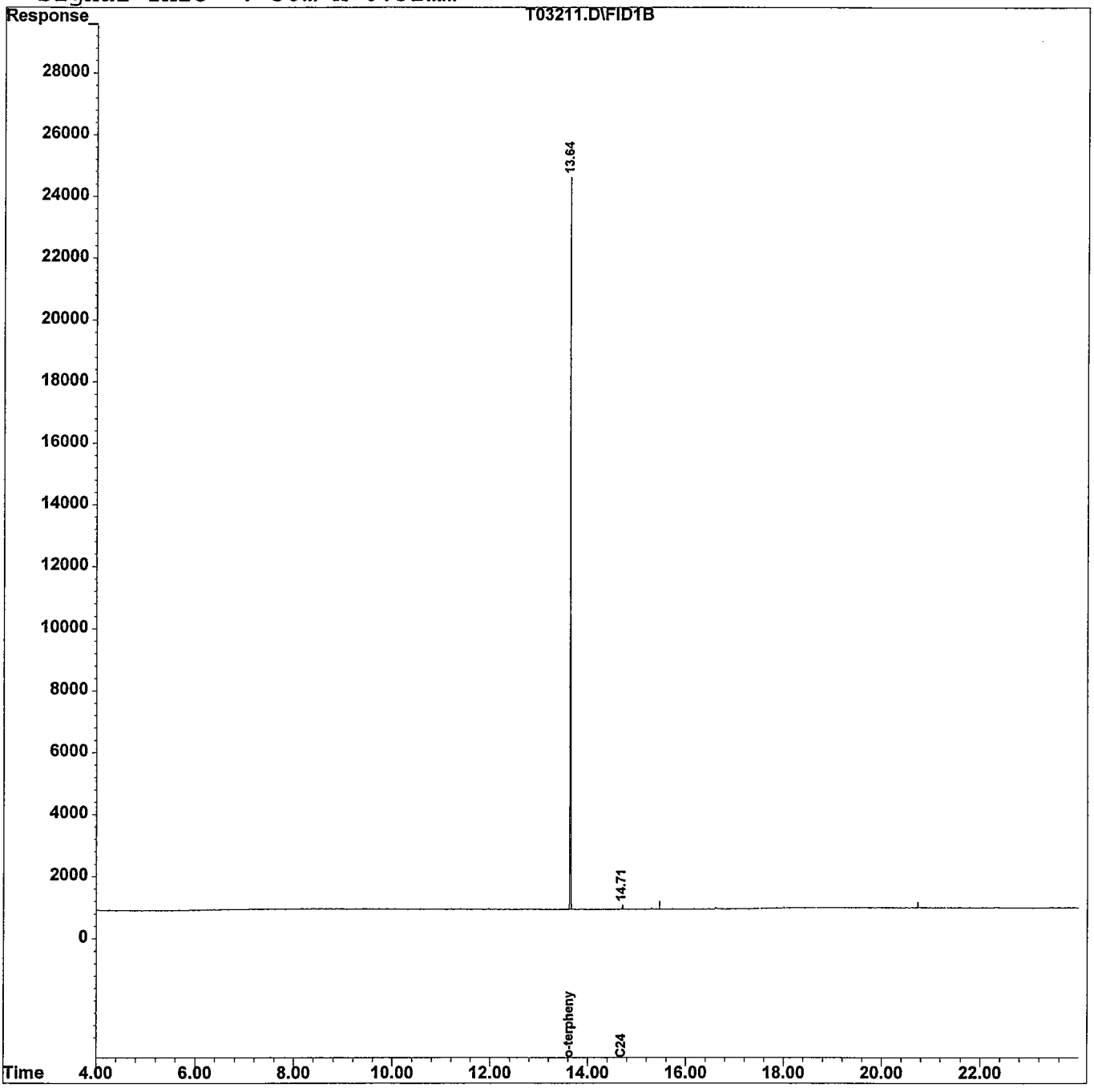
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03211.D Vial: 7
Acq On : 14 Nov 97 7:12 pm Operator: DEINHARDT
Sample : 3158.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 19:40 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



21

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03212.D Vial: 8
Acq On : 14 Nov 97 7:59 pm Operator: DEINHARDT
Sample : 3158.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 20:26 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	204139	12.166	mg/L
Spiked Amount	10.000	Recovery	=	121.66%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1396	0.092	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

(f)=RT Delta > 1/2 Window (m)=manual int.

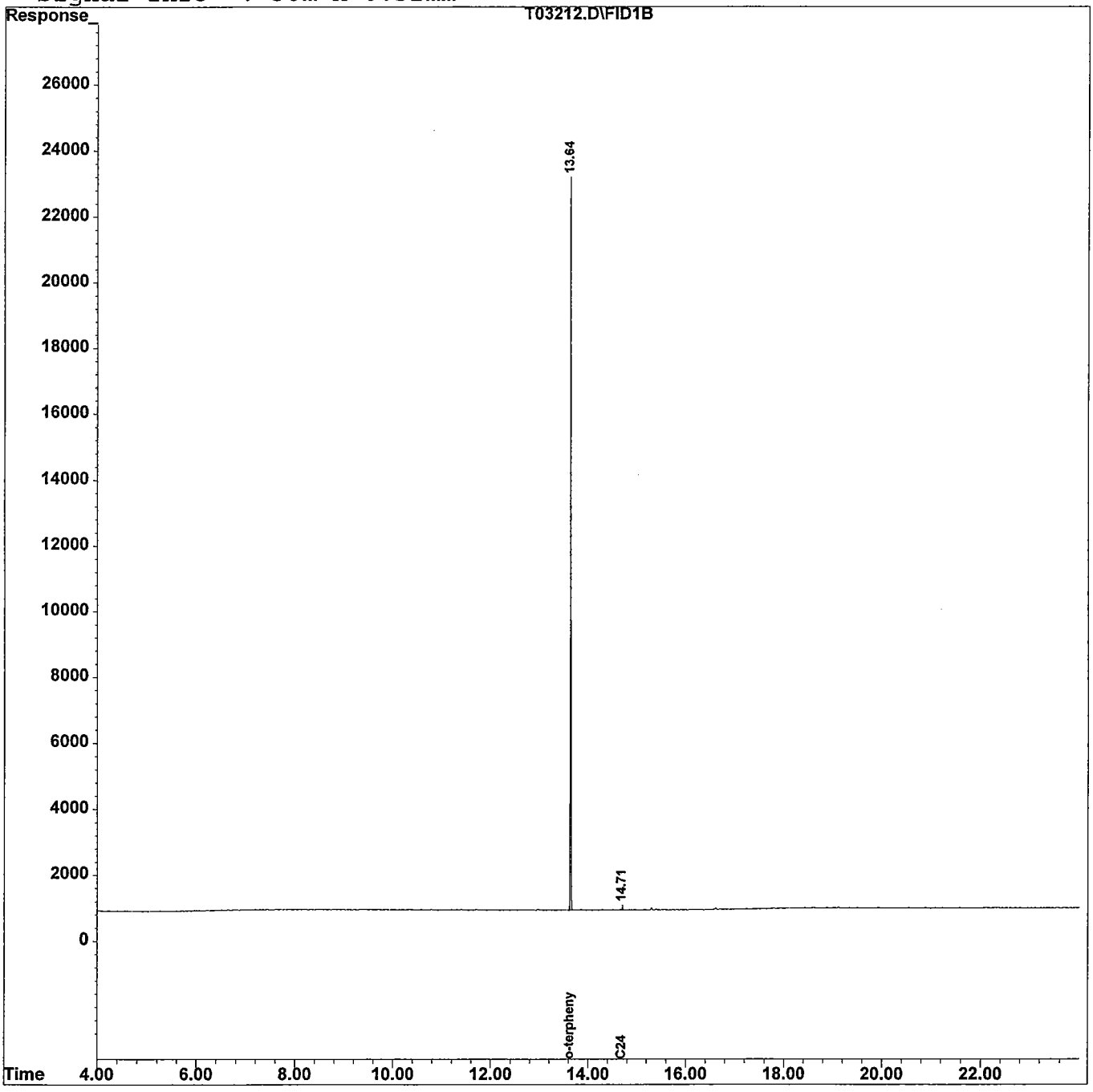
21

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03212.D Vial: 8
Acq On : 14 Nov 97 7:59 pm Operator: DEINHARDT
Sample : 3158.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 20:26 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



2

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03213.D Vial: 9
Acq On : 14 Nov 97 8:46 pm Operator: DEINHARDT
Sample : 3158.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 21:14 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	199910	11.914	mg/L
Spiked Amount	10.000	Recovery	=	119.14%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1349	0.089	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

(f)=RT Delta > 1/2 Window (m)=manual int.

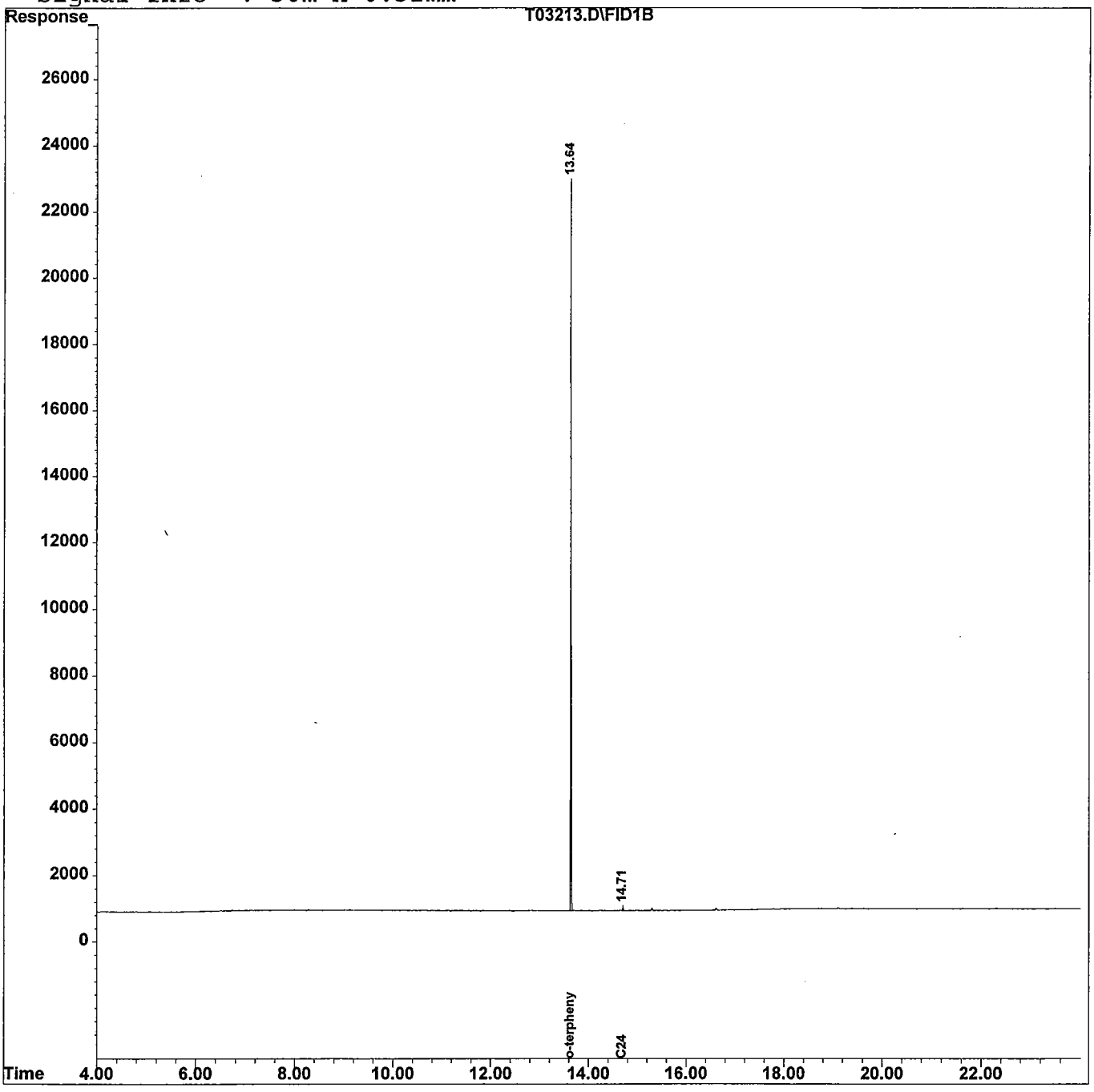
2

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03213.D Vial: 9
Acq On : 14 Nov 97 8:46 pm Operator: DEINHARDT
Sample : 3158.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 21:14 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03214.D Vial: 10
Acq On : 14 Nov 97 9:33 pm Operator: DEINHARDT
Sample : 3158.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 22:01 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	211698	12.616	mg/L
Spiked Amount	10.000	Recovery	=	126.16%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1528	0.101	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

(f)=RT Delta > 1/2 Window (m)=manual int.

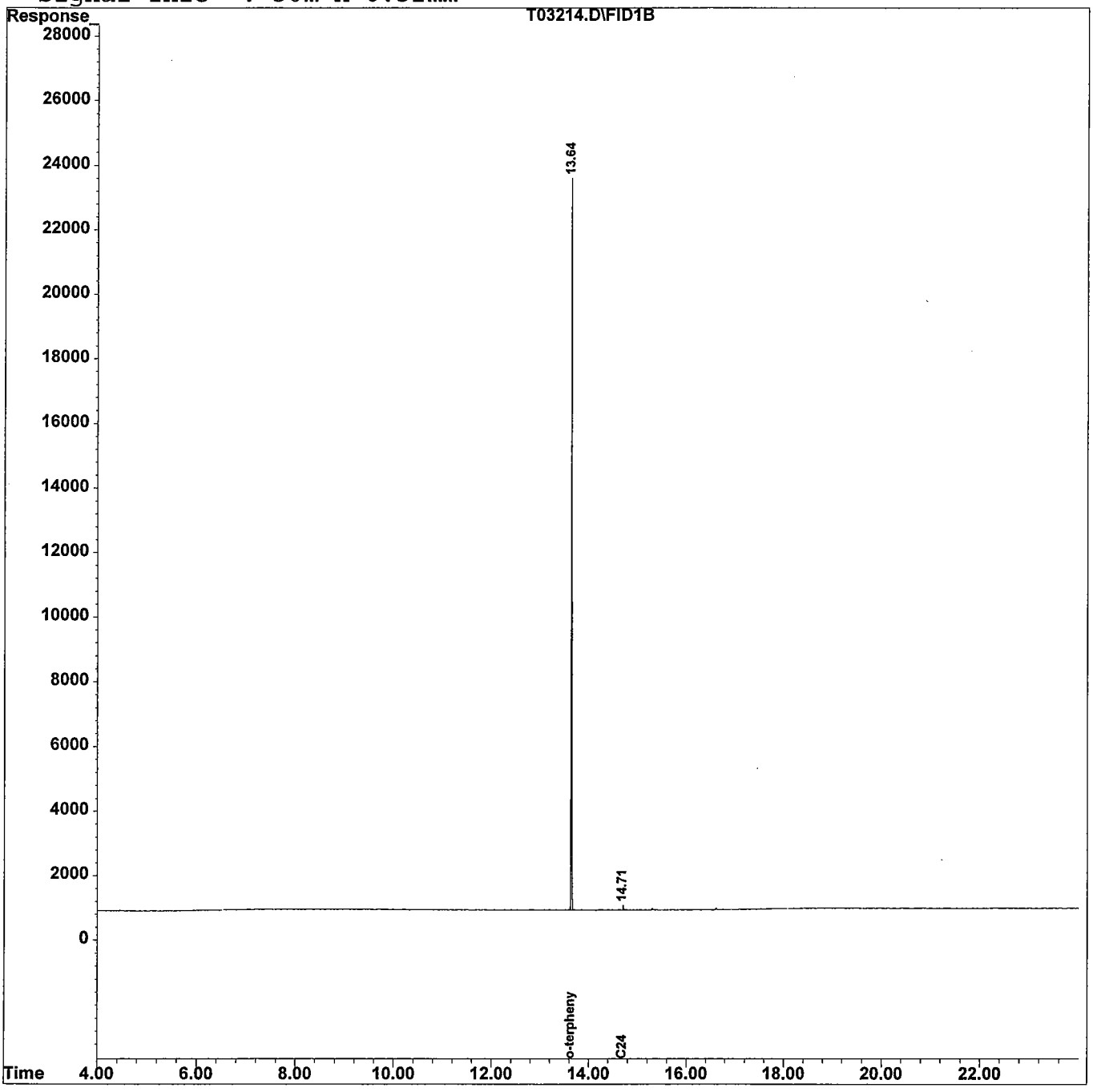
2

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03214.D Vial: 10
Acq On : 14 Nov 97 9:33 pm Operator: DEINHARDT
Sample : 3158.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 22:01 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



2

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03215.D Vial: 11
Acq On : 14 Nov 97 10:21 pm Operator: DEINHARDT
Sample : 3158.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 22:49 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
21) s o-terphenyl	13.64	196396	11.704	mg/L
Spiked Amount 10.000	Recovery = 117.04%			
Target Compounds				
1) t C8	0.00	0	N.D.	mg/L
2) t C10	0.00	0	N.D.	mg/L
3) t C12	0.00	0	N.D.	mg/L
4) t C14	0.00	0	N.D.	mg/L
5) t C16	0.00	0	N.D.	mg/L
6) t C18	0.00	0	N.D.	mg/L
7) t C20	0.00	0	N.D.	mg/L
8) t C22	0.00	0	N.D.	mg/L
9) t C24	14.71	1572	0.103	mg/L
10) t C26	0.00	0	N.D.	mg/L
11) t C28	0.00	0	N.D.	mg/L
12) t C30	0.00	0	N.D.	mg/L
13) t C32	0.00	0	N.D.	mg/L
14) t C34	0.00	0	N.D.	mg/L
15) t C36	0.00	0	N.D.	mg/L
16) t C38	0.00	0	N.D.	mg/L
17) t C40	0.00	0	N.D.	mg/L
18) t c42	0.00	0	N.D.	mg/L
19) T Pristane	0.00	0	N.D.	mg/L
20) T Phytane	0.00	0	N.D.	mg/L
22) t TPHC - total	0.00	0	N.D.	mg/L

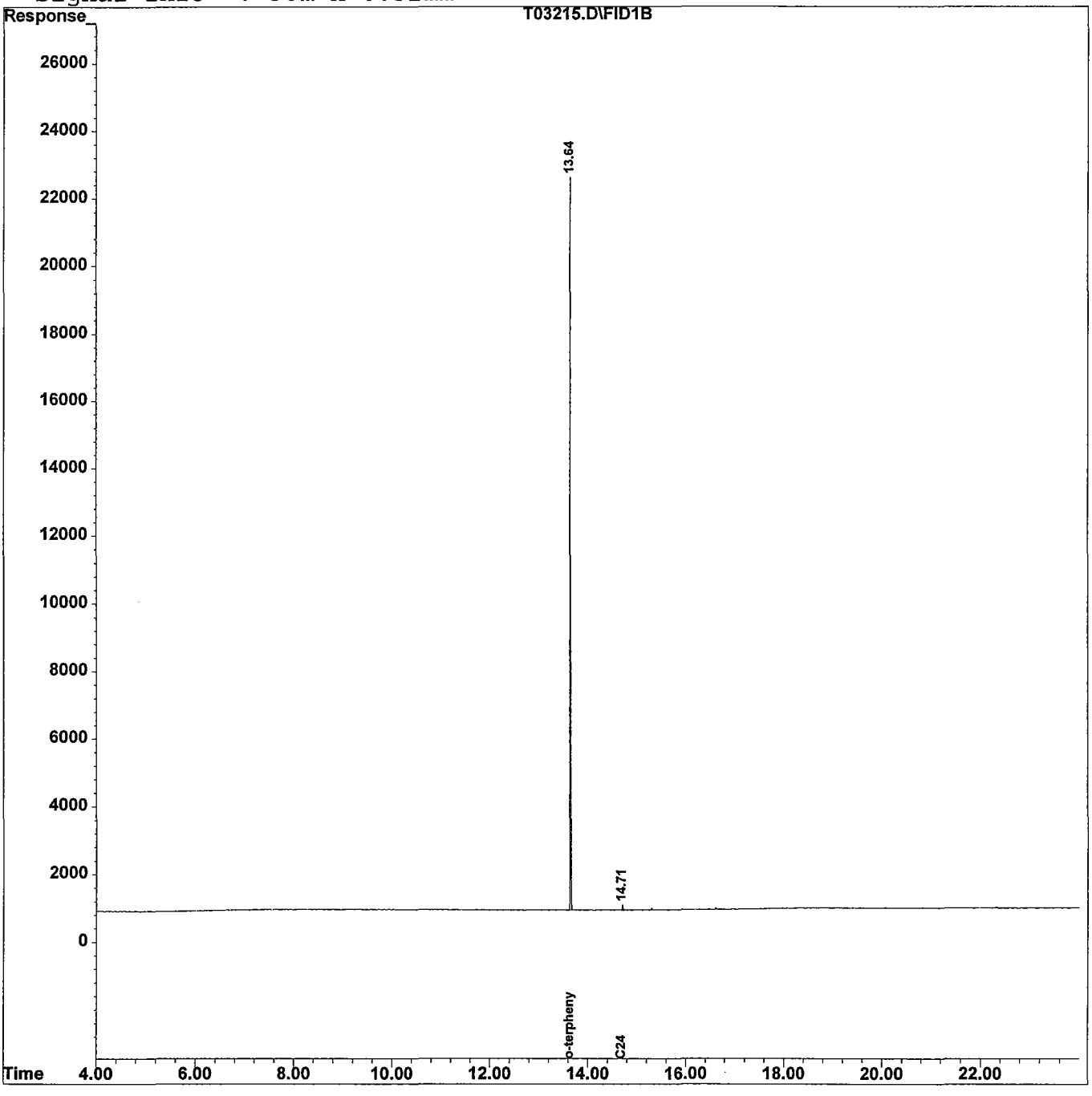
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03215.D Vial: 11
Acq On : 14 Nov 97 10:21 pm Operator: DEINHARDT
Sample : 3158.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 22:49 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03216.D Vial: 12
Acq On : 14 Nov 97 11:09 pm Operator: DEINHARDT
Sample : 3158.09 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 23:37 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	209955	12.512	mg/L
Spiked Amount	10.000	Recovery	=	125.12%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1426	0.094	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

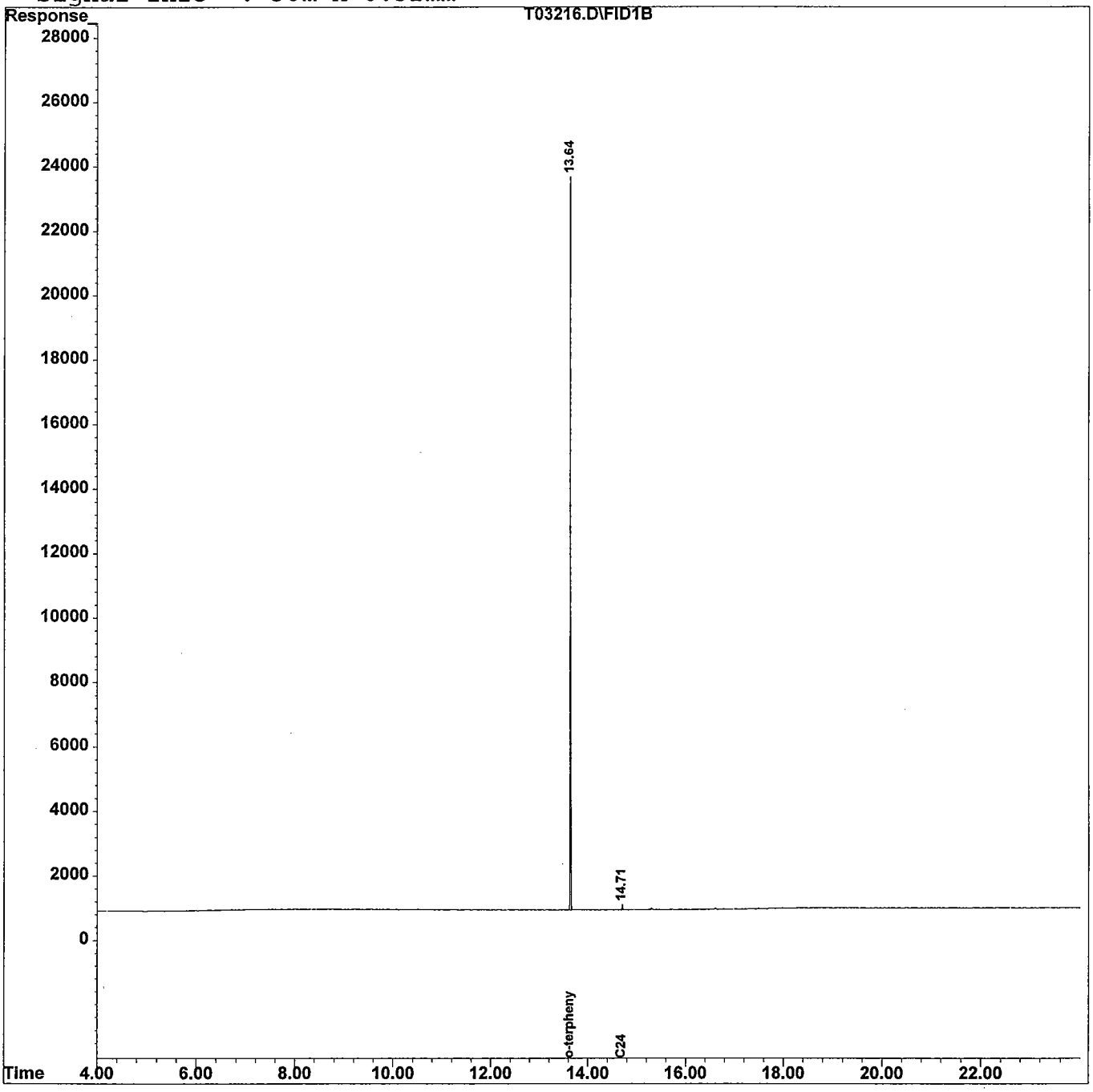
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03216.D Vial: 12
Acq On : 14 Nov 97 11:09 pm Operator: DEINHARDT
Sample : 3158.09 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 14 23:37 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03218.D Vial: 14
Acq On : 15 Nov 97 12:47 am Operator: DEINHARDT
Sample : 3158.10 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 15 1:15 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	216466	12.900	mg/L
Spiked Amount	10.000	Recovery	=	129.00%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1352	0.089	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

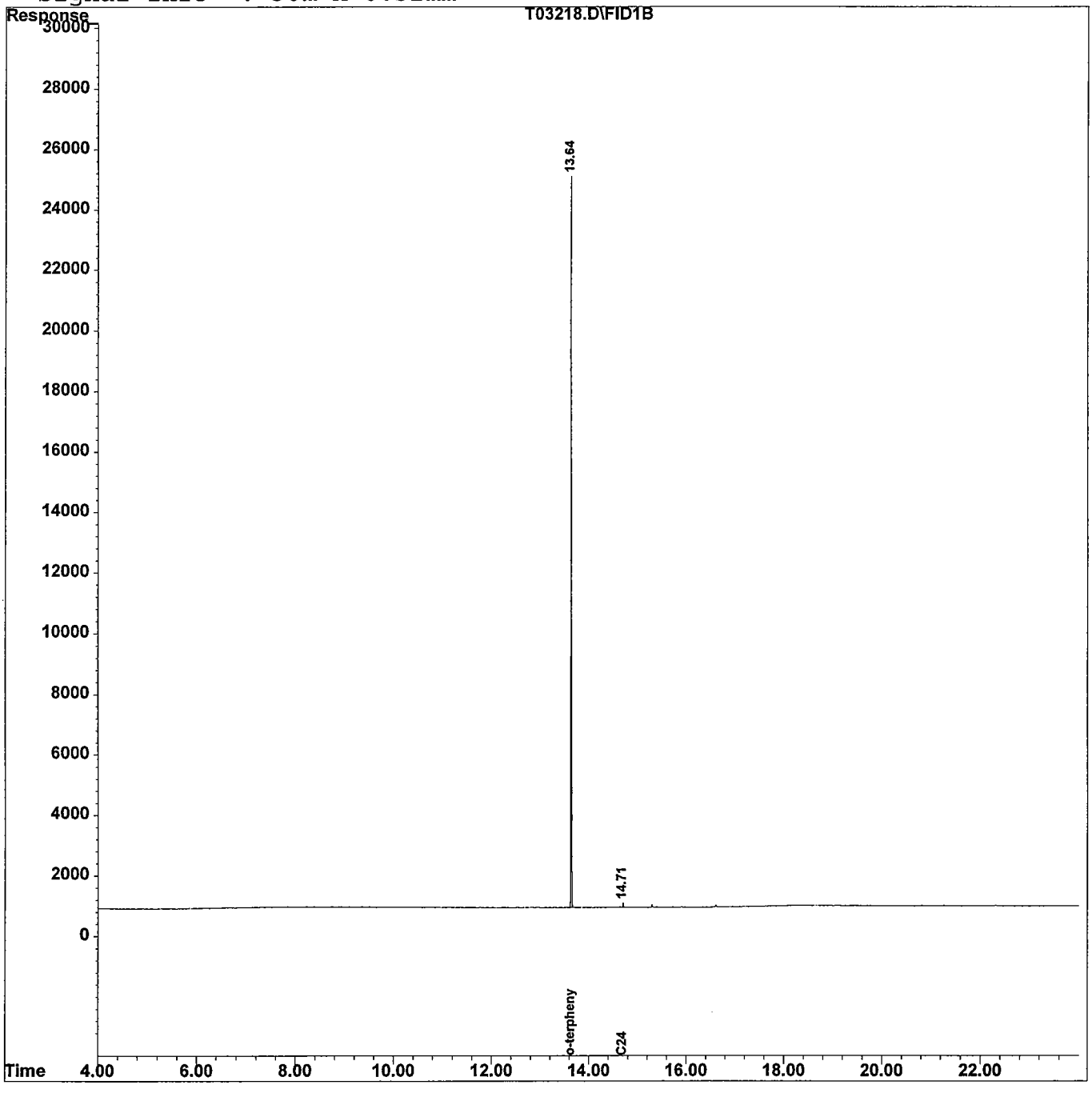
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03218.D Vial: 14
Acq On : 15 Nov 97 12:47 am Operator: DEINHARDT
Sample : 3158.10 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 15 1:15 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\971114\T03219.D Vial: 15
Acq On : 15 Nov 97 1:35 am Operator: DEINHARDT
Sample : 3158.11 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 15 2:03 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.64	201982	12.037	mg/L
Spiked Amount	10.000	Recovery	=	120.37%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	14.71	1549	0.102	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L

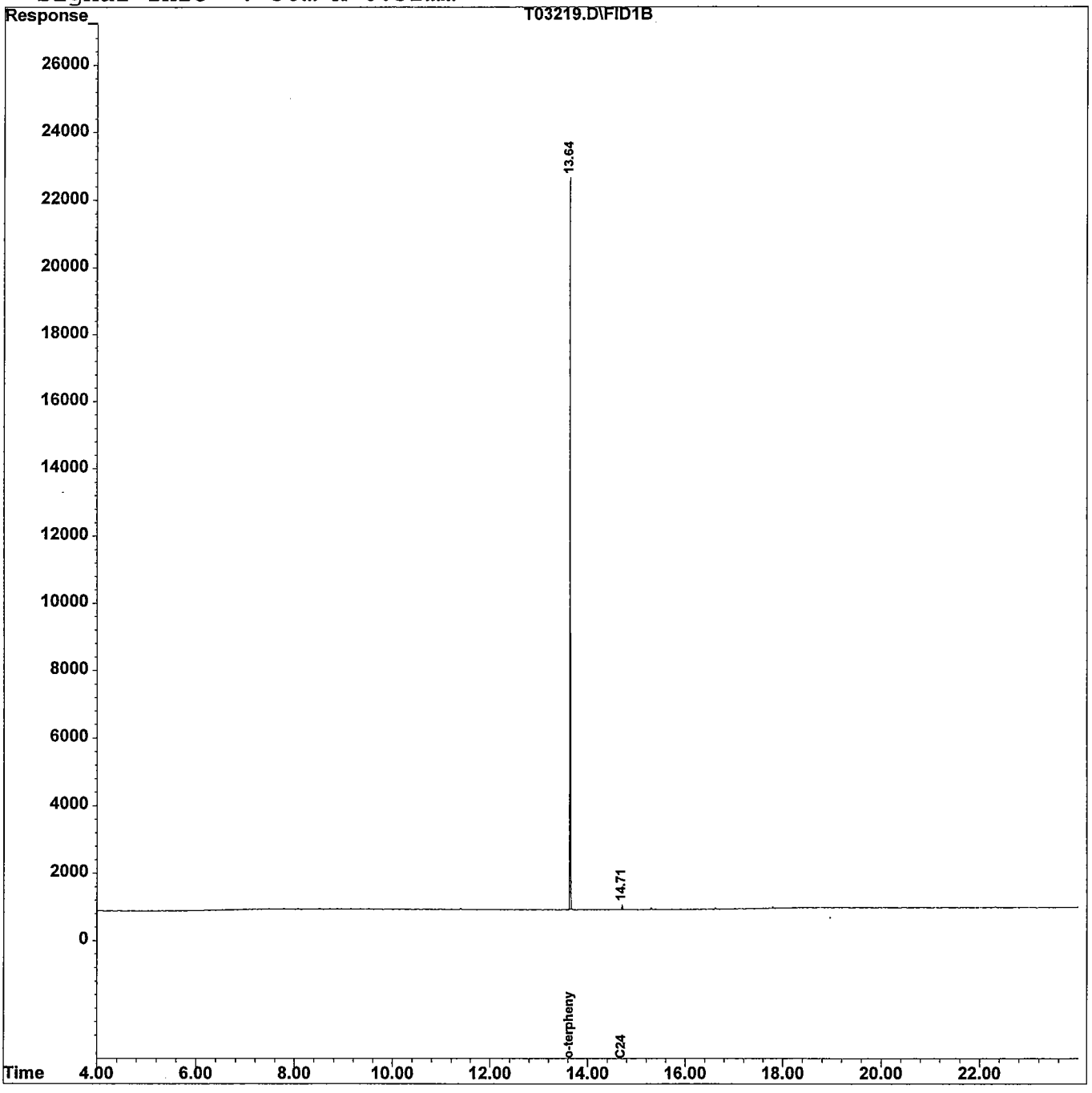
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971114\T03219.D Vial: 15
Acq On : 15 Nov 97 1:35 am Operator: DEINHARDT
Sample : 3158.11 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Nov 15 2:03 1997 Quant Results File: TPH16.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH16.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH16.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <u>and</u> in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis ✓
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 8 / 25 / 15

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 426

Project # 3187
Date Rec. 12/02/97
Date Compl. 12/03/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	NA	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		✓
7. Analysis holding time met.		✓

(If not met, list number of days exceeded for each sample)

Additional Comments:

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: DRW-ENV
Phone #:
( )DERA (X)OMA ( )Other:
Project No: 98-0001
Location: B. 426
Samplers Name / Company : GARY DiMARTINIS - TVS

Analysis Parameters: TPHC; TS Solids; Munsell; Cl/ATTS (TO BE DETERMINED); OVA

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles									Remarks / Preservation Method
31870.01	426-A	12-2-97	1031	SOIL	2	X	X	X	X	15.15			4	EXC. FLOOR @ 8.0' *
.02	B	↓	1046	↓	↓	↓	↓	↓	↓	15.13			ND	↓
.03	C	↓	1100	↓	↓	↓	↓	↓	↓	15.78			30	SIDEWALL @ 5.5'
.04	D	↓	1054	↓	↓	↓	↓	↓	↓	15.33	MS 15.55	MSD 15.55	ND	↓
	** E	(THESE SAMPLES NOT Collected DUE TO UTILITIES.)												↓
	** F													
.05	DUP	12-2-97	—	SOIL	↓	X	X	X	X	15.27			—	FIELD DUPLICATE
.06	TB	↓		METHANOL	1				X				—	TRIP BLANK

** NOTE: GEO-PROBE SAMPLING AT LOCATIONS SHOWN IS RECOMMENDED.

NOTE: OVA (#AS2114) CALIBRATED W/ 95 ppm CH_4 & ZERO (-) AIR @ 1020 HRS ON 12/2/97 by G. DiMARTINIS.

Comments: * = SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12/4/97 1326	J. Verguin			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (_)Standard 4 wks, (X)Rush ___ Days, (X)ASAP Verbal ___ Hrs.

Remarks: DEDICATED SAMPLING TOOLS USED.

print legibly

~me1413.xls11/17/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Lab. ID # :**	3187
	DPW. SELFM-PW-EV	**Date Rec'd:**	02-Dec-97
	Bldg. 173	**Analysis Start:**	03-Dec-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	03-Dec-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B. 426

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3187.01	426-A	**1.00**	15.15	84.09	184	**297.90**
3187.02	426-B	**1.00**	15.13	84.59	184	**ND**
3187.03	426-C	**1.00**	15.78	83.43	179	**6413.79**
3187.04	426-D	**1.00**	15.33	82.92	185	**187.30**
3187.05	426-DUP	**1.00**	15.27	83.23	185	**226.71**
METHOD BLANK	3-Dec-97	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997

Calibration Files
1 =T03251.D 2 =T03250.D 3 =T03249.D
4 =T03248.D 5 =T03247.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	t	C8	1.824	1.591	1.646	1.637	1.784	1.696	E4	5.98
2)	t	C10	1.846	1.560	1.625	1.638	1.809	1.695	E4	7.34
3)	t	C12	1.900	1.619	1.701	1.718	1.911	1.770	E4	7.30
4)	t	C14	1.941	1.642	1.730	1.742	1.943	1.800	E4	7.53
5)	t	C16	1.987	1.674	1.759	1.767	1.970	1.831	E4	7.59
6)	t	C18	2.260	1.912	2.017	2.058	2.251	2.100	E4	7.23
7)	t	C20	2.152	1.809	1.935	1.925	2.175	1.999	E4	7.91
8)	t	C22	2.092	1.748	1.878	1.891	2.101	1.942	E4	7.81
9)	t	C24	2.023	1.694	1.850	1.883	2.094	1.909	E4	8.18
10)	t	C26	1.780	1.610	1.739	1.772	1.976	1.775	E4	7.40
11)	t	C28	1.751	1.469	1.595	1.616	1.814	1.649	E4	8.25
12)	t	C30	1.637	1.415	1.535	1.567	1.763	1.584	E4	8.11
13)	t	C32	1.525	1.292	1.420	1.454	1.630	1.464	E4	8.55
14)	t	C34	1.391	1.156	1.280	1.327	1.478	1.327	E4	9.09
15)	t	C36	1.086	0.885	1.014	1.069	1.191	1.049	E4	10.67
16)	t	C38	7.205	5.847	7.501	8.184	9.070	7.561	E3	15.83
17)	t	C40	3.806	3.060	4.730	5.446	5.844	4.577	E3	25.10
18)	t	c42	1.771	1.492	2.569	3.040	2.991	2.373	E3	29.82
19)	T	Pristane	2.105	1.772	1.866	1.863	2.076	1.936	E4	7.55
20)	T	Phytane	2.108	1.782	1.930	1.954	2.178	1.990	E4	7.84
21)	s	o-terphenyl	2.393	2.007	2.102	2.115	2.359	2.195	E4	7.78
22)	t	TPHC - total	2.808	2.028	1.793	1.776	1.978	2.077	E4	20.39

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\971203\T03287.D Vial: 2
Acq On : 3 Dec 97 10:51 am Operator: DEINHARDT
Sample : 50 PPM STANDARD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	t	C8	16.964	14.653 E3	13.6	84	0.00
2	t	C10	16.955	14.731 E3	13.1	84	0.00
3	t	C12	17.699	15.340 E3	13.3	83	0.00
4	t	C14	17.997	15.426 E3	14.3	82	0.00
5	t	C16	18.314	15.546 E3	15.1	81	0.00
6	t	C18	20.997	17.206 E3	18.1	78	0.00
7	t	C20	19.992	15.870 E3	20.6	79	0.00
8	t	C22	19.422	16.115 E3	17.0	79	0.00
9	t	C24	19.087	15.855 E3	16.9	79	0.00
10	t	C26	17.754	14.964 E3	15.7	81	0.00
11	t	C28	16.492	13.641 E3	17.3	79	0.00
12	t	C30	15.835	13.078 E3	17.4	79	0.00
13	t	C32	14.645	12.090 E3	17.4	78	0.00
14	t	C34	13.266	10.769 E3	18.8	77	0.00
15	t	C36	10.489	8.433 E3	19.6	76	0.00
16	t	C38	7.561	6.108 E3	19.2	74	0.00
17	t	C40	4.577	3.781 E3	17.4	72	0.00
18	t	c42	2.373	1.869 E3	21.2	68	0.00
19	T	Pristane	19.363	16.529 E3	14.6	83	0.00
20	T	Phytane	19.905	17.222 E3	13.5	85	0.00
21	s	o-terphenyl	21.951	18.593 E3	15.3	81	0.00
22	t	TPHC - total	20.767	15.588 E3	24.9	76	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Surrogate Recovery Report

Lab. ID # : 3187

Location #: B. 426

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3187.01		10.00	11.72	117.24
3187.02		10.00	11.91	119.08
3187.03		10.00	11.16	111.61
3187.04		10.00	11.72	117.24
3187.05		10.00	11.94	119.40
METHOD BLANK	03-Dec-97	10.00	11.13	111.28

Surrogate Added : **o-Terphenyl**

12/4/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Matrix Spike Recovery Report

Lab. ID # : 3187

Location #: B. 426

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3187.04MS	1000	47.62	937.11	88.95	75-125
3187.04MSD	1000	47.62	951.41	90.38	75-125

RPD	**1.60**	**20.00**

12/4/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Blank Spike Recovery Report

Lab. ID # : 3187

Location #: B. 426

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	3-Dec-97	1000	928.96	92.90	75-125

12/4/97

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971203\T03290.D Vial: 4
Acq On : 3 Dec 97 2:37 pm Operator: DEINHARDT
Sample : 3187.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:44 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
21) s	o-terphenyl	13.60	257355	11.724	mg/L	
Spiked Amount	10.000	Recovery	=	117.24%		
	Target Compounds					
1) t	C8	0.00	0	N.D.	mg/L	
2) t	C10	0.00	0	N.D.	mg/L	
3) t	C12	10.03	4831	0.273	mg/L	
4) t	C14	11.19	8446	0.469	mg/L	
5) t	C16	12.19	9009	0.492	mg/L	
6) t	C18	12.65	8100	0.386	mg/L	
7) t	C20	13.09	7577	0.379	mg/L	
8) t	C22	13.91	4482	0.231	mg/L	
9) t	C24	14.65	1769	0.093	mg/L	
10) t	C26	0.00	0	N.D.	mg/L	
11) t	C28	0.00	0	N.D.	mg/L	
12) t	C30	0.00	0	N.D.	mg/L	
13) t	C32	0.00	0	N.D.	mg/L	
14) t	C34	0.00	0	N.D.	mg/L	
15) t	C36	0.00	0	N.D.	mg/L	
16) t	C38	0.00	0	N.D.	mg/L	
17) t	C40	0.00	0	N.D.	mg/L	
18) t	c42	0.00	0	N.D.	mg/L	
19) T	Pristane	12.68	3740	0.193	mg/L	
20) T	Phytane	13.13	2855	0.143	mg/L	
22) t	TPHC - total	13.60	1576272	75.904	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

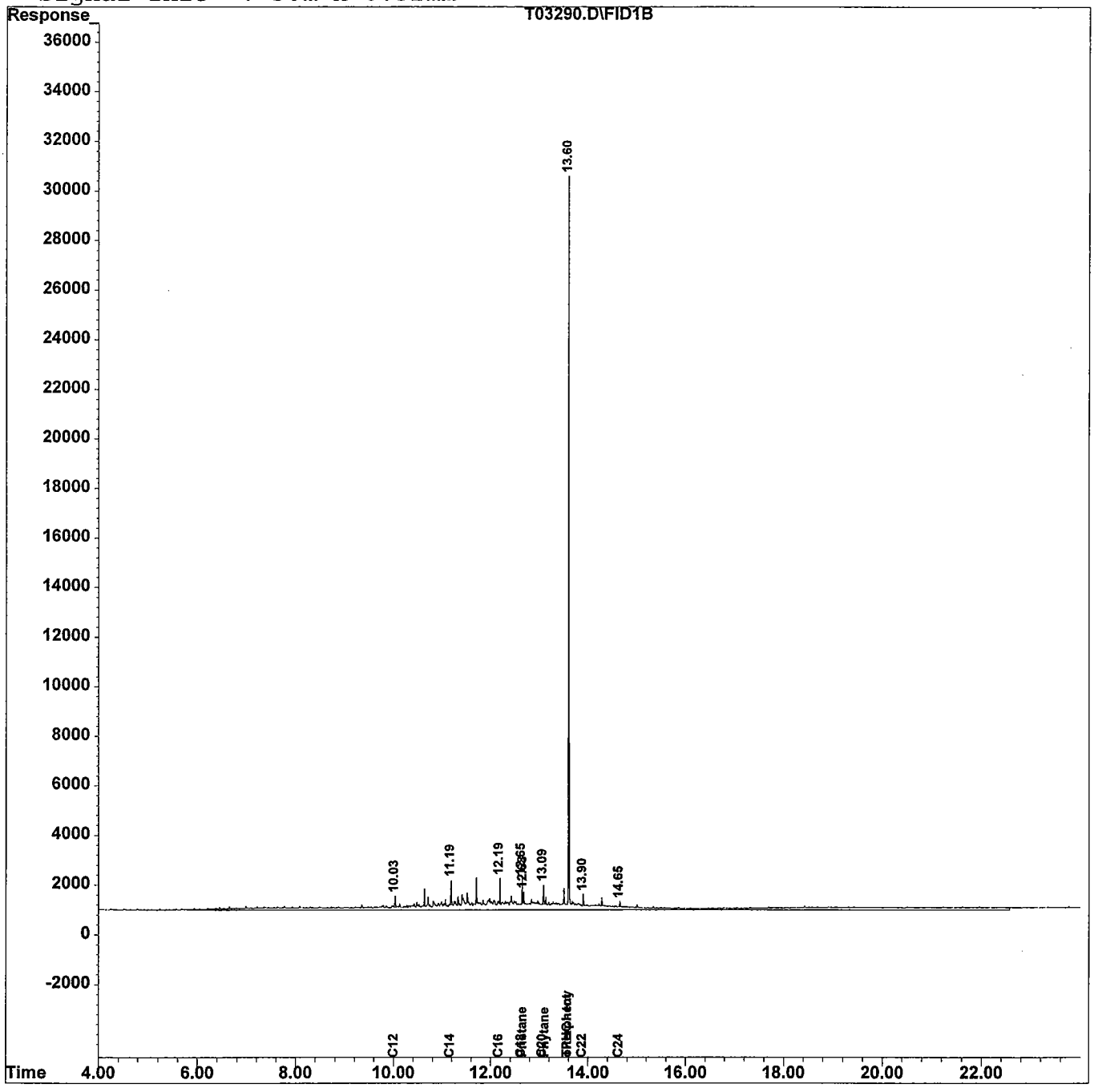
12

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971203\T03290.D Vial: 4
Acq On : 3 Dec 97 2:37 pm Operator: DEINHARDT
Sample : 3187.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:44 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971203\T03291.D Vial: 5
Acq On : 3 Dec 97 3:21 pm Operator: DEINHARDT
Sample : 3187.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:45 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
21) s	o-terphenyl	13.60	261398	11.908	mg/L	
Spiked Amount	10.000	Recovery	=	119.08%		
	Target Compounds					
1) t	C8	0.00	0	N.D.	mg/L	
2) t	C10	0.00	0	N.D.	mg/L	
3) t	C12	0.00	0	N.D.	mg/L	
4) t	C14	0.00	0	N.D.	mg/L	
5) t	C16	0.00	0	N.D.	mg/L	
6) t	C18	0.00	0	N.D.	mg/L	
7) t	C20	0.00	0	N.D.	mg/L	
8) t	C22	0.00	0	N.D.	mg/L	
9) t	C24	0.00	0	N.D.	mg/L	
10) t	C26	0.00	0	N.D.	mg/L	
11) t	C28	0.00	0	N.D.	mg/L	
12) t	C30	0.00	0	N.D.	mg/L	
13) t	C32	0.00	0	N.D.	mg/L	
14) t	C34	0.00	0	N.D.	mg/L	
15) t	C36	0.00	0	N.D.	mg/L	
16) t	C38	0.00	0	N.D.	mg/L	
17) t	C40	0.00	0	N.D.	mg/L	
18) t	c42	0.00	0	N.D.	mg/L	
19) T	Pristane	0.00	0	N.D.	mg/L	
20) T	Phytane	0.00	0	N.D.	mg/L	
22) t	TPHC - total	0.00	0	N.D.	mg/L	d

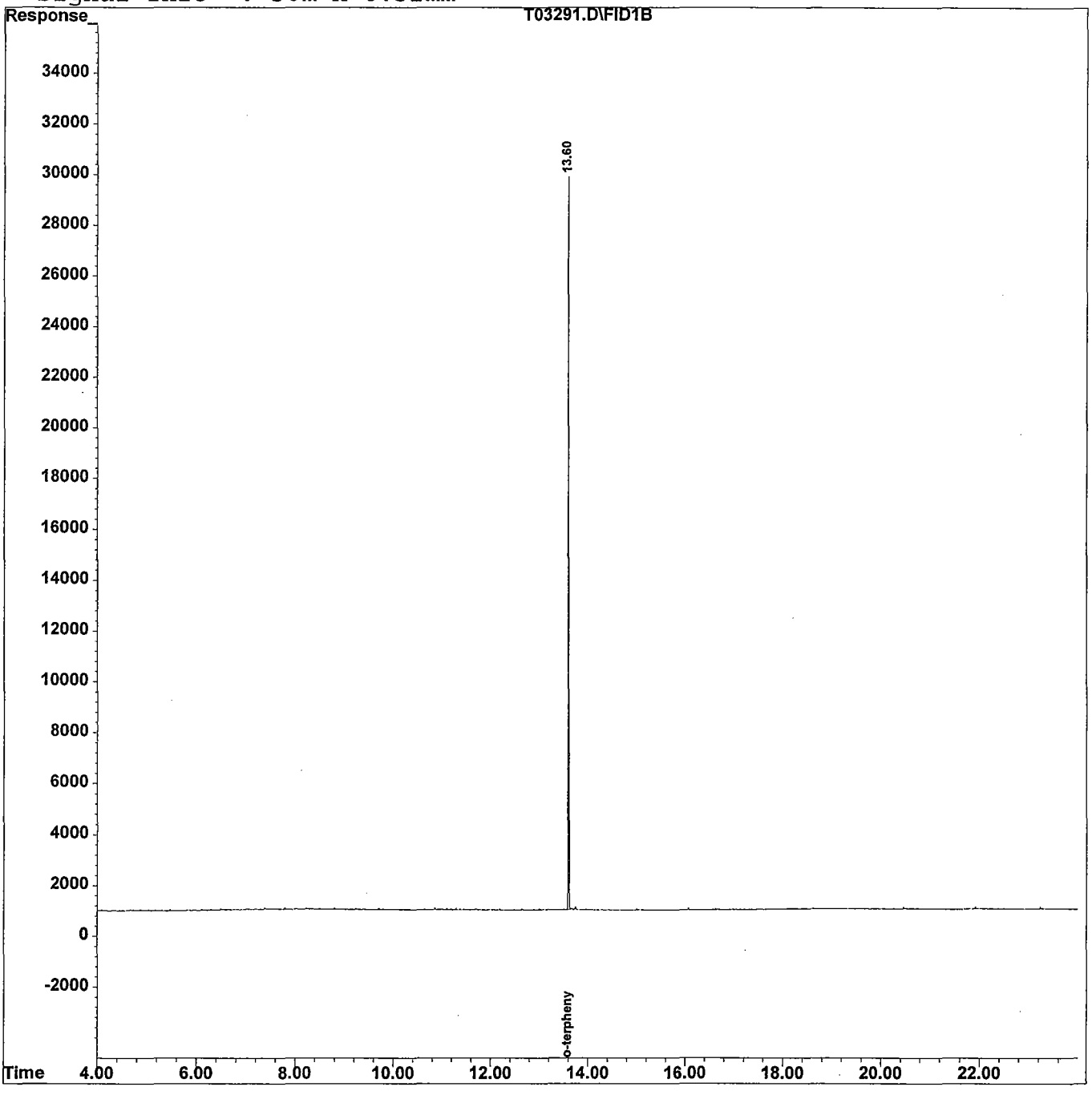
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971203\T03291.D Vial: 5
Acq On : 3 Dec 97 3:21 pm Operator: DEINHARDT
Sample : 3187.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:45 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



15

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971203\T03292.D Vial: 6
Acq On : 3 Dec 97 4:03 pm Operator: DEINHARDT
Sample : 3187.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:47 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.61	244992	11.161	mg/L
Spiked Amount	10.000	Recovery	=	111.61%	
	Target Compounds				
1) t	C8	5.65	1080	0.064	mg/L
2) t	C10	8.52	44087	2.600	mg/L
3) t	C12	10.03	274640	15.517	mg/L
4) t	C14	11.19	525483	29.198	mg/L
5) t	C16	12.19	493249	26.932	mg/L
6) t	C18	12.65	415411	19.785	mg/L
7) t	C20	13.09	374475	18.731	mg/L
8) t	C22	13.91	212154	10.924	mg/L
9) t	C24	14.65	93862	4.918	mg/L
10) t	C26	15.34	31774	1.790	mg/L
11) t	C28	15.98	8104	0.491	mg/L
12) t	C30	16.58	1091	0.069	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	12.68	209010	10.794	mg/L
20) T	Phytane	13.14	164637	8.271	mg/L
22) t	TPHC - total	11.71	35070205	1688.783	mg/L m

(f)=RT Delta > 1/2 Window (m)=manual int.

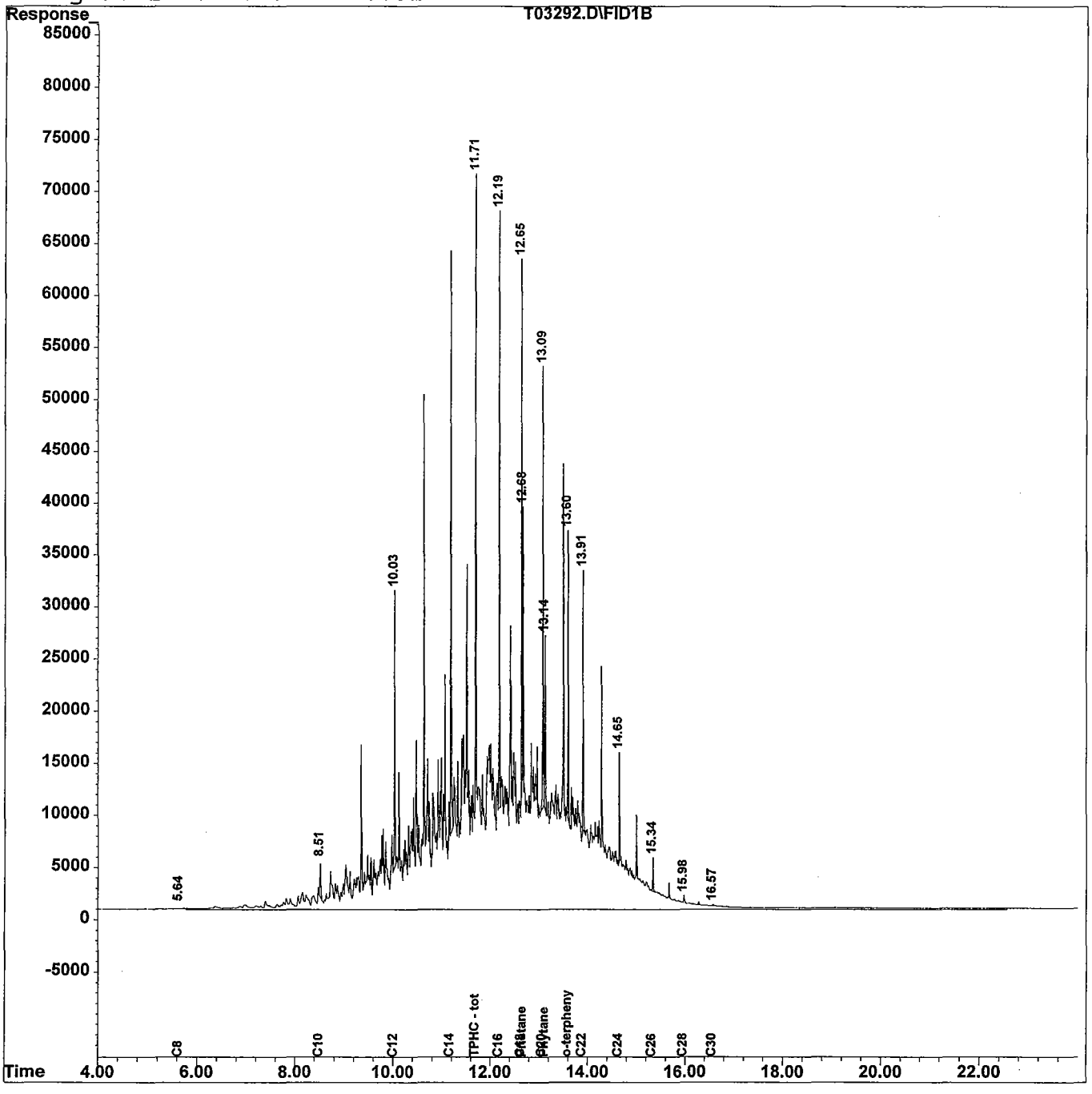
1C

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971203\T03292.D Vial: 6
Acq On : 3 Dec 97 4:03 pm Operator: DEINHARDT
Sample : 3187.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:47 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



17

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971203\T03293.D Vial: 7
Acq On : 3 Dec 97 4:45 pm Operator: DEINHARDT
Sample : 3187.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:47 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
21)	s	o-terphenyl	13.60	257365	11.724	mg/L	
Spiked Amount		10.000	Recovery	=	117.24%		
		Target Compounds					
1)	t	C8	0.00	0	N.D.	mg/L	
2)	t	C10	0.00	0	N.D.	mg/L	
3)	t	C12	0.00	0	N.D.	mg/L	
4)	t	C14	0.00	0	N.D.	mg/L	
5)	t	C16	0.00	0	N.D.	mg/L	
6)	t	C18	12.90	1226	0.058	mg/L	
7)	t	C20	12.90	1226	0.061	mg/L	
8)	t	C22	13.74	3358	0.173	mg/L	
9)	t	C24	0.00	0	N.D.	mg/L	
10)	t	C26	0.00	0	N.D.	mg/L	
11)	t	C28	0.00	0	N.D.	mg/L	
12)	t	C30	0.00	0	N.D.	mg/L	
13)	t	C32	0.00	0	N.D.	mg/L	
14)	t	C34	0.00	0	N.D.	mg/L	
15)	t	C36	0.00	0	N.D.	mg/L	
16)	t	C38	0.00	0	N.D.	mg/L	
17)	t	C40	0.00	0	N.D.	mg/L	
18)	t	c42	0.00	0	N.D.	mg/L	
19)	T	Pristane	12.90	1226	0.063	mg/L	
20)	T	Phytane	12.90	1226	0.062	mg/L	
22)	t	TPHC - total	13.60	988874	47.619	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

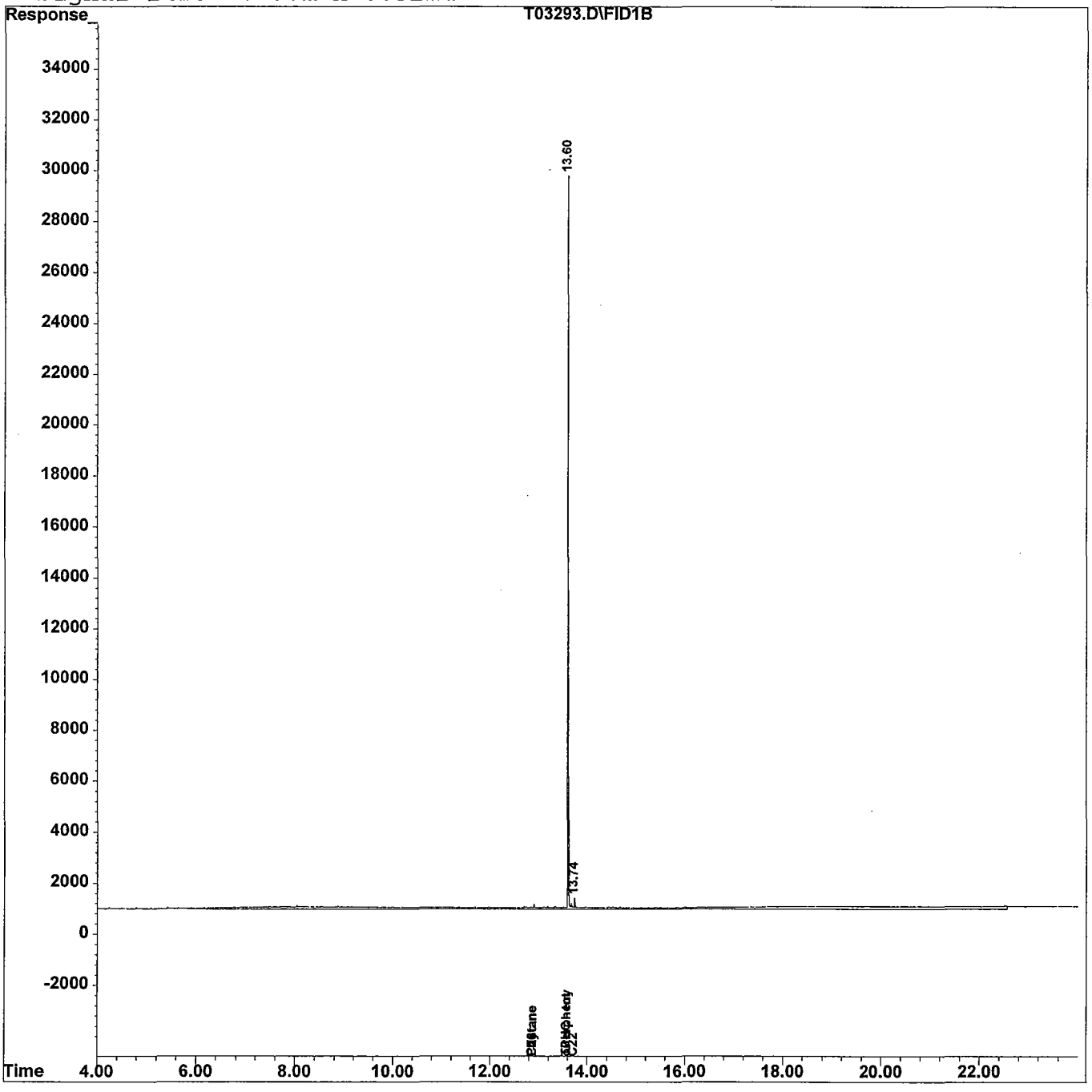
18

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971203\T03293.D Vial: 7
Acq On : 3 Dec 97 4:45 pm Operator: DEINHARDT
Sample : 3187.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 7:47 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971203\T03296.D Vial: 10
Acq On : 3 Dec 97 6:50 pm Operator: DEINHARDT
Sample : 3187.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 8:07 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
21) s	o-terphenyl	13.60	262098	11.940	mg/L	
Spiked Amount	10.000	Recovery	=	119.40%		
	Target Compounds					
1) t	C8	0.00	0	N.D.	mg/L	
2) t	C10	0.00	0	N.D.	mg/L	
3) t	C12	10.03	2234	0.126	mg/L	
4) t	C14	11.19	4553	0.253	mg/L	
5) t	C16	12.19	4134	0.226	mg/L	
6) t	C18	12.65	3699	0.176	mg/L	
7) t	C20	13.09	3648	0.182	mg/L	
8) t	C22	13.91	1844	0.095	mg/L	
9) t	C24	14.65	1279	0.067	mg/L	
10) t	C26	0.00	0	N.D.	mg/L	
11) t	C28	0.00	0	N.D.	mg/L	
12) t	C30	0.00	0	N.D.	mg/L	
13) t	C32	0.00	0	N.D.	mg/L	
14) t	C34	0.00	0	N.D.	mg/L	
15) t	C36	0.00	0	N.D.	mg/L	
16) t	C38	0.00	0	N.D.	mg/L	
17) t	C40	0.00	0	N.D.	mg/L	
18) t	c42	0.00	0	N.D.	mg/L	
19) T	Pristane	12.68	1698	0.088	mg/L	
20) T	Phytane	13.14	1278	0.064	mg/L	
22) t	TPHC - total	13.60	1196663	57.625	mg/L	m

(f)=RT Delta > 1/2 Window (m)=manual int.

