United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 106
Main Post-East Area

NJDEP UST Registration No. 90010-74

February 2002

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 106

MAIN POST-EAST AREA
NJDEP UST REGISTRATION NO. 90010-75

FEBRUARY 2002

PREPARED FOR:

UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
BUILDING 167
FORT MONMOUTH, NJ 07703

PREPARED BY:

Versar INC.
1900 FROST ROAD
SUITE 110
BRISTOL, PA 19007

106.DOC

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EXECUTIVE SUMMARY

UST Closure

On February 13, 1998, a series of test pits were excavated in the area of former Buildings 104 and 106 during an investigation conducted for the possible construction of a new credit union. On February 2, 1998, a concrete pit suspected to be an oil water separator was discovered near former building 106. The field investigators assumed that the oil water separator would have been associated with an underground storage tank containing waste oil, however, no tank was ever located. Based on the assumption that a tank did exist in association with the oil water separator and had been removed at an unknown time, the tank was registered with the NJDEP, and a closure investigation was conducted.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual.* The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation.* Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Approximately 246 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Soil samples, which were collected after the removal of the potentially contaminated soil, contained levels of TPH ranging from undetected to 1517.36 mg/kg. Groundwater was encountered at 3.0 feet below ground surface.

All post excavation soil samples collected from the UST excavation at Building 106 contained TPH concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition.

In response to the observation of potentially contaminated soil near the shallow water table, two (2) groundwater samples were collected at Building 106. On June 8, 2001 and July 7, 2001, groundwater at Building 106 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's), Pesticides and PCBs, and metals. All groundwater results for VOC and SVOC analyses were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC). Several metals detected in groundwater at the site exceed the GWQC. As presented in the *Site Investigation Report, Fort Monmouth, New Jersey, Main Post and Charles Wood Areas*, submitted by Roy F. Weston, Inc., dated December 1995, several natural and anthropogenic factors contribute to the wide range in concentrations of metals in soils, which further impact the concentration of metals in groundwater. Soils derived from the glauconitic sands contain abundant aluminum, calcium, potassium, iron,

magnesium, and manganese (among others), which are likely to be present at elevated concentrations in the groundwater, particularly when sediments are entrained in the collected groundwater samples. A low flow sampling methodology was proposed for use by the DPW and accepted by the NJDEP to assess the impact of entrained sediments on the dissolved phase metals concentrations at the site. Using a low flow sampling methodology to reduce the presence of entrained sediment yielded substantial reductions in the dissolved phase concentrations of metals, particularly for the constituents regarded as "non-native" (i.e., arsenic, antimony, beryllium, cadmium, chromium, cobalt, lead, mercury, selenium, silver, thallium, vanadium). Significant decreases in the concentrations of naturally occurring metals also were observed, including aluminum, barium, calcium, copper, iron, magnesium, manganese, nickel, potassium, sodium, and zinc. However, the native metal constituents (i.e., those indigenous to the soil types present at Fort Monmouth) were consistently present in the groundwater, even when the low-flow sampling methodology was employed. The samples at Building 106 were not filtered. The levels of metals present in site groundwater are indicative of naturally occurring background levels in the area.

One pesticide was detected in the groundwater samples collected June 8, 2001 and July 7, 2001. Chlordane was detected at a concentration of 1.18 ug/L in the first round and 3.50 in the second, both of which are above the NJDEP Groundwater Quality Criteria of 0.5 ug/L. Due to the low concentration of chlordane, and the immobility of chlordane in groundwater (high sorption coefficient), no further action is recommended with respect to this pesticide.

No further action is proposed in regard to the closure and site assessment of UST No. 90010-75 at Building 106.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST) was thought to have existed at Building 106 at the Main Post-East area of U.S. Army Fort Monmouth, Fort Monmouth, New. Refer to the site location map on Figure 1. The UST was registered and assigned New Jersey Department of Environmental Protection (NJDEP) Registration No. 90010-75 after it was removed at an unknown time. This report presents the results of the Department of Public Works' (DPW) UST Decommissioning/Closure. The UST was assumed to have contained waste oil given the presence of an oil water separator.

Decommissioning activities for UST No. 90010-75 complied with all applicable Federal, State, and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities.

This UST Closure and Site Investigation Report has been prepared by Versar, to assist the U.S. Army DPW in complying with the NJDEP regulations. The applicable NJDEP regulations at the date of closure were the *Interim Closure Requirements for Underground Storage Tank Systems* (N.J.A.C. 7:14B-1 et seq. October 1990 and revisions dated November 1, 1991).

1.2 SITE DESCRIPTION

Building 106 was located in the Main Post-East area of the Fort Monmouth Army Base. UST No. 0090010-75 was located southeast of Building 106. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 106. 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 106 is located approximately 400 feet north of Oceanport Creek, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 106 is anticipated to be to the south.

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involved with, or were affected by, the decommissioning of the UST system were minimized. All areas, which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

No UST was ever located at the site. There is no record of the removal of the UST. It is an assumption that the UST existed and was removed.

1.5 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPH analysis results from the post-excavation soil samples, approximately 246 cubic yards of potentially contaminated soil were removed from the excavation. All potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to the soil staging area. Soils that did not exhibit signs of contamination were used as backfill. Groundwater was encountered at 3.0 feet below ground surface.

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 document *Interim Closure Requirements for Underground Storage Tank Systems* (October 1990 and revisions dated November 1, 1991). 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 an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank exhibited evidence of potential contamination. Approximately 246 cubic yards of potentially contaminated soil were removed from the excavated area and transported to the Fort Monmouth petroleum contaminated soil holding area. Soils were removed from the excavation until no evidence of contamination remained. Groundwater was encountered at 3.0 feet below ground surface. A sheen was observed on groundwater near the concrete oil water separator.

2.3 SOIL SAMPLING

On March 4, 1998, an unknown solid was collected from the oil water separator. The sample was analyzed for TPH, VOCs, SVOCs, Pest/PCB, and metals. The sample contained 46,625.17 mg/kg TPH.

On March 5, 1998, ten (10) soil samples were collected from the open excavation at Building 106. The groundwater sample was analyzed for VOCs. The soil samples were analyzed for TPH.

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.

2.4 GROUNDWATER SAMPLING

Geoprobe groundwater samples were collected June 8, 2001 and July 7, 2001 at Building 106. Samples were analyzed for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's), pesticides and PCBs, and metals. Sampling and analysis were performed in accordance with the NJDEP Field Sampling Procedures Manual and the Technical Requirements For Site Remediation.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following discovery of the oil water separator, which indicated the presence of a former UST, post-excavation soil samples were collected on February 5, 1998 from 10 locations. All samples were analyzed for TPH and total solids. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (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 Table 2 and the soil sampling locations are shown on Figure 4.

Nine of the post-excavation soil samples collected from the excavation on March 5, 1998 contained no detectable TPH. All sample results were below the NJDEP soil cleanup criteria. Sample 106D contained 269.46 mg/kg TPH and 106G contained 1,517.36 mg/kg TPH. A soil sample was collected from the 106G location on March 12, 1998 and was submitted to the laboratory for VOC, SVOC, Pest/PCB, and metals analysis. According to the laboratory records, the VOC analysis was never run. The Pest/PCB results cannot be located. There were no SVOCs detected in the sample.

3.2 GROUNDWATER SAMPLING RESULTS

The samples collected from Building 106 on June 8 and July 7, 2001, contained no detectable VOCs and no SVOCs above New Jersey Ground Water Quality Criteria (GWQC).

Both samples contained several metals at concentrations above the GWQC. However, as presented in the *Site Investigation Report, Fort Monmouth, New Jersey, Main Post and Charles Wood Areas*, submitted by Roy F. Weston, Inc., dated December 1995, several natural and anthropogenic factors contribute to the wide range in concentrations of metals in soils, which further impact the concentration of metals in groundwater. Soils derived from the glauconitic sands contain abundant aluminum, calcium, potassium, iron, magnesium, and manganese (among others), which are likely to be present at elevated concentrations in the groundwater, particularly when sediments are entrained in the collected groundwater samples. The groundwater samples at Building 106 were not filtered or collected using a low-flow method, which would reduce sediment content in groundwater samples. However, even in filtered samples and when the low-flow sampling methodology was employed at Fort Monmouth, the native metal constituents (i.e., those indigenous to the soil types present at Fort Monmouth) were consistently present in the groundwater. Therefore, the metal concentrations detected in the groundwater samples are not of concern.

Chlordane was detected at a concentration of 1.18 ug/L in the first round and 3.50 in the second, both of which are above the NJDEP Groundwater Quality Criteria of 0.5 ug/L. Due to the low concentration of chlordane, and the immobility of chlordane in groundwater (high sorption coefficient), no further action is recommended with respect to this pesticide.

A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 3. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey.

No further action is proposed in regard to the closure and site assessment of UST No. 90010-75 at Building 106.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 106 were below the NJDEP soil cleanup criteria for total organic contaminants. Soil with TPH concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of Building 106.

Based on the analytical results of the groundwater samples collected at Building 106, groundwater quality at Building 106 was either in compliance with the New Jersey Ground Water Quality Criteria or are indicative of background conditions.

No further action is proposed in regard to the closure and site assessment of UST No. 90010-75 at Building 106.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SOIL SAMPLING ACTIVITIES
BUILDING 106, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
106-A	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-B	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-C	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-D	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-E	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-F	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-G	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-H	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-I	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
106-J	3/5/98	3/9/98	Soil	Post-Excavation	TPH	OQA-QAM-025
XX	3/5/98	3/9/98	unknown	Post-Excavation	TPH	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons
** Sample was further remediated and resampled

TABLE 2

SUMMARY OF GROUNDWATER SAMPLING ACTIVITIES
BUILDING 106, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Date of Collection	Date Analysis Started*	Matrix	Sample Type	Analytical Parameters	EPA Methods
Trip Blank	6/8/01	6/11/01	Aqueous	Groundwater	VOCs	624
Field Blank	6/8/01	6/11/01	Aqueous	Groundwater	VOCs; SVOCs; Pesticides/PCBs; TAL Metals	624; 3510/625; 608; 3115B/3120B/7470A
106/2-9' bgs	6/8/01	6/11/01	Aqueous	Groundwater	VOCs; SVOCs; Pesticides/PCBs; TAL Metals	624; 3510/625; 608; 3115B/3120B/7470A
106/2-9' bgs	7/7/01	7/11/01	Aqueous	Groundwater	VOCs; SVOCs; Pesticides/PCBs; TAL Metals	624; 3510/625; 608; 3115B/3120B/7470A

Note:

*	Date first analysis started
VOCs	Volatile organic compounds
SVOCs	Semi-volatile organic compounds
PCB	Polychlorinated Byphenyl
TAL	Target analyte list
Bgs	Below ground surface

TABLE 3

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 106, 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
160-A	3384.01	2/10/98	2/11/98	Total Solid	--	--	76.66	--	--
				TPH	200	yes	ND	10,000	No
106-B	3384.02	2/10/98	2/11/98	Total Solid	--	--	79.26	--	--
				TPH	191	Yes	ND	10,000	No
106-C	3384.03	2/10/98	2/11/98	Total Solid	--	--	84.92	--	--
				TPH	176	Yes	ND	10,000	No
106-D	3384.04	2/10/98	2/11/98	Total Solid	--	--	78.86	--	--
				TPH	188	yes	269.46	10,000	No
106-E	3384.05	2/10/98	2/11/98	Total Solid	--	--	81.56	--	--
				TPH	189	Yes	ND	10,000	No
106-F	3384.06	2/10/98	2/11/98	Total Solid	--	--	81.16	--	--
				TPH	192	Yes	ND	10,000	No
106-G	3384.07	2/10/98	2/11/98	Total Solid	--	--	81.45	--	--
				TPH	185	yes	1517.36	10,000	No
106-H	3384.08	2/10/98	2/11/98	Total Solid	--	--	81.61	--	--
				TPH	183	yes	ND	10,000	No
106-I	3384.09	2/10/98	2/11/98	Total Solid	--	--	80.65	--	--
				TPH	188	Yes	ND	10,000	No
106-J	3384.10	2/10/98	2/11/98	Total Solid	--	--	82.33	--	--
				TPH	185	Yes	ND	10,000	No
XX	3384.13	2/10/98	2/11/98	Total Solid	--	--	26.92	--	--
				TPH	569	yes	46,625.17	10,000	Yes

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

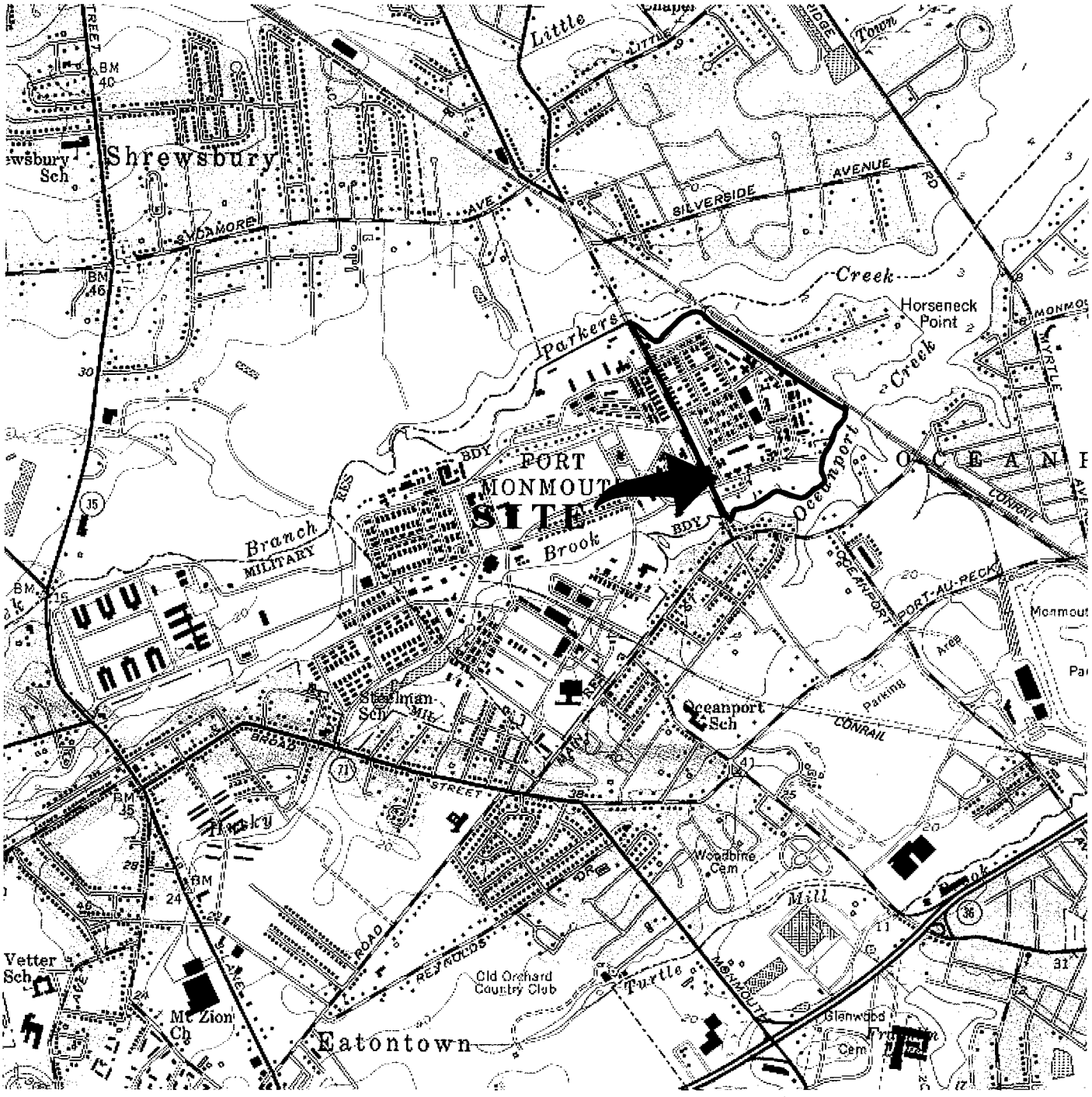
TPHC Total Petroleum Hydrocarbons

TABLE 4
Groundwater Sample Results
Building 106
Fort Monmouth, New Jersey

		SVOCs	Pesticides		Metals				
Sample ID/ Depth	Sample Date	diethyl-phthalate	alpha-chlordane	gamma-chlordane	aluminum	arsenic	iron	lead	manganese
	GWQC	5000	0.5	0.5	10.0	2.0	10.0	1.0	0.5
	units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
106/2-9'bgs	6/8/2001	5.90	0.61	0.57	12,300	24.60	32,300	24.40	297
106/2-9'bgs	7/8/1998	ND	1.71	1.79	3250	5.88	6470	ND	319

Notes:
SVOCs = semi-volatile organic compounds
ND = not detected above method detection limit
GWQC = Higher of Practical Quantitation Limits (PQLs) and Groundwater Quality Criteria per N.J.A.C. 7:9-6
bgs = below ground surface

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

NEW JERSEY

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 106
Main-Post East
Fort Monmouth Army Base
Monmouth County, NJ

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

Scale: 1" = 2000'	Date: Feb. 1998

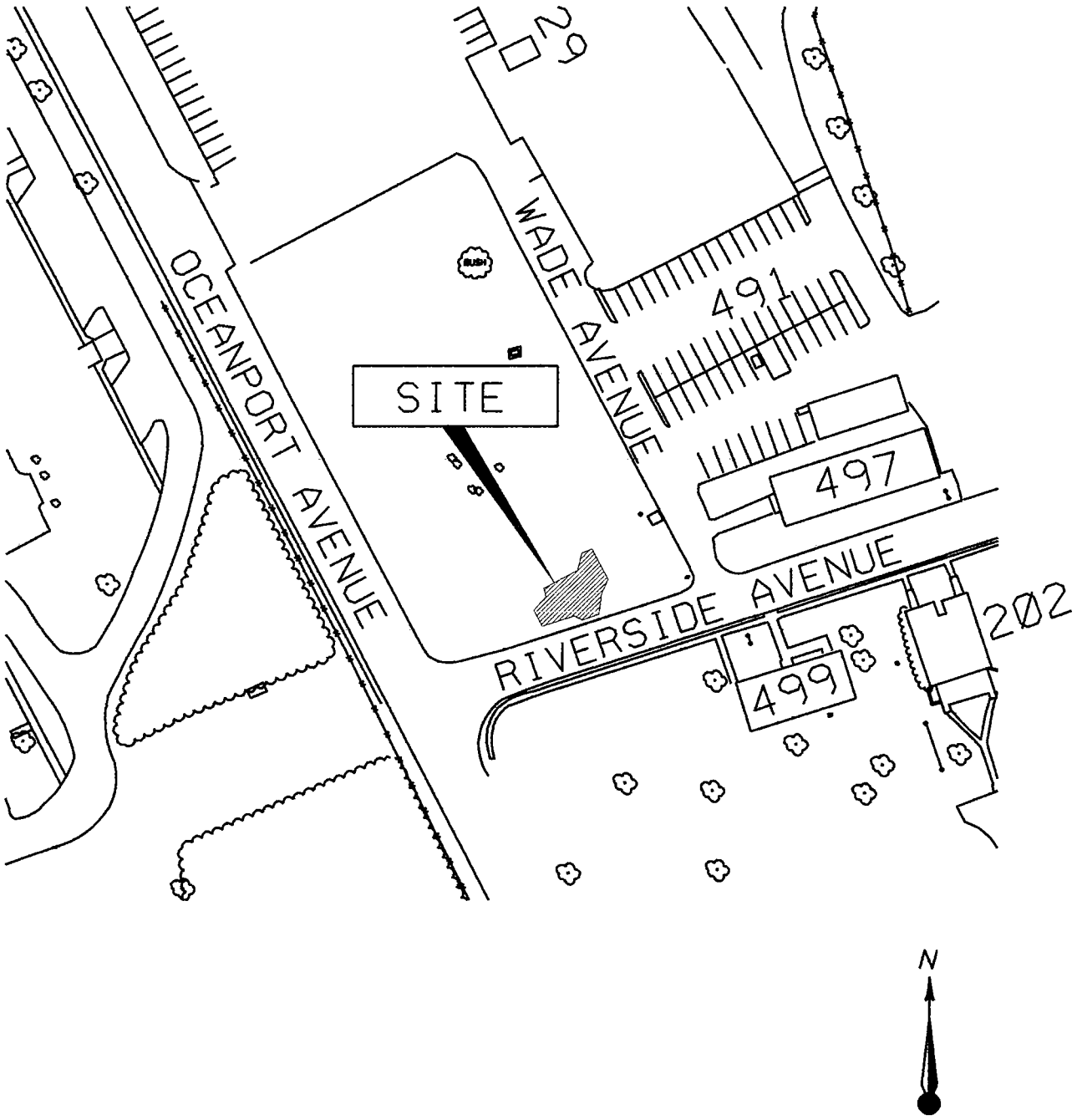
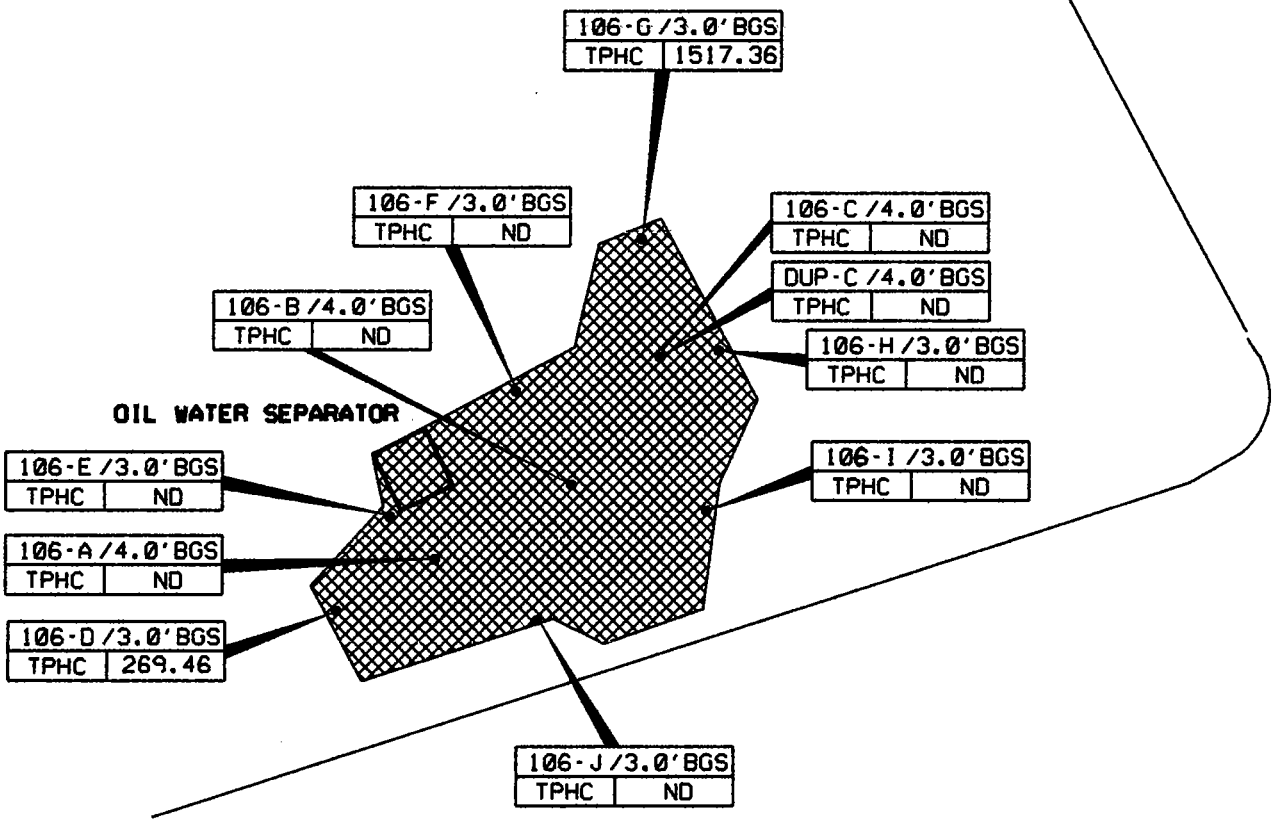


FIGURE 2
SITE MAP
BUILDING 106
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=100' | DATE: OCT 2001

106 FIG2



LEGEND

- SOIL SAMPLE LOCATION (MARCH 5, 1998)
- LIMIT OF EXCAVATION (MARCH 5, 1998)

NOTES:

1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS - BELOW GROUND SURFACE

FIGURE 3
SOIL SAMPLING LOCATION MAP
BUILDING 106
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1" = 20' | DATE: OCT 2001

106 FIG4

APPENDIX A

NJDEP-UST REPORT CERTIFICATION FORM

APPENDIX B

WASTE MANIFEST

APPENDIX C

UST DISPOSAL CERTIFICATE

APPENDIX D

SOIL SAMPLE DATA

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. 106
Proposed Credit Union Site

Project # 3384
Date Rec. 03/05/98
Date Compl. 03/10/98
Released by:

Daniel K. Wright
Laboratory Director

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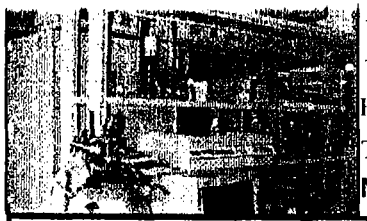


Fort Monmouth Environmental Testing Laboratory

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.106 (PROPOSED CREDIT UNION SITE B.497)
Samplers Name / Company : GARY DIMARTINIS-TVS

Comments: *=SAMPLES KEPT BELOW 4°C.

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids	Mansell	VOA+10	B/N+15	PCB's	TAL Metals	OVA	Remarks / Preservation Method
33841.01	106-A	3-5-98	1124	SOIL	1	X	X	X					ND	EXC. FLOOR @ 4.0' *
02	B		1131										ND	
03	C		1101										10	↓
04	D		1114										ND	SIDE WALL @ 3.0'
05	E		1119										ND	
06	F		1127										ND	
07	G		1055										5	
08	H		1059										ND	
09	I		1104										10	
10	J		1109										ND	↓
11	DUP	↓	—										—	FIELD DUPLICATE
12	ES	3-4-98	1042	↓	↓								20	EXCAVATED SOIL
13	XX	↓	1025	UNKNOWN	2	↓	↓	↓	X	X	X	X	500	UNKNOWN SOLID ↓

NOTE: OVA (#A52144) CALIBRATED W/ 5 ppm CH4 + ZERO (0) AIR @ 1030 HRS. ON 3/4/98 BY G. DIMARTINIS.*

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	3-5-98 1400	[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.

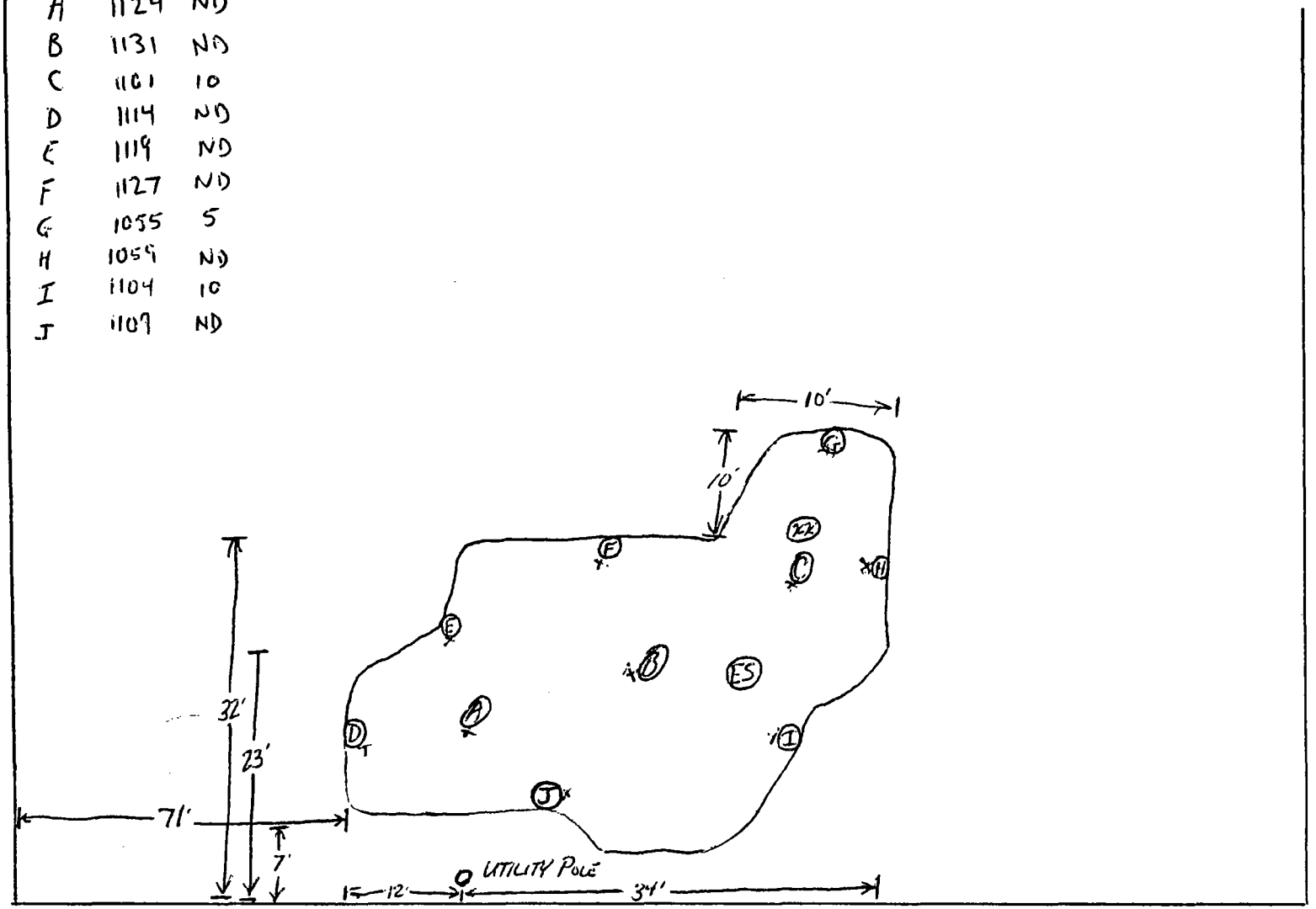
* OVA CALIBRATION CHECKED @ 1035 HRS. ON 3/5/98.

print legibly

~me1413.xls11/17/97

ES	1042	20
XX	1025	500

A	1124	ND
B	1131	ND
C	1161	10
D	1114	ND
E	1119	ND
F	1127	ND
G	1055	5
H	1059	ND
I	1104	10
J	1109	ND



B.106 REMEDIATION 3/4-5/98 SAMPLING EVENT

NOTE: GW @ ~3.5'

N

6

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

Client :	U.S. Army	**Lab. ID # :**	3384
	DPW. SELFM-PW-EV	**Date Rec'd:**	05-Mar-98
	Bldg. 173	**Analysis Start:**	09-Mar-98
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	10-Mar-98
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B. 106

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3384.01	106-A	**1.00**	15.36	76.66	200	**ND**
3384.02	106-B	**1.00**	15.49	79.26	191	**ND**
3384.03	106-C	**1.00**	15.68	84.92	176	**ND**
3384.04	106-D	**1.00**	15.83	78.86	188	**269.46**
3384.05	106-E	**1.00**	15.23	81.56	189	**ND**
3384.06	106-F	**1.00**	15.07	81.16	192	**ND**
3384.07	106-G	**1.00**	15.57	81.45	185	**1517.36**
3384.08	106-H	**1.00**	15.77	81.61	183	**ND**
3384.09	106-I	**1.00**	15.52	80.65	188	**ND**
3384.10	106-J	**1.00**	15.46	82.33	185	**ND**
3384.11	106-DUP	**1.00**	15.42	85.07	179	**ND**
3384.12	ES	**1.00**	15.46	79.67	191	**3362.54**
3384.13	XX	**1.00**	15.33	26.92	569	**46625.17**
METHOD BLANK	9-Mar-98	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

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. (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

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Mar 13 07:39:31 1998

Calibration Files
200 =T04528.D 100 =T04530.D 50 =T04531.D
10 =T04532.D 5 =T04529.D

	Compound	200	100	50	10	5	Avg		%RSD
1)	tC C8	2.171	1.843	2.306	2.006	2.110	2.087	E4	8.35
2)	tC C10	2.432	1.952	2.451	2.091	2.320	2.249	E4	9.76
3)	TC C12	2.685	2.130	2.689	2.267	2.502	2.454	E4	10.20
4)	tC C14	2.777	2.203	2.801	2.392	2.690	2.573	E4	10.22
5)	tC C16	2.836	2.257	2.873	2.476	2.815	2.651	E4	10.26
6)	tC C18	3.200	2.519	3.295	2.841	3.232	3.018	E4	10.94
7)	tC C20	3.054	2.463	3.143	2.673	3.017	2.870	E4	10.06
8)	tC C22	3.053	2.433	3.094	2.636	2.979	2.839	E4	10.23
9)	tC C24	3.055	2.426	3.086	2.619	2.852	2.808	E4	10.10
10)	tC C26	2.881	2.277	2.892	2.401	2.706	2.631	E4	10.65
11)	tC C28	2.455	1.914	2.435	2.080	2.351	2.247	E4	10.62
12)	tC C30	2.155	1.653	2.082	1.797	2.069	1.951	E4	11.02
13)	tC C32	2.019	1.517	1.906	1.542	1.745	1.746	E4	12.61
14)	tC C34	1.857	1.349	1.695	1.519	1.755	1.635	E4	12.35
15)	tC C36	1.636	1.167	1.494	1.455	1.778	1.506	E4	15.15
16)	tC C38	1.435	1.026	1.308	1.499	1.675	1.389	E4	17.42
17)	tC C40	1.198	0.899	1.177	1.287	1.576	1.227	E4	19.81
18)	tC c42	1.071	0.808	1.071	1.243	1.505	1.140	E4	22.52
19)	TC Pristane	3.248	2.354	3.046	2.662	3.138	2.890	E4	12.87
20)	TC Phytane	3.170	2.514	3.164	2.863	2.987	2.940	E4	9.20
21)	sC o-terphenyl	3.313	2.636	3.363	2.907	3.316	3.107	E4	10.35
22)	tC TPHC - total	2.915	2.351	3.061	3.193	4.019	3.108	E4	19.37

(#) = Out of Range

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:32:43 1998

Calibration Files
200 =T04480.D 100 =T04481.D 50 =T04482.D
10 =T04483.D 5 =T04484.D

		Compound	200	100	50	10	5	Avg		%RSD
1)	tC	C8	1.971	1.914	2.100	2.180	2.094	2.052	E4	5.23
2)	tC	C10	2.110	2.041	2.220	2.296	2.211	2.176	E4	4.60
3)	TC	C12	2.333	2.266	2.466	2.517	2.413	2.399	E4	4.20
4)	tC	C14	2.443	2.392	2.628	2.706	2.608	2.555	E4	5.17
5)	tC	C16	2.518	2.485	2.748	2.822	2.762	2.667	E4	5.79
6)	tC	C18	2.887	2.771	3.241	3.153	3.266	3.064	E4	7.25
7)	tC	C20	2.722	2.703	3.000	3.100	3.036	2.912	E4	6.39
8)	tC	C22	2.735	2.713	3.015	3.090	2.986	2.908	E4	5.93
9)	tC	C24	2.745	2.730	3.039	3.118	2.932	2.913	E4	5.95
10)	tC	C26	2.616	2.609	2.901	2.930	2.725	2.756	E4	5.54
11)	tC	C28	2.264	2.255	2.500	2.492	2.402	2.383	E4	4.98
12)	tC	C30	2.161	2.142	2.174	2.329	2.184	2.198	E4	3.41
13)	tC	C32	1.856	1.808	1.973	1.917	1.756	1.862	E4	4.61
14)	tC	C34	1.656	1.591	1.721	1.591	1.432	1.598	E4	6.70
15)	tC	C36	1.430	1.371	1.468	1.251	1.094	1.323	E4	11.49
16)	tC	C38	1.242	1.203	1.288	1.055	0.972	1.152	E4	11.57
17)	tC	C40	1.078	1.003	1.050	0.853	0.790	0.955	E4	13.27
18)	tC	c42	8.728	8.636	8.810	6.222	5.942	7.668	E3	18.94
19)	TC	Pristane	2.743	2.650	2.924	3.166	3.007	2.898	E4	7.11
20)	TC	Phytane	2.833	2.827	2.918	3.272	3.227	3.015	E4	7.21
21)	sC	o-terphenyl	2.961	2.923	3.238	3.367	3.301	3.158	E4	6.42
22)	tC	TPHC - total	2.635	2.669	2.979	3.614	3.695	3.118	E4	16.30

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980309\T04485.D Vial: 4
Acq On : 9 Mar 98 8:49 pm Operator: DEINHARDT
Sample : 50 PPM STD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:32:43 1998
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	tC	C8	20.519	21.187 E3	-3.3	100	0.00
2	tC	C10	21.756	22.859 E3	-5.1	100	0.00
3	TC	C12	23.986	25.333 E3	-5.6	100	0.00
4	tC	C14	25.555	26.718 E3	-4.6	100	0.00
5	tC	C16	26.672	27.716 E3	-3.9	100	0.00
6	tC	C18	30.635	31.773 E3	-3.7	100	0.00
7	tC	C20	29.122	29.845 E3	-2.5	100	0.00
8	tC	C22	29.078	30.097 E3	-3.5	100	0.00
9	tC	C24	29.127	30.163 E3	-3.6	100	0.00
10	tC	C26	27.561	28.720 E3	-4.2	100	0.00
11	tC	C28	23.825	24.740 E3	-3.8	100	0.00
12	tC	C30	21.979	23.394 E3	-6.4	100	0.00
13	tC	C32	18.619	19.584 E3	-5.2	100	0.00
14	tC	C34	15.983	17.214 E3	-7.7	100	0.00
15	tC	C36	13.225	14.852 E3	-12.3	100	0.00
16	tC	C38	11.521	13.141 E3	-14.1	100	0.00
17	tC	C40	9.547	11.189 E3	-17.2	100	0.00
18	tC	c42	7.668	9.020 E3	-17.6	100	0.00
19	TC	Pristane	28.981	29.496 E3	-1.8	100	0.00
20	TC	Phytane	30.152	30.901 E3	-2.5	100	0.00
21	sC	o-terphenyl	31.582	32.587 E3	-3.2	100	0.00
22	tC	TPHC - total	31.184	29.704 E3	4.7	100	2.00#

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980311\T04531.D Vial: 2
Acq On : 11 Mar 98 3:42 pm Operator: DEINHARDT
Sample : 50 PPM STD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Mar 13 07:39:31 1998
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	tC	C8	20.874	23.058 E3	-10.5	0#	0.00
2	tC	C10	22.494	24.513 E3	-9.0	0#	0.00
3	TC	C12	24.545	26.893 E3	-9.6	0#	0.00
4	tC	C14	25.725	28.010 E3	-8.9	0#	0.00
5	tC	C16	26.514	28.729 E3	-8.4	0#	0.00
6	tC	C18	30.176	32.952 E3	-9.2	0#	0.00
7	tC	C20	28.701	31.425 E3	-9.5	0#	0.00
8	tC	C22	28.391	30.943 E3	-9.0	0#	0.00
9	tC	C24	28.075	30.863 E3	-9.9	0#	0.00
10	tC	C26	26.315	28.919 E3	-9.9	0#	0.00
11	tC	C28	22.469	24.345 E3	-8.3	0#	0.00
12	tC	C30	19.513	20.816 E3	-6.7	0#	0.00
13	tC	C32	17.457	19.058 E3	-9.2	0#	0.00
14	tC	C34	16.348	16.947 E3	-3.7	0#	0.00
15	tC	C36	15.062	14.944 E3	0.8	0#	0.00
16	tC	C38	13.887	13.082 E3	5.8	0#	0.00
17	tC	C40	12.275	11.767 E3	4.1	0#	0.00
18	tC	c42	11.395	10.706 E3	6.0	0#	0.00
19	TC	Pristane	28.898	30.463 E3	-5.4	0#	0.00
20	TC	Phytane	29.395	31.640 E3	-7.6	0#	0.00
21	sC	o-terphenyl	31.073	33.632 E3	-8.2	0#	0.00
22	tC	TPHC - total	31.079	30.606 E3	1.5	0#	2.66#

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980311\T04544.D Vial: 12
Acq On : 12 Mar 98 12:21 am Operator: DEINHARDT
Sample : 50 PPM STD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Fri Mar 13 07:39:31 1998
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	tC	C8	20.874	17.384	E3	16.7	0#	0.00
2	tC	C10	22.494	18.232	E3	18.9	0#	0.00
3	TC	C12	24.545	19.912	E3	18.9	0#	0.00
4	tC	C14	25.725	20.769	E3	19.3	0#	0.00
5	tC	C16	26.514	21.218	E3	20.0	0#	0.00
6	tC	C18	30.176	23.574	E3	21.9	0#	0.00
7	tC	C20	28.701	21.689	E3	24.4	0#	0.00
8	tC	C22	28.391	22.739	E3	19.9	0#	0.00
9	tC	C24	28.075	22.499	E3	19.9	0#	0.00
10	tC	C26	26.315	21.430	E3	18.6	0#	0.00
11	tC	C28	22.469	18.460	E3	17.8	0#	0.00
12	tC	C30	19.513	15.935	E3	18.3	0#	0.00
13	tC	C32	17.457	14.180	E3	18.8	0#	0.00
14	tC	C34	16.348	11.658	E3	28.7#	0#	0.00
15	tC	C36	15.062	8.486	E3	43.7#	0#	-0.01
16	tC	C38	13.887	5.814	E3	58.1#	0#	-0.02
17	tC	C40	12.275	4.126	E3	66.4#	0#	-0.03
18	tC	c42	11.395	3.211	E3	71.8#	0#	-0.05
19	TC	Pristane	28.898	13.423	E3	53.6#	0#	0.00
20	TC	Phytane	29.395	22.398	E3	23.8	0#	0.00
21	sC	o-terphenyl	31.073	24.944	E3	19.7	0#	0.00
22	tC	TPHC - total	31.079	1.247	E3	96.0#	0#	2.66#

(#) = Out of Range SPCC's out = 0 CCC's out = 7

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

Surrogate Recovery Report

Lab. ID # : 3384

Location #: B. 106

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3384.01		10.00	8.44	**84.37**
3384.02		10.00	9.36	**93.63**
3384.03		10.00	9.06	**90.60**
3384.04		10.00	8.01	**80.12**
3384.05		10.00	9.59	**95.91**
3384.06		10.00	9.12	**91.21**
3384.07		10.00	9.67	**96.74**
3384.08		10.00	7.51	**75.12**
3384.09		10.00	8.32	**83.23**
3384.10		10.00	8.80	**87.98**
3384.11		10.00	7.92	**79.23**
3384.12		10.00	9.21	**92.11**
3384.13		10.00	7.70	**76.96**
METHOD BLANK	09-Mar-98	10.00	9.83	**98.27**

Surrogate Added : **o-Terphenyl**

3/13/98

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

Matrix Spike Recovery Report

Lab. ID # : 3384

Location #: B. 106

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3384.07MS	1000	384.86	1240.14	85.53	75-125
3384.07MSD	1000	384.86	1138.67	75.38	75-125

RPD	**12.61**	**20.00**

3/13/98

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

Blank Spike Recovery Report

Lab. ID # : 3384

Location #: B. 106

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	9-Mar-98	1000	881.75	88.18	75-125

3/13/98

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980309\T04488.D Vial: 10
Acq On : 9 Mar 98 11:21 pm Operator: DEINHARDT
Sample : 3384.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 13 10:33 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	266467	8.437	mg/L
Spiked Amount	10.000 Range	8 - 13	Recovery =	84.37%#	
	Target Compounds				
1)	tC C8	0.00	0	N.D.	mg/L
2)	tC C10	0.00	0	N.D.	mg/L
3)	TC C12	0.00	0	N.D.	mg/L
4)	tC C14	0.00	0	N.D.	mg/L
5)	tC C16	0.00	0	N.D.	mg/L
6)	tC C18	0.00	0	N.D.	mg/L
7)	tC C20	0.00	0	N.D.	mg/L
8)	tC C22	0.00	0	N.D.	mg/L d
9)	tC C24	0.00	0	N.D.	mg/L d
10)	tC C26	0.00	0	N.D.	mg/L
11)	tC C28	0.00	0	N.D.	mg/L
12)	tC C30	0.00	0	N.D.	mg/L
13)	tC C32	0.00	0	N.D.	mg/L
14)	tC C34	0.00	0	N.D.	mg/L
15)	tC C36	0.00	0	N.D.	mg/L
16)	tC C38	0.00	0	N.D.	mg/L
17)	tC C40	0.00	0	N.D.	mg/L
18)	tC c42	0.00	0	N.D.	mg/L
19)	TC Pristane	0.00	0	N.D.	mg/L
20)	TC Phytane	0.00	0	N.D.	mg/L
22)	tC TPHC - total	0.00	0	N.D.	mg/L

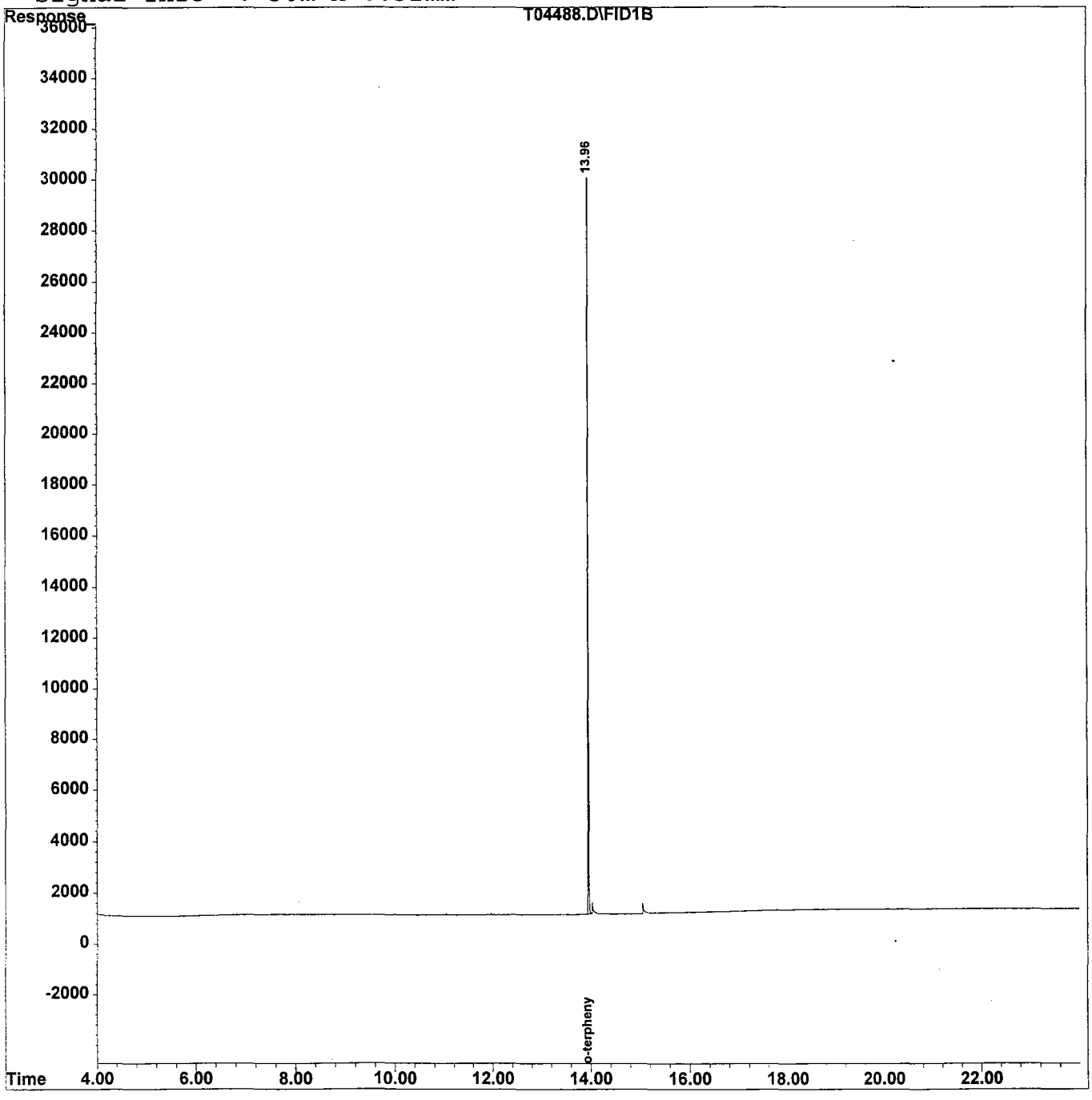
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04488.D Vial: 10
Acq On : 9 Mar 98 11:21 pm Operator: DEINHARDT
Sample : 3384.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 13 10:33 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04489.D Vial: 11
Acq On : 10 Mar 98 12:13 am Operator: DEINHARDT
Sample : 3384.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 13 10:34 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	295695	9.363	mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	93.63%#	
Target Compounds				
1) tC C8	0.00	0	N.D.	mg/L
2) tC C10	0.00	0	N.D.	mg/L
3) TC C12	0.00	0	N.D.	mg/L
4) tC C14	0.00	0	N.D.	mg/L
5) tC C16	0.00	0	N.D.	mg/L
6) tC C18	0.00	0	N.D.	mg/L
7) tC C20	0.00	0	N.D.	mg/L
8) tC C22	0.00	0	N.D.	mg/L
9) tC C24	0.00	0	N.D.	mg/L d
10) tC C26	0.00	0	N.D.	mg/L
11) tC C28	0.00	0	N.D.	mg/L
12) tC C30	0.00	0	N.D.	mg/L
13) tC C32	0.00	0	N.D.	mg/L
14) tC C34	0.00	0	N.D.	mg/L
15) tC C36	0.00	0	N.D.	mg/L
16) tC C38	0.00	0	N.D.	mg/L
17) tC C40	0.00	0	N.D.	mg/L
18) tC c42	0.00	0	N.D.	mg/L
19) TC Pristane	0.00	0	N.D.	mg/L
20) TC Phytane	0.00	0	N.D.	mg/L
22) tC TPHC - total	0.00	0	N.D.	mg/L

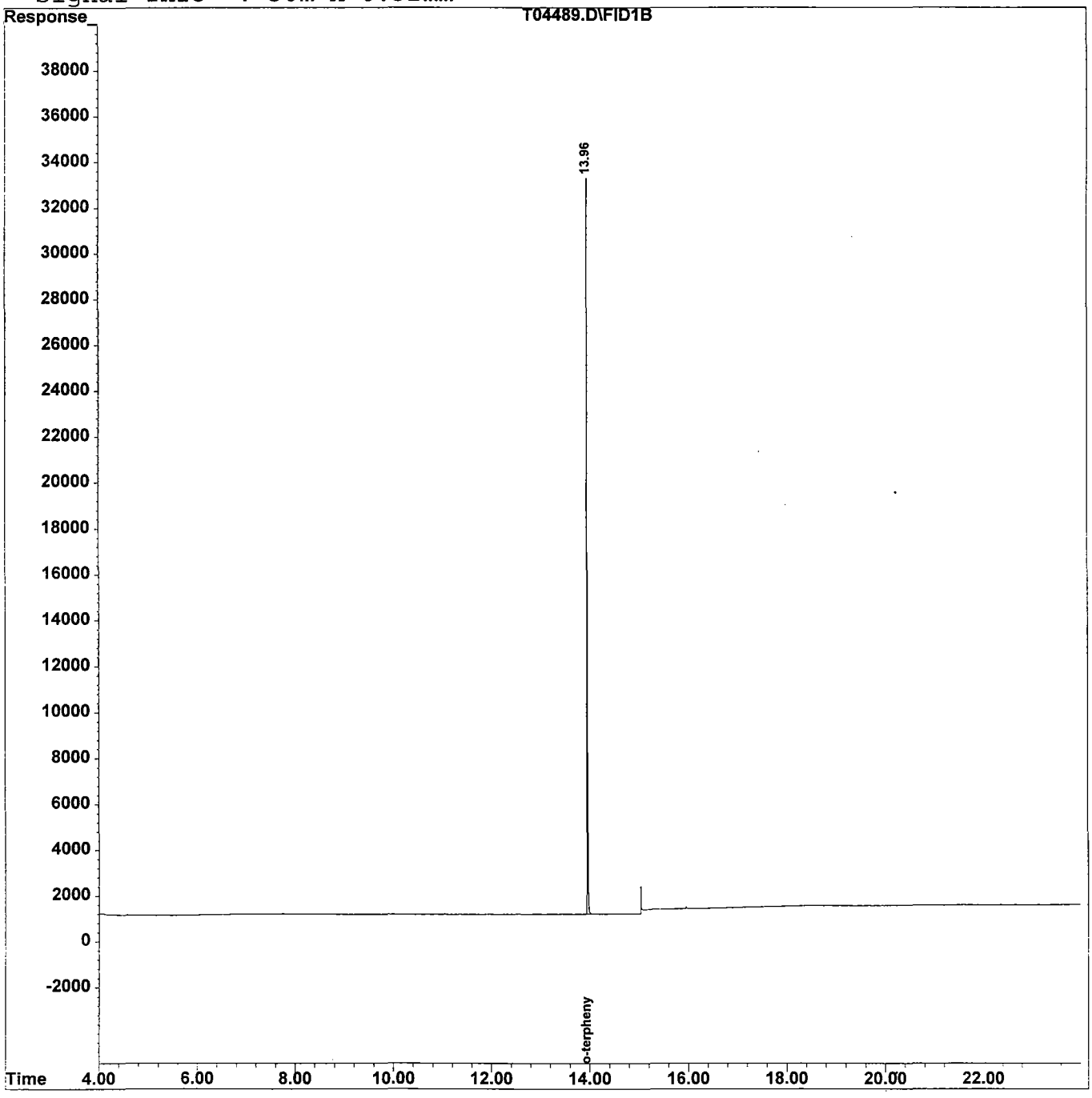
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04489.D Vial: 11
Acq On : 10 Mar 98 12:13 am Operator: DEINHARDT
Sample : 3384.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 13 10:34 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04490.D Vial: 12
Acq On : 10 Mar 98 1:04 am Operator: DEINHARDT
Sample : 3384.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:22 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	286150	9.060	mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	90.60%#	
Target Compounds				
1) tC C8	0.00	0	N.D.	mg/L
2) tC C10	0.00	0	N.D.	mg/L
3) TC C12	0.00	0	N.D.	mg/L
4) tC C14	0.00	0	N.D.	mg/L
5) tC C16	0.00	0	N.D.	mg/L
6) tC C18	0.00	0	N.D.	mg/L
7) tC C20	0.00	0	N.D.	mg/L
8) tC C22	0.00	0	N.D.	mg/L
9) tC C24	0.00	0	N.D.	mg/L
10) tC C26	0.00	0	N.D.	mg/L
11) tC C28	0.00	0	N.D.	mg/L
12) tC C30	0.00	0	N.D.	mg/L
13) tC C32	0.00	0	N.D.	mg/L
14) tC C34	0.00	0	N.D.	mg/L
15) tC C36	0.00	0	N.D.	mg/L
16) tC C38	0.00	0	N.D.	mg/L
17) tC C40	0.00	0	N.D.	mg/L
18) tC c42	0.00	0	N.D.	mg/L
19) TC Pristane	0.00	0	N.D.	mg/L
20) TC Phytane	0.00	0	N.D.	mg/L
22) tC TPHC - total	0.00	0	N.D.	mg/L