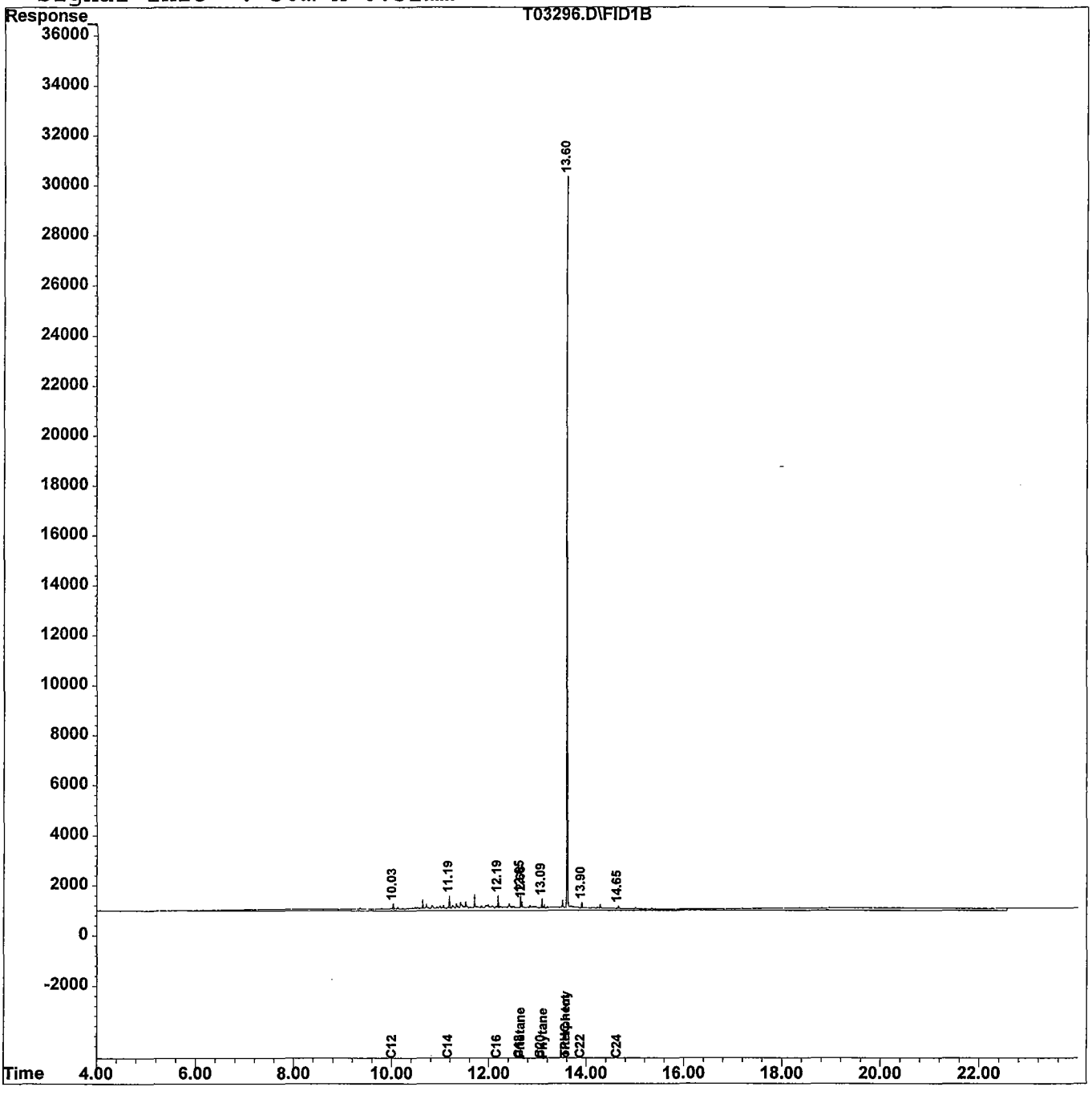
21

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971203\T03296.D Vial: 10
Acq On : 3 Dec 97 6:50 pm Operator: DEINHARDT
Sample : 3187.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 4 8:07 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



21

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <u>and</u> in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis ✓
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 1/13/06

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - EPA Method 8260
B.426
98-0001

Project # 3187
Date Rec. 12/02/97
Date Compl. 12/11/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) — Y

2. Retention times for chromatograms provided — Y

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — Y
   b. DFTPP Meet Criteria —

4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series — Y

5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — Y

6. GC/MS Calibration Requirements

   a. Calibration Check Compounds Meet Criteria — Y
   b. System Performance Check Compounds Meet Criteria — Y

7. Blank Contamination - If yes, List compounds and concentrations in each blank: — N

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

8. Surrogate Recoveries Meet Criteria — Y

   If not met, list those compounds and their recoveries which fall outside the acceptable range:

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

   If not met, were the calculations checked and the results qualified as "estimated"? —

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) — Y

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

4

GC/MS Analysis Conformance/Non-Conformance Summary (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria Y
(If not met, list those compounds which fall outside the acceptable range)
    a. VOA Fraction_____
    b. B/N Fraction_____
    c. Acid Fraction_____

11. Extraction Holding Time Met Y

If not met, list number of days exceeded for each sample: ___
_____
_____

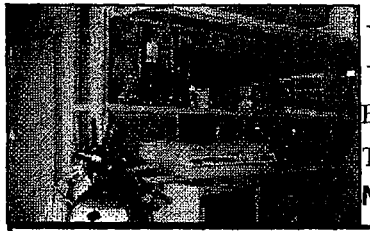
12. Analysis Holding Time Met Y

If not met, list number of days exceeded for each sample: ___
_____
_____

Additional Comments:
_____
_____
_____

Laboratory Manager: _____ Date: 1-18-94

5



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: DRW-ENV
Phone #:
( )DERA (X)OMA ( )Other:

Project No: 98-0001
Location: B. 426

Samplers Name / Company: GARY DiMARTINIS - TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	6 SVOCs	Munsell	Chart's TO BE DETERMINED	OVA	Remarks / Preservation Method
3187.01	426-A	12-2-97	1031	SOIL	2	X	X	X	X	4	EXC. FLOOR @ 8.0' *
.02	B	↓	1046	↓	↓	↓	↓	↓	↓	ND	↓
.03	C	↓	1100	↓	↓	↓	↓	↓	↓	30	SIDEWALL @ 5.5'
.04	D	↓	1054	↓	↓	↓	↓	↓	↓	ND	↓
	** E	(THESE SAMPLES NOT Collected DUE TO UTILITIES.)									↓
	** F										
.05	DUP	12-2-97	—	SOIL	↓	X	X	X	X	—	FIELD DUPLICATE
.06	TB	↓		METHANOL	1				X	—	TRIP BLANK

** NOTE: GEO-PROBE SAMPLING AT LOCATIONS SHOWN IS RECOMMENDED.

NOTE: OVA (#AS2114) CALIBRATED W/95 ppm CH4 & ZERO @ AIR @ 1020 HRS ON 12/2/97 by G. DiMARTINIS.

Comments: * = SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12/4/97 1326	J. Verguin			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (_)Standard 4 wks, (X)Rush ____ Days, (X)ASAP Verbal ____ Hrs.

Remarks:
DEDICATED SAMPLING TOOLS USED.

print legibly

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK05

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02532.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 0 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1800	U
107131	Acrylonitrile	1800	U
75650	tert-Butyl alcohol	3200	U
1634044	Methyl-tert-Butyl ether	750	U
108203	Di-isopropyl ether	500	U
	Dichlorodifluoromethane	1000	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	750	U
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	750	U
75-69-4	Trichlorofluoromethane	500	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	500	U
156-60-5	trans-1,2-Dichloroethene	500	U
75-35-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl Acetate	750	U
78-93-3	2-Butanone	750	U
	cis-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	500	U
71-43-2	Benzene	250	U
107-06-2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	500	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	500	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	500	U
126-48-1	Dibromochloromethane	500	U
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	500	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK05

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02532.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 0 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
95-50-1	1,2-Dichlorobenzene	750	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-C

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3187.03

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V02541.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 16.57 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	3000	
1330-20-7	o-Xylene	1600	
100-42-5	Styrene	690	U
75-25-2	Bromoform	690	U
79-34-5	1,1,2,2-Tetrachloroethane	690	U
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	1000	U
95-50-1	1,2-Dichlorobenzene	1000	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-C

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3187.03

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V02541.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 16.57 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2400	U
107131	Acrylonitrile	2400	U
75650	tert-Butyl alcohol	4500	U
1634044	Methyl-tert-Butyl ether	1000	U
108203	Di-isopropyl ether	690	U
	Dichlorodifluoromethane	1400	U
74-87-3	Chloromethane	350	U
75-01-4	Vinyl Chloride	1000	U
74-83-9	Bromomethane	690	U
75-00-3	Chloroethane	1000	U
75-69-4	Trichlorofluoromethane	690	U
75-35-4	1,1-Dichloroethene	350	U
67-64-1	Acetone	690	U
75-15-0	Carbon Disulfide	350	U
75-09-2	Methylene Chloride	690	U
156-60-5	trans-1,2-Dichloroethene	690	U
75-35-3	1,1-Dichloroethane	350	U
108-05-4	Vinyl Acetate	1000	U
78-93-3	2-Butanone	1000	U
	cis-1,2-Dichloroethene	350	U
67-66-3	Chloroform	350	U
75-55-6	1,1,1-Trichloroethane	350	U
56-23-5	Carbon Tetrachloride	690	U
71-43-2	Benzene	350	U
107-06-2	1,2-Dichloroethane	690	U
79-01-6	Trichloroethene	350	U
78-87-5	1,2-Dichloropropane	350	U
75-27-4	Bromodichloromethane	350	U
110-75-8	2-Chloroethyl vinyl ether	690	U
10061-01-5	cis-1,3-Dichloropropene	350	U
108-10-1	4-Methyl-2-Pentanone	690	U
108-88-3	Toluene	350	U
10061-02-6	trans-1,3-Dichloropropene	690	U
79-00-5	1,1,2-Trichloroethane	690	U
127-18-4	Tetrachloroethene	350	U
591-78-6	2-Hexanone	690	U
126-48-1	Dibromochloromethane	690	U
108-90-7	Chlorobenzene	350	U
100-41-4	Ethylbenzene	680	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

426-TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3187.06

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02542.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 0 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1800	U
107131	Acrylonitrile	1800	U
75650	tert-Butyl alcohol	3200	U
1634044	Methyl-tert-Butyl ether	750	U
108203	Di-isopropyl ether	500	U
	Dichlorodifluoromethane	1000	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	750	U
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	750	U
75-69-4	Trichlorofluoromethane	500	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	500	U
156-60-5	trans-1,2-Dichloroethene	500	U
75-35-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl Acetate	750	U
78-93-3	2-Butanone	750	U
	cis-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	500	U
71-43-2	Benzene	250	U
107-06-2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	500	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	500	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	500	U
126-48-1	Dibromochloromethane	500	U
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	500	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

VBLK05

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02532.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 0 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

426-C

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3187.03

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V02541.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 16.57 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 15

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	23.37	4800	J
2. 000589-81-1	Heptane, 3-methyl-	23.80	4100	JN
3. 002207-03-6	Cyclohexane, 1,3-dimethyl-, trans	24.77	4000	JN
4.	unknown hydrocarbon	24.92	5300	J
5.	unknown	27.24	4100	J
6. 000111-84-2	Nonane	28.75	4700	JN
7. 000124-18-5	Decane	32.10	5900	JN
8. 000611-14-3	Benzene, 1-ethyl-2-methyl-	32.76	5500	JN
9. 000526-73-8	Benzene, 1,2,3-trimethyl-	33.92	7300	JN
10. 001120-21-4	Undecane	35.09	5200	JN
11. 001074-43-7	Benzene, 1-methyl-3-propyl-	35.49	7700	JN
12. 000933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	35.68	8600	JN
13. 000493-02-7	Naphthalene, decahydro-, trans-	35.87	6900	JN
14. 001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	36.70	4300	JN
15.	unknown	37.32	6100	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

426-TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3187.06

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02542.D

Level: (low/med) MED Date Received: 12/02/97

% Moisture: not dec. 0 Date Analyzed: 12/11/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 4

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	29.04	1800	JN
2.	unknown	30.76	1000	J
3.	unknown	30.98	930	J
4.	unknown hydrocarbon	31.92	940	J

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration

Calibration Files
50 =V02389.D 5 =V02387.D 10 =V02388.D
20 =V02391.D 100 =V02390.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	1.157	0.905	1.140	0.950	1.181	1.067	12.05
3)	t	Acrylonitrile	1.099	0.970	1.078	0.925	1.119	1.038	8.24
4)	t	tert-Butyl alcohol	0.437	0.258	0.352	0.336	0.455	0.368	21.75
5)	t	Methyl-tert-Butyl eth	4.836	4.034	4.275	4.482	5.384	4.602	11.45
6)	t	Di-isopropyl ether	3.264	3.145	3.085	3.193	2.968	3.131	3.59
7)	T	Dichlorodifluorometha	3.055	3.076	3.191	2.909	2.941	3.034	3.73
8)	TP	Chloromethane	4.608	4.608	4.649	4.477	4.486	4.566	1.73
9)	TC	Vinyl Chloride	2.003	2.663	2.703	2.247	1.628	2.249	20.18
10)	T	Bromomethane	2.067	2.030	1.996	1.988	2.000	2.016	1.61
11)	T	Chloroethane	2.036	1.725	1.881	1.885	1.992	1.904	6.34
12)	T	Trichlorofluoromethan	2.935	2.560	2.756	2.720	2.900	2.774	5.43
13)	MC	1,1-Dichloroethene	3.579	3.396	3.544	3.404	3.676	3.520	3.40
14)	T	Acetone	0.835	1.263	0.797	0.838	0.833	0.913	21.49
15)	T	Carbon Disulfide	7.897	7.879	7.821	7.491	8.095	7.837	2.80
16)	T	Methylene Chloride	2.728	3.225	2.996	2.669	2.775	2.879	7.98
17)	T	trans-1,2-Dichloroeth	3.528	2.851	3.294	3.229	3.641	3.309	9.24
18)	TP	1,1-Dichloroethane	4.527	4.278	4.576	4.326	4.611	4.464	3.40
19)	T	Vinyl Acetate	5.658	4.700	5.082	5.083	6.230	5.351	11.19
20)	T	2-Butanone	1.256	0.839	0.566	1.011	1.382	1.011	32.24
21)	T	cis-1,2-Dichloroethen	3.674	3.315	3.652	3.452	3.728	3.564	4.88
22)	TC	Chloroform	3.803	3.523	3.756	3.556	3.868	3.701	4.15
23)	T	1,1,1-Trichloroethane	2.181	1.671	1.828	2.030	2.488	2.040	15.55
24)	T	Carbon Tetrachloride	1.528	1.097	1.256	1.435	1.717	1.407	17.07
25)	S	1,2-Dichloroethane-d4	2.423	1.910	2.063	2.147	2.410	2.191	10.18
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.368	1.335	1.354	1.340	1.541	1.387	6.25
28)	T	1,2-Dichloroethane	0.451	0.331	0.384	0.376	0.509	0.410	17.07
29)	TM	Trichloroethene	0.288	0.252	0.264	0.279	0.334	0.283	11.22
30)	TC	1,2-Dichloropropane	0.398	0.347	0.371	0.386	0.462	0.393	10.92
31)	T	Bromodichloromethane	0.418	0.305	0.354	0.365	0.510	0.390	20.01
32)	T	2-Chloroethyl vinyl e	0.294	0.263	0.292	0.261	0.299	0.282	6.44
33)	T	cis-1,3-Dichloroprope	0.586	0.533	0.556	0.566	0.669	0.582	8.92
34)	T	4-Methyl-2-Pentanone	0.171	0.131	0.166	0.143	0.177	0.158	12.58
35)	S	Toluene-d8	1.321	1.269	1.348	1.283	1.360	1.316	3.00
36)	TCM	Toluene	1.545	1.527	1.617	1.472	1.616	1.555	3.99
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.818	1.758	1.767	1.795	1.834	1.794	1.81
39)	T	1,1,2-Trichloroethane	0.965	0.906	0.921	0.953	0.967	0.942	2.90
40)	T	Tetrachloroethene	0.888	0.843	0.897	0.878	0.859	0.873	2.53

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration

Calibration Files
50 =V02389.D 5 =V02387.D 10 =V02388.D
20 =V02391.D 100 =V02390.D

		Compound	50	5	10	20	100	Avg	%RSD
41)	T	2-Hexanone	1.113	0.976	1.098	0.975	1.094	1.051	6.60
42)	T	Dibromochloromethane	0.899	0.722	0.797	0.851	0.929	0.839	9.85
43)	TMP	Chlorobenzene	2.980	3.017	3.084	2.984	3.046	3.022	1.44
44)	TC	Ethylbenzene	5.809	5.802	5.845	5.782	5.968	5.841	1.27
45)	T	m+p-Xylenes	2.122	2.076	2.116	2.102	2.174	2.118	1.71
46)	T	o-Xylene	4.493	4.331	4.479	4.463	4.573	4.468	1.95
47)	T	Styrene	3.560	3.285	3.448	3.511	3.631	3.487	3.77
48)	TP	Bromoform	0.508	0.348	0.417	0.414	0.538	0.445	17.35
49)	S	Bromofluorobenzene	1.722	1.690	1.697	1.722	1.739	1.714	1.18
50)	TP	1,1,2,2-Tetrachloroet	1.768	1.640	1.749	1.625	1.783	1.713	4.35
51)	T	1,3-Dichlorobenzene	2.065	2.038	2.047	2.053	2.128	2.066	1.73
52)	T	1,4-Dichlorobenzene	2.279	2.222	2.270	2.266	2.339	2.275	1.84
53)	T	1,2-Dichlorobenzene	2.088	1.995	2.052	2.077	2.138	2.070	2.53

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\971211\V02531.D Vial: 2
Acq On : 11 Dec 1997 9:02 Operator: Skelton
Sample : Daily Cal Inst : GC/MS Ins
Misc : 20 ppb std Multiplr: 1.00
MS Integration Params: gases.p

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	99	0.00
2	t	Acrolein	1.067	0.539	49.5#	56	-0.06
3	t	Acrylonitrile	1.038	0.883	14.9	94	0.00
4	t	tert-Butyl alcohol	0.368	0.336	8.7	99	-0.06
5	t	Methyl-tert-Butyl ether	4.602	4.878	-6.0	108	-0.03
6	t	Di-isopropyl ether	3.131	3.593	-14.8	111	-0.02
7	T	Dichlorodifluoromethane	3.034	2.797	7.8	95	-0.02
8	TP	Chloromethane	4.566	3.532	22.6	78	-0.01
9	TC	Vinyl Chloride	2.249	1.996	11.2	88	0.00
10	T	Bromomethane	2.016	1.776	11.9	88	-0.02
11	T	Chloroethane	1.904	1.687	11.4	88	0.02
12	T	Trichlorofluoromethane	2.774	2.510	9.5	91	-0.05
13	MC	1,1-Dichloroethene	3.520	3.104	11.8	90	-0.03
14	T	Acetone	0.913	0.457	49.9#	54	0.00
15	T	Carbon Disulfide	7.837	7.549	3.7	100	0.00
16	T	Methylene Chloride	2.879	2.747	4.6	102	-0.02
17	T	trans-1,2-Dichloroethene	3.309	2.913	12.0	89	-0.02
18	TP	1,1-Dichloroethane	4.464	3.947	11.6	90	-0.03
19	T	Vinyl Acetate	5.351	5.006	6.4	97	-0.02
20	T	2-Butanone	1.011	0.807	20.2	79	-0.03
21	T	cis-1,2-Dichloroethene	3.564	3.114	12.6	89	-0.02
22	TC	Chloroform	3.701	3.507	5.2	97	-0.02
23	T	1,1,1-Trichloroethane	2.040	2.143	-5.0	104	0.00
24	T	Carbon Tetrachloride	1.407	1.604	-14.0	110	0.00
25	S	1,2-Dichloroethane-d4	2.191	1.810	17.4	83	-0.02
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	103	0.00
27	TM	Benzene	1.387	1.381	0.4	106	-0.02
28	T	1,2-Dichloroethane	0.410	0.328	20.0	90	-0.02
29	TM	Trichloroethene	0.283	0.317	-12.0	117	0.00
30	TC	1,2-Dichloropropane	0.393	0.378	3.8	101	0.00
31	T	Bromodichloromethane	0.390	0.368	5.6	104	0.00
32	T	2-Chloroethyl vinyl ether	0.282	0.258	8.5	101	0.00
33	T	cis-1,3-Dichloropropene	0.582	0.581	0.2	105	0.00
34	T	4-Methyl-2-Pentanone	0.158	0.135	14.6	97	0.00
35	S	Toluene-d8	1.316	1.205	8.4	96	0.00
36	TCM	Toluene	1.555	1.443	7.2	101	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
38	T	trans-1,3-Dichloropropene	1.794	1.861	-3.7	104	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\971211\V02531.D Vial: 2
Acq On : 11 Dec 1997 9:02 Operator: Skelton
Sample : Daily Cal Inst : GC/MS Ins
Misc : 20 ppb std Multiplr: 1.00
MS Integration Params: gases.p

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

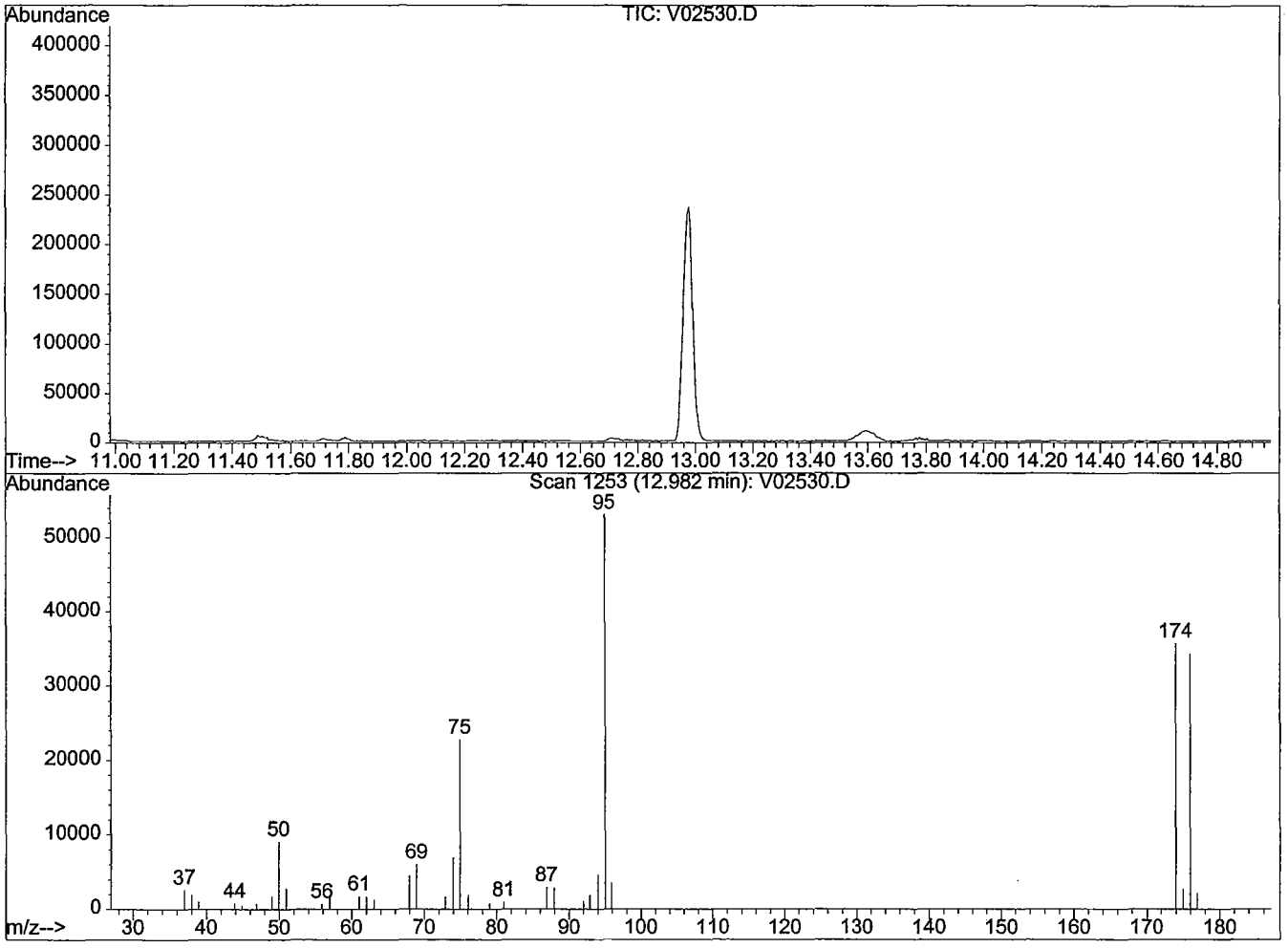
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
39	T	1,1,2-Trichloroethane	0.942	1.072	-13.8	113	0.00
40	T	Tetrachloroethene	0.873	0.989	-13.3	113	0.00
41	T	2-Hexanone	1.051	0.847	19.4	87	0.00
42	T	Dibromochloromethane	0.839	0.995	-18.6	117	0.00
43	TMP	Chlorobenzene	3.022	3.182	-5.3	107	0.00
44	TC	Ethylbenzene	5.841	5.792	0.8	100	0.00
45	T	m+p-Xylenes	2.118	2.172	-2.5	103	0.00
46	T	o-Xylene	4.468	4.420	1.1	99	0.00
47	T	Styrene	3.487	3.622	-3.9	103	0.00
48	TP	Bromoform	0.445	0.515	-15.7	124	0.00
49	S	Bromofluorobenzene	1.714	1.653	3.6	96	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.713	1.627	5.0	100	0.00
51	T	1,3-Dichlorobenzene	2.066	2.131	-3.1	104	0.00
52	T	1,4-Dichlorobenzene	2.275	2.374	-4.4	105	0.00
53	T	1,2-Dichlorobenzene	2.070	2.166	-4.6	104	0.00

10

BFB

Data File : C:\HPCHEM\1\DATA\971211\V02530.D
Acq On : 11 Dec 1997 8:30
Sample : BFB Tune
Misc : 100-33-29/1487872
MS Integration Params: gases.p
Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00



Spectrum Information: Scan 1253

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	9094	PASS
75	95	30	60	42.8	22776	PASS
95	95	100	100	100.0	53192	PASS
96	95	5	9	6.6	3519	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	67.1	35680	PASS
175	174	5	9	7.5	2678	PASS
176	174	95	101	96.1	34304	PASS
177	176	5	9	6.3	2151	PASS

V02530.D M62426.M Wed Jan 14 09:04:16 1998

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID.

VBLK05

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Lab File ID: V02532.D Lab Sample ID: VBLK05

Date Analyzed: 12/11/97 Time Analyzed: 11:05

GC Column: Rtx502.2 ID: 0.25 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMSVoa

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	426-C	3187.03	V02541.D	20:42
02	426-TB	3187.06	V02542.D	21:30

COMMENTS:

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\M62425.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 03 10:56:28 1997
Response via : Initial Calibration

Non-Spiked Sample: V02169.D

	Spike Sample	Spike Duplicate Sample
File ID :	V02170.D	V02171.D
Sample :	3031.08MS	3031.08MSD
Acq Time:	7 Oct 1997 22:07	7 Oct 1997 22:55

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	20	17	17	87	86	1	14	61-145
Benzene	0.0	20	18	17	89	86	4	11	76-127
Trichloroethene	0.0	20	18	18	91	88	3	14	71-120
Toluene	0.0	20	18	18	91	89	3	13	76-125
Chlorobenzene	0.0	20	18	18	91	88	3	13	75-130

- Fails Limit Check

M62425.M Wed Jan 14 09:06:52 1998

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3187 Location: B.426 SDG No.:

Lab File ID (Standard): V02531.D Date Analyzed: 12/11/97

Instrument ID: GCMSVoa Time Analyzed: 09:02

GC Column: Rtx502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	57826	18.76	374931	21.36	106571	29.18
	UPPER LIMIT	115652	18.26	749862	20.86	213142	28.68
	LOWER LIMIT	28913	19.26	187466	21.86	53286	29.68
	EPA SAMPLE NO.						
01	VBLK05	57301	18.77	380716	21.36	103896	29.19
02	426-C	47260	18.77	320645	21.35	101648	29.18
03	426-TB	45873	18.76	334091	21.35	106131	29.18

IS1 BCM = Bromochloromethane

IS2 DFB = 1,4-Difluorobenzene

IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	FMETL	NJDEP#	13461
Project:	98-0001	Location:	B.486
Level:(low/med)	Med	Case No:	3187

	LAB SAMPLE ID.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
1	VBLK05	85	91	97	0
2	3187.03	73	72	72	0
3	3187.06	70	68	63	0

SMC1 DCE	=	1,2-Dichloroethane-d4
SMC2 TOL	=	Toluene-d8
SMC3 BFB	=	Bromofluorobenzene

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971211\V02532.D Vial: 1
Acq On : 11 Dec 1997 11:05 Operator: Skelton
Sample : VBLK05 Inst : GC/MS Ins
Misc : VBLK05 Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Dec 18 11:03 1997 Quant Results File: M62426.RES

Quant Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration
DataAcq Meth : M62426

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.77	128	57301	30.00	ug/L	-0.02
26) 1,4-Difluorobenzene	21.36	114	380716	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.19	119	103896	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.32	65	107072	25.59	ug/L	-0.01
Spiked Amount 30.000	Range 76 - 114		Recovery = 85.30%			
35) Toluene-d8	25.36	98	454553	27.21	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 90.70%			
49) Bromofluorobenzene	32.20	95	173100	29.16	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 97.20%			

Target Compounds Qvalue

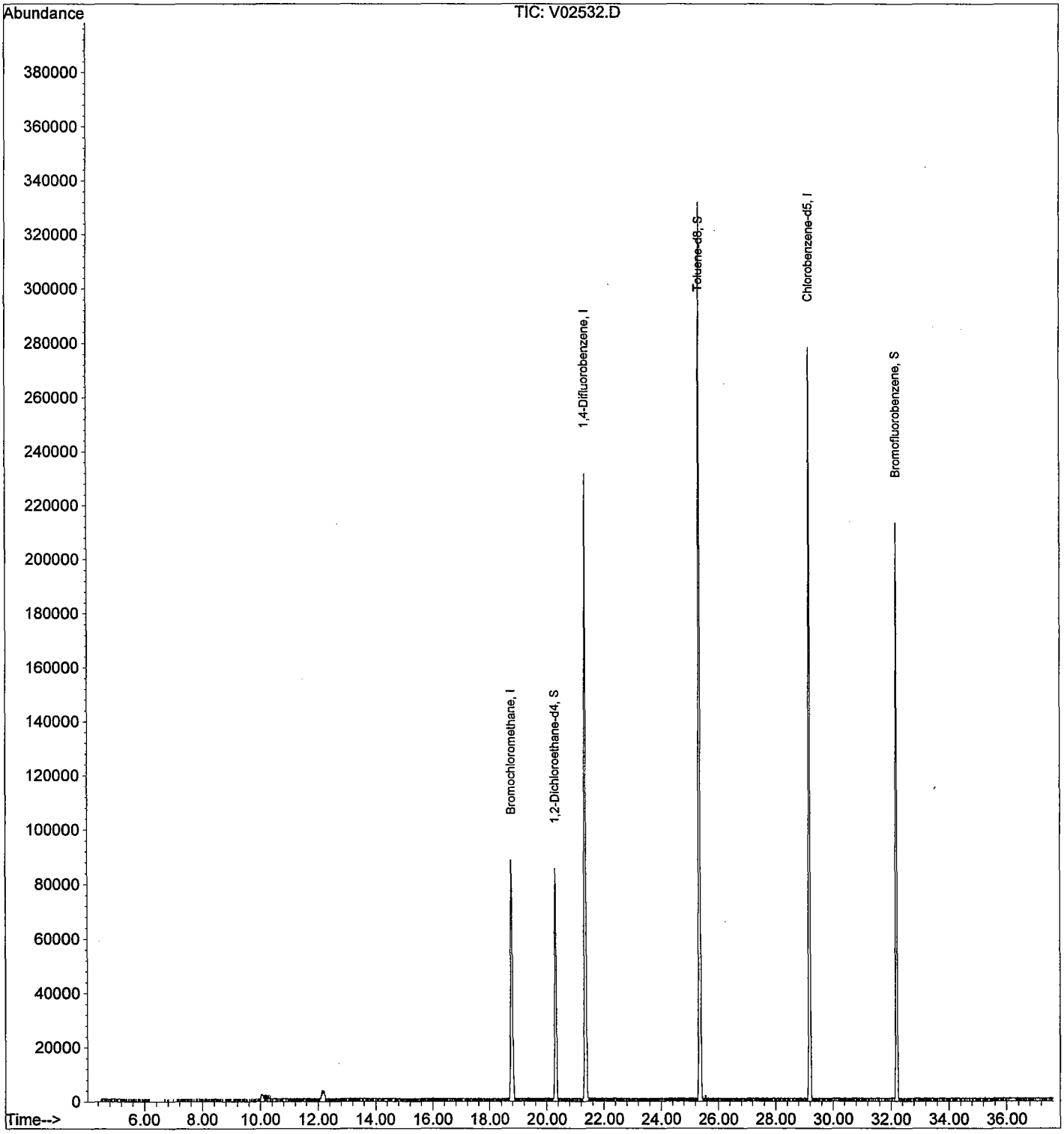
(#) = qualifier out of range (m) = manual integration

2

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971211\V02532.D Vial: 1
Acq On : 11 Dec 1997 11:05 Operator: Skelton
Sample : VBLK05 Inst : GC/MS Ins
Misc : VBLK05 Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Dec 18 11:03 1997 Quant Results File: M62426.RES

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971211\V02541.D Vial: 9
Acq On : 11 Dec 1997 20:42 Operator: Skelton
Sample : 3187.03 Inst : GC/MS Ins
Misc : 426-C Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Jan 7 15:48 1998 Quant Results File: M62426.RES

Quant Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration
DataAcq Meth : M62426

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.77	128	47260	30.00	ug/L	-0.02
26) 1,4-Difluorobenzene	21.35	114	320645	30.00	ug/L	-0.02
37) Chlorobenzene-d5	29.18	119	101648	30.00	ug/L	-0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.31	65	202142	58.57	ug/L	-0.02
Spiked Amount 30.000	Range 76 - 114		Recovery = 195.23%#			
35) Toluene-d8	25.35	98	810074	57.59	ug/L	-0.01
Spiked Amount 30.000	Range 88 - 110		Recovery = 191.97%#			
49) Bromofluorobenzene	32.20	95	336794	57.99	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 193.30%#			
Target Compounds						Qvalue
44) Ethylbenzene	29.36	91	39081	1.97	ug/L	93
45) m+p-Xylenes	29.56	106	61842	8.62	ug/L	99
46) o-Xylene	30.66	91	68743	4.54	ug/L	97

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

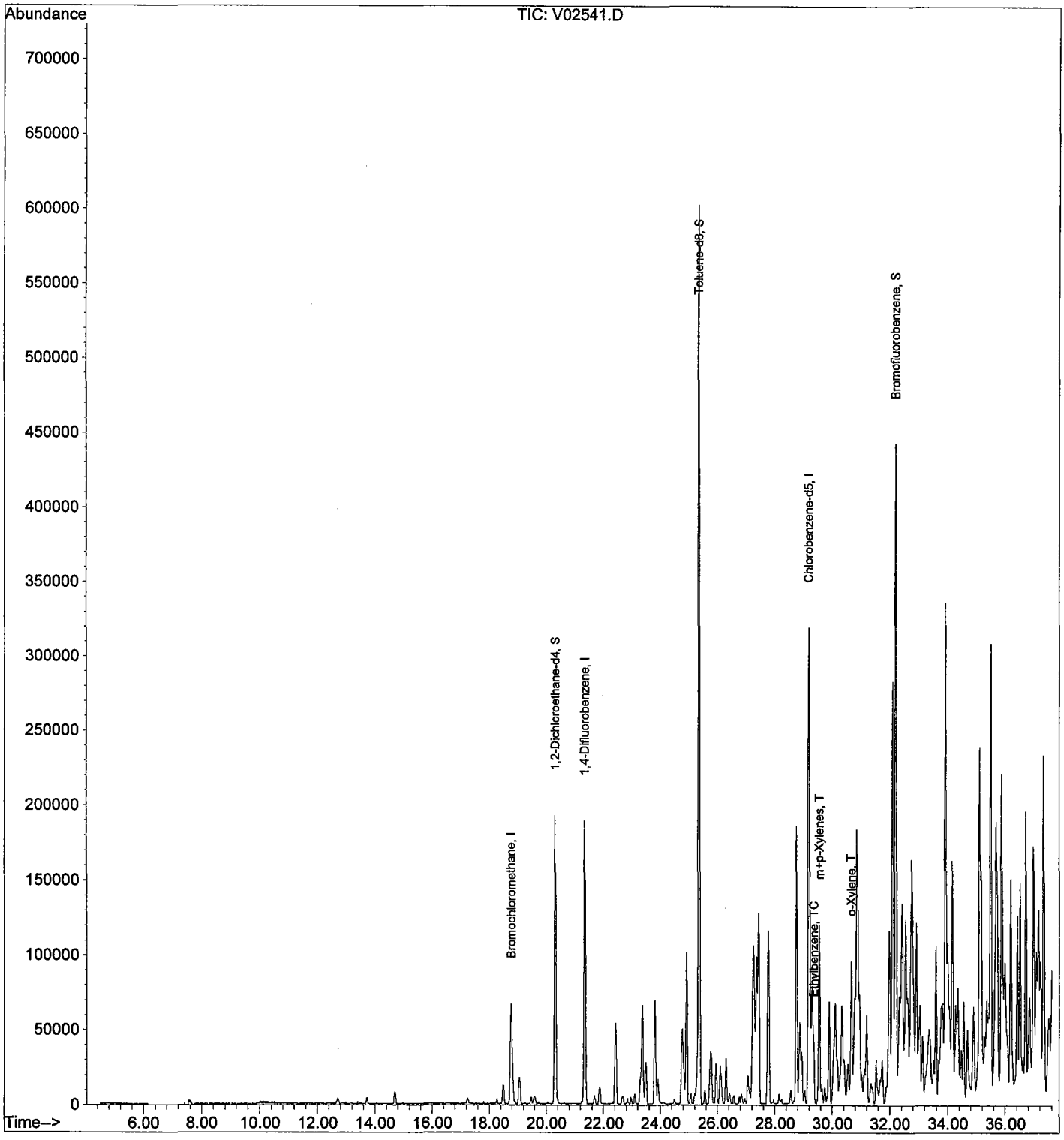
Quantitation Report

Data File : C:\HPCHEM\1\DATA\971211\V02541.D
Acq On : 11 Dec 1997 20:42
Sample : 3187.03
Misc : 426-C
MS Integration Params: gases.p
Quant Time: Jan 7 15:48 1998

Vial: 9
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M62426.RES

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971211\V02542.D Vial: 10
Acq On : 11 Dec 1997 21:30 Operator: Skelton
Sample : 3187.06 Inst : GC/MS Ins
Misc : TB Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Jan 7 15:50 1998 Quant Results File: M62426.RES

Quant Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration
DataAcq Meth : M62426

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.76	128	45873	30.00	ug/L	-0.02
26) 1,4-Difluorobenzene	21.35	114	334091	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.18	119	106131	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.31	65	188216	56.19	ug/L	-0.02
Spiked Amount 30.000	Range 76 - 114		Recovery = 187.30%#			
35) Toluene-d8	25.35	98	801646	54.69	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 182.30%#			
49) Bromofluorobenzene	32.20	95	306567	50.56	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 168.53%#			

Target Compounds Qvalue

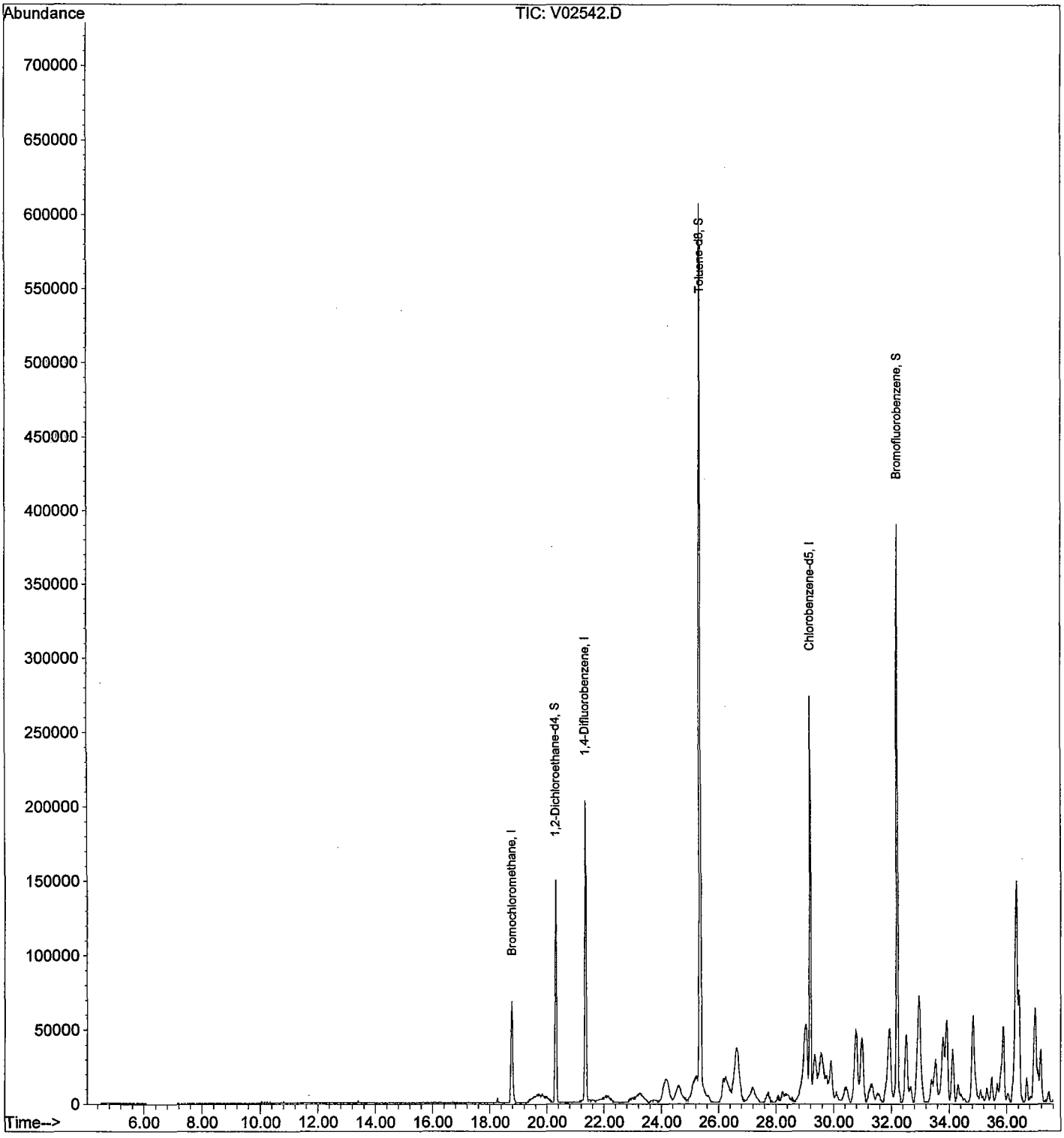
(#) = qualifier out of range (m) = manual integration

Q'

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971211\V02542.D Vial: 10
Acq On : 11 Dec 1997 21:30 Operator: Skelton
Sample : 3187.06 Inst : GC/MS Ins
Misc : TB Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Jan 7 15:50 1998 Quant Results File: M62426.RES

Method : C:\HPCHEM\1\METHODS\M62426.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Nov 10 12:46:06 1997
Response via : Initial Calibration



3'

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

		Indicate* Yes, No, N/A
1.	Cover Page, Title Page listing Lab Certification #, facility name & address, & data of report submitted	Y
2.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	Y
3.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s Lab ID's submitted	Y
4.	Document bound, paginated and legible	Y
5.	Chain of Custody submitted	Y
6.	Samples submitted to lab within 48 hours of sample collection	Y
7.	Methodology Summary submitted	Y
8.	Results submitted on a dry weight basis	Y
9.	Method Detection Limits	Y
10.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	Y

Laboratory Manager of Environmental Consultant's Signature _____

Date 1/16/96

Laboratory Certification # 13461

- *Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 426

Project # 3193
Date Rec. 12/03/97
Date Compl. 12/04/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
5. IR Spectra submitted for standards, blanks, & samples	__ NA __	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met.	__	✓

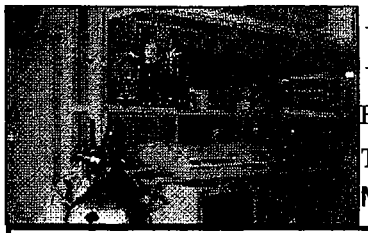
(If not met, list number of days exceeded for each sample)

Additional Comments:

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: DPW-ENV
Phone #:
( )DERA (X)OMA ( )Other:
Project No: 98-0001
Location: B. 426
Samplers Name / Company : GARY DiMARTINIS-TUS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids	Munsell	OVA	Remarks / Preservation Method
3193.01	426-A	12-3-97	1435	Soil	1	X	X	X	9	EXC. FLOOR @ 8.0' *
02	-B	↓	1443	↓	↓	↓	↓	↓	ND	SIDEWALL @ 5.5' *
03	-DUP	↓	—	↓	↓	↓	↓	↓	—	FIELD DUPLICATE *

Analysis Parameters

Comments: *= SAMPLES KEPT BELOW 4°C.

OVA #AS2114 CALIBRATED W/ 95 ppm CH4 & ZERO(0) AIR @ 1430 HRS. ON 12/3/97 by G. DiMARTINIS

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12-3-97 1500	J. Verguna			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (X)Standard 4 wks, (_)Rush ___ Days, (_)ASAP Verbal ___ Hrs.

Remarks: DEDICATED SAMPLING TOOLS USED.

~me1413.xls11/17/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Lab. ID # :**	3193
	DPW. SELFM-PW-EV	**Date Rec'd:**	03-Dec-97
	Bldg. 173	**Analysis Start:**	04-Dec-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	04-Dec-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B. 426

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3193.01	426-A	1.00	15.51	85.00	178	ND
3193.02	426-B	1.00	15.66	78.01	192	ND
3193.03	426-DUP	1.00	15.02	78.79	199	ND
METHOD BLANK	4-Dec-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997

Calibration Files
1 =T03251.D 2 =T03250.D 3 =T03249.D
4 =T03248.D 5 =T03247.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	t	C8	1.824	1.591	1.646	1.637	1.784	1.696	E4	5.98
2)	t	C10	1.846	1.560	1.625	1.638	1.809	1.695	E4	7.34
3)	t	C12	1.900	1.619	1.701	1.718	1.911	1.770	E4	7.30
4)	t	C14	1.941	1.642	1.730	1.742	1.943	1.800	E4	7.53
5)	t	C16	1.987	1.674	1.759	1.767	1.970	1.831	E4	7.59
6)	t	C18	2.260	1.912	2.017	2.058	2.251	2.100	E4	7.23
7)	t	C20	2.152	1.809	1.935	1.925	2.175	1.999	E4	7.91
8)	t	C22	2.092	1.748	1.878	1.891	2.101	1.942	E4	7.81
9)	t	C24	2.023	1.694	1.850	1.883	2.094	1.909	E4	8.18
10)	t	C26	1.780	1.610	1.739	1.772	1.976	1.775	E4	7.40
11)	t	C28	1.751	1.469	1.595	1.616	1.814	1.649	E4	8.25
12)	t	C30	1.637	1.415	1.535	1.567	1.763	1.584	E4	8.11
13)	t	C32	1.525	1.292	1.420	1.454	1.630	1.464	E4	8.55
14)	t	C34	1.391	1.156	1.280	1.327	1.478	1.327	E4	9.09
15)	t	C36	1.086	0.885	1.014	1.069	1.191	1.049	E4	10.67
16)	t	C38	7.205	5.847	7.501	8.184	9.070	7.561	E3	15.83
17)	t	C40	3.806	3.060	4.730	5.446	5.844	4.577	E3	25.10
18)	t	c42	1.771	1.492	2.569	3.040	2.991	2.373	E3	29.82
19)	T	Pristane	2.105	1.772	1.866	1.863	2.076	1.936	E4	7.55
20)	T	Phytane	2.108	1.782	1.930	1.954	2.178	1.990	E4	7.84
21)	s	o-terphenyl	2.393	2.007	2.102	2.115	2.359	2.195	E4	7.78
22)	t	TPHC - total	2.808	2.028	1.793	1.776	1.978	2.077	E4	20.39

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\971204\T03304.D Vial: 2
Acq On : 4 Dec 97 12:29 pm Operator: DEINHARDT
Sample : 50 PPM STANDARD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	t	C8	16.964	15.006 E3	11.5	86	-0.01
2	t	C10	16.955	15.270 E3	9.9	87	0.00
3	t	C12	17.699	15.925 E3	10.0	86	0.00
4	t	C14	17.997	16.069 E3	10.7	85	0.00
5	t	C16	18.314	16.215 E3	11.5	85	0.00
6	t	C18	20.997	18.136 E3	13.6	83	0.00
7	t	C20	19.992	16.921 E3	15.4	84	0.00
8	t	C22	19.422	17.199 E3	11.4	85	0.00
9	t	C24	19.087	17.089 E3	10.5	85	0.00
10	t	C26	17.754	15.969 E3	10.1	86	0.00
11	t	C28	16.492	14.498 E3	12.1	84	0.00
12	t	C30	15.835	13.906 E3	12.2	84	0.00
13	t	C32	14.645	12.935 E3	11.7	84	0.00
14	t	C34	13.266	11.627 E3	12.4	84	0.00
15	t	C36	10.489	9.064 E3	13.6	82	0.00
16	t	C38	7.561	6.627 E3	12.4	80	0.00
17	t	C40	4.577	4.156 E3	9.2	79	-0.01
18	t	c42	2.373	2.156 E3	9.1	79	-0.01
19	T	Pristane	19.363	16.857 E3	12.9	85	0.00
20	T	Phytane	19.905	18.070 E3	9.2	90	0.00
21	s	o-terphenyl	21.951	19.380 E3	11.7	85	0.00
22	t	TPHC - total	20.767	16.388 E3	21.1	80	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Surrogate Recovery Report

Lab. ID # : 3193

Location #: B. 426

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3193.01		10.00	12.12	121.20
3193.02		10.00	12.03	120.34
3193.03		10.00	11.97	119.69
METHOD BLANK	04-Dec-97	10.00	11.68	116.75

Surrogate Added : **o-Terphenyl**

12/5/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Matrix Spike Recovery Report

Lab. ID # : 3193

Location #: B. 426

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3194.09MS	1000	0.00	1013.65	101.37	75-125
3194.09MSD	1000	0.00	986.20	98.62	75-125

RPD	**2.75**	**20.00**

12/5/97

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Blank Spike Recovery Report

Lab. ID # : 3193

Location #: B. 426

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	4-Dec-97	1000	959.41	95.94	75-125

12/5/97

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971204\T03307.D Vial: 5
Acq On : 4 Dec 97 2:39 pm Operator: DEINHARDT
Sample : 3193.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.61	266057	12.120	mg/L
Spiked Amount	10.000		Recovery =	121.20%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	0.00	0	N.D.	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L d

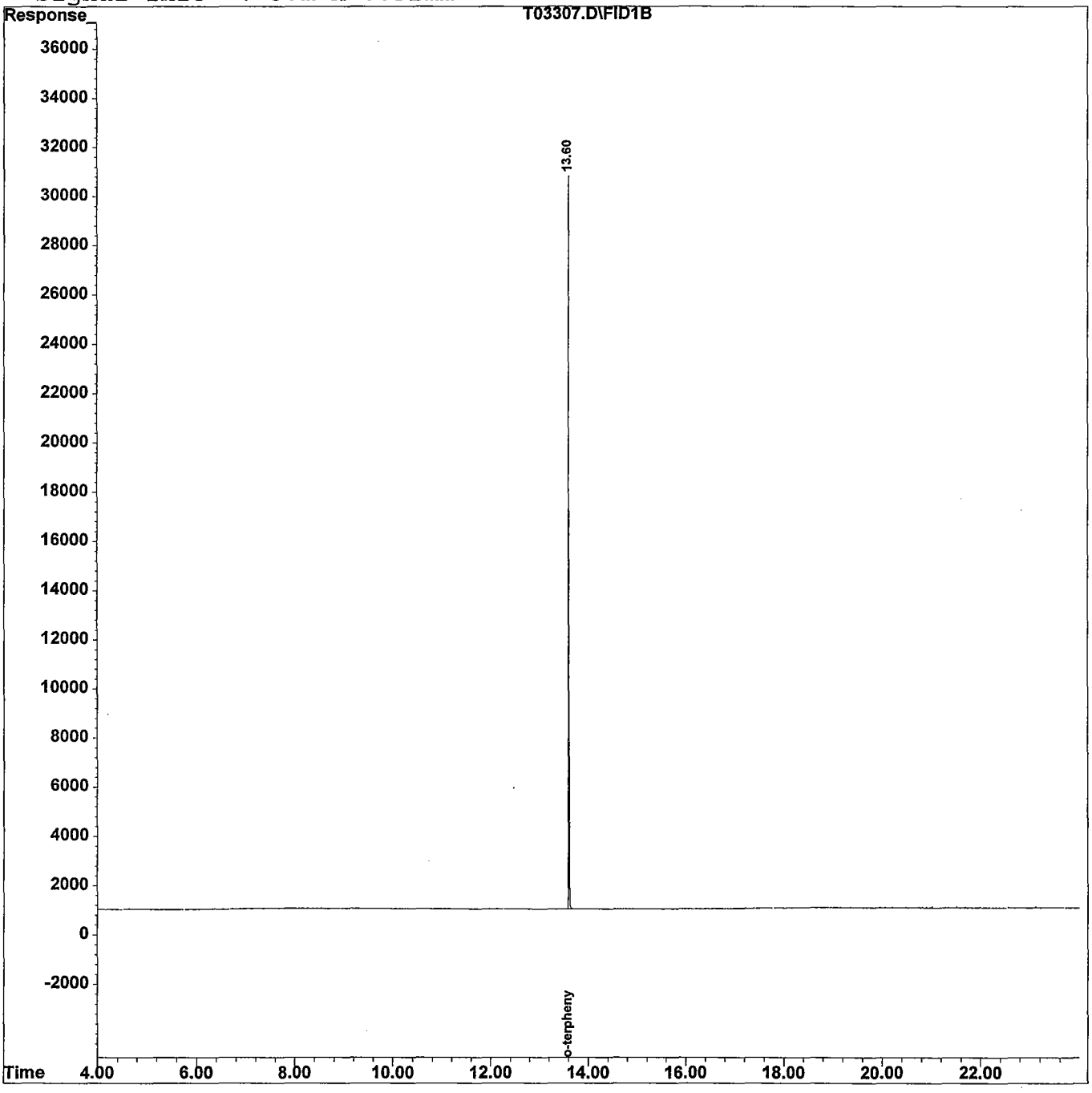
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971204\T03307.D Vial: 5
Acq On : 4 Dec 97 2:39 pm Operator: DEINHARDT
Sample : 3193.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



13

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971204\T03308.D Vial: 6
Acq On : 4 Dec 97 3:20 pm Operator: DEINHARDT
Sample : 3193.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
21) s	o-terphenyl	13.61	264165	12.034	mg/L	
Spiked Amount	10.000	Recovery	=	120.34%		
	Target Compounds					
1) t	C8	0.00	0	N.D.	mg/L	
2) t	C10	0.00	0	N.D.	mg/L	
3) t	C12	0.00	0	N.D.	mg/L	
4) t	C14	0.00	0	N.D.	mg/L	
5) t	C16	0.00	0	N.D.	mg/L	
6) t	C18	0.00	0	N.D.	mg/L	
7) t	C20	0.00	0	N.D.	mg/L	
8) t	C22	0.00	0	N.D.	mg/L	
9) t	C24	0.00	0	N.D.	mg/L	
10) t	C26	0.00	0	N.D.	mg/L	
11) t	C28	0.00	0	N.D.	mg/L	
12) t	C30	0.00	0	N.D.	mg/L	
13) t	C32	0.00	0	N.D.	mg/L	
14) t	C34	0.00	0	N.D.	mg/L	
15) t	C36	0.00	0	N.D.	mg/L	
16) t	C38	0.00	0	N.D.	mg/L	
17) t	C40	0.00	0	N.D.	mg/L	
18) t	c42	0.00	0	N.D.	mg/L	
19) T	Pristane	0.00	0	N.D.	mg/L	
20) T	Phytane	0.00	0	N.D.	mg/L	
22) t	TPHC - total	0.00	0	N.D.	mg/L	d

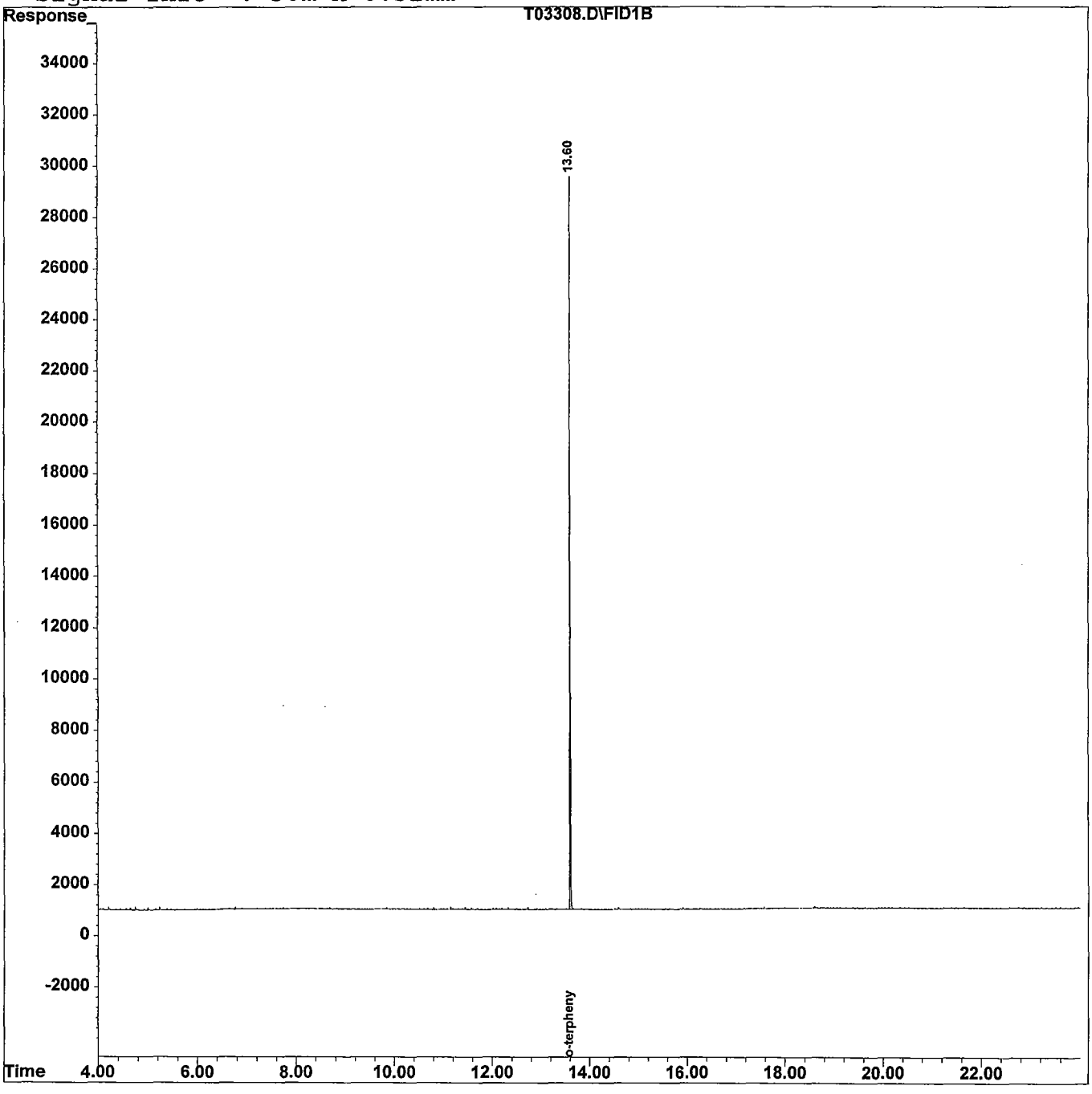
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971204\T03308.D Vial: 6
Acq On : 4 Dec 97 3:20 pm Operator: DEINHARDT
Sample : 3193.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



15

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\971204\T03309.D Vial: 7
Acq On : 4 Dec 97 4:01 pm Operator: DEINHARDT
Sample : 3193.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Initial Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
21) s	o-terphenyl	13.60	262734	11.969	mg/L
Spiked Amount	10.000	Recovery	=	119.69%	
	Target Compounds				
1) t	C8	0.00	0	N.D.	mg/L
2) t	C10	0.00	0	N.D.	mg/L
3) t	C12	0.00	0	N.D.	mg/L
4) t	C14	0.00	0	N.D.	mg/L
5) t	C16	0.00	0	N.D.	mg/L
6) t	C18	0.00	0	N.D.	mg/L
7) t	C20	0.00	0	N.D.	mg/L
8) t	C22	0.00	0	N.D.	mg/L
9) t	C24	0.00	0	N.D.	mg/L
10) t	C26	0.00	0	N.D.	mg/L
11) t	C28	0.00	0	N.D.	mg/L
12) t	C30	0.00	0	N.D.	mg/L
13) t	C32	0.00	0	N.D.	mg/L
14) t	C34	0.00	0	N.D.	mg/L
15) t	C36	0.00	0	N.D.	mg/L
16) t	C38	0.00	0	N.D.	mg/L
17) t	C40	0.00	0	N.D.	mg/L
18) t	c42	0.00	0	N.D.	mg/L
19) T	Pristane	0.00	0	N.D.	mg/L
20) T	Phytane	0.00	0	N.D.	mg/L
22) t	TPHC - total	0.00	0	N.D.	mg/L d

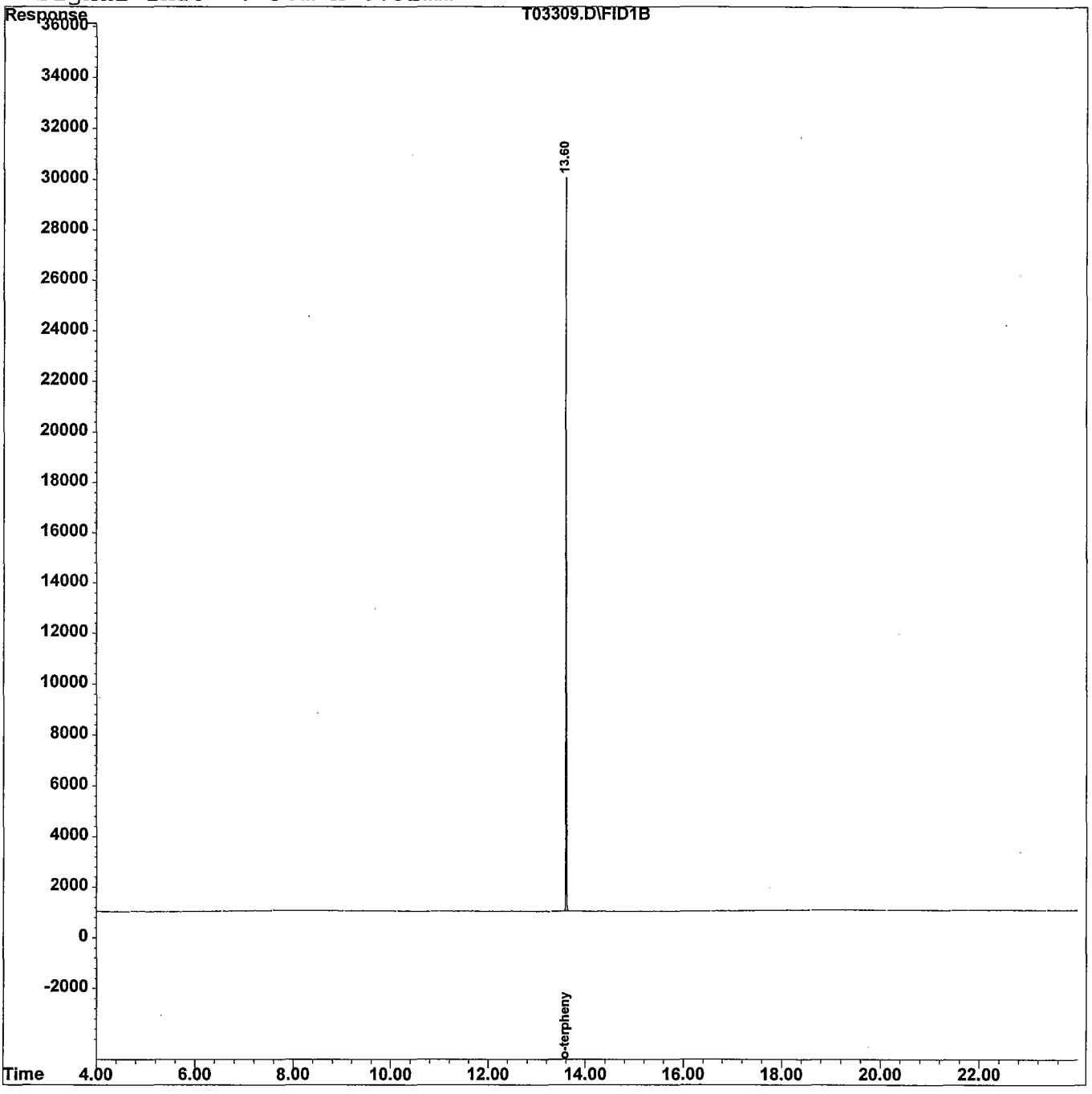
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\971204\T03309.D Vial: 7
Acq On : 4 Dec 97 4:01 pm Operator: DEINHARDT
Sample : 3193.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Dec 5 8:24 1997 Quant Results File: TPH17.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH17.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Aug 22 07:39:41 1997
Response via : Multiple Level Calibration
DataAcq Meth : TPH17.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



17

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <u>and</u> in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis ✓
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 1/13/98

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: IJO# 01-0001

Bldg. 426

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
1C 6'	16069.01	Soil	21-Apr-01 10:02	04/23/01
2E 6'	16069.02	Soil	21-Apr-01 10:10	04/23/01
3D 6'	16069.03	Soil	21-Apr-01 10:19	04/23/01
4C 6'	16069.04	Soil	21-Apr-01 10:27	04/23/01
DUP.	16069.05	Soil	21-Apr-01	04/23/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

5-8-01
Daniel Wright/Date
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97
Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.
Twenty-five milliliters (25mL) Methylene Chloride is added to the flask and it is secured on a orbital shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL-autosampler vial.
The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including Pristane and Phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

TPHC Conformance/Non-conformance Summary Report

		Indicate Yes, No, N/A
1.	Method Detection Limits provided.	yes
2.	Method Blank Contamination – If yes, list the sample and the Corresponding concentrations in each blank.	no
3.	Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	yes
4.	Duplicate Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	yes
5.	IR Spectra submitted for standards, blanks and samples.	NA
6.	Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted.	yes
7.	Analysis holding time met. (If not met, list number of days exceeded for each sample).	yes

Additional comments: _____

Laboratory Manager

5-8-01
Date

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. Deasi
Phone #: 121475
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg 426
Soils

Samplers Name / Company: Corey McCormack, TVS

Analysis Parameters: TPHC; % Solids; Hazard Read

Comments: <4°C

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids	Hazard Read	Remarks / Preservation Method
160069.01	1C 6'	4/21/01	1002	Soil	1	✓	✓	0.0	
.02	2E 6'		1010		1	✓	✓	0.0	
.03	3D 6'		1019		1	✓	✓	0.0	
.04	4C 6'		1027		1	✓	✓	0.3	slight odor.
.05	Dupe		—		1	✓	✓	—	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCormack	4/21/01 1730				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

000003

print legibly

Coc.xls4/5/01

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :** **Location :** **UST Reg. # :**	16069 Bldg.426
Analysis :	OQA-QAM-025	**Date Received :**	21-Apr-01
Matrix :	Soil	**Date Extracted :**	25-Apr-01
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	25-Apr-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
1606901	1C	**1.00**	15.10	87.48	178	**255.11**
1606902	2E	**1.00**	15.24	84.89	182	**234.15**
1606903	3D	**1.00**	15.25	95.47	161	**170.65**
1606904	4C	**1.00**	15.21	85.44	181	**614.93**
1606905	Dupe	**1.00**	15.18	86.50	179	**276.06**
METHOD BLANK	MB-1704	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001

Calibration Files
100 =T012553.D 50 =T012557.D 20 =T012556.D
10 =T012555.D 5 =T012554.D

	Compound	100	50	20	10	5	Avg	%RSD
1)	tC C8	2.191	2.181	2.146	2.110	1.983	2.122 E4	3.95
2)	tC C10	2.277	2.249	2.152	2.134	2.021	2.167 E4	4.70
3)	TC C12	2.321	2.328	2.344	2.226	2.172	2.278 E4	3.30
4)	tC C14	2.361	2.356	2.370	2.349	2.306	2.349 E4	1.06
5)	tC C16	2.389	2.385	2.402	2.356	2.285	2.364 E4	1.98
6)	tC C18	2.255	2.270	2.272	2.124	1.866	2.157 E4	8.08
7)	tC C20	2.462	2.453	2.441	2.273	2.152	2.356 E4	5.86
8)	tC C22	2.536	2.536	2.585	2.562	2.466	2.537 E4	1.75
9)	tC C24	2.560	2.559	2.587	2.540	2.518	2.553 E4	1.00
10)	tC C26	2.566	2.568	2.578	2.535	2.503	2.550 E4	1.20
11)	tC C28	2.574	2.563	2.561	2.501	2.454	2.531 E4	2.03
12)	tC C30	2.683	2.652	2.624	2.662	2.308	2.586 E4	6.06
13)	tC C32	2.622	2.579	2.562	2.521	2.479	2.553 E4	2.15
14)	tC C34	2.618	2.572	2.567	2.519	2.453	2.546 E4	2.47
15)	tC C36	2.593	2.556	2.556	2.474	2.386	2.513 E4	3.30
16)	tC C38	2.598	2.573	2.547	2.491	2.483	2.538 E4	1.98
17)	tC C40	2.419	2.409	2.392	2.346	2.262	2.365 E4	2.72
18)	tC c42	2.471	2.458	2.441	2.432	2.382	2.437 E4	1.41
19)	TC Pristane	2.506	2.365	2.712	2.789	2.667	2.608 E4	6.54
20)	TC Phytane	2.561	2.573	2.667	2.728	2.842	2.674 E4	4.36
21)	sC o-terphenyl	2.868	2.867	2.910	2.886	2.891	2.885 E4	0.62
22)	tC TPHC - total	2.751	2.810	2.967	3.223	3.880	3.126 E4	14.69

#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\010425\T012804.D Vial: 1
Acq On : 25 Apr 2001 11:42 am Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)
1	tC	C8	21.220	19.709	E3	7.1	90	0.00
2	tC	C10	21.666	19.762	E3	8.8	88	0.00
3	TC	C12	22.781	21.053	E3	7.6	90	0.00
4	tC	C14	23.486	21.173	E3	9.8	90	0.00
5	tC	C16	23.635	21.757	E3	7.9	91	0.00
6	tC	C18	21.574	19.681	E3	8.8	87	0.00
7	tC	C20	23.563	22.290	E3	5.4	91	0.00
8	tC	C22	25.370	23.269	E3	8.3	92	0.00
9	tC	C24	25.529	23.404	E3	8.3	91	0.00
10	tC	C26	25.501	23.465	E3	8.0	91	0.00
11	tC	C28	25.307	23.503	E3	7.1	92	0.00
12	tC	C30	25.857	24.559	E3	5.0	93	0.00
13	tC	C32	25.526	24.059	E3	5.7	93	0.00
14	tC	C34	25.459	24.341	E3	4.4	95	0.00
15	tC	C36	25.129	24.342	E3	3.1	95	0.00
16	tC	C38	25.384	24.648	E3	2.9	96	-0.01
17	tC	C40	23.655	22.948	E3	3.0	95	0.00
18	tC	c42	24.370	23.118	E3	5.1	94	-0.02
19	TC	Pristane	26.077	23.832	E3	8.6	101	0.00
20	TC	Phytane	26.741	23.911	E3	10.6	93	0.00
21	sC	o-terphenyl	28.847	25.721	E3	10.8	90	0.00
22	tC	TPHC - total	31.263	29.048	E3	7.1	103	0.49

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012804.D Vial: 1
Acq On : 25 Apr 2001 11:42 am Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 25 12:50 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	1286045	44.582 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery = 445.82%#	
Target Compounds			
1) tC C8	3.68	985443	46.440 mg/L
2) tC C10	7.17	988099	45.607 mg/L
3) TC C12	8.85	1052669	46.209 mg/L
4) tC C14	10.05	1058667	45.077 mg/L
5) tC C16	11.05	1087855	46.027 mg/L
6) tC C18	11.52	984033	45.613 mg/L m
7) tC C20	11.95	1114505	47.298 mg/L m
8) tC C22	12.77	1163429	45.858 mg/L
9) tC C24	13.51	1170186	45.838 mg/L
10) tC C26	14.20	1173234	46.008 mg/L
11) tC C28	14.84	1175175	46.437 mg/L
12) tC C30	15.43	1227933	47.490 mg/L
13) tC C32	16.05	1202927	47.126 mg/L
14) tC C34	16.80	1217049	47.804 mg/L
15) tC C36	17.77	1217109	48.435 mg/L
16) tC C38	19.11	1232392	48.550 mg/L
17) tC C40	20.99	1147408	48.506 mg/L
18) tC c42	23.67	1155884	47.431 mg/L
19) TC Pristane	11.54	1191599	45.695 mg/L m
20) TC Phytane	12.00	1195557	44.708 mg/L m
22) tC TPHC - total	12.49	29048494	929.161 mg/L m

(f)=RT Delta > 1/2 Window (m)=manual int.