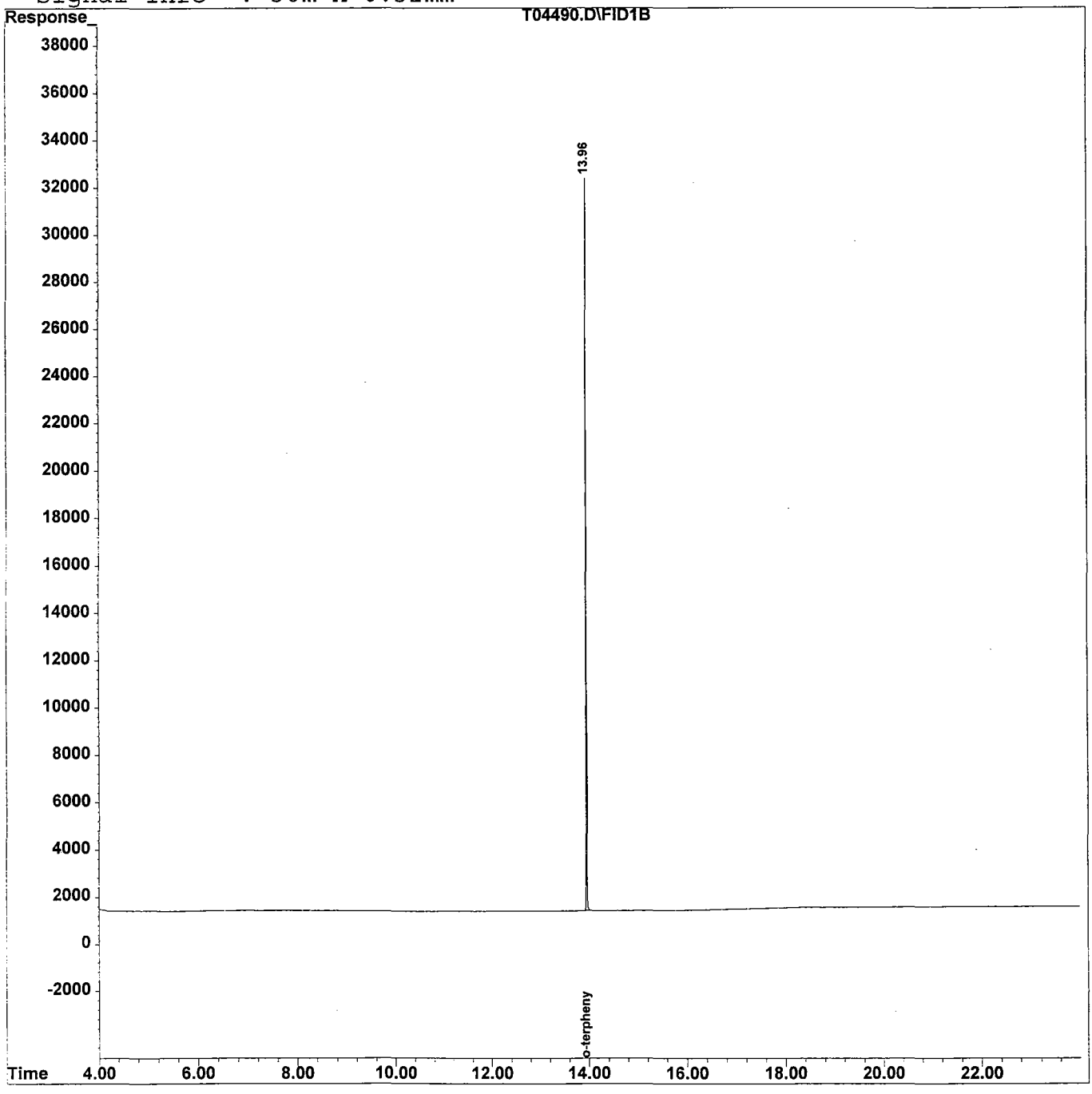
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04490.D Vial: 12
Acq On : 10 Mar 98 1:04 am Operator: DEINHARDT
Sample : 3384.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:22 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04491.D Vial: 13
Acq On : 10 Mar 98 1:55 am Operator: DEINHARDT
Sample : 3384.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 15:06 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	253032	8.012	mg/L
Spiked Amount	10.000 Range	8 - 13	Recovery =	80.12%#	
	Target Compounds				
1)	tC C8	0.00	0	N.D.	mg/L
2)	tC C10	0.00	0	N.D.	mg/L
3)	TC C12	10.44	1693	0.071	mg/L
4)	tC C14	11.50	2726	0.107	mg/L
5)	tC C16	12.50	3805	0.143	mg/L
6)	tC C18	12.96	2431	0.079	mg/L
7)	tC C20	13.40	2582	0.089	mg/L
8)	tC C22	14.22	1414	0.049	mg/L
9)	tC C24	0.00	0	N.D.	mg/L
10)	tC C26	0.00	0	N.D.	mg/L
11)	tC C28	0.00	0	N.D.	mg/L
12)	tC C30	0.00	0	N.D.	mg/L
13)	tC C32	0.00	0	N.D.	mg/L
14)	tC C34	0.00	0	N.D.	mg/L
15)	tC C36	0.00	0	N.D.	mg/L
16)	tC C38	0.00	0	N.D.	mg/L
17)	tC C40	0.00	0	N.D.	mg/L
18)	tC c42	0.00	0	N.D.	mg/L
19)	TC Pristane	12.99	5856	0.202	mg/L
20)	TC Phytane	13.45	3438	0.114	mg/L
22)	tC TPHC - total	13.96	2097922	67.276	mg/L m

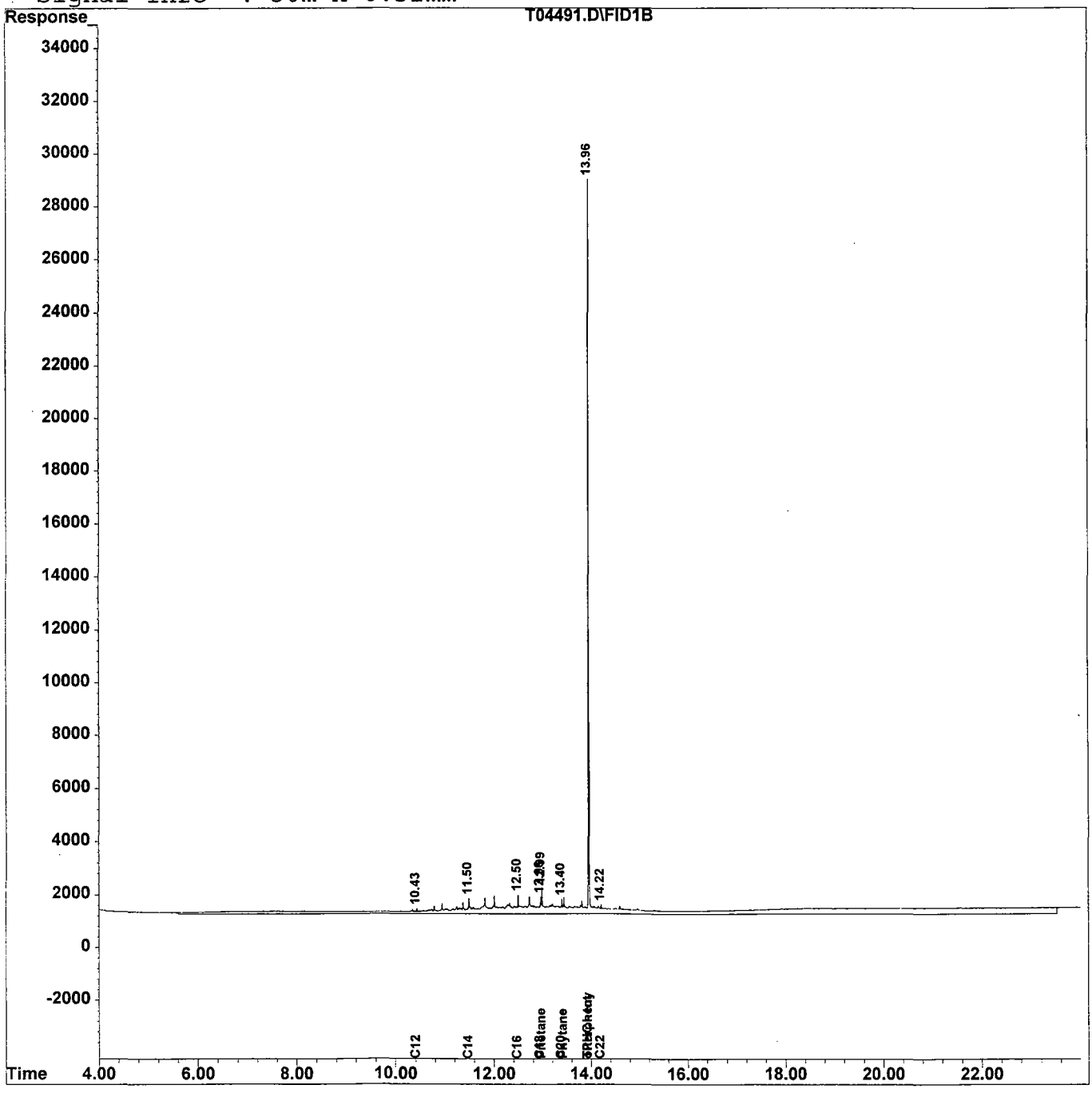
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04491.D Vial: 13
Acq On : 10 Mar 98 1:55 am Operator: DEINHARDT
Sample : 3384.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 15:06 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04492.D Vial: 14
Acq On : 10 Mar 98 2:45 am Operator: DEINHARDT
Sample : 3384.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:23 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	302897	9.591	mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	95.91%#	
Target Compounds				
1) tC C8	0.00	0	N.D.	mg/L
2) tC C10	0.00	0	N.D.	mg/L
3) TC C12	0.00	0	N.D.	mg/L
4) tC C14	0.00	0	N.D.	mg/L
5) tC C16	0.00	0	N.D.	mg/L
6) tC C18	0.00	0	N.D.	mg/L
7) tC C20	0.00	0	N.D.	mg/L
8) tC C22	0.00	0	N.D.	mg/L
9) tC C24	0.00	0	N.D.	mg/L
10) tC C26	0.00	0	N.D.	mg/L
11) tC C28	0.00	0	N.D.	mg/L
12) tC C30	0.00	0	N.D.	mg/L
13) tC C32	0.00	0	N.D.	mg/L
14) tC C34	0.00	0	N.D.	mg/L
15) tC C36	0.00	0	N.D.	mg/L
16) tC C38	0.00	0	N.D.	mg/L
17) tC C40	0.00	0	N.D.	mg/L
18) tC c42	0.00	0	N.D.	mg/L
19) TC Pristane	0.00	0	N.D.	mg/L
20) TC Phytane	0.00	0	N.D.	mg/L
22) tC TPHC - total	0.00	0	N.D.	mg/L

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

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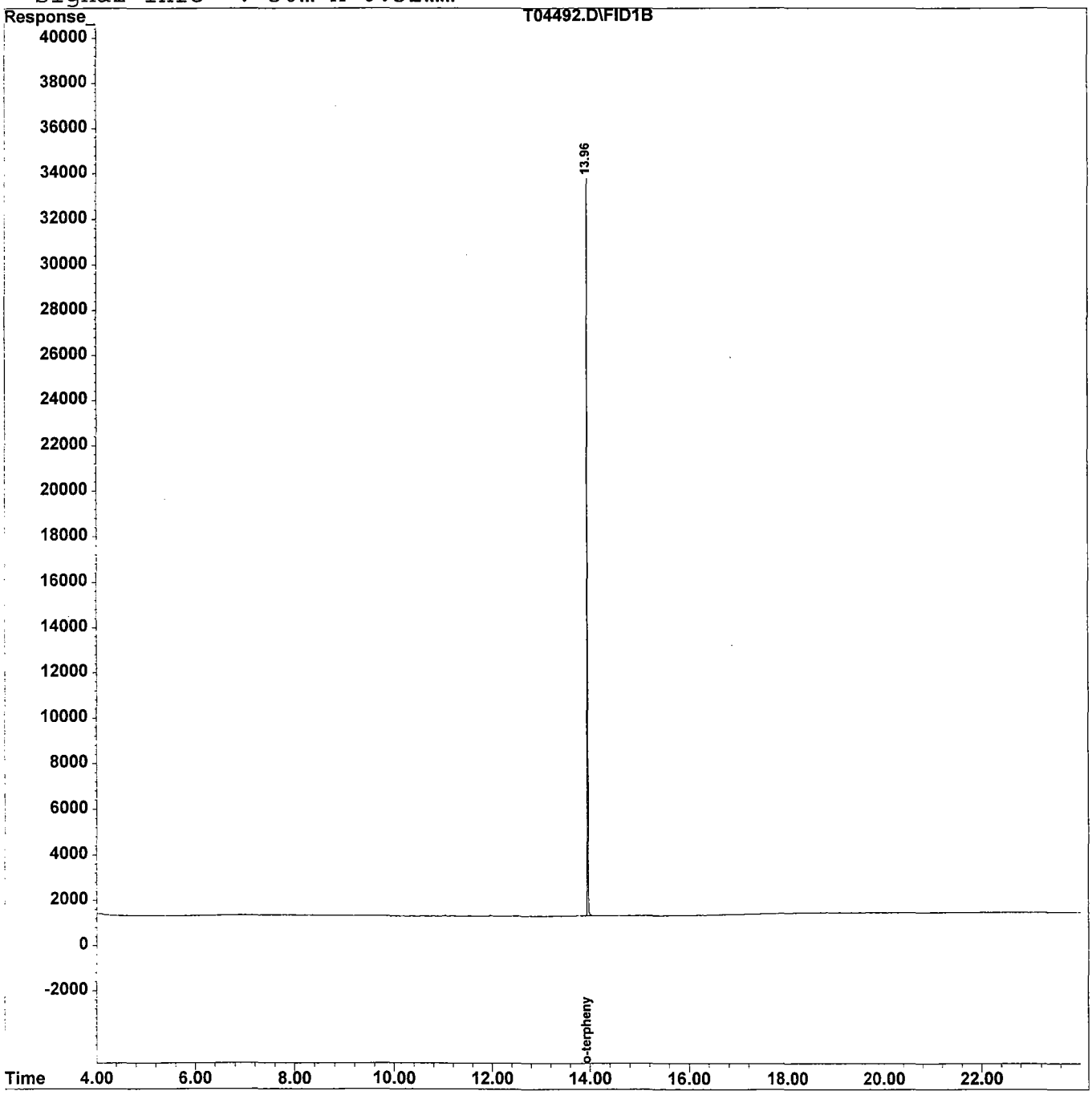
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04492.D Vial: 14
Acq On : 10 Mar 98 2:45 am Operator: DEINHARDT
Sample : 3384.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:23 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04493.D Vial: 15
Acq On : 10 Mar 98 3:36 am Operator: DEINHARDT
Sample : 3384.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:23 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	288048	9.121 mg/L
Spiked Amount 10.000 Range 8 - 13 Recovery = 91.21%#			
Target Compounds			
1) tC C8	0.00	0	N.D. mg/L
2) tC C10	0.00	0	N.D. mg/L
3) TC C12	0.00	0	N.D. mg/L
4) tC C14	0.00	0	N.D. mg/L
5) tC C16	0.00	0	N.D. mg/L
6) tC C18	0.00	0	N.D. mg/L
7) tC C20	0.00	0	N.D. mg/L
8) tC C22	0.00	0	N.D. mg/L
9) tC C24	0.00	0	N.D. mg/L
10) tC C26	0.00	0	N.D. mg/L
11) tC C28	0.00	0	N.D. mg/L
12) tC C30	0.00	0	N.D. mg/L
13) tC C32	0.00	0	N.D. mg/L
14) tC C34	0.00	0	N.D. mg/L
15) tC C36	0.00	0	N.D. mg/L
16) tC C38	0.00	0	N.D. mg/L
17) tC C40	0.00	0	N.D. mg/L
18) tC c42	0.00	0	N.D. mg/L
19) TC Pristane	0.00	0	N.D. mg/L
20) TC Phytane	0.00	0	N.D. mg/L
22) tC TPHC - total	0.00	0	N.D. mg/L

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

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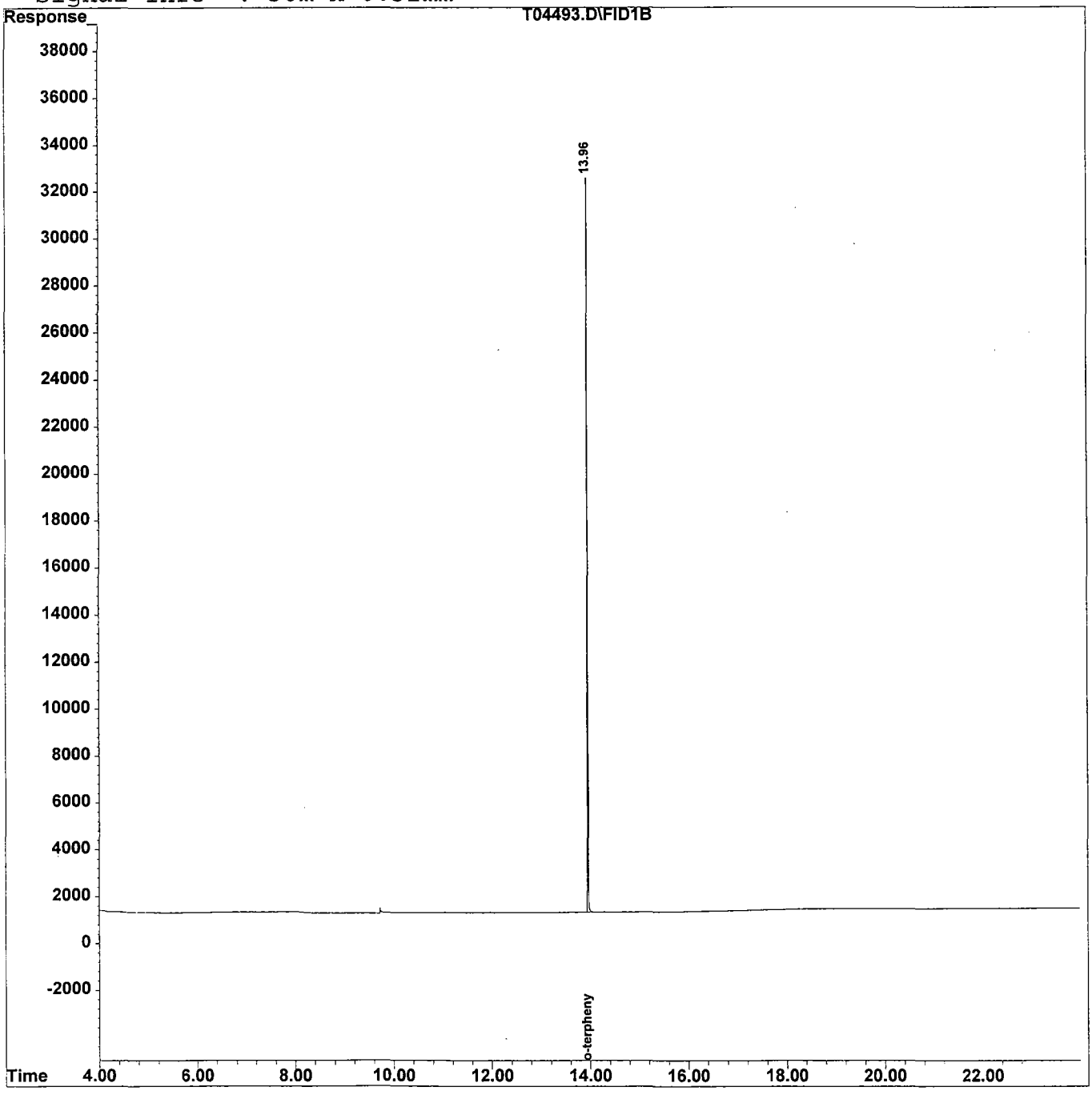
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04493.D Vial: 15
Acq On : 10 Mar 98 3:36 am Operator: DEINHARDT
Sample : 3384.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 8:23 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980309\T04494.D Vial: 16
Acq On : 10 Mar 98 4:26 am Operator: DEINHARDT
Sample : 3384.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 15:07 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Initial Calibration
DataAcq Meth : TPH22.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	13.96	305522	9.674 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	96.74%#
Target Compounds			
1) tC C8	0.00	0	N.D. mg/L
2) tC C10	9.04	5898	0.271 mg/L
3) TC C12	10.35	1149	0.048 mg/L
4) tC C14	11.50	10639	0.416 mg/L
5) tC C16	12.50	8306	0.311 mg/L
6) tC C18	12.95	2698	0.088 mg/L
7) tC C20	13.39	1346	0.046 mg/L
8) tC C22	14.21	3508	0.121 mg/L
9) tC C24	14.98	8584	0.295 mg/L
10) tC C26	15.51	3578	0.130 mg/L
11) tC C28	0.00	0	N.D. mg/L
12) tC C30	0.00	0	N.D. mg/L
13) tC C32	0.00	0	N.D. mg/L
14) tC C34	0.00	0	N.D. mg/L
15) tC C36	0.00	0	N.D. mg/L
16) tC C38	0.00	0	N.D. mg/L
17) tC C40	0.00	0	N.D. mg/L
18) tC c42	0.00	0	N.D. mg/L
19) TC Pristane	12.99	143250	4.943 mg/L
20) TC Phytane	13.45	68758	2.280 mg/L
22) tC TPHC - total	13.96	12001324	384.856 mg/L m

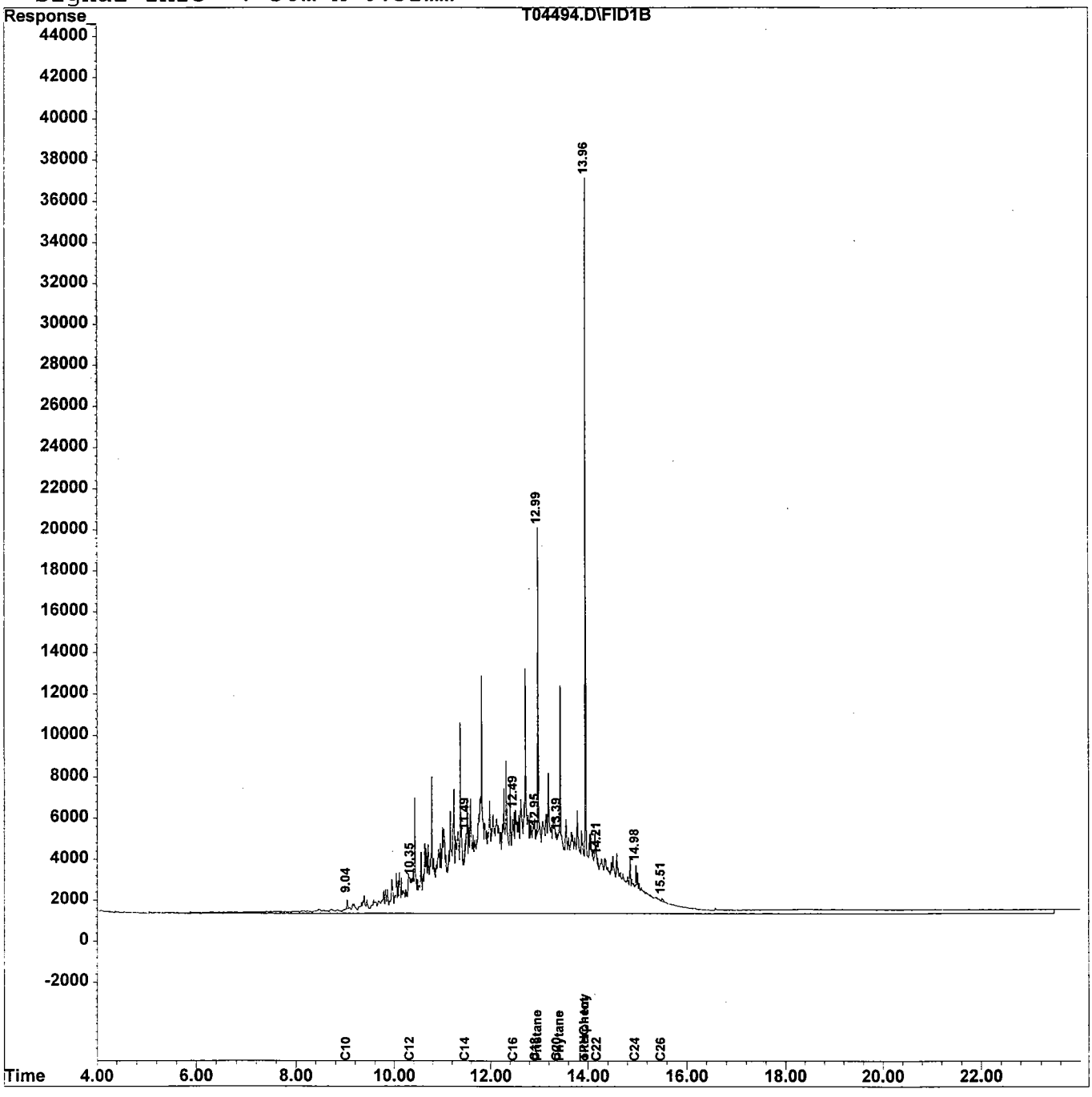
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980309\T04494.D Vial: 16
Acq On : 10 Mar 98 4:26 am Operator: DEINHARDT
Sample : 3384.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 10 15:07 1998 Quant Results File: TPH23.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH23.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue Mar 10 08:21:11 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH22.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\980311\T04539.D Vial: 7
Acq On : 11 Mar 98 9:10 pm Operator: DEINHARDT
Sample : 3384.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.95	233404	7.512	mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	75.12%#	
Target Compounds				
1) tC C8	0.00	0	N.D.	mg/L
2) tC C10	0.00	0	N.D.	mg/L
3) TC C12	0.00	0	N.D.	mg/L
4) tC C14	0.00	0	N.D.	mg/L
5) tC C16	0.00	0	N.D.	mg/L
6) tC C18	0.00	0	N.D.	mg/L
7) tC C20	0.00	0	N.D.	mg/L
8) tC C22	0.00	0	N.D.	mg/L
9) tC C24	0.00	0	N.D.	mg/L
10) tC C26	0.00	0	N.D.	mg/L
11) tC C28	0.00	0	N.D.	mg/L
12) tC C30	0.00	0	N.D.	mg/L
13) tC C32	0.00	0	N.D.	mg/L
14) tC C34	0.00	0	N.D.	mg/L
15) tC C36	0.00	0	N.D.	mg/L
16) tC C38	0.00	0	N.D.	mg/L
17) tC C40	0.00	0	N.D.	mg/L
18) tC c42	0.00	0	N.D.	mg/L
19) TC Pristane	0.00	0	N.D.	mg/L
20) TC Phytane	0.00	0	N.D.	mg/L
22) tC TPHC - total	0.00	0	N.D.	mg/L

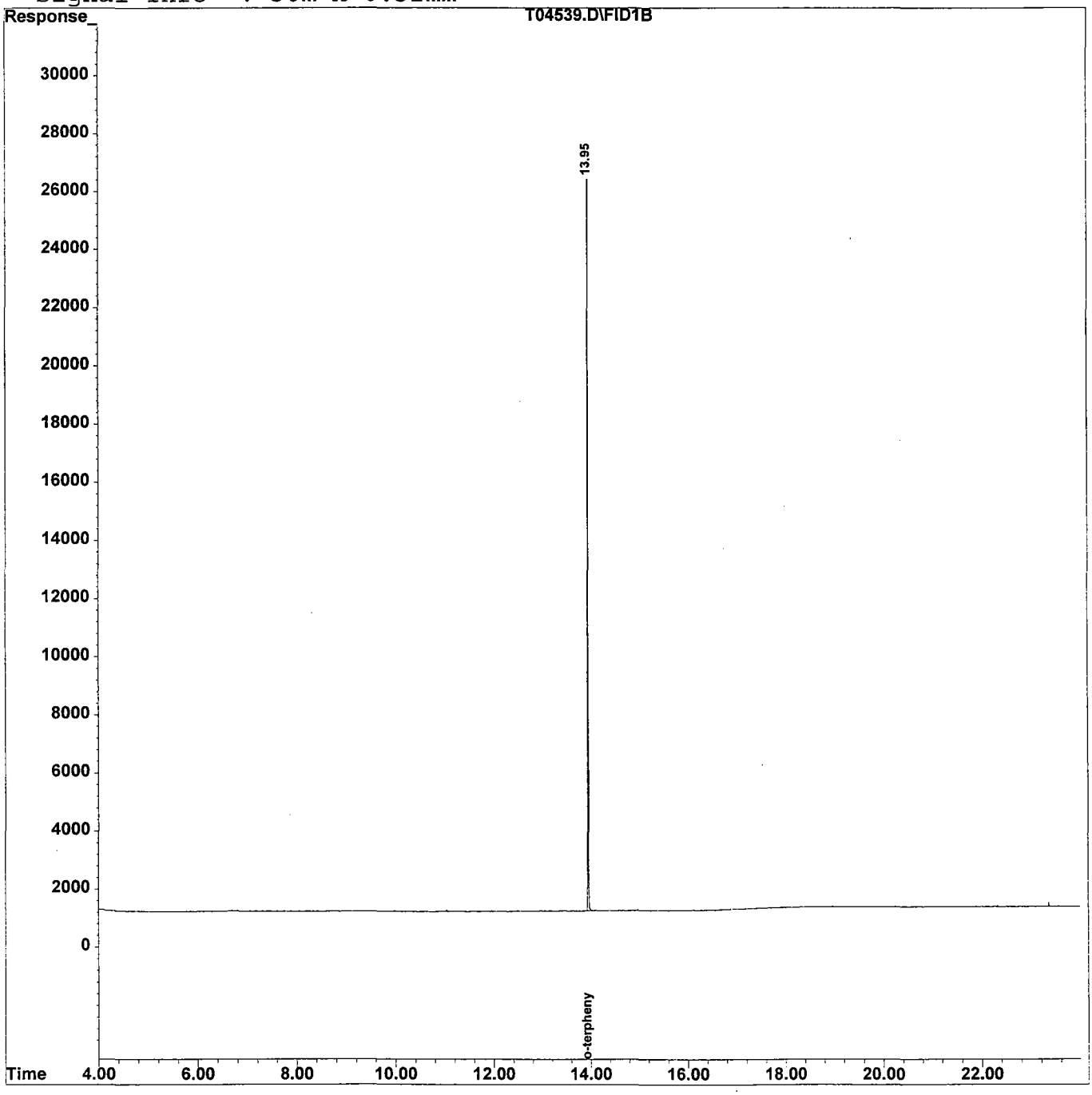
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980311\T04539.D Vial: 7
Acq On : 11 Mar 98 9:10 pm Operator: DEINHARDT
Sample : 3384.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.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\980311\T04540.D Vial: 8
Acq On : 11 Mar 98 9:48 pm Operator: DEINHARDT
Sample : 3384.09 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.95	258615	8.323	mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery =	83.23%#	
	Target Compounds				
1)	tC C8	0.00	0	N.D.	mg/L
2)	tC C10	0.00	0	N.D.	mg/L
3)	TC C12	0.00	0	N.D.	mg/L
4)	tC C14	0.00	0	N.D.	mg/L
5)	tC C16	0.00	0	N.D.	mg/L
6)	tC C18	0.00	0	N.D.	mg/L
7)	tC C20	0.00	0	N.D.	mg/L
8)	tC C22	0.00	0	N.D.	mg/L
9)	tC C24	0.00	0	N.D.	mg/L
10)	tC C26	0.00	0	N.D.	mg/L
11)	tC C28	0.00	0	N.D.	mg/L
12)	tC C30	0.00	0	N.D.	mg/L
13)	tC C32	0.00	0	N.D.	mg/L
14)	tC C34	0.00	0	N.D.	mg/L
15)	tC C36	0.00	0	N.D.	mg/L
16)	tC C38	0.00	0	N.D.	mg/L
17)	tC C40	0.00	0	N.D.	mg/L
18)	tC c42	0.00	0	N.D.	mg/L
19)	TC Pristane	0.00	0	N.D.	mg/L
20)	TC Phytane	0.00	0	N.D.	mg/L
22)	tC TPHC - total	0.00	0	N.D.	mg/L

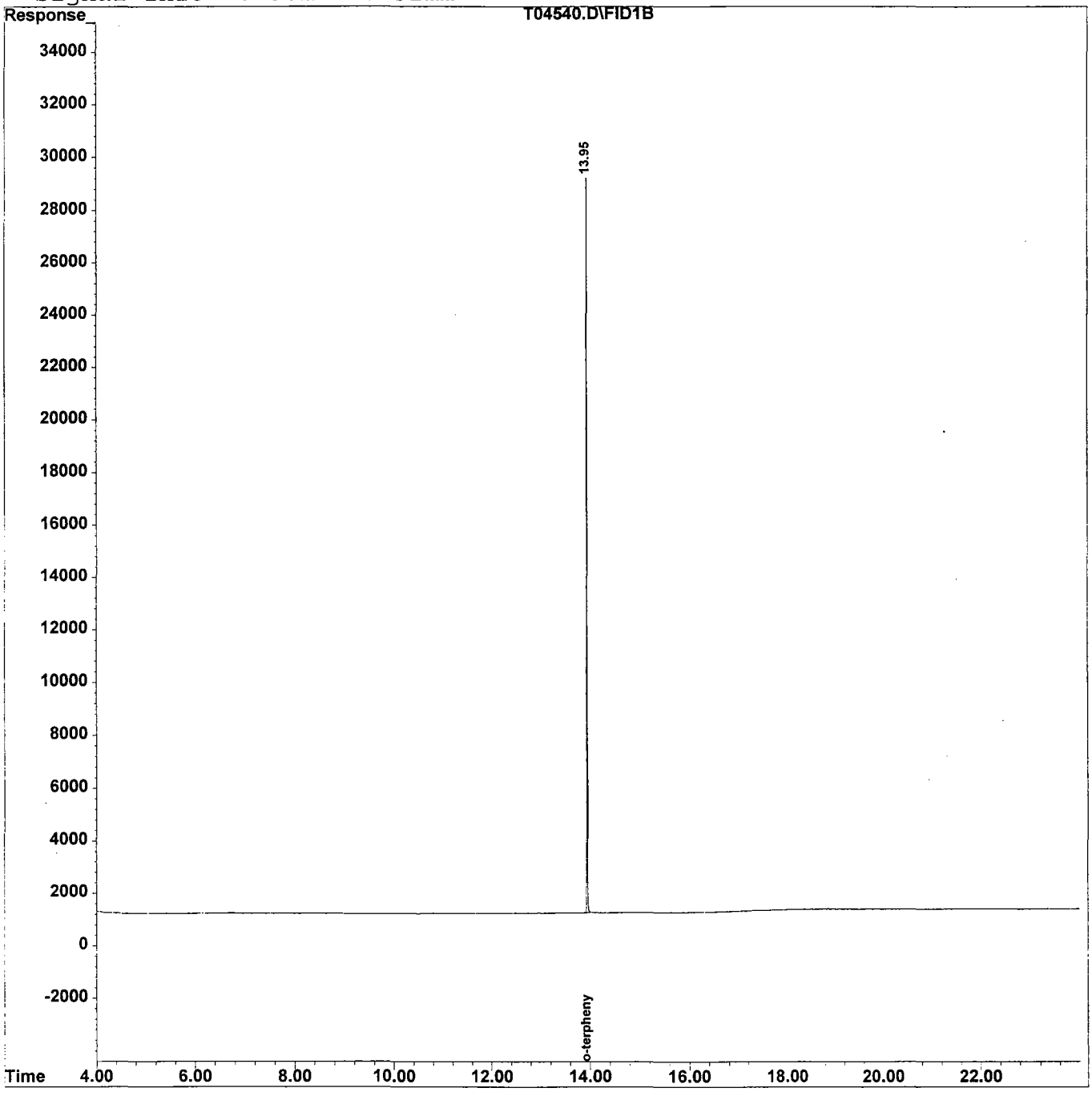
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980311\T04540.D Vial: 8
Acq On : 11 Mar 98 9:48 pm Operator: DEINHARDT
Sample : 3384.09 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.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\980311\T04541.D Vial: 9
Acq On : 11 Mar 98 10:26 pm Operator: DEINHARDT
Sample : 3384.10 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.95	273372	8.798	mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery =	87.98%#	
	Target Compounds				
1)	tC C8	0.00	0	N.D.	mg/L
2)	tC C10	0.00	0	N.D.	mg/L
3)	TC C12	0.00	0	N.D.	mg/L
4)	tC C14	0.00	0	N.D.	mg/L
5)	tC C16	0.00	0	N.D.	mg/L
6)	tC C18	0.00	0	N.D.	mg/L
7)	tC C20	0.00	0	N.D.	mg/L
8)	tC C22	0.00	0	N.D.	mg/L
9)	tC C24	0.00	0	N.D.	mg/L
10)	tC C26	0.00	0	N.D.	mg/L
11)	tC C28	0.00	0	N.D.	mg/L
12)	tC C30	0.00	0	N.D.	mg/L
13)	tC C32	0.00	0	N.D.	mg/L
14)	tC C34	0.00	0	N.D.	mg/L
15)	tC C36	0.00	0	N.D.	mg/L
16)	tC C38	0.00	0	N.D.	mg/L
17)	tC C40	0.00	0	N.D.	mg/L
18)	tC c42	0.00	0	N.D.	mg/L
19)	TC Pristane	0.00	0	N.D.	mg/L
20)	TC Phytane	0.00	0	N.D.	mg/L
22)	tC TPHC - total	0.00	0	N.D.	mg/L

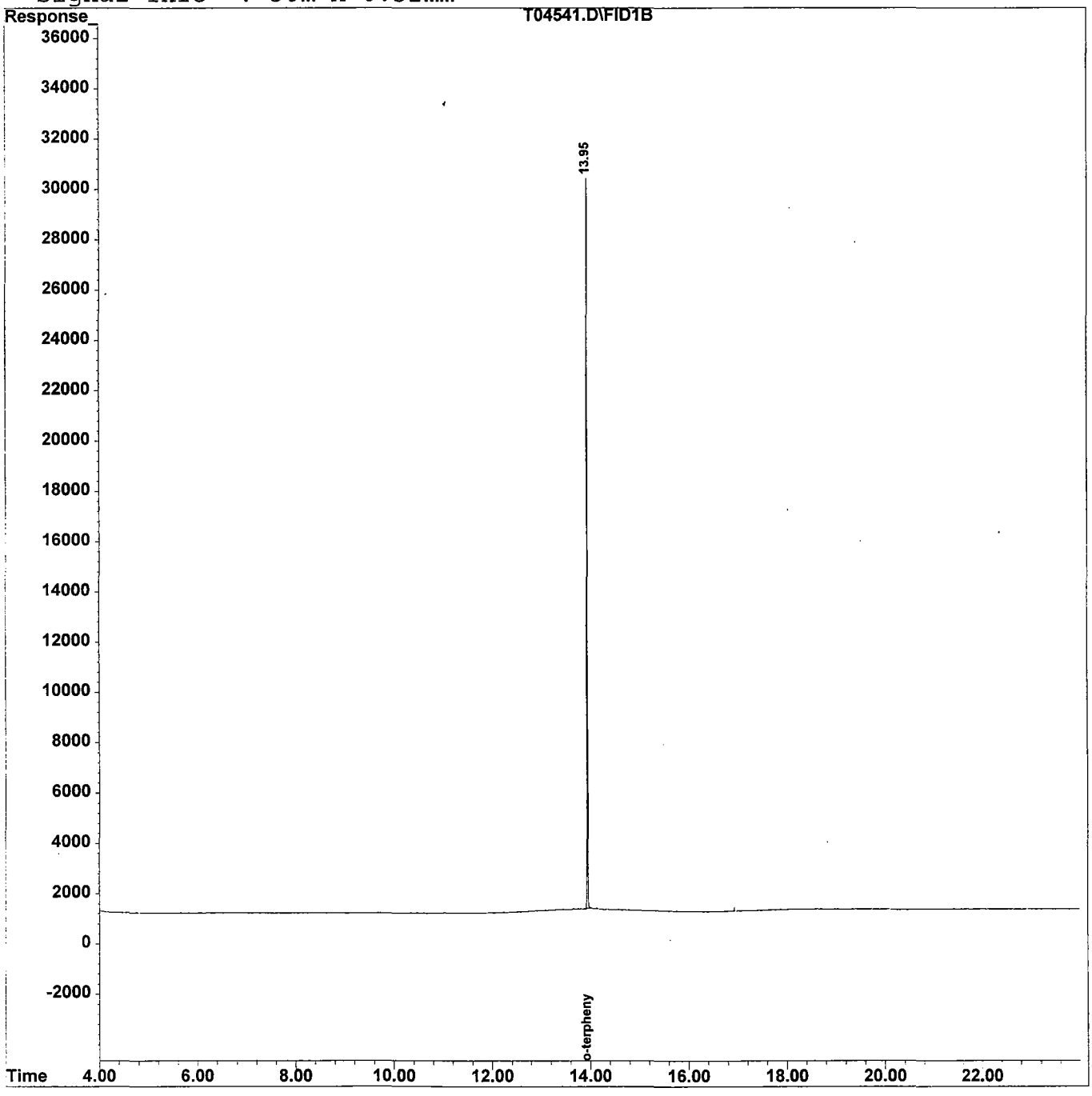
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980311\T04541.D Vial: 9
Acq On : 11 Mar 98 10:26 pm Operator: DEINHARDT
Sample : 3384.10 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:38 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.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\980311\T04542.D Vial: 10
Acq On : 11 Mar 98 11:04 pm Operator: DEINHARDT
Sample : 3384.11 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:39 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.95	246195	7.923	mg/L
Spiked Amount 10.000 Range 8 - 13 Recovery = 79.23%#				
Target Compounds				
1) tC C8	0.00	0	N.D.	mg/L
2) tC C10	0.00	0	N.D.	mg/L
3) TC C12	0.00	0	N.D.	mg/L
4) tC C14	0.00	0	N.D.	mg/L
5) tC C16	0.00	0	N.D.	mg/L
6) tC C18	0.00	0	N.D.	mg/L
7) tC C20	0.00	0	N.D.	mg/L
8) tC C22	0.00	0	N.D.	mg/L
9) tC C24	0.00	0	N.D.	mg/L
10) tC C26	0.00	0	N.D.	mg/L
11) tC C28	0.00	0	N.D.	mg/L
12) tC C30	0.00	0	N.D.	mg/L
13) tC C32	0.00	0	N.D.	mg/L
14) tC C34	0.00	0	N.D.	mg/L
15) tC C36	0.00	0	N.D.	mg/L
16) tC C38	0.00	0	N.D.	mg/L
17) tC C40	0.00	0	N.D.	mg/L
18) tC c42	0.00	0	N.D.	mg/L
19) TC Pristane	0.00	0	N.D.	mg/L
20) TC Phytane	0.00	0	N.D.	mg/L
22) tC TPHC - total	0.00	0	N.D.	mg/L

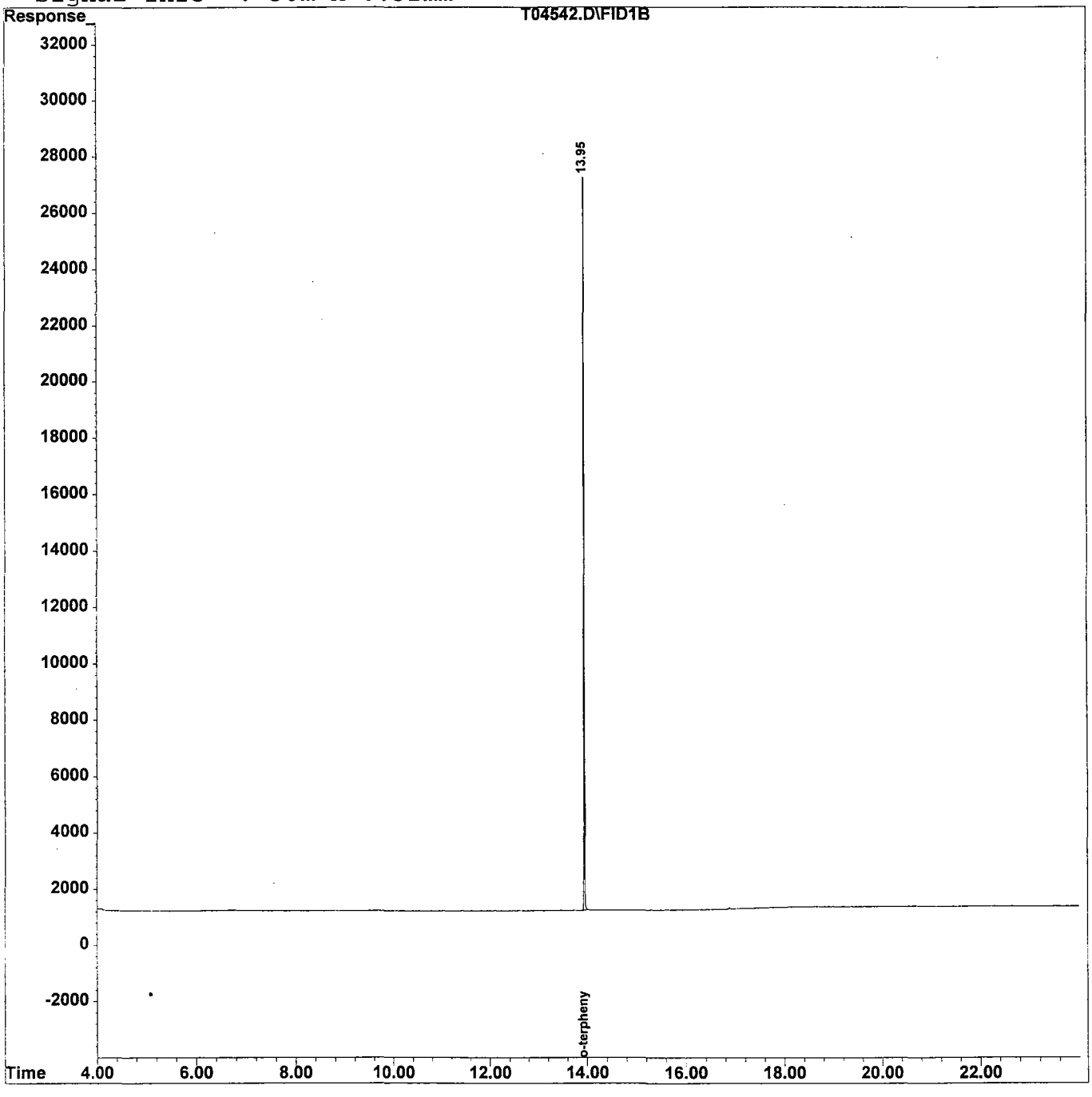
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980311\T04542.D Vial: 10
Acq On : 11 Mar 98 11:04 pm Operator: DEINHARDT
Sample : 3384.11 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 7:39 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.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\980311\T04543.D Vial: 11
Acq On : 11 Mar 98 11:42 pm Operator: DEINHARDT
Sample : 3384.12 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 8:22 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.95	286199	9.211	mg/L	
Spiked Amount 10.000 Range 8 - 13	Recovery = 92.11%#				
Target Compounds					
1) tC C8	0.00	0	N.D.	mg/L	
2) tC C10	0.00	0	N.D.	mg/L	d
3) TC C12	0.00	0	N.D.	mg/L	d
4) tC C14	0.00	0	N.D.	mg/L	d
5) tC C16	0.00	0	N.D.	mg/L	d
6) tC C18	12.98	301814	10.002	mg/L	
7) tC C20	0.00	0	N.D.	mg/L	d
8) tC C22	0.00	0	N.D.	mg/L	d
9) tC C24	0.00	0	N.D.	mg/L	d
10) tC C26	0.00	0	N.D.	mg/L	d
11) tC C28	0.00	0	N.D.	mg/L	d
12) tC C30	0.00	0	N.D.	mg/L	d
13) tC C32	0.00	0	N.D.	mg/L	d
14) tC C34	0.00	0	N.D.	mg/L	
15) tC C36	0.00	0	N.D.	mg/L	
16) tC C38	0.00	0	N.D.	mg/L	
17) tC C40	0.00	0	N.D.	mg/L	
18) tC c42	0.00	0	N.D.	mg/L	
19) TC Pristane	12.98	301814	10.444	mg/L	
20) TC Phytane	13.44	139027	4.730	mg/L	
22) tC TPHC - total	12.98	25743596	828.326	mg/L	m

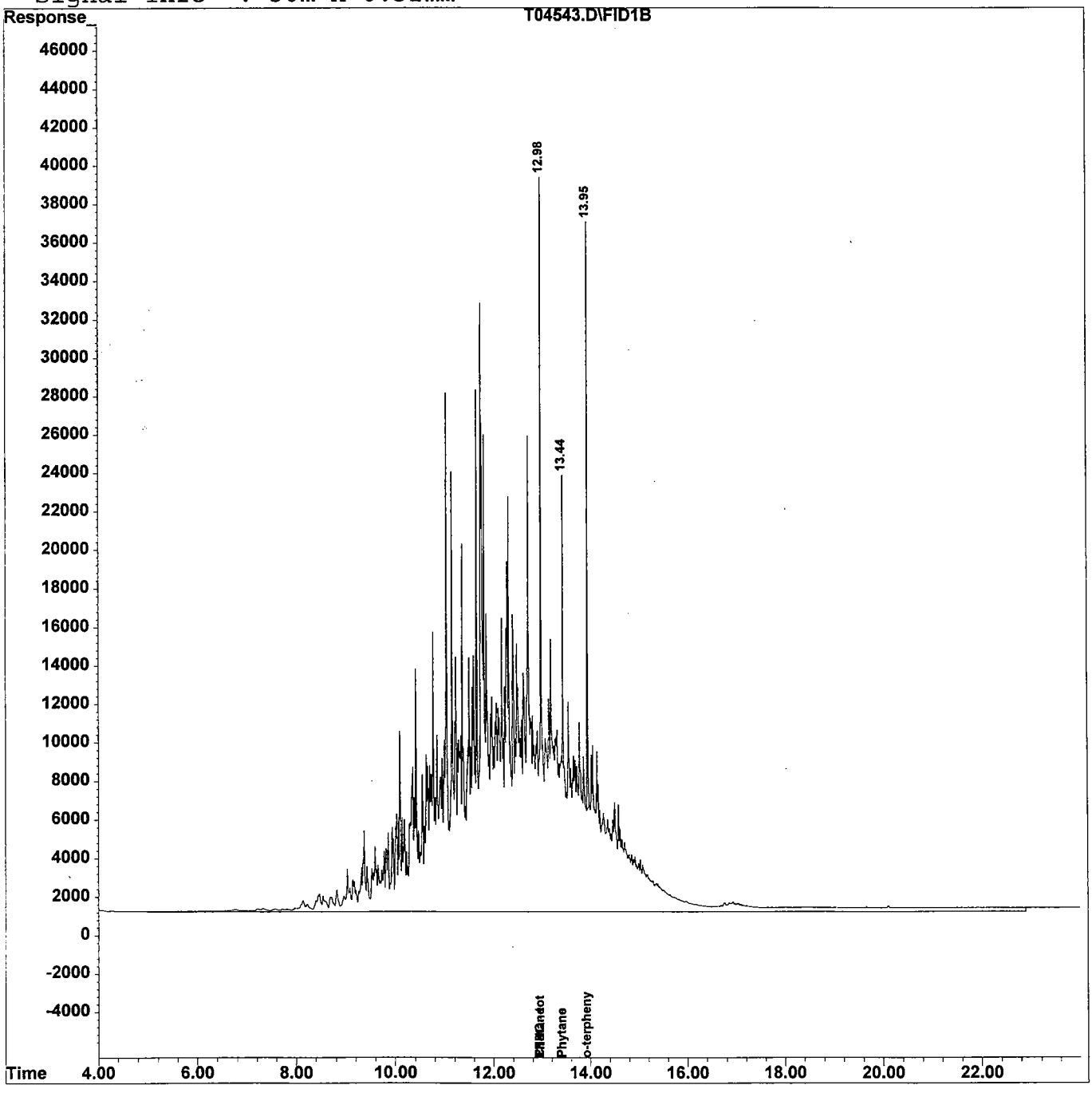
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980311\T04543.D Vial: 11
Acq On : 11 Mar 98 11:42 pm Operator: DEINHARDT
Sample : 3384.12 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 8:22 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.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\980312\T04546.D Vial: 13
Acq On : 12 Mar 98 11:49 am Operator: DEINHARDT
Sample : 3384.13 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 13:04 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Initial Calibration
DataAcq Meth : TPH25.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	13.96	239140	7.696	mg/L	
Spiked Amount	10.000 Range	8 - 13	Recovery =	76.96%#		
	Target Compounds					
1)	tC C8	0.00	0	N.D.	mg/L	d
2)	tC C10	0.00	0	N.D.	mg/L	d
3)	TC C12	10.34	833883	33.974	mg/L	
4)	tC C14	11.51	2620452	101.863	mg/L	
5)	tC C16	12.51	2258051	85.165	mg/L	
6)	tC C18	12.97	1595168	52.863	mg/L	
7)	tC C20	13.41	1570133	54.706	mg/L	
8)	tC C22	14.22	893015	31.455	mg/L	
9)	tC C24	14.96	341803	12.174	mg/L	
10)	tC C26	0.00	0	N.D.	mg/L	d
11)	tC C28	0.00	0	N.D.	mg/L	d
12)	tC C30	0.00	0	N.D.	mg/L	d
13)	tC C32	0.00	0	N.D.	mg/L	d
14)	tC C34	0.00	0	N.D.	mg/L	d
15)	tC C36	0.00	0	N.D.	mg/L	d
16)	tC C38	0.00	0	N.D.	mg/L	
17)	tC C40	0.00	0	N.D.	mg/L	
18)	tC c42	0.00	0	N.D.	mg/L	
19)	TC Pristane	13.00	980946	33.945	mg/L	
20)	TC Phytane	13.45	580905	19.762	mg/L	
22)	tC TPHC - total	12.02	119601162	3848.289	mg/L	m