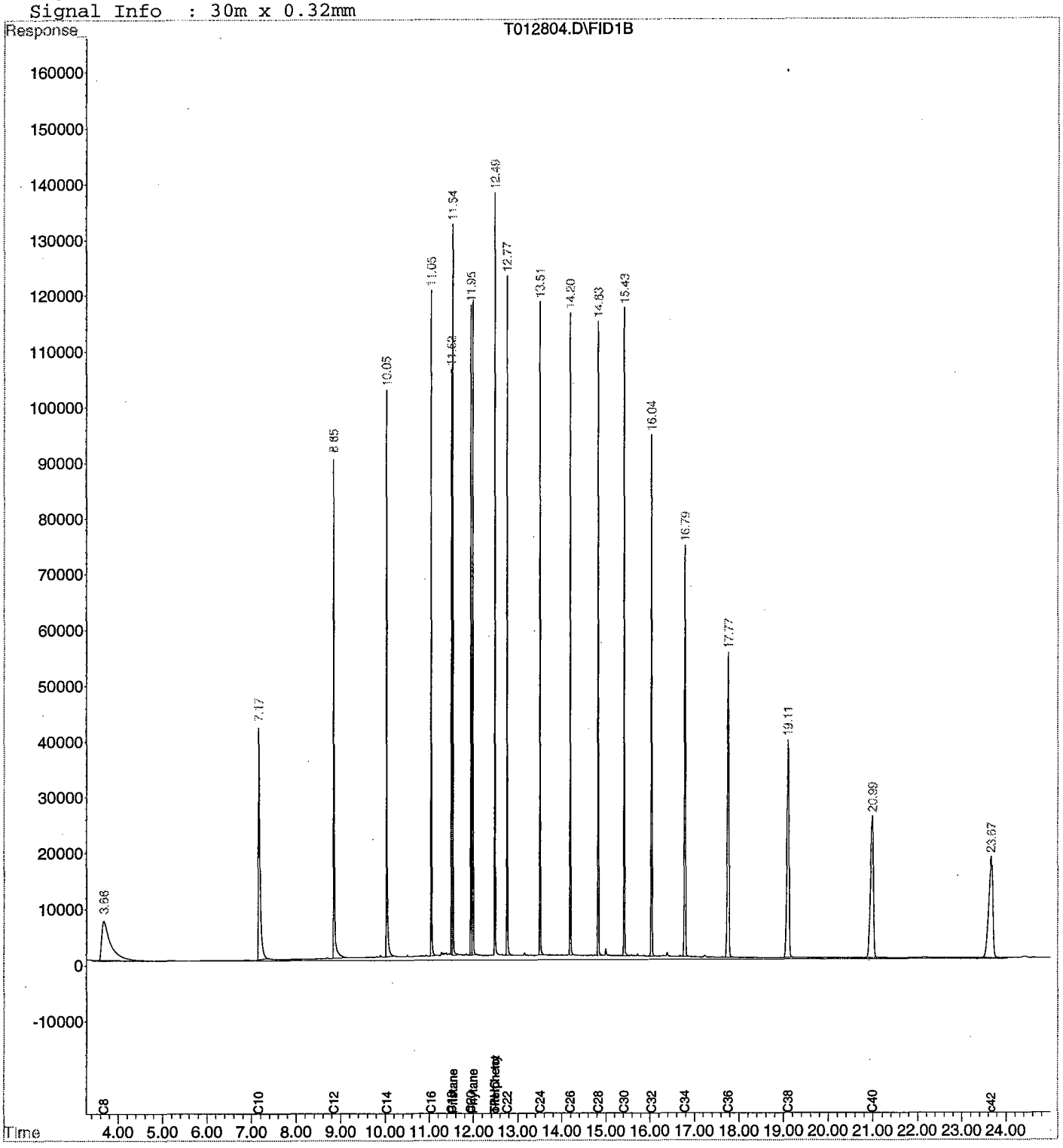
000007

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012804.D Vial: 1
Acq On : 25 Apr 2001 11:42 am Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 25 12:50 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\010425\T012814.D Vial: 11
Acq On : 25 Apr 2001 5:17 pm Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	21.220	20.695 E3	2.5	95	0.00
2	tC	C10	21.666	21.251 E3	1.9	94	0.00
3	TC	C12	22.781	22.821 E3	-0.2	98	0.00
4	tC	C14	23.486	23.001 E3	2.1	98	0.00
5	tC	C16	23.635	23.585 E3	0.2	99	0.00
6	tC	C18	21.574	23.540 E3	-9.1	104	0.00
7	tC	C20	23.563	24.193 E3	-2.7	99	0.00
8	tC	C22	25.370	25.042 E3	1.3	99	0.00
9	tC	C24	25.529	25.247 E3	1.1	99	0.00
10	tC	C26	25.501	25.292 E3	0.8	99	0.00
11	tC	C28	25.307	25.247 E3	0.2	99	0.00
12	tC	C30	25.857	26.151 E3	-1.1	99	0.00
13	tC	C32	25.526	25.774 E3	-1.0	100	0.00
14	tC	C34	25.459	26.045 E3	-2.3	101	0.00
15	tC	C36	25.129	26.094 E3	-3.8	102	0.00
16	tC	C38	25.384	26.443 E3	-4.2	103	-0.01
17	tC	C40	23.655	24.850 E3	-5.1	103	-0.02
18	tC	c42	24.370	25.360 E3	-4.1	103	-0.02
19	TC	Pristane	26.077	24.950 E3	4.3	105	0.00
20	TC	Phytane	26.741	25.676 E3	4.0	100	0.00
21	sC	o-terphenyl	28.847	27.802 E3	3.6	97	0.00
22	tC	TPHC - total	31.263	28.045 E3	10.3	100	0.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012814.D Vial: 11
Acq On : 25 Apr 2001 5:17 pm Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:14 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	1390115	48.190 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery = 481.90%#	
Target Compounds			
1) tC C8	3.70	1034772	48.765 mg/L
2) tC C10	7.17	1062570	49.044 mg/L
3) TC C12	8.86	1141064	50.089 mg/L
4) tC C14	10.05	1150065	48.969 mg/L
5) tC C16	11.05	1179270	49.894 mg/L
6) tC C18	11.51	1177001	54.557 mg/L m
7) tC C20	11.95	1209631	51.335 mg/L m
8) tC C22	12.77	1252113	49.353 mg/L
9) tC C24	13.51	1262334	49.448 mg/L
10) tC C26	14.20	1264624	49.592 mg/L
11) tC C28	14.83	1262369	49.882 mg/L
12) tC C30	15.43	1307548	50.569 mg/L
13) tC C32	16.04	1288701	50.487 mg/L
14) tC C34	16.79	1302253	51.151 mg/L
15) tC C36	17.77	1304713	51.921 mg/L
16) tC C38	19.11	1322151	52.086 mg/L
17) tC C40	20.99	1242513	52.527 mg/L
18) tC c42	23.68	1267986	52.032 mg/L
19) TC Pristane	11.54	1247488	47.838 mg/L m
20) TC Phytane	11.99	1283812	48.009 mg/L m
22) tC TPHC - total	12.49	28045027	897.063 mg/L m

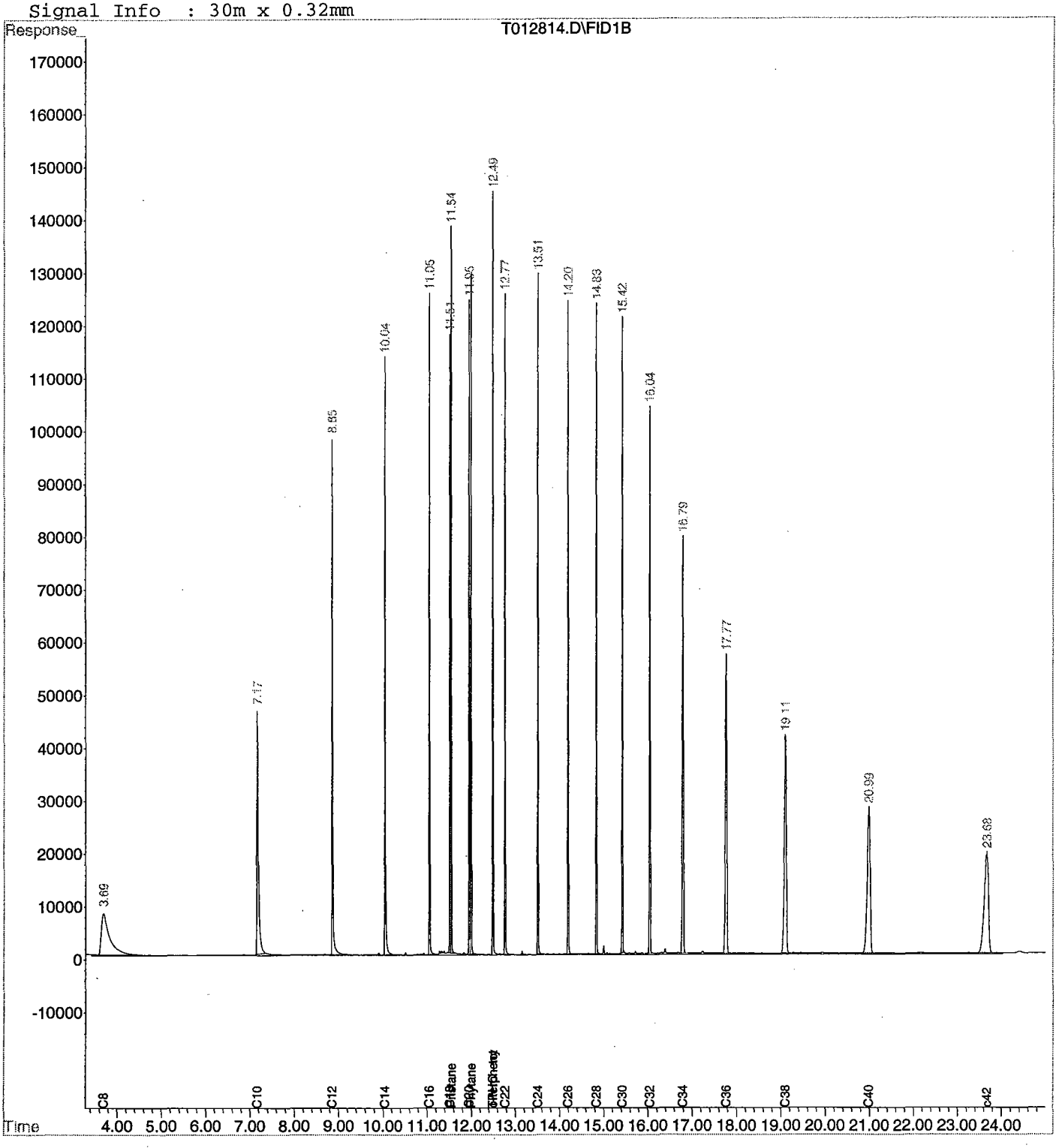
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012814.D Vial: 11
Acq On : 25 Apr 2001 5:17 pm Operator: BPatel
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:14 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Surrogate Recovery Report
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Project # :**	16069
	DPW. SELFM-PW-EV	**Location :**	Bldg.426
	Bldg. 173	**UST Reg. # :**	
	Ft. Monmouth, NJ 07703		
Analysis:	OQA-QAM-025	**Date Received :**	21-Apr-01
Matrix:	Soil	**Date Extracted :**	25-Apr-01
Inst. ID.	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	25-Apr-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample			Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
1606901			10.00	8.82	**88.22**
1606902			10.00	9.06	**90.56**
1606903			10.00	8.46	**84.62**
1606904			10.00	8.71	**87.06**
1606905			10.00	9.02	**90.15**
METHOD BLANK	MB-1704		10.00	8.85	**88.49**

Surrogate Added : **o-Terphenyl**

Matrix Spike/ Duplicate Recovery Report
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Project # :**	16069
	DPW. SELFM-PW-EV	**Location :**	Bldg.426
	Bldg. 173	**UST Reg. # :**	
	Ft. Monmouth, NJ 07703		
Analysis:	OQA-QAM-025	**Date Received :**	21-Apr-01
Matrix:	Soil	**Date Extracted :**	25-Apr-01
Inst. ID.	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	25-Apr-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
MS-1706	1000	67.39	812.25	74.49	75-125
MSD-1707	1000	67.39	810.50	74.31	75-125
			RPD	**0.24**	**20.00**

Quality Control Check Standard Summary
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	**Project # :**	16069
	DPW. SELFM-PW-EV	**Location :**	Bldg.426
	Bldg. 173	**UST Reg. # :**	
	Ft. Monmouth, NJ 07703		
Analysis:	OQA-QAM-025	**Date Received :**	21-Apr-01
Matrix:	Soil	**Date Extracted :**	25-Apr-01
Inst. ID.	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	25-Apr-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
LCS-1705	25-Apr-01	1000	791.10	79.11	75-125

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012805.D Vial: 2
Acq On : 25 Apr 2001 12:15 pm Operator: BPatel
Sample : MB-1704 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 25 14:52 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	255262	8.849 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	88.49%#
Target Compounds			

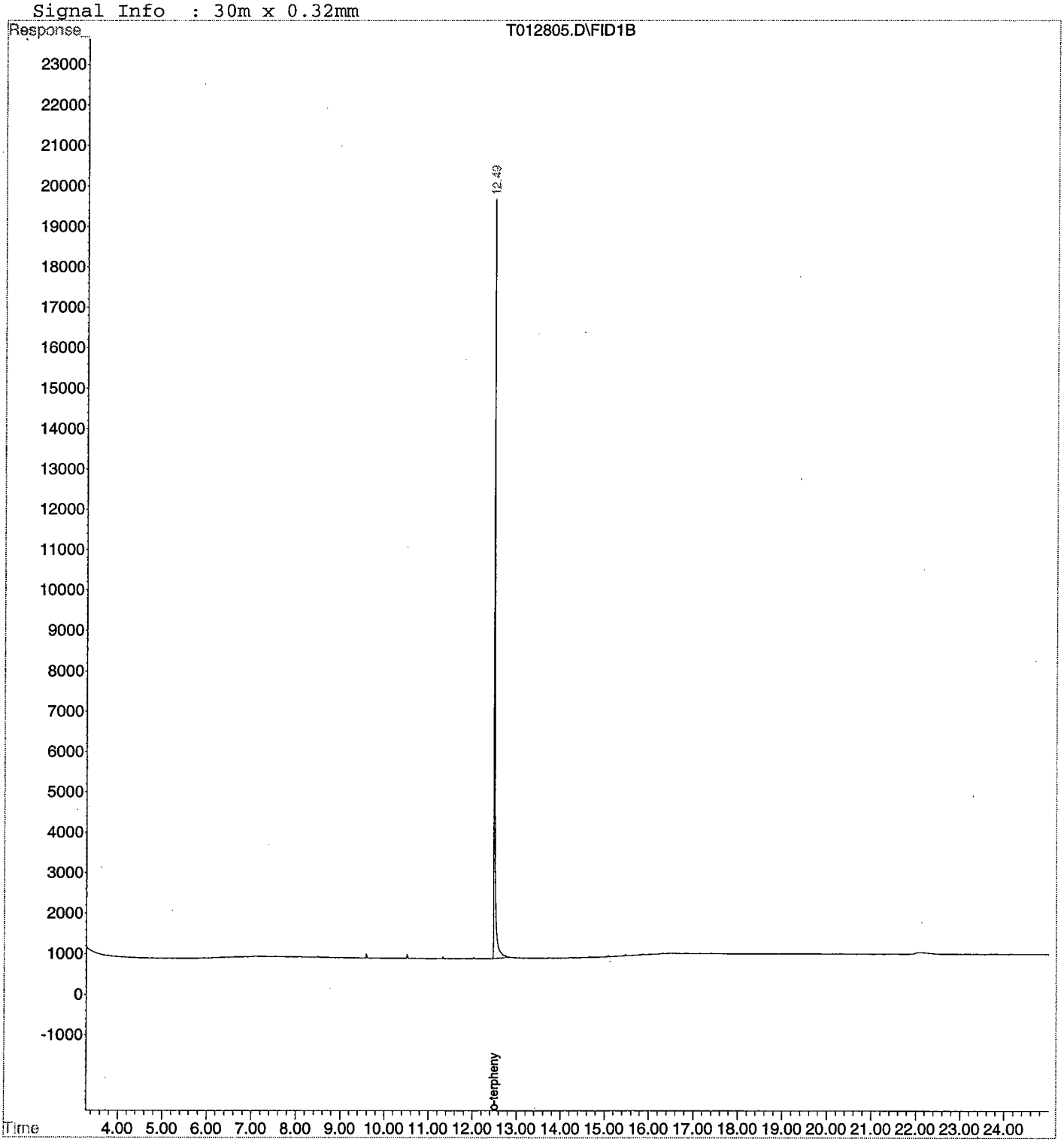
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012805.D Vial: 2
Acq On : 25 Apr 2001 12:15 pm Operator: BPatel
Sample : MB-1704 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 25 14:52 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012809.D Vial: 6
Acq On : 25 Apr 2001 2:30 pm Operator: BPatel
Sample : 1606901s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:11 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	254479	8.822 mg/L
Spiked Amount 10.000 Range 8 - 13 Recovery = 88.22%#			
Target Compounds			
22) tC TPHC - total	12.49	2106959	67.394 mg/L m

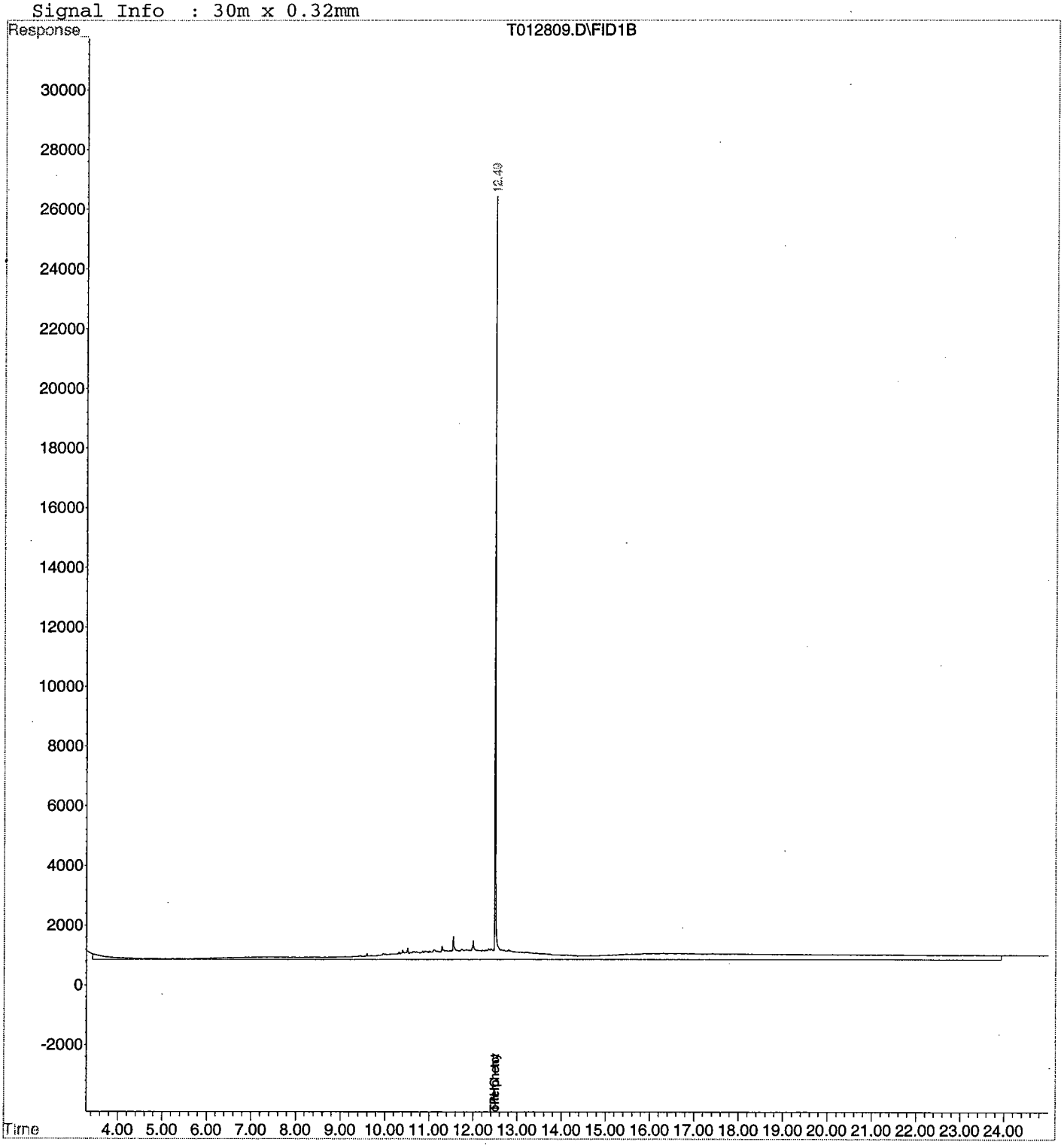
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012809.D Vial: 6
Acq On : 25 Apr 2001 2:30 pm Operator: BPatel
Sample : 1606901s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:11 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



000018

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012810.D Vial: 7
Acq On : 25 Apr 2001 3:04 pm Operator: BPatel
Sample : 1606902s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:11 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	261248	9.056 mg/L
Spiked Amount 10.000 Range 8 - 13	Recovery =	90.56%#	
Target Compounds			
22) tC TPHC - total	12.49	1894115	60.586 mg/L m

000019

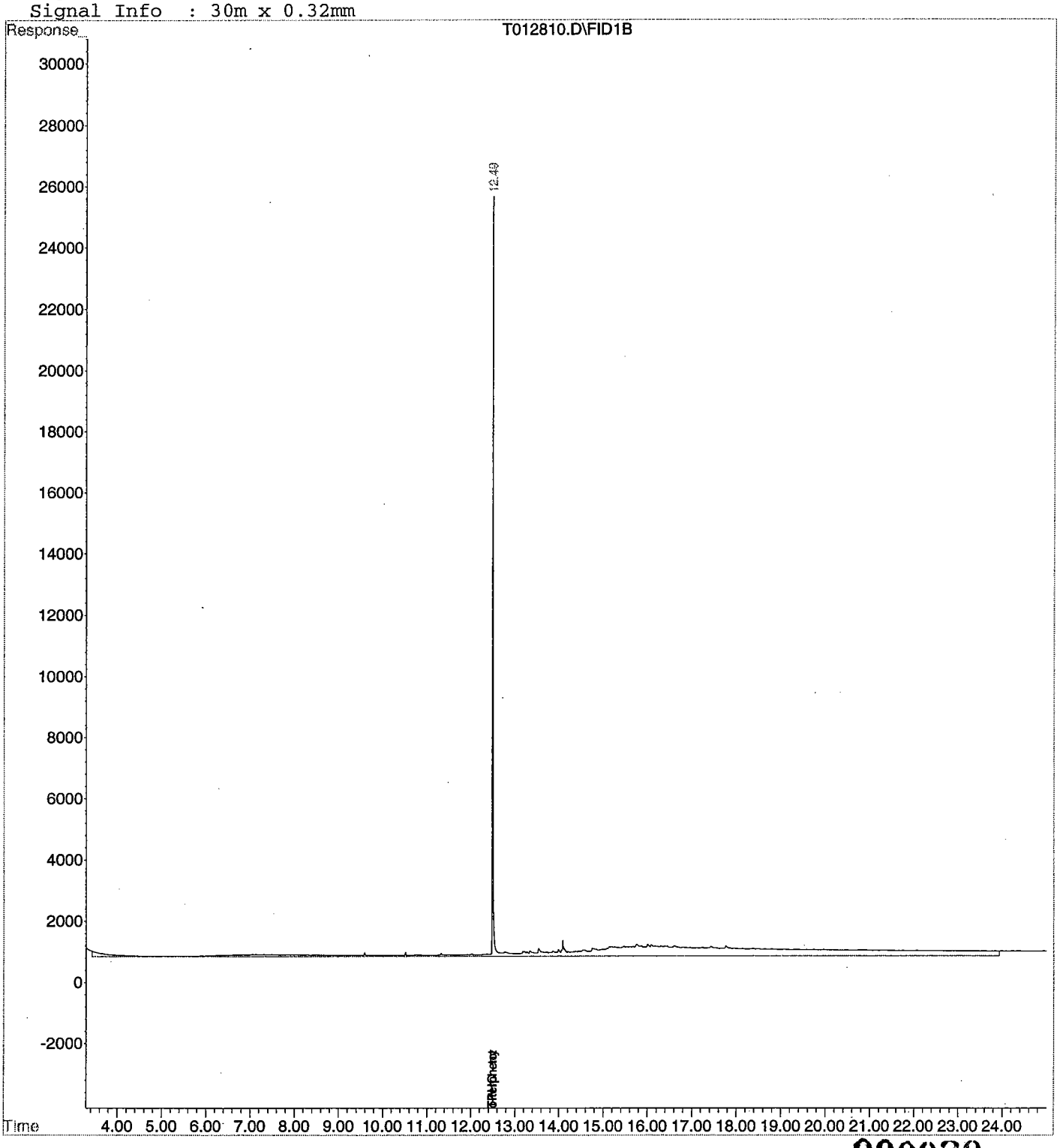
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012810.D Vial: 7
Acq On : 25 Apr 2001 3:04 pm Operator: BPatel
Sample : 1606902s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:11 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012811.D Vial: 8
Acq On : 25 Apr 2001 3:37 pm Operator: BPatel
Sample : 1606903s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:12 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	244109	8.462 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	84.62%#
Target Compounds			
22) tC TPHC - total	12.48	1553457	49.690 mg/L m

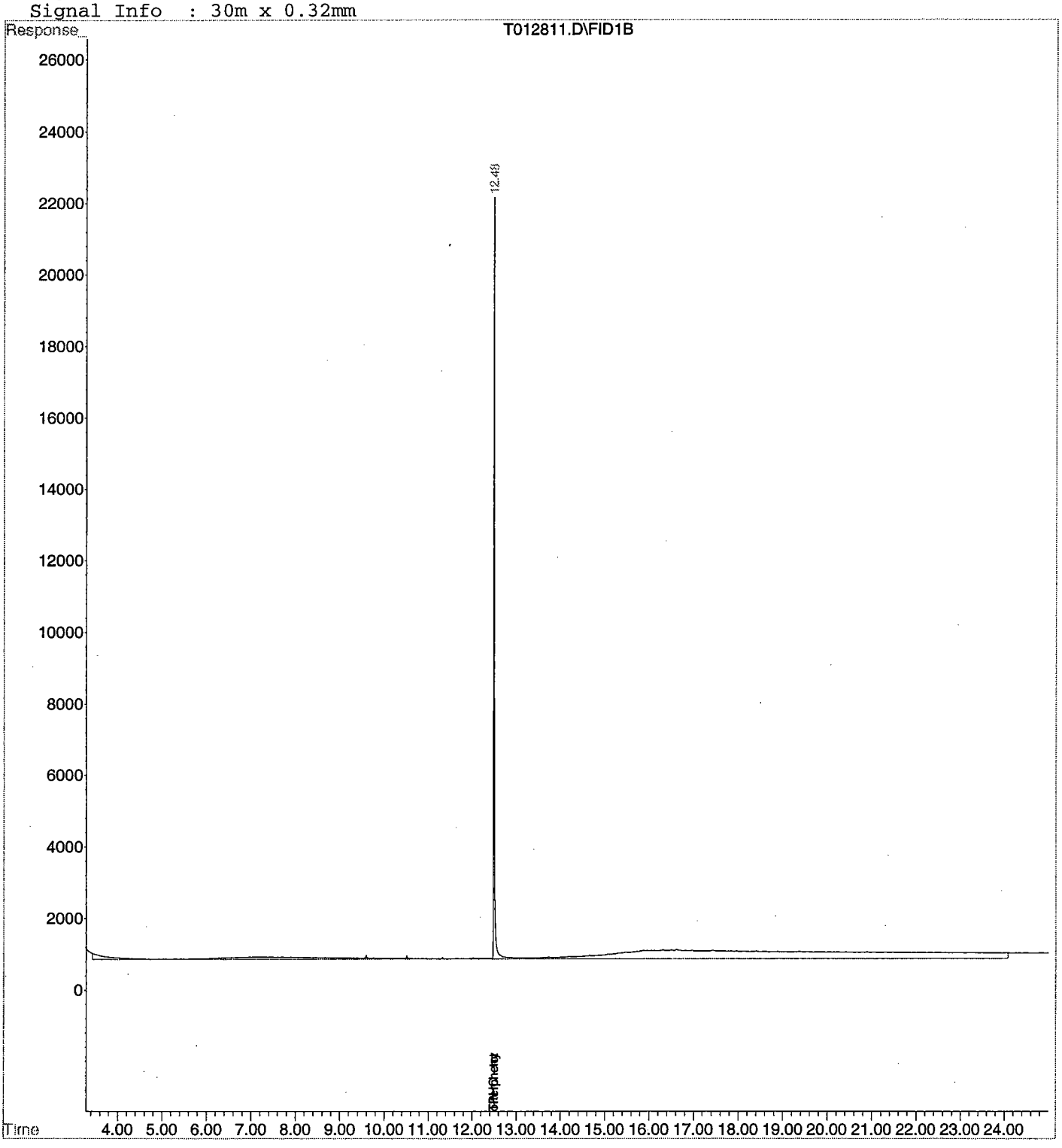
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012811.D Vial: 8
Acq On : 25 Apr 2001 3:37 pm Operator: BPatel
Sample : 1606903s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:12 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012812.D Vial: 9
Acq On : 25 Apr 2001 4:11 pm Operator: BPatel
Sample : 1606904s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:12 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.48	251146	8.706 mg/L
Spiked Amount 10.000 Range 8 - 13 Recovery = 87.06%#			
Target Compounds			
22) tC TPHC - total	12.48	4996693	159.827 mg/L m

(f)=RT Delta > 1/2 Window (m)=manual int.

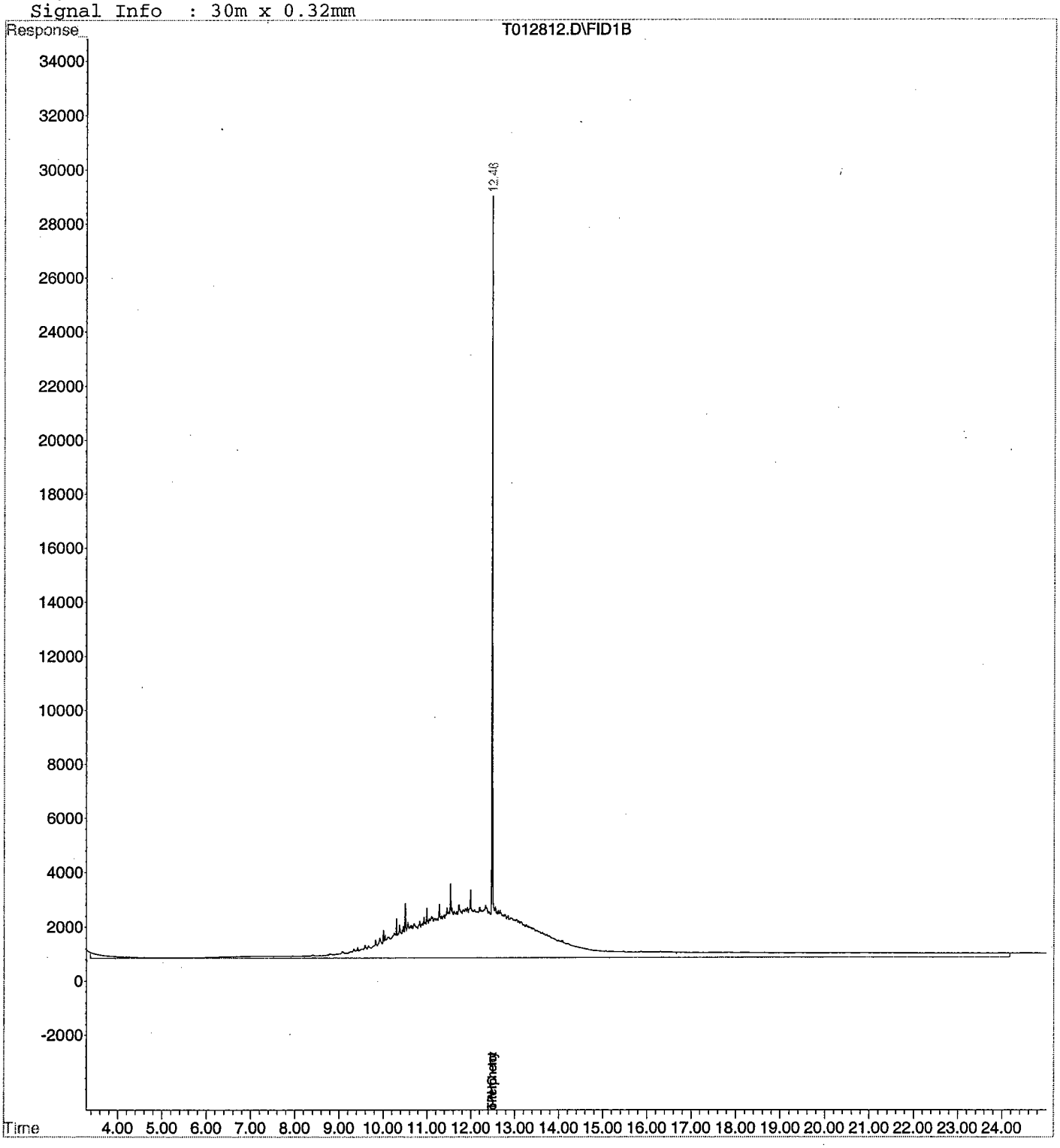
000023

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012812.D Vial: 9
Acq On : 25 Apr 2001 4:11 pm Operator: BPatel
Sample : 1606904s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:12 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010425\T012813.D Vial: 10
Acq On : 25 Apr 2001 4:44 pm Operator: BPatel
Sample : 1606905s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:13 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Initial Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.49	260045	9.015 mg/L
Spiked Amount 10.000 Range 8 - 13 Recovery = 90.15%#			
Target Compounds			
22) tC TPHC - total	12.48	2266474	72.497 mg/L m

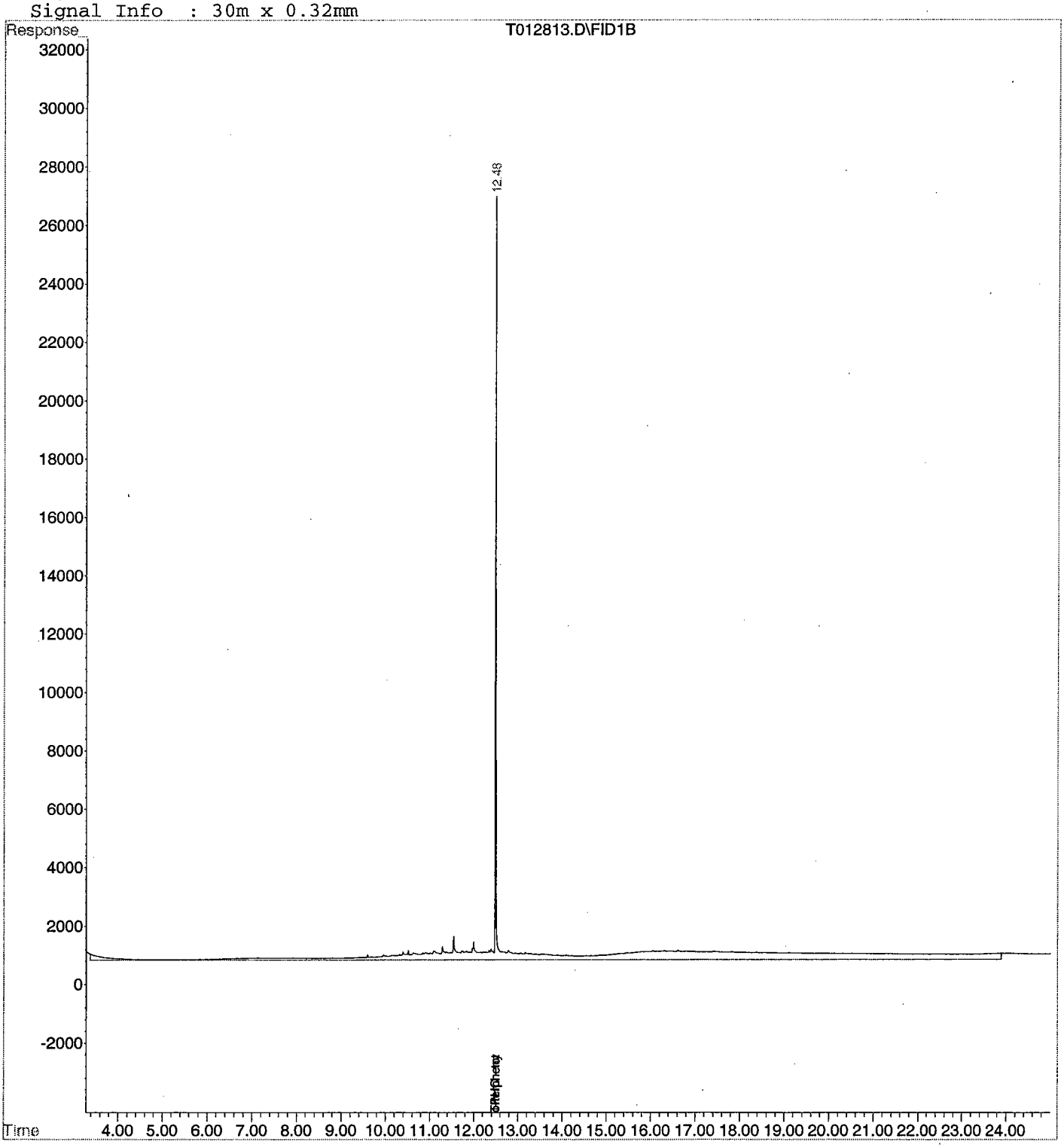
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\010425\T012813.D Vial: 10
Acq On : 25 Apr 2001 4:44 pm Operator: BPatel
Sample : 1606905s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Apr 26 8:13 2001 Quant Results File: TPH85.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH85.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Feb 02 11:34:54 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH85.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



000026

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis ✓
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 5/16/01

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

APPENDIX E

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

Bldg. 426

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
426-1 4.5-10'	5171.01	Aqueous	15-Feb-00 10:35	02/15/00

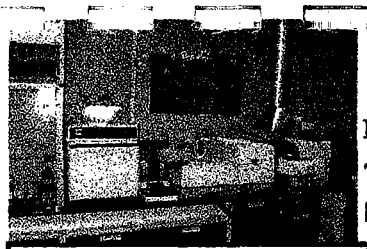
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

5-8-00
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: X2145
( )DERA (√)OMA ( )Other:
Project No: 10-0004
Location: BLDG. 426
Samplers Name / Company: MARK LAMA / ITS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	XYLENE	BN+15						Remarks / Preservation Method
5171 -01	426-1 4.5-10'	2-15-00	1035	AQ.	3	X	X	X						HCL/24oz

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Mark Lama	2-15-00 1130	J. Wright			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks: SHARED T.B. + F.B. W/ BLDG. 2043

200002

print legibly

Coc.xls2/8/00

METHODOLOGY SUMMARY

Methodology Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5-ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/8270
Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5171 Site: Bldg. 426

	Date	Hold Time
Date Sampled	02/15/00	NA
Receipt/Refrigeration	02/15/00	NA
Extractions		
1. Base Neutral	02/16/00	14 days
Analyses		
1. Volatile Organics	2/16,17/00	14 days
2. Base Neutral	02/18/00	40 days

CONFORMANCE NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes, No, N/A
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	Yes
2. Retention times for chromatograms provided	Yes
3. GC/MS Tune Specifications	
a. BFB Meet Criteria	Yes
b. DFTPP Meet Criteria	Yes
4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	Yes
6. GC/MS Calibration Requirements	
a. Calibration Check Compounds Meet Criteria	Yes
b. System Performance Check Compounds Meet Criteria	Yes
7. Blank Contamination - If yes, List compounds and concentrations in each blank:	NO
a. VOA Fraction _____	
b. B/N Fraction _____	
c. Acid Fraction NA	
8. Surrogate Recoveries Meet Criteria	Yes
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction _____	
b. B/N Fraction _____	
c. Acid Fraction NA	
If not met, were the calculations checked and the results qualified as "estimated"?	___
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range)	Yes
a. VOA Fraction _____	
b. B/N Fraction _____	
c. Acid Fraction NA	

GC/MS Analysis Conformance/Non-Conformance Summary (cont.)

Indicate Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
    (If not met, list those compounds, which fall outside the acceptable range)
    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction NA

11. Extraction Holding Time Met — Yes

    If not met, list number of days exceeded for each sample: ___
    _____
    _____

12. Analysis Holding Time Met — Yes

    If not met, list number of days exceeded for each sample: ___
    _____
    _____

Additional Comments:

_____
_____
_____

Laboratory Manager : _____ Date: 5-8-00

VOLATILES
ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	: Method Detection Limit
J	: Compound Identified Below Detection Limit
B	: Compound is in Both Sample and Blank
D	: Results are from a Dilution of the Sample
U	: Compound Searched for but not Detected
E	: Compound Exceeds Calibration Limit

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VC002129.D**	Sample Name	**Vblk58**
Operator	**Skelton**	Field ID	**Vblk58**
Date Acquired	**16 Feb 2000 1:34 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75343	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156594	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

2/18/00 2:28 PM

C:\HPCHEM\Custrpt\Volatile\624fy00.crt

000012

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Vblk58**

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: Vblk58

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC002129.D

Level: (low/med) LOW Date Received: 2/15/00

% Moisture: not dec. _____ Date Analyzed: 2/16/00

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VC002144.D**	Sample Name	**5171.01**
Operator	**Skelton**	Field ID	**426-1**
Date Acquired	**17 Feb 2000 12:40 am**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75343	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156594	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform	16.22	200665	4.86 ug/L	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

2/18/00 2:29 PM

C:\HPCHEM\Custrpt\Volatile\624fy00.crt

000014

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 426-1

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5171.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC002144.D

Level: (low/med) LOW Date Received: 2/15/00

% Moisture: not dec. Date Analyzed: 2/17/00

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.:

Lab File ID: VC002070.D BFB Injection Date: 2/10/00

Instrument ID: VoaInst#3 BFB Injection Time: 11:01

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.8
75	30.0 - 66.0% of mass 95	51.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	64.3
175	4.0 - 9.0% of mass 174	4.3 (6.7)1
176	93.0 - 101.0% of mass 174	62.7 (97.6)1
177	5.0 - 9.0% of mass 176	3.6 (5.8)2

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

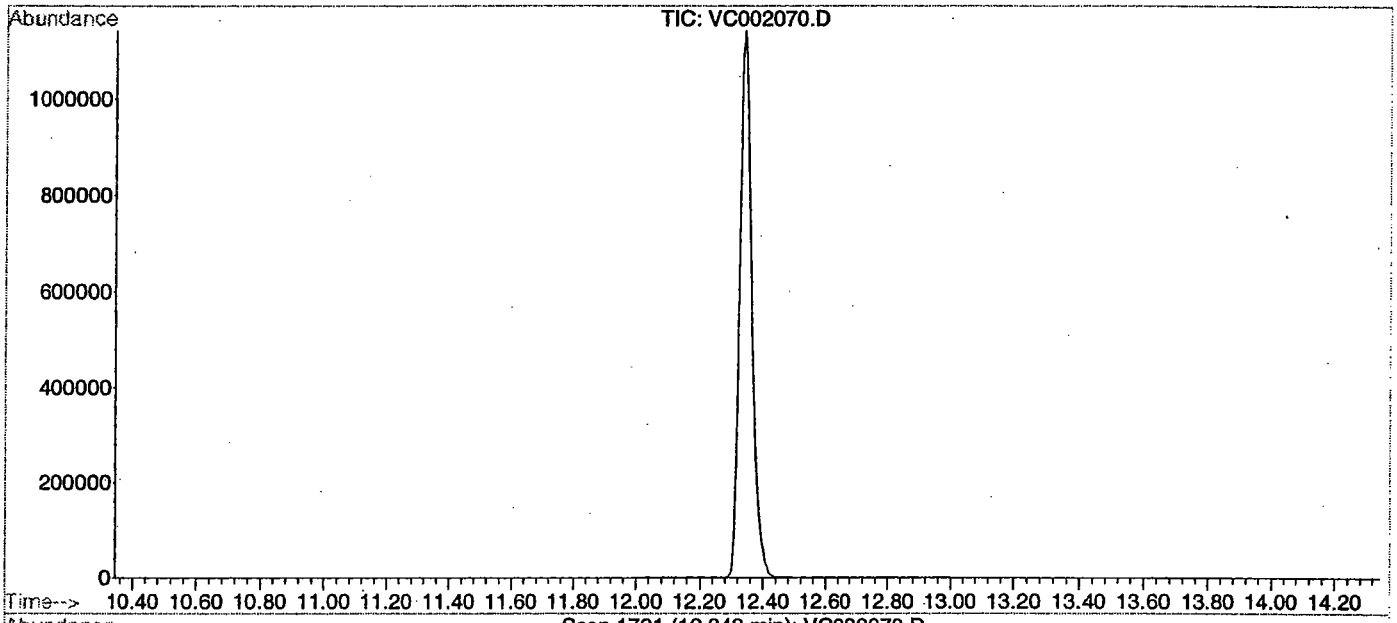
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

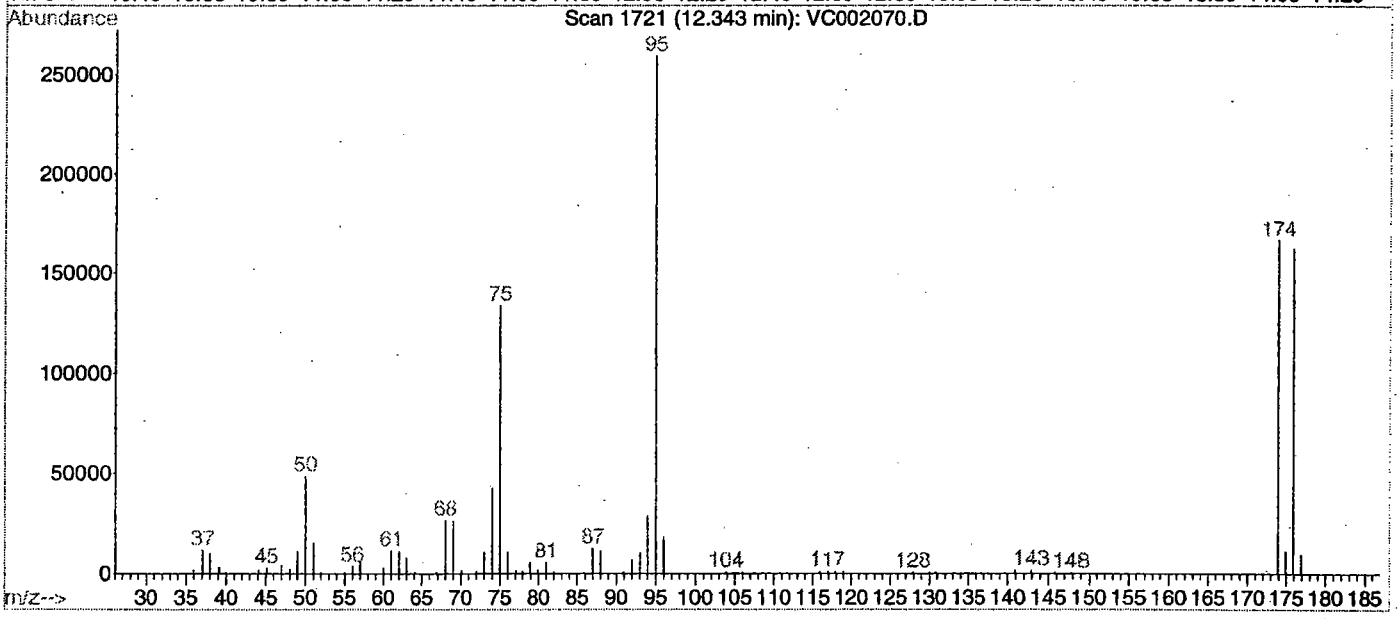
	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD100	VSTD100	VC002071.D	2/10/00	11:33
02	VSTD050	VSTD050	VC002072.D	2/10/00	12:14
03	VSTD020	VSTD020	VC002073.D	2/10/00	12:55
04	VSTD010	VSTD010	VC002074.D	2/10/00	13:36
05	VSTD005	VSTD005	VC002075.D	2/10/00	14:17

BFB

Data File : C:\HPCHEM\1\DATA\000210\VC002070.D
Acq On : 10 Feb 2000 11:01 am
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00





Spectrum Information: Scan 1721

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.8	48640	PASS
75	95	30	60	51.6	133888	PASS
95	95	100	100	100.0	259392	PASS
96	95	5	9	7.1	18288	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.3	166784	PASS
175	174	5	9	6.7	11241	PASS
176	174	95	101	97.6	162752	PASS
177	176	5	9	5.8	9451	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.:

Lab File ID: VC002127.D BFB Injection Date: 2/16/00

Instrument ID: VoaInst#3 BFB Injection Time: 12:08

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.9
75	30.0 - 66.0% of mass 95	51.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	56.1
175	4.0 - 9.0% of mass 174	4.2 (7.5)1
176	93.0 - 101.0% of mass 174	54.5 (97.3)1
177	5.0 - 9.0% of mass 176	3.5 (6.3)2

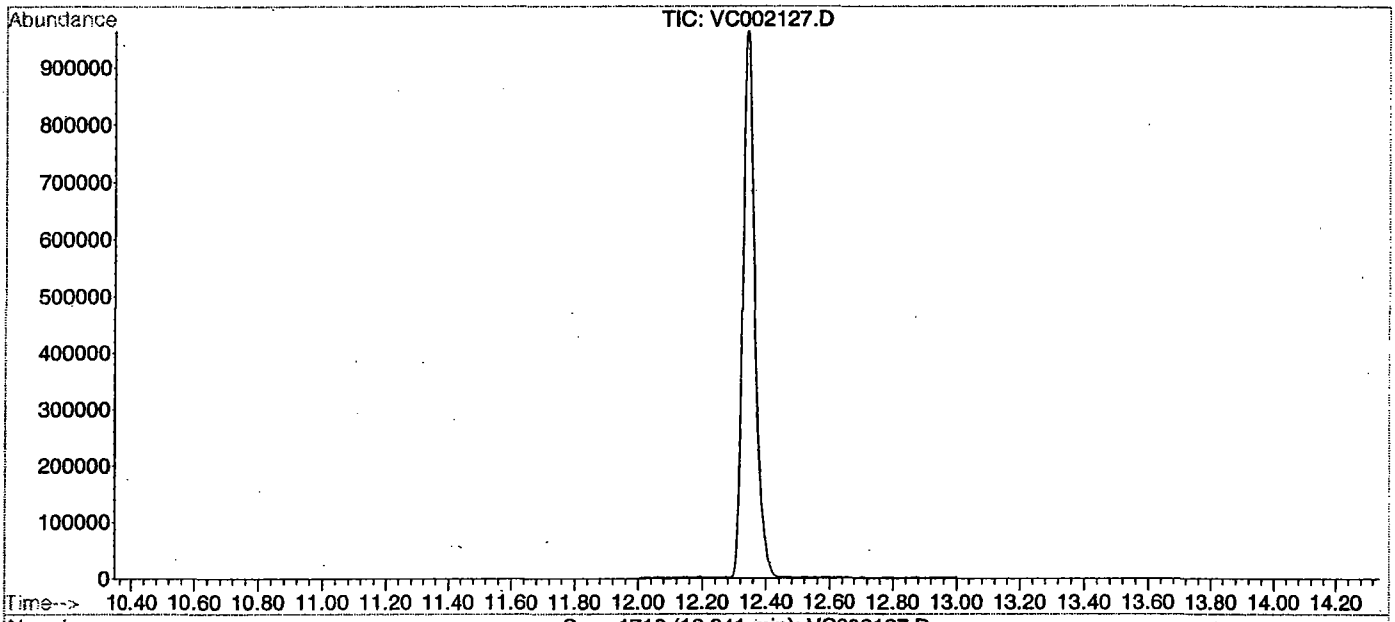
1-Value is % mass 174 2-Value is % mass 176

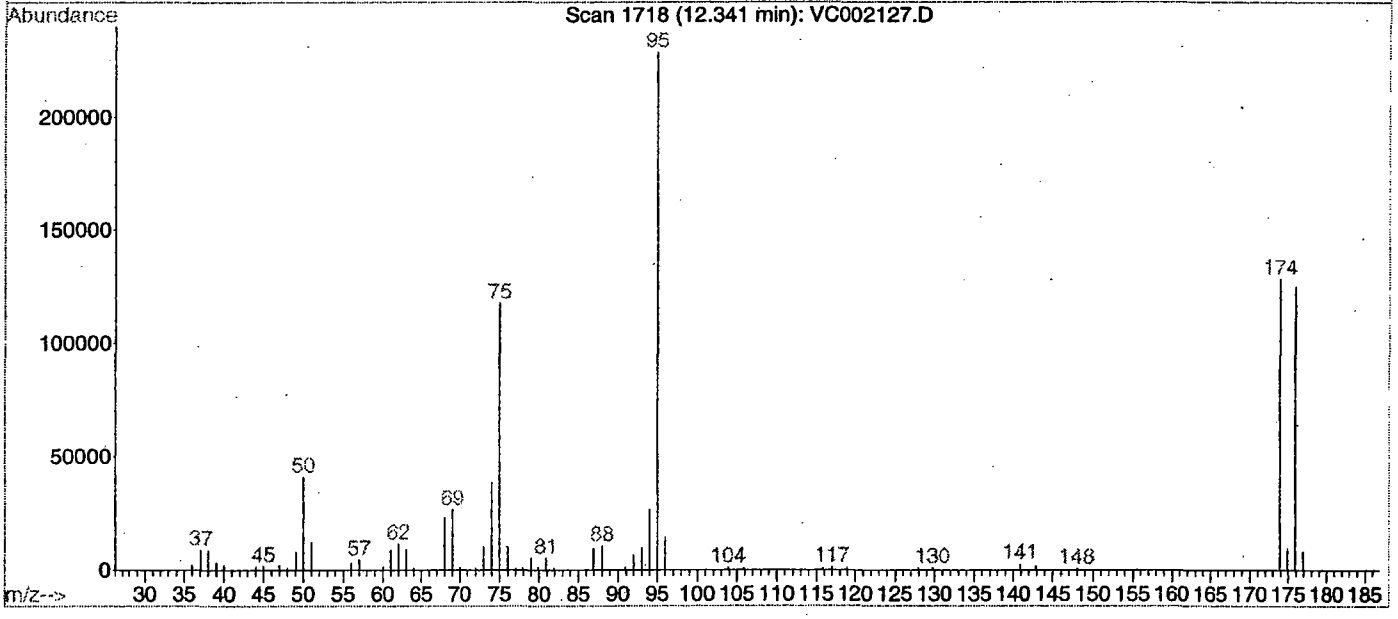
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VC002128.D	2/16/00	12:40
02	VBLK58	VBLK58	VC002129.D	2/16/00	13:34
03	5169.03MS	5169.03MS	VC002142.D	2/16/00	23:18
04	5169.03MSD	5169.03MSD	VC002143.D	2/16/00	23:59
05	426-1	5171.01	VC002144.D	2/17/00	0:40

BFB

Data File : C:\HPCHEM\1\DATA\000216\VC002127.D Vial: 1
Acq On : 16 Feb 2000 12:08 pm Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP





Spectrum Information: Scan 1718

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	40880	PASS
75	95	30	60	51.4	117608	PASS
95	95	100	100	100.0	228992	PASS
96	95	5	9	6.3	14474	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.1	128352	PASS
175	174	5	9	7.5	9575	PASS
176	174	95	101	97.3	124904	PASS
177	176	5	9	6.3	7917	PASS

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID: **Vblk58**

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.:

Lab File ID: VC002129.D Lab Sample ID: Vblk58

Date Analyzed: 2/16/00 Time Analyzed: 13:34

GC Column: RTX502. ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: VoaInst#3

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

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	5169.03MS	5169.03MS	VC002142.D	23:18
02	5169.03MSD	5169.03MSD	VC002143.D	23:59
03	426-1	5171.01	VC002144.D	0:40

COMMENTS:

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Initial Calibration

Calibration Files
50 =VC002072.D 5 =VC002075.D 10 =VC002074.D
20 =VC002073.D 100 =VC002071.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.175	0.143	0.133	0.163	0.153	0.153	10.85
3)	t	Acrylonitrile	0.414	0.394	0.343	0.399	0.385	0.387	6.88
4)	t	tert-Butyl alcohol	0.084	0.081	0.073	0.082	0.074	0.079	6.26
5)	t	Methyl-tert-Butyl eth	3.965	3.850	3.336	3.877	3.727	3.751	6.59
6)	t	Di-isopropyl ether	1.641	1.541	1.366	1.595	1.577	1.544	6.83
7)	T	Dichlorodifluorometha	2.346	2.137	1.802	2.429	2.330	2.209	11.37
8)	TP	Chloromethane	1.546	1.497	1.266	1.654	1.547	1.502	9.57
9)	TC	Vinyl Chloride	1.059	1.052	0.858	1.153	1.036	1.032	10.38
10)	T	Bromomethane	0.785	0.886	0.720	0.890	0.681	0.792	11.99
11)	T	Chloroethane	1.166	1.168	0.968	1.248	1.151	1.140	9.08
12)	T	Trichlorofluoromethan	2.430	2.344	1.991	2.579	2.406	2.350	9.29
13)	MC	1,1-Dichloroethene	2.265	2.162	1.874	2.213	2.154	2.134	7.12
14)	T	Acetone	0.273	0.709	0.433	0.338	0.306	0.412	42.82
15)	T	Carbon Disulfide	5.819	5.630	4.883	5.754	5.531	5.524	6.78
16)	T	Methylene Chloride	1.919	1.854	1.603	1.874	1.840	1.818	6.82
17)	T	trans-1,2-Dichloroeth	2.217	2.130	1.850	2.181	2.116	2.099	6.91
18)	TP	1,1-Dichloroethane	2.846	2.707	2.394	2.785	2.715	2.689	6.49
19)	T	Vinyl Acetate	2.325	2.249	1.867	2.228	2.244	2.183	8.26
20)	T	2-Butanone	0.427	0.815	0.566	0.477	0.442	0.545	29.32
21)	T	cis-1,2-Dichloroethen	2.183	2.096	1.839	2.146	2.085	2.070	6.51
22)	TC	Chloroform	2.925	2.977	2.520	2.879	2.774	2.815	6.43
23)	T	1,1,1-Trichloroethane	2.558	2.369	2.104	2.477	2.456	2.393	7.32
24)	T	Carbon Tetrachloride	2.122	1.841	1.648	1.998	2.058	1.934	9.85
25)	S	1,2-Dichloroethane-d4	1.566	1.565	1.568	1.580	1.570	1.569	0.38
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.072	1.031	0.907	1.051	1.003	1.013	6.34
28)	T	1,2-Dichloroethane	0.249	0.243	0.211	0.246	0.236	0.237	6.54
29)	TM	Trichloroethene	0.320	0.305	0.264	0.310	0.310	0.302	7.21
30)	TC	1,2-Dichloropropane	0.251	0.239	0.208	0.243	0.238	0.236	6.83
31)	T	Bromodichloromethane	0.314	0.276	0.246	0.296	0.303	0.287	9.35
32)	T	2-Chloroethyl vinyl e	0.074	0.071	0.063	0.072	0.071	0.070	6.16
33)	T	cis-1,3-Dichloroprope	0.415	0.385	0.340	0.398	0.397	0.387	7.32
34)	T	4-Methyl-2-Pentanone	0.054	0.053	0.047	0.054	0.050	0.052	5.88
35)	S	Toluene-d8	1.188	1.189	1.189	1.196	1.188	1.190	0.27
36)	TCM	Toluene	1.203	1.181	1.032	1.187	1.120	1.145	6.13
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.387	1.243	1.113	1.322	1.338	1.280	8.37
39)	T	1,1,2-Trichloroethane	0.876	0.833	0.726	0.843	0.838	0.823	6.91
40)	T	Tetrachloroethene	1.112	1.049	0.918	1.055	1.100	1.047	7.38
41)	T	2-Hexanone	0.288	0.274	0.236	0.266	0.301	0.273	9.02
42)	T	Dibromochloromethane	0.848	0.663	0.611	0.759	0.841	0.744	14.21
43)	TMP	Chlorobenzene	3.303	3.175	2.786	3.203	3.152	3.124	6.32
44)	TC	Ethylbenzene	5.223	5.161	4.518	5.188	4.856	4.989	6.04
45)	T	m+p-Xylenes	2.216	2.074	1.825	2.134	2.141	2.078	7.22
46)	T	o-Xylene	3.988	3.799	3.350	3.868	3.771	3.755	6.43
47)	T	Styrene	3.496	3.107	2.755	3.338	3.386	3.216	9.16
48)	TP	Bromoform	0.401	0.288	0.261	0.340	0.414	0.341	19.73
49)	S	Bromofluorobenzene	1.567	1.527	1.530	1.553	1.584	1.552	1.58
50)	TP	1,1,2,2-Tetrachloroet	0.920	0.926	0.775	0.896	0.871	0.877	6.99
51)	T	1,3-Dichlorobenzene	2.303	1.982	1.781	2.132	2.288	2.097	10.48
52)	T	1,4-Dichlorobenzene	2.221	1.886	1.689	2.022	2.231	2.010	11.45
53)	T	1,2-Dichlorobenzene	2.129	1.819	1.636	1.966	2.104	1.931	10.69

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000216\VC002128.D Vial: 2
Acq On : 16 Feb 2000 12:40 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	109	0.00
2	t	Acrolein	0.153	0.105	31.4#	70	0.00
3	t	Acrylonitrile	0.387	0.422	-9.0	115	0.00
4	t	tert-Butyl alcohol	0.079	0.081	-2.5	108	0.00
5	t	Methyl-tert-Butyl ether	3.751	3.888	-3.7	109	0.00
6	t	Di-isopropyl ether	1.544	1.543	0.1	105	0.00
7	T	Dichlorodifluoromethane	2.209	2.413	-9.2	108	0.00
8	TP	Chloromethane	1.502	1.635	-8.9	107	0.00
9	TC	Vinyl Chloride	1.032	1.260	-22.1	119	0.00
10	T	Bromomethane	0.792	0.900	-13.6	110	0.00
11	T	Chloroethane	1.140	1.220	-7.0	106	0.00
12	T	Trichlorofluoromethane	2.350	2.465	-4.9	104	0.00
13	MC	1,1-Dichloroethene	2.134	2.112	1.0	104	0.00
14	T	Acetone	0.412	1.067	-159.0#	343#	0.00
15	T	Carbon Disulfide	5.524	5.536	-0.2	105	0.00
16	T	Methylene Chloride	1.818	1.783	1.9	103	0.00
17	T	trans-1,2-Dichloroethene	2.099	2.043	2.7	102	0.00
18	TP	1,1-Dichloroethane	2.689	2.669	0.7	104	0.00
19	T	Vinyl Acetate	2.183	2.240	-2.6	109	0.00
20	T	2-Butanone	0.545	0.430	21.1	98	0.00
21	T	cis-1,2-Dichloroethene	2.070	2.053	0.8	104	0.00
22	TC	Chloroform	2.815	2.697	4.2	102	0.00
23	T	1,1,1-Trichloroethane	2.393	2.288	4.4	100	0.00
24	T	Carbon Tetrachloride	1.934	1.746	9.7	95	0.00
25	S	1,2-Dichloroethane-d4	1.569	1.534	2.2	106	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	108	0.00
27	TM	Benzene	1.013	0.991	2.2	102	0.00
28	T	1,2-Dichloroethane	0.237	0.240	-1.3	106	0.00
29	TM	Trichloroethene	0.302	0.270	10.6	94	0.00
30	TC	1,2-Dichloropropane	0.236	0.233	1.3	104	0.00
31	T	Bromodichloromethane	0.287	0.268	6.6	98	0.00
32	T	2-Chloroethyl vinyl ether	0.070	0.071	-1.4	107	0.00
33	T	cis-1,3-Dichloropropene	0.387	0.371	4.1	101	0.00
34	T	4-Methyl-2-Pentanone	0.052	0.055	-5.8	111	0.00
35	S	Toluene-d8	1.190	1.091	8.3	99	0.00
36	TCM	Toluene	1.145	1.088	5.0	99	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.00
38	T	trans-1,3-Dichloropropene	1.280	1.256	1.9	100	0.00
39	T	1,1,2-Trichloroethane	0.823	0.817	0.7	102	0.00
40	T	Tetrachloroethene	1.047	0.896	14.4	90	0.00
41	T	2-Hexanone	0.273	0.289	-5.9	115	0.00
42	T	Dibromochloromethane	0.744	0.662	11.0	92	0.00
43	TMP	Chlorobenzene	3.124	2.938	6.0	97	0.00
44	TC	Ethylbenzene	4.989	4.785	4.1	97	0.00
45	T	m+p-Xylenes	2.078	2.003	3.6	99	0.00
46	T	o-Xylene	3.755	3.738	0.5	102	0.00
47	T	Styrene	3.216	3.081	4.2	97	0.00
48	TP	Bromoform	0.341	0.273	19.9	85	0.00
49	S	Bromofluorobenzene	1.552	1.417	8.7	96	0.00
50	TP	1,1,2,2-Tetrachloroethane	0.877	0.896	-2.2	105	0.00
51	T	1,3-Dichlorobenzene	2.097	1.740	17.0	86	0.00
52	T	1,4-Dichlorobenzene	2.010	1.651	17.9	86	0.00
53	T	1,2-Dichlorobenzene	1.931	1.649	14.6	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: 100004 Case No.: 5171 Location: 426 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	VBLK58	103	99	89	0
02	5169.03MS	103	102	101	0
03	5169.03MSD	105	101	100	0
04	426-1	109	102	99	0

QC LIMITS

SMC1	DCE	=	1,2-Dichloroethane-d4	(70-117)
SMC2	TOL	=	Toluene-d8	(88-110)
SMC3	BFB	=	Bromofluorobenzene	(82-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VC002143.D	Sample Name	5169.03MSD
Date Acquired	16-Feb-00	Field ID	5169.03MSD

Compound Name	Amount Added ug/L	Result ul/L	Percent Recovered
Acrolein	100	230.76	230.8
Acrylonitrile	100	226.48	226.5
tert-Butyl alcohol	200	209.62	104.8
Methyl-tert-Butyl ether	20	21.67	108.4
Di-isopropyl ether	20	21.40	107.0
Dichlorodifluoromethane	20	11.79	59.0
Chloromethane	20	21.10	105.5
Vinyl Chloride	20	17.57	87.9
Bromomethane	20	22.54	112.7
Chloroethane	20	19.42	97.1
Trichlorofluoromethane	20	13.38	66.9
1,1-Dichloroethene	20	15.82	79.1
Acetone	20	21.05	105.2
Carbon Disulfide	20	16.26	81.3
Methylene Chloride	20	21.02	105.1
trans-1,2-Dichloroethene	20	18.80	94.0
1,1-Dichloroethane	20	20.05	100.2
Vinyl Acetate	20	21.79	109.0
2-Butanone	20	21.84	109.2
cis-1,2-Dichloroethene	20	20.62	103.1
Chloroform	20	20.52	102.6
1,1,1-Trichloroethane	20	16.89	84.5
Carbon Tetrachloride	20	14.65	73.3
Benzene	20	19.20	96.0
1,2-Dichloroethane	20	21.42	107.1
Trichloroethene	20	17.37	86.9
1,2-Dichloropropane	20	20.53	102.6
Bromodichloromethane	20	20.02	100.1
2-Chloroethyl vinyl ether	20	20.49	102.4
cis-1,3-Dichloropropene	20	19.81	99.1
4-Methyl-2-Pentanone	20	20.89	104.5
Toluene	20	18.90	94.5
trans-1,3-Dichloropropene	20	19.74	98.7
1,1,2-Trichloroethane	20	20.92	104.6
Tetrachloroethene	20	15.25	76.2
2-Hexanone	20	20.27	101.4
Dibromochloromethane	20	19.42	97.1
Chlorobenzene	20	19.40	97.0
Ethylbenzene	20	18.60	93.0
m+p-Xylenes	40	37.19	93.0
o-Xylene	20	19.70	98.5
Styrene	20	19.56	97.8
Bromoform	20	17.75	88.8
1,1,2,2-Tetrachloroethane	20	20.85	104.3
1,3-Dichlorobenzene	20	18.78	93.9
1,4-Dichlorobenzene	20	18.64	93.2
1,2-Dichlorobenzene	20	19.02	95.1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002129.D Vial: 2
Acq On : 16 Feb 2000 1:34 pm Operator: Skelton
Sample : Vblk58 Inst : GC/MS Ins
Misc : Vblk58 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 11:50 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	464830	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.41	114	3417640	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	793034	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	731467	30.77	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 102.57%			
35) Toluene-d8	23.42	98	3709636	29.84	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.47%			
49) Bromofluorobenzene	30.26	95	997749	26.63	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 88.77%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration
VC002129.D M362420.M Fri Feb 18 14:25:21 2000

000027

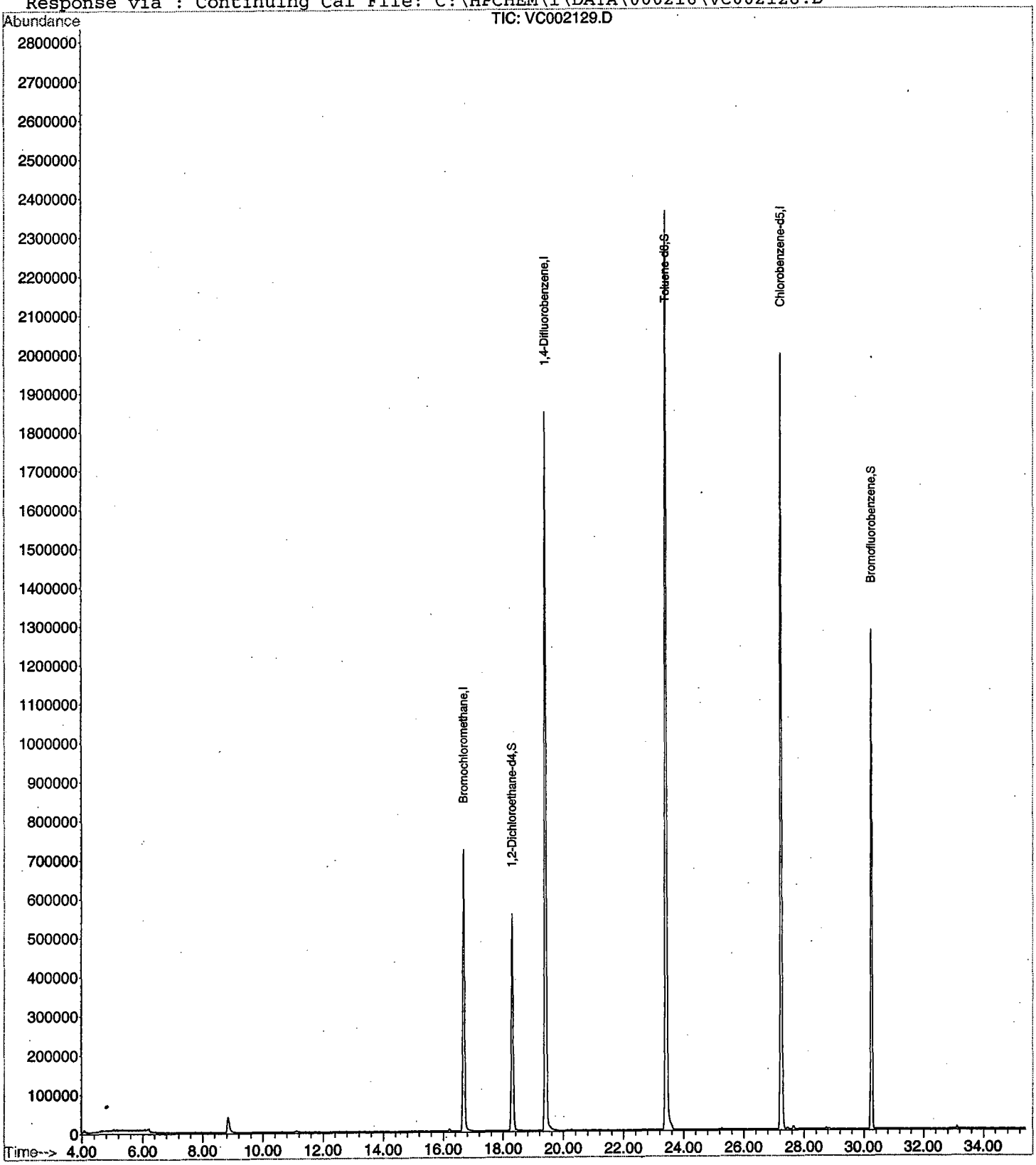
Quantitation Report

Data File : C:\HPCHEM\1\DATA\000216\VC002129.D
Acq On : 16 Feb 2000 1:34 pm
Sample : Vblk58
Misc : Vblk58
MS Integration Params: RTEINT.P
Quant Time: Feb 17 11:50 2000

Vial: 2
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M362420.RES

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002144.D Vial: 15
Acq On : 17 Feb 2000 12:40 am Operator: Skelton
Sample : 5171.01 Inst : GC/MS Ins
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:36 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	459066	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.41	114	3457453	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	845920	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	764103	32.55	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 108.50%			
35) Toluene-d8	23.41	98	3847827	30.60	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 102.00%			
49) Bromofluorobenzene	30.25	95	1189085	29.75	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 99.17%			
Target Compounds						Qvalue
22) Chloroform	16.22	83	200665	4.86	ug/L	92

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

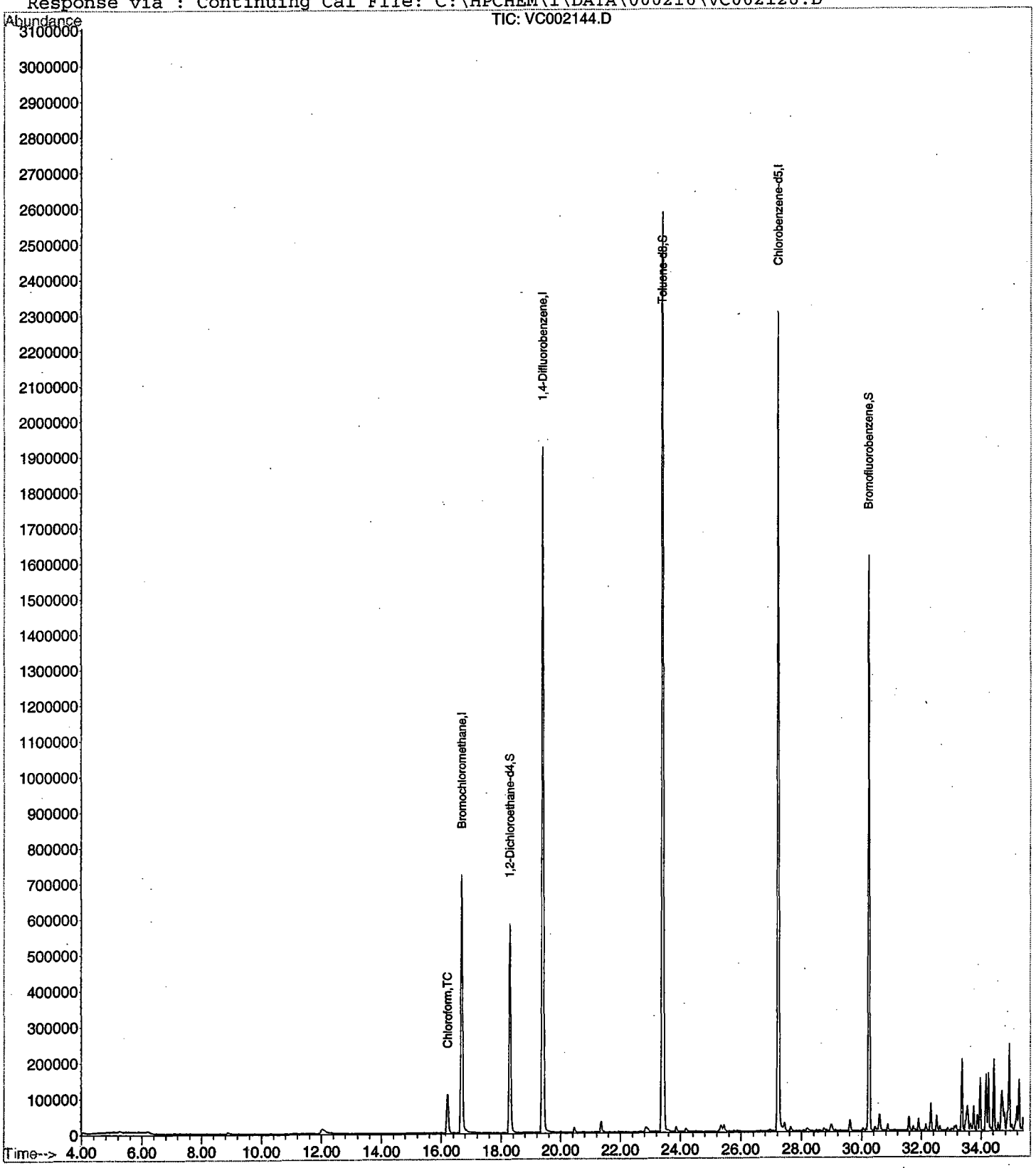
Quantitation Report

Data File : C:\HPCHEM\1\DATA\000216\VC002144.D
Acq On : 17 Feb 2000 12:40 am
Sample : 5171.01
Misc : 426-1
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:36 2000

Vial: 15
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M362420.RES

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002071.D Vial: 1
Acq On : 10 Feb 2000 11:33 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:09 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.69	128	495319	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.41	114	3470082	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	876511	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.30	65	777433	35.60	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 118.67%#				
35) Toluene-d8	23.41	98	4120983	36.53	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 121.77%#				
49) Bromofluorobenzene	30.25	95	1388716	40.17	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 133.90%#				
Target Compounds							Qvalue
2) Acrolein	8.59	56	2524548	2225.99	ug/L		97
3) Acrylonitrile	11.66	53	6351603	1140.17	ug/L		99
4) tert-Butyl alcohol	9.74	59	1228473	3209.82	ug/L	#	96
5) Methyl-tert-Butyl ether	11.82	73	6152990	132.38	ug/L		94
6) Di-isopropyl ether	13.51	87	2604448	124.19	ug/L		74
7) Dichlorodifluoromethane	4.12	85	3846201	111.86	ug/L		98
8) Chloromethane	4.71	50	2554059	98.70	ug/L		100
9) Vinyl Chloride	5.00	62	1711289	79.44	ug/L		100
10) Bromomethane	6.18	94	1123962	138.65	ug/L		96
11) Chloroethane	6.42	64	1901182	105.79	ug/L		98
12) Trichlorofluoromethane	7.18	101	3972182	98.02	ug/L		96
13) 1,1-Dichloroethene	9.26	61	3556962	108.97	ug/L		89
14) Acetone	8.86	43	505152	147.03	ug/L		97
15) Carbon Disulfide	11.08	76	9132504	108.53	ug/L		99
16) Methylene Chloride	11.15	84	3037152	108.28	ug/L		89
17) trans-1,2-Dichloroethene	12.27	61	3493123	109.49	ug/L		90
18) 1,1-Dichloroethane	13.77	63	4481895	107.06	ug/L		99
19) Vinyl Acetate	13.85	43	3705318	120.45	ug/L		94
20) 2-Butanone	15.22	43	730367	141.96	ug/L		88
21) cis-1,2-Dichloroethene	15.73	61	3442336	105.20	ug/L		89
22) Chloroform	16.22	83	4579442	95.47	ug/L		100
23) 1,1,1-Trichloroethane	17.40	97	4055539	108.88	ug/L		99
24) Carbon Tetrachloride	18.12	117	3398461	123.38	ug/L		94
27) Benzene	18.60	78	11606165	105.37	ug/L		98
28) 1,2-Dichloroethane	18.56	62	2726720	100.13	ug/L		96
29) Trichloroethene	20.29	130	3584090	104.80	ug/L		97
30) 1,2-Dichloropropane	20.75	63	2758619	107.02	ug/L		99
31) Bromodichloromethane	21.36	83	3507678	112.02	ug/L		98
32) 2-Chloroethyl vinyl ether	18.57	63	816524	106.55	ug/L		85
33) cis-1,3-Dichloropropene	22.78	75	4594735	120.03	ug/L		96
34) 4-Methyl-2-Pentanone	22.27	58	576041	93.52	ug/L		94
36) Toluene	23.62	91	12956334	103.59	ug/L		96
38) trans-1,3-Dichloropropene	24.06	75	3908229	133.91	ug/L		96
39) 1,1,2-Trichloroethane	24.46	97	2449664	113.05	ug/L		95
40) Tetrachloroethene	25.29	166	3214402	109.32	ug/L		98
41) 2-Hexanone	24.48	43	879245	575.49	ug/L		96
42) Dibromochloromethane	25.77	129	2458290	124.71	ug/L		98
43) Chlorobenzene	27.34	112	9210367	105.66	ug/L		98
44) Ethylbenzene	27.46	91	14188036	104.93	ug/L		93
45) m+p-Xylenes	27.66	106	12509604	229.32	ug/L		84
46) o-Xylene	28.75	91	11016329	110.96	ug/L		94
47) Styrene	28.83	104	9893014	125.05	ug/L		98
48) Bromoform	29.68	173	1209351	158.81	ug/L		99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002071.D Vial: 1
Acq On : 10 Feb 2000 11:33 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:09 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50)	1,1,2,2-Tetrachloroethane	30.04	83	2544730	116.11 ug/L	99
51)	1,3-Dichlorobenzene	32.88	146	6685799	120.14 ug/L	98
52)	1,4-Dichlorobenzene	33.12	146	6518301	126.71 ug/L	98
53)	1,2-Dichlorobenzene	33.96	146	6148636	119.48 ug/L	96

(#) = qualifier out of range (m) = manual integration
VC002071.D M362419.M Fri Feb 18 14:06:19 2000

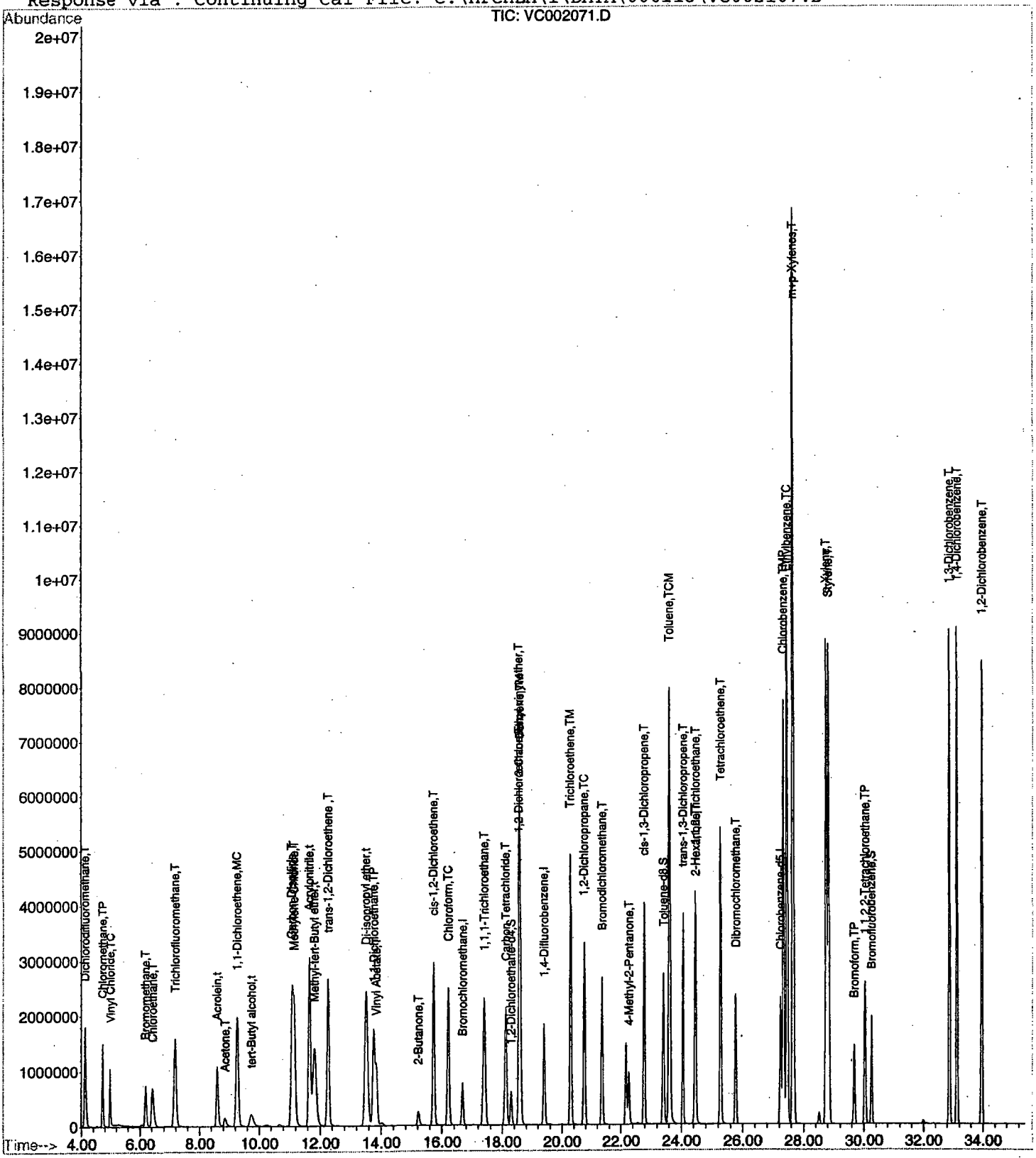
Quantitation Report

Data File : C:\HPCHEM\1\DATA\000210\VC002071.D
Acq On : 10 Feb 2000 11:33 am
Sample : Vstd100
Misc : Vstd100
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:09 2000

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M362419.RES

Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D

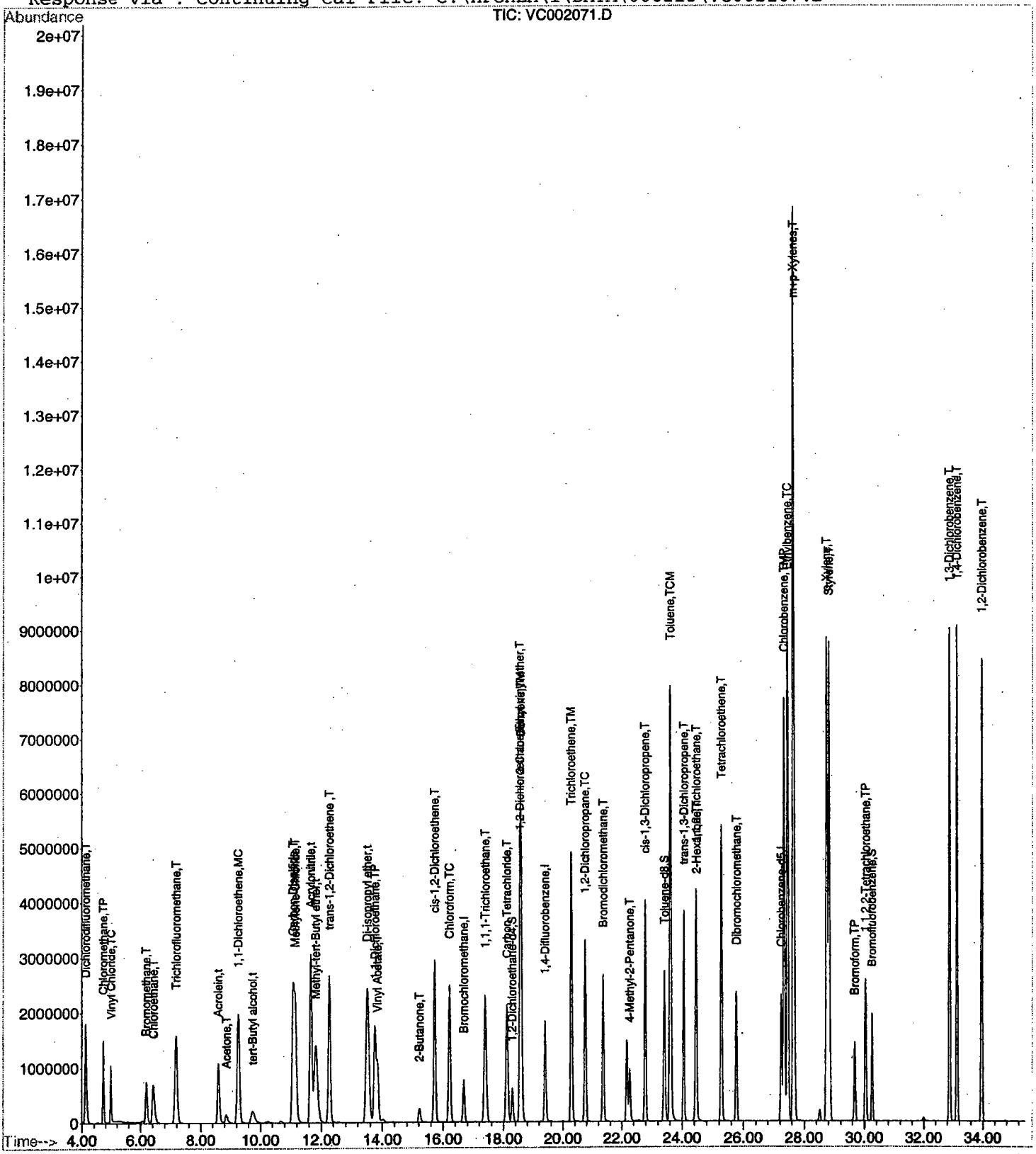


000033

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000210\VC002071.D Vial: 1
Acq On : 10 Feb 2000 11:33 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:09 2000 Quant Results File: M362419.RES

Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D



000033

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002072.D Vial: 2
Acq On : 10 Feb 2000 12:14 pm Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:50 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	497301	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.41	114	3480364	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	885937	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	778533	35.51	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 118.37%#			
35) Toluene-d8	23.41	98	4135987	36.55	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 121.83%#			
49) Bromofluorobenzene	30.25	95	1388487	39.74	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 132.47%#			
Target Compounds						Qvalue
2) Acrolein	8.59	56	1451892	1275.09	ug/L	98
3) Acrylonitrile	11.66	53	3432104	613.64	ug/L	99
4) tert-Butyl alcohol	9.73	59	697304	1814.69	ug/L	96
5) Methyl-tert-Butyl ether	11.83	73	3286554	70.43	ug/L	95
6) Di-isopropyl ether	13.52	87	1359804	64.58	ug/L	75
7) Dichlorodifluoromethane	4.12	85	1944463	56.32	ug/L	99
8) Chloromethane	4.71	50	1281509	49.33	ug/L	99
9) Vinyl Chloride	5.00	62	877991	40.60	ug/L	99
10) Bromomethane	6.18	94	651038	79.99	ug/L	95
11) Chloroethane	6.42	64	966249	53.55	ug/L	95
12) Trichlorofluoromethane	7.19	101	2013702	49.49	ug/L	98
13) 1,1-Dichloroethene	9.26	61	1877417	57.29	ug/L	89
14) Acetone	8.86	43	226313	65.61	ug/L	96
15) Carbon Disulfide	11.09	76	4823025	57.09	ug/L	100
16) Methylene Chloride	11.16	84	1590666	56.49	ug/L	88
17) trans-1,2-Dichloroethene	12.27	61	1837551	57.37	ug/L	89
18) 1,1-Dichloroethane	13.77	63	2358851	56.12	ug/L	99
19) Vinyl Acetate	13.85	43	1926823	62.39	ug/L	94
20) 2-Butanone	15.22	43	354000	68.53	ug/L	88
21) cis-1,2-Dichloroethene	15.73	61	1809748	55.09	ug/L	88
22) Chloroform	16.22	83	2424045	50.34	ug/L	98
23) 1,1,1-Trichloroethane	17.40	97	2120525	56.70	ug/L	100
24) Carbon Tetrachloride	18.13	117	1758866	63.60	ug/L	94
27) Benzene	18.60	78	6216983	56.27	ug/L	99
28) 1,2-Dichloroethane	18.56	62	1443294	52.85	ug/L	97
29) Trichloroethene	20.29	130	1856434	54.12	ug/L	97
30) 1,2-Dichloropropane	20.75	63	1455088	56.28	ug/L	99
31) Bromodichloromethane	21.36	83	1819592	57.94	ug/L	100
32) 2-Chloroethyl vinyl ether	18.58	63	430906	56.06	ug/L	97
33) cis-1,3-Dichloropropene	22.78	75	2408525	62.73	ug/L	96
34) 4-Methyl-2-Pentanone	22.27	58	313291	50.71	ug/L	99
36) Toluene	23.62	91	6977967	55.62	ug/L	99
38) trans-1,3-Dichloropropene	24.06	75	2047967	69.42	ug/L	96
39) 1,1,2-Trichloroethane	24.46	97	1293748	59.07	ug/L	95
40) Tetrachloroethene	25.28	166	1642297	55.26	ug/L	99
41) 2-Hexanone	24.49	43	424830	275.11	ug/L	93
42) Dibromochloromethane	25.77	129	1251640	62.82	ug/L	98
43) Chlorobenzene	27.34	112	4877102	55.36	ug/L	99
44) Ethylbenzene	27.46	91	7711963	56.43	ug/L	97
45) m+p-Xylenes	27.65	106	6544531	118.69	ug/L	94
46) o-Xylene	28.75	91	5888032	58.68	ug/L	98
47) Styrene	28.83	104	5162221	64.56	ug/L	98
48) Bromoform	29.68	173	591543	76.85	ug/L	97

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002072.D Vial: 2
Acq On : 10 Feb 2000 12:14 pm Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:50 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

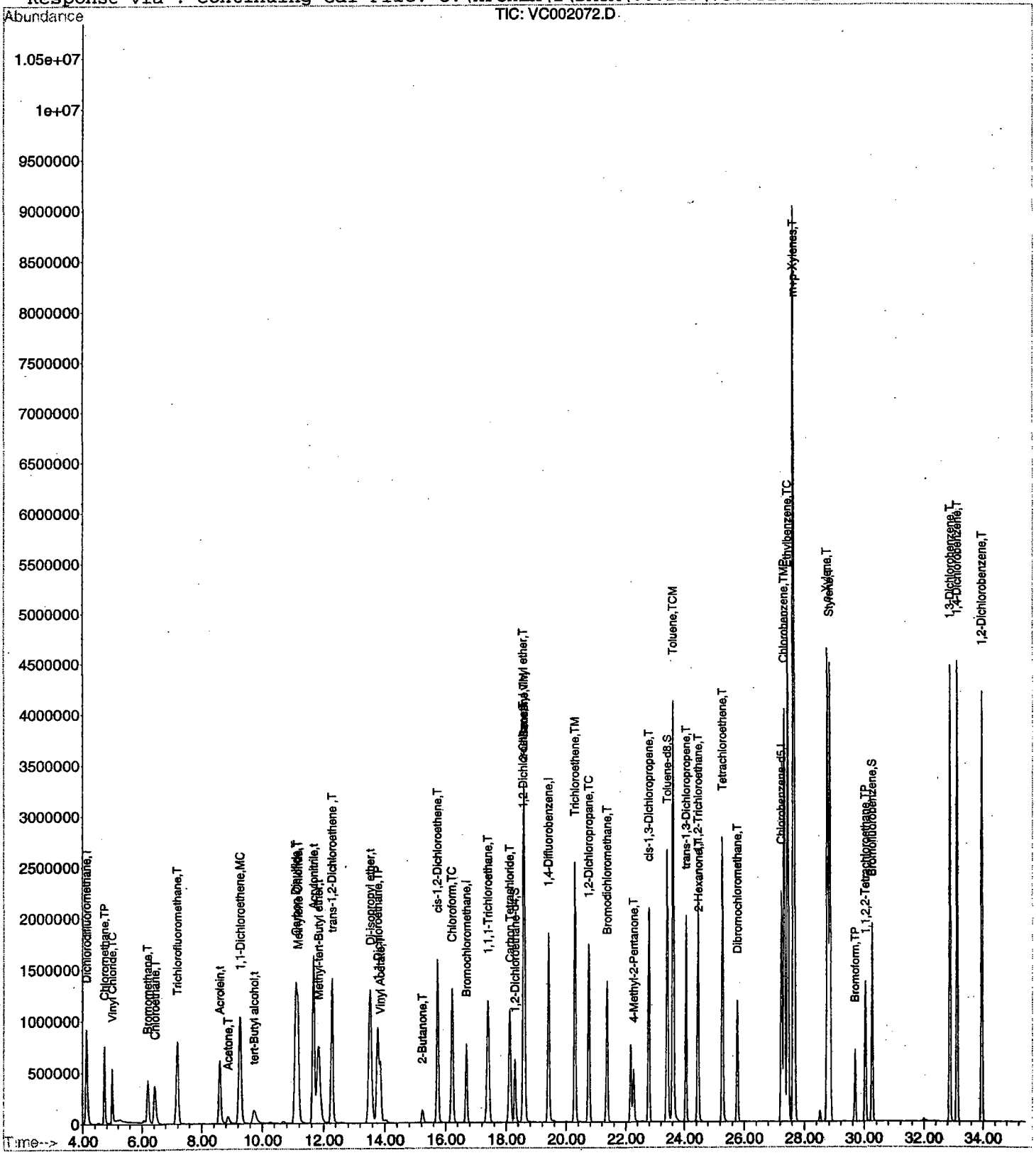
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	1,1,2,2-Tetrachloroethane	30.03	83	1358447	61.32	ug/L	98
51)	1,3-Dichlorobenzene	32.88	146	3400671	60.46	ug/L	98
52)	1,4-Dichlorobenzene	33.12	146	3279500	63.07	ug/L	98
53)	1,2-Dichlorobenzene	33.96	146	3143726	60.44	ug/L	97

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000210\VC002072.D Vial: 2
Acq On : 10 Feb 2000 12:14 pm Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 12:50 2000 Quant Results File: M362419.RES

Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002073.D Vial: 3
Acq On : 10 Feb 2000 12:55 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 13:31 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	491250	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.41	114	3449428	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	885302	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	775948	35.82	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery =	119.40%#		
35) Toluene-d8	23.41	98	4124464	36.78	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery =	122.60%#		
49) Bromofluorobenzene	30.25	95	1374655	39.37	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery =	131.23%#		
Target Compounds						Qvalue
2) Acrolein	8.60	56	533004	473.86	ug/L	94
3) Acrylonitrile	11.66	53	1307357	236.63	ug/L	99
4) tert-Butyl alcohol	9.73	59	268759	708.04	ug/L	96
5) Methyl-tert-Butyl ether	11.83	73	1269711	27.54	ug/L	95
6) Di-isopropyl ether	13.52	87	522239	25.11	ug/L	75
7) Dichlorodifluoromethane	4.13	85	795353	23.32	ug/L	100
8) Chloromethane	4.71	50	541684	21.11	ug/L	100
9) Vinyl Chloride	5.00	62	377579	17.67	ug/L	100
10) Bromomethane	6.19	94	291553	36.26	ug/L	94
11) Chloroethane	6.42	64	408658	22.93	ug/L	93
12) Trichlorofluoromethane	7.18	101	844619	21.01	ug/L	96
13) 1,1-Dichloroethene	9.27	61	724674	22.38	ug/L	89
14) Acetone	8.87	43	110853	32.53	ug/L	91
15) Carbon Disulfide	11.09	76	1884395	22.58	ug/L	98
16) Methylene Chloride	11.15	84	613584	22.06	ug/L	89
17) trans-1,2-Dichloroethene	12.27	61	714420	22.58	ug/L	93
18) 1,1-Dichloroethane	13.77	63	911955	21.96	ug/L	98
19) Vinyl Acetate	13.86	43	729551	23.91	ug/L	95
20) 2-Butanone	15.23	43	156161	30.60	ug/L	95
21) cis-1,2-Dichloroethene	15.73	61	702706	21.65	ug/L	93
22) Chloroform	16.22	83	942745	19.82	ug/L	100
23) 1,1,1-Trichloroethane	17.40	97	811322	21.96	ug/L	99
24) Carbon Tetrachloride	18.12	117	654505	23.96	ug/L	96
27) Benzene	18.60	78	2416860	22.07	ug/L	99
28) 1,2-Dichloroethane	18.57	62	565829	20.90	ug/L	98
29) Trichloroethene	20.29	130	713742	20.99	ug/L	95
30) 1,2-Dichloropropane	20.76	63	558231	21.79	ug/L	99
31) Bromodichloromethane	21.36	83	680349	21.86	ug/L	99
32) 2-Chloroethyl vinyl ether	18.57	63	165287	21.70	ug/L	78
33) cis-1,3-Dichloropropene	22.78	75	916229	24.08	ug/L	96
34) 4-Methyl-2-Pentanone	22.26	58	124699	20.37	ug/L	98
36) Toluene	23.62	91	2728701	21.95	ug/L	100
38) trans-1,3-Dichloropropene	24.06	75	780325	26.47	ug/L	99
39) 1,1,2-Trichloroethane	24.46	97	497252	22.72	ug/L	95
40) Tetrachloroethene	25.29	166	622849	20.97	ug/L	99
41) 2-Hexanone	24.48	43	156832	101.63	ug/L	99
42) Dibromochloromethane	25.77	129	448205	22.51	ug/L	97
43) Chlorobenzene	27.34	112	1890629	21.47	ug/L	98
44) Ethylbenzene	27.46	91	3062121	22.42	ug/L	100
45) m+p-Xylenes	27.66	106	2518434	45.71	ug/L	99
46) o-Xylene	28.75	91	2282951	22.77	ug/L	99
47) Styrene	28.83	104	1970016	24.65	ug/L	98
48) Bromoform	29.68	173	200514	26.07	ug/L	99

(#) = qualifier out of range (m) = manual integration
VC002073.D M362419.M Fri Feb 18 14:06:41 2000

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002073.D Vial: 3
Acq On : 10 Feb 2000 12:55 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 13:31 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

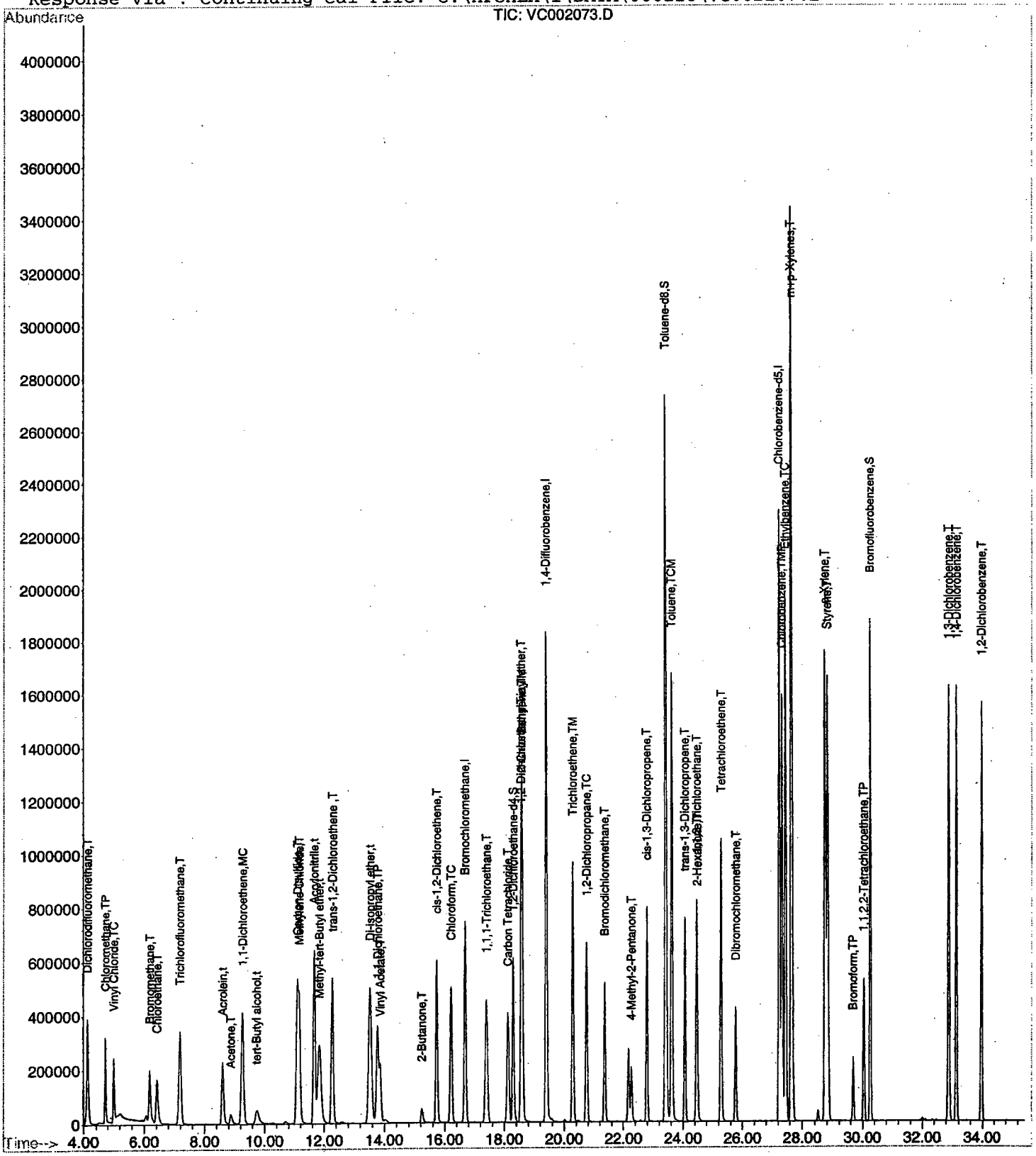
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	1,1,2,2-Tetrachloroethane	30.04	83	528564	23.88	ug/L	98
51)	1,3-Dichlorobenzene	32.88	146	1258327	22.39	ug/L	99
52)	1,4-Dichlorobenzene	33.12	146	1193403	22.97	ug/L	99
53)	1,2-Dichlorobenzene	33.96	146	1160126	22.32	ug/L	98

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000210\VC002073.D Vial: 3
Acq On : 10 Feb 2000 12:55 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 13:31 2000 Quant Results File: M362419.RES

Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002074.D Vial: 4
Acq On : 10 Feb 2000 1:36 pm Operator: Skelton
Sample : Vstd010 Inst : GC/MS Ins
Misc : Vstd010 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 14:12 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.69	128	499985	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.41	114	3485239	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	891489	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.30	65	783862	35.56	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery =	118.53%#			
35) Toluene-d8	23.41	98	4144950	36.58	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery =	121.93%#			
49) Bromofluorobenzene	30.25	95	1363811	38.79	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery =	129.30%#			
Target Compounds							Qvalue
2) Acrolein	8.59	56	221253	193.27	ug/L		96
3) Acrylonitrile	11.66	53	572281	101.77	ug/L		95
4) tert-Butyl alcohol	9.75	59	121516	314.54	ug/L	#	95
5) Methyl-tert-Butyl ether	11.86	73	555914	11.85	ug/L		94
6) Di-isopropyl ether	13.52	87	227737	10.76	ug/L		73
7) Dichlorodifluoromethane	4.13	85	300358	8.65	ug/L		98
8) Chloromethane	4.71	50	211058	8.08	ug/L		97
9) Vinyl Chloride	5.00	62	143070	6.58	ug/L		99
10) Bromomethane	6.18	94	119982	14.66	ug/L		95
11) Chloroethane	6.43	64	161291	8.89	ug/L		96
12) Trichlorofluoromethane	7.19	101	331895	8.11	ug/L		99
13) 1,1-Dichloroethene	9.26	61	312307	9.48	ug/L		93
14) Acetone	8.87	43	72198	20.82	ug/L		95
15) Carbon Disulfide	11.09	76	813858	9.58	ug/L		99
16) Methylene Chloride	11.16	84	267106	9.43	ug/L		91
17) trans-1,2-Dichloroethene	12.27	61	308250	9.57	ug/L		92
18) 1,1-Dichloroethane	13.76	63	398970	9.44	ug/L		99
19) Vinyl Acetate	13.86	43	311198	10.02	ug/L		95
20) 2-Butanone	15.24	43	94369	18.17	ug/L		87
21) cis-1,2-Dichloroethene	15.74	61	306547	9.28	ug/L		89
22) Chloroform	16.22	83	420019	8.67	ug/L		98
23) 1,1,1-Trichloroethane	17.39	97	350612	9.33	ug/L		99
24) Carbon Tetrachloride	18.13	117	274721	9.88	ug/L		99
27) Benzene	18.60	78	1054102	9.53	ug/L		99
28) 1,2-Dichloroethane	18.56	62	244666	8.95	ug/L		100
29) Trichloroethene	20.29	130	306896	8.93	ug/L		99
30) 1,2-Dichloropropane	20.75	63	242201	9.35	ug/L		97
31) Bromodichloromethane	21.37	83	285621	9.08	ug/L		97
32) 2-Chloroethyl vinyl ether	18.57	63	73031	9.49	ug/L		87
33) cis-1,3-Dichloropropene	22.79	75	395346	10.28	ug/L		96
34) 4-Methyl-2-Pentanone	22.27	58	54804	8.86	ug/L		97
36) Toluene	23.62	91	1199210	9.55	ug/L		100
38) trans-1,3-Dichloropropene	24.06	75	330612	11.14	ug/L		98
39) 1,1,2-Trichloroethane	24.46	97	215793	9.79	ug/L		95
40) Tetrachloroethene	25.28	166	272743	9.12	ug/L		98
41) 2-Hexanone	24.49	43	70111	45.12	ug/L		93
42) Dibromochloromethane	25.78	129	181457	9.05	ug/L		99
43) Chlorobenzene	27.34	112	827941	9.34	ug/L		96
44) Ethylbenzene	27.46	91	1342693	9.76	ug/L		100
45) m+p-Xylenes	27.65	106	1084644	19.55	ug/L		99
46) o-Xylene	28.74	91	995473	9.86	ug/L		99
47) Styrene	28.83	104	818556	10.17	ug/L		98
48) Bromoform	29.68	173	77670	10.03	ug/L		100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002075.D Vial: 5
Acq On : 10 Feb 2000 2:17 pm Operator: Skelton
Sample : Vstd005 Inst : GC/MS Ins
Misc : Vstd005 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 14:54 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.69	128	501168	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.41	114	3491657	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	894831	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.30	65	784239	35.49	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 118.30%#				
35) Toluene-d8	23.41	98	4151911	36.57	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 121.90%#				
49) Bromofluorobenzene	30.25	95	1366202	38.71	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 129.03%#				
Target Compounds							Qvalue
2) Acrolein	8.60	56	119066	103.76	ug/L		94
3) Acrylonitrile	11.66	53	328692	58.31	ug/L	#	99
4) tert-Butyl alcohol	9.76	59	67585m	174.53	ug/L		
5) Methyl-tert-Butyl ether	11.85	73	321575	6.84	ug/L		93
6) Di-isopropyl ether	13.52	87	128725	6.07	ug/L		75
7) Dichlorodifluoromethane	4.13	85	178515	5.13	ug/L		99
8) Chloromethane	4.72	50	125079	4.78	ug/L		98
9) Vinyl Chloride	5.01	62	87884	4.03	ug/L		97
10) Bromomethane	6.19	94	74007	9.02	ug/L		95
11) Chloroethane	6.42	64	97521	5.36	ug/L		90
12) Trichlorofluoromethane	7.20	101	195821	4.78	ug/L		95
13) 1,1-Dichloroethene	9.28	61	180596	5.47	ug/L		97
14) Acetone	8.88	43	59194	17.03	ug/L		94
15) Carbon Disulfide	11.09	76	470299	5.52	ug/L		100
16) Methylene Chloride	11.16	84	154881	5.46	ug/L		89
17) trans-1,2-Dichloroethene	12.27	61	177920	5.51	ug/L		95
18) 1,1-Dichloroethane	13.78	63	226136	5.34	ug/L		99
19) Vinyl Acetate	13.86	43	187876	6.04	ug/L		95
20) 2-Butanone	15.24	43	68058	13.07	ug/L		90
21) cis-1,2-Dichloroethene	15.74	61	175116	5.29	ug/L		93
22) Chloroform	16.22	83	248670	5.12	ug/L		98
23) 1,1,1-Trichloroethane	17.40	97	197841	5.25	ug/L		98
24) Carbon Tetrachloride	18.13	117	153816	5.52	ug/L		98
27) Benzene	18.60	78	600262	5.42	ug/L		98
28) 1,2-Dichloroethane	18.56	62	141617	5.17	ug/L		96
29) Trichloroethene	20.29	130	177297	5.15	ug/L		96
30) 1,2-Dichloropropane	20.76	63	139061	5.36	ug/L		97
31) Bromodichloromethane	21.36	83	160415	5.09	ug/L		99
32) 2-Chloroethyl vinyl ether	18.58	63	41515m	5.38	ug/L		
33) cis-1,3-Dichloropropene	22.78	75	223908	5.81	ug/L		93
34) 4-Methyl-2-Pentanone	22.27	58	30684m	4.95	ug/L		
36) Toluene	23.62	91	687184	5.46	ug/L		100
38) trans-1,3-Dichloropropene	24.06	75	185324	6.22	ug/L		98
39) 1,1,2-Trichloroethane	24.46	97	124282	5.62	ug/L		97
40) Tetrachloroethene	25.28	166	156405	5.21	ug/L		94
41) 2-Hexanone	24.49	43	40849m	26.19	ug/L		
42) Dibromochloromethane	25.77	129	98900	4.91	ug/L		99
43) Chlorobenzene	27.34	112	473506	5.32	ug/L		98
44) Ethylbenzene	27.46	91	769676	5.58	ug/L		99
45) m+p-Xylenes	27.65	106	618562	11.11	ug/L		97
46) o-Xylene	28.75	91	566521	5.59	ug/L		97
47) Styrene	28.83	104	463302	5.74	ug/L		97
48) Bromoform	29.67	173	42890m	5.52	ug/L		

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000210\VC002074.D Vial: 4
Acq On : 10 Feb 2000 1:36 pm Operator: Skelton
Sample : Vstd010 Inst : GC/MS Ins
Misc : Vstd010 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 10 14:12 2000 Quant Results File: M362419.RES

Quant Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D
DataAcq Meth : M362419

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50) 1,1,2,2-Tetrachloroethane	30.04	83	230259	10.33	ug/L	97
51) 1,3-Dichlorobenzene	32.88	146	529237	9.35	ug/L	100
52) 1,4-Dichlorobenzene	33.12	146	501913	9.59	ug/L	97
53) 1,2-Dichlorobenzene	33.96	146	486015	9.29	ug/L	97

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

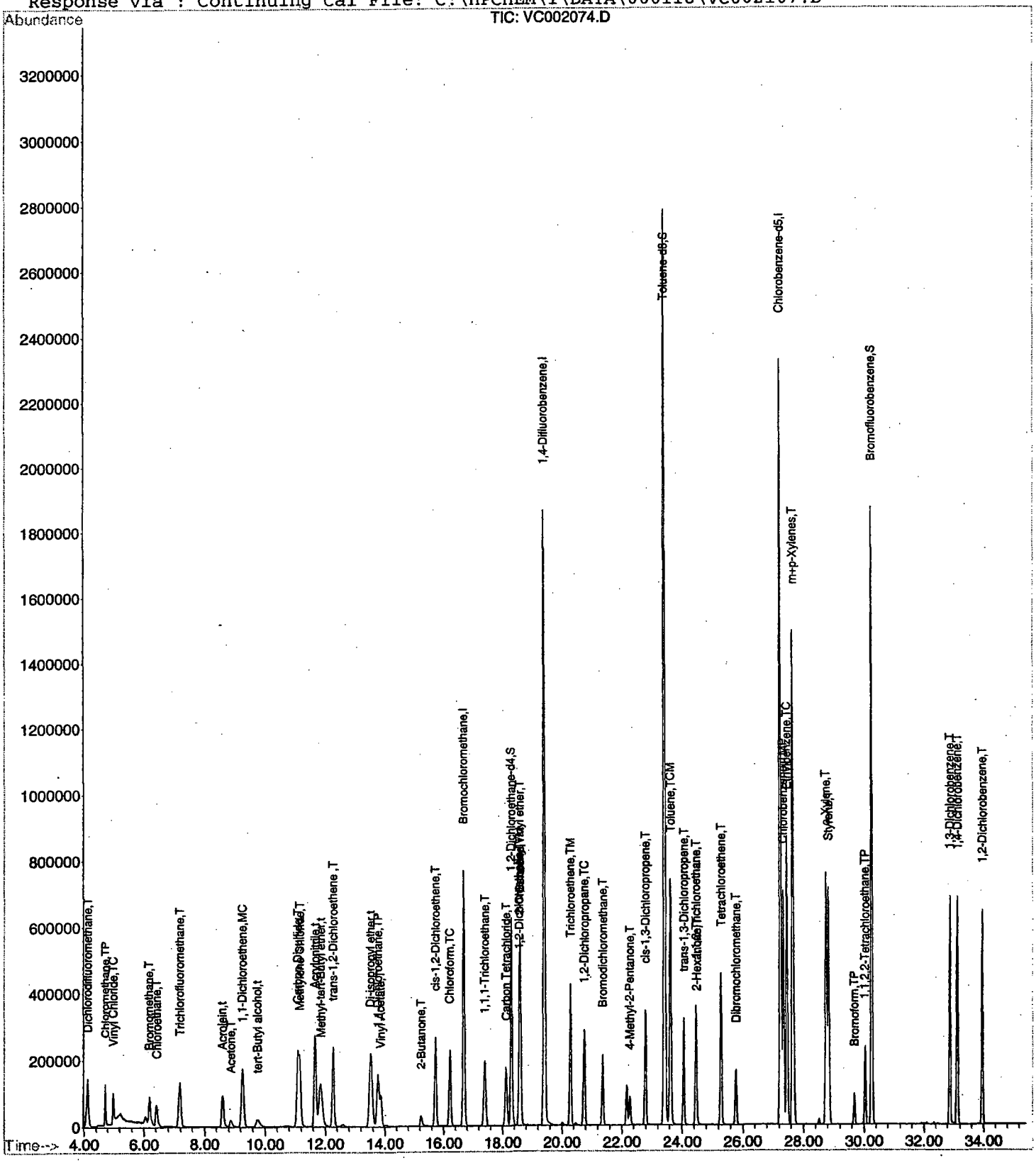
Quantitation Report

Data File : C:\HPCHEM\1\DATA\000210\VC002074.D
Acq On : 10 Feb 2000 1:36 pm
Sample : Vstd010
Misc : Vstd010
MS Integration Params: RTEINT.P
Quant Time: Feb 10 14:12 2000

Vial: 4
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M362419.RES

Method : C:\HPCHEM\1\METHODS\M362419.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Jan 18 15:19:16 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000118\VC002107.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002128.D Vial: 2
Acq On : 16 Feb 2000 12:40 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 16 13:16 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Feb 10 14:58:41 2000
Response via : Initial Calibration
DataAcq Meth : M362420

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.69	128	533855	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.41	114	3741187	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	933686	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.30	65	819009	29.33	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 97.77%				
35) Toluene-d8	23.41	98	4082390	27.51	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 91.70%				
49) Bromofluorobenzene	30.25	95	1323325	27.39	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 91.30%				
Target Compounds							Qvalue
2) Acrolein	8.59	56	373172	136.86	ug/L		96
3) Acrylonitrile	11.65	53	1502581	218.20	ug/L		99
4) tert-Butyl alcohol	9.69	59	289345	206.12	ug/L	#	95
5) Methyl-tert-Butyl ether	11.83	73	1383919	20.73	ug/L		99
6) Di-isopropyl ether	13.52	87	549252	19.99	ug/L		90
7) Dichlorodifluoromethane	4.13	85	858796	21.85	ug/L		97
8) Chloromethane	4.72	50	581995	21.77	ug/L		99
9) Vinyl Chloride	5.00	62	448333	24.42	ug/L		99
10) Bromomethane	6.19	94	320313	22.71	ug/L		98
11) Chloroethane	6.43	64	434376	21.41	ug/L		96
12) Trichlorofluoromethane	7.19	101	877377	20.98	ug/L		97
13) 1,1-Dichloroethene	9.27	61	751623	19.80	ug/L		96
14) Acetone	8.84	43	379868	51.83	ug/L		92
15) Carbon Disulfide	11.09	76	1970240	20.04	ug/L		99
16) Methylene Chloride	11.15	84	634541	19.62	ug/L		98
17) trans-1,2-Dichloroethene	12.28	61	727245	19.47	ug/L		100
18) 1,1-Dichloroethane	13.77	63	949856	19.85	ug/L		98
19) Vinyl Acetate	13.85	43	797388	20.53	ug/L		99
20) 2-Butanone	15.22	43	152910	15.75	ug/L		93
21) cis-1,2-Dichloroethene	15.73	61	730709	19.84	ug/L		97
22) Chloroform	16.22	83	959905	19.16	ug/L		99
23) 1,1,1-Trichloroethane	17.40	97	814162	19.12	ug/L		98
24) Carbon Tetrachloride	18.13	117	621423	18.06	ug/L		100
27) Benzene	18.60	78	2471748	19.57	ug/L		100
28) 1,2-Dichloroethane	18.56	62	597907	20.24	ug/L		98
29) Trichloroethene	20.29	130	674196	17.91	ug/L		96
30) 1,2-Dichloropropane	20.75	63	580023	19.72	ug/L		99
31) Bromodichloromethane	21.37	83	669446	18.71	ug/L		100
32) 2-Chloroethyl vinyl ether	18.58	63	176463	20.16	ug/L		78
33) cis-1,3-Dichloropropene	22.78	75	925376	19.16	ug/L		98
34) 4-Methyl-2-Pentanone	22.27	58	137944	21.44	ug/L		94
36) Toluene	23.62	91	2713044	19.01	ug/L		99
38) trans-1,3-Dichloropropene	24.06	75	781662	19.62	ug/L		98
39) 1,1,2-Trichloroethane	24.46	97	508643	19.85	ug/L		96
40) Tetrachloroethene	25.29	166	558016	17.13	ug/L		98
41) 2-Hexanone	24.48	43	179866	21.18	ug/L		98
42) Dibromochloromethane	25.77	129	411821	17.77	ug/L		99
43) Chlorobenzene	27.34	112	1828617	18.81	ug/L		99
44) Ethylbenzene	27.46	91	2978679	19.18	ug/L		97
45) m+p-Xylenes	27.66	106	2493907	38.56	ug/L		97
46) o-Xylene	28.75	91	2327034	19.91	ug/L		98
47) Styrene	28.83	104	1917789	19.16	ug/L		99
48) Bromoform	29.68	173	169880	16.02	ug/L		99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002128.D Vial: 2
Acq On : 16 Feb 2000 12:40 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 16 13:16 2000 Quant Results File: M362420.RES