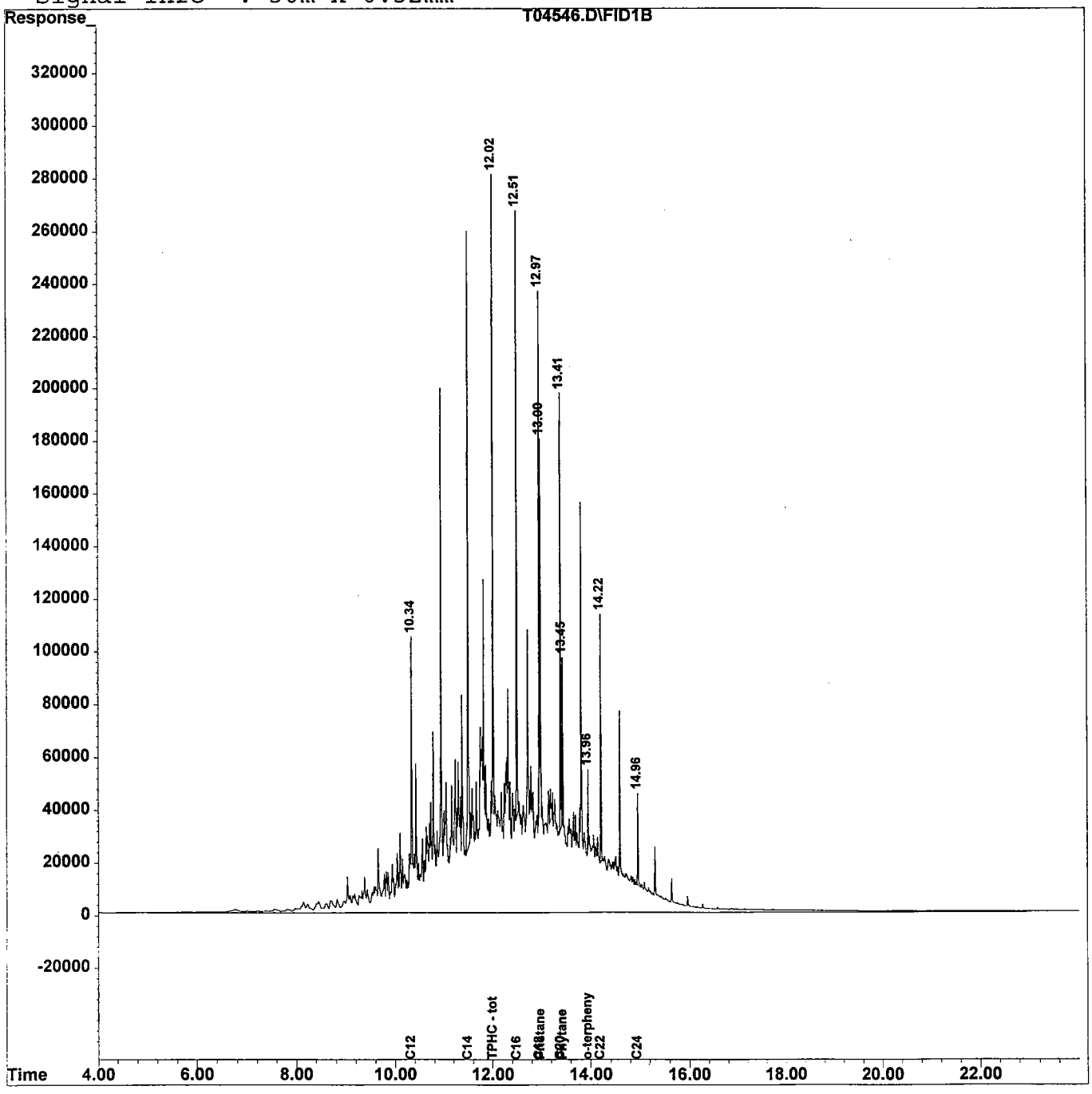
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980312\T04546.D Vial: 13
Acq On : 12 Mar 98 11:49 am Operator: DEINHARDT
Sample : 3384.13 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Mar 12 13:04 1998 Quant Results File: TPH25.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH25.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Mar 12 07:36:08 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH25.M

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



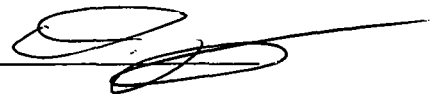
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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 3/23/99

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
98-0001
B.106
Proposed Credit Union Site, B.497

Project # 3384
Date Rec. 03/05/98
Date Compl. 03/12/98
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)	N
a. VOA Fraction 1,1-DCE RPD= 46%	
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 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 NA

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

12. Analysis Holding Time Met Y

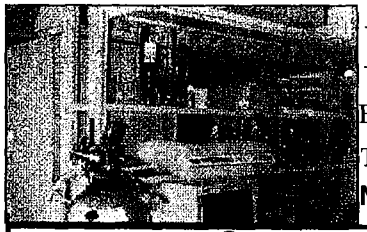
    If not met, list number of days exceeded for each sample: ___
    _____
    _____

Additional Comments:

_____
_____
_____

Laboratory Manager : _____ Date: _____

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: DPW-ENV
Phone #:
( )DERA (X)OMA ( )Other:_____

Project No: 98-0001
Location: B.106 (PROPOSED CREDIT UNION SITE, B.497)

Samplers Name / Company : GARY DiMARTINIS-TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	6 Solids	Munsell	VO+10	BN+15	PCB's	TAL Metals	OVA	Remarks / Preservation Method
33841.01	106-A	3-5-98	1124	SOIL	1	X	X	X					NO	EXC. FLOOR @ 4.0' *
02	B		1131										NO	
03	C		1101										10	
04	D		1114										NO	SIDE WALL @ 3.0'
05	E		1119										NO	
06	F		1127										NO	
07	G		1055										5	
08	H		1059										NO	
09	I		1104										10	
10	J		1109										NO	
11	DUP	↓	—										—	FIELD DUPLICATE
12	ES	3-4-98	1042	↓	↓								20	EXCAVATED SOIL
V0005 13	XX	↓	1025	UNKNOWN	2	↓	↓	↓	X	X	X	X	500	UNKNOWN SOLID ↓

NOTE: OVA (#AS214) CALIBRATED w/ 95 ppm CH4 + ZERO (✓) AIR @ 1030 HRS. ON 3/4/98 by G. DiMARTINIS. *

Analysis Parameters

Comments: * = SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	3-5-98 1400	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[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.

* OVA CALIBRATION CHECKED @ 1035 HRS. ON 3/5/98.

print legibly

~me1413.xls11/17/97

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.

VBLK31

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK31

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03130.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 0 Date Analyzed: 03/12/98

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK31

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK31

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03130.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 0 Date Analyzed: 03/12/98

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.

106-XX

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3384.13

Sample wt/vol: 10.1 (g/ml) G Lab File ID: V03139.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 73.08 Date Analyzed: 03/12/98

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

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	6500	U
107131	Acrylonitrile	6500	U
75650	tert-Butyl alcohol	12000	U
1634044	Methyl-tert-Butyl ether	2800	U
108203	Di-isopropyl ether	1800	U
	Dichlorodifluoromethane	3700	U
74-87-3	Chloromethane	920	U
75-01-4	Vinyl Chloride	2800	U
74-83-9	Bromomethane	1800	U
75-00-3	Chloroethane	2800	U
75-69-4	Trichlorofluoromethane	1800	U
75-35-4	1,1-Dichloroethene	920	U
67-64-1	Acetone	1800	U
75-15-0	Carbon Disulfide	920	U
75-09-2	Methylene Chloride	18000	
156-60-5	trans-1,2-Dichloroethene	1800	U
75-35-3	1,1-Dichloroethane	920	U
108-05-4	Vinyl Acetate	2800	U
78-93-3	2-Butanone	2800	U
	cis-1,2-Dichloroethene	26000	
67-66-3	Chloroform	920	U
75-55-6	1,1,1-Trichloroethane	920	U
56-23-5	Carbon Tetrachloride	1800	U
71-43-2	Benzene	920	U
107-06-2	1,2-Dichloroethane	1800	U
79-01-6	Trichloroethene	1800	
78-87-5	1,2-Dichloropropane	920	U
75-27-4	Bromodichloromethane	920	U
110-75-8	2-Chloroethyl vinyl ether	1800	U
10061-01-5	cis-1,3-Dichloropropene	920	U
108-10-1	4-Methyl-2-Pentanone	1800	U
108-88-3	Toluene	920	U
10061-02-6	trans-1,3-Dichloropropene	1800	U
79-00-5	1,1,2-Trichloroethane	1800	U
127-18-4	Tetrachloroethene	920	U
591-78-6	2-Hexanone	1800	U
126-48-1	Dibromochloromethane	1800	U
108-90-7	Chlorobenzene	920	U
100-41-4	Ethylbenzene	1800	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

106-XX

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3384.13

Sample wt/vol: 10.1 (g/ml) G Lab File ID: V03139.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 73.08 Date Analyzed: 03/12/98

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	2800	U
1330-20-7	o-Xylene	1800	U
100-42-5	Styrene	1800	U
75-25-2	Bromoform	1800	U
79-34-5	1,1,2,2-Tetrachloroethane	1800	U
541-73-1	1,3-Dichlorobenzene	2800	U
106-46-7	1,4-Dichlorobenzene	2800	U
95-50-1	1,2-Dichlorobenzene	2800	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET FIELD ID.

TENTATIVELY IDENTIFIED COMPOUNDS

VBLK31

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: VBLK31

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03130.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 0 Date Analyzed: 03/12/98

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.

106-XX

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3384.13

Sample wt/vol: 10.1 (g/ml) G Lab File ID: V03139.D

Level: (low/med) MED Date Received: 03/05/98

% Moisture: not dec. 73.08 Date Analyzed: 03/12/98

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: 11

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000591-21-9	Cyclohexane, 1,3-dimethyl-	24.77	13000	JN
2. 002207-04-7	Cyclohexane, 1,4-dimethyl-, trans	25.77	2800	JN
3. 000624-29-3	Cyclohexane, 1,4-dimethyl-, cis-	26.10	3800	JN
4. 003073-66-3	Cyclohexane, 1,1,3-trimethyl-	27.24	12000	JN
5. 001678-91-7	Cyclohexane, ethyl-	27.35	6300	JN
6. 007667-60-9	Cyclohexane, 1,2,4-trimethyl-, (1.	27.77	5400	JN
7. 002234-75-5	Cyclohexane, 1,2,4-trimethyl-	28.87	4600	JN
8.	unknown hydrocarbon	30.10	10000	J
9. 001678-92-8	Cyclohexane, propyl-	30.85	9200	JN
10.	unknown	30.94	5400	J
11.	unknown	31.97	11000	J

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
Response via : Initial Calibration

Calibration Files
50 =V02992.D 5 =V02994.D 10 =V02991.D
20 =V02989.D 100 =V02993.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.631	0.661	0.634	0.591	0.583	0.620	5.22
3)	t	Acrylonitrile	0.534	0.537	0.519	0.520	0.491	0.520	3.56
4)	t	tert-Butyl alcohol	0.297	0.291	0.303	0.248	0.247	0.277	9.85
5)	t	Methyl-tert-Butyl eth	4.246	4.166	4.087	3.389	4.005	3.978	8.58
6)	t	Di-isopropyl ether	2.938	2.605	2.744	2.651	2.888	2.765	5.24
7)	T	Dichlorodifluorometha	2.259	2.194	2.202	2.329	2.145	2.226	3.16
8)	TP	Chloromethane	2.184	2.193	2.009	2.153	2.141	2.136	3.48
9)	TC	Vinyl Chloride	1.209	1.322	1.295	1.286	1.101	1.243	7.20
10)	T	Bromomethane	1.413	1.536	1.374	1.467	1.407	1.440	4.42
11)	T	Chloroethane	1.141	0.708	0.930	1.061	1.143	0.997	18.35
12)	T	Trichlorofluoromethan	2.511	2.272	2.218	2.369	2.475	2.369	5.31
13)	MC	1,1-Dichloroethene	2.687	2.341	2.485	2.516	2.581	2.522	5.05
14)	T	Acetone	0.456	0.029	0.303	0.437	0.413	0.328	53.98
15)	T	Carbon Disulfide	5.949	5.917	5.715	5.827	5.812	5.844	1.58
16)	T	Methylene Chloride	2.123	2.170	2.115	2.058	2.052	2.104	2.34
17)	T	trans-1,2-Dichloroeth	2.462	2.317	2.311	2.232	2.371	2.339	3.63
18)	TP	1,1-Dichloroethane	3.177	3.163	3.030	2.973	3.043	3.077	2.89
19)	T	Vinyl Acetate	3.334	3.337	3.313	2.956	3.116	3.211	5.29
20)	T	2-Butanone	0.693	0.652	0.672	0.583	0.643	0.648	6.37
21)	T	cis-1,2-Dichloroethen	2.551	2.551	2.424	2.347	2.444	2.463	3.57
22)	TC	Chloroform	3.063	3.187	2.972	2.769	2.940	2.986	5.18
23)	T	1,1,1-Trichloroethane	2.279	2.146	2.022	1.730	2.213	2.078	10.42
24)	T	Carbon Tetrachloride	1.792	1.626	1.587	1.413	1.737	1.631	9.02
25)	S	1,2-Dichloroethane-d4	1.969	1.857	1.884	1.696	1.868	1.855	5.34
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.107	1.210	1.120	1.038	1.077	1.110	5.76
28)	T	1,2-Dichloroethane	0.323	0.334	0.324	0.302	0.315	0.320	3.78
29)	TM	Trichloroethene	0.330	0.343	0.332	0.296	0.317	0.324	5.62
30)	TC	1,2-Dichloropropane	0.274	0.296	0.273	0.249	0.268	0.272	6.23
31)	T	Bromodichloromethane	0.329	0.357	0.319	0.285	0.324	0.323	7.91
32)	T	2-Chloroethyl vinyl e	0.119	0.136	0.140	0.162	0.118	0.135	13.38
33)	T	cis-1,3-Dichloroprope	0.418	0.452	0.427	0.415	0.420	0.426	3.48
34)	T	4-Methyl-2-Pentanone	0.083	0.086	0.088	0.095	0.081	0.086	6.00
35)	S	Toluene-d8	1.057	1.046	1.075	1.146	1.073	1.079	3.60

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
Response via : Initial Calibration

Calibration Files
50 =V02992.D 5 =V02994.D 10 =V02991.D
20 =V02989.D 100 =V02993.D

		Compound	50	5	10	20	100	Avg	%RSD
36)	TCM	Toluene	1.166	1.338	1.237	1.262	1.153	1.231	6.12
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.276	1.428	1.336	1.260	1.342	1.329	4.99
39)	T	1,1,2-Trichloroethane	0.907	1.118	0.959	0.813	0.904	0.940	11.96
40)	T	Tetrachloroethene	1.012	1.115	1.059	0.984	1.033	1.040	4.78
41)	T	2-Hexanone	0.481	0.552	0.508	0.519	0.463	0.504	6.86
42)	T	Dibromochloromethane	0.934	1.062	0.957	0.845	0.957	0.951	8.14
43)	TMP	Chlorobenzene	2.929	3.647	3.146	2.944	2.940	3.121	9.85
44)	TC	Ethylbenzene	4.473	5.312	4.679	4.708	4.560	4.746	6.95
45)	T	m+p-Xylenes	1.817	2.107	1.887	1.874	1.829	1.903	6.19
46)	T	o-Xylene	3.437	4.065	3.527	3.524	3.502	3.611	7.10
47)	T	Styrene	3.004	3.444	3.047	3.114	2.998	3.121	5.97
48)	TP	Bromoform	0.533	0.558	0.519	0.526	0.533	0.534	2.79
49)	S	Bromofluorobenzene	1.465	1.393	1.431	1.747	1.480	1.503	9.33
50)	TP	1,1,2,2-Tetrachloroet	1.194	1.555	1.314	1.242	1.158	1.293	12.21
51)	T	1,3-Dichlorobenzene	1.987	2.547	2.107	2.092	1.902	2.127	11.70
52)	T	1,4-Dichlorobenzene	2.125	2.848	2.313	2.237	2.007	2.306	14.06
53)	T	1,2-Dichlorobenzene	2.011	2.656	2.137	2.115	1.902	2.164	13.42

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980312\V03129.D Vial: 5
Acq On : 12 Mar 1998 12:50 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\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
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	59	0.02
2	t	Acrolein	0.620	0.537	13.4	53	0.00
3	t	Acrylonitrile	0.520	0.558	-7.3	63	0.01
4	t	tert-Butyl alcohol	0.277	0.284	-2.5	67	0.05
5	t	Methyl-tert-Butyl ether	3.978	4.323	-8.7	75	0.06
6	t	Di-isopropyl ether	2.765	2.649	4.2	59	0.04
7	T	Dichlorodifluoromethane	2.226	1.914	14.0	48	-0.03
8	TP	Chloromethane	2.136	1.615	24.4	44	0.00
9	TC	Vinyl Chloride	1.243	1.052	15.4	48	-0.02
10	T	Bromomethane	1.440	1.183	17.8	47	0.00
11	T	Chloroethane	0.997	0.820	17.8	46	0.00
12	T	Trichlorofluoromethane	2.369	2.020	14.7	50	0.03
13	MC	1,1-Dichloroethene	2.522	2.705	-7.3	63	0.04
14	T	Acetone	0.328	0.340	-3.7	46	0.03
15	T	Carbon Disulfide	5.844	5.212	10.8	53	0.02
16	T	Methylene Chloride	2.104	2.200	-4.6	63	0.02
17	T	trans-1,2-Dichloroethene	2.339	2.440	-4.3	64	0.04
18	TP	1,1-Dichloroethane	3.077	3.213	-4.4	64	0.04
19	T	Vinyl Acetate	3.211	3.055	4.9	61	0.05
20	T	2-Butanone	0.648	0.514	20.7	52	0.04
21	T	cis-1,2-Dichloroethene	2.463	2.578	-4.7	65	0.03
22	TC	Chloroform	2.986	3.237	-8.4	69	0.03
23	T	1,1,1-Trichloroethane	2.078	2.459	-18.3	84	0.04
24	T	Carbon Tetrachloride	1.631	1.875	-15.0	78	0.02
25	S	1,2-Dichloroethane-d4	1.855	2.001	-7.9	69	0.03
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	66	0.03
27	TM	Benzene	1.110	1.155	-4.1	73	0.03
28	T	1,2-Dichloroethane	0.320	0.355	-10.9	78	0.03
29	TM	Trichloroethene	0.324	0.387	-19.4	86	0.03
30	TC	1,2-Dichloropropane	0.272	0.266	2.2	71	0.02
31	T	Bromodichloromethane	0.323	0.335	-3.7	78	0.02
32	T	2-Chloroethyl vinyl ether	0.135	0.088	34.8	36	0.02
33	T	cis-1,3-Dichloropropene	0.426	0.413	3.1	66	0.02

(#) = Out of Range

16

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980312\V03129.D Vial: 5
Acq On : 12 Mar 1998 12:50 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\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
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%

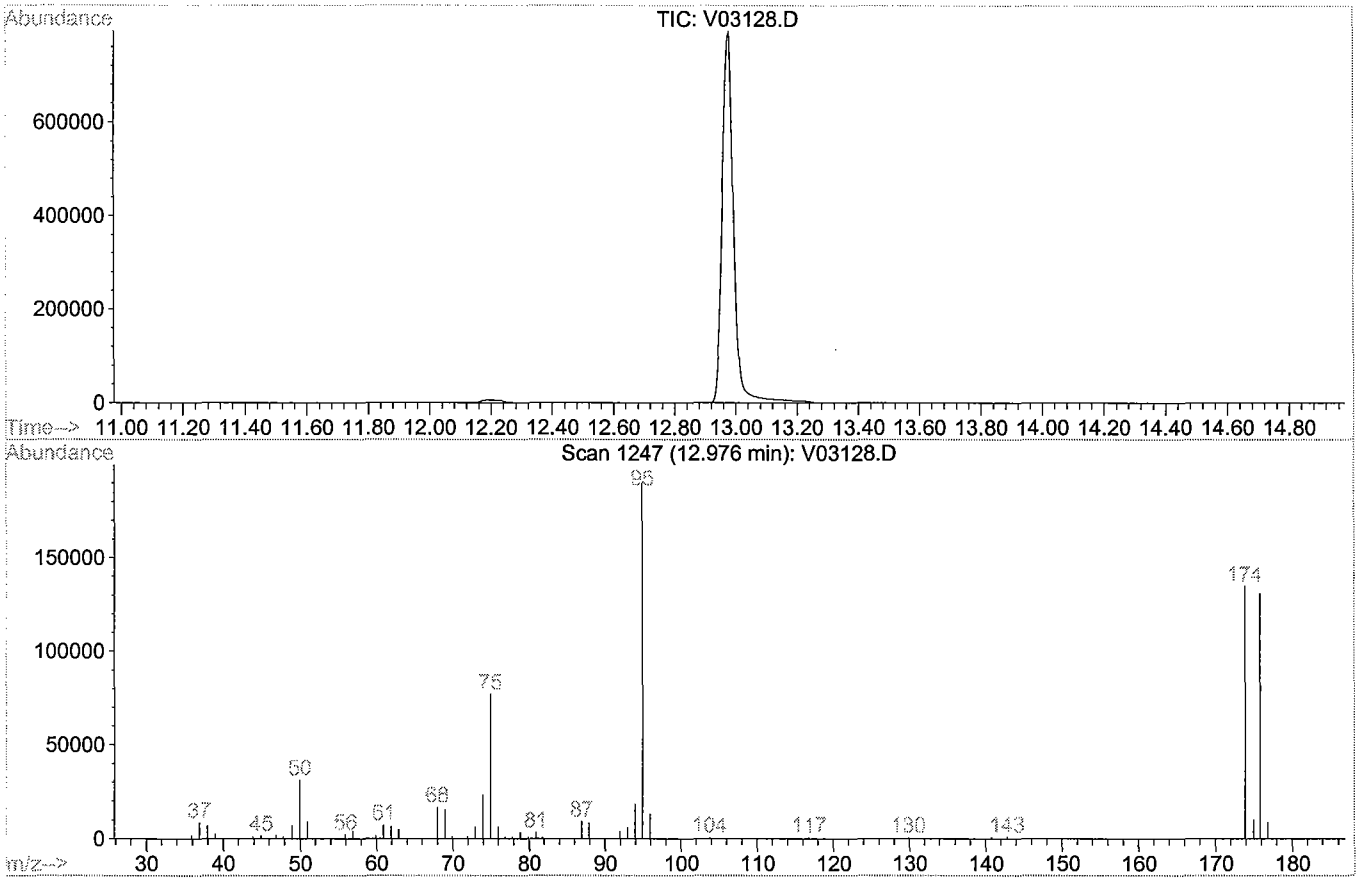
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
34	T	4-Methyl-2-Pentanone	0.086	0.049#	43.0#	34	0.01
35	S	Toluene-d8	1.079	0.894	17.1	52	0.02
36	TCM	Toluene	1.231	1.086	11.8	57	0.02
37	I	Chlorobenzene-d5	1.000	1.000	0.0	49	0.00
38	T	trans-1,3-Dichloropropene	1.329	1.438	-8.2	56	0.02
39	T	1,1,2-Trichloroethane	0.940	1.145	-21.8	70	0.02
40	T	Tetrachloroethene	1.040	1.245	-19.7	62	0.02
41	T	2-Hexanone	0.504	0.336	33.3	32	0.01
42	T	Dibromochloromethane	0.951	1.125	-18.3	66	0.02
43	TMP	Chlorobenzene	3.121	3.048	2.3	51	0.02
44	TC	Ethylbenzene	4.746	4.051	14.6	42	0.02
45	T	m+p-Xylenes	1.903	1.497	21.3	39	0.01
46	T	o-Xylene	3.611	2.809	22.2	39	0.00
47	T	Styrene	3.121	2.408	22.8	38	0.00
48	TP	Bromoform	0.534	0.529	0.9	50	0.02
49	S	Bromofluorobenzene	1.503	1.277	15.0	36	0.01
50	TP	1,1,2,2-Tetrachloroethane	1.293	1.146	11.4	46	0.01
51	T	1,3-Dichlorobenzene	2.127	2.028	4.7	48	0.01
52	T	1,4-Dichlorobenzene	2.306	2.267	1.7	50	0.00
53	T	1,2-Dichlorobenzene	2.164	2.125	1.8	50	0.01

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

BFB

Data File : C:\HPCHEM\1\DATA\980312\V03128.D
Acq On : 12 Mar 1998 12:13
Sample : BFB Tune
Misc :
MS Integration Params: gases.p
Method : C:\HPCHEM\1\METHODS\M62428.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 1247

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	31184	PASS
75	95	30	60	40.6	76976	PASS
95	95	100	100	100.0	189760	PASS
96	95	5	9	6.8	12993	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.0	134656	PASS
175	174	5	9	7.6	10190	PASS
176	174	95	101	97.1	130800	PASS
177	176	5	9	6.5	8503	PASS

V03128.D M62428.M Tue Mar 17 11:49:23 1998

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Lab File ID: V03128.D BFB Injection Date: 03/12/98

Instrument ID: GCMSVoa BFB Injection Time: 12:13

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	16.4
75	30.0 - 66.0% of mass 95	40.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	71.0
175	4.0 - 9.0% of mass 174	5.4 (7.6)1
176	93.0 - 101.0% of mass 174	68.9 (97.1)1
177	5.0 - 9.0% of mass 176	4.5 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	DAILY CAL	V03129.D	03/12/98	12:50
02	VBLK31	VBLK31	V03130.D	03/12/98	13:44
03	106-XX	3384.13	V03139.D	03/12/98	20:20

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID.