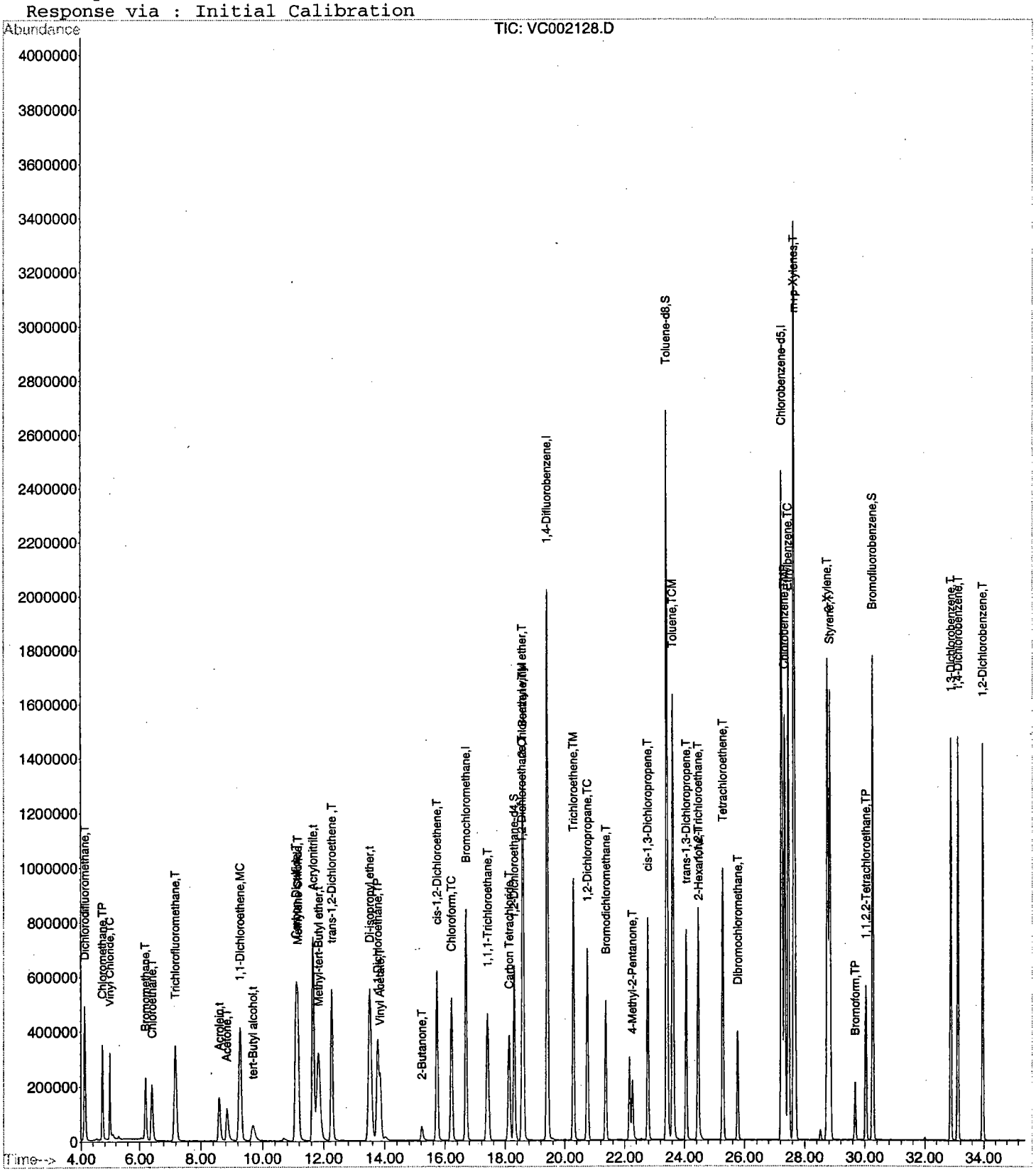
Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Feb 10 14:58:41 2000
Response via : Initial Calibration
DataAcq Meth : M362420

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50) 1,1,2,2-Tetrachloroethane	30.04	83	557473	20.41	ug/L	99
51) 1,3-Dichlorobenzene	32.89	146	1082857	16.59	ug/L	97
52) 1,4-Dichlorobenzene	33.12	146	1027714	16.43	ug/L	98
53) 1,2-Dichlorobenzene	33.96	146	1026429	17.08	ug/L	96

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

Data File : C:\HPCHEM\1\DATA\000216\VC002128.D Vial: 2
Acq On : 16 Feb 2000 12:40 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 16 13:16 2000 Quant Results File: M362420.RES

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002142.D Vial: 13
Acq On : 16 Feb 2000 11:18 pm Operator: Skelton
Sample : 5169.03MS Inst : GC/MS Ins
Misc : 5169.03MS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:35 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	494909	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.41	114	3530181	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	884895	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	781795	30.89	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 102.97%			
35) Toluene-d8	23.41	98	3922931	30.55	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.83%			
49) Bromofluorobenzene	30.25	95	1264116	30.24	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.80%			
Target Compounds						Qvalue
2) Acrolein	8.59	56	311000	179.80	ug/L	92
3) Acrylonitrile	11.65	53	1508849	216.64	ug/L	99
4) tert-Butyl alcohol	9.68	59	264977	197.57	ug/L	98
5) Methyl-tert-Butyl ether	11.83	73	1358538	21.18	ug/L	100
6) Di-isopropyl ether	13.51	87	537283	21.10	ug/L	98
7) Dichlorodifluoromethane	4.12	85	549807	13.81	ug/L	96
8) Chloromethane	4.72	50	575977	21.35	ug/L	100
9) Vinyl Chloride	5.00	62	391423	18.84	ug/L	99
10) Bromomethane	6.19	94	296769	19.99	ug/L	97
11) Chloroethane	6.42	64	399024	19.82	ug/L	98
12) Trichlorofluoromethane	7.19	101	616580	15.16	ug/L	99
13) 1,1-Dichloroethene	9.27	61	581645	16.69	ug/L	98
14) Acetone	8.85	43	355505	20.19	ug/L	99
15) Carbon Disulfide	11.09	76	1559558	17.08	ug/L	99
16) Methylene Chloride	11.16	84	615073	20.91	ug/L	96
17) trans-1,2-Dichloroethene	12.28	61	646318	19.17	ug/L	98
18) 1,1-Dichloroethane	13.76	63	885537	20.11	ug/L	99
19) Vinyl Acetate	13.85	43	777581	21.04	ug/L	99
20) 2-Butanone	15.22	43	149230	21.05	ug/L	95
21) cis-1,2-Dichloroethene	15.73	61	698522	20.62	ug/L	97
22) Chloroform	16.22	83	912682	20.51	ug/L	99
23) 1,1,1-Trichloroethane	17.40	97	661175	17.52	ug/L	99
24) Carbon Tetrachloride	18.13	117	444653	15.44	ug/L	96
27) Benzene	18.60	78	2299921	19.72	ug/L	98
28) 1,2-Dichloroethane	18.56	62	596638	21.15	ug/L	97
29) Trichloroethene	20.29	130	571424	17.96	ug/L	97
30) 1,2-Dichloropropane	20.75	63	569695	20.82	ug/L	99
31) Bromodichloromethane	21.36	83	633661	20.06	ug/L	100
32) 2-Chloroethyl vinyl ether	18.57	63	171446	20.59	ug/L	83
33) cis-1,3-Dichloropropene	22.78	75	855762	19.60	ug/L	99
34) 4-Methyl-2-Pentanone	22.26	58	131232	20.16	ug/L	93
36) Toluene	23.62	91	2469729	19.29	ug/L	99
38) trans-1,3-Dichloropropene	24.06	75	718691	19.40	ug/L	99
39) 1,1,2-Trichloroethane	24.46	97	493832	20.49	ug/L	96
40) Tetrachloroethene	25.28	166	419067	15.85	ug/L	97
41) 2-Hexanone	24.48	43	167618	19.67	ug/L	100
42) Dibromochloromethane	25.77	129	362943	18.60	ug/L	97
43) Chlorobenzene	27.34	112	1691350	19.52	ug/L	98
44) Ethylbenzene	27.46	91	2649748	18.77	ug/L	99
45) m+p-Xylenes	27.66	106	2218419	37.54	ug/L	99
46) o-Xylene	28.75	91	2174490	19.72	ug/L	99
47) Styrene	28.83	104	1796957	19.77	ug/L	99
48) Bromoform	29.68	173	136458	16.95	ug/L	96

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

Data File : C:\HPCHEM\1\DATA\000216\VC002142.D Vial: 13
Acq On : 16 Feb 2000 11:18 pm Operator: Skelton
Sample : 5169.03MS Inst : GC/MS Ins
Misc : 5169.03MS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:35 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

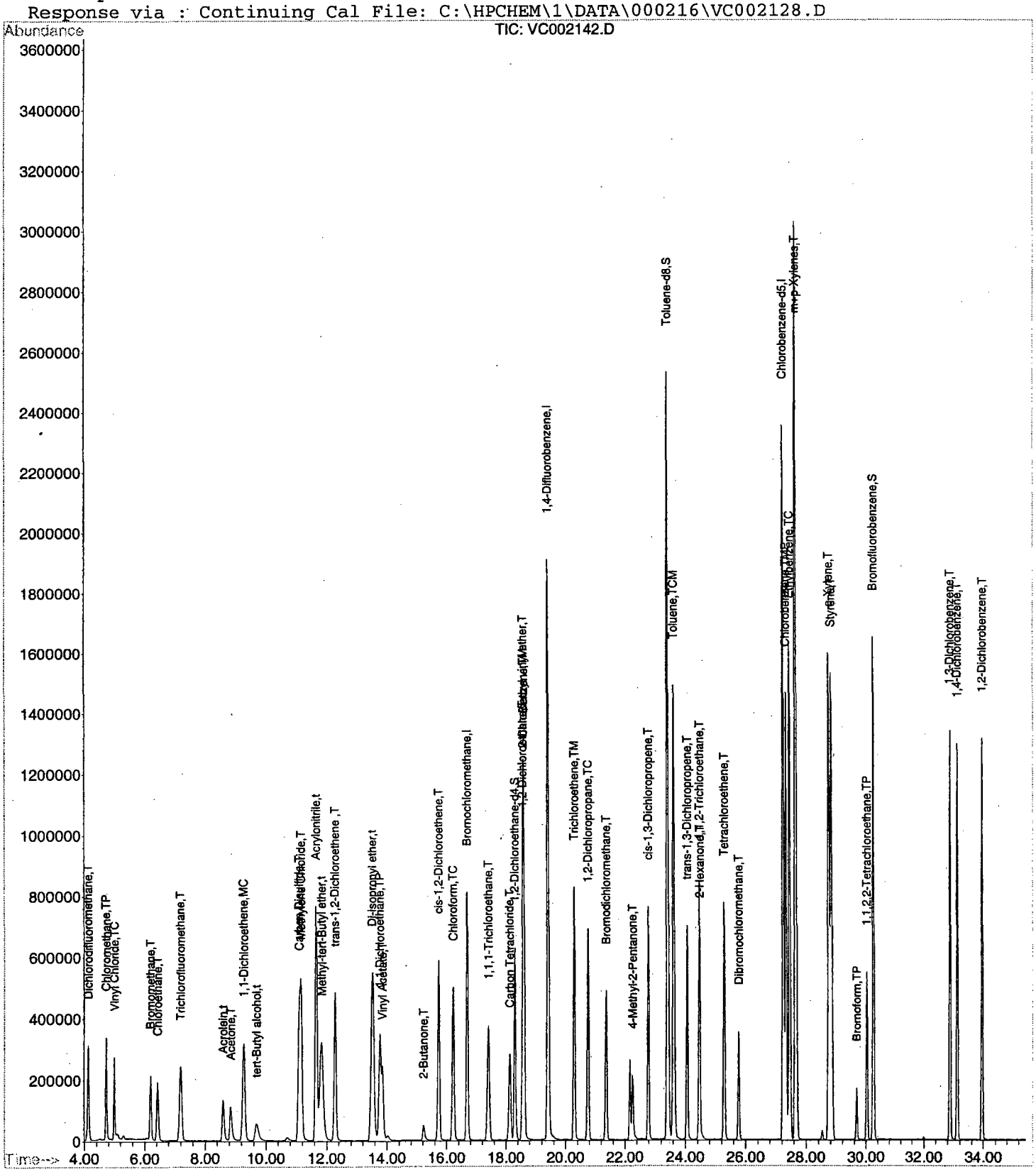
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	1,1,2,2-Tetrachloroethane	30.04	83	532720	20.17	ug/L	100
51)	1,3-Dichlorobenzene	32.88	146	956995	18.65	ug/L	98
52)	1,4-Dichlorobenzene	33.12	146	901305	18.51	ug/L	97
53)	1,2-Dichlorobenzene	33.96	146	916143	18.84	ug/L	98

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000216\VC002142.D Vial: 13
Acq On : 16 Feb 2000 11:18 pm Operator: Skelton
Sample : 5169.03MS Inst : GC/MS Ins
Misc : 5169.03MS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:35 2000 Quant Results File: M362420.RES

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\000216\VC002143.D Vial: 14
Acq On : 16 Feb 2000 11:59 pm Operator: Skelton
Sample : 5169.03MSD Inst : GC/MS Ins
Misc : 5169.03MSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:36 2000 Quant Results File: M362420.RES

Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.69	128	485635	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.41	114	3515637	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	871319	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.30	65	779196	31.38	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 104.60%				
35) Toluene-d8	23.41	98	3880459	30.35	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.17%				
49) Bromofluorobenzene	30.25	95	1240610	30.14	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.47%				
Target Compounds							Qvalue
2) Acrolein	8.60	56	391682	230.76	ug/L		99
3) Acrylonitrile	11.65	53	1547835	226.48	ug/L		97
4) tert-Butyl alcohol	9.70	59	275866	209.62	ug/L	#	97
5) Methyl-tert-Butyl ether	11.81	73	1364246	21.67	ug/L		98
6) Di-isopropyl ether	13.51	87	534681	21.40	ug/L		99
7) Dichlorodifluoromethane	4.13	85	460598	11.79	ug/L		100
8) Chloromethane	4.71	50	558443	21.10	ug/L		99
9) Vinyl Chloride	5.00	62	358383	17.57	ug/L		99
10) Bromomethane	6.19	94	328339	22.54	ug/L		94
11) Chloroethane	6.42	64	383734	19.42	ug/L		98
12) Trichlorofluoromethane	7.20	101	533939	13.38	ug/L		95
13) 1,1-Dichloroethene	9.27	61	540993	15.82	ug/L		99
14) Acetone	8.85	43	363686	21.05	ug/L		93
15) Carbon Disulfide	11.09	76	1456925	16.26	ug/L		99
16) Methylene Chloride	11.17	84	606568	21.02	ug/L		99
17) trans-1,2-Dichloroethene	12.27	61	621925	18.80	ug/L		98
18) 1,1-Dichloroethane	13.77	63	866120	20.05	ug/L		98
19) Vinyl Acetate	13.85	43	790306	21.79	ug/L		99
20) 2-Butanone	15.22	43	151898	21.84	ug/L		91
21) cis-1,2-Dichloroethene	15.74	61	685412	20.62	ug/L		97
22) Chloroform	16.22	83	895898	20.52	ug/L		98
23) 1,1,1-Trichloroethane	17.40	97	625541	16.89	ug/L		99
24) Carbon Tetrachloride	18.13	117	414185	14.65	ug/L		99
27) Benzene	18.60	78	2230280	19.20	ug/L		100
28) 1,2-Dichloroethane	18.56	62	601799	21.42	ug/L		98
29) Trichloroethene	20.29	130	550347	17.37	ug/L		100
30) 1,2-Dichloropropane	20.75	63	559389	20.53	ug/L		98
31) Bromodichloromethane	21.36	83	629715	20.02	ug/L		99
32) 2-Chloroethyl vinyl ether	18.57	63	169857	20.49	ug/L		82
33) cis-1,3-Dichloropropene	22.78	75	861469	19.81	ug/L		97
34) 4-Methyl-2-Pentanone	22.26	58	135426	20.89	ug/L		93
36) Toluene	23.62	91	2408995	18.90	ug/L		99
38) trans-1,3-Dichloropropene	24.06	75	720018	19.74	ug/L		99
39) 1,1,2-Trichloroethane	24.45	97	496537	20.92	ug/L		95
40) Tetrachloroethene	25.28	166	397063	15.25	ug/L		99
41) 2-Hexanone	24.48	43	170125	20.27	ug/L		98
42) Dibromochloromethane	25.77	129	373190	19.42	ug/L		99
43) Chlorobenzene	27.34	112	1655503	19.40	ug/L		99
44) Ethylbenzene	27.46	91	2584989	18.60	ug/L		100
45) m+p-Xylenes	27.65	106	2163602	37.19	ug/L		99
46) o-Xylene	28.75	91	2139094	19.70	ug/L		100
47) Styrene	28.83	104	1749882	19.56	ug/L		98
48) Bromoform	29.67	173	140700	17.75	ug/L		97

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

Data File : C:\HPCHEM\1\DATA\000216\VC002143.D Vial: 14
Acq On : 16 Feb 2000 11:59 pm Operator: Skelton
Sample : 5169.03MSD Inst : GC/MS Ins
Misc : 5169.03MSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:36 2000 Quant Results File: M362420.RES

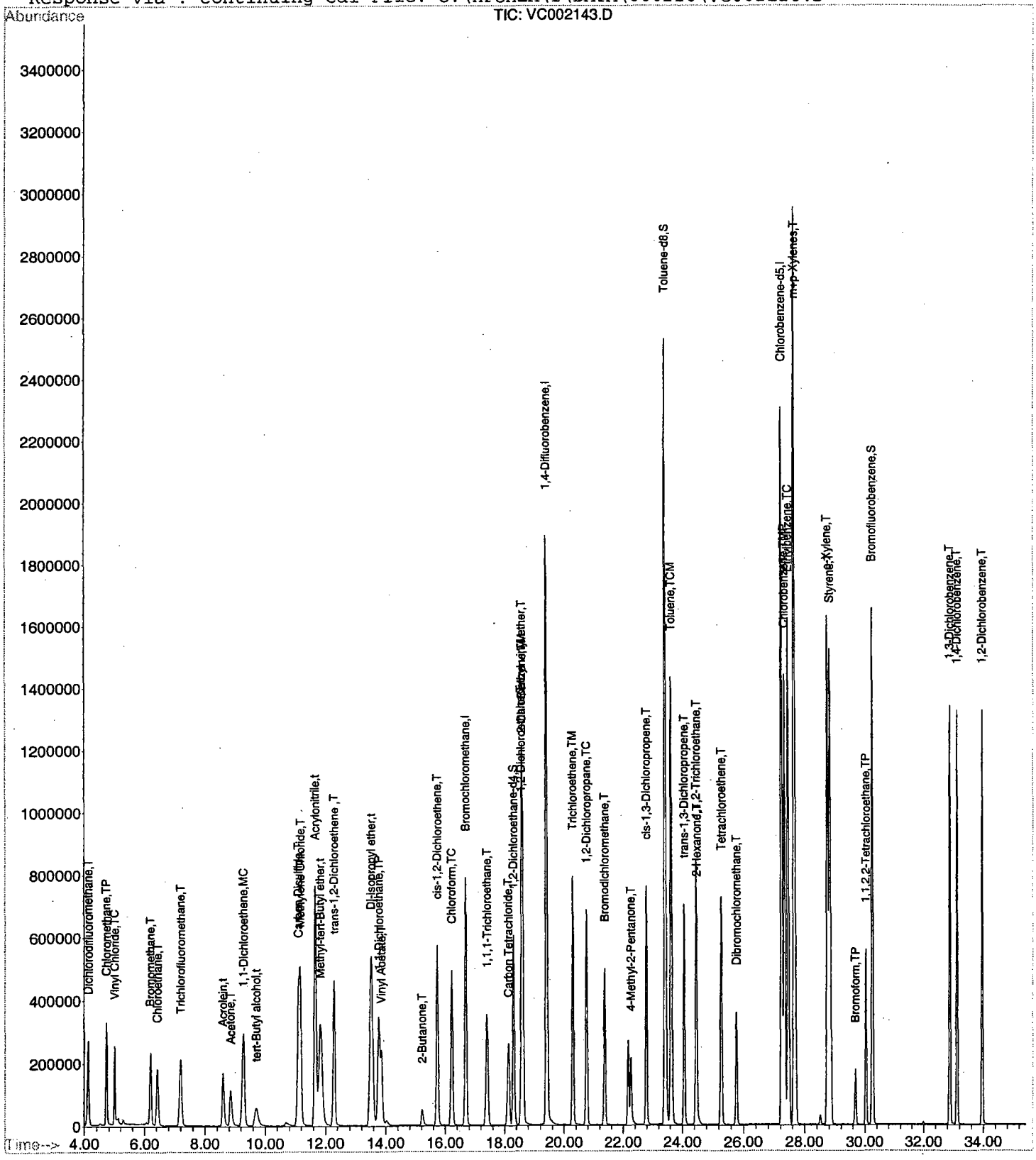
Quant Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D
DataAcq Meth : M362420

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	1,1,2,2-Tetrachloroethane	30.03	83	542469	20.85	ug/L	99
51)	1,3-Dichlorobenzene	32.88	146	948792	18.78	ug/L	99
52)	1,4-Dichlorobenzene	33.12	146	894044	18.64	ug/L	97
53)	1,2-Dichlorobenzene	33.96	146	910994	19.02	ug/L	99

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

Data File : C:\HPCHEM\1\DATA\000216\VC002143.D Vial: 14
Acq On : 16 Feb 2000 11:59 pm Operator: Skelton
Sample : 5169.03MSD Inst : GC/MS Ins
Misc : 5169.03MSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 17 8:36 2000 Quant Results File: M362420.RES

Method : C:\HPCHEM\1\METHODS\M362420.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Feb 16 13:38:41 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000216\VC002128.D



BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03627.D**	Sample Name	**Sblk343**
Operator	**Bhaskar**	Misc Info	**Sblk343**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03627.D**	Sample Name	**Sblk343**
Operator	**Bhaskar**	Misc Info	**Sblk343**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID: **Sblk343**

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No: _____

Matrix: (soil/water) WATER Lab Sample ID: Sblk343

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03627.D

Level: (low/med) LOW Date Received: 2/15/00

% Moisture: _____ decanted: (Y/N) N Date Extracted: 2/16/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/18/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000123-42-2	2-Pentanone, 4-hydroxy-4-methyl	7.07	5	JN

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN04200.D**	Sample Name	**5171.01**
Operator	**Bhaskar**	Misc Info	**426-1**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene	10.56	68968	1.42 ug/L	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene	12.15	200834	4.83 ug/L	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.79	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene	15.98	58134	1.87 ug/L	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene	18.10	97742	2.18 ug/L	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN04200.D**	Sample Name	**5171.01**
Operator	**Bhaskar**	Misc Info	**426-1**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID: **426-1**

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 5171.01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN04200.D

Level: (low/med) LOW Date Received: 2/15/00

% Moisture: decanted: (Y/N) N Date Extracted: 2/16/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/18/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 002039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	10.02	4	JN
2. 002809-64-5	Naphthalene, 1,2,3,4-tetrahydro-5	11.72	5	JN
3. 000091-57-6	Naphthalene, 2-methyl-	12.39	4	JN
4. 013065-07-1	Naphthalene, 1,2,3,4-tetrahydro-2	12.45	4	JN
5. 000581-42-0	Naphthalene, 2,6-dimethyl-	13.66	9	JN
6. 000581-40-8	Naphthalene, 2,3-dimethyl-	13.89	12	JN
7. 000582-16-1	Naphthalene, 2,7-dimethyl-	13.93	5	JN
8. 000581-40-8	Naphthalene, 2,3-dimethyl-	14.15	5	JN
9. 006975-98-0	Decane, 2-methyl-	17.11	7	JN

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No:

Lab File ID: BN04190.D DFTPP Injection Date: 2/18/00

Instrument ID: SVoa#1 DFTPP Injection Time: 8:31

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	52.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	65.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	25.0 - 75.0% of mass 198	45.8
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	6.4
275	10.0 - 30.0% of mass 198	15.3
365	Greater than 0.75% of mass 198	1.5
441	Present, but less than mass 443	6.6
442	40.0 - 110.0% of mass 198	41.8
443	15.0 - 24.0% of mass 442	8.2 (19.7)2

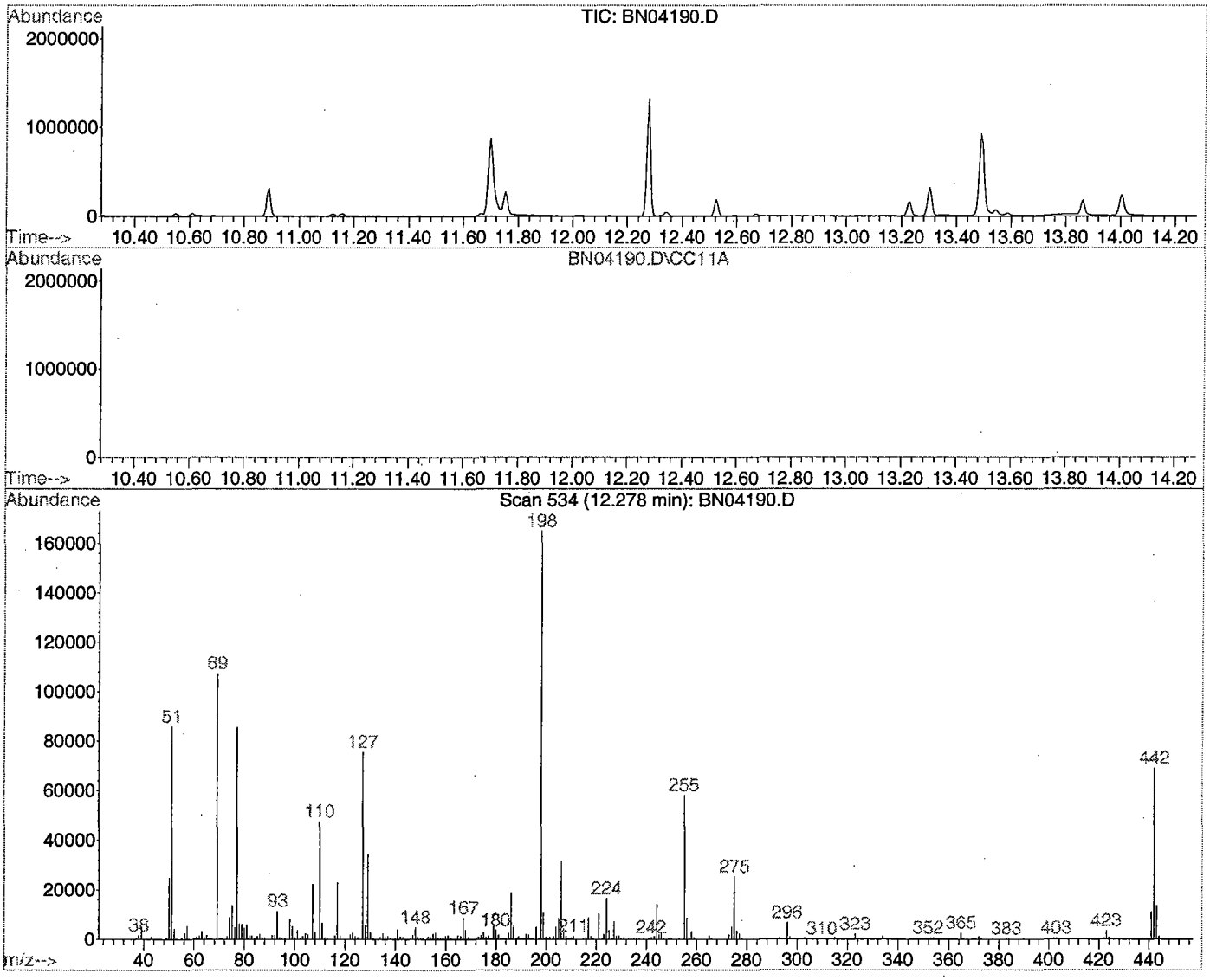
1-Value is % mass 69 2-Value is % mass 442

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

	Field ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	120 PPM CAL	BN04191.D	2/18/00	9:01
02	SSTD080	80 PPM CAL	BN04192.D	2/18/00	9:46
03	SSTD050	50 PPM CAL	BN04193.D	2/18/00	10:31
04	SSTD020	20 PPM CAL	BN04194.D	2/18/00	11:17
05	SSTD	10 PPM CAL	BN04195.D	2/18/00	12:05
06	426-1	5171.01	BN04200.D	2/18/00	16:47

DFTPP

Data File : C:\HPCHEM\1\DATA\000218\BN04190.D Vial: 99
Acq On : 18 Feb 2000 8:31 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M62539.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 534

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	52.0	85792	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	65.1	107360	PASS
70	69	0.00	2	0.4	393	PASS
127	198	40	60	45.8	75576	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	164992	PASS
199	198	5	9	6.4	10630	PASS
275	198	10	30	15.3	25232	PASS
365	198	1	100	1.5	2506	PASS
441	443	1	99	80.4	10922	PASS
442	198	40	100	41.8	68976	PASS
443	442	17	23	19.7	13577	PASS

000063

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5171 Location Bl.426 SDG No.:

Lab File ID: BNA03608.D DFTPP Injection Date: 2/8/00

Instrument ID: BNA#2 DFTPP Injection Time: 9:39

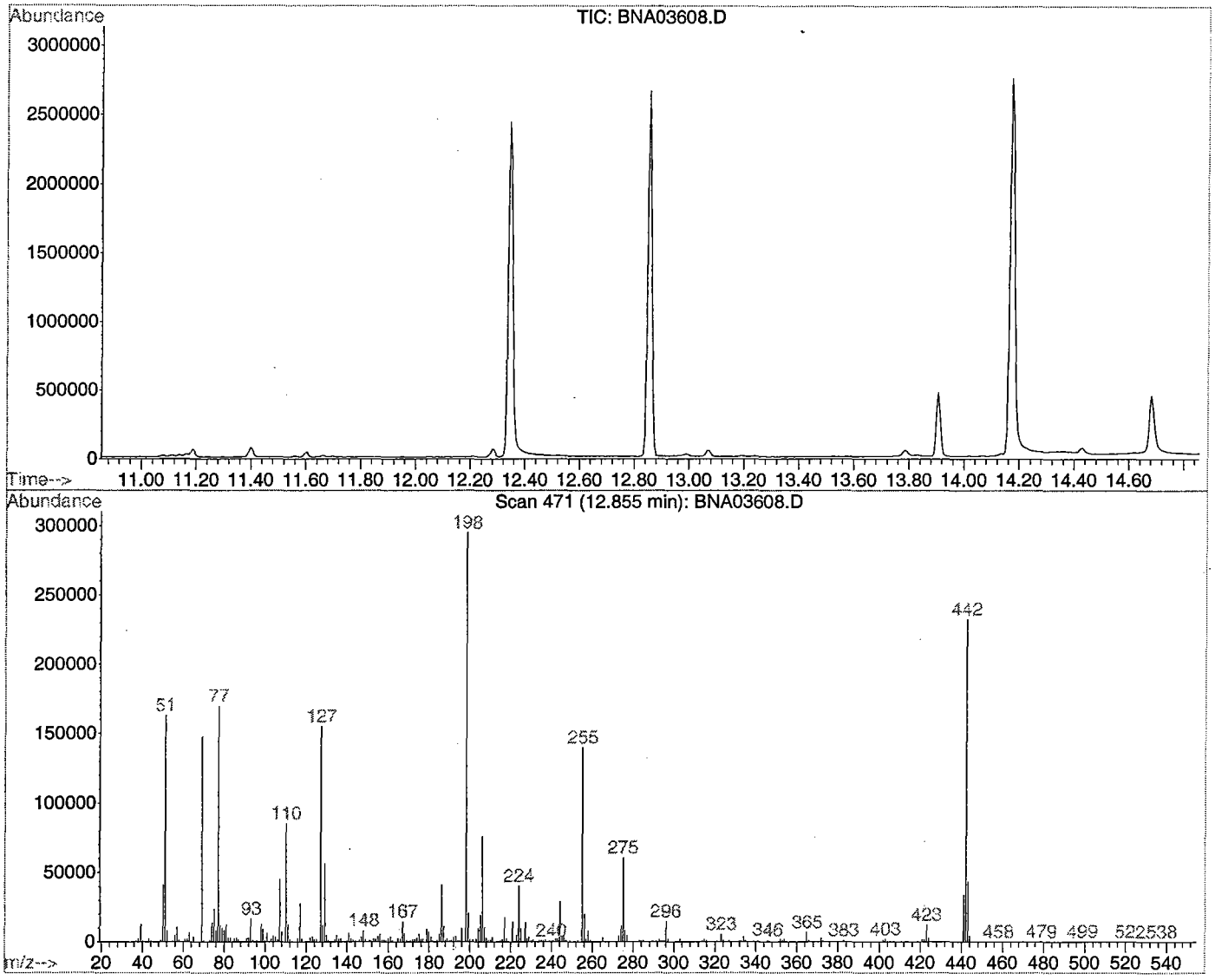
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	55.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	50.0
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	25.0 - 75.0% of mass 198	52.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	20.5
365	Greater than 0.75% of mass 198	2.3
441	Present, but less than mass 443	11.5
442	40.0 - 110.0% of mass 198	78.7
443	15.0 - 24.0% of mass 442	14.7 (18.7)2

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

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	120 PPM CAL	BNA03609.D	2/8/00	10:07
02	SSTD080	80 PPM CAL	BNA03610.D	2/8/00	10:55
03	SSTD050	50 PPM CAL	BNA03611.D	2/8/00	11:42
04	SSTD020	20 PPM CAL	BNA03612.D	2/8/00	12:28
05	SSTD010	10 PPM CAL	BNA03613.D	2/8/00	13:16

Data File : C:\HPCHEM\1\DATA\000208\BNA03608.D Vial: 99
Acq On : 8 Feb 2000 9:39 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 471

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	55.2	162816	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	50.0	147456	PASS
70	69	0.00	2	0.5	746	PASS
127	198	40	60	52.5	155008	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	295168	PASS
199	198	5	9	7.0	20808	PASS
275	198	10	30	20.5	60536	PASS
365	198	1	100	2.3	6786	PASS
441	443	1	99	78.0	33888	PASS
442	198	40	100	78.7	232384	PASS
443	442	17	23	18.7	43456	PASS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5171 Location Bl.426 SDG No.:

Lab File ID: BNA03625.D DFTPP Injection Date: 2/18/00

Instrument ID: BNA#2 DFTPP Injection Time: 8:09

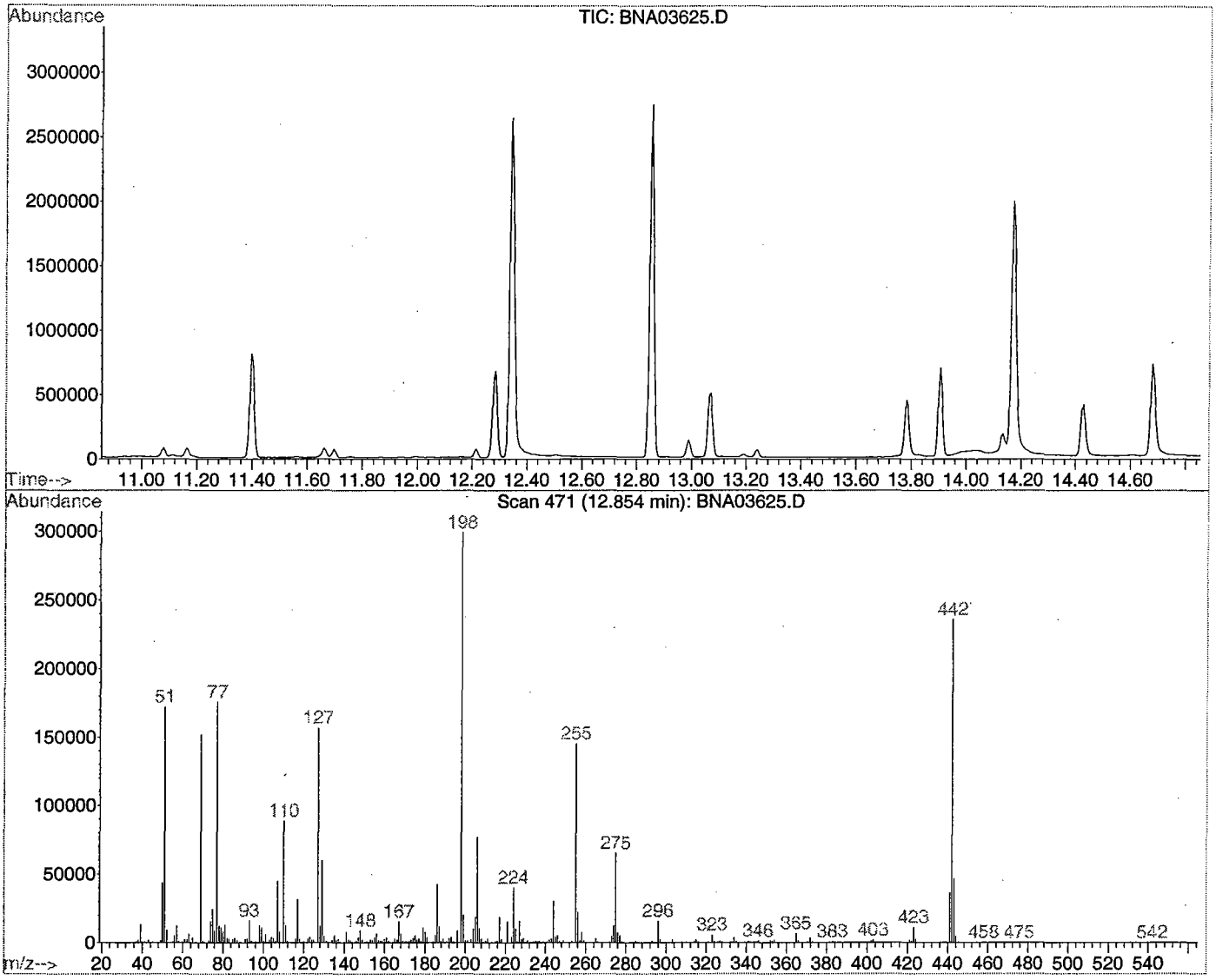
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	57.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	50.8
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	52.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.7
365	Greater than 0.75% of mass 198	2.2
441	Present, but less than mass 443	12.1
442	40.0 - 110.0% of mass 198	78.7
443	15.0 - 24.0% of mass 442	15.5 (19.6)2

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

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	DAILY CAL	BNA03626.D	2/18/00	8:36
02	SBLK343	SBLK343	BNA03627.D	2/18/00	9:29
03	5175.04MS	5175.04MS	BNA03644.D	2/18/00	22:57
04	5175.04DUP	5175.04DUP	BNA03645.D	2/18/00	23:42

Data File : C:\HPCHEM\1\DATA\000218\BNA03625.D Vial: 99
Acq On : 18 Feb 2000 8:09 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 471

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	57.5	171968	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	50.8	152000	PASS
70	69	0.00	2	0.6	983	PASS
127	198	40	60	52.3	156608	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	299200	PASS
199	198	5	9	6.7	20192	PASS
275	198	10	30	21.7	64936	PASS
365	198	1	100	2.2	6636	PASS
441	443	1	99	78.4	36256	PASS
442	198	40	100	78.7	235584	PASS
443	442	17	23	19.6	46240	PASS

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Field ID: **Sblk343**

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No:

Lab File ID: BNA03627.D Lab Sample ID: Sblk343

Instrument ID: GC BNA 2 Date Extracted: 2/16/00

Matrix: (soil/water) WATER Date Analyzed: 2/18/00

Level: (low/med) LOW Time Analyzed: 9:29

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

	Field ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	426-1	5171.01	BN04200.D	2/18/00

COMMENTS:

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M62539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Fri Feb 18 15:27:16 2000
Response via : Initial Calibration

Calibration Files
10 =BN04195.D 20 =BN04194.D 50 =BN04193.D
80 =BN04192.D 120 =BN04191.D

		Compound	10	20	50	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.718	1.705	1.767	1.777	1.840	1.762	3.05
3)	T	N-nitroso-dimethylami	1.105	1.083	1.119	1.117	1.153	1.115	2.28
4)	S	2-Fluorophenol	1.317	1.317	1.373	1.365	1.423	1.359	3.25
5)	T	Aniline	1.867	1.764	1.990	2.103	2.230	1.991	9.28
6)	S	Phenol-d5	1.755	1.778	1.901	1.889	1.865	1.838	3.63
7)	TCM	Phenol	1.899	1.933	2.044	2.014	1.921	1.962	3.20
8)	T	bis(2-Chloroethyl)eth	1.848	1.868	1.994	1.900	1.818	1.886	3.58
9)	TM	2-Chlorophenol	1.325	1.317	1.407	1.381	1.412	1.369	3.27
10)	T	1,3-Dichlorobenzene	1.622	1.608	1.698	1.651	1.689	1.654	2.40
11)	TCM	1,4-Dichlorobenzene	1.812	1.800	1.823	1.836	1.808	1.816	0.76
12)	T	Benzyl alcohol	0.842	0.852	0.930	0.931	0.970	0.905	6.10
13)	T	1,2-Dichlorobenzene	1.633	1.613	1.671	1.653	1.642	1.642	1.32
14)	T	2-Methylphenol	1.246	1.239	1.308	1.309	1.326	1.286	3.12
15)	T	bis(2-chloroisopropyl	2.340	2.312	2.403	2.377	2.383	2.363	1.54
16)	T	4-Methylphenol	1.164	1.174	1.263	1.273	1.289	1.233	4.78
17)	TM	n-Nitroso-di-n-propyl	0.244	0.243	0.262	0.254	0.253	0.251	3.06
18)	T	Hexachloroethane	0.777	0.779	0.823	0.814	0.809	0.800	2.65
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.449	0.450	0.477	0.468	0.493	0.467	4.03
21)	T	Nitrobenzene	0.549	0.549	0.577	0.567	0.580	0.564	2.58
22)	T	Isophorone	1.049	1.077	1.113	1.100	1.168	1.101	4.03
23)	TC	2-Nitrophenol	0.230	0.234	0.252	0.249	0.261	0.245	5.35
24)	T	2,4-Dimethylphenol	0.368	0.373	0.408	0.395	0.404	0.390	4.64
25)	T	bis(2-Chloroethoxy)me	0.564	0.572	0.605	0.585	0.588	0.583	2.70
26)	TC	2,4-Dichlorophenol	0.297	0.308	0.327	0.328	0.329	0.318	4.52
27)	T	Benzoic Acid	0.254	0.272	0.321	0.327	0.349	0.305	13.10
28)	TM	1,2,4-Trichlorobenzen	0.381	0.379	0.404	0.390	0.399	0.391	2.73
29)	T	Naphthalene	1.056	1.049	1.068	0.986	0.929	1.018	5.78
30)	T	4-Chloroaniline	0.326	0.297	0.376	0.418	0.432	0.370	15.67
31)	TC	Hexachlorobutadiene	0.191	0.190	0.206	0.196	0.182	0.193	4.60
32)	TCM	4-Chloro-3-methylphen	0.309	0.315	0.340	0.336	0.336	0.327	4.37
33)	T	2-Methylnaphthalene	0.913	0.684	0.963	0.910	0.892	0.873	12.44
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	T	Hexachlorocyclopentad	0.173	0.243	0.324	0.334	0.337	0.282	25.68
36)	TC	2,4,6-Trichlorophenol	0.341	0.368	0.406	0.398	0.400	0.382	7.20
37)	T	2,4,5-Trichlorophenol	0.365	0.388	0.431	0.425	0.436	0.409	7.58
38)	S	2-Fluorobiphenyl	1.176	1.224	1.301	1.199	1.160	1.212	4.58
39)	T	2-Chloronaphthalene	1.248	1.289	1.359	1.269	1.248	1.283	3.56
40)	T	2-Nitroaniline	0.435	0.471	0.508	0.492	0.528	0.487	7.34
41)	T	Dimethylphthalate	1.382	1.430	1.470	1.368	1.340	1.398	3.71
42)	T	Acenaphthylene	1.807	1.864	1.881	1.703	1.573	1.766	7.26
43)	T	2,6-Dinitrotoluene	0.231	0.242	0.259	0.256	0.262	0.250	5.18
44)	T	3-Nitroaniline	0.310	0.288	0.263	0.288	0.348	0.300	10.61
45)	TCM	Acenaphthene	1.094	1.143	1.165	1.098	1.003	1.101	5.65
46)	T	2,4-Dinitrophenol		0.179	0.237	0.248	0.281	0.236	17.94
47)	T	Dibenzofuran	1.493	1.516	1.594	1.508	1.483	1.519	2.87
48)	TM	4-Nitrophenol	0.242	0.260	0.297	0.313	0.338	0.290	13.39
49)	TM	2,4-Dinitrotoluene	0.489	0.510	0.547	0.536	0.566	0.530	5.76
50)	T	Diethylphthalate	1.470	1.525	1.438	1.175	1.170	1.356	12.54
51)	T	Fluorene	1.207	1.223	1.275	1.178	1.131	1.203	4.42
52)	T	4-Chlorophenyl-phenyl	0.525	0.560	0.567	0.464	0.422	0.508	12.38
53)	T	4-Nitroaniline	0.261	0.332	0.263	0.283	0.312	0.290	10.64
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M62539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Fri Feb 18 15:27:16 2000
Response via : Initial Calibration

Calibration Files
10 =BN04195.D 20 =BN04194.D 50 =BN04193.D
80 =BN04192.D 120 =BN04191.D

		Compound	10	20	50	80	120	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.156	0.179	0.209	0.218	0.180	0.189	13.46
56)	TC	n-Nitrosodiphenylamin	0.568	0.584	0.582	0.506	0.367	0.521	17.64
57)	T	Azobenzene	1.484	1.509	1.578	1.392	1.128	1.418	12.38
58)	S	2,4,6-Tribromophenol	0.090	0.100	0.114	0.117	0.114	0.107	10.77
59)	T	4-Bromophenyl-phenyle	0.180	0.191	0.216	0.215	0.204	0.201	7.61
60)	T	Hexachlorobenzene	0.226	0.243	0.259	0.254	0.234	0.243	5.64
61)	TCM	Pentachlorophenol	0.098	0.112	0.144	0.153	0.156	0.133	19.55
62)	T	Phenanthrene	1.125	1.146	1.159	1.121	1.071	1.124	3.01
63)	T	Anthracene	1.156	1.179	1.233	1.194	1.070	1.166	5.19
64)	T	Di-n-butylphthalate	1.753	1.782	1.824	1.692	1.562	1.723	5.90
65)	TC	Fluoranthene	1.066	1.113	1.168	1.115	1.044	1.101	4.37
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.275	0.271	0.268	0.291	0.357	0.293	12.68
68)	TM	Pyrene	1.452	1.467	1.542	1.452	1.346	1.452	4.82
69)	S	p-Terphenyl-d14	0.777	0.806	0.850	0.772	0.664	0.774	8.92
70)	T	Butylbenzylphthalate	1.013	1.035	1.054	1.009	0.941	1.011	4.24
71)	T	Benzo[a]anthracene	1.155	1.232	1.314	1.242	1.160	1.221	5.40
72)	T	3,3'-Dichlorobenzidin	0.318	0.289	0.253	0.280	0.310	0.290	8.86
73)	T	Chrysene	1.140	1.178	1.197	1.068	0.870	1.091	12.17
74)	T	bis(2-Ethylhexyl)phth	1.428	1.477	1.467	1.302	1.127	1.360	10.87
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	2.791	2.836	2.827	2.507	2.196	2.631	10.59
77)	T	Benzo[b]fluoranthene	1.319	1.275	1.406	1.291	1.075	1.273	9.56
78)	T	Benzo[k]fluoranthene	1.131	1.331	1.345	1.337	1.194	1.268	7.76
79)	TC	Benzo[a]pyrene	1.140	1.165	1.285	1.244	1.186	1.204	4.92
80)	T	Indeno[1,2,3-cd]pyren	1.034	1.127	1.296	1.309	1.309	1.215	10.50
81)	T	Dibenz[a,h]anthracene	0.736	0.796	0.953	0.947	0.890	0.864	11.06
82)	T	Benzo[g,h,i]perylene	0.926	0.988	1.129	1.149	1.176	1.074	10.26

(#) = Out of Range

Response Factor Report GC BNA 2

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03609.D 80 =BNA03610.D 50 =BNA03611.D
20 =BNA03612.D 10 =BNA03613.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.845	1.762	1.751	1.715	1.756	1.766	2.71
3)	T	N-nitroso-dimethylami	0.999	0.968	0.960	0.927	0.939	0.959	2.89
4)	S	2-Fluorophenol	1.468	1.431	1.429	1.392	1.404	1.425	2.07
5)	T	Aniline	1.581	1.735	1.560	1.429	1.783	1.618	8.83
6)	S	Phenol-d5	1.679	1.697	1.754	1.755	1.764	1.730	2.24
7)	TCM	Phenol	1.859	1.874	1.917	1.922	1.925	1.899	1.61
8)	T	bis(2-Chloroethyl)eth	1.818	1.779	1.822	1.803	1.718	1.788	2.39
9)	TM	2-Chlorophenol	1.395	1.398	1.424	1.408	1.429	1.411	1.07
10)	T	1,3-Dichlorobenzene	1.746	1.755	1.813	1.825	1.865	1.801	2.76
11)	TCM	1,4-Dichlorobenzene	1.740	1.760	1.806	1.826	1.884	1.803	3.15
12)	T	Benzyl alcohol	0.822	0.849	0.921	0.934	0.946	0.895	6.19
13)	T	1,2-Dichlorobenzene	1.538	1.584	1.649	1.710	1.758	1.648	5.45
14)	T	2-Methylphenol	1.325	1.334	1.359	1.382	1.380	1.356	1.92
15)	T	bis(2-chloroisopropyl	2.232	2.220	2.252	2.260	2.264	2.246	0.85
16)	T	4-Methylphenol	1.275	1.284	1.310	1.313	1.339	1.304	1.93
17)	TPM	n-Nitroso-di-n-propyl	0.285	0.285	0.286	0.285	0.292	0.287	1.11
18)	T	Hexachloroethane	0.639	0.660	0.680	0.692	0.712	0.676	4.16
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.471	0.472	0.488	0.491	0.493	0.483	2.23
21)	T	Nitrobenzene	0.539	0.555	0.581	0.593	0.610	0.576	4.94
22)	T	Isophorone	0.965	0.971	1.029	1.086	1.123	1.035	6.71
23)	TC	2-Nitrophenol	0.200	0.204	0.212	0.209	0.208	0.207	2.19
24)	T	2,4-Dimethylphenol	0.391	0.403	0.427	0.443	0.452	0.423	6.13
25)	T	bis(2-Chloroethoxy)me	0.512	0.513	0.530	0.549	0.561	0.533	4.11
26)	TC	2,4-Dichlorophenol	0.286	0.299	0.314	0.328	0.330	0.312	6.14
27)	T	Benzoic Acid	0.310	0.314	0.321	0.280	0.253	0.296	9.57
28)	TM	1,2,4-Trichlorobenzen	0.354	0.368	0.389	0.412	0.428	0.390	7.74
29)	T	Naphthalene	0.960	1.019	1.100	1.173	1.222	1.095	9.81
30)	T	4-Chloroaniline	0.313	0.336	0.335	0.281	0.325	0.318	7.19
31)	TC	Hexachlorobutadiene	0.193	0.199	0.214	0.228	0.239	0.214	9.05
32)	TCM	4-Chloro-3-methylphen	0.346	0.355	0.377	0.382	0.387	0.369	4.82
33)	T	2-Methylnaphthalene	0.651	0.677	0.721	0.766	0.789	0.721	8.07
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.314	0.318	0.322	0.277	0.228	0.292	13.79
36)	TC	2,4,6-Trichlorophenol	0.347	0.357	0.379	0.383	0.388	0.371	4.76
37)	T	2,4,5-Trichlorophenol	0.358	0.369	0.391	0.395	0.406	0.384	5.16
38)	S	2-Fluorobiphenyl	1.066	1.124	1.219	1.296	1.350	1.211	9.69
39)	T	2-Chloronaphthalene	1.158	1.220	1.314	1.405	1.445	1.308	9.23
40)	T	2-Nitroaniline	0.391	0.401	0.415	0.412	0.402	0.404	2.40
41)	T	Dimethylphthalate	1.266	1.320	1.415	1.492	1.554	1.409	8.42
42)	T	Acenaphthylene	1.578	1.680	1.829	1.935	1.995	1.803	9.65
43)	T	2,6-Dinitrotoluene	0.261	0.265	0.277	0.281	0.284	0.273	3.58
44)	T	3-Nitroaniline	0.241	0.249	0.262	0.258	0.290	0.260	7.07
45)	TCM	Acenaphthene	0.989	1.045	1.134	1.205	1.249	1.125	9.63
46)	TP	2,4-Dinitrophenol	0.192	0.193	0.186	0.137	0.088	0.159	28.94
47)	T	Dibenzofuran	1.350	1.421	1.552	1.630	1.702	1.531	9.49
48)	TMP	4-Nitrophenol	0.299	0.304	0.314	0.300	0.264	0.296	6.44
49)	TM	2,4-Dinitrotoluene	0.456	0.473	0.501	0.519	0.514	0.492	5.53
50)	T	Diethylphthalate	1.258	1.334	1.447	1.551	1.614	1.441	10.25
51)	T	Fluorene	1.125	1.201	1.317	1.415	1.455	1.303	10.72
52)	T	4-Chlorophenyl-phenyl	0.551	0.577	0.624	0.672	0.707	0.626	10.30
53)	T	4-Nitroaniline	0.235	0.221	0.266	0.286	0.282	0.258	11.11
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03609.D 80 =BNA03610.D 50 =BNA03611.D
20 =BNA03612.D 10 =BNA03613.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.159	0.161	0.167	0.149	0.136	0.154	7.84
56)	TC	n-Nitrosodiphenylamin	0.492	0.533	0.594	0.639	0.654	0.582	11.89
57)	T	Azobenzene	1.126	1.166	1.265	1.253	1.310	1.224	6.18
58)	S	2,4,6-Tribromophenol	0.087	0.088	0.093	0.091	0.093	0.091	2.93
59)	T	4-Bromophenyl-phenyle	0.201	0.204	0.219	0.226	0.237	0.218	6.95
60)	T	Hexachlorobenzene	0.225	0.226	0.240	0.254	0.266	0.242	7.32
61)	TCM	Pentachlorophenol	0.127	0.129	0.130	0.120	0.106	0.122	7.93
62)	T	Phenanthrene	1.022	1.079	1.201	1.295	1.362	1.192	11.98
63)	T	Anthracene	1.047	1.117	1.229	1.330	1.380	1.221	11.46
64)	T	Di-n-butylphthalate	1.226	1.331	1.499	1.659	1.742	1.491	14.51
65)	TC	Fluoranthene	1.098	1.161	1.272	1.367	1.429	1.265	10.90
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.322	0.290	0.251	0.232	0.307	0.280	13.52
68)	TM	Pyrene	1.274	1.341	1.443	1.539	1.619	1.443	9.74
69)	S	p-Terphenyl-d14	0.841	0.862	0.907	0.941	0.988	0.908	6.57
70)	T	Butylbenzylphthalate	0.706	0.751	0.799	0.856	0.872	0.797	8.74
71)	T	Benzo[a]anthracene	1.235	1.272	1.339	1.402	1.462	1.342	6.91
72)	T	3,3'-Dichlorobenzidin	0.373	0.360	0.368	0.399	0.426	0.385	7.08
73)	T	Chrysene	1.125	1.166	1.218	1.288	1.360	1.231	7.65
74)	T	bis(2-Ethylhexyl)phth	0.947	1.030	1.109	1.193	1.221	1.100	10.34
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.647	1.799	1.994	2.171	2.194	1.961	12.08
77)	T	Benzo[b]fluoranthene	1.334	1.384	1.440	1.495	1.496	1.430	4.93
78)	T	Benzo[k]fluoranthene	1.283	1.301	1.377	1.426	1.514	1.380	6.84
79)	TC	Benzo[a]pyrene	1.265	1.284	1.335	1.373	1.376	1.327	3.82
80)	T	Indeno[1,2,3-cd]pyren	1.434	1.431	1.446	1.417	1.383	1.422	1.71
81)	T	Dibenz[a,h]anthracene	1.052	1.053	1.066	1.049	1.026	1.049	1.37
82)	T	Benzo[g,h,i]perylene	1.239	1.239	1.247	1.216	1.191	1.226	1.86

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000218\BNA03626.D Vial: 100
Acq On : 18 Feb 2000 8:36 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00
2	T	Pyridine	1.766	1.747	1.1	104	0.00
3	T	N-nitroso-dimethylamine	0.959	0.949	1.0	103	0.00
4	S	2-Fluorophenol	1.425	1.433	-0.6	104	-0.01
5	T	Aniline	1.618	1.933	-19.5	129	0.00
6	S	Phenol-d5	1.730	1.747	-1.0	104	-0.01
7	TCM	Phenol	1.899	1.869	1.6	102	-0.01
8	T	bis(2-Chloroethyl)ether	1.788	1.719	3.9	98	0.00
9	TM	2-Chlorophenol	1.411	1.423	-0.9	104	0.00
10	T	1,3-Dichlorobenzene	1.801	1.807	-0.3	104	0.00
11	TCM	1,4-Dichlorobenzene	1.803	1.819	-0.9	105	0.00
12	T	Benzyl alcohol	0.895	0.971	-8.5	110	0.00
13	T	1,2-Dichlorobenzene	1.648	1.667	-1.2	105	0.00
14	T	2-Methylphenol	1.356	1.369	-1.0	105	-0.01
15	T	bis(2-chloroisopropyl)ether	2.246	2.258	-0.5	104	0.00
16	T	4-Methylphenol	1.304	1.324	-1.5	105	-0.02
17	TPM	n-Nitroso-di-n-propylamine	0.287	0.285	0.7	104	0.00
18	T	Hexachloroethane	0.676	0.697	-3.1	107	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	104	0.00
20	S	Nitrobenzene-d5	0.483	0.487	-0.8	104	0.00
21	T	Nitrobenzene	0.576	0.583	-1.2	105	0.00
22	T	Isophorone	1.035	1.038	-0.3	105	0.00
23	TC	2-Nitrophenol	0.207	0.208	-0.5	103	0.00
24	T	2,4-Dimethylphenol	0.423	0.432	-2.1	106	0.00
25	T	bis(2-Chloroethoxy)methane	0.533	0.530	0.6	104	0.00
26	TC	2,4-Dichlorophenol	0.312	0.316	-1.3	105	-0.01
27	T	Benzoic Acid	0.296	0.328	-10.8	107	0.00
28	TM	1,2,4-Trichlorobenzene	0.390	0.393	-0.8	105	0.00
29	T	Naphthalene	1.095	1.100	-0.5	104	0.00
30	T	4-Chloroaniline	0.318	0.358	-12.6	112	0.00
31	TC	Hexachlorobutadiene	0.214	0.217	-1.4	106	0.00
32	TCM	4-Chloro-3-methylphenol	0.369	0.382	-3.5	106	0.00
33	T	2-Methylnaphthalene	0.721	0.725	-0.6	105	0.00
34	I	Acenaphthene-d10	1.000	1.000	0.0	106	0.00
35	TP	Hexachlorocyclopentadiene	0.292	0.313	-7.2	103	0.00
36	TC	2,4,6-Trichlorophenol	0.371	0.373	-0.5	105	0.00
37	T	2,4,5-Trichlorophenol	0.384	0.392	-2.1	107	0.00
38	S	2-Fluorobiphenyl	1.211	1.214	-0.2	106	0.00
39	T	2-Chloronaphthalene	1.308	1.307	0.1	105	0.00
40	T	2-Nitroaniline	0.404	0.406	-0.5	104	0.00
41	T	Dimethylphthalate	1.409	1.401	0.6	105	0.00
42	T	Acenaphthylene	1.803	1.786	0.9	104	0.00
43	T	2,6-Dinitrotoluene	0.273	0.280	-2.6	107	0.00
44	T	3-Nitroaniline	0.260	0.240	7.7	97	0.00
45	TCM	Acenaphthene	1.125	1.117	0.7	104	0.00
46	TP	2,4-Dinitrophenol	0.159	0.170	-6.9	97	0.00
47	T	Dibenzofuran	1.531	1.523	0.5	104	0.00
48	TMP	4-Nitrophenol	0.296	0.317	-7.1	107	-0.01
49	TM	2,4-Dinitrotoluene	0.492	0.487	1.0	103	0.00
50	T	Diethylphthalate	1.441	1.436	0.3	105	0.00
51	T	Fluorene	1.303	1.299	0.3	105	0.00
52	T	4-Chlorophenyl-phenylether	0.626	0.623	0.5	106	0.00
53	T	4-Nitroaniline	0.258	0.227	12.0	90	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000218\BNA03626.D Vial: 100
Acq On : 18 Feb 2000 8:36 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	105	0.00
55	T	4,6-Dinitro-2-methylphenol	0.154	0.162	-5.2	102	0.00
56	TC	n-Nitrosodiphenylamine	0.582	0.591	-1.5	105	0.00
57	T	Azobenzene	1.224	1.268	-3.6	105	0.00
58	S	2,4,6-Tribromophenol	0.091	0.092	-1.1	105	0.00
59	T	4-Bromophenyl-phenylether	0.218	0.216	0.9	104	0.00
60	T	Hexachlorobenzene	0.242	0.242	0.0	106	0.00
61	TCM	Pentachlorophenol	0.122	0.137	-12.3	111	0.00
62	T	Phenanthrene	1.192	1.178	1.2	103	0.00
63	T	Anthracene	1.221	1.211	0.8	104	0.00
64	T	Di-n-butylphthalate	1.491	1.482	0.6	104	0.00
65	TC	Fluoranthene	1.265	1.242	1.8	103	0.00
66	I	Chrysene-d12	1.000	1.000	0.0	104	0.00
67	T	Benzidine	0.280	0.255	8.9	105	0.00
68	TM	Pyrene	1.443	1.432	0.8	103	0.00
69	S	p-Terphenyl-d14	0.908	0.909	-0.1	104	0.00
70	T	Butylbenzylphthalate	0.797	0.811	-1.8	105	0.00
71	T	Benzo[a]anthracene	1.342	1.346	-0.3	104	0.00
72	T	3,3'-Dichlorobenzidine	0.385	0.344	10.6	97	0.00
73	T	Chrysene	1.231	1.230	0.1	105	0.00
74	T	bis(2-Ethylhexyl)phthalate	1.100	1.121	-1.9	105	0.00
75	I	Perylene-d12	1.000	1.000	0.0	103	0.00
76	TC	Di-n-octylphthalate	1.961	2.015	-2.8	104	0.00
77	T	Benzo[b]fluoranthene	1.430	1.429	0.1	102	0.00
78	T	Benzo[k]fluoranthene	1.380	1.390	-0.7	104	0.00
79	TC	Benzo[a]pyrene	1.327	1.337	-0.8	103	0.00
80	T	Indeno[1,2,3-cd]pyrene	1.422	1.444	-1.5	103	0.00
81	T	Dibenz[a,h]anthracene	1.049	1.070	-2.0	104	0.00
82	T	Benzo[g,h,i]perylene	1.226	1.250	-2.0	103	0.01

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No: _____

	Field ID:	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	SBLK343	69	72	78	0
02	426-1	69	78	56	0

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(35-114)
S2	2FP	=	2-Fluorobiphenyl	(43-116)
S3	TPL	=	p-Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03644.D** Sample Name **5175.04MS**

Date Acquired **18-Feb-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		2.99 ug/L	14.96
62-75-9	N-nitroso-dimethylamine		8.80 ug/L	44.00
62-53-3	Aniline		5.74 ug/L	28.70
111-44-4	bis(2-Chloroethyl)ether		11.64 ug/L	58.22
541-73-1	1,3-Dichlorobenzene		10.84 ug/L	54.20
106-46-7	1,4-Dichlorobenzene		11.08 ug/L	55.40
100-51-6	Benzyl alcohol		11.88 ug/L	59.41
95-50-1	1,2-Dichlorobenzene		11.58 ug/L	57.91
108-60-1	bis(2-chloroisopropyl)ether		16.32 ug/L	81.60
621-64-7	n-Nitroso-di-n-propylamine		13.11 ug/L	65.54
67-72-1	Hexachloroethane		10.70 ug/L	53.51
98-95-3	Nitrobenzene		11.61 ug/L	58.06
78-59-1	Isophorone		12.59 ug/L	62.93
111-91-1	bis(2-Chloroethoxy)methane		12.71 ug/L	63.55
120-82-1	1,2,4-Trichlorobenzene		11.03 ug/L	55.14
91-20-3	Naphthalene		12.92 ug/L	64.58
106-47-8	4-Chloroaniline		12.42 ug/L	62.12
87-68-3	Hexachlorobutadiene		10.74 ug/L	53.68
91-57-6	2-Methylnaphthalene		12.63 ug/L	63.13
77-47-4	Hexachlorocyclopentadiene		6.12 ug/L	30.62
91-58-7	2-Chloronaphthalene		12.42 ug/L	62.11
88-74-4	2-Nitroaniline		13.48 ug/L	67.38
131-11-3	Dimethylphthalate		15.10 ug/L	75.52
208-96-8	Acenaphthylene		13.93 ug/L	69.63
606-20-2	2,6-Dinitrotoluene		12.99 ug/L	64.97
99-09-2	3-Nitroaniline		13.17 ug/L	65.85
83-32-9	Acenaphthene		14.49 ug/L	72.47
132-64-9	Dibenzofuran		14.20 ug/L	71.02
121-14-2	2,4-Dinitrotoluene		13.89 ug/L	69.46
84-66-2	Diethylphthalate		15.58 ug/L	77.89
86-73-7	Fluorene		15.03 ug/L	75.17
7005-72-3	4-Chlorophenyl-phenylether		14.90 ug/L	74.50
100-01-6	4-Nitroaniline		11.84 ug/L	59.18
86-30-6	n-Nitrosodiphenylamine		15.58 ug/L	77.90
103-33-3	Azobenzene		12.13 ug/L	60.65
101-55-3	4-Bromophenyl-phenylether		14.64 ug/L	73.21
118-74-1	Hexachlorobenzene		12.59 ug/L	62.95
85-01-8	Phenanthrene		15.23 ug/L	76.15
120-12-7	Anthracene		14.76 ug/L	73.82
84-74-2	Di-n-butylphthalate		16.08 ug/L	80.39
206-44-0	Fluoranthene		15.43 ug/L	77.14
129-00-0	Pyrene		15.33 ug/L	76.67
85-68-7	Butylbenzylphthalate		15.77 ug/L	78.85
56-55-3	Benzo[a]anthracene		15.18 ug/L	75.92
218-01-9	Chrysene		15.58 ug/L	77.92
117-81-7	bis(2-Ethylhexyl)phthalate		16.06 ug/L	80.30
117-84-0	Di-n-octylphthalate		14.32 ug/L	71.62
205-99-2	Benzo[b]fluoranthene		13.37 ug/L	66.86
207-08-9	Benzo[k]fluoranthene		13.48 ug/L	67.41
50-32-8	Benzo[a]pyrene		12.55 ug/L	62.74
193-39-5	Indeno[1,2,3-cd]pyrene		12.84 ug/L	64.20
53-70-3	Dibenz[a,h]anthracene		14.74 ug/L	73.69
191-24-2	Benzo[g,h,i]perylene		12.40 ug/L	62.01

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03628.D** Sample Name **Sblk343BS**

Date Acquired **18-Feb-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		2.86 ug/L	14.30
62-75-9	N-nitroso-dimethylamine		7.90 ug/L	39.51
62-53-3	Aniline		4.67 ug/L	23.34
111-44-4	bis(2-Chloroethyl)ether		11.18 ug/L	55.90
541-73-1	1,3-Dichlorobenzene		10.01 ug/L	50.07
106-46-7	1,4-Dichlorobenzene		10.26 ug/L	51.29
100-51-6	Benzyl alcohol		10.51 ug/L	52.54
95-50-1	1,2-Dichlorobenzene		10.66 ug/L	53.30
108-60-1	bis(2-chloroisopropyl)ether		16.33 ug/L	81.64
621-64-7	n-Nitroso-di-n-propylamine		12.89 ug/L	64.47
67-72-1	Hexachloroethane		9.67 ug/L	48.35
98-95-3	Nitrobenzene		11.56 ug/L	57.79
78-59-1	Isophorone		12.53 ug/L	62.63
111-91-1	bis(2-Chloroethoxy)methane		12.22 ug/L	61.09
120-82-1	1,2,4-Trichlorobenzene		10.23 ug/L	51.14
91-20-3	Naphthalene		12.36 ug/L	61.78
106-47-8	4-Chloroaniline		9.90 ug/L	49.52
87-68-3	Hexachlorobutadiene		9.89 ug/L	49.46
91-57-6	2-Methylnaphthalene		11.82 ug/L	59.08
77-47-4	Hexachlorocyclopentadiene		5.34 ug/L	26.70
91-58-7	2-Chloronaphthalene		11.73 ug/L	58.66
88-74-4	2-Nitroaniline		13.10 ug/L	65.50
131-11-3	Dimethylphthalate		15.29 ug/L	76.45
208-96-8	Acenaphthylene		13.36 ug/L	66.80
606-20-2	2,6-Dinitrotoluene		13.80 ug/L	68.99
99-09-2	3-Nitroaniline		11.98 ug/L	59.90
83-32-9	Acenaphthene		13.87 ug/L	69.35
132-64-9	Dibenzofuran		13.81 ug/L	69.05
121-14-2	2,4-Dinitrotoluene		13.95 ug/L	69.73
84-66-2	Diethylphthalate		15.76 ug/L	78.80
86-73-7	Fluorene		14.71 ug/L	73.54
7005-72-3	4-Chlorophenyl-phenylether		14.66 ug/L	73.31
100-01-6	4-Nitroaniline		11.84 ug/L	59.21
86-30-6	n-Nitrosodiphenylamine		15.23 ug/L	76.13
103-33-3	Azobenzene		12.29 ug/L	61.46
101-55-3	4-Bromophenyl-phenylether		14.09 ug/L	70.46
118-74-1	Hexachlorobenzene		12.47 ug/L	62.34
85-01-8	Phenanthrene		14.95 ug/L	74.74
120-12-7	Anthracene		14.68 ug/L	73.39
84-74-2	Di-n-butylphthalate		16.38 ug/L	81.89
206-44-0	Fluoranthene		15.13 ug/L	75.63
129-00-0	Pyrene		15.77 ug/L	78.86
85-68-7	Butylbenzylphthalate		16.28 ug/L	81.39
56-55-3	Benzo[a]anthracene		15.68 ug/L	78.41
218-01-9	Chrysene		16.01 ug/L	80.03
117-81-7	bis(2-Ethylhexyl)phthalate		16.48 ug/L	82.39
117-84-0	Di-n-octylphthalate		14.71 ug/L	73.55
205-99-2	Benzo[b]fluoranthene		13.76 ug/L	68.79
207-08-9	Benzo[k]fluoranthene		13.91 ug/L	69.57
50-32-8	Benzo[a]pyrene		13.20 ug/L	66.00
193-39-5	Indeno[1,2,3-cd]pyrene		13.55 ug/L	67.76
53-70-3	Dibenz[a,h]anthracene		15.24 ug/L	76.20
191-24-2	Benzo[g,h,i]perylene		13.10 ug/L	65.49

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03645.D**	Sample Name	**5175.04Dup**
Operator	**Bhaskar**	Misc Info	**0CW2MW30Dup**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03645.D**	Sample Name	**5175.04Dup**
Operator	**Bhaskar**	Misc Info	**0CW2MW30Dup**
Date Acquired	**18-Feb-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: BI.426 SDG No:

Lab File ID (Standard): BN04193.D Date Analyzed: 2/18/00

Instrument ID: SVoa#1 Time Analyzed: 10:31

	IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
12 HOUR STD	492718	7.79	1659710	10.54	903045	14.72
UPPER LIMIT	985436	8.29	3319420	11.04	1806090	15.22
LOWER LIMIT	246359	7.29	829855	10.04	451523	14.22
Field ID:						
01 426-1	506203	7.78	1904035	10.53	1032808	14.72

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 100004 Case No.: 5171 Location: Bl.426 SDG No:

Lab File ID (Standard): BN04193.D Date Analyzed: 02/18/00

Instrument ID: SVoa#1 Time Analyzed: 10:31

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1318570	18.06	1022994	23.52	894650	26.17
	UPPER LIMIT	2637140	17.56	2045988	23.02	1789300	25.67
	LOWER LIMIT	659285	18.56	511497	24.02	447325	26.67
	EPA SAMPLE NO.						
01	426-1	1594183	18.06	1156258	23.51	1121321	26.16

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5171 Location Bl.426 SDG No.:

Lab File ID (Standard): BNA03626.D Date Analyzed: 2/18/00

Instrument ID: BNA#2 Time Analyzed: 8:36

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	505393	10.46	1794084	13.41	1102008	17.77
	UPPER LIMIT	1010786	10.96	3588168	13.91	2204016	18.27
	LOWER LIMIT	252697	9.96	897042	12.91	551004	17.27
	FIELD ID						
01	SBLK343	542208	10.46	1990798	13.40	1195577	17.76
02	5175.04MS	551255	10.46	2023971	13.40	1195095	17.76
03	5175.04DUP	553007	10.46	2031603	13.40	1206737	17.76

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5171 Location BI.426 SDG No.:

Lab File ID (Standard): BNA03626.D Date Analyzed: 02/18/00

Instrument ID: BNA#2 Time Analyzed: 08:36

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1751174	21.03	1535682	26.55	1441285	29.67
	UPPER LIMIT	3502348	20.53	3071364	26.05	2882570	29.17
	LOWER LIMIT	875587	21.53	767841	27.05	720643	30.17
	EPA SAMPLE NO.						
01	SBLK343	1943166	21.03	1694882	26.54	1709275	29.66
02	5175.04MS	1966162	21.03	1788360	26.54	1826827	29.66
03	5175.04DUP	1964612	21.03	1780129	26.54	1806304	29.66

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000218\BNA03627.D Vial: 1
Acq On : 18 Feb 2000 9:29 am Operator: Bhaskar
Sample : Sblk343 Inst : GC BNA 2
Misc : Sblk343 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 18 16:00 2000 Quant Results File: M262537.RES

Quant Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration
DataAcq Meth : M262537

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.46	152	542208	40.00	ug/L	0.00
19) Naphthalene-d8	13.40	136	1990798	40.00	ug/L	0.00
34) Acenaphthene-d10	17.76	164	1195577	40.00	ug/L	0.00
54) Phenanthrene-d10	21.03	188	1943166	40.00	ug/L	0.00
66) Chrysene-d12	26.54	240	1694882	40.00	ug/L	-0.01
75) Perylene-d12	29.66	264	1709275	40.00	ug/L	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.92	112	754776	39.09	ug/L	-0.01
Spiked Amount 100.000	Range 21 - 100		Recovery = 39.09%			
6) Phenol-d5	9.96	99	615050	26.23	ug/L	-0.01
Spiked Amount 100.000	Range 10 - 94		Recovery = 26.23%			
20) Nitrobenzene-d5	11.79	82	825522	34.33	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 68.66%			
38) 2-Fluorobiphenyl	16.15	172	1299943	35.92	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 71.84%			
58) 2,4,6-Tribromophenol	19.59	330	286961	65.20	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 65.20%			
69) p-Terphenyl-d14	24.40	244	1495099	38.87	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 77.74%			

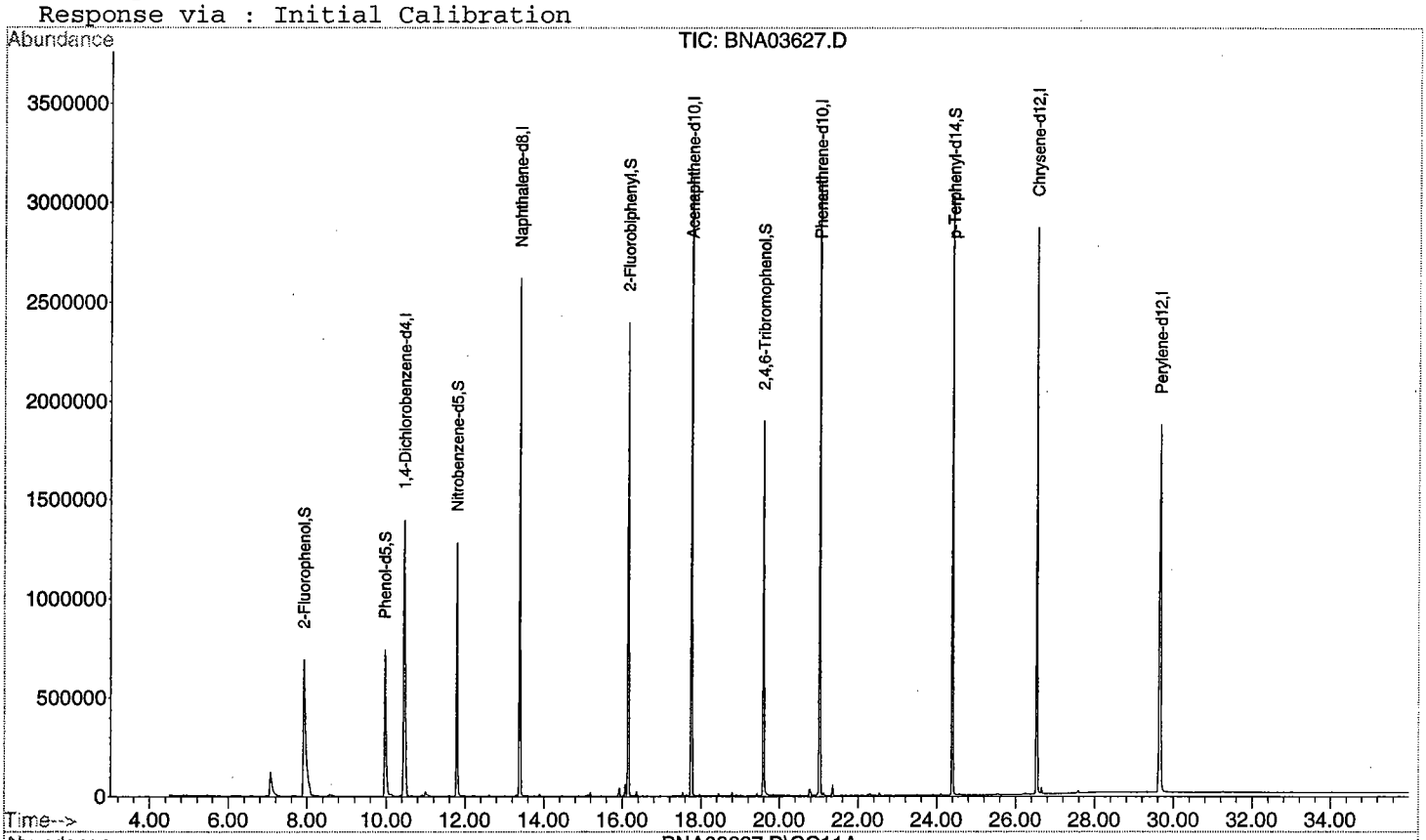
Target Compounds Qvalue

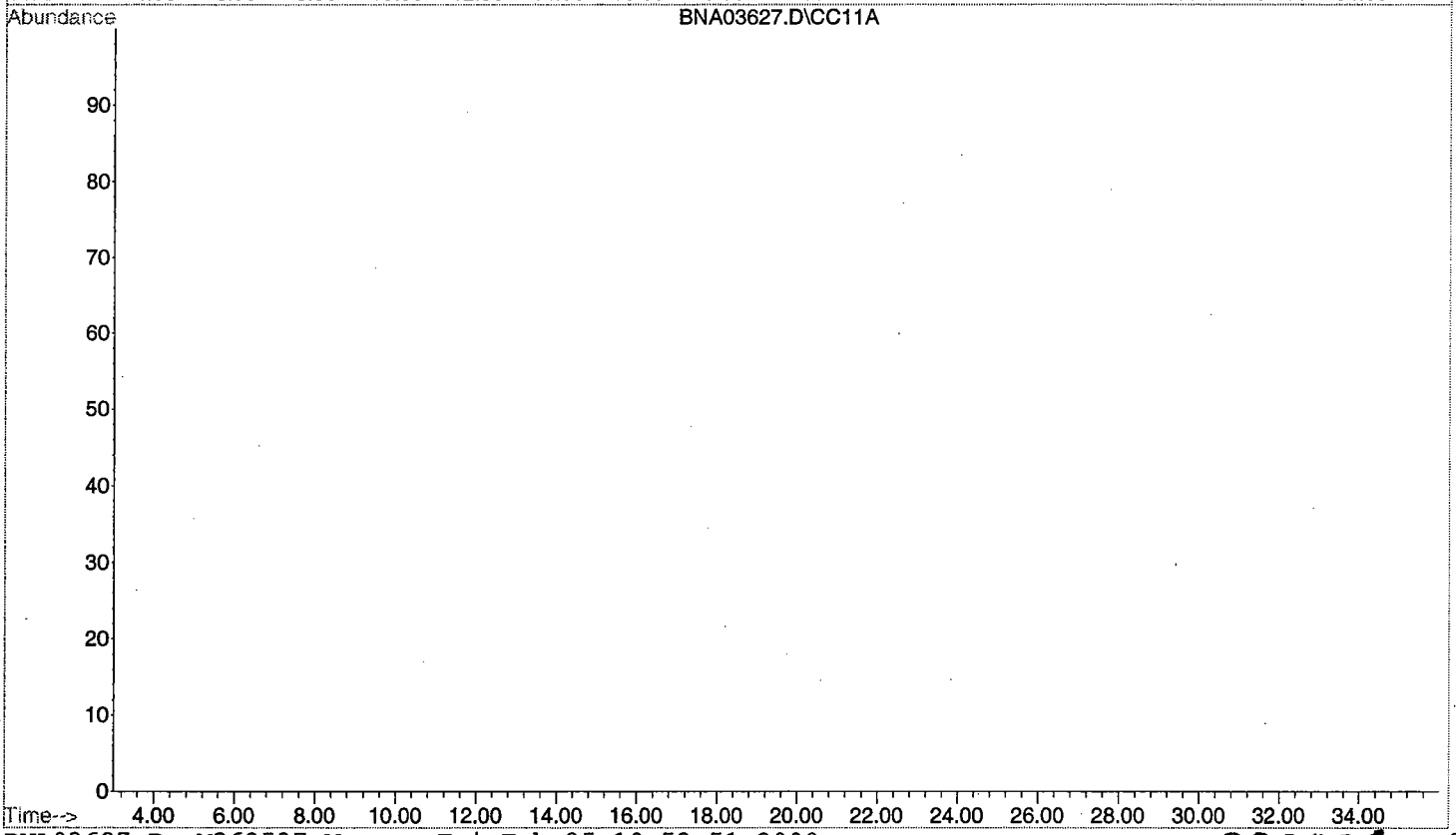
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000218\BNA03627.D Vial: 1
Acq On : 18 Feb 2000 9:29 am Operator: Bhaskar
Sample : Sblk343 Inst : GC BNA 2
Misc : Sblk343 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 18 16:00 2000 Quant Results File: M262537.RES

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000218\BN04200.D Vial: 10
Acq On : 18 Feb 2000 4:47 pm Operator: Bhaskar
Sample : 5171.01 Inst : GC/MS Ins
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:06 2000 Quant Results File: M62539.RES

Quant Method : C:\HPCHEM\1\METHODS\M62539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Fri Feb 18 15:27:16 2000
Response via : Initial Calibration
DataAcq Meth : M62539

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.78	152	506203	40.00	ug/L	0.00
19) Naphthalene-d8	10.53	136	1904035	40.00	ug/L	0.00
34) Acenaphthene-d10	14.72	164	1032808	40.00	ug/L	0.00
54) Phenanthrene-d10	18.06	188	1594183	40.00	ug/L	0.00
66) Chrysene-d12	23.51	240	1156258	40.00	ug/L	0.00
75) Perylene-d12	26.16	264	1121321	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	9.03	82	771656	34.70	ug/L	-0.02
Spiked Amount 50.000	Range 35 - 114		Recovery =	69.40%		
38) 2-Fluorobiphenyl	13.11	172	1219039	38.95	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	77.90%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	21.47	244	624674	27.93	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	55.86%		
Target Compounds						Qvalue
29) Naphthalene	10.56	128	68968m	1.42	ug/L	
33) 2-Methylnaphthalene	12.15	142	200834	4.83	ug/L	99
45) Acenaphthene	14.78	153	29669m	1.04	ug/L	
51) Fluorene	15.98	166	58134m	1.87	ug/L	
62) Phenanthrene	18.10	178	97742	2.18	ug/L	99

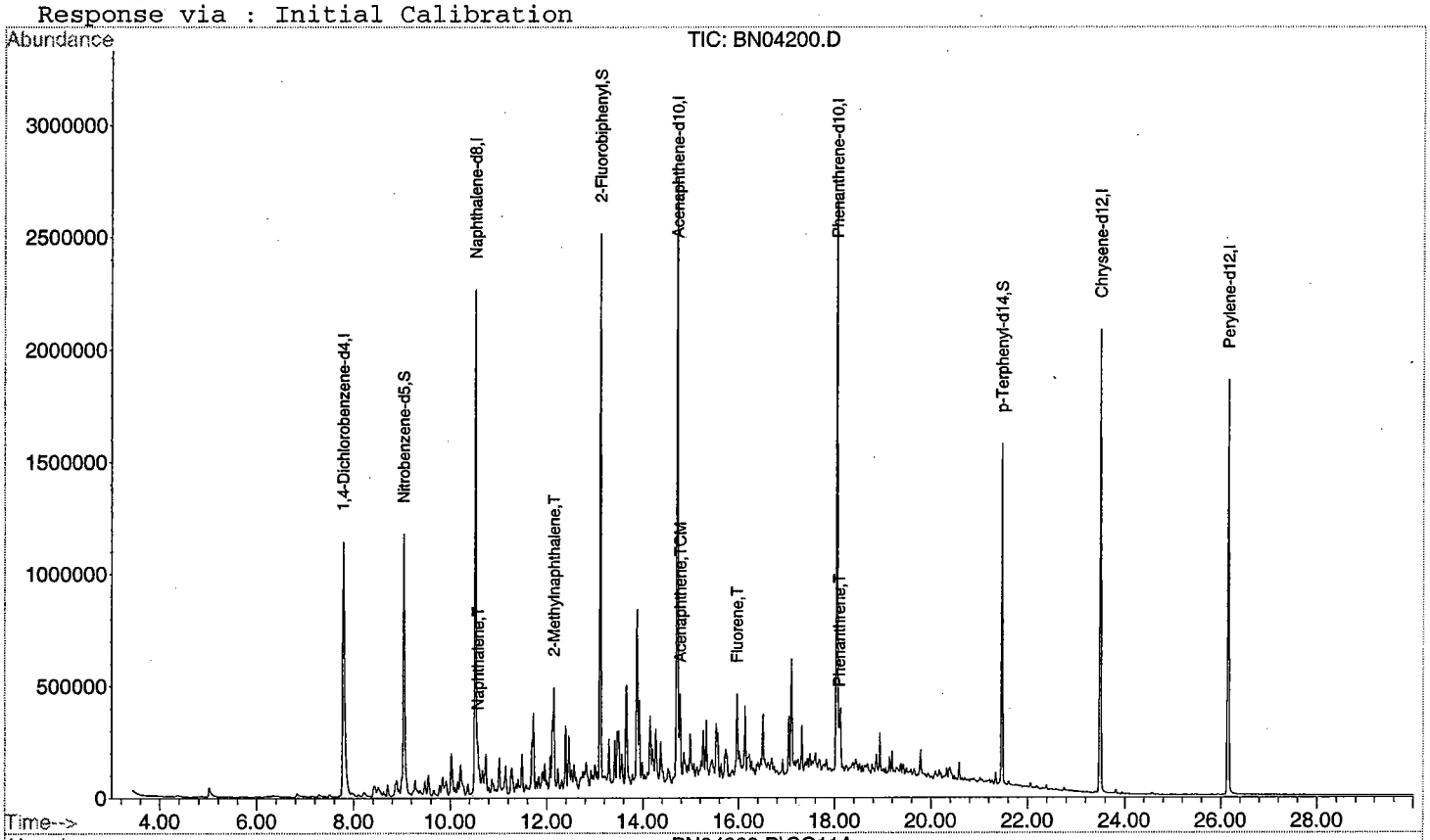
(#) = qualifier out of range (m) = manual integration
BN04200.D M62539.M Fri Feb 25 10:08:54 2000 GC-BNA-1

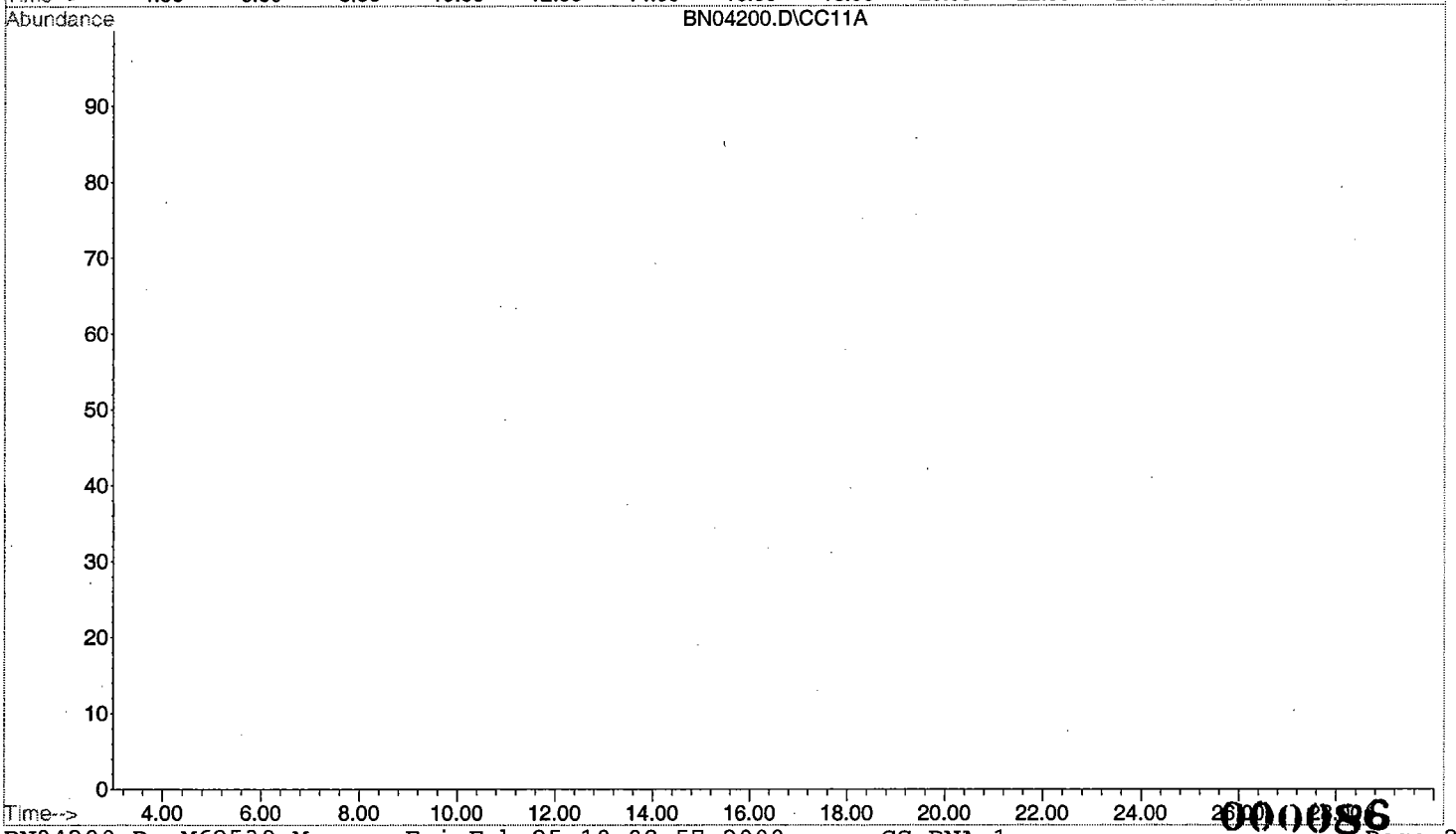
000085

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000218\BN04200.D Vial: 10
Acq On : 18 Feb 2000 4:47 pm Operator: Bhaskar
Sample : 5171.01 Inst : GC/MS Ins
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:06 2000 Quant Results File: M62539.RES

Method : C:\HPCHEM\1\METHODS\M62539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Fri Feb 18 15:27:16 2000
Response via : Initial Calibration





000086

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000218\BNA03644.D Vial: 17
Acq On : 18 Feb 2000 10:57 pm Operator: Bhaskar
Sample : 5175.04MS Inst : GC BNA 2
Misc : 0CW2MW30MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:38 2000 Quant Results File: M262537.RES

Quant Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration
DataAcq Meth : M262537

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.46	152	551255	40.00	ug/L	0.00
19) Naphthalene-d8	13.40	136	2023971	40.00	ug/L	0.00
34) Acenaphthene-d10	17.76	164	1195095	40.00	ug/L	0.00
54) Phenanthrene-d10	21.03	188	1966162	40.00	ug/L	0.00
66) Chrysene-d12	26.54	240	1788360	40.00	ug/L	0.00
75) Perylene-d12	29.66	264	1826827	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.92	112	813919	41.46	ug/L	-0.01
Spiked Amount 100.000	Range 21 - 100		Recovery = 41.46%			
6) Phenol-d5	9.96	99	689515	28.92	ug/L	-0.01
Spiked Amount 100.000	Range 10 - 94		Recovery = 28.92%			
20) Nitrobenzene-d5	11.80	82	792959	32.44	ug/L	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 64.88%			
38) 2-Fluorobiphenyl	16.15	172	1266502	35.01	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 70.02%			
58) 2,4,6-Tribromophenol	19.60	330	330810	74.29	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 74.29%			
69) p-Terphenyl-d14	24.40	244	1451864	35.78	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 71.56%			
Target Compounds						Qvalue
2) Pyridine	4.93	79	72800m	2.99	ug/L	
3) N-nitroso-dimethylamine	4.92	74	116244m	8.80	ug/L	
5) Aniline	9.86	93	127957	5.74	ug/L	96
7) Phenol	9.99	94	150373	5.74	ug/L	92
8) bis(2-Chloroethyl)ether	9.99	93	286991	11.64	ug/L	100
9) 2-Chlorophenol	10.13	128	230420	11.85	ug/L	98
10) 1,3-Dichlorobenzene	10.37	146	269050	10.84	ug/L	98
11) 1,4-Dichlorobenzene	10.49	146	275339	11.08	ug/L	98
12) Benzyl alcohol	10.88	108	146485	11.88	ug/L	99
13) 1,2-Dichlorobenzene	10.91	146	263027	11.58	ug/L	99
14) 2-Methylphenol	11.26	108	202266	10.82	ug/L	95
15) bis(2-chloroisopropyl)ethe	11.20	45	505082	16.32	ug/L	99
16) 4-Methylphenol	11.59	108	197086	10.97	ug/L	97
17) n-Nitroso-di-n-propylamine	11.51	130	51806	13.11	ug/L	93
18) Hexachloroethane	11.60	117	99764	10.70	ug/L	99
21) Nitrobenzene	11.83	77	338254	11.61	ug/L	99
22) Isophorone	12.37	82	659009	12.59	ug/L	99
23) 2-Nitrophenol	12.58	139	130883	12.52	ug/L	98
24) 2,4-Dimethylphenol	12.77	107	258807	12.08	ug/L	99
25) bis(2-Chloroethoxy)methane	12.93	93	342969	12.71	ug/L	98
26) 2,4-Dichlorophenol	13.19	162	200224	12.70	ug/L	98
27) Benzoic Acid	13.07	105	80861	5.40	ug/L	99
28) 1,2,4-Trichlorobenzene	13.31	180	217712	11.03	ug/L	99
29) Naphthalene	13.44	128	715653	12.92	ug/L	99
30) 4-Chloroaniline	13.68	127	199963	12.42	ug/L	99
31) Hexachlorobutadiene	13.88	225	116524	10.74	ug/L	98
32) 4-Chloro-3-methylphenol	14.96	107	251848	13.48	ug/L	99
33) 2-Methylnaphthalene	15.12	142	460680	12.63	ug/L	98
35) Hexachlorocyclopentadiene	15.72	237	53380	6.12	ug/L	98
36) 2,4,6-Trichlorophenol	15.99	196	154984	13.99	ug/L	98
37) 2,4,5-Trichlorophenol	16.13	196	161489	14.09	ug/L	97
39) 2-Chloronaphthalene	16.37	162	485586	12.42	ug/L	98
40) 2-Nitroaniline	16.77	138	162691	13.48	ug/L	96
41) Dimethylphthalate	17.28	163	635914	15.10	ug/L	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000218\BNA03644.D Vial: 17
Acq On : 18 Feb 2000 10:57 pm Operator: Bhaskar
Sample : 5175.04MS Inst : GC BNA 2
Misc : 0CW2MW30MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:38 2000 Quant Results File: M262537.RES

Quant Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration
DataAcq Meth : M262537

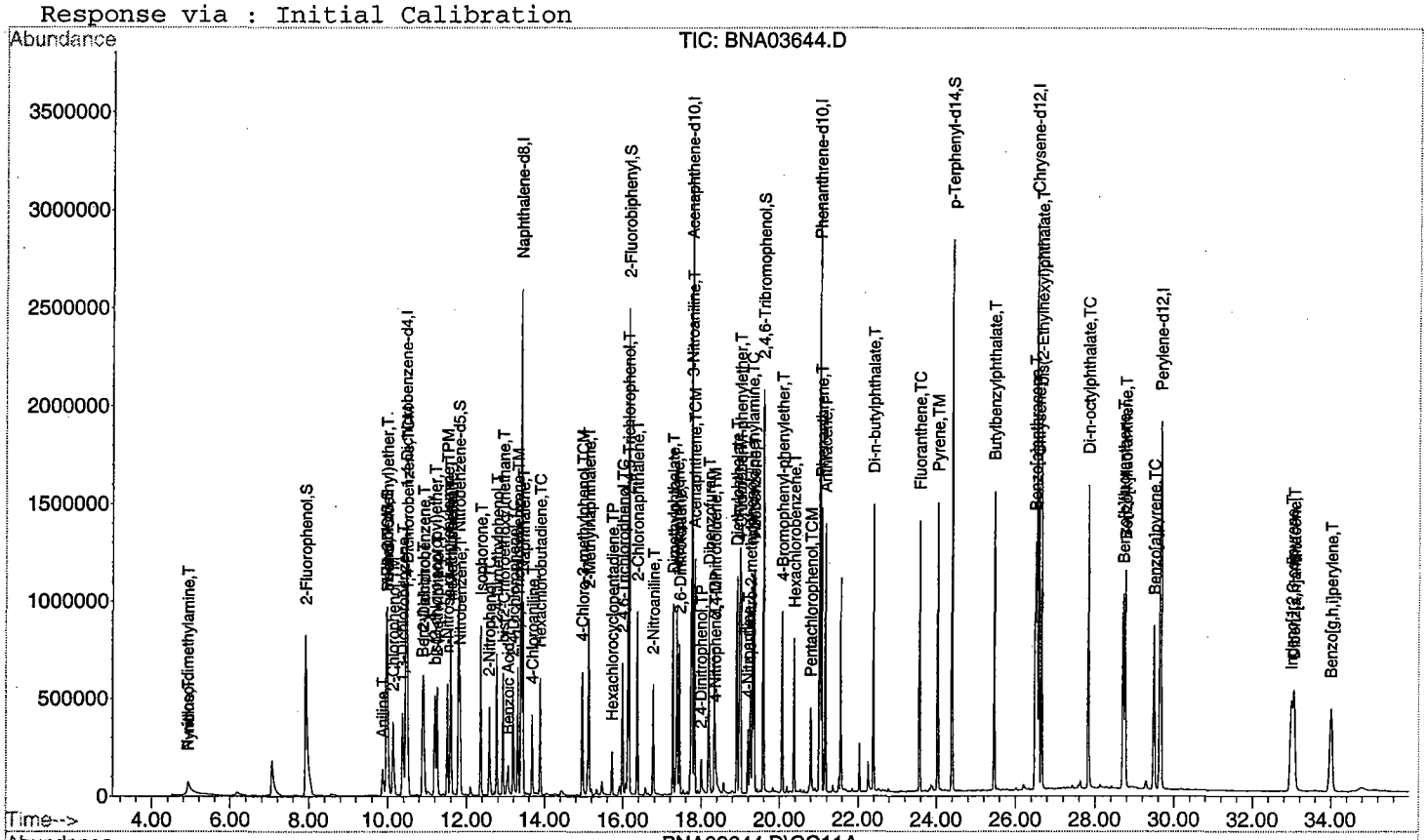
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
42)	Acenaphthylene	17.39	152	750386	13.93	ug/L	99
43)	2,6-Dinitrotoluene	17.44	63	106173	12.99	ug/L	97
44)	3-Nitroaniline	17.78	138	102355	13.17	ug/L	95
45)	Acenaphthene	17.83	153	486947	14.49	ug/L	98
46)	2,4-Dinitrophenol	18.01	184	46278	9.73	ug/L	96
47)	Dibenzofuran	18.19	168	649658	14.20	ug/L	98
48)	4-Nitrophenol	18.37	65	73664	8.32	ug/L	93
49)	2,4-Dinitrotoluene	18.34	165	204379	13.89	ug/L	93
50)	Diethylphthalate	18.91	149	670532	15.58	ug/L	98
51)	Fluorene	18.98	166	585070	15.03	ug/L	100
52)	4-Chlorophenyl-phenylether	19.01	204	278717	14.90	ug/L	96
53)	4-Nitroaniline	19.19	138	91257	11.84	ug/L	97
55)	4,6-Dinitro-2-methylphenol	19.25	198	100334	13.23	ug/L	94
56)	n-Nitrosodiphenylamine	19.31	169	446061	15.58	ug/L	98
57)	Azobenzene	19.35	77	729839	12.13	ug/L	98
59)	4-Bromophenyl-phenylether	20.07	248	156631	14.64	ug/L	96
60)	Hexachlorobenzene	20.37	284	149956	12.59	ug/L	96
61)	Pentachlorophenol	20.80	266	70006	11.65	ug/L	99
62)	Phenanthrene	21.07	178	892277	15.23	ug/L	98
63)	Anthracene	21.16	178	885927	14.76	ug/L	98
64)	Di-n-butylphthalate	22.40	149	1178623	16.08	ug/L	99
65)	Fluoranthene	23.58	202	959577	15.43	ug/L	97
68)	Pyrene	24.04	202	989390	15.33	ug/L	96
70)	Butylbenzylphthalate	25.47	149	561840	15.77	ug/L	94
71)	Benzo[a]anthracene	26.50	228	911180	15.18	ug/L	99
73)	Chrysene	26.58	228	857973	15.58	ug/L	98
74)	bis(2-Ethylhexyl)phthalate	26.66	149	789914	16.06	ug/L	100
76)	Di-n-octylphthalate	27.84	149	1282888	14.32	ug/L	99
77)	Benzo[b]fluoranthene	28.71	252	873110	13.37	ug/L	99
78)	Benzo[k]fluoranthene	28.76	252	849913	13.48	ug/L	98
79)	Benzo[a]pyrene	29.49	252	760158	12.55	ug/L	98
80)	Indeno[1,2,3-cd]pyrene	32.99	276	833959	12.84	ug/L	99
81)	Dibenz[a,h]anthracene	33.05	278	706027	14.74	ug/L	98
82)	Benzo[g,h,i]perylene	34.01	276	694724	12.40	ug/L	98

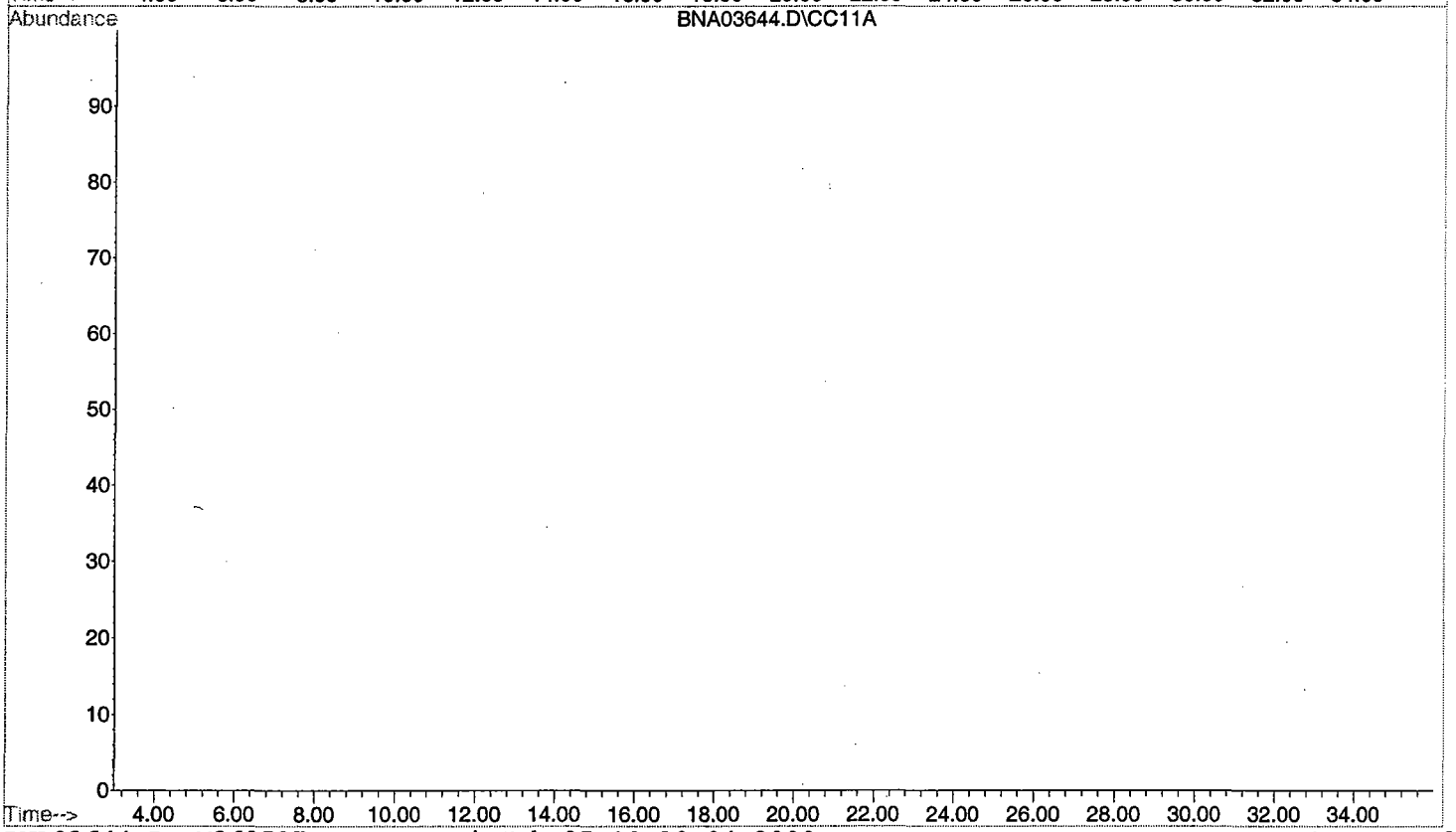
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000218\BNA03644.D Vial: 17
Acq On : 18 Feb 2000 10:57 pm Operator: Bhaskar
Sample : 5175.04MS Inst : GC BNA 2
Misc : 0CW2MW30MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:38 2000 Quant Results File: M262537.RES

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000218\BNA03645.D Vial: 18
Acq On : 18 Feb 2000 11:42 pm Operator: Bhaskar
Sample : 5175.04Dup Inst : GC BNA 2
Misc : 0CW2MW30Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:41 2000 Quant Results File: M262537.RES

Quant Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration
DataAcq Meth : M262537

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.46	152	553007	40.00	ug/L	0.00
19) Naphthalene-d8	13.40	136	2031603	40.00	ug/L	0.00
34) Acenaphthene-d10	17.76	164	1206737	40.00	ug/L	0.00
54) Phenanthrene-d10	21.03	188	1964612	40.00	ug/L	0.00
66) Chrysene-d12	26.54	240	1780129	40.00	ug/L	-0.01
75) Perylene-d12	29.66	264	1806304	40.00	ug/L	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	7.92	112	726760	36.90	ug/L	-0.01
Spiked Amount 100.000	Range 21 - 100		Recovery = 36.90%			
6) Phenol-d5	9.96	99	607829	25.42	ug/L	-0.02
Spiked Amount 100.000	Range 10 - 94		Recovery = 25.42%			
20) Nitrobenzene-d5	11.79	82	753264	30.70	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 61.40%			
38) 2-Fluorobiphenyl	16.15	172	1199187	32.83	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 65.66%			
58) 2,4,6-Tribromophenol	19.59	330	318594	71.60	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 71.60%			
69) p-Terphenyl-d14	24.39	244	1393240	34.49	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 68.98%			
Target Compounds						Qvalue

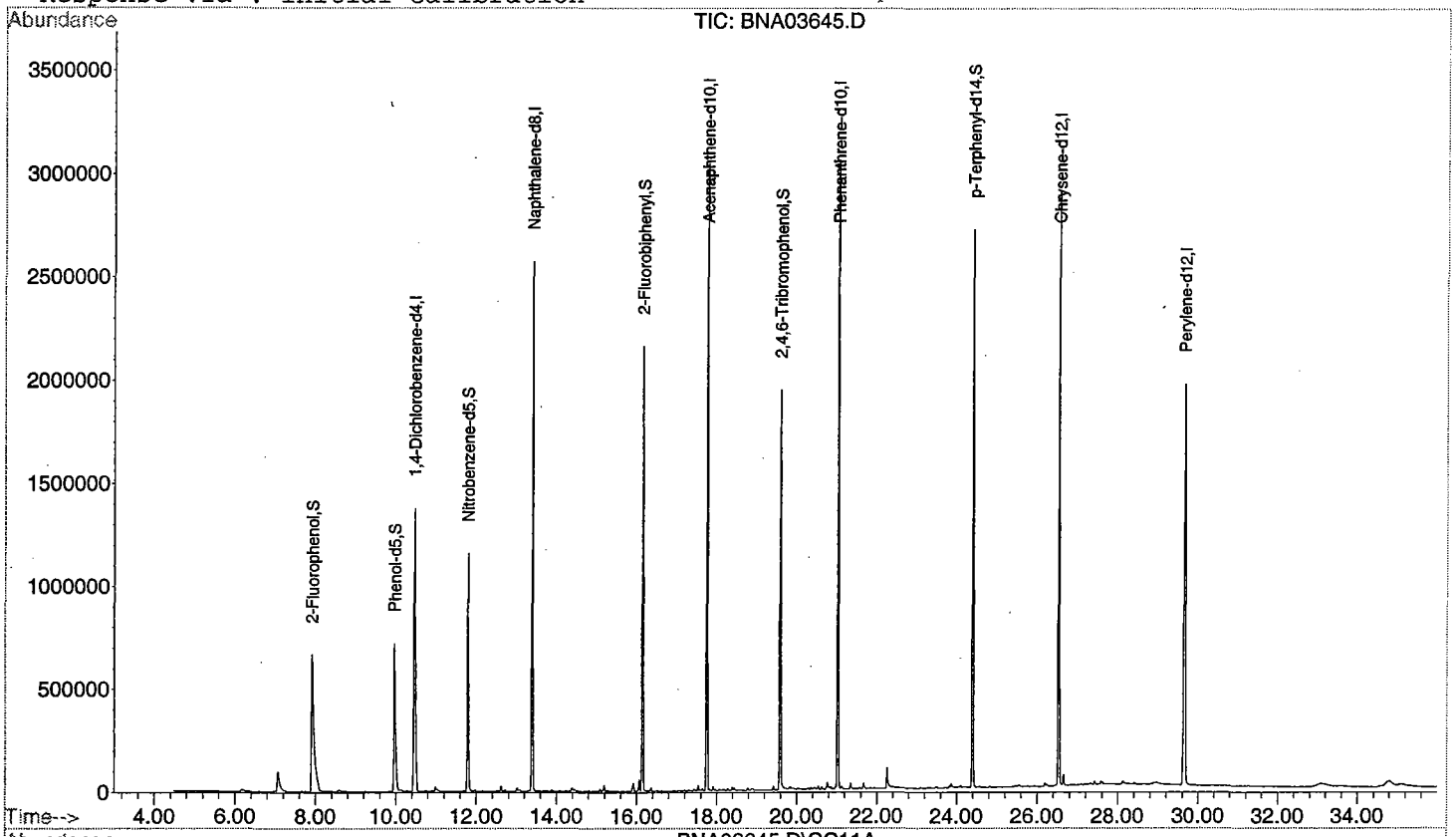
(#) = qualifier out of range (m) = manual integration
BNA03645.D M262537.M Fri Feb 25 10:42:38 2000

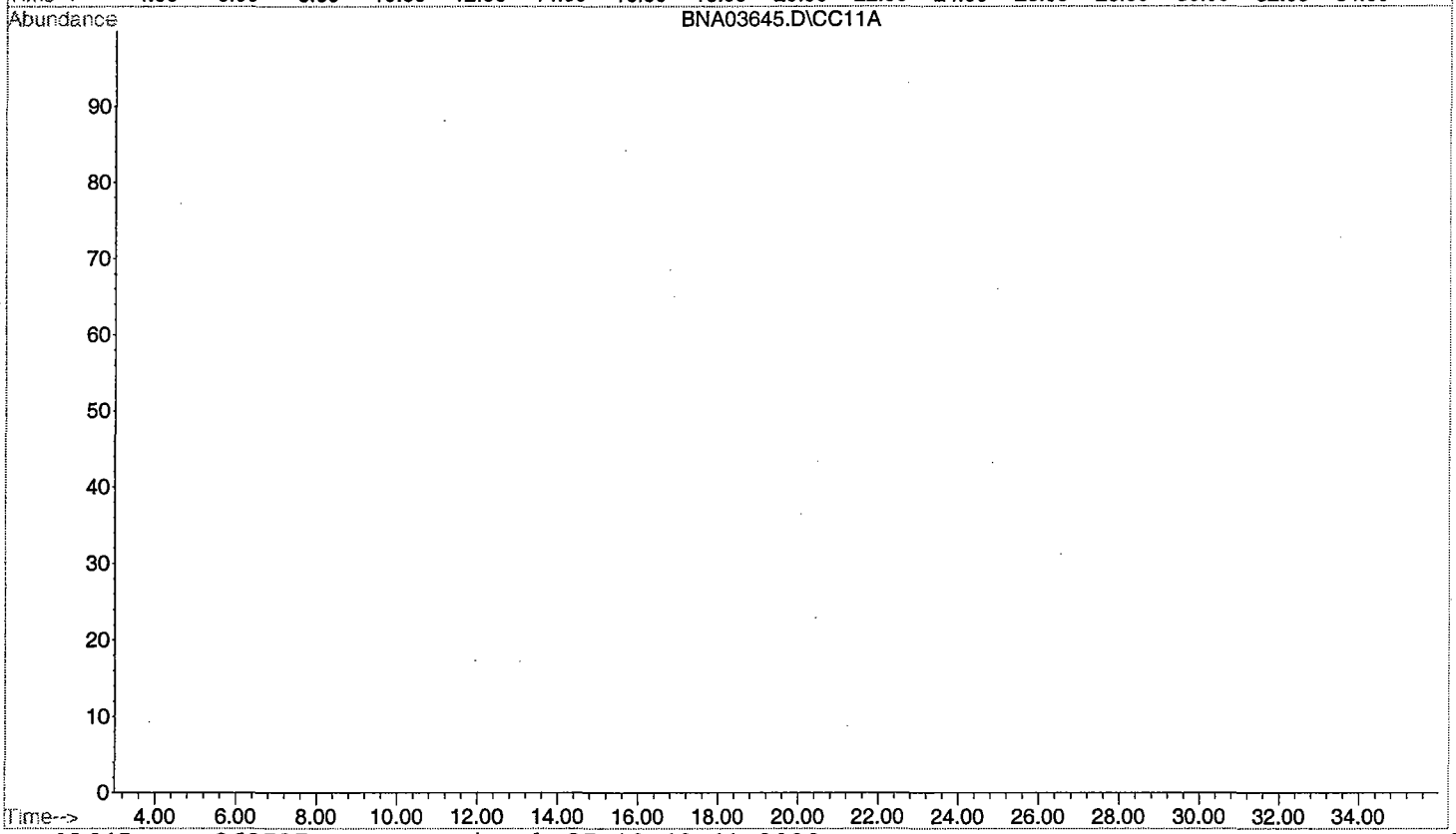
000090

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000218\BNA03645.D Vial: 18
Acq On : 18 Feb 2000 11:42 pm Operator: Bhaskar
Sample : 5175.04Dup Inst : GC BNA 2
Misc : 0CW2MW30Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Feb 25 10:41 2000 Quant Results File: M262537.RES

Method : C:\HPCHEM\1\METHODS\M262537.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 08 14:16:08 2000
Response via : Initial Calibration





LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted ✓
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis NA
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 5/16/00

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

Bldg. 426

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
426-1 4-9'	5262.01	Aqueous	18-Mar-00 10:40	03/20/00

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15

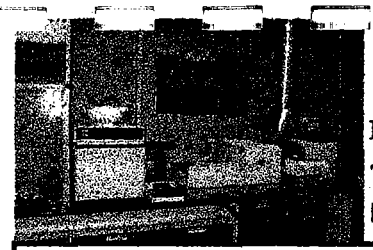
ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

4-28-00

Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D.DESAI
Phone #: X2145
( )DERA (✓)OMA ( )Other:_____
Project No:
Location: BLDG. 426
Samplers Name / Company: MARK LAURA-TVS-PWS 07

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	XYLENE	BN+15						Comments: Remarks / Preservation Method
0262. 1	426-1 4-9'	3-18-00	1040	AQ.	3	X	X	X						HCL C4°C

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	3-20-00 730				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (✓)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (✓)Standard 3 wks, ( )Rush ___ Days, ( )ASAP Verbal ___ Hrs.

Remarks:

print legibly

Coc.xls3/6/00

METHODOLOGY SUMMARY

Methodology Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5-ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/8270
Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5262 Site: Bldg. 426

	Date	Hold Time
Date Sampled	03/18/00	NA
Receipt/Refrigeration	03/18,20/00*	NA
Extractions		
1. Base Neutrals	03/23/00	7 Days
Analyses		
1. Volatile Organics	03/22,23/00	14 Days
2. Base Neutrals	03/24,28/00	40 DDays

* Samples taken on Saturday 03/18/00, and refrigerated.
Received by laboratory on Monday 03/20/00.

CONFORMANCE NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) ____

2. Retention times for chromatograms provided ____

3. GC/MS Tune Specifications

   a. BFB Meet Criteria ____
   b. DFTPP Meet Criteria ____

4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series ____

5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series ____

6. GC/MS Calibration Requirements

   a. Calibration Check Compounds Meet Criteria ____
   b. System Performance Check Compounds Meet Criteria ____

7. Blank Contamination - If yes, List compounds and concentrations in each blank: ____

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

8. Surrogate Recoveries Meet Criteria ____

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

   If not met, were the calculations checked and the results qualified as "estimated"? ____

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria ____
   (If not met, list those compounds and their recoveries, which fall outside the acceptable range)

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

GC/MS Analysis Conformance/Non-Conformance Summary (cont.)

Indicate
Yes,
No,
N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria ____
(If not met, list those compounds, which fall outside the acceptable range)
    a. VOA Fraction_____
    b. B/N Fraction_____
    c. Acid Fraction_____

11. Extraction Holding Time Met ____

If not met, list number of days exceeded for each sample: ___
_____
_____

12. Analysis Holding Time Met ____

If not met, list number of days exceeded for each sample: ___
_____
_____

Additional Comments:
_____
_____
_____

Laboratory Manager : _____ Date: _____

VOLATILES
ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	: Method Detection Limit
J	: Compound Identified Below Detection Limit
B	: Compound is in Both Sample and Blank
D	: Results are from a Dilution of the Sample
U	: Compound Searched for but not Detected
E	: Compound Exceeds Calibration Limit

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VB006250.D**	Sample Name	**Vblk192**
Operator	**Skelton**	Field ID	**Vblk192**
Date Acquired	**22 Mar 2000 7:56 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

4/10/00 2:49 PM

C:\Hpchem\Custrpt\Volatile\624fy99.crt

000012

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.: **Vblk192**

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Vblk192

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006250.D

Level: (low/med) LOW Date Received: 3/20/00

% Moisture: not dec. Date Analyzed: 3/22/00

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VB006274.D**	Sample Name	**5262.01**
Operator	**Skelton**	Field ID	**426-1**
Date Acquired	**23 Mar 2000 12:57 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

4/10/00 2:49 PM

C:\Hpchem\Custrpt\Volatile\624fy99.crt

000014

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. 426-1

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5262.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006274.D

Level: (low/med) LOW Date Received: 3/20/00

% Moisture: not dec. Date Analyzed: 3/23/00

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.:

Lab File ID: VB006244.D BFB Injection Date: 3/22/00

Instrument ID: GCMS#2 BFB Injection Time: 16:10

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	15.2
75	30.0 - 66.0% of mass 95	48.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	77.8
175	4.0 - 9.0% of mass 174	5.6 (7.2)1
176	93.0 - 101.0% of mass 174	75.3 (96.8)1
177	5.0 - 9.0% of mass 176	5.2 (6.9)2

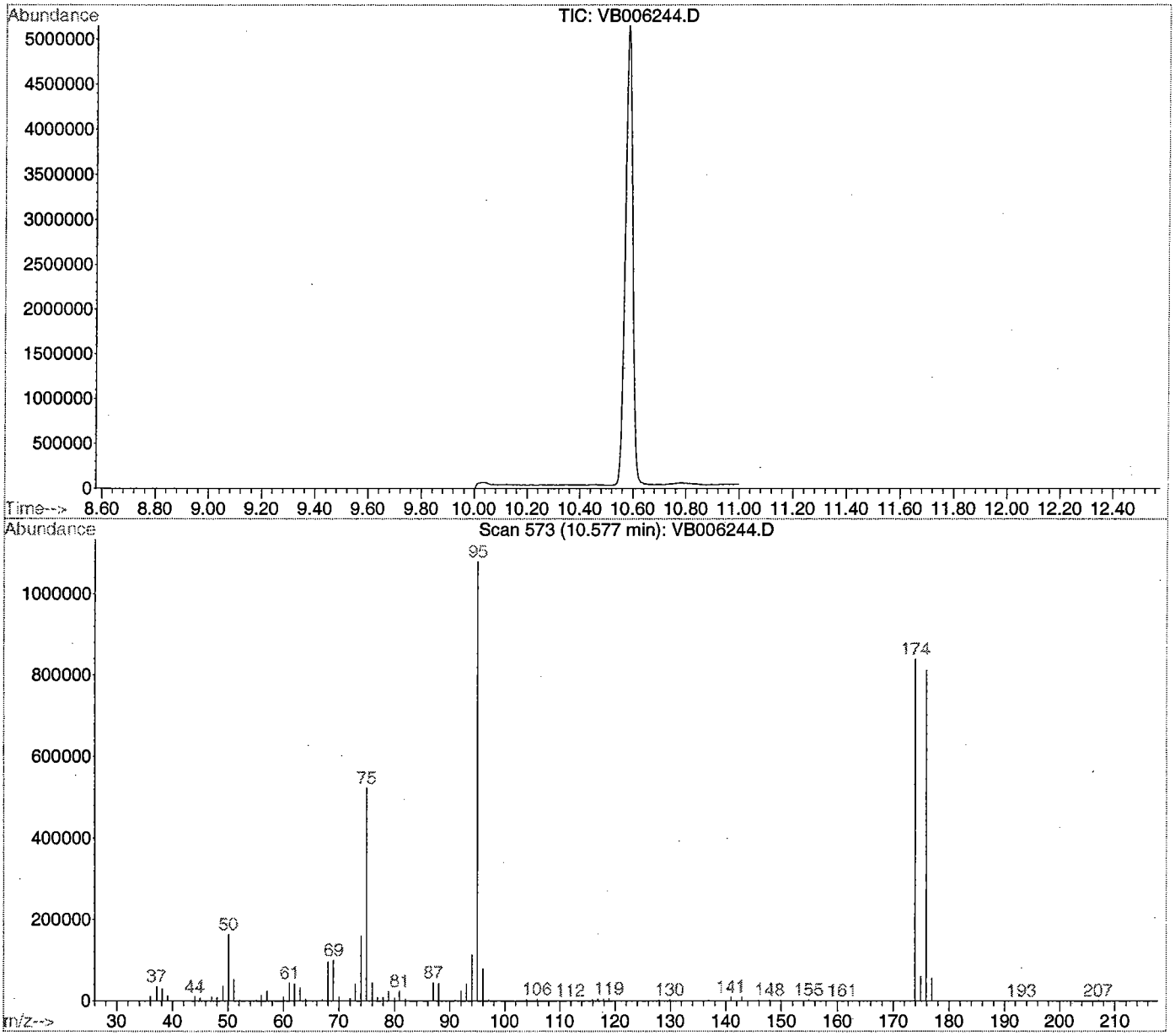
1-Value is % mass 174 2-Value is % mass 176

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD100	VSTD100	VB006245.D	3/22/00	16:39
02	VSTD050	VSTD050	VB006246.D	3/22/00	17:19
03	VSTD020	VSTD020	VB006247.D	3/22/00	17:58
04	VSTD010	VSTD010	VB006248.D	3/22/00	18:37
05	VSTD005	VSTD005	VB006249.D	3/22/00	19:17
06	VBLK192	VBLK192	VB006250.D	3/22/00	19:56
07	426-1	5262.01	VB006274.D	3/23/00	12:57
08	5262.01MS	5262.01MS	VB006275.D	3/23/00	13:36
09	5262.01MSD	5262.01MSD	VB006276.D	3/23/00	14:16

BFB

Data File : C:\HPCHEM\1\DATA\MARCH2000\000322\VB006244.D Vial: 21
Acq On : 22 Mar 2000 4:10 pm Operator: Skelton
Sample : BFB Tune Inst : GC VOA 2
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 573

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	163968	PASS
75	95	30	60	48.4	523456	PASS
95	95	100	100	100.0	1080832	PASS
96	95	5	9	7.3	79296	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	77.8	840640	PASS
175	174	5	9	7.2	60576	PASS
176	174	95	101	96.8	813440	PASS
177	176	5	9	6.9	55744	PASS

VB006244.D M262451.M Fri Apr 21 09:09:10 2000

4A

VOLATILE METHOD BLANK SUMMARY

Lab ID. **Vblk192**

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.:

Lab File ID: VB006250.D Lab Sample ID: Vblk192

Date Analyzed: 3/22/00 Time Analyzed: 19:56

GC Column: RTX502. ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#2

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	426-1	5262.01	VB006274.D	12:57
02	5262.01MS	5262.01MS	VB006275.D	13:36
03	5262.01MSD	5262.01MSD	VB006276.D	14:16

COMMENTS:

Response Factor Report GC VOA 2

Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Mar 23 08:41:09 2000
Response via : Initial Calibration