VBLK31

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Lab File ID: V03130.D Lab Sample ID: VBLK31

Date Analyzed: 03/12/98 Time Analyzed: 13:44

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

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	106-XX	3384.13	V03139.D	20:20

COMMENTS:

Spike Recovery and RPD Summary Report - Soil

Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
Response via : Initial Calibration

Non-Spiked Sample: V03144.D

	Spike Sample	Spike Duplicate Sample
File ID :	V03145.D	V03146.D
Sample :	3394.03MS	3394.03MSD
Acq Time:	13 Mar 1998 00:26	13 Mar 1998 1:07

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	19	31	97	155#	46#	14	61-145
Benzene	0.0	20	19	20	93	102	9	11	76-127
Trichloroethene	0.0	20	22	23	109	116	6	14	71-120
Toluene	0.0	20	16	16	79	80	0	13	76-125
Chlorobenzene	0.0	20	18	20	90	101	11	13	75-130

- Fails Limit Check

M62428.M Tue Mar 17 09:38:24 1998

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8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3384 Location: B.106 SDG No.:

Lab File ID (Standard): V03129.D Date Analyzed: 03/12/98

Instrument ID: GCMSVoa Time Analyzed: 12:50

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

		IS1BCM		IS2DFB		IS3CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	38070	18.77	270007	21.37	61787	29.18
	UPPER LIMIT	76140	18.27	540014	20.87	123574	28.68
	LOWER LIMIT	19035	19.27	135004	21.87	30894	29.68
	EPA SAMPLE NO.						
01	VBLK31	37922	18.77	268301	21.37	60194	29.19
02	106-XX	36386	18.78	248077	21.37	58924	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.106
Level:(low/med)	Med	Case No:	3384

	LAB SAMPLE ID.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
1	VBLK31	108	84	89	0
2	3384.01	68	52	47	0
3					

SMC1 DCE	=	1,2-Dichloroethane-d4
SMC2 TOL	=	Toluene-d8
SMC3 BFB	=	Bromofluorobenzene

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980312\V03130.D Vial: 1
Acq On : 12 Mar 1998 13:44 Operator: Skelton
Sample : VBLK31 Inst : GC/MS Ins
Misc : VBLK31 Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Mar 12 14:22 1998 Quant Results File: M62428.RES

Quant Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Fri Mar 06 10:44:07 1998
Response via : Initial Calibration
DataAcq Meth : M62428

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.77	128	37922	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.37	114	268301	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.19	119	60194	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.33	65	76170	32.48	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 108.27%			
35) Toluene-d8	25.36	98	241905	25.06	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 83.53%#			
49) Bromofluorobenzene	32.19	95	80694	26.76	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 89.20%			

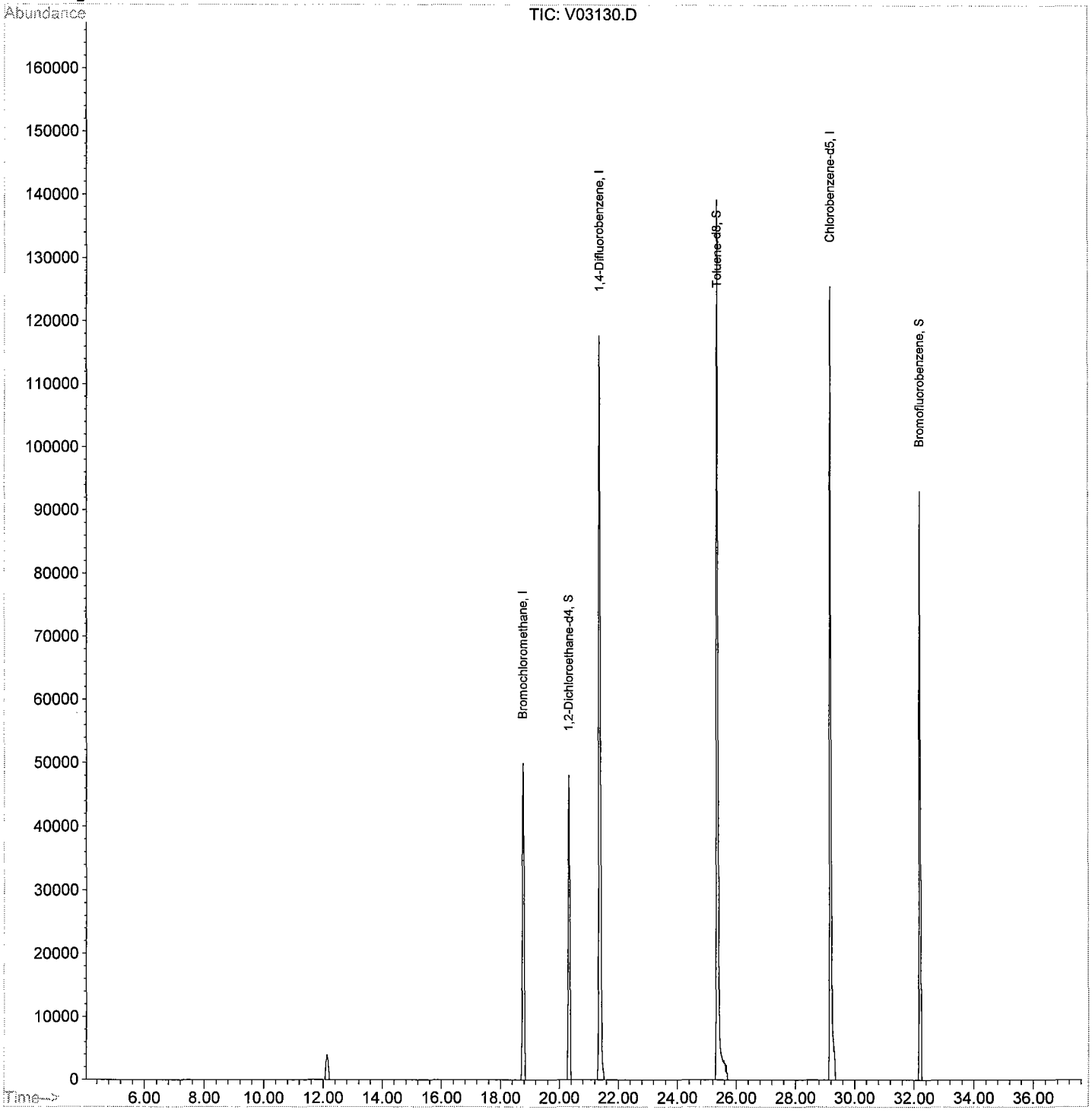
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980312\V03130.D Vial: 1
Acq On : 12 Mar 1998 13:44 Operator: Skelton
Sample : VBLK31 Inst : GC/MS Ins
Misc : VBLK31 Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Mar 12 14:22 1998 Quant Results File: M62428.RES

Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980312\V03139.D Vial: 9
Acq On : 12 Mar 1998 20:20 Operator: Skelton
Sample : 3384.13 Inst : GC/MS Ins
Misc : XX Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Mar 17 11:52 1998 Quant Results File: M62428.RES

Quant Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Fri Mar 06 10:44:07 1998
Response via : Initial Calibration
DataAcq Meth : M62428A

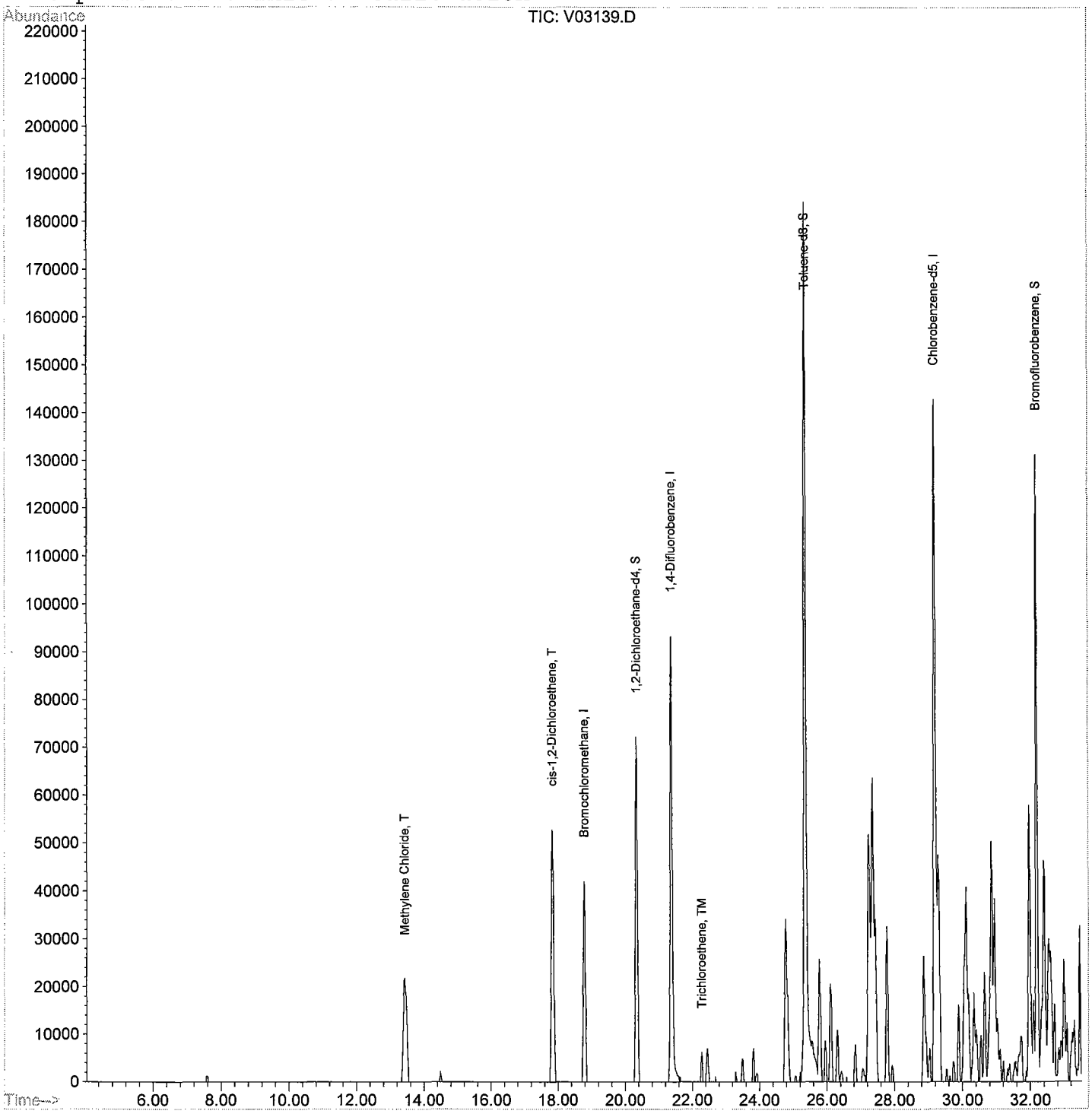
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	18.78	128	36386	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	21.37	114	248077	30.00	ug/L	0.00
37) Chlorobenzene-d5	29.18	119	58924	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	20.33	65	122888	54.62	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 182.07%#			
35) Toluene-d8	25.36	98	367711	41.20	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 137.33%#			
49) Bromofluorobenzene	32.19	95	110881	37.56	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 125.20%#			
Target Compounds						Qvalue
16) Methylene Chloride	13.42	84	50246	19.69	ug/L	78
21) cis-1,2-Dichloroethene	17.82	61	85613	28.66	ug/L	82
29) Trichloroethene	22.27	130	5252	1.96	ug/L	82

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980312\V03139.D Vial: 9
Acq On : 12 Mar 1998 20:20 Operator: Skelton
Sample : 3384.13 Inst : GC/MS Ins
Misc : XX Multiplr: 1.00
MS Integration Params: gases.p
Quant Time: Mar 17 11:52 1998 Quant Results File: M62428.RES

Method : C:\HPCHEM\1\METHODS\M62428.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8240/TCLP
Last Update : Mon Mar 16 14:10:30 1998
Response via : Initial Calibration



27

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 4/6/96

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: Semi-Volatiles - EPA Method 625
OMA
BLDG. 106 (PROPOSED CREDIT UNION SITE)

Project # 3401
Date Rec. 03/12/98
Date Compl. 03/30/98
Released by:

Daniel K. Wright
Laboratory Director

5 grams / 10 ml

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: B106 (PROPOSED CREDIT UNION SITE-B.497)
Samplers Name / Company : GARY DIMARTINIS - TUS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: VOA 10	BN 625	PCB's	TAL METALS	O. Sulfas	VOA ID #	Comments / Remarks / Preservation Method
34G1.01	106-G	3-12-98	0952	SOIL	3	X	X	X	X	X	VO-0074	SIDEWALL @ 3.0' *
02	-TB	↓	—	METHANOL	1	X	541 BN				VO-0045	TRIP BLANK *

*=SAMPLES KEPT BELOW 4°C.

NOTE: SAMPLES COLLECTED AT THE SAME LOCATION AS SAMPLE 106-G (3-5-98), EXCEPT THAT SAMPLES WERE COLLECTED APPROX. 1' INTO UNDISTURBED EXCAVATION SIDEWALL, AS REQUIRED BY 7:26E-6.4.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	3-12-98 1050	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

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

Remarks:

print legibly

~me0753.xls1/13/98

Continued From Page

Sample	WT(G)	FV	SOLVENT	SURR	MISC
BLK 43	—	10 ml	DCM	500 µl BN	
~~3400~~					
3401.01	541				

BN SURR SV030198_04

DCM L30252

Continued on Page

Read and Understood By

D - D 3/23/98

Signed Date Signed Date

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Sample ID: **SBLK 43**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: SBLK 43

Sample wt/vol: 5 (g/ml) G Lab File ID: BN1264.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 0 decanted:(Y/N) N Date Extracted: 03/23/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 03/30/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-86-1	Pyridine	20000	U
62-75-9	N-nitroso-dimethylamine	20000	U
62-53-3	Aniline	20000	U
111-44-4	bis(2-Chloroethyl)ether	20000	U
541-73-1	1,3-Dichlorobenzene	20000	U
106-46-7	1,4-Dichlorobenzene	20000	U
100-51-6	Benzyl alcohol	20000	U
95-50-1	1,2-Dichlorobenzene	20000	U
108-60-1	bis(2-chloroisopropyl)ether	20000	U
621-64-7	n-Nitroso-di-n-propylamine	20000	U
67-72-1	Hexachloroethane	20000	U
98-95-3	Nitrobenzene	20000	U
78-59-1	Isophorone	20000	U
111-91-1	bis(2-Chloroethoxy)methane	20000	U
120-82-1	1,2,4-Trichlorobenzene	20000	U
91-20-3	Naphthalene	20000	U
106-47-8	4-Chloroaniline	20000	U
87-68-3	Hexachlorobutadiene	20000	U
91-57-6	2-Methylnaphthalene	20000	U
77-47-4	Hexachlorocyclopentadiene	20000	U
91-58-7	2-Chloronaphthalene	20000	U
88-74-4	2-Nitroaniline	20000	U
131-11-3	Dimethylphthalate	20000	U
208-96-8	Acenaphthylene	20000	U
606-20-2	2,6-Dinitrotoluene	20000	U
99-09-2	3-Nitroaniline	20000	U
83-32-9	Acenaphthene	20000	U
132-64-9	Dibenzofuran	20000	U
121-14-2	2,4-Dinitrotoluene	20000	U
84-66-2	Diethylphthalate	20000	U
86-73-7	Fluorene	20000	U
7005-72-3	4-Chlorophenyl-phenylether	20000	U
100-01-6	4-Nitroaniline	20000	U
86-30-6	n-Nitrosodiphenylamine	20000	U
103-33-3	Azobenzene	20000	U
101-55-3	4-Bromophenyl-phenylether	20000	U
118-74-1	Hexachlorobenzene	20000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Sample ID: **SBLK 43**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: SBLK 43

Sample wt/vol: 5 (g/ml) G Lab File ID: BN1264.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 0 decanted:(Y/N) N Date Extracted: 03/23/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 03/30/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
85-01-8	Phenanthrene	20000	U
120-12-7	Anthracene	20000	U
84-74-2	Di-n-butylphthalate	20000	U
206-44-0	Fluoranthene	20000	U
92-87-5	Benzidine	20000	U
129-00-0	Pyrene	20000	U
85-68-7	Butylbenzylphthalate	20000	U
56-55-3	Benzo[a]anthracene	20000	U
91-94-1	3,3'-Dichlorobenzidine	20000	U
218-01-9	Chrysene	20000	U
117-81-7	bis(2-Ethylhexyl)phthalate	20000	U
117-84-0	Di-n-octylphthalate	20000	U
205-99-2	Benzo[b]fluoranthene	20000	U
207-08-9	Benzo[k]fluoranthene	20000	U
50-32-8	Benzo[a]pyrene	20000	U
193-39-5	Indeno[1,2,3-cd]pyrene	20000	U
53-70-3	Dibenz[a,h]anthracene	20000	U
191-24-2	Benzo[g,h,i]perylene	20000	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample ID: **SBLK 43**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: SBLK 43

Sample wt/vol: 5 (g/ml) G Lab File ID: BN1264.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 0 decanted: (Y/N) N Date Analyzed: 03/30/98

Concentrated Extract Volume: 10000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL) Soil Aliquot Volume: 1 (uL)

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Sample ID: **106-G**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: 3401.01 BN

Sample wt/vol: 5.41 (g/ml) G Lab File ID: BN1265.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 17.64 decanted:(Y/N) N Date Extracted: 03/23/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 03/30/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-86-1	Pyridine	22000	U
62-75-9	N-nitroso-dimethylamine	22000	U
62-53-3	Aniline	22000	U
111-44-4	bis(2-Chloroethyl)ether	22000	U
541-73-1	1,3-Dichlorobenzene	22000	U
106-46-7	1,4-Dichlorobenzene	22000	U
100-51-6	Benzyl alcohol	22000	U
95-50-1	1,2-Dichlorobenzene	22000	U
108-60-1	bis(2-chloroisopropyl)ether	22000	U
621-64-7	n-Nitroso-di-n-propylamine	22000	U
67-72-1	Hexachloroethane	22000	U
98-95-3	Nitrobenzene	22000	U
78-59-1	Isophorone	22000	U
111-91-1	bis(2-Chloroethoxy)methane	22000	U
120-82-1	1,2,4-Trichlorobenzene	22000	U
91-20-3	Naphthalene	22000	U
106-47-8	4-Chloroaniline	22000	U
87-68-3	Hexachlorobutadiene	22000	U
91-57-6	2-Methylnaphthalene	22000	U
77-47-4	Hexachlorocyclopentadiene	22000	U
91-58-7	2-Chloronaphthalene	22000	U
88-74-4	2-Nitroaniline	22000	U
131-11-3	Dimethylphthalate	22000	U
208-96-8	Acenaphthylene	22000	U
606-20-2	2,6-Dinitrotoluene	22000	U
99-09-2	3-Nitroaniline	22000	U
83-32-9	Acenaphthene	22000	U
132-64-9	Dibenzofuran	22000	U
121-14-2	2,4-Dinitrotoluene	22000	U
84-66-2	Diethylphthalate	22000	U
86-73-7	Fluorene	22000	U
7005-72-3	4-Chlorophenyl-phenylether	22000	U
100-01-6	4-Nitroaniline	22000	U
86-30-6	n-Nitrosodiphenylamine	22000	U
103-33-3	Azobenzene	22000	U
101-55-3	4-Bromophenyl-phenylether	22000	U
118-74-1	Hexachlorobenzene	22000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Sample ID: **106-G**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: 3401.01 BN

Sample wt/vol: 5.41 (g/ml) G Lab File ID: BN1265.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 17.64 decanted:(Y/N) N Date Extracted: 03/23/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 03/30/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
85-01-8	Phenanthrene	22000	U
120-12-7	Anthracene	22000	U
84-74-2	Di-n-butylphthalate	22000	U
206-44-0	Fluoranthene	22000	U
92-87-5	Benzidine	22000	U
129-00-0	Pyrene	22000	U
85-68-7	Butylbenzylphthalate	22000	U
56-55-3	Benzo[a]anthracene	22000	U
91-94-1	3,3'-Dichlorobenzidine	22000	U
218-01-9	Chrysene	22000	U
117-81-7	bis(2-Ethylhexyl)phthalate	22000	U
117-84-0	Di-n-octylphthalate	22000	U
205-99-2	Benzo[b]fluoranthene	22000	U
207-08-9	Benzo[k]fluoranthene	22000	U
50-32-8	Benzo[a]pyrene	22000	U
193-39-5	Indeno[1,2,3-cd]pyrene	22000	U
53-70-3	Dibenz[a,h]anthracene	22000	U
191-24-2	Benzo[g,h,i]perylene	22000	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample ID: **106-G**

Lab Name: FMETL Lab Code 13461

Project 98-0001 Case No.: 3401 SDG No _____ Location B.106

Matrix: (soil/water) SOIL Lab Sample ID: 3401.01 BN

Sample wt/vol: 5.41 (g/ml) G Lab File ID: BN1265.D

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: 17.64 decanted: (Y/N) N Date Analyzed: 03/30/98

Concentrated Extract Volume: 10000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL) Soil Aliquot Volume: 1 (uL)

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980330\BN1264.D Vial: 43
Acq On : 30 Mar 98 11:22 am Operator: FITZPATRICK
Sample : SBLK 43 Inst : GC/MS Ins
Misc : SBLK 43 3/23/98 Multiplr: 1.00
Quant Time: Mar 30 15:30 1998 Quant Results File: M62510.RES

Quant Method : C:\HPCHEM\1\METHODS\M62510.M
Title : BNA Calibration
Last Update : Fri Mar 13 10:53:38 1998
Response via : Initial Calibration
DataAcq Meth : M62510

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.04	152	768240	40.00	ug/L	-0.04
19) Naphthalene-d8	10.87	136	2754234	40.00	ug/L	-0.05
34) Acenaphthene-d10	14.98	164	1730738	40.00	ug/L	-0.01
54) Phenanthrene-d10	18.44	188	2738878	40.00	ug/L	0.02
66) Chrysene-d12	24.71	240	1330299	40.00	ug/L	0.08
75) Perylene-d12	27.86	264	1029284	40.00	ug/L	0.14
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Surrogate Spike 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Surrogate Spike 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	9.45	82	23004	0.75	ug/L	0.02
Surrogate Spike 50.000	Range 35 - 114		Recovery =	1.50%#		
38) 2-Fluorobiphenyl	13.55	172	305206	5.64	ug/L	-0.01
Surrogate Spike 50.000	Range 43 - 116		Recovery =	11.28%#		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Surrogate Spike 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	22.35	244	180023	5.34	ug/L	0.03
Surrogate Spike 50.000	Range 33 - 141		Recovery =	10.68%#		

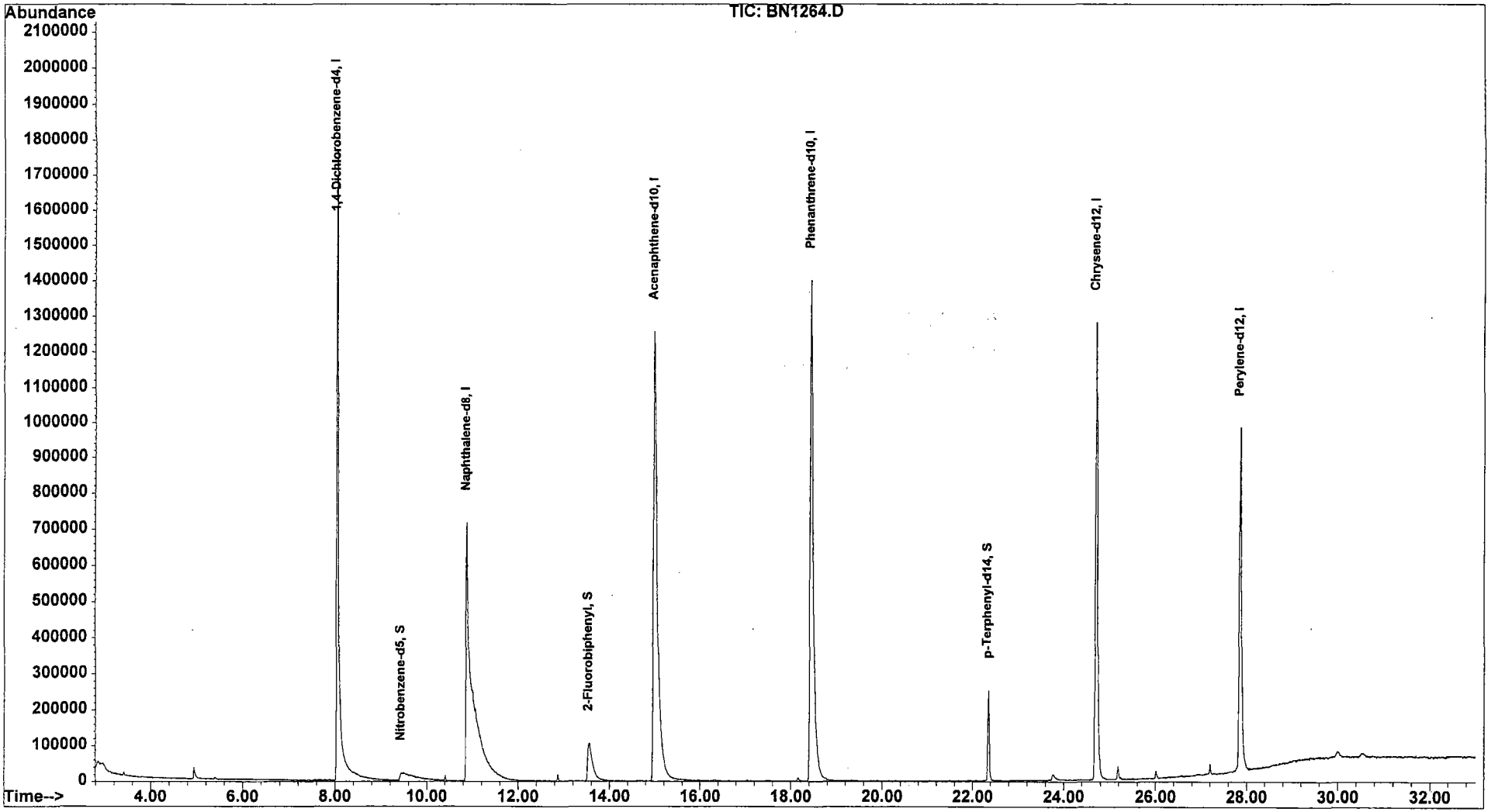
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980330\BN1264.D Vial: 43
Acq On : 30 Mar 98 11:22 am Operator: FITZPATRICK
Sample : SBLK 43 Inst : GC/MS Ins
Misc : SBLK 43 3/23/98 Multiplr: 1.00
Quant Time: Mar 30 15:30 1998 Quant Results File: M62510.RES

Method : C:\HPCHEM\1\METHODS\M62510.M
Title : BNA Calibration
Last Update : Fri Mar 13 10:53:38 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980330\BN1265.D Vial: 44
Acq On : 30 Mar 98 12:11 pm Operator: FITZPATRICK
Sample : 3401.01 BN Inst : GC/MS Ins
Misc : 106-G Multiplr: 1.00
Quant Time: Mar 30 15:35 1998 Quant Results File: M62510.RES

Quant Method : C:\HPCHEM\1\METHODS\M62510.M
Title : BNA Calibration
Last Update : Fri Mar 13 10:53:38 1998
Response via : Initial Calibration
DataAcq Meth : M62510

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.04	152	740452	40.00	ug/L	-0.04
19) Naphthalene-d8	10.88	136	2809366	40.00	ug/L	-0.04
34) Acenaphthene-d10	14.98	164	1651180	40.00	ug/L	-0.01
54) Phenanthrene-d10	18.44	188	2630805	40.00	ug/L	0.02
66) Chrysene-d12	24.72	240	1288886	40.00	ug/L	0.08
75) Perylene-d12	27.86	264	965041	40.00	ug/L	0.15
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Surrogate Spike 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Surrogate Spike 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	9.45	82	29522	0.95	ug/L	0.02
Surrogate Spike 50.000	Range 35 - 114		Recovery =	1.90%#		
38) 2-Fluorobiphenyl	13.52	172	305224	5.91	ug/L	-0.04
Surrogate Spike 50.000	Range 43 - 116		Recovery =	11.82%#		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Surrogate Spike 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	22.35	244	186013	5.70	ug/L	0.03
Surrogate Spike 50.000	Range 33 - 141		Recovery =	11.40%#		

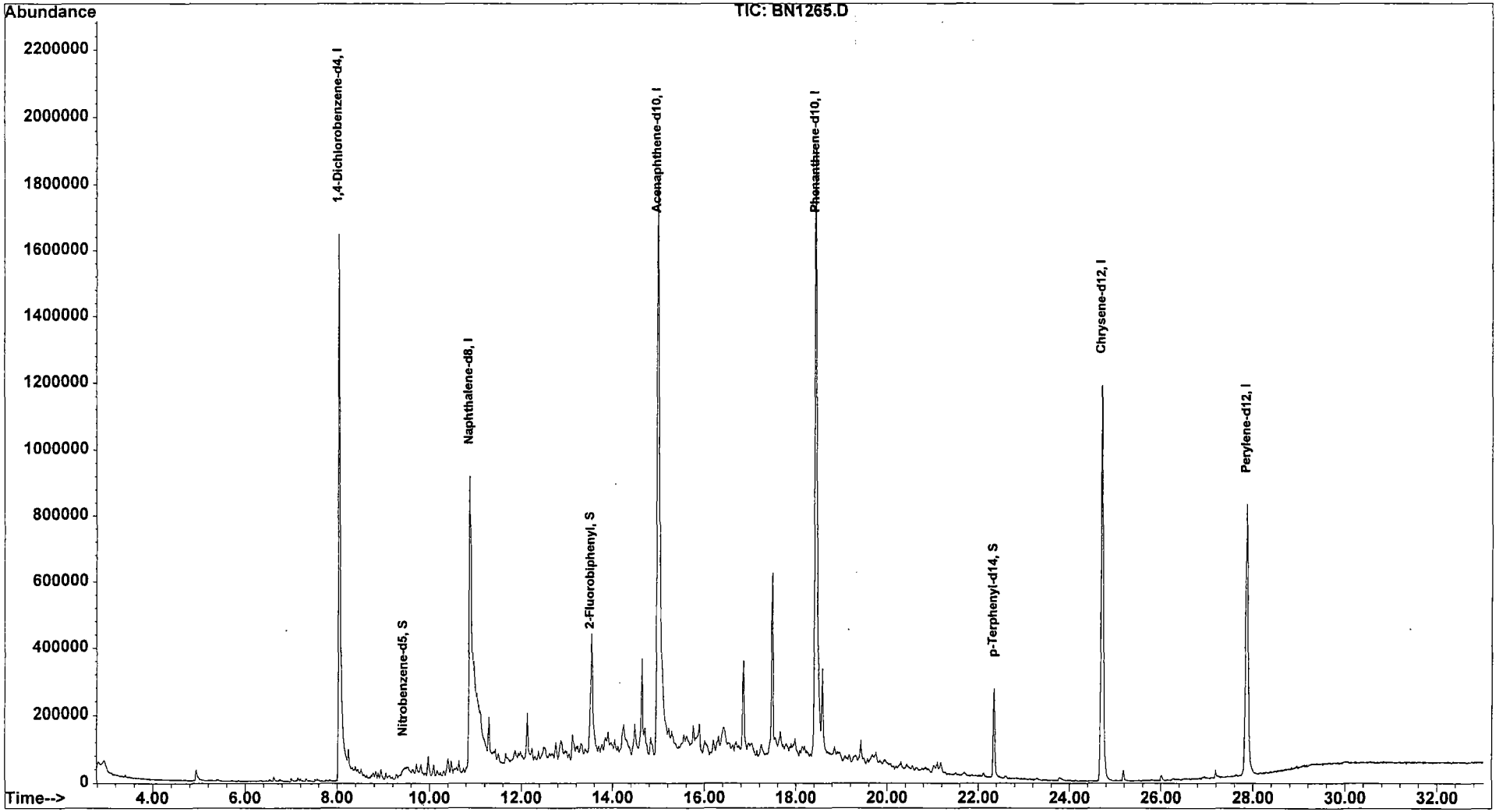
Target Compounds Qvalue

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980330\BN1265.D Vial: 44
Acq On : 30 Mar 98 12:11 pm Operator: FITZPATRICK
Sample : 3401.01 BN Inst : GC/MS Ins
Misc : 106-G Multiplr: 1.00
Quant Time: Mar 30 15:35 1998 Quant Results File: M62510.RES

Method : C:\HPCHEM\1\METHODS\M62510.M
Title : BNA Calibration
Last Update : Fri Mar 13 10:53:38 1998
Response via : Multiple Level Calibration



APPENDIX E

GROUNDWATER ANALYTICAL DATA PACKAGE

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# 01-001

Bldg. 106

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
106 2-9'	1623601	Aqueous	7-Jul-01 09:30	07/09/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, ABN+25, PEST/PCB's,
TAL METALS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

9-24-81
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 #: 427495
( )DERA ( )OMA ( )Other:_____

Project No: 01-0001
Location: BLDG. 106

Samplers Name / Company: MARK LAUER / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA + IS	ABN + 25	PEST/PCB	TAL METALS					Remarks / Preservation Method
16236.01	106 2-9'	7-7-01	0930	AQ.	5	X	X	X	X					HCl, <4°C, ltrs

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	7-9-01 800				
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:

print legibly

Coc.xls6/26/01

20000306

METHOD SUMMARY

Method Summary

EPA Method 624 – Aqueous
Gas Chromatographic Determination of Volatiles in Water

A 5-ml volume of sample is added to 5-ml aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample is purged and desorbed into a GC/MS system. Volatiles are then identified and quantitated.

EPA Method 3510/625
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.

EPA Method 608
Gas Chromatographic Determination of Pesticide and PCB's in Water

Surrogates are added to a measured volume of sample, usually 1 liter. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract is concentrated and exchanged into Hexane. The sample is injected into a GC/ECD system. Pesticides and PCB's are identified and quantitated.

Methodology Summary

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) micro-vessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50-ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77
The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16236 **Site:** Bldg. 106

	Date	Hold Time
Date Sampled	07/07/01	NA
Receipt/Refrigeration	07/09/01	NA
Extractions		
1. ABN	07/10/01	7 days
2. Pest/PCB	07/20/01	7 days
Analyses		
1. Volatile Organics	07/11/01	14 days
2. ABN	07/11/01	40 days
3. Pest/PCB	07/26/01	40 days
4. TAL Metals	07/30/01	180 days
5. Mercury	07/19/01	28 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 _____
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 _____

   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 _____

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (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_____

11. Extraction Holding Time Met — YES

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

12. Analysis Holding Time Met — YES

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

Additional Comments:
_____
_____
_____

Laboratory Manager:_____ Date: 9-24-01

GC 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.	Standards Summary Meet Criteria	Yes
4.	Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 12 hours of sample analysis	Yes
5.	Blank Contamination – If yes, list compounds and concentrations in each blank:	NO
	a. VOA Fraction NA	
	b. B/N Fraction NA	
	c. Acid Fraction NA	
	d. Pesticide/PCB's	
	e. Other	
6.	Surrogate Recoveries Meet Criteria	Yes
	If not met, list those compounds and their recoveries which fall outside the acceptable range:	
	a. VOA Fraction NA	
	b. B/N Fraction NA	
	c. Acid Fraction NA	
	d. Pesticide/PCB's	
	e. Other	
	If not met, were the calculations checked and the results qualified as "estimated"?	
7.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria	NO
	If not met, list those compounds and their recoveries which fall outside the acceptable range	
	a. VOA Fraction NA	
	f. B/N Fraction NA	
	g. Acid Fraction NA	
	h. Pesticide/PCB's gamma and alpha chlordane diluted out	
	i. Other	
8.	Retention Time Summary for primary and confirmation analyses meet criteria	Yes
9.	Were samples run on dissimilar columns?	Yes

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

Indicate
Yes, No, N/A

10. Extraction Holding Time Met — YES

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

11. Analysis Holding Time Met — YES

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

Additional Comments: _____

Laboratory Manager: _____ Date: 9-24-01

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2.	ICP Interference Check Sample Results Meet Criteria	Yes
3.	Serial Dilutions Meet Criteria	NA
4.	Laboratory Control Samples Meet Criteria	yes
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank Ba .001 Cd .0005 Ca .04 Cu .012 Fe .009 Se .004 Na .175 Zn .01	yes
6.	Spike Sample Recoveries Meet Criteria Silver low 30%	NO
7.	Duplicates Meet Criteria	Yes
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes

Additional Comments

Laboratory Manager [signature] Date 9-24-01

VOLATILE 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 found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

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

Data File	**VC006472.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**10-Jul-01**	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	
156594	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 97

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

8/6/01 1:48 PM

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000016

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 2132**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006472.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: not dec. _____ Date Analyzed: 7/10/01

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 Number #13461

Data File	**VC006489.D**	Sample Name	**1623601**
Operator	**Skelton**	Field ID	**106**
Date Aquired	**11-Jul-01**	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	
156594	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 97

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

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000018

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **106**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1623601

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006489.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: not dec. _____ Date Analyzed: 7/11/01

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: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: VC006451.D BFB Injection Date: 7/9/01

Instrument ID: VoaInst#3 BFB Injection Time: 10:27

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

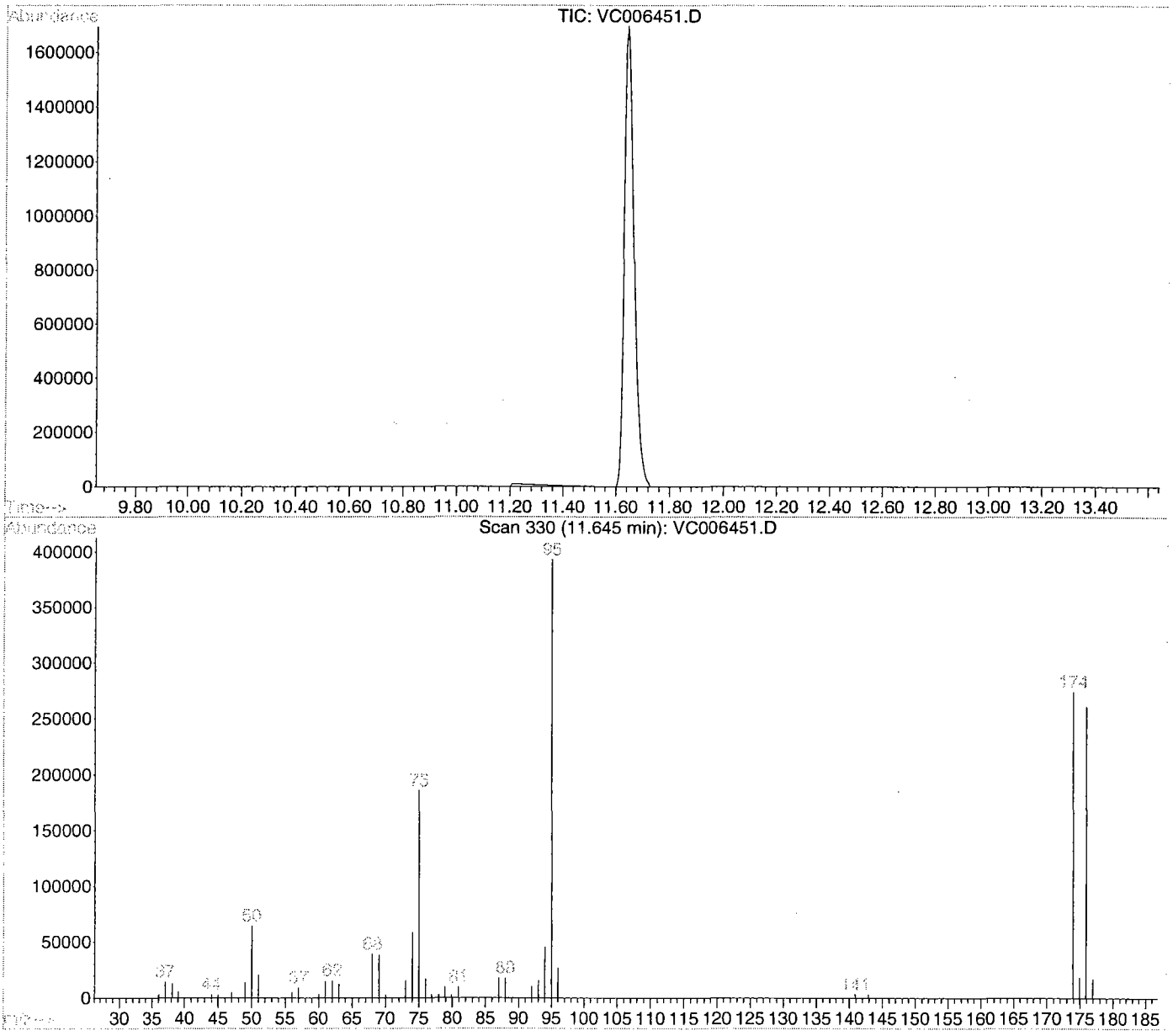
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	16.4
75	30.0 - 66.0% of mass 95	47.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	69.8
175	4.0 - 9.0% of mass 174	4.7 (6.8)1
176	93.0 - 101.0% of mass 174	66.3 (95.1)1
177	5.0 - 9.0% of mass 176	4.3 (6.4)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	VC006452.D	7/9/01	11:03
02	VSTD100	VSTD100	VC006453.D	7/9/01	11:59
03	VSTD050	VSTD050	VC006454.D	7/9/01	12:40
04	VSTD010	VSTD010	VC006455.D	7/9/01	13:21
05	VSTD005	VSTD005	VC006456.D	7/9/01	14:01

Data File : D:\HPCHEM\1\DATA\010709\VC006451.D Vial: 1
Acq On : 9 Jul 2001 10:27 am Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362448.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 330

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	64416	PASS
75	95	30	60	47.2	185728	PASS
95	95	100	100	100.0	393408	PASS
96	95	5	9	6.8	26672	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	69.8	274496	PASS
175	174	5	9	6.8	18552	PASS
176	174	95	101	95.1	260992	PASS
177	176	5	9	6.4	16784	PASS

Response Factor Report GC/MS Ins

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration

Calibration Files
50 =VC006454.D 5 =VC006456.D 10 =VC006455.D
20 =VC006452.D 100 =VC006453.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.416	0.342	0.411	0.398	0.406	0.395	7.69
3)	t	Acrylonitrile	1.054	1.033	1.132	1.138	1.059	1.083	4.47
4)	t	tert-Butyl alcohol	0.125	0.069	0.112	0.125	0.152	0.116	25.99
5)	t	Methyl-tert-Butyl eth	5.666	4.895	5.442	5.743	5.991	5.547	7.46
6)	t	Di-isopropyl ether	1.806	1.274	1.602	1.779	1.921	1.677	15.07
7)	T	Dichlorodifluorometha	1.769	1.155	1.273	2.011	1.833	1.608	23.17
8)	TP	Chloromethane	2.038	1.785	1.862	2.311	2.072	2.014	10.16
9)	TC	Vinyl Chloride	2.375	2.384	2.404	2.778	2.380	2.464	7.13
10)	T	Bromomethane	1.457	1.578	1.521	1.504	1.362	1.484	5.45
11)	T	Chloroethane	1.530	1.375	1.460	1.625	1.578	1.513	6.51
12)	T	Trichlorofluoromethan	2.631	2.445	2.578	2.830	2.725	2.642	5.52
13)	MC	1,1-Dichloroethene	3.051	2.693	2.917	3.146	3.186	2.998	6.66
14)	T	Acetone	0.845	3.100	1.858	1.283	0.969	1.611	57.12
15)	T	Carbon Disulfide	6.339	5.649	5.987	6.719	6.629	6.265	7.14
16)	T	Methylene Chloride	2.306	2.330	2.417	2.461	2.398	2.382	2.66
17)	T	trans-1,2-Dichloroeth	3.070	2.943	3.094	3.200	3.194	3.100	3.41
18)	TP	1,1-Dichloroethane	3.989	3.937	4.084	4.164	4.111	4.057	2.28
19)	T	Vinyl Acetate	3.859	3.024	3.570	3.815	3.771	3.608	9.55
20)	T	2-Butanone	0.832	0.701	0.828	0.854	1.041	0.851	14.31
21)	T	cis-1,2-Dichloroethen	3.053	2.770	2.991	3.111	3.168	3.018	5.10
22)	TC	Chloroform	3.844	3.917	4.033	4.038	3.952	3.957	2.06
23)	T	1,1,1-Trichloroethane	3.062	2.871	3.062	3.131	3.205	3.066	4.04
24)	T	Carbon Tetrachloride	2.636	2.446	2.629	2.707	2.770	2.638	4.62
25)	S	1,2-Dichloroethane-d4	2.572	2.569	2.536	2.467	2.647	2.558	2.55
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.344	1.366	1.414	1.435	1.326	1.377	3.35
28)	T	1,2-Dichloroethane	0.401	0.430	0.435	0.430	0.407	0.421	3.66
29)	TM	Trichloroethene	0.389	0.363	0.385	0.391	0.403	0.386	3.73
30)	TC	1,2-Dichloropropane	0.342	0.326	0.340	0.352	0.350	0.342	3.00
31)	T	Bromodichloromethane	0.377	0.359	0.382	0.391	0.390	0.380	3.35
32)	T	2-Chloroethyl vinyl e	0.114	0.106	0.121	0.120	0.117	0.115	5.20
33)	T	cis-1,3-Dichloroprope	0.496	0.401	0.452	0.492	0.522	0.473	9.97
34)	T	4-Methyl-2-Pentanone	0.107	0.060	0.104	0.104	0.115	0.098	22.29
35)	S	Toluene-d8	1.259	1.229	1.228	1.224	1.323	1.253	3.31
36)	TCM	Toluene	1.350	1.382	1.436	1.443	1.331	1.389	3.63
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.515	1.181	1.377	1.471	1.577	1.424	10.83
39)	T	1,1,2-Trichloroethane	0.959	0.945	1.000	1.005	0.965	0.975	2.73
40)	T	Tetrachloroethene	0.954	0.907	0.984	0.996	0.976	0.963	3.63
41)	T	2-Hexanone	0.483	0.302	0.511	0.449	0.572	0.463	21.75
42)	T	Dibromochloromethane	0.855	0.732	0.816	0.850	0.898	0.830	7.48
43)	TMP	Chlorobenzene	2.878	2.972	3.082	3.047	2.855	2.967	3.38
44)	TC	Ethylbenzene	4.981	4.802	5.224	5.238	4.765	5.002	4.49
45)	T	m+p-Xylenes	1.807	1.666	1.834	1.887	1.811	1.801	4.55
46)	T	o-Xylene	3.422	2.705	3.250	3.446	3.443	3.253	9.75
47)	T	Styrene	3.042	2.424	2.845	3.019	3.112	2.888	9.60
48)	TP	Bromoform	0.551	0.412	0.488	0.534	0.583	0.514	12.94
49)	S	Bromofluorobenzene	1.694	1.478	1.516	1.571	1.807	1.613	8.41
50)	TP	1,1,2,2-Tetrachloroet	0.708	0.799	0.859	0.842	0.699	0.781	9.53
51)	T	1,3-Dichlorobenzene	1.807	1.336	1.584	1.701	1.895	1.665	13.05
52)	T	1,4-Dichlorobenzene	1.732	1.268	1.521	1.614	1.821	1.591	13.44
53)	T	1,2-Dichlorobenzene	1.691	1.264	1.518	1.608	1.766	1.569	12.37

000022

(#) = Out of Range

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: VC006470.D BFB Injection Date: 7/10/01

Instrument ID: VoaInst#3 BFB Injection Time: 9:39

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

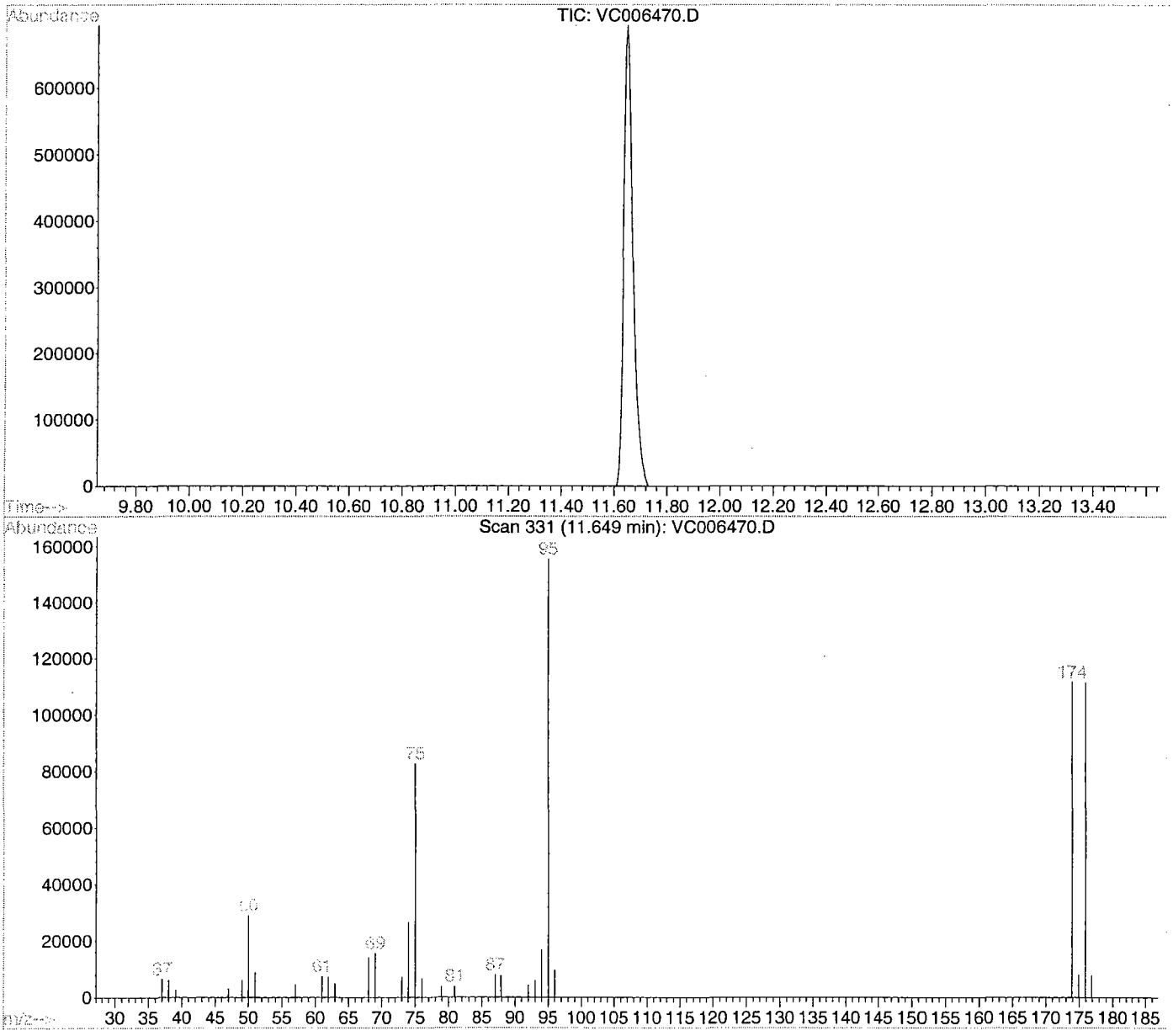
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.7
75	30.0 - 66.0% of mass 95	53.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	71.9
175	4.0 - 9.0% of mass 174	5.1 (7.1)1
176	93.0 - 101.0% of mass 174	71.7 (99.8)1
177	5.0 - 9.0% of mass 176	5.0 (7.0)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	VC006471.D	7/10/01	11:29
02	MB 2132	MB	VC006472.D	7/10/01	12:32
03	2133 MS	1621604 MS	VC006477.D	7/10/01	16:13
04	2134 MSD	1621604 MSD	VC006478.D	7/10/01	16:54
05	106	1623601	VC006489.D	7/11/01	0:27
06	804	1623701	VC006490.D	7/11/01	1:09
07	FD	1623702	VC006491.D	7/11/01	1:50
08	TB	1623801	VC006492.D	7/11/01	2:31
09	FB	1623802	VC006493.D	7/11/01	3:12
10	164	1623803	VC006494.D	7/11/01	3:54

Data File : D:\HPCHEM\1\DATA\010710\VC006470.D Vial: 5
Acq On : 10 Jul 2001 9:39 am Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362448.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 331

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	29056	PASS
75	95	30	60	53.1	82688	PASS
95	95	100	100	100.0	155584	PASS
96	95	5	9	6.3	9740	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.9	111848	PASS
175	174	5	9	7.1	7966	PASS
176	174	95	101	99.8	111616	PASS
177	176	5	9	7.0	7784	PASS

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\010710\VC006471.D Vial: 5
Acq On : 10 Jul 2001 11:29 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Multiple Level Calibration

Min. RRF : 0.025 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	83	0.00
2	t	Acrolein	0.395	0.080	79.7#	17#	0.02
3	t	Acrylonitrile	1.083	1.264	-16.7	92	0.00
4	t	tert-Butyl alcohol	0.116	0.102	12.1	68	0.01
5	t	Methyl-tert-Butyl ether	5.547	5.484	1.1	79	0.00
6	t	Di-isopropyl ether	1.677	1.674	0.2	78	0.02
7	T	Dichlorodifluoromethane	1.608	2.271	-41.2#	94	0.00
8	TP	Chloromethane	2.014	2.362	-17.3	85	0.00
9	TC	Vinyl Chloride	2.464	2.780	-12.8	83	0.00
10	T	Bromomethane	1.484	1.258	15.2	69	0.00
11	T	Chloroethane	1.513	1.624	-7.3	83	0.00
12	T	Trichlorofluoromethane	2.642	2.699	-2.2	79	0.00
13	MC	1,1-Dichloroethene	2.998	2.969	1.0	78	0.01
14	T	Acetone	1.611	2.175	-35.0#	141	0.00
15	T	Carbon Disulfide	6.265	6.473	-3.3	80	0.00
16	T	Methylene Chloride	2.382	2.429	-2.0	82	0.00
17	T	trans-1,2-Dichloroethene	3.100	3.071	0.9	80	0.00
18	TP	1,1-Dichloroethane	4.057	4.090	-0.8	82	0.00
19	T	Vinyl Acetate	3.608	4.121	-14.2	90	0.00
20	T	2-Butanone	0.851	0.864	-1.5	84	0.00
21	T	cis-1,2-Dichloroethene	3.018	3.039	-0.7	81	0.00
22	TC	Chloroform	3.957	3.946	0.3	81	0.00
23	T	1,1,1-Trichloroethane	3.066	2.787	9.1	74	0.00
24	T	Carbon Tetrachloride	2.638	2.419	8.3	74	0.00
25	S	1,2-Dichloroethane-d4	2.558	2.649	-3.6	89	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	82	0.00
27	TM	Benzene	1.377	1.372	0.4	78	0.00
28	T	1,2-Dichloroethane	0.421	0.454	-7.8	87	0.00
29	TM	Trichloroethene	0.386	0.351	9.1	73	0.00
30	TC	1,2-Dichloropropane	0.342	0.345	-0.9	80	0.00
31	T	Bromodichloromethane	0.380	0.382	-0.5	80	0.00
32	T	2-Chloroethyl vinyl ether	0.115	0.124	-7.8	85	0.00
33	T	cis-1,3-Dichloropropene	0.473	0.455	3.8	76	0.00
34	T	4-Methyl-2-Pentanone	0.098	0.103	-5.1	81	0.00
35	S	Toluene-d8	1.253	1.246	0.6	83	0.00
36	TCM	Toluene	1.389	1.347	3.0	76	0.01
37	I	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
38	T	trans-1,3-Dichloropropene	1.424	1.376	3.4	77	0.00
39	T	1,1,2-Trichloroethane	0.975	0.994	-1.9	82	0.00
40	T	Tetrachloroethene	0.963	0.885	8.1	73	0.00
41	T	2-Hexanone	0.463	0.460	0.6	85	0.01
42	T	Dibromochloromethane	0.830	0.823	0.8	80	0.00
43	TMP	Chlorobenzene	2.967	2.825	4.8	77	0.01
44	TC	Ethylbenzene	5.002	4.801	4.0	76	0.00
45	T	m+p-Xylenes	1.801	1.743	3.2	76	0.00
46	T	o-Xylene	3.253	3.154	3.0	76	0.00
47	T	Styrene	2.888	2.875	0.5	79	0.00
48	TP	Bromoform	0.514	0.514	0.0	79	0.00
49	S	Bromofluorobenzene	1.613	1.574	2.4	83	0.01
50	TP	1,1,2,2-Tetrachloroethane	0.781	0.868	-11.1	85	0.00
51	T	1,3-Dichlorobenzene	1.665	1.454	12.7	71	0.00
52	T	1,4-Dichlorobenzene	1.591	1.406	11.6	72	0.00
53	T	1,2-Dichlorobenzene	1.569	1.422	9.4	73	0.00

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

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

MB 2132

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

Lab File ID: VC006472.D Lab Sample ID: MB

Date Analyzed: 7/10/01 Time Analyzed: 12:32

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	2133 MS	1621604 MS	VC006477.D	16:13
02	2134 MSD	1621604 MSD	VC006478.D	16:54
03	106	1623601	VC006489.D	0:27
04	804	1623701	VC006490.D	1:09
05	FD	1623702	VC006491.D	1:50
06	TB	1623801	VC006492.D	2:31
07	FB	1623802	VC006493.D	3:12
08	164	1623803	VC006494.D	3:54

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB 2132	109	98	85	0
02	2133 MS	105	100	99	0
03	2134 MSD	106	99	100	0
04	106	109	99	83	0
05	804	110	98	82	0
06	FD	111	98	80	0
07	TB	111	98	80	0
08	FB	111	98	79	0
09	164	112	99	85	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(88-110)
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

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	VC006477.D	Sample Name	1621604 MS
Date Aquired	10-Jul-01	Field ID	1621604 MS

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	59.64 ug/L	29.82
Acrylonitrile	200	256.72 ug/L	128.36
tert-Butyl alcohol	200	194.81 ug/L	97.40
Methyl-tert-Butyl ether	20	21.29 ug/L	106.46
Di-isopropyl ether	20	21.55 ug/L	107.74
Dichlorodifluoromethane	20	33.47 ug/L	167.34
Chloromethane	20	26.40 ug/L	131.99
Vinyl Chloride	20	26.46 ug/L	132.30
Bromomethane	20	19.69 ug/L	98.44
Chloroethane	20	24.53 ug/L	122.63
Trichlorofluoromethane	20	24.30 ug/L	121.52
1,1-Dichloroethene	20	23.31 ug/L	116.57
Acetone	20	24.95 ug/L	124.74
Carbon Disulfide	20	24.13 ug/L	120.64
Methylene Chloride	20	22.11 ug/L	110.55
trans-1,2-Dichloroethene	20	22.91 ug/L	114.53
1,1-Dichloroethane	20	22.55 ug/L	112.74
Vinyl Acetate	20	25.02 ug/L	125.09
2-Butanone	20	21.33 ug/L	106.63
cis-1,2-Dichloroethene	20	22.31 ug/L	111.55
Chloroform	20	21.96 ug/L	109.78
1,1,1-Trichloroethane	20	21.15 ug/L	105.74
Carbon Tetrachloride	20	21.76 ug/L	108.79
Benzene	20	22.39 ug/L	111.95
1,2-Dichloroethane	20	23.20 ug/L	116.02
Trichloroethene	20	20.91 ug/L	104.55
1,2-Dichloropropane	20	22.02 ug/L	110.12
Bromodichloromethane	20	22.22 ug/L	111.08
2-Chloroethyl vinyl ether	20	23.33 ug/L	116.65
cis-1,3-Dichloropropene	20	21.12 ug/L	105.61
4-Methyl-2-Pentanone	20	23.23 ug/L	116.17
Toluene	20	21.89 ug/L	109.44
trans-1,3-Dichloropropene	20	21.18 ug/L	105.90
1,1,2-Trichloroethane	20	22.03 ug/L	110.17
Tetrachloroethene	20	21.21 ug/L	106.03
2-Hexanone	20	21.97 ug/L	109.86
Dibromochloromethane	20	21.80 ug/L	109.02
Chlorobenzene	20	21.46 ug/L	107.31
Ethylbenzene	20	22.08 ug/L	110.38
m+p-Xylenes	40	45.21 ug/L	113.03
o-Xylene	20	22.68 ug/L	113.38
Styrene	20	22.74 ug/L	113.68
Bromoform	20	22.22 ug/L	111.10
1,1,2,2-Tetrachloroethane	20	23.49 ug/L	117.46
1,3-Dichlorobenzene	20	20.43 ug/L	102.16
1,4-Dichlorobenzene	20	20.56 ug/L	102.82
1,2-Dichlorobenzene	20	21.13 ug/L	105.65

000028

8/6/01 1:48 PM

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Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006478.D**	Sample Name	**1621604 MSD**
Date Aquired	**10-Jul-01**	Field ID	**1621604 MSD**

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	98.97 ug/L	49.48
Acrylonitrile	200	253.18 ug/L	126.59
tert-Butyl alcohol	200	221.79 ug/L	110.90
Methyl-tert-Butyl ether	20	20.83 ug/L	104.16
Di-isopropyl ether	20	20.70 ug/L	103.52
Dichlorodifluoromethane	20	32.53 ug/L	162.67
Chloromethane	20	25.19 ug/L	125.97
Vinyl Chloride	20	24.96 ug/L	124.78
Bromomethane	20	18.94 ug/L	94.71
Chloroethane	20	23.10 ug/L	115.48
Trichlorofluoromethane	20	22.84 ug/L	114.18
1,1-Dichloroethene	20	21.96 ug/L	109.82
Acetone	20	35.25 ug/L	176.24
Carbon Disulfide	20	22.56 ug/L	112.78
Methylene Chloride	20	20.77 ug/L	103.87
trans-1,2-Dichloroethene	20	21.39 ug/L	106.95
1,1-Dichloroethane	20	21.16 ug/L	105.78
Vinyl Acetate	20	24.15 ug/L	120.75
2-Butanone	20	23.52 ug/L	117.58
cis-1,2-Dichloroethene	20	21.05 ug/L	105.25
Chloroform	20	20.61 ug/L	103.03
1,1,1-Trichloroethane	20	20.07 ug/L	100.34
Carbon Tetrachloride	20	20.59 ug/L	102.95
Benzene	20	20.79 ug/L	103.93
1,2-Dichloroethane	20	21.62 ug/L	108.11
Trichloroethene	20	19.85 ug/L	99.23
1,2-Dichloropropane	20	20.49 ug/L	102.44
Bromodichloromethane	20	20.24 ug/L	101.19
2-Chloroethyl vinyl ether	20	21.73 ug/L	108.66
cis-1,3-Dichloropropene	20	19.83 ug/L	99.17
4-Methyl-2-Pentanone	20	23.69 ug/L	118.45
Toluene	20	20.49 ug/L	102.43
trans-1,3-Dichloropropene	20	19.88 ug/L	99.40
1,1,2-Trichloroethane	20	20.85 ug/L	104.23
Tetrachloroethene	20	19.74 ug/L	98.70
2-Hexanone	20	24.46 ug/L	122.32
Dibromochloromethane	20	20.19 ug/L	100.97
Chlorobenzene	20	20.11 ug/L	100.53
Ethylbenzene	20	20.77 ug/L	103.85
m+p-Xylenes	40	43.22 ug/L	108.04
o-Xylene	20	21.89 ug/L	109.46
Styrene	20	21.97 ug/L	109.85
Bromoform	20	20.77 ug/L	103.85
1,1,2,2-Tetrachloroethane	20	22.14 ug/L	110.68
1,3-Dichlorobenzene	20	20.20 ug/L	101.00
1,4-Dichlorobenzene	20	20.43 ug/L	102.14
1,2-Dichlorobenzene	20	20.69 ug/L	103.44

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID (Standard): VC006471.D Date Analyzed: 7/10/01

Instrument ID: VoaInst#3 Time Analyzed: 11:29

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	414071	16.69	2947942	19.42	918837	27.25
	UPPER LIMIT	828142	17.19	5895884	19.92	1837674	27.75
	LOWER LIMIT	207036	16.19	1473971	18.92	459419	26.75
	FIELD ID:						
01	MB 2132	375351	16.70	2622817	19.42	817789	27.25
02	2133 MS	405343	16.70	2891473	19.42	903447	27.25
03	2134 MSD	416607	16.70	2993042	19.42	927096	27.25
04	106	381287	16.70	2702178	19.42	875873	27.26
05	804	380014	16.70	2685686	19.42	856282	27.25
06	FD	379028	16.70	2681996	19.42	842837	27.26
07	TB	374900	16.70	2639850	19.42	838656	27.26
08	FB	372199	16.70	2640076	19.42	831932	27.26
09	164	371132	16.70	2635595	19.42	850673	27.24

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

000030

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010710\VC006472.D Vial: 5
Acq On : 10 Jul 2001 12:32 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 10 13:07 2001 Quant Results File: M362447.RES

Quant Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration
DataAcq Meth : M362447

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	375351	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2622817	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	817789	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	1045326	32.66	ug/L	-0.01
Spiked Amount 30.000	Range 70 - 121		Recovery = 108.87%			
35) Toluene-d8	23.43	98	3219427	29.40	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.00%			
49) Bromofluorobenzene	30.25	95	1125915	25.61	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 85.37%			

Target Compounds Qvalue

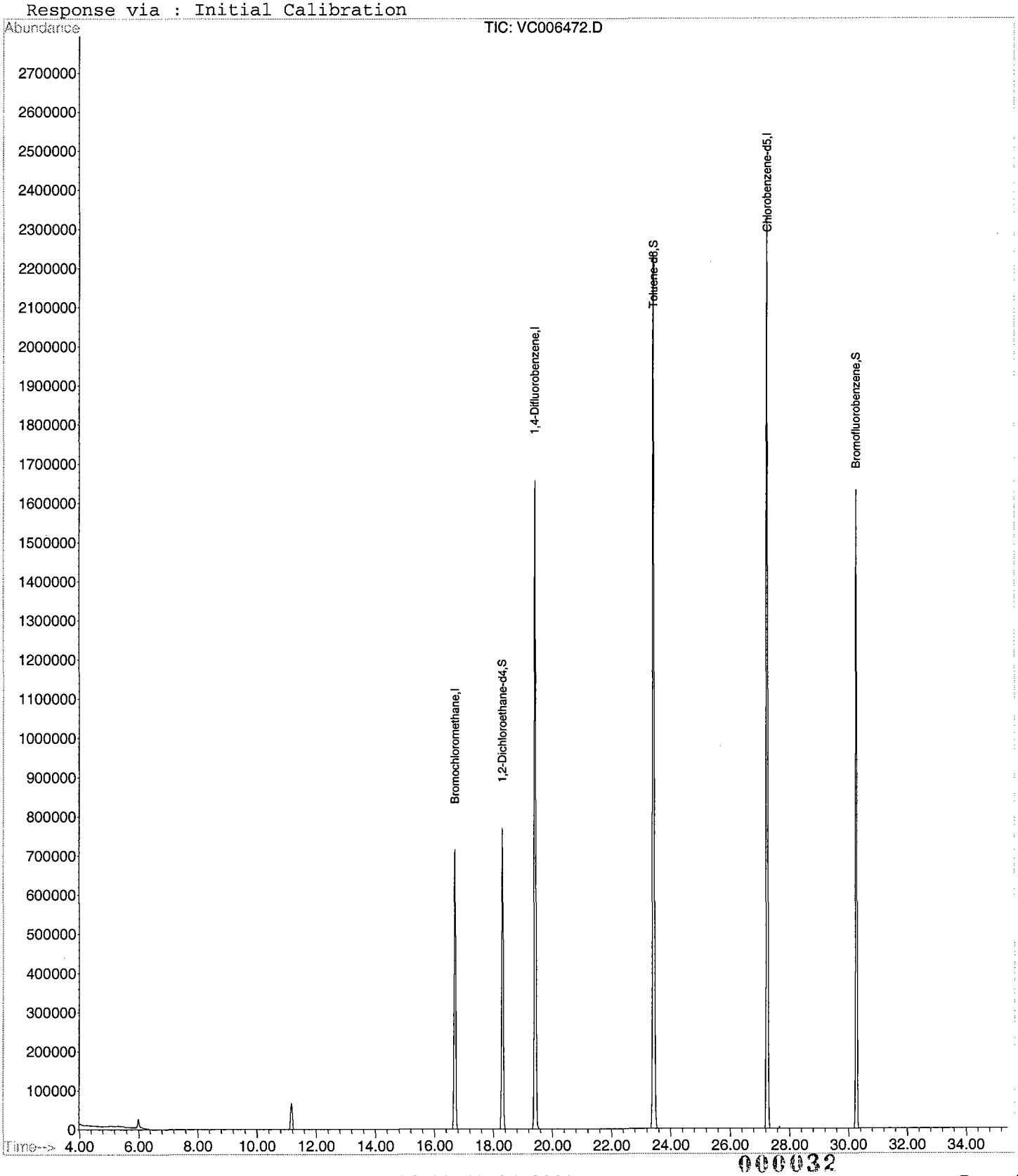
000031

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010710\VC006472.D Vial: 5
Acq On : 10 Jul 2001 12:32 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 10 13:07 2001 Quant Results File: M362447.RES

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration



000032

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010710\VC006489.D Vial: 17
Acq On : 11 Jul 2001 12:27 am Operator: Skelton
Sample : 1623601 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 1:02 2001 Quant Results File: M362447.RES

Quant Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration
DataAcq Meth : M362447

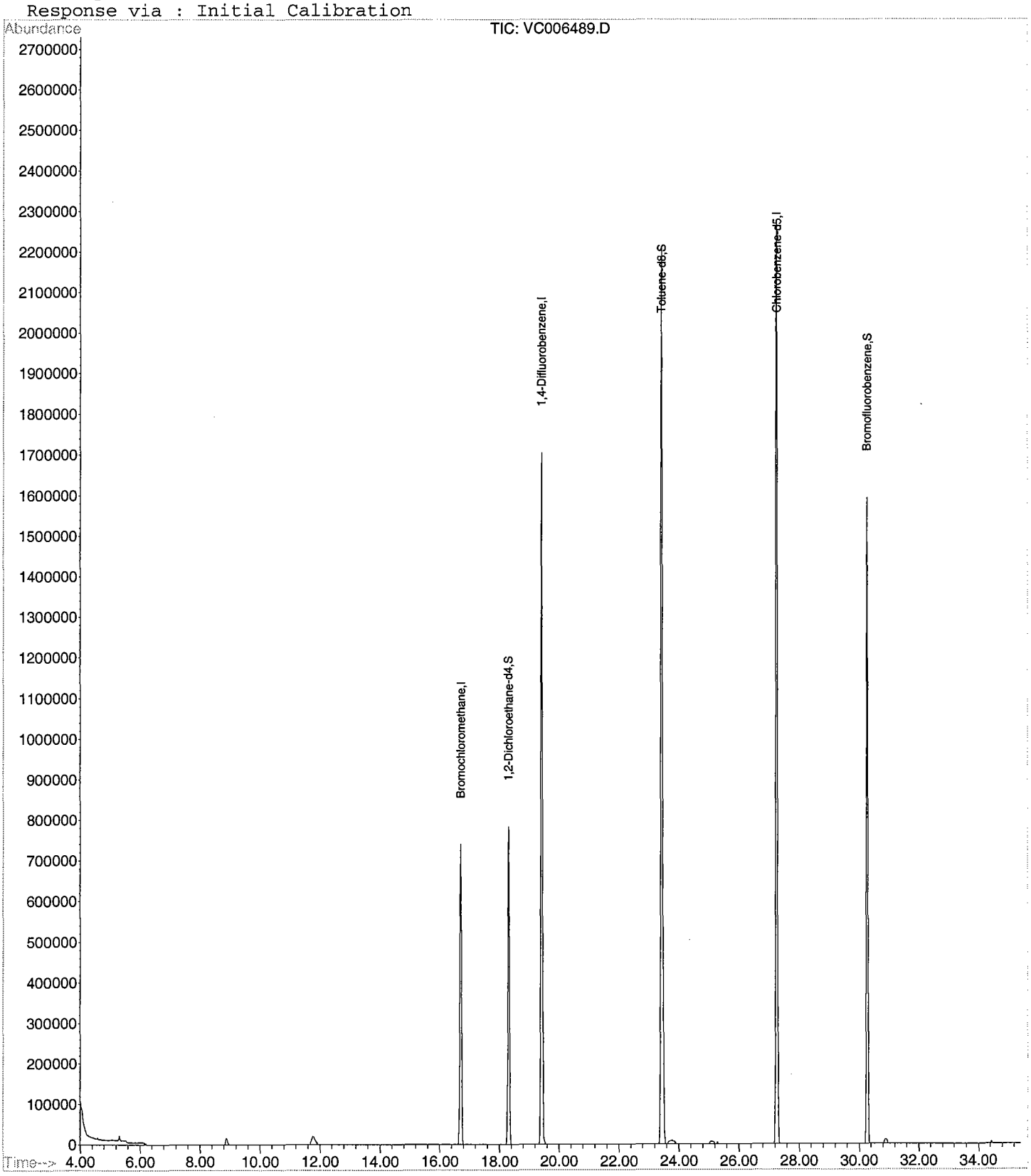
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	381287	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2702178	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.26	119	875873	30.00	ug/L	0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	1060016	32.60	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 108.67%			
35) Toluene-d8	23.43	98	3361135	29.79	ug/L	0.01
Spiked Amount 30.000	Range 81 - 117		Recovery = 99.30%			
49) Bromofluorobenzene	30.26	95	1176853	24.99	ug/L	0.01
Spiked Amount 30.000	Range 74 - 121		Recovery = 83.30%			
Target Compounds						Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010710\VC006489.D Vial: 17
Acq On : 11 Jul 2001 12:27 am Operator: Skelton
Sample : 1623601 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 1:02 2001 Quant Results File: M362447.RES

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration



SEMI-VOLATILES

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05688.D**	Sample Name	**MB 1995**
Operator	**Skelton**	Misc Info	**7-10-2001**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
108-95-2	Phenol			not detected	4000	0.52	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
95-57-8	2-Chlorophenol			not detected	40	0.61	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	0.59	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.48	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	0.52	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	0.93	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	0.39	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.15	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	0.59	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	0.96	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.84	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.41	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05688.D**	Sample Name	**MB 1995**
Operator	**Skelton**	Misc Info	**7-10-2001**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	2.10	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.74	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **MB 1995**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: MB 1995

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05688.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/11/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05690.D**	Sample Name	**1623601**
Operator	**Skelton**	Misc Info	**106**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
108-95-2	Phenol			not detected	4000	0.52	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
95-57-8	2-Chlorophenol			not detected	40	0.61	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	0.59	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.48	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	0.52	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	0.93	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	0.39	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.15	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	0.59	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	0.96	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.84	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.41	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05690.D**	Sample Name	**1623601**
Operator	**Skelton**	Misc Info	**106**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	2.10	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.74	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **106**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1623601

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05690.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: decanted: (Y/N) N Date Extracted: 7/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/11/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: BNA05601.D DFTPP Injection Date: 7/6/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 7:50

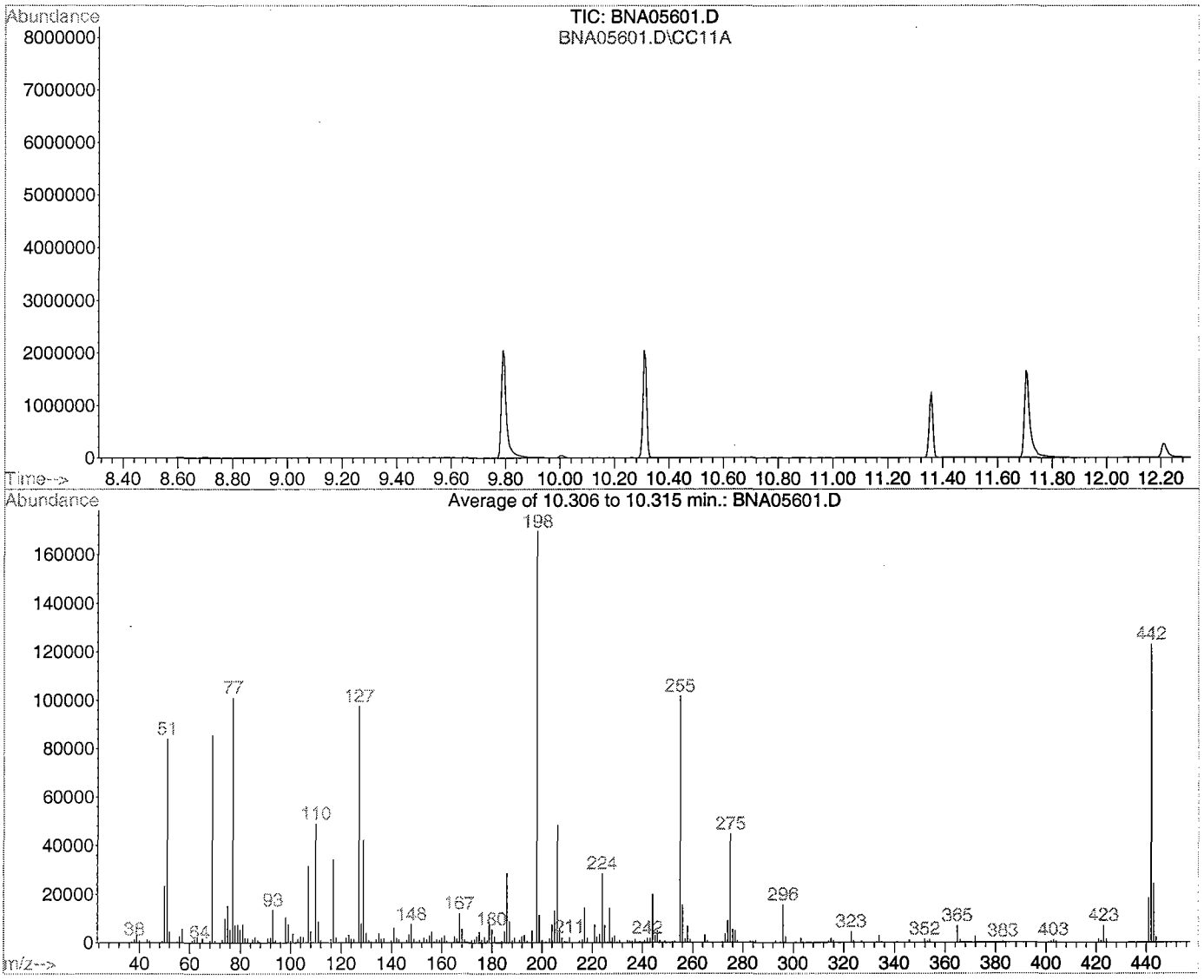
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	49.5
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Mass 69 Relative abundance	50.4
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	57.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	26.3
365	Greater than 0.75% of mass 198	4.0
441	Present, but less than mass 443	10.8
442	40.0 - 110.0% of mass 198	72.4
443	15.0 - 24.0% of mass 442	14.2 (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	SSTD050	SSTD050	BNA05602.D	7/6/01	8:13
02	SSTD020	SSTD020	BNA05603.D	7/6/01	8:