Calibration Files
50 =VB006246.D 5 =VB006249.D 10 =VB006248.D
20 =VB006247.D 100 =VB006245.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.211	0.346	0.348	0.328	0.283	0.303	19.09
3)	t	Acrylonitrile	0.496	0.837	0.834	0.758	0.605	0.706	21.33
4)	t	tert-Butyl alcohol	0.105	0.172	0.166	0.142	0.040	0.125	43.31
5)	t	Methyl-tert-Butyl eth	3.969	5.735	5.807	5.709	5.138	5.272	14.72
6)	t	Di-isopropyl ether	1.595	1.665	1.724	1.731	1.578	1.659	4.27
7)	T	Dichlorodifluorometha	2.825	3.362	3.463	3.482	2.639	3.154	12.48
8)	TP	Chloromethane	2.123	2.860	2.830	2.683	2.020	2.503	16.03
9)	TC	Vinyl Chloride	2.066	2.527	2.569	2.537	1.996	2.339	12.08
10)	T	Bromomethane	0.726	1.218	1.244	1.196	0.942	1.065	21.13
11)	T	Chloroethane	1.008	1.692	1.717	1.681	1.413	1.502	20.14
12)	T	Trichlorofluoromethan	2.090	3.282	3.350	3.241	2.921	2.977	17.55
13)	MC	1,1-Dichloroethene	2.238	2.924	3.013	2.967	2.601	2.749	11.93
14)	T	Acetone	0.639	0.758	0.710	0.472	0.500	0.616	20.51
15)	T	Carbon Disulfide	3.902	5.314	5.668	5.752	5.528	5.233	14.57
16)	T	Methylene Chloride	1.426	2.873	2.622	2.444	2.040	2.281	24.82
17)	T	trans-1,2-Dichloroeth	1.923	2.759	2.778	2.739	2.406	2.521	14.58
18)	TP	1,1-Dichloroethane	3.085	3.419	3.453	3.420	3.034	3.282	6.23
19)	T	Vinyl Acetate	2.792	2.834	3.207	3.271	2.980	3.017	7.15
20)	T	2-Butanone	0.645	0.876	0.870	0.714	0.688	0.758	14.16
21)	T	cis-1,2-Dichloroethen	2.485	2.736	2.737	2.715	2.450	2.625	5.50
22)	TC	Chloroform	3.061	3.421	3.403	3.399	2.990	3.255	6.48
23)	T	1,1,1-Trichloroethane	2.704	2.814	2.886	2.905	2.656	2.793	3.94
24)	T	Carbon Tetrachloride	2.211	2.111	2.222	2.266	2.210	2.204	2.57
25)	S	1,2-Dichloroethane-d4	1.883	2.164	2.083	2.012	1.877	2.004	6.24
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.099	1.202	1.245	1.212	1.016	1.155	8.22
28)	T	1,2-Dichloroethane	0.364	0.407	0.414	0.399	0.364	0.390	6.21
29)	TM	Trichloroethene	0.311	0.302	0.316	0.318	0.302	0.310	2.42
30)	TC	1,2-Dichloropropane	0.277	0.299	0.312	0.301	0.269	0.292	6.07
31)	T	Bromodichloromethane	0.345	0.333	0.349	0.351	0.350	0.346	2.12
32)	T	2-Chloroethyl vinyl e	0.098	0.110	0.112	0.108	0.099	0.105	6.12
33)	T	cis-1,3-Dichloroprope	0.443	0.425	0.451	0.461	0.441	0.444	2.94
34)	T	4-Methyl-2-Pentanone	0.106	0.106	0.113	0.106	0.110	0.108	3.08
35)	S	Toluene-d8	1.076	1.094	1.111	1.088	1.072	1.088	1.41
36)	TCM	Toluene	1.170	1.284	1.341	1.305	1.045	1.229	9.85
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.558	1.468	1.547	1.587	1.570	1.546	2.99
39)	T	1,1,2-Trichloroethane	0.989	1.011	1.025	1.027	0.993	1.009	1.77
40)	T	Tetrachloroethene	1.105	1.078	1.117	1.123	1.081	1.101	1.85
41)	T	2-Hexanone	0.562	0.589	0.617	0.536	0.554	0.572	5.52
42)	T	Dibromochloromethane	0.880	0.712	0.764	0.815	0.949	0.824	11.34
43)	TMP	Chlorobenzene	2.978	3.182	3.280	3.203	2.748	3.078	7.01
44)	TC	Ethylbenzene	4.836	5.359	5.576	5.423	4.176	5.074	11.32
45)	T	m+p-Xylenes	1.846	1.973	2.054	2.025	1.657	1.911	8.52
46)	T	o-Xylene	3.882	4.157	4.307	4.221	3.481	4.010	8.37
47)	T	Styrene	3.126	3.080	3.322	3.319	2.881	3.146	5.85
48)	TP	Bromoform	0.502	0.349	0.382	0.418	0.596	0.449	22.20
49)	S	Bromofluorobenzene	1.590	1.607	1.611	1.586	1.577	1.594	0.88
50)	TP	1,1,2,2-Tetrachloroet	1.335	1.363	1.428	1.370	1.343	1.368	2.67
51)	T	1,3-Dichlorobenzene	2.118	2.123	2.203	2.216	2.024	2.137	3.63
52)	T	1,4-Dichlorobenzene	2.167	2.194	2.255	2.254	2.058	2.186	3.70
53)	T	1,2-Dichlorobenzene	2.090	2.096	2.172	2.170	1.995	2.105	3.46

(#) = Out of Range

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.: _____

	Lab ID.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	VBLK192	80	97	93	0
02	426-1	105	102	99	0
03	5262.01MS	104	103	100	0
04	5262.01MSD	103	103	102	0

QC LIMITS

SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(80-115)
SMC3	BFB	=	Bromofluorobenzene	(80-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VB006275.D**	Sample Name	**5262.01MS**
Date Acquired	**23-Mar-00**	Field ID	**5262.01MS**

Compound Name	Amount Added ug/L	Result ul/L	Percent Recovered
Acrolein	200	182.59	91.3
Acrylonitrile	200	201.56	100.8
tert-Butyl alcohol	200	226.67	113.3
Methyl-tert-Butyl ether	20	16.20	81.0
Di-isopropyl ether	20	14.48	72.4
Dichlorodifluoromethane	20	15.42	77.1
Chloromethane	20	17.19	85.9
Vinyl Chloride	20	16.16	80.8
Bromomethane	20	13.03	65.1
Chloroethane	20	16.91	84.5
Trichlorofluoromethane	20	15.52	77.6
1,1-Dichloroethene	20	17.66	88.3
Acetone	20	24.25	121.2
Carbon Disulfide	20	14.71	73.6
Methylene Chloride	20	16.42	82.1
trans-1,2-Dichloroethene	20	17.50	87.5
1,1-Dichloroethane	20	17.50	87.5
Vinyl Acetate	20	20.96	104.8
2-Butanone	20	21.40	107.0
cis-1,2-Dichloroethene	20	17.52	87.6
Chloroform	20	15.41	77.1
1,1,1-Trichloroethane	20	14.67	73.4
Carbon Tetrachloride	20	13.80	69.0
Benzene	20	15.29	76.4
1,2-Dichloroethane	20	17.77	88.8
Trichloroethene	20	12.92	64.6
1,2-Dichloropropane	20	16.90	84.5
Bromodichloromethane	20	15.05	75.3
2-Chloroethyl vinyl ether	20	17.22	86.1
cis-1,3-Dichloropropene	20	15.45	77.3
4-Methyl-2-Pentanone	20	18.02	90.1
Toluene	20	14.79	74.0
trans-1,3-Dichloropropene	20	15.02	75.1
1,1,2-Trichloroethane	20	13.72	68.6
Tetrachloroethene	20	11.95	59.8
2-Hexanone	20	20.08	100.4
Dibromochloromethane	20	12.90	64.5
Chlorobenzene	20	13.47	67.3
Ethylbenzene	20	14.82	74.1
m+p-Xylenes	40	27.98	69.9
o-Xylene	20	14.90	74.5
Styrene	20	13.66	68.3
Bromoform	20	12.25	61.3
1,1,2,2-Tetrachloroethane	20	14.89	74.5
1,3-Dichlorobenzene	20	13.15	65.8
1,4-Dichlorobenzene	20	12.79	63.9
1,2-Dichlorobenzene	20	12.76	63.8

Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VB006276.D**	Sample Name	**5262.01MSD**
Date Acquired	**23-Mar-00**	Field ID	**5262.01MSD**

Compound Name	Amount Added ug/L	Result ul/L	Percent Recovered
Acrolein	200	169.48	84.7
Acrylonitrile	200	182.85	91.4
tert-Butyl alcohol	200	205.34	102.7
Methyl-tert-Butyl ether	20	15.08	75.4
Di-isopropyl ether	20	13.29	66.5
Dichlorodifluoromethane	20	13.97	69.8
Chloromethane	20	15.55	77.8
Vinyl Chloride	20	14.85	74.3
Bromomethane	20	12.86	64.3
Chloroethane	20	15.49	77.5
Trichlorofluoromethane	20	14.20	71.0
1,1-Dichloroethene	20	16.18	80.9
Acetone	20	21.85	109.2
Carbon Disulfide	20	13.53	67.6
Methylene Chloride	20	15.21	76.1
trans-1,2-Dichloroethene	20	15.94	79.7
1,1-Dichloroethane	20	15.79	78.9
Vinyl Acetate	20	19.36	96.8
2-Butanone	20	19.62	98.1
cis-1,2-Dichloroethene	20	15.94	79.7
Chloroform	20	14.04	70.2
1,1,1-Trichloroethane	20	13.50	67.5
Carbon Tetrachloride	20	12.81	64.1
Benzene	20	14.05	70.2
1,2-Dichloroethane	20	16.21	81.1
Trichloroethene	20	11.88	59.4
1,2-Dichloropropane	20	15.40	77.0
Bromodichloromethane	20	13.81	69.0
2-Chloroethyl vinyl ether	20	15.93	79.7
cis-1,3-Dichloropropene	20	14.16	70.8
4-Methyl-2-Pentanone	20	16.45	82.2
Toluene	20	13.54	67.7
trans-1,3-Dichloropropene	20	14.08	70.4
1,1,2-Trichloroethane	20	12.73	63.6
Tetrachloroethene	20	11.03	55.2
2-Hexanone	20	18.62	93.1
Dibromochloromethane	20	12.09	60.5
Chlorobenzene	20	12.54	62.7
Ethylbenzene	20	13.77	68.8
m+p-Xylenes	40	25.94	64.9
o-Xylene	20	13.80	69.0
Styrene	20	12.78	63.9
Bromoform	20	11.42	57.1
1,1,2,2-Tetrachloroethane	20	13.67	68.3
1,3-Dichlorobenzene	20	11.69	58.5
1,4-Dichlorobenzene	20	11.88	59.4
1,2-Dichlorobenzene	20	11.85	59.2

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5262 Location: 426 SDG No.:

Lab File ID (Standard): VB006247.D Date Analyzed: 3/22/00

Instrument ID: GCMS#2 Time Analyzed: 17:58

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	646761	16.93	4323506	19.62	1170757	27.46
	UPPER LIMIT	1293522	17.43	8647012	20.12	2341514	27.96
	LOWER LIMIT	323381	16.43	2161753	19.12	585379	26.96
	Lab ID.						
01	VBLK192	585566	16.93	3973657	19.62	1073144	27.46
02	426-1	429177	16.93	3213188	19.62	904701	27.46
03	5262.01MS	431978	16.93	3189196	19.62	928136	27.46
04	5262.01MSD	431355	16.93	3180555	19.62	911355	27.46

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

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\MARCH2000\000322\VB006250.D Vial: 6
Acq On : 22 Mar 2000 7:56 pm Operator: Skelton
Sample : Vblk192 Inst : GC VOA 2
Misc : Vblk192 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 11:42 2000 Quant Results File: M262451.RES

Quant Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Mar 23 08:41:09 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000322\VB006262.D
DataAcq Meth : M262450

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.93	128	585566	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.62	114	3973657	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.46	119	1073144	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.52	65	1308448	24.06	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 80.20%			
35) Toluene-d8	23.63	98	4426740	29.07	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 96.90%			
49) Bromofluorobenzene	30.47	95	1736200	27.82	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 92.73%			

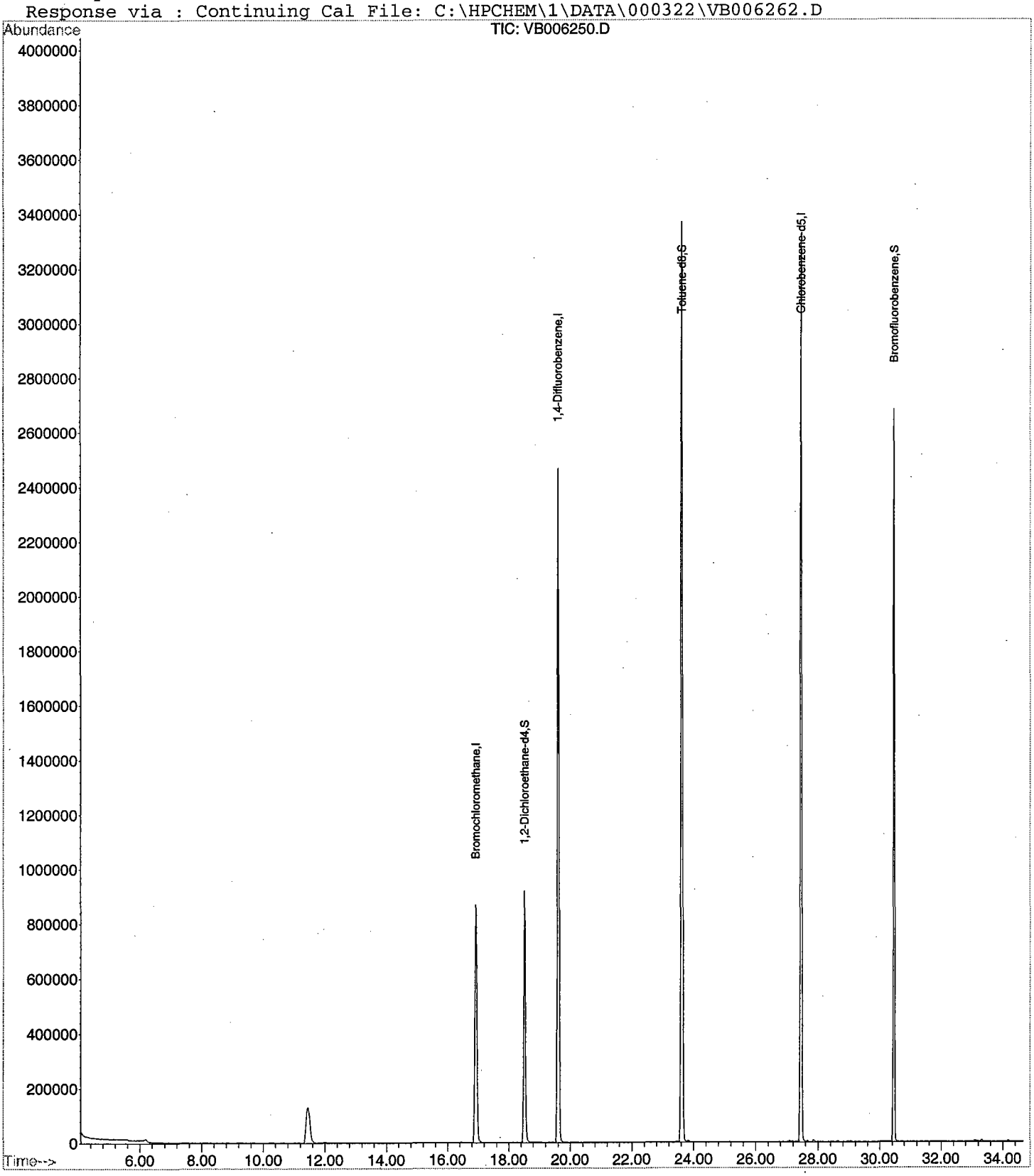
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\MARCH2000\000322\VB006250.D Vial: 6
Acq On : 22 Mar 2000 7:56 pm Operator: Skelton
Sample : Vblk192 Inst : GC VOA 2
Misc : Vblk192 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 11:42 2000 Quant Results File: M262451.RES

Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Mar 23 08:41:09 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000322\VB006262.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\MARCH2000\000322\VB006274.D Vial: 30
Acq On : 23 Mar 2000 12:57 pm Operator: Skelton
Sample : 5262.01 Inst : GC VOA 2
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 10 14:48 2000 Quant Results File: M262451.RES

Quant Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Mar 23 08:41:09 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000322\VB006262.D
DataAcq Meth : M262451

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.93	128	429177	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.62	114	3213188	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.46	119	904701	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.52	65	1254693	31.47	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 104.90%			
35) Toluene-d8	23.63	98	3771604	30.63	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 102.10%			
49) Bromofluorobenzene	30.46	95	1558833	29.63	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 98.77%			

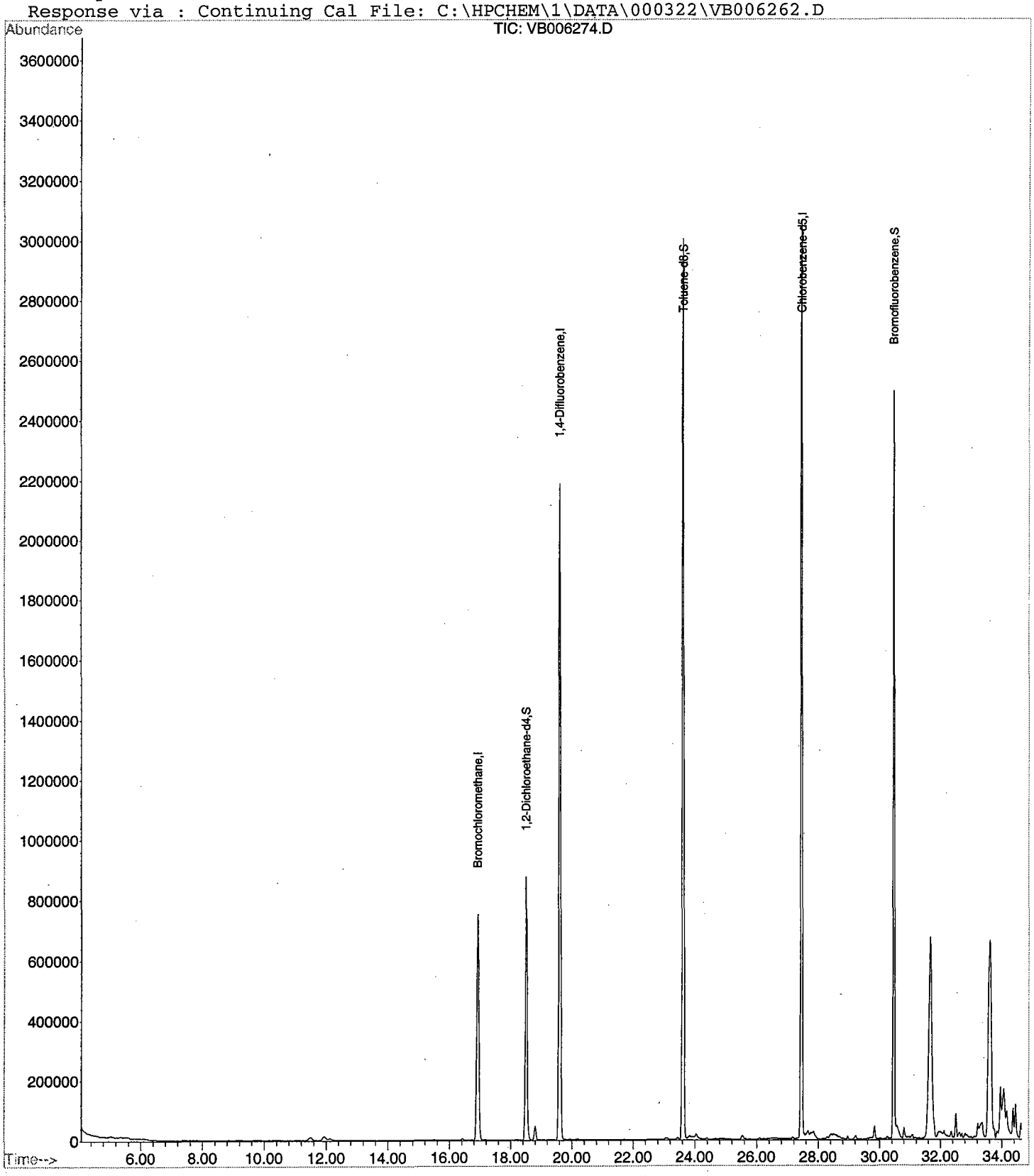
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\MARCH2000\000322\VB006274.D Vial: 30
Acq On : 23 Mar 2000 12:57 pm Operator: Skelton
Sample : 5262.01 Inst : GC VOA 2
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 10 14:48 2000 Quant Results File: M262451.RES

Method : C:\HPCHEM\1\METHODS\M262451.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu Mar 23 08:41:09 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000322\VB006262.D



BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03761.D**	Sample Name	**Sblk357**
Operator	**Bhaskar**	Misc Info	**Sblk357**
Date Acquired	**24-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03761.D**	Sample Name	**Sblk357**
Operator	**Bhaskar**	Misc Info	**Sblk357**
Date Acquired	**24-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Sblk357**

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Sblk357

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03761.D

Level: (low/med) LOW Date Received: 3/20/00

% Moisture: decanted: (Y/N) N Date Extracted: 3/23/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 3/24/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.03	5	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03770.D**	Sample Name	**5262.01**
Operator	**Bhaskar**	Misc Info	**426-1**
Date Acquired	**28-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
108-95-2	Phenol			not detected	4000	0.82	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
95-57-8	2-Chlorophenol			not detected	40	2.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	1.17	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.35	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	1.92	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	2.62	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	1.33	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.75	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	1.39	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	1.78	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	1.28	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.44	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.06	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03770.D**	Sample Name	**5262.01**
Operator	**Bhaskar**	Misc Info	**426-1**
Date Acquired	**28-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	1.98	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.42	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 426-1

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5962.01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03770.D

Level: (low/med) LOW Date Received: 3/20/00

% Moisture: decanted: (Y/N) N Date Extracted: 3/23/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 3/28/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.03	5	J
2. 000582-16-1	Naphthalene, 2,7-dimethyl-	16.89	4	JN
3. 054105-67-8	Heptadecane, 2,6-dimethyl-	19.85	4	JN

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID: BNA03649.D DFTPP Injection Date: 2/29/00

Instrument ID: BNA#2 DFTPP Injection Time: 8:54

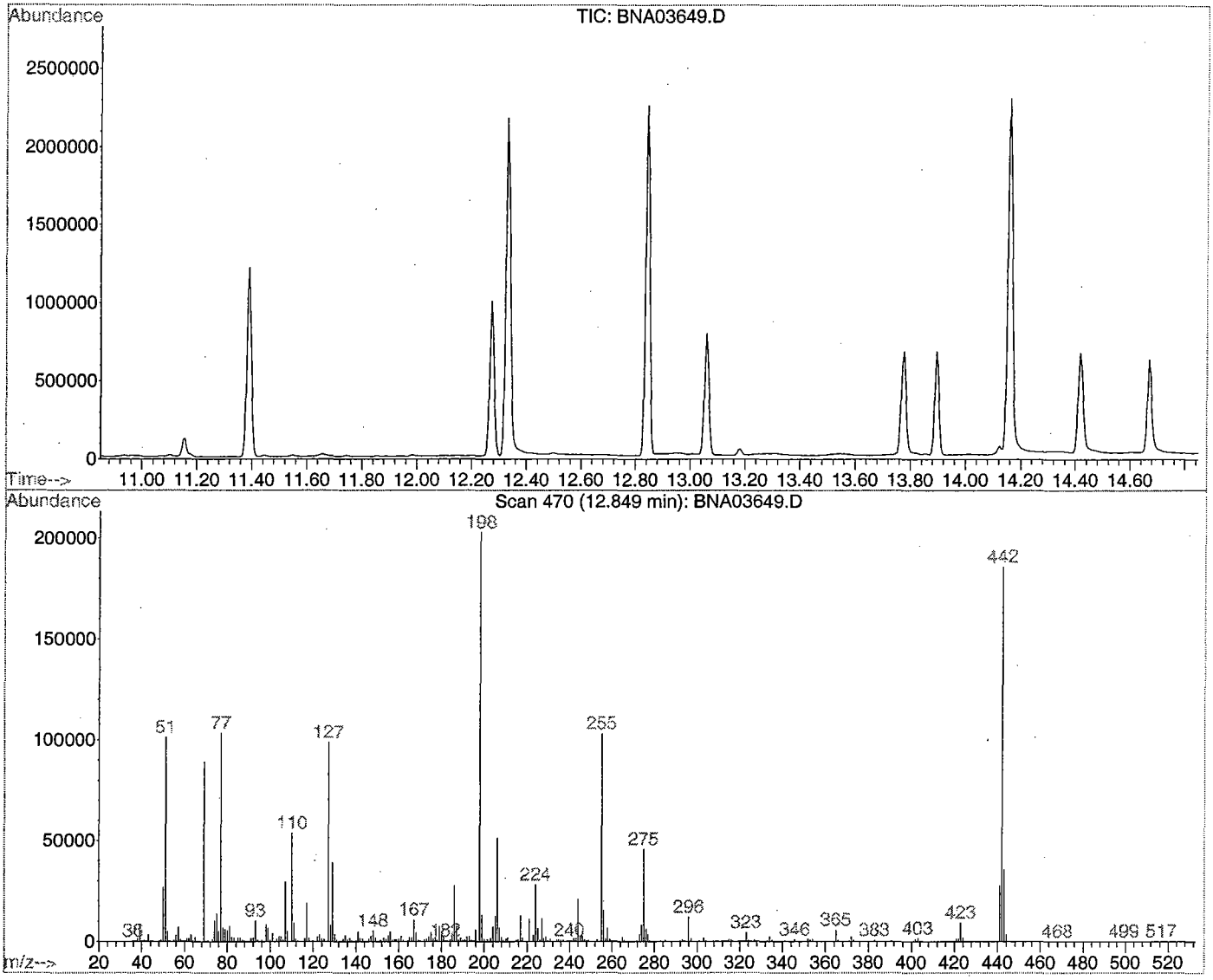
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	49.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	43.9
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	48.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 0.75% of mass 198	2.8
441	Present, but less than mass 443	13.6
442	40.0 - 110.0% of mass 198	91.5
443	15.0 - 24.0% of mass 442	17.5 (19.1)2

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

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	SSTD120	BNA03650.D	2/29/00	9:23
02	SSTD080	SSTD080	BNA03651.D	2/29/00	10:13
03	SSTD050	SSTD050	BNA03652.D	2/29/00	11:04
04	SSTD020	SSTD020	BNA03653.D	2/29/00	11:53
05	SSTD010	SSTD010	BNA03654.D	2/29/00	12:40

Data File : C:\HPCHEM\1\DATA\000229\BNA03649.D Vial: 99
Acq On : 29 Feb 2000 8:54 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.9	101312	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.9	89144	PASS
70	69	0.00	2	0.6	567	PASS
127	198	40	60	48.6	98688	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	203136	PASS
199	198	5	9	6.4	12977	PASS
275	198	10	30	22.5	45712	PASS
365	198	1	100	2.8	5680	PASS
441	443	1	99	77.8	27624	PASS
442	198	40	100	91.5	185856	PASS
443	442	17	23	19.1	35520	PASS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID: BNA03721.D DFTPP Injection Date: 3/23/00

Instrument ID: BNA#2 DFTPP Injection Time: 8:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	54.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	25.0 - 75.0% of mass 198	52.4
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	6.8
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 0.75% of mass 198	2.8
441	Present, but less than mass 443	13.0
442	40.0 - 110.0% of mass 198	88.1
443	15.0 - 24.0% of mass 442	17.1 (19.4)2

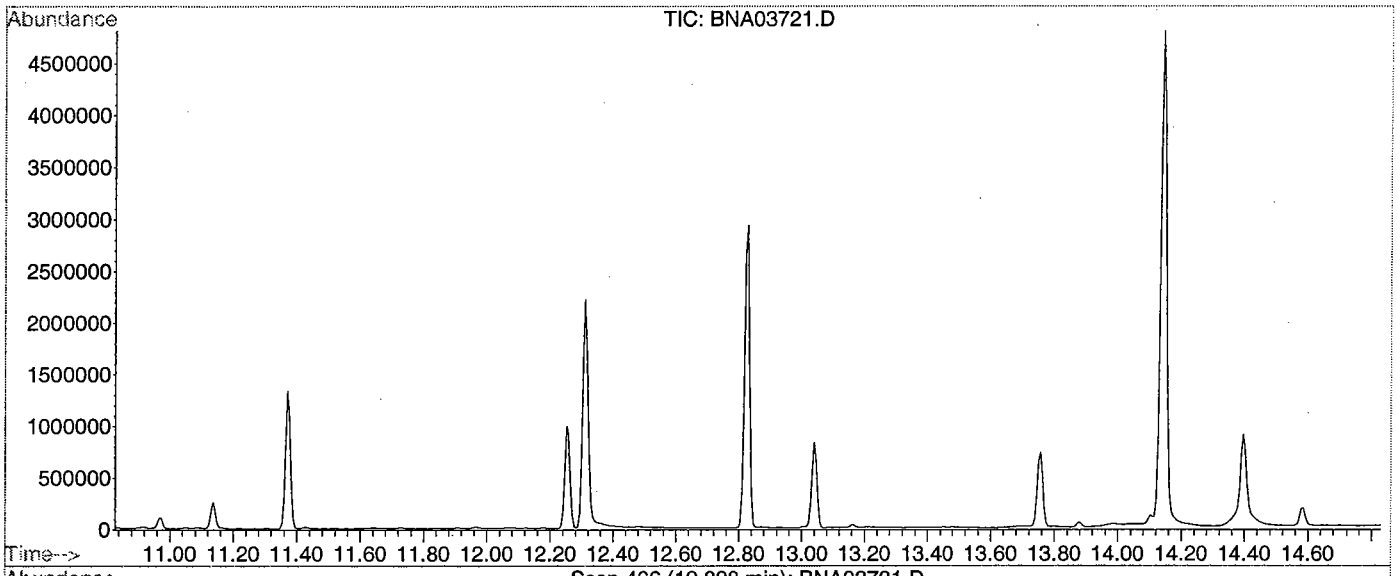
1-Value is % mass 69 2-Value is % mass 442

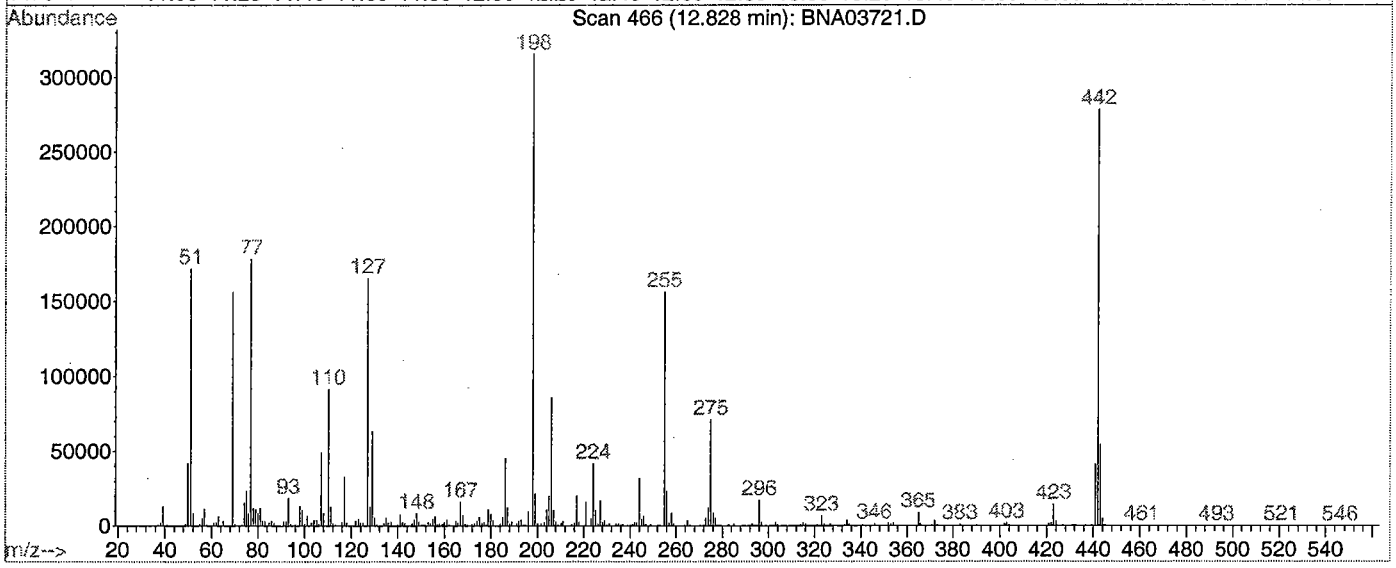
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	DAILY CAL	BNA03722.D	3/23/00	8:33
02	5244.09MS	5244.09MS	BNA03733.D	3/23/00	17:31
03	5244.09DUP	5244.09DUP	BNA03734.D	3/23/00	18:19

Data File : C:\HPCHEM\1\DATA\000323\BNA03721.D
Acq On : 23 Mar 2000 8:06 am
Sample : DFTPP TUNE
Misc : 50 NG/2UL
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration

Vial: 99
Operator: Bhaskar
Inst : GC BNA 2
Multiplr: 1.00





Spectrum Information: Scan 466

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.4	171904	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	49.4	156224	PASS
70	69	0.00	2	0.7	1158	PASS
127	198	40	60	52.4	165504	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	316096	PASS
199	198	5	9	6.8	21496	PASS
275	198	10	30	22.5	71024	PASS
365	198	1	100	2.8	8828	PASS
441	443	1	99	75.9	41040	PASS
442	198	40	100	88.1	278400	PASS
443	442	17	23	19.4	54096	PASS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID: BNA03753.D DFTPP Injection Date: 3/24/00

Instrument ID: BNA#2 DFTPP Injection Time: 13:37

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	56.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	53.1
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	6.5
275	10.0 - 30.0% of mass 198	21.9
365	Greater than 0.75% of mass 198	2.5
441	Present, but less than mass 443	12.5
442	40.0 - 110.0% of mass 198	81.6
443	15.0 - 24.0% of mass 442	16.1 (19.7)2

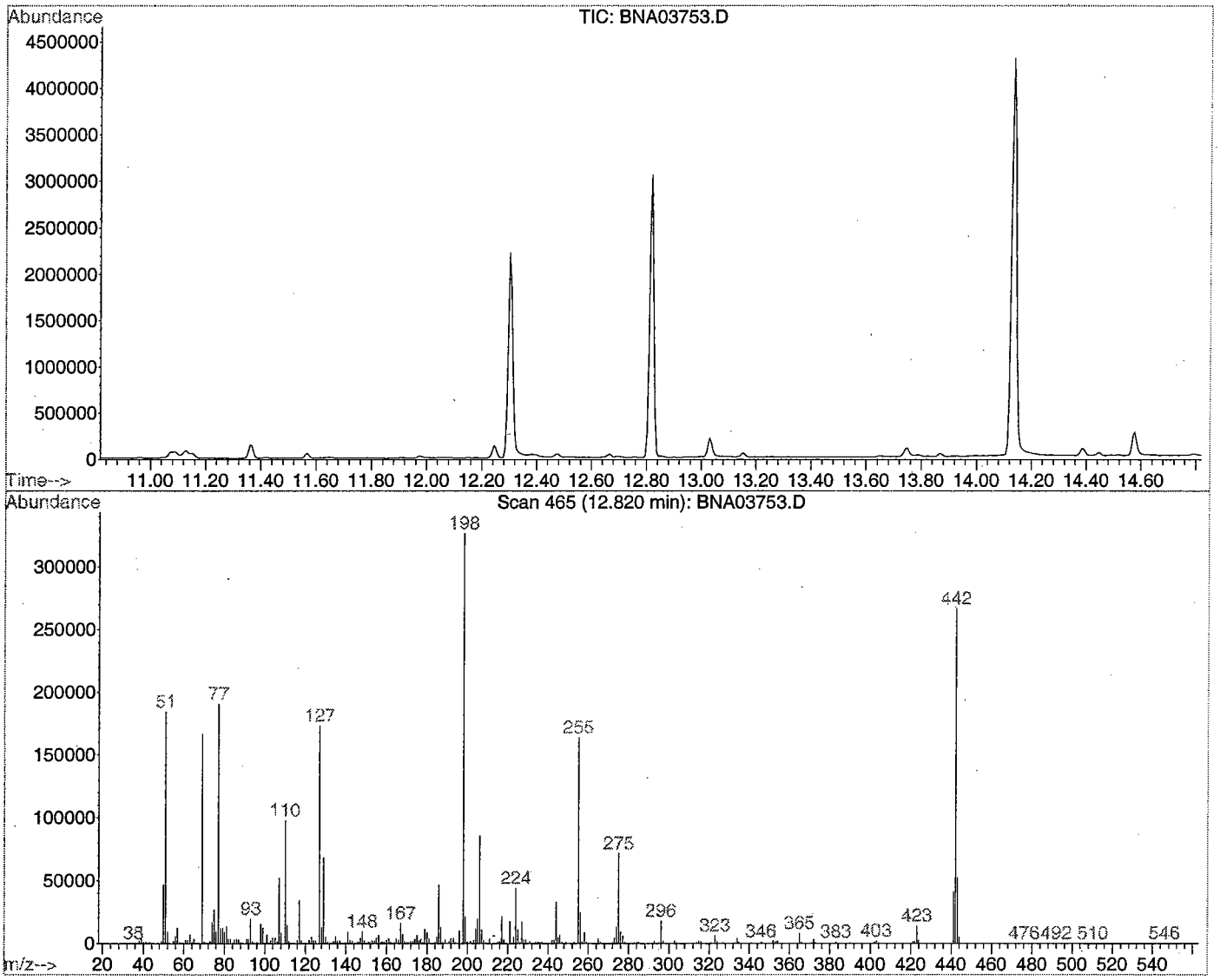
1-Value is % mass 69 2-Value is % mass 442

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	DAILY CAL	BNA03754.D	3/24/00	14:04
02	SBLK357	SBLK357	BNA03761.D	3/24/00	19:48

CLP

Data File : C:\HPCHEM\1\DATA\000324\BNA03753.D Vial: 99
Acq On : 24 Mar 2000 1:37 pm Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 465

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	56.4	184256	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.0	166464	PASS
70	69	0.00	2	0.6	1047	PASS
127	198	40	60	53.1	173376	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	326720	PASS
199	198	5	9	6.5	21120	PASS
275	198	10	30	21.9	71488	PASS
365	198	1	100	2.5	8110	PASS
441	443	1	99	78.2	41000	PASS
442	198	40	100	81.6	266688	PASS
443	442	17	23	19.7	52448	PASS

BNA03753.D M262538.M Wed Apr 05 13:39:57 2000

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID: BNA03767.D DFTPP Injection Date: 3/28/00

Instrument ID: BNA#2 DFTPP Injection Time: 14:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	53.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	48.0
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	25.0 - 75.0% of mass 198	51.0
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	6.5
275	10.0 - 30.0% of mass 198	22.2
365	Greater than 0.75% of mass 198	2.6
441	Present, but less than mass 443	13.9
442	40.0 - 110.0% of mass 198	95.0
443	15.0 - 24.0% of mass 442	18.1 (19.0)2

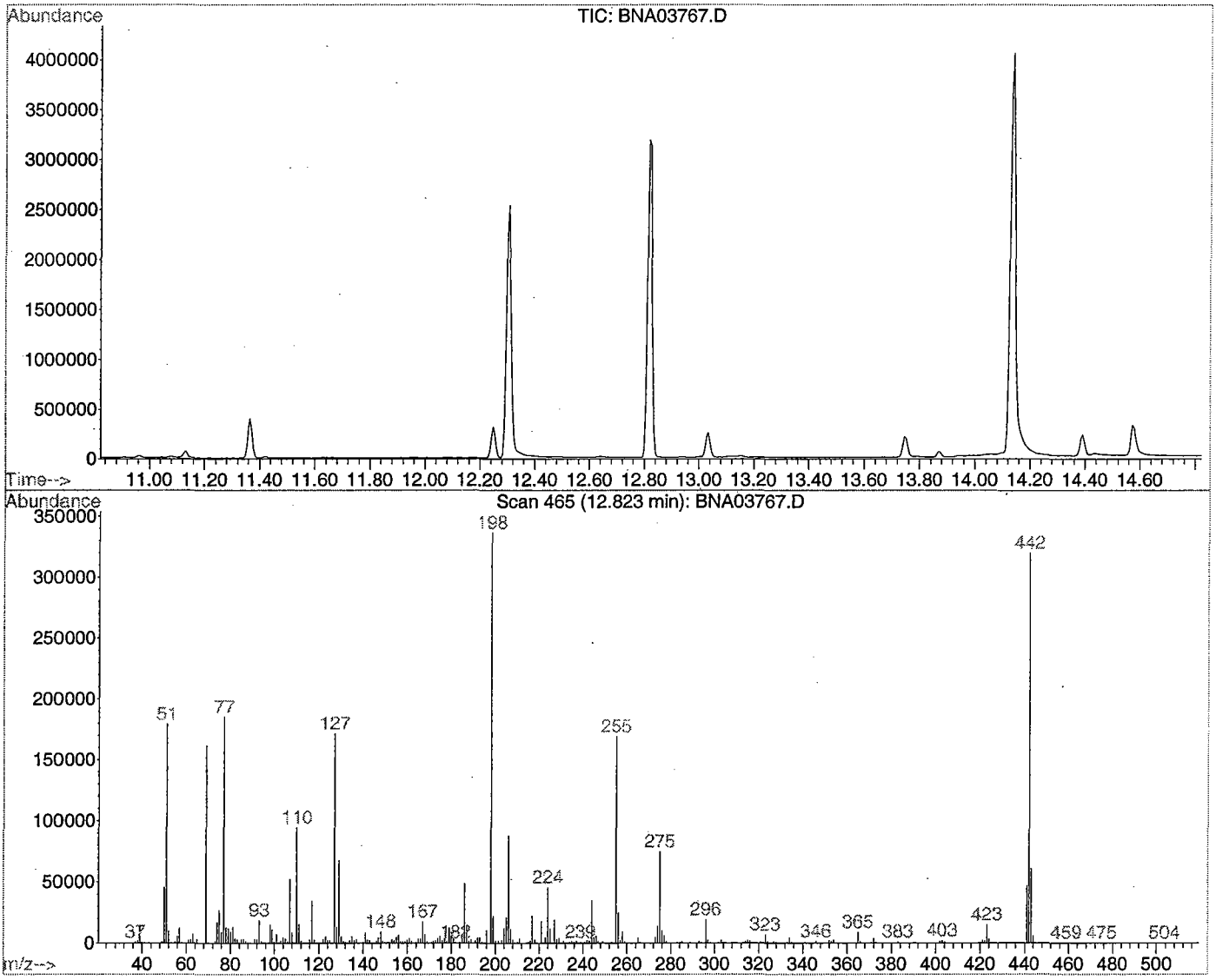
1-Value is % mass 69 2-Value is % mass 442

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	DAILY CAL	BNA03768.D	3/28/00	15:19
02	426-1	5962.01	BNA03770.D	3/28/00	16:56

CLP

Data File : C:\HPCHEM\1\DATA\000328\BNA03767.D Vial: 99
Acq On : 28 Mar 2000 2:50 pm Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 465

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.3	179264	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	48.0	161536	PASS
70	69	0.00	2	0.5	802	PASS
127	198	40	60	51.0	171520	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	336576	PASS
199	198	5	9	6.5	21864	PASS
275	198	10	30	22.2	74568	PASS
365	198	1	100	2.6	8822	PASS
441	443	1	99	76.8	46704	PASS
442	198	40	100	95.0	319680	PASS
443	442	17	23	19.0	60784	PASS

000042

4B

FIELD ID

SEMIVOLATILE METHOD BLANK SUMMARY

Sblk357

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID: BNA03761.D Lab Sample ID: Sblk357

Instrument ID: GC BNA 2 Date Extracted: 3/23/00

Matrix: (soil/water) WATER Date Analyzed: 3/24/00

Level: (low/med) LOW Time Analyzed: 19:48

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	426-1	5962.01	BNA03770.D	3/28/00

COMMENTS:

Response Factor Report GC BNA 2

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03650.D 80 =BNA03651.D 50 =BNA03652.D
20 =BNA03653.D 10 =BNA03654.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.694	1.626	1.628	1.613	1.678	1.648	2.18
3)	T	N-nitroso-dimethylami	0.916	0.895	0.891	0.884	0.899	0.897	1.32
4)	S	2-Fluorophenol	1.400	1.376	1.381	1.348	1.345	1.370	1.69
5)	T	Aniline	1.431	1.585	1.465	1.478	1.810	1.554	9.94
6)	S	Phenol-d5	1.667	1.666	1.711	1.697	1.724	1.693	1.53
7)	TCM	Phenol	1.827	1.849	1.885	1.864	1.857	1.856	1.14
8)	T	bis(2-Chloroethyl)eth	1.704	1.727	1.763	1.644	1.644	1.696	3.09
9)	TM	2-Chlorophenol	1.358	1.359	1.377	1.361	1.397	1.370	1.22
10)	T	1,3-Dichlorobenzene	1.719	1.743	1.777	1.800	1.857	1.779	3.00
11)	TCM	1,4-Dichlorobenzene	1.713	1.753	1.795	1.808	1.864	1.787	3.21
12)	T	Benzyl alcohol	0.861	0.894	0.938	0.930	0.945	0.914	3.89
13)	T	1,2-Dichlorobenzene	1.530	1.594	1.660	1.698	1.763	1.649	5.47
14)	T	2-Methylphenol	1.310	1.316	1.354	1.340	1.388	1.342	2.33
15)	T	bis(2-chloroisopropyl	2.106	2.113	2.165	2.163	2.208	2.151	1.94
16)	T	4-Methylphenol	1.236	1.273	1.321	1.307	1.314	1.290	2.75
17)	TPM	n-Nitroso-di-n-propyl	0.272	0.280	0.282	0.282	0.286	0.280	1.80
18)	T	Hexachloroethane	0.632	0.666	0.688	0.702	0.715	0.681	4.78
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.465	0.463	0.480	0.484	0.494	0.477	2.72
21)	T	Nitrobenzene	0.545	0.555	0.581	0.599	0.617	0.579	5.13
22)	T	Isophorone	0.977	0.982	1.034	1.068	1.093	1.031	4.97
23)	TC	2-Nitrophenol	0.198	0.201	0.208	0.207	0.205	0.204	2.08
24)	T	2,4-Dimethylphenol	0.398	0.409	0.432	0.442	0.452	0.426	5.26
25)	T	bis(2-Chloroethoxy)me	0.494	0.499	0.520	0.528	0.546	0.517	4.17
26)	TC	2,4-Dichlorophenol	0.291	0.300	0.317	0.324	0.327	0.312	5.02
27)	T	Benzoic Acid	0.301	0.302	0.299	0.272	0.227	0.280	11.53
28)	TM	1,2,4-Trichlorobenzen	0.362	0.373	0.394	0.410	0.429	0.394	6.92
29)	T	Naphthalene	0.972	1.021	1.091	1.144	1.203	1.086	8.52
30)	T	4-Chloroaniline	0.283	0.311	0.279	0.222	0.336	0.286	14.88
31)	TC	Hexachlorobutadiene	0.197	0.205	0.220	0.235	0.242	0.220	8.71
32)	TCM	4-Chloro-3-methylphen	0.355	0.362	0.381	0.382	0.384	0.373	3.51
33)	T	2-Methylnaphthalene	0.653	0.679	0.717	0.752	0.773	0.715	6.96
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.317	0.323	0.324	0.280	0.225	0.294	14.39
36)	TC	2,4,6-Trichlorophenol	0.347	0.355	0.369	0.378	0.377	0.365	3.74
37)	T	2,4,5-Trichlorophenol	0.371	0.381	0.394	0.391	0.391	0.386	2.48
38)	S	2-Fluorobiphenyl	1.082	1.139	1.203	1.258	1.352	1.207	8.70
39)	T	2-Chloronaphthalene	1.162	1.222	1.294	1.351	1.418	1.289	7.88
40)	T	2-Nitroaniline	0.385	0.389	0.402	0.399	0.398	0.395	1.82
41)	T	Dimethylphthalate	1.271	1.323	1.396	1.460	1.519	1.394	7.18
42)	T	Acenaphthylene	1.574	1.661	1.783	1.881	1.957	1.771	8.82
43)	T	2,6-Dinitrotoluene	0.265	0.272	0.284	0.284	0.283	0.278	3.04
44)	T	3-Nitroaniline	0.223	0.227	0.251	0.248	0.281	0.246	9.53
45)	TCM	Acenaphthene	0.990	1.036	1.093	1.151	1.208	1.095	7.97
46)	TP	2,4-Dinitrophenol	0.181	0.184	0.177	0.129		0.168	15.38
47)	T	Dibenzofuran	1.354	1.425	1.518	1.591	1.673	1.512	8.41
48)	TMP	4-Nitrophenol	0.316	0.318	0.324	0.300	0.277	0.307	6.14
49)	TM	2,4-Dinitrotoluene	0.458	0.472	0.487	0.495	0.504	0.483	3.76
50)	T	Diethylphthalate	1.261	1.346	1.433	1.501	1.574	1.423	8.69
51)	T	Fluorene	1.133	1.203	1.291	1.363	1.420	1.282	9.07
52)	T	4-Chlorophenyl-phenyl	0.553	0.584	0.620	0.652	0.685	0.619	8.46
53)	T	4-Nitroaniline	0.234	0.228	0.244	0.228	0.255	0.238	4.84
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

000044

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03650.D 80 =BNA03651.D 50 =BNA03652.D
20 =BNA03653.D 10 =BNA03654.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.153	0.157	0.160	0.147	0.125	0.149	9.30
56)	TC	n-Nitrosodiphenylamin	0.492	0.524	0.571	0.610	0.634	0.566	10.36
57)	T	Azobenzene	1.147	1.173	1.252	1.227	1.279	1.216	4.49
58)	S	2,4,6-Tribromophenol	0.088	0.089	0.091	0.092	0.091	0.090	2.04
59)	T	4-Bromophenyl-phenyle	0.197	0.203	0.213	0.220	0.224	0.211	5.29
60)	T	Hexachlorobenzene	0.222	0.226	0.238	0.250	0.260	0.239	6.62
61)	TCM	Pentachlorophenol	0.129	0.127	0.130	0.119	0.115	0.124	5.41
62)	T	Phenanthrene	1.014	1.075	1.156	1.257	1.315	1.163	10.69
63)	T	Anthracene	1.040	1.106	1.192	1.276	1.342	1.191	10.29
64)	T	Di-n-butylphthalate	1.232	1.356	1.479	1.614	1.683	1.473	12.51
65)	TC	Fluoranthene	1.086	1.149	1.216	1.316	1.370	1.227	9.49
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.230	0.202	0.183	0.190	0.248	0.211	13.08
68)	TM	Pyrene	1.240	1.284	1.384	1.498	1.567	1.395	9.94
69)	S	p-Terphenyl-d14	0.817	0.829	0.879	0.926	0.965	0.883	7.12
70)	T	Butylbenzylphthalate	0.694	0.719	0.778	0.807	0.818	0.763	7.12
71)	T	Benzo[a]anthracene	1.201	1.235	1.311	1.373	1.431	1.310	7.25
72)	T	3,3'-Dichlorobenzidin	0.360	0.329	0.327	0.379	0.398	0.359	8.70
73)	T	Chrysene	1.094	1.126	1.195	1.268	1.313	1.199	7.72
74)	T	bis(2-Ethylhexyl)phth	0.936	0.998	1.075	1.111	1.124	1.049	7.61
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.658	1.794	1.962	2.026	2.017	1.891	8.49
77)	T	Benzo[b]fluoranthene	1.231	1.307	1.452	1.446	1.487	1.385	7.93
78)	T	Benzo[k]fluoranthene	1.356	1.361	1.321	1.426	1.498	1.392	5.04
79)	TC	Benzo[a]pyrene	1.249	1.262	1.304	1.329	1.366	1.302	3.70
80)	T	Indeno[1,2,3-cd]pyren	1.400	1.395	1.399	1.366	1.364	1.385	1.32
81)	T	Dibenz[a,h]anthracene	1.044	1.039	1.052	1.025	1.024	1.037	1.19
82)	T	Benzo[g,h,i]perylene	1.192	1.190	1.199	1.162	1.166	1.182	1.41

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000324\BNA03754.D Vial: 100
Acq On : 24 Mar 2000 2:04 pm Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	-0.03
2	T	Pyridine	1.648	1.553	5.8	99	-0.04
3	T	N-nitroso-dimethylamine	0.897	0.839	6.5	98	-0.03
4	S	2-Fluorophenol	1.370	1.369	0.1	103	-0.06
5	T	Aniline	1.554	1.872	-20.5	132	-0.04
6	S	Phenol-d5	1.693	1.707	-0.8	103	-0.05
7	TCM	Phenol	1.856	1.892	-1.9	104	-0.05
8	T	bis(2-Chloroethyl)ether	1.696	1.604	5.4	94	-0.03
9	TM	2-Chlorophenol	1.370	1.365	0.4	103	-0.05
10	T	1,3-Dichlorobenzene	1.779	1.770	0.5	103	-0.03
11	TCM	1,4-Dichlorobenzene	1.787	1.781	0.3	103	-0.03
12	T	Benzyl alcohol	0.914	0.973	-6.5	108	-0.03
13	T	1,2-Dichlorobenzene	1.649	1.634	0.9	102	-0.03
14	T	2-Methylphenol	1.342	1.340	0.1	103	-0.05
15	T	bis(2-chloroisopropyl)ether	2.151	2.034	5.4	97	-0.03
16	T	4-Methylphenol	1.290	1.317	-2.1	103	-0.05
17	TPM	n-Nitroso-di-n-propylamine	0.280	0.277	1.1	102	-0.02
18	T	Hexachloroethane	0.681	0.701	-2.9	106	-0.04
19	I	Naphthalene-d8	1.000	1.000	0.0	103	-0.03
20	S	Nitrobenzene-d5	0.477	0.476	0.2	102	-0.03
21	T	Nitrobenzene	0.579	0.579	0.0	103	-0.03
22	T	Isophorone	1.031	1.029	0.2	103	-0.03
23	TC	2-Nitrophenol	0.204	0.202	1.0	100	-0.03
24	T	2,4-Dimethylphenol	0.426	0.439	-3.1	105	-0.04
25	T	bis(2-Chloroethoxy)methane	0.517	0.510	1.4	101	-0.03
26	TC	2,4-Dichlorophenol	0.312	0.314	-0.6	102	-0.05
27	T	Benzoic Acid	0.280	0.300	-7.1	103	-0.03
28	TM	1,2,4-Trichlorobenzene	0.394	0.394	0.0	103	-0.03
29	T	Naphthalene	1.086	1.085	0.1	103	-0.03
30	T	4-Chloroaniline	0.286	0.367	-28.3#	136	-0.04
31	TC	Hexachlorobutadiene	0.220	0.221	-0.5	104	-0.04
32	TCM	4-Chloro-3-methylphenol	0.373	0.383	-2.7	104	-0.05
33	T	2-Methylnaphthalene	0.715	0.715	0.0	103	-0.04
34	I	Acenaphthene-d10	1.000	1.000	0.0	102	-0.03
35	TP	Hexachlorocyclopentadiene	0.294	0.339	-15.3	107	-0.04
36	TC	2,4,6-Trichlorophenol	0.365	0.371	-1.6	103	-0.04
37	T	2,4,5-Trichlorophenol	0.386	0.404	-4.7	105	-0.05
38	S	2-Fluorobiphenyl	1.207	1.218	-0.9	103	-0.03
39	T	2-Chloronaphthalene	1.289	1.296	-0.5	102	-0.03
40	T	2-Nitroaniline	0.395	0.393	0.5	100	-0.03
41	T	Dimethylphthalate	1.394	1.406	-0.9	103	-0.03
42	T	Acenaphthylene	1.771	1.775	-0.2	102	-0.03
43	T	2,6-Dinitrotoluene	0.278	0.287	-3.2	103	-0.03
44	T	3-Nitroaniline	0.246	0.239	2.8	97	-0.04
45	TCM	Acenaphthene	1.095	1.111	-1.5	104	-0.03
46	TP	2,4-Dinitrophenol	0.168	0.162	3.6	93	-0.03
47	T	Dibenzofuran	1.512	1.525	-0.9	103	-0.03
48	TMP	4-Nitrophenol	0.307	0.323	-5.2	102	-0.06
49	TM	2,4-Dinitrotoluene	0.483	0.494	-2.3	104	-0.03
50	T	Diethylphthalate	1.423	1.446	-1.6	103	-0.03
51	T	Fluorene	1.282	1.314	-2.5	104	-0.03
52	T	4-Chlorophenyl-phenylether	0.619	0.627	-1.3	103	-0.03
53	T	4-Nitroaniline	0.238	0.208	12.6	87	-0.03

(#) = Out of Range

000046

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000324\BNA03754.D Vial: 100
Acq On : 24 Mar 2000 2:04 pm Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	98	-0.03
55	T	4,6-Dinitro-2-methylphenol	0.149	0.161	-8.1	99	-0.03
56	TC	n-Nitrosodiphenylamine	0.566	0.576	-1.8	99	-0.03
57	T	Azobenzene	1.216	1.300	-6.9	102	-0.03
58	S	2,4,6-Tribromophenol	0.090	0.094	-4.4	102	-0.03
59	T	4-Bromophenyl-phenylether	0.211	0.215	-1.9	100	-0.03
60	T	Hexachlorobenzene	0.239	0.241	-0.8	100	-0.03
61	TCM	Pentachlorophenol	0.124	0.128	-3.2	97	-0.04
62	T	Phenanthrene	1.163	1.167	-0.3	99	-0.03
63	T	Anthracene	1.191	1.208	-1.4	100	-0.03
64	T	Di-n-butylphthalate	1.473	1.451	1.5	97	-0.03
65	TC	Fluoranthene	1.227	1.144	6.8	93	-0.04
66	I	Chrysene-d12	1.000	1.000	0.0	101	-0.04
67	T	Benzidine	0.211	0.147	30.3#	81	-0.04
68	TM	Pyrene	1.395	1.296	7.1	95	-0.03
69	S	p-Terphenyl-d14	0.883	0.836	5.3	96	-0.03
70	T	Butylbenzylphthalate	0.763	0.739	3.1	96	-0.03
71	T	Benzo[a]anthracene	1.310	1.318	-0.6	101	-0.04
72	T	3,3'-Dichlorobenzidine	0.359	0.339	5.6	105	-0.04
73	T	Chrysene	1.199	1.187	1.0	100	-0.03
74	T	bis(2-Ethylhexyl)phthalate	1.049	1.060	-1.0	100	-0.04
75	I	Perylene-d12	1.000	1.000	0.0	99	-0.06
76	TC	Di-n-octylphthalate	1.891	2.016	-6.6	102	-0.04
77	T	Benzo[b]fluoranthene	1.385	1.509	-9.0	103	-0.05
78	T	Benzo[k]fluoranthene	1.392	1.321	5.1	99	-0.05
79	TC	Benzo[a]pyrene	1.302	1.322	-1.5	100	-0.05
80	T	Indeno[1,2,3-cd]pyrene	1.385	1.360	1.8	96	-0.09
81	T	Dibenz[a,h]anthracene	1.037	1.032	0.5	97	-0.08
82	T	Benzo[g,h,i]perylene	1.182	1.220	-3.2	101	-0.09

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000328\BNA03768.D Vial: 100
Acq On : 28 Mar 2000 3:19 pm Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	-0.04
2	T	Pyridine	1.648	1.571	4.7	94	-0.07
3	T	N-nitroso-dimethylamine	0.897	0.856	4.6	94	-0.03
4	S	2-Fluorophenol	1.370	1.368	0.1	97	-0.06
5	T	Aniline	1.554	1.763	-13.4	117	-0.04
6	S	Phenol-d5	1.693	1.697	-0.2	97	-0.06
7	TCM	Phenol	1.856	1.833	1.2	95	-0.06
8	T	bis(2-Chloroethyl)ether	1.696	1.681	0.9	93	-0.03
9	TM	2-Chlorophenol	1.370	1.353	1.2	96	-0.04
10	T	1,3-Dichlorobenzene	1.779	1.761	1.0	97	-0.03
11	TCM	1,4-Dichlorobenzene	1.787	1.774	0.7	96	-0.03
12	T	Benzyl alcohol	0.914	0.954	-4.4	99	-0.03
13	T	1,2-Dichlorobenzene	1.649	1.633	1.0	96	-0.03
14	T	2-Methylphenol	1.342	1.333	0.7	96	-0.06
15	T	bis(2-chloroisopropyl)ether	2.151	2.076	3.5	94	-0.03
16	T	4-Methylphenol	1.290	1.300	-0.8	96	-0.05
17	TPM	n-Nitroso-di-n-propylamine	0.280	0.274	2.1	95	-0.03
18	T	Hexachloroethane	0.681	0.702	-3.1	100	-0.04
19	I	Naphthalene-d8	1.000	1.000	0.0	96	-0.03
20	S	Nitrobenzene-d5	0.477	0.484	-1.5	97	-0.03
21	T	Nitrobenzene	0.579	0.585	-1.0	97	-0.03
22	T	Isophorone	1.031	1.043	-1.2	97	-0.03
23	TC	2-Nitrophenol	0.204	0.203	0.5	94	-0.03
24	T	2,4-Dimethylphenol	0.426	0.446	-4.7	100	-0.04
25	T	bis(2-Chloroethoxy)methane	0.517	0.511	1.2	95	-0.03
26	TC	2,4-Dichlorophenol	0.312	0.314	-0.6	96	-0.05
27	T	Benzoic Acid	0.280	0.308	-10.0	99	-0.04
28	TM	1,2,4-Trichlorobenzene	0.394	0.393	0.3	96	-0.03
29	T	Naphthalene	1.086	1.087	-0.1	96	-0.03
30	T	4-Chloroaniline	0.286	0.307	-7.3	106	-0.04
31	TC	Hexachlorobutadiene	0.220	0.222	-0.9	97	-0.04
32	TCM	4-Chloro-3-methylphenol	0.373	0.388	-4.0	98	-0.05
33	T	2-Methylnaphthalene	0.715	0.710	0.7	95	-0.04
34	I	Acenaphthene-d10	1.000	1.000	0.0	97	-0.04
35	TP	Hexachlorocyclopentadiene	0.294	0.344	-17.0	104	-0.04
36	TC	2,4,6-Trichlorophenol	0.365	0.365	0.0	96	-0.04
37	T	2,4,5-Trichlorophenol	0.386	0.394	-2.1	97	-0.05
38	S	2-Fluorobiphenyl	1.207	1.200	0.6	97	-0.04
39	T	2-Chloronaphthalene	1.289	1.278	0.9	96	-0.04
40	T	2-Nitroaniline	0.395	0.385	2.5	93	-0.04
41	T	Dimethylphthalate	1.394	1.391	0.2	97	-0.03
42	T	Acenaphthylene	1.771	1.757	0.8	96	-0.03
43	T	2,6-Dinitrotoluene	0.278	0.289	-4.0	99	-0.03
44	T	3-Nitroaniline	0.246	0.188	23.6	73	-0.03
45	TCM	Acenaphthene	1.095	1.089	0.5	97	-0.04
46	TP	2,4-Dinitrophenol	0.168	0.161	4.2	88	-0.03
47	T	Dibenzofuran	1.512	1.506	0.4	97	-0.04
48	TMP	4-Nitrophenol	0.307	0.327	-6.5	98	-0.07
49	TM	2,4-Dinitrotoluene	0.483	0.486	-0.6	97	-0.03
50	T	Diethylphthalate	1.423	1.425	-0.1	97	-0.03
51	T	Fluorene	1.282	1.289	-0.5	97	-0.03
52	T	4-Chlorophenyl-phenylether	0.619	0.613	1.0	96	-0.03
53	T	4-Nitroaniline	0.238	0.216	9.2	86	-0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000328\BNA03768.D Vial: 100
Acq On : 28 Mar 2000 3:19 pm Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	96	-0.04
55	T	4,6-Dinitro-2-methylphenol	0.149	0.152	-2.0	92	-0.03
56	TC	n-Nitrosodiphenylamine	0.566	0.542	4.2	91	-0.04
57	T	Azobenzene	1.216	1.264	-3.9	97	-0.04
58	S	2,4,6-Tribromophenol	0.090	0.091	-1.1	97	-0.04
59	T	4-Bromophenyl-phenylether	0.211	0.211	0.0	95	-0.04
60	T	Hexachlorobenzene	0.239	0.239	0.0	96	-0.03
61	TCM	Pentachlorophenol	0.124	0.132	-6.5	98	-0.04
62	T	Phenanthrene	1.163	1.156	0.6	96	-0.04
63	T	Anthracene	1.191	1.191	0.0	96	-0.04
64	T	Di-n-butylphthalate	1.473	1.467	0.4	96	-0.03
65	TC	Fluoranthene	1.227	1.214	1.1	96	-0.04
66	I	Chrysene-d12	1.000	1.000	0.0	96	-0.04
67	T	Benzidine	0.211	0.153	27.5#	80	-0.04
68	TM	Pyrene	1.395	1.376	1.4	96	-0.04
69	S	p-Terphenyl-d14	0.883	0.872	1.2	95	-0.04
70	T	Butylbenzylphthalate	0.763	0.780	-2.2	96	-0.03
71	T	Benzo[a]anthracene	1.310	1.310	0.0	96	-0.04
72	T	3,3'-Dichlorobenzidine	0.359	0.226	37.0#	66	-0.04
73	T	Chrysene	1.199	1.179	1.7	95	-0.04
74	T	bis(2-Ethylhexyl)phthalate	1.049	1.074	-2.4	96	-0.04
75	I	Perylene-d12	1.000	1.000	0.0	95	-0.05
76	TC	Di-n-octylphthalate	1.891	2.022	-6.9	98	-0.04
77	T	Benzo[b]fluoranthene	1.385	1.399	-1.0	92	-0.04
78	T	Benzo[k]fluoranthene	1.392	1.278	8.2	92	-0.05
79	TC	Benzo[a]pyrene	1.302	1.298	0.3	95	-0.05
80	T	Indeno[1,2,3-cd]pyrene	1.385	1.402	-1.2	95	-0.08
81	T	Dibenz[a,h]anthracene	1.037	1.049	-1.2	95	-0.08
82	T	Benzo[g,h,i]perylene	1.182	1.218	-3.0	96	-0.09

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.: _____

	FIELD ID	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	5244.09MS	75	79	80	0
02	5244.09DUP	70	74	79	0
03	SBLK357	80	81	78	0
04	426-1	80	77	38	0

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(34-112)
S2	2FP	=	2-Fluorobiphenyl	(30-128)
S3	TPL	=	p-Terphenyl-d14	(29-151)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03762.D** Sample Name **Sblk357BS**

Date Acquired **24-Mar-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		6.85 ug/L	34.25
62-75-9	N-nitroso-dimethylamine		5.22 ug/L	26.10
62-53-3	Aniline		10.57 ug/L	52.85
111-44-4	bis(2-Chloroethyl)ether		11.43 ug/L	57.16
541-73-1	1,3-Dichlorobenzene		9.29 ug/L	46.46
106-46-7	1,4-Dichlorobenzene		9.50 ug/L	47.52
100-51-6	Benzyl alcohol		8.64 ug/L	43.21
95-50-1	1,2-Dichlorobenzene		9.93 ug/L	49.64
108-60-1	bis(2-chloroisopropyl)ether		16.02 ug/L	80.12
621-64-7	n-Nitroso-di-n-propylamine		12.47 ug/L	62.34
67-72-1	Hexachloroethane		9.38 ug/L	46.88
98-95-3	Nitrobenzene		11.08 ug/L	55.40
78-59-1	Isophorone		11.84 ug/L	59.18
111-91-1	bis(2-Chloroethoxy)methane		12.17 ug/L	60.87
120-82-1	1,2,4-Trichlorobenzene		9.42 ug/L	47.08
91-20-3	Naphthalene		11.46 ug/L	57.32
106-47-8	4-Chloroaniline		17.20 ug/L	86.02
87-68-3	Hexachlorobutadiene		9.01 ug/L	45.03
91-57-6	2-Methylnaphthalene		12.10 ug/L	60.52
77-47-4	Hexachlorocyclopentadiene		4.47 ug/L	22.37
91-58-7	2-Chloronaphthalene		11.02 ug/L	55.09
88-74-4	2-Nitroaniline		13.12 ug/L	65.60
131-11-3	Dimethylphthalate		10.99 ug/L	54.94
208-96-8	Acenaphthylene		12.55 ug/L	62.75
606-20-2	2,6-Dinitrotoluene		11.92 ug/L	59.62
99-09-2	3-Nitroaniline		15.63 ug/L	78.17
83-32-9	Acenaphthene		12.94 ug/L	64.71
132-64-9	Dibenzofuran		13.81 ug/L	69.04
121-14-2	2,4-Dinitrotoluene		11.86 ug/L	59.31
84-66-2	Diethylphthalate		13.14 ug/L	65.72
86-73-7	Fluorene		13.38 ug/L	66.91
7005-72-3	4-Chlorophenyl-phenylether		13.30 ug/L	66.52
100-01-6	4-Nitroaniline		13.79 ug/L	68.94
86-30-6	n-Nitrosodiphenylamine		13.37 ug/L	66.83
103-33-3	Azobenzene		10.94 ug/L	54.70
101-55-3	4-Bromophenyl-phenylether		12.80 ug/L	64.01
118-74-1	Hexachlorobenzene		11.07 ug/L	55.36
85-01-8	Phenanthrene		13.41 ug/L	67.06
120-12-7	Anthracene		13.12 ug/L	65.62
84-74-2	Di-n-butylphthalate		13.92 ug/L	69.62
206-44-0	Fluoranthene		13.43 ug/L	67.14
129-00-0	Pyrene		14.25 ug/L	71.24
85-68-7	Butylbenzylphthalate		14.00 ug/L	69.98
56-55-3	Benzo[a]anthracene		13.80 ug/L	69.01
218-01-9	Chrysene		13.91 ug/L	69.54
117-81-7	bis(2-Ethylhexyl)phthalate		14.64 ug/L	73.18
117-84-0	Di-n-octylphthalate		13.29 ug/L	66.43
205-99-2	Benzo[b]fluoranthene		12.25 ug/L	61.23
207-08-9	Benzo[k]fluoranthene		11.81 ug/L	59.04
50-32-8	Benzo[a]pyrene		11.71 ug/L	58.55
193-39-5	Indeno[1,2,3-cd]pyrene		11.90 ug/L	59.52
53-70-3	Dibenz[a,h]anthracene		13.14 ug/L	65.70
191-24-2	Benzo[g,h,i]perylene		11.91 ug/L	59.57

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03733.D** Sample Name **5244.09MS**

Date Acquired **23-Mar-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		2.88 ug/L	14.39
62-75-9	N-nitroso-dimethylamine		9.71 ug/L	48.56
62-53-3	Aniline		10.54 ug/L	52.72
111-44-4	bis(2-Chloroethyl)ether		13.28 ug/L	66.41
541-73-1	1,3-Dichlorobenzene		12.01 ug/L	60.03
106-46-7	1,4-Dichlorobenzene		12.09 ug/L	60.46
100-51-6	Benzyl alcohol		14.79 ug/L	73.95
95-50-1	1,2-Dichlorobenzene		12.64 ug/L	63.22
108-60-1	bis(2-chloroisopropyl)ether		18.83 ug/L	94.16
621-64-7	n-Nitroso-di-n-propylamine		14.73 ug/L	73.64
67-72-1	Hexachloroethane		12.16 ug/L	60.80
98-95-3	Nitrobenzene		12.89 ug/L	64.45
78-59-1	Isophorone		13.84 ug/L	69.21
111-91-1	bis(2-Chloroethoxy)methane		14.10 ug/L	70.48
120-82-1	1,2,4-Trichlorobenzene		11.84 ug/L	59.21
91-20-3	Naphthalene		14.09 ug/L	70.46
106-47-8	4-Chloroaniline		15.71 ug/L	78.56
87-68-3	Hexachlorobutadiene		11.74 ug/L	58.70
91-57-6	2-Methylnaphthalene		14.91 ug/L	74.56
77-47-4	Hexachlorocyclopentadiene		10.17 ug/L	50.87
91-58-7	2-Chloronaphthalene		13.67 ug/L	68.34
88-74-4	2-Nitroaniline		15.95 ug/L	79.74
131-11-3	Dimethylphthalate		15.96 ug/L	79.80
208-96-8	Acenaphthylene		15.16 ug/L	75.78
606-20-2	2,6-Dinitrotoluene		14.02 ug/L	70.11
99-09-2	3-Nitroaniline		15.74 ug/L	78.69
83-32-9	Acenaphthene		15.64 ug/L	78.22
132-64-9	Dibenzofuran		16.70 ug/L	83.49
121-14-2	2,4-Dinitrotoluene		14.39 ug/L	71.97
84-66-2	Diethylphthalate		16.07 ug/L	80.34
86-73-7	Fluorene		15.64 ug/L	78.21
7005-72-3	4-Chlorophenyl-phenylether		15.72 ug/L	78.60
100-01-6	4-Nitroaniline		14.65 ug/L	73.27
86-30-6	n-Nitrosodiphenylamine		16.02 ug/L	80.10
103-33-3	Azobenzene		13.14 ug/L	65.68
101-55-3	4-Bromophenyl-phenylether		15.11 ug/L	75.57
118-74-1	Hexachlorobenzene		12.79 ug/L	63.95
85-01-8	Phenanthrene		15.56 ug/L	77.79
120-12-7	Anthracene		15.21 ug/L	76.03
84-74-2	Di-n-butylphthalate		16.26 ug/L	81.31
206-44-0	Fluoranthene		15.03 ug/L	75.15
129-00-0	Pyrene		16.35 ug/L	81.76
85-68-7	Butylbenzylphthalate		17.75 ug/L	88.75
56-55-3	Benzo[a]anthracene		15.82 ug/L	79.08
218-01-9	Chrysene		15.89 ug/L	79.45
117-81-7	bis(2-Ethylhexyl)phthalate		17.40 ug/L	87.01
117-84-0	Di-n-octylphthalate		15.83 ug/L	79.13
205-99-2	Benzo[b]fluoranthene		13.70 ug/L	68.51
207-08-9	Benzo[k]fluoranthene		13.28 ug/L	66.38
50-32-8	Benzo[a]pyrene		13.17 ug/L	65.85
193-39-5	Indeno[1,2,3-cd]pyrene		13.73 ug/L	68.67
53-70-3	Dibenz[a,h]anthracene		15.43 ug/L	77.14
191-24-2	Benzo[g,h,i]perylene		14.14 ug/L	70.70

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03734.D**	Sample Name	**5244.09Dup**
Operator	**Bhaskar**	Misc Info	**00M12MW24Dup**
Date Acquired	**23-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03734.D**	Sample Name	**5244.09Dup**
Operator	**Bhaskar**	Misc Info	**00M12MW24Dup**
Date Acquired	**23-Mar-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID (Standard): BNA03722.D Date Analyzed: 3/23/00

Instrument ID: BNA#2 Time Analyzed: 8:33

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	421566	10.42	1493653	13.37	936905	17.73
	UPPER LIMIT	843132	10.92	2987306	13.87	1873810	18.23
	LOWER LIMIT	210783	9.92	746827	12.87	468453	17.23
	FIELD ID						
01	5244.09MS	397832	10.42	1499835	13.36	892486	17.72
02	5244.09DUP	401701	10.42	1507447	13.36	901483	17.72

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.: _____

Lab File ID (Standard): BNA03722.D Date Analyzed: 03/23/00

Instrument ID: BNA#2 Time Analyzed: 08:33

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1484401	20.99	1282020	26.50	1154458	29.61
	UPPER LIMIT	2968802	20.49	2564040	26.00	2308916	29.11
	LOWER LIMIT	742201	21.49	641010	27.00	577229	30.11
	EPA SAMPLE NO.						
01	5244.09MS	1445413	20.99	1226360	26.50	1247102	29.60
02	5244.09DUP	1434429	20.99	1217551	26.50	1235109	29.59

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location BI.426 SDG No.:

Lab File ID (Standard): BNA03754.D Date Analyzed: 3/24/00

Instrument ID: BNA#2 Time Analyzed: 14:04

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	463482	10.42	1647845	13.36	1018018	17.72
	UPPER LIMIT	926964	10.92	3295690	13.86	2036036	18.22
	LOWER LIMIT	231741	9.92	823923	12.86	509009	17.22
	FIELD ID						
01	SBLK357	433040	10.41	1628113	13.35	970261	17.71

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID (Standard): BNA03754.D Date Analyzed: 03/24/00

Instrument ID: BNA#2 Time Analyzed: 14:04

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1572958	20.99	1436796	26.50	1280926	29.59
	UPPER LIMIT	3145916	20.49	2873592	26.00	2561852	29.09
	LOWER LIMIT	786479	21.49	718398	27.00	640463	30.09
	EPA SAMPLE NO.						
01	SBLK357	1602104	20.97	1381925	26.48	1351370	29.58

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location BI.426 SDG No.:

Lab File ID (Standard): BNA03768.D Date Analyzed: 3/28/00

Instrument ID: BNA#2 Time Analyzed: 15:19

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	436429	10.41	1537465	13.36	970368	17.72
	UPPER LIMIT	872858	10.91	3074930	13.86	1940736	18.22
	LOWER LIMIT	218215	9.91	768733	12.86	485184	17.22
	FIELD ID						
01	426-1	478665	10.41	1761256	13.35	1041660	17.71

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5262 Location Bl.426 SDG No.:

Lab File ID (Standard): BNA03768.D Date Analyzed: 03/28/00

Instrument ID: BNA#2 Time Analyzed: 15:19

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1539429	20.98	1369501	26.50	1229178	29.60
	UPPER LIMIT	3078858	20.48	2739002	26.00	2458356	29.10
	LOWER LIMIT	769715	21.48	684751	27.00	614589	30.10
	EPA SAMPLE NO.						
01	426-1	1676362	20.98	1481350	26.49	1513573	29.59

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = 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 to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000324\BNA03761.D Vial: 7
Acq On : 24 Mar 2000 7:48 pm Operator: Bhaskar
Sample : Sblk357 Inst : GC BNA 2
Misc : Sblk357 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:26 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.41	152	433040	40.00	ug/L	-0.04
19) Naphthalene-d8	13.35	136	1628113	40.00	ug/L	-0.04
34) Acenaphthene-d10	17.71	164	970261	40.00	ug/L	-0.04
54) Phenanthrene-d10	20.97	188	1602104	40.00	ug/L	-0.05
66) Chrysene-d12	26.48	240	1381925	40.00	ug/L	-0.06
75) Perylene-d12	29.58	264	1351370	40.00	ug/L	-0.08
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.75	82	781719	40.24	ug/L	-0.04
Spiked Amount 50.000	Range 35 - 114		Recovery =	80.48%		
38) 2-Fluorobiphenyl	16.10	172	1190980	40.68	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery =	81.36%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.35	244	1192892	39.09	ug/L	-0.04
Spiked Amount 50.000	Range 33 - 141		Recovery =	78.18%		

Target Compounds Qvalue

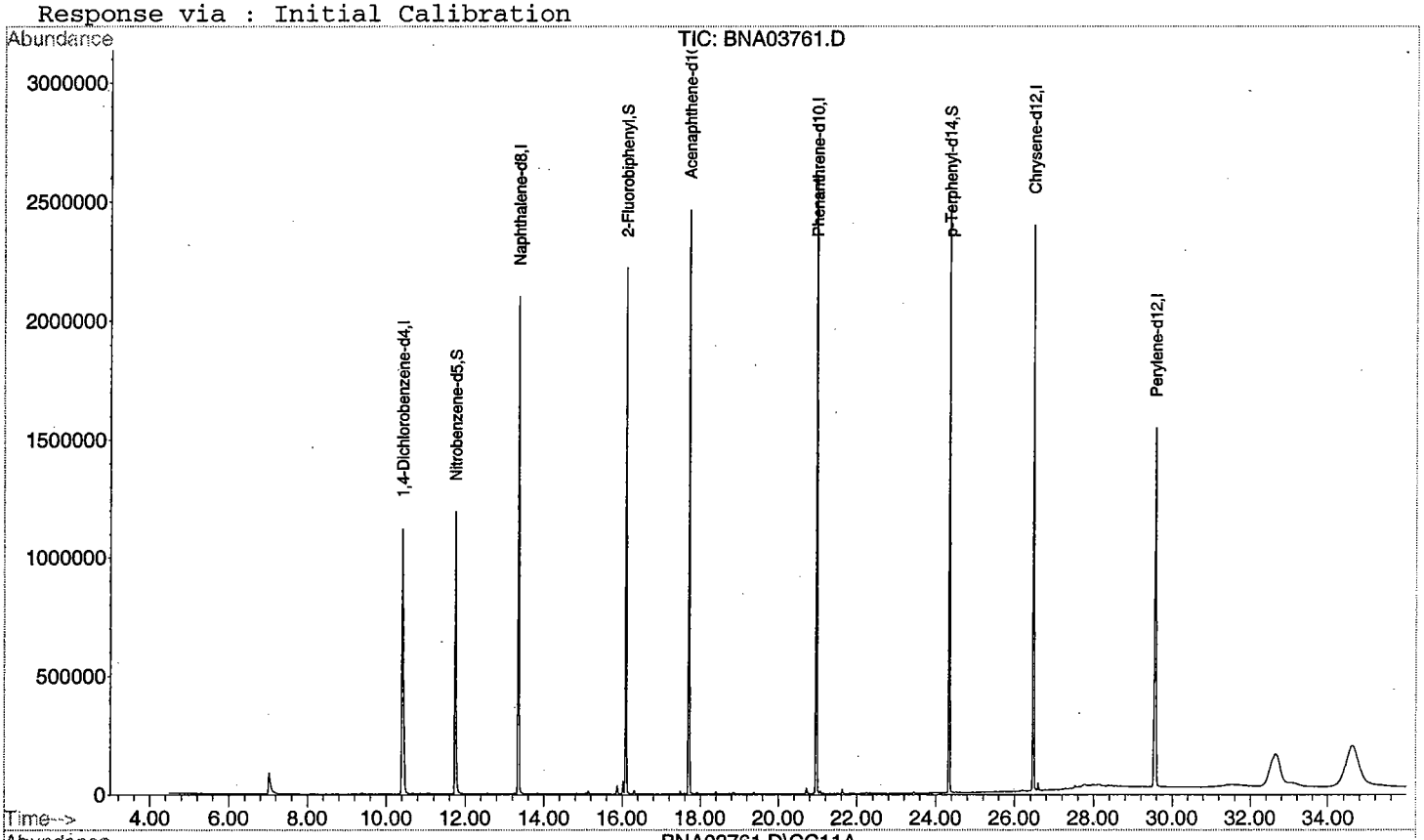
(#) = qualifier out of range (m) = manual integration
BNA03761.D M262538.M Tue Apr 04 10:42:49 2000

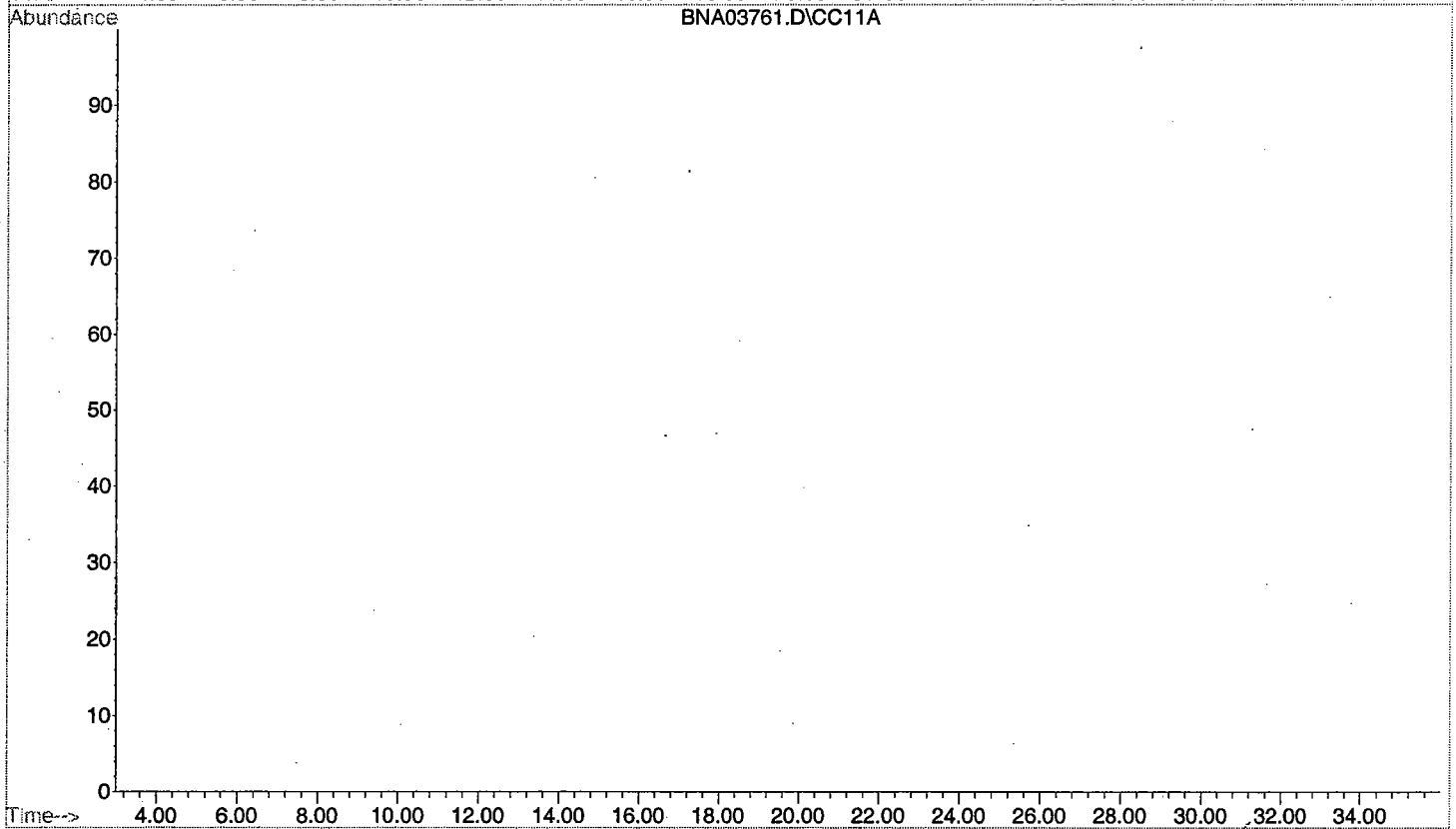
000061

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000324\BNA03761.D Vial: 7
Acq On : 24 Mar 2000 7:48 pm Operator: Bhaskar
Sample : Sblk357 Inst : GC BNA 2
Misc : Sblk357 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:26 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000328\BNA03770.D Vial: 2
Acq On : 28 Mar 2000 4:56 pm Operator: Bhaskar
Sample : 5262.01 Inst : GC BNA 2
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:31 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.41	152	478665	40.00	ug/L	-0.04
19) Naphthalene-d8	13.35	136	1761256	40.00	ug/L	-0.04
34) Acenaphthene-d10	17.71	164	1041660	40.00	ug/L	-0.04
54) Phenanthrene-d10	20.98	188	1676362	40.00	ug/L	-0.04
66) Chrysene-d12	26.49	240	1481350	40.00	ug/L	-0.05
75) Perylene-d12	29.59	264	1513573	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.75	82	838265	39.89	ug/L	-0.04
Spiked Amount 50.000	Range 35 - 114		Recovery =	79.78%		
38) 2-Fluorobiphenyl	16.10	172	1216964	38.72	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery =	77.44%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.34	244	623240	19.05	ug/L	-0.05
Spiked Amount 50.000	Range 33 - 141		Recovery =	38.10%		

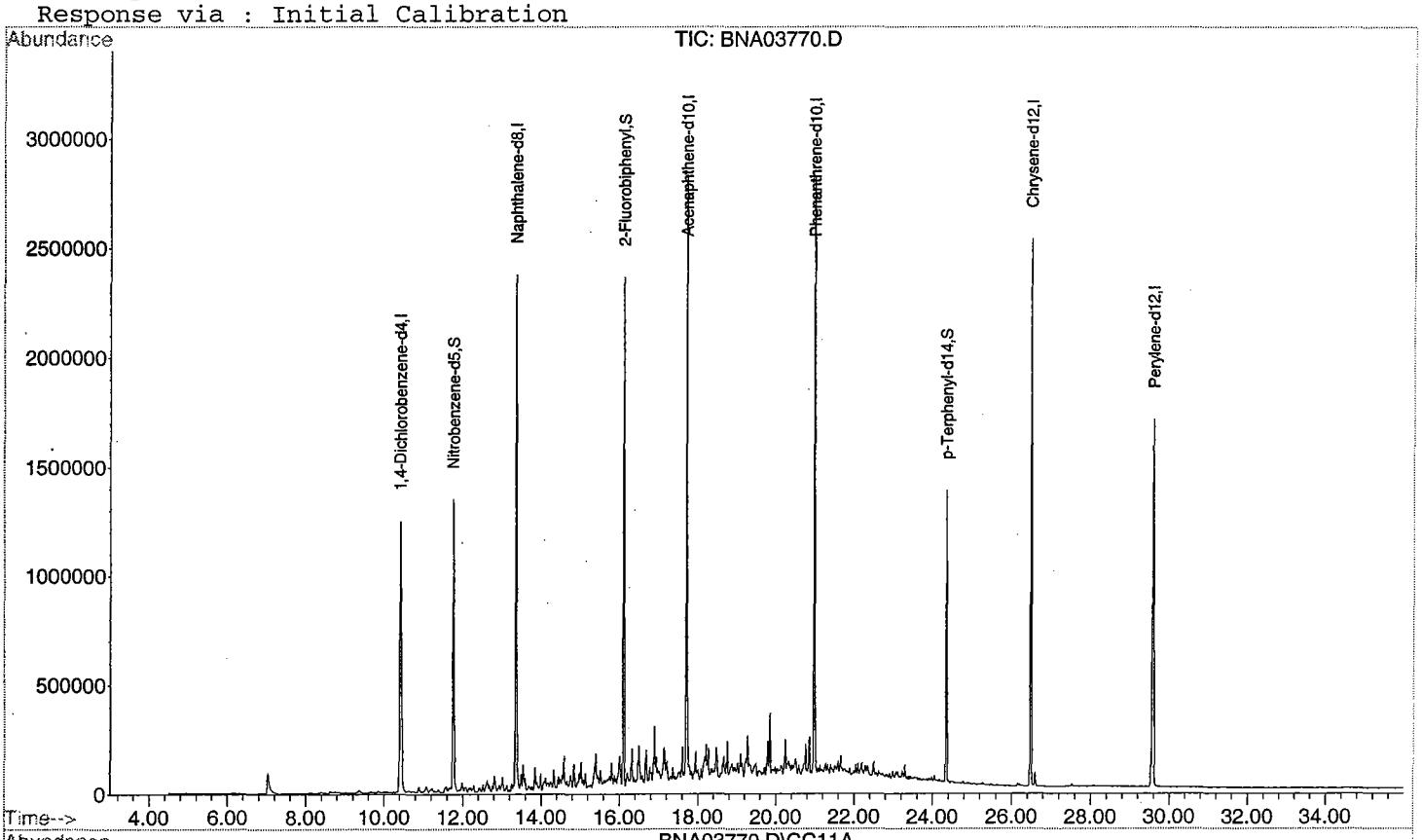
Target Compounds Qvalue

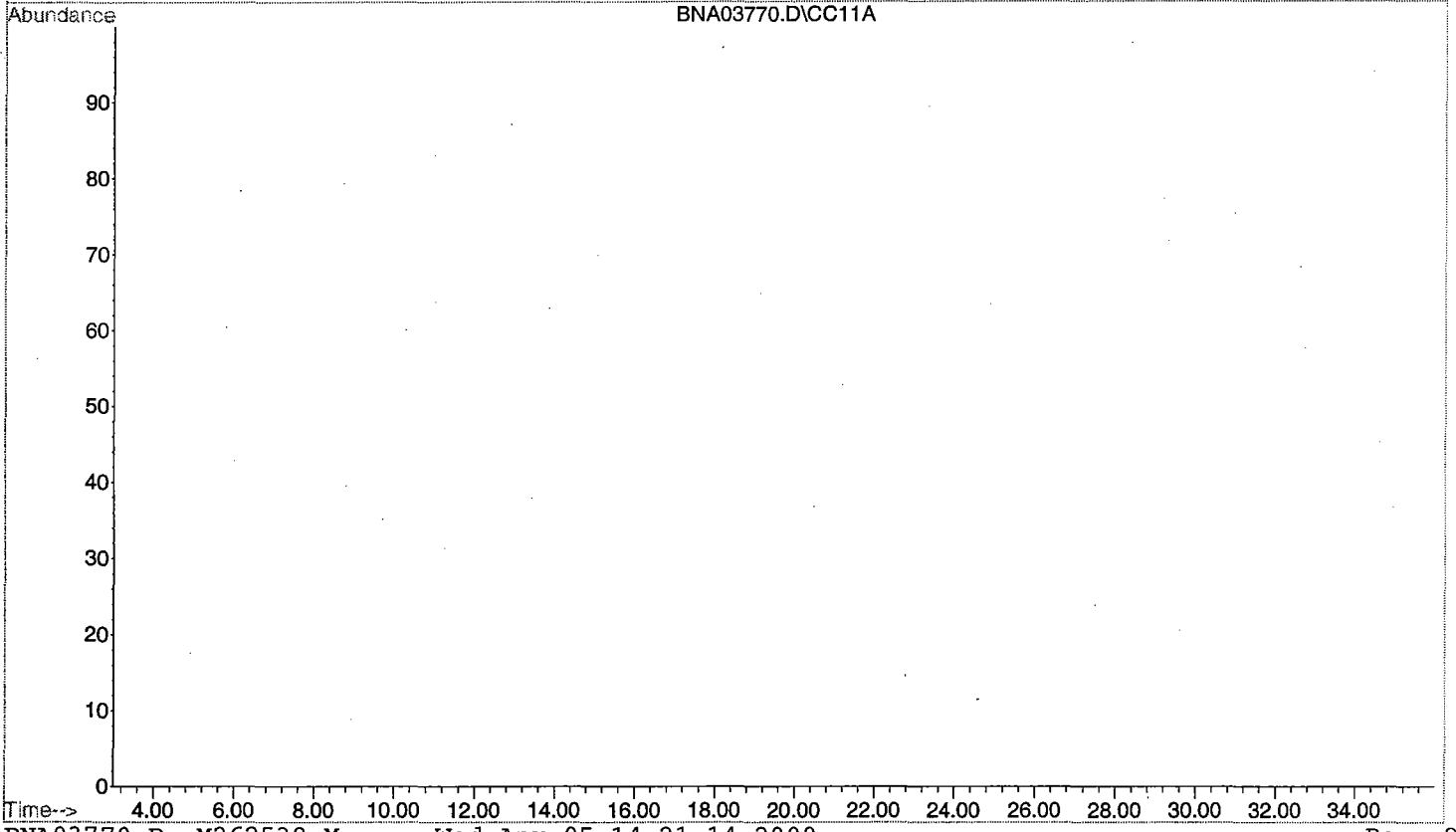
(#) = qualifier out of range (m) = manual integration
BNA03770.D M262538.M Wed Apr 05 14:21:13 2000

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000328\BNA03770.D Vial: 2
Acq On : 28 Mar 2000 4:56 pm Operator: Bhaskar
Sample : 5262.01 Inst : GC BNA 2
Misc : 426-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:31 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





000064

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000324\BNA03762.D Vial: 8
Acq On : 24 Mar 2000 8:36 pm Operator: Bhaskar
Sample : Sblk357BS Inst : GC BNA 2
Misc : Sblk357BS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:27 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.41	152	437889	40.00	ug/L	-0.04
19) Naphthalene-d8	13.35	136	1635102	40.00	ug/L	-0.04
34) Acenaphthene-d10	17.71	164	974179	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.97	188	1619604	40.00	ug/L	-0.05
66) Chrysene-d12	26.48	240	1402650	40.00	ug/L	-0.06
75) Perylene-d12	29.58	264	1378176	40.00	ug/L	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.75	82	630640	32.33	ug/L	-0.04
Spiked Amount 50.000	Range 35 - 114		Recovery =	64.66%		
38) 2-Fluorobiphenyl	16.10	172	993399	33.80	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery =	67.60%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.34	244	1075702	34.73	ug/L	-0.05
Spiked Amount 50.000	Range 33 - 141		Recovery =	69.46%		
Target Compounds						Qvalue
2) Pyridine	4.85	79	123568m	6.85	ug/L	
3) N-nitroso-dimethylamine	4.88	74	51270m	5.22	ug/L	
5) Aniline	9.82	93	179781	10.57	ug/L	98
8) bis(2-Chloroethyl)ether	9.95	93	212302	11.43	ug/L	93
10) 1,3-Dichlorobenzene	10.32	146	180964	9.29	ug/L	99
11) 1,4-Dichlorobenzene	10.45	146	185897	9.50	ug/L	99
12) Benzyl alcohol	10.83	108	86455	8.64	ug/L	97
13) 1,2-Dichlorobenzene	10.86	146	179186	9.93	ug/L	99
15) bis(2-chloroisopropyl)ethe	11.16	45	377333	16.02	ug/L	99
17) n-Nitroso-di-n-propylamine	11.47	130	38277	12.47	ug/L	96
18) Hexachloroethane	11.55	117	69863	9.38	ug/L	98
21) Nitrobenzene	11.79	77	262435	11.08	ug/L	99
22) Isophorone	12.32	82	498672	11.84	ug/L	98
25) bis(2-Chloroethoxy)methane	12.88	93	257446	12.17	ug/L	98
28) 1,2,4-Trichlorobenzene	13.27	180	151514	9.42	ug/L	99
29) Naphthalene	13.40	128	509077	11.46	ug/L	99
30) 4-Chloroaniline	13.63	127	201241	17.20	ug/L	99
31) Hexachlorobutadiene	13.84	225	80957	9.01	ug/L	98
33) 2-Methylnaphthalene	15.07	142	353693	12.10	ug/L	98
35) Hexachlorocyclopentadiene	15.67	237	32003	4.47	ug/L	98
39) 2-Chloronaphthalene	16.32	162	345963	11.02	ug/L	99
40) 2-Nitroaniline	16.72	138	126076	13.12	ug/L	99
41) Dimethylphthalate	17.23	163	372960	10.99	ug/L	99
42) Acenaphthylene	17.34	152	541330	12.55	ug/L	99
43) 2,6-Dinitrotoluene	17.40	63	80616	11.92	ug/L	98
44) 3-Nitroaniline	17.73	138	93659	15.63	ug/L	96
45) Acenaphthene	17.78	153	345253	12.94	ug/L	96
47) Dibenzofuran	18.15	168	508540	13.81	ug/L	98
49) 2,4-Dinitrotoluene	18.30	165	139605	11.86	ug/L	98
50) Diethylphthalate	18.87	149	455460	13.14	ug/L	99
51) Fluorene	18.93	166	417766	13.38	ug/L	96
52) 4-Chlorophenyl-phenylether	18.96	204	200466	13.30	ug/L	96
53) 4-Nitroaniline	19.14	138	79785	13.79	ug/L	90
56) n-Nitrosodiphenylamine	19.26	169	306364	13.37	ug/L	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000324\BNA03762.D Vial: 8
Acq On : 24 Mar 2000 8:36 pm Operator: Bhaskar
Sample : Sblk357BS Inst : GC BNA 2
Misc : Sblk357BS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:27 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

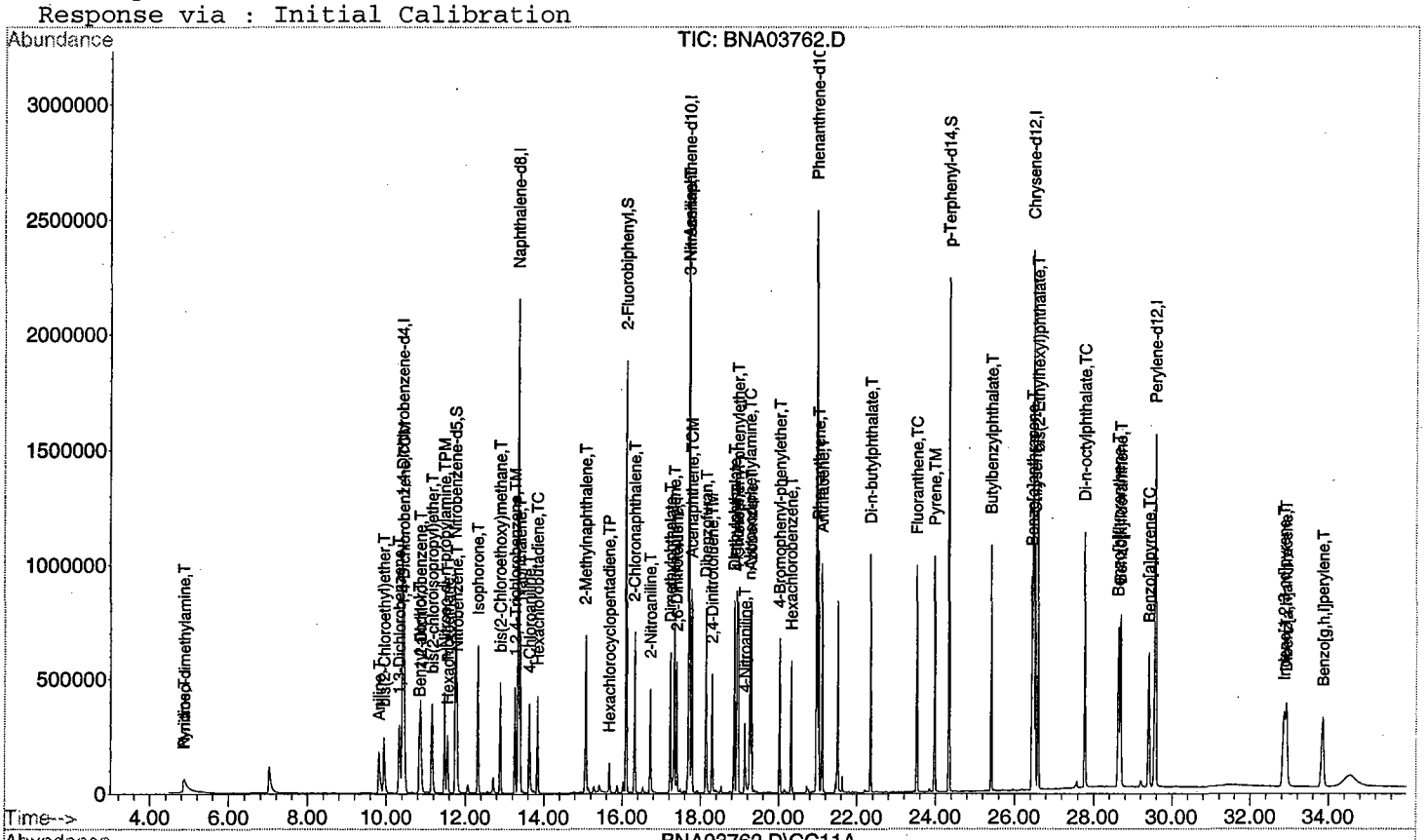
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57)	Azobenzene	19.30	77	538454	10.94	ug/L	99
59)	4-Bromophenyl-phenylether	20.03	248	109569	12.80	ug/L	95
60)	Hexachlorobenzene	20.33	284	107273	11.07	ug/L	99
62)	Phenanthrene	21.02	178	631732	13.41	ug/L	97
63)	Anthracene	21.11	178	633000	13.12	ug/L	100
64)	Di-n-butylphthalate	22.35	149	830349	13.92	ug/L	98
65)	Fluoranthene	23.52	202	667403	13.43	ug/L	96
68)	Pyrene	23.98	202	696721	14.25	ug/L	94
70)	Butylbenzylphthalate	25.41	149	374594	14.00	ug/L	95
71)	Benzo[a]anthracene	26.44	228	634112	13.80	ug/L	99
73)	Chrysene	26.53	228	584820	13.91	ug/L	100
74)	bis(2-Ethylhexyl)phthalate	26.60	149	538298	14.64	ug/L	99
76)	Di-n-octylphthalate	27.78	149	865796	13.29	ug/L	98
77)	Benzo[b]fluoranthene	28.64	252	584178	12.25	ug/L	97
78)	Benzo[k]fluoranthene	28.68	252	566551	11.81	ug/L	97
79)	Benzo[a]pyrene	29.41	252	525218	11.71	ug/L	98
80)	Indeno[1,2,3-cd]pyrene	32.85	276	567950	11.90	ug/L	95
81)	Dibenz[a,h]anthracene	32.92	278	469370	13.14	ug/L	97
82)	Benzo[g,h,i]perylene	33.85	276	485134	11.91	ug/L	98

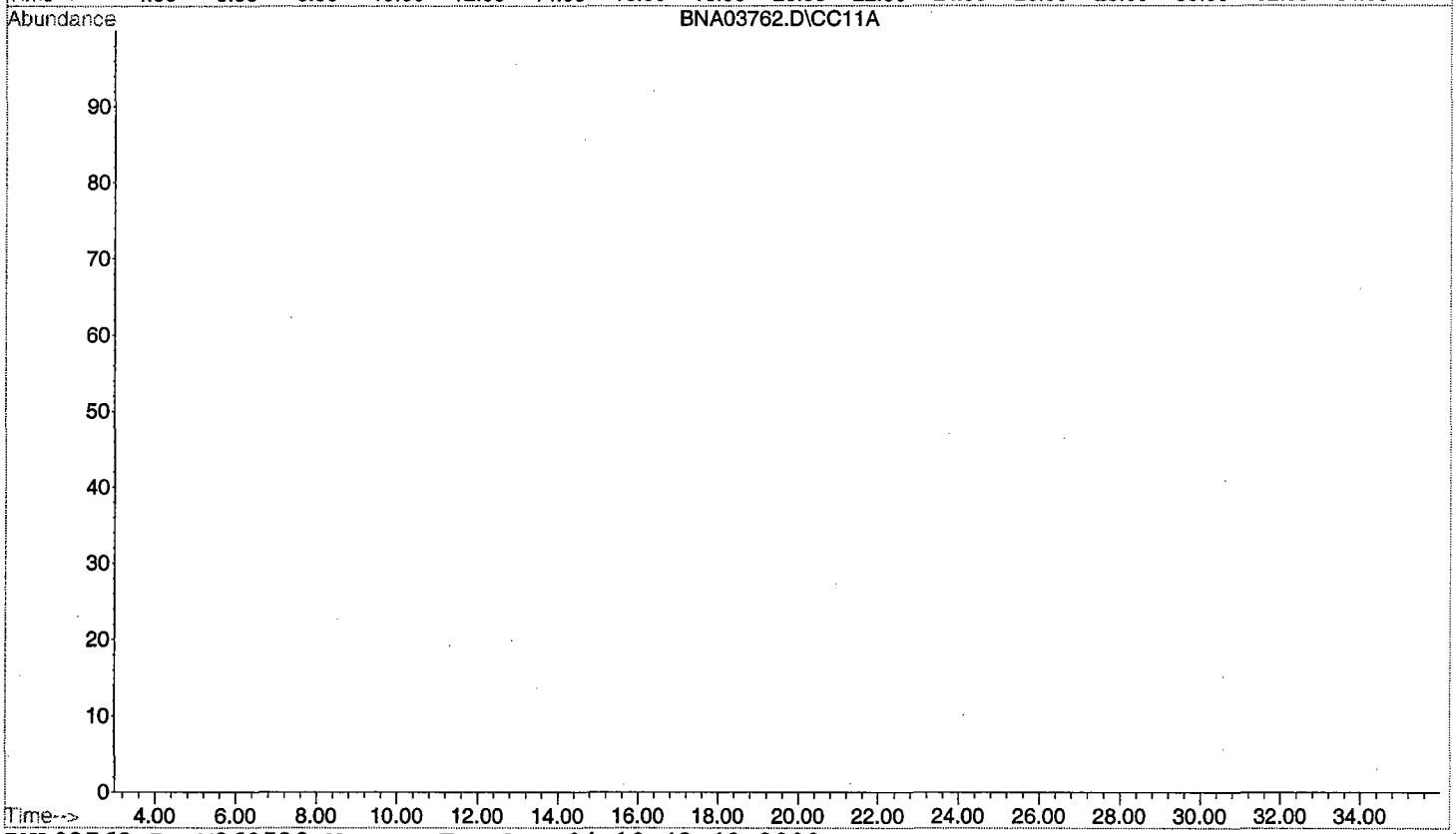
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000324\BNA03762.D Vial: 8
Acq On : 24 Mar 2000 8:36 pm Operator: Bhaskar
Sample : Sblk357BS Inst : GC BNA 2
Misc : Sblk357BS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:27 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





000067

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.42	152	397832	40.00	ug/L	-0.03
19) Naphthalene-d8	13.36	136	1499835	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.72	164	892486	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.99	188	1445413	40.00	ug/L	-0.03
66) Chrysene-d12	26.50	240	1226360	40.00	ug/L	-0.04
75) Perylene-d12	29.60	264	1247102	40.00	ug/L	-0.05
System Monitoring Compounds						
4) 2-Fluorophenol	7.87	112	703610	51.64	ug/L	-0.03
Spiked Amount 100.000	Range 21 - 100		Recovery = 51.64%			
6) Phenol-d5	9.90	99	590416	35.06	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 35.06%			
20) Nitrobenzene-d5	11.76	82	669722	37.43	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 74.86%			
38) 2-Fluorobiphenyl	16.11	172	1065247	39.56	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery = 79.12%			
58) 2,4,6-Tribromophenol	19.56	330	260310	79.93	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 79.93%			
69) p-Terphenyl-d14	24.36	244	1085622	40.09	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery = 80.18%			
Target Compounds						Qvalue
2) Pyridine	4.91	79	47157m	2.88	ug/L	
3) N-nitroso-dimethylamine	4.89	74	86649m	9.71	ug/L	
5) Aniline	9.83	93	162941	10.54	ug/L	98
7) Phenol	9.93	94	140061	7.59	ug/L	86
8) bis(2-Chloroethyl)ether	9.95	93	224088	13.28	ug/L	96
9) 2-Chlorophenol	10.08	128	211239	15.50	ug/L	99
10) 1,3-Dichlorobenzene	10.33	146	212419	12.01	ug/L	99
11) 1,4-Dichlorobenzene	10.45	146	214896	12.09	ug/L	98
12) Benzyl alcohol	10.85	108	134423	14.79	ug/L	98
13) 1,2-Dichlorobenzene	10.88	146	207349	12.64	ug/L	98
14) 2-Methylphenol	11.20	108	191067	14.32	ug/L	97
15) bis(2-chloroisopropyl)ethe	11.17	45	402870	18.83	ug/L	99
16) 4-Methylphenol	11.54	108	188804	14.71	ug/L	98
17) n-Nitroso-di-n-propylamine	11.48	130	41077	14.73	ug/L	95
18) Hexachloroethane	11.56	117	82314	12.16	ug/L	94
21) Nitrobenzene	11.80	77	280035	12.89	ug/L	98
22) Isophorone	12.33	82	534876	13.84	ug/L	99
23) 2-Nitrophenol	12.55	139	115087	15.06	ug/L	93
24) 2,4-Dimethylphenol	12.72	107	245895	15.38	ug/L	99
25) bis(2-Chloroethoxy)methane	12.90	93	273393	14.10	ug/L	99
26) 2,4-Dichlorophenol	13.14	162	184304	15.77	ug/L	100
27) Benzoic Acid	13.00	105	77048	7.33	ug/L	93
28) 1,2,4-Trichlorobenzene	13.27	180	174780	11.84	ug/L	99
29) Naphthalene	13.41	128	573992	14.09	ug/L	99
30) 4-Chloroaniline	13.64	127	168585	15.71	ug/L	98
31) Hexachlorobutadiene	13.85	225	96807	11.74	ug/L	98
32) 4-Chloro-3-methylphenol	14.91	107	227595	16.28	ug/L	98
33) 2-Methylnaphthalene	15.08	142	399677	14.91	ug/L	99
35) Hexachlorocyclopentadiene	15.68	237	66687	10.17	ug/L	99
36) 2,4,6-Trichlorophenol	15.95	196	136502	16.75	ug/L	99
37) 2,4,5-Trichlorophenol	16.08	196	145081	16.87	ug/L	97
39) 2-Chloronaphthalene	16.33	162	393219	13.67	ug/L	99
40) 2-Nitroaniline	16.74	138	140406	15.95	ug/L	94
41) Dimethylphthalate	17.25	163	496315	15.96	ug/L	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

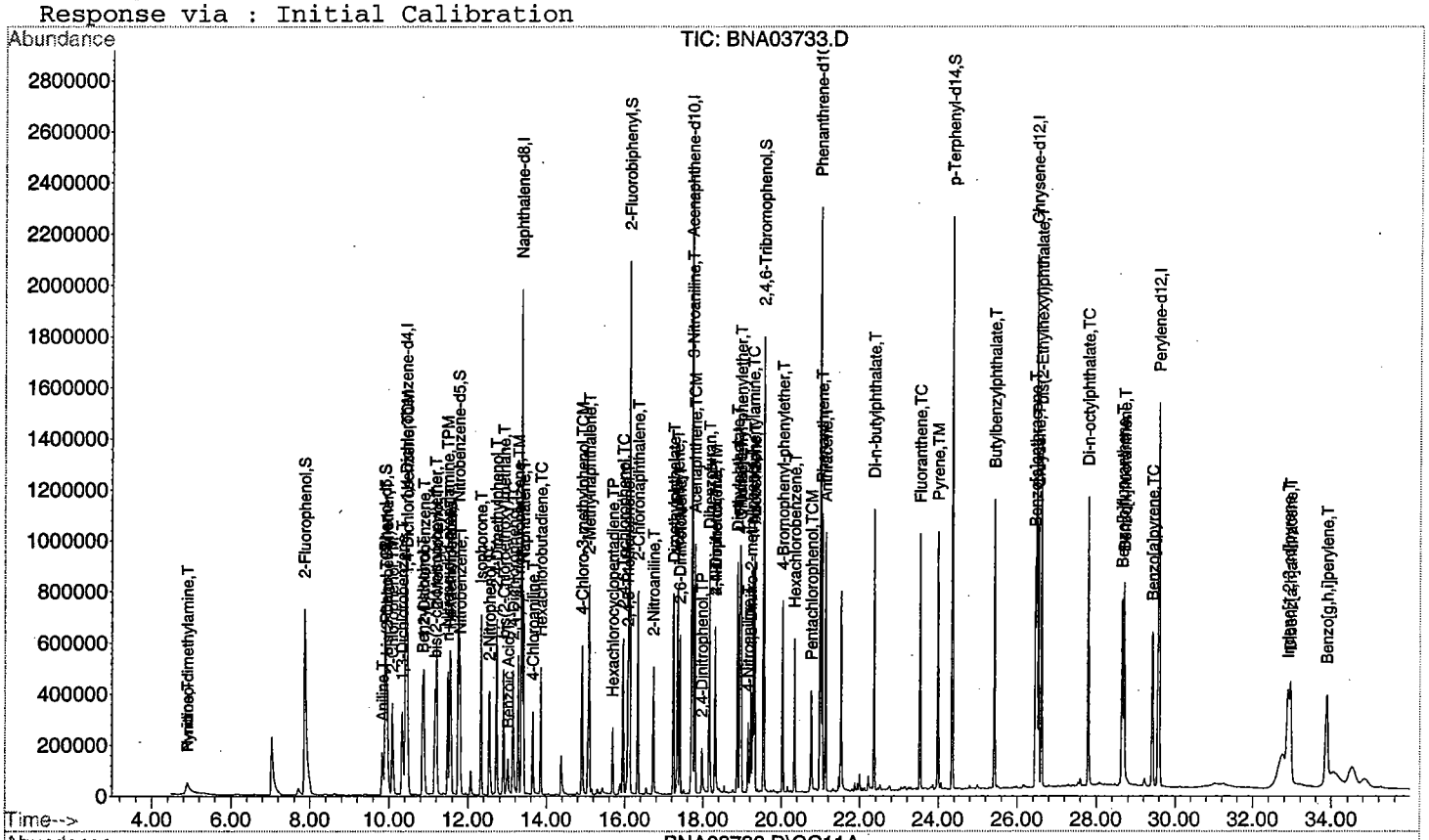
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
42)	Acenaphthylene	17.35	152	598927	15.16	ug/L	99
43)	2,6-Dinitrotoluene	17.41	63	86847	14.02	ug/L	97
44)	3-Nitroaniline	17.74	138	86371	15.74	ug/L	95
45)	Acenaphthene	17.79	153	382348	15.64	ug/L	98
46)	2,4-Dinitrophenol	17.97	184	43485	11.60	ug/L	100
47)	Dibenzofuran	18.16	168	563384	16.70	ug/L	99
48)	4-Nitrophenol	18.30	65	62382	9.10	ug/L	83
49)	2,4-Dinitrotoluene	18.31	165	155197	14.39	ug/L	97
50)	Diethylphthalate	18.88	149	510109	16.07	ug/L	99
51)	Fluorene	18.94	166	447403	15.64	ug/L	95
52)	4-Chlorophenyl-phenylether	18.97	204	217032	15.72	ug/L	97
53)	4-Nitroaniline	19.15	138	77685	14.65	ug/L	99
55)	4,6-Dinitro-2-methylphenol	19.22	198	81761	15.22	ug/L	96
56)	n-Nitrosodiphenylamine	19.27	169	327719	16.02	ug/L	98
57)	Azobenzene	19.31	77	577051	13.14	ug/L	98
59)	4-Bromophenyl-phenylether	20.04	248	115442	15.11	ug/L	93
60)	Hexachlorobenzene	20.34	284	110595	12.79	ug/L	96
61)	Pentachlorophenol	20.77	266	62627	13.96	ug/L	99
62)	Phenanthrene	21.03	178	654032	15.56	ug/L	98
63)	Anthracene	21.12	178	654490	15.21	ug/L	99
64)	Di-n-butylphthalate	22.36	149	865539	16.26	ug/L	99
65)	Fluoranthene	23.53	202	666614	15.03	ug/L	96
68)	Pyrene	24.00	202	699193	16.35	ug/L	94
70)	Butylbenzylphthalate	25.43	149	415328	17.75	ug/L	94
71)	Benzo[a]anthracene	26.46	228	635264	15.82	ug/L	98
73)	Chrysene	26.54	228	584171	15.89	ug/L	100
74)	bis(2-Ethylhexyl)phthalate	26.62	149	559621	17.40	ug/L	99
76)	Di-n-octylphthalate	27.80	149	933157	15.83	ug/L	99
77)	Benzo[b]fluoranthene	28.66	252	591482	13.70	ug/L	97
78)	Benzo[k]fluoranthene	28.71	252	576332	13.28	ug/L	97
79)	Benzo[a]pyrene	29.43	252	534538	13.17	ug/L	97
80)	Indeno[1,2,3-cd]pyrene	32.89	276	592940	13.73	ug/L	96
81)	Dibenz[a,h]anthracene	32.96	278	498726	15.43	ug/L	98
82)	Benzo[g,h,i]perylene	33.90	276	521003	14.14	ug/L	98

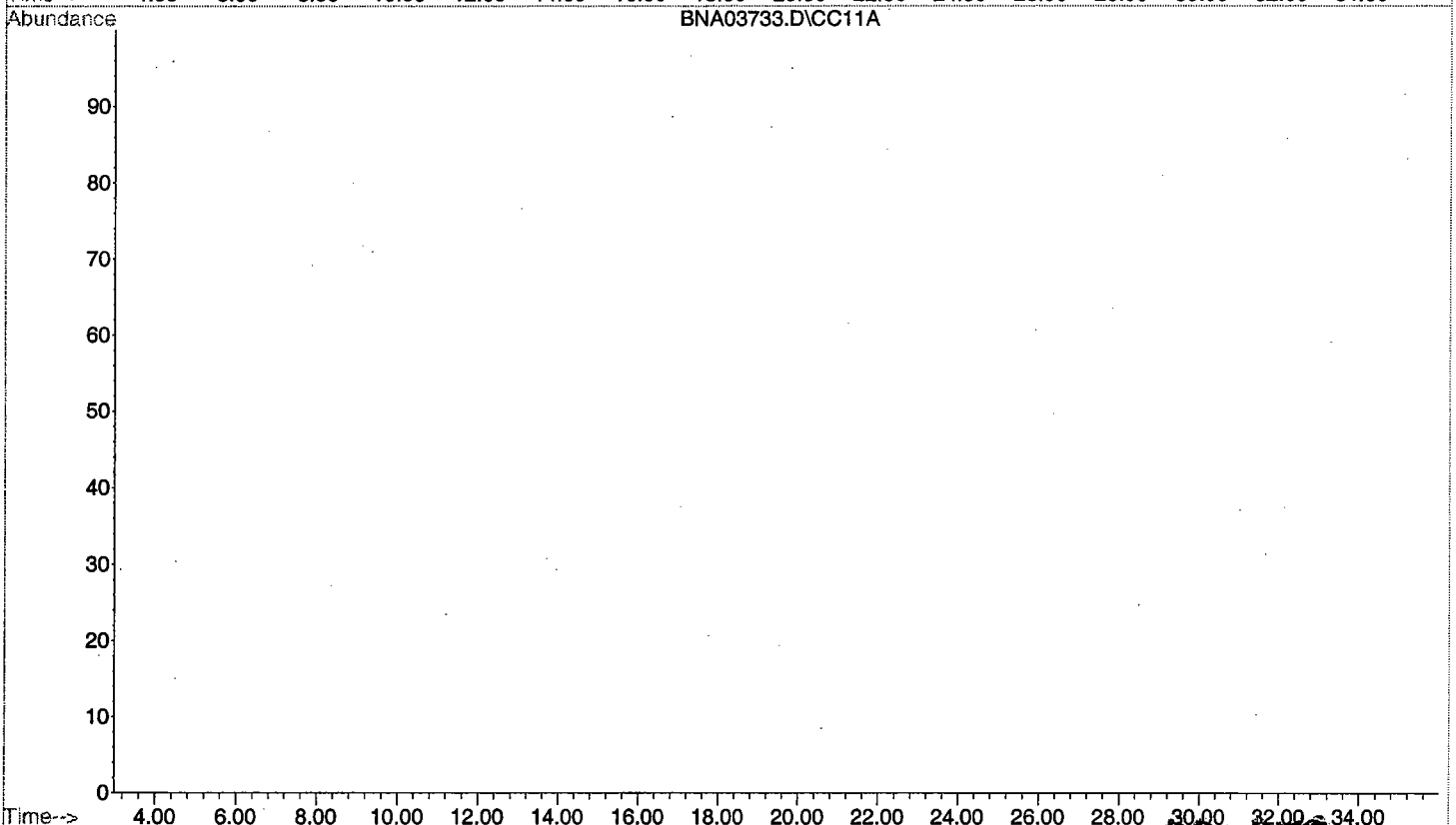
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03734.D Vial: 12
Acq On : 23 Mar 2000 6:19 pm Operator: Bhaskar
Sample : 5244.09Dup Inst : GC BNA 2
Misc : 00M12MW24Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:00 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.42	152	401701	40.00	ug/L	-0.03
19) Naphthalene-d8	13.36	136	1507447	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.72	164	901483	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.99	188	1434429	40.00	ug/L	-0.03
66) Chrysene-d12	26.50	240	1217551	40.00	ug/L	-0.04
75) Perylene-d12	29.59	264	1235109	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.87	112	727595	52.89	ug/L	-0.03
Spiked Amount 100.000	Range 21 - 100		Recovery = 52.89%			
6) Phenol-d5	9.90	99	610210	35.89	ug/L	-0.05
Spiked Amount 100.000	Range 10 - 94		Recovery = 35.89%			
20) Nitrobenzene-d5	11.76	82	632655	35.18	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 70.36%			
38) 2-Fluorobiphenyl	16.11	172	1009923	37.13	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery = 74.26%			
58) 2,4,6-Tribromophenol	19.55	330	242718	75.10	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 75.10%			
69) p-Terphenyl-d14	24.36	244	1057876	39.34	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery = 78.68%			

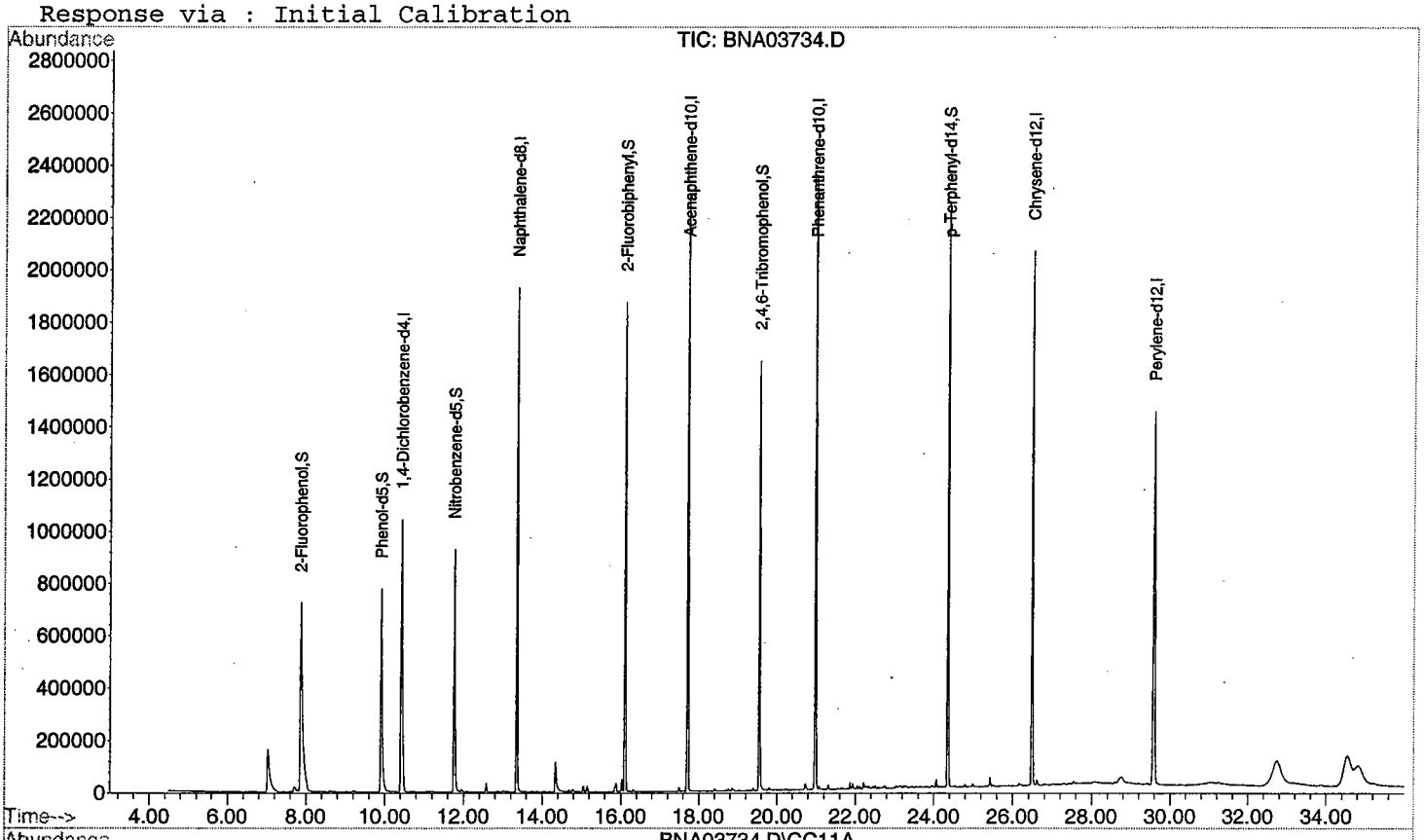
Target Compounds Qvalue

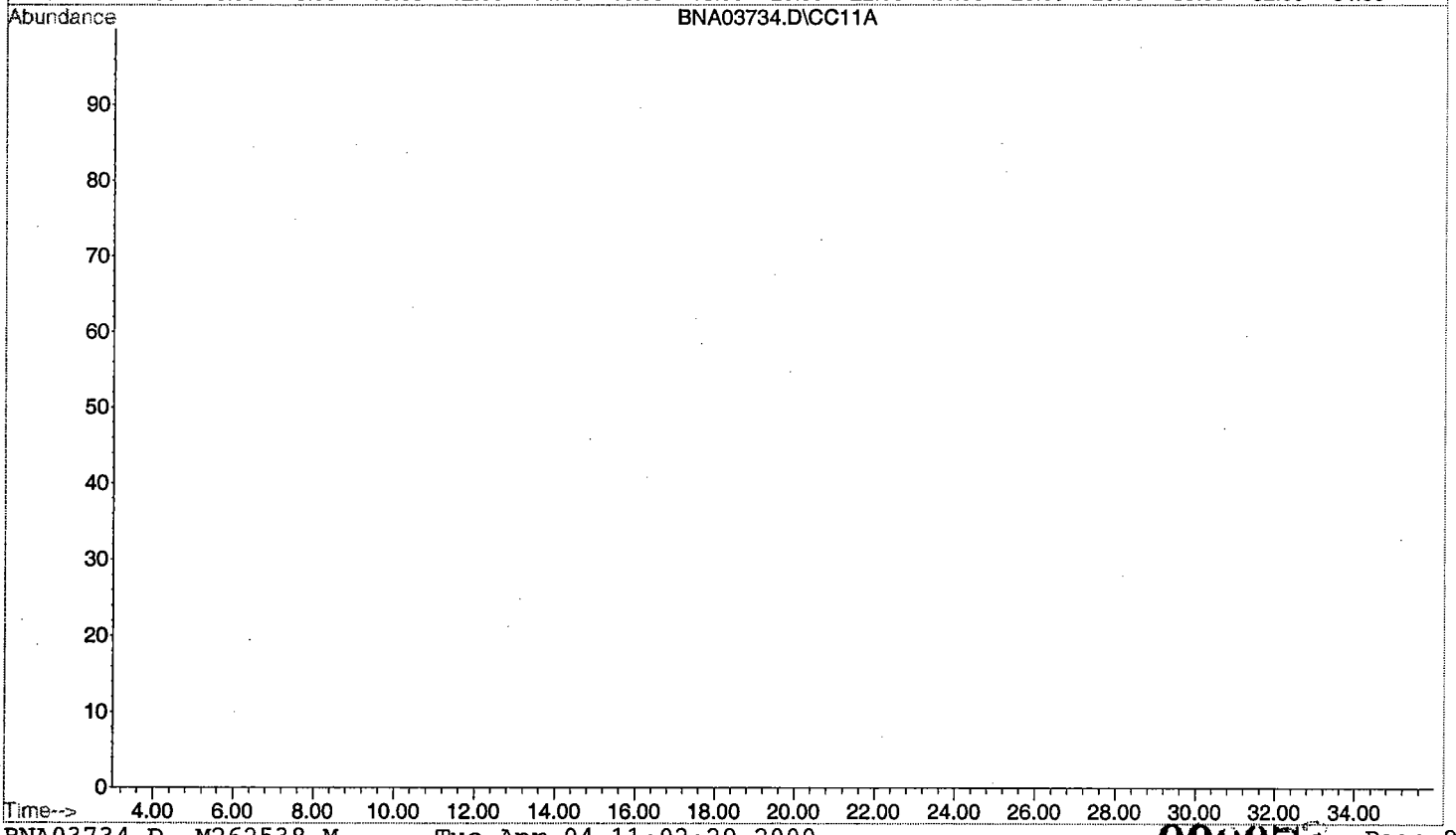
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000323\BNA03734.D Vial: 12
Acq On : 23 Mar 2000 6:19 pm Operator: Bhaskar
Sample : 5244.09Dup Inst : GC BNA 2
Misc : 00M12MW24Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:00 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <u>and</u> in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted _____
2. Table of Contents submitted _____
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted _____
4. Document paginated and legible _____
5. Chain of Custody submitted _____
6. Samples submitted to lab within 48 hours of sample collection _____
7. Methodology Summary submitted _____
8. Laboratory Chronicle and Holding Time Check submitted _____
9. Results submitted on a dry weight basis _____
10. Method Detection Limits submitted _____
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP _____

Laboratory Manager or Environmental Consultant's Signature _____

Date ___/___/___

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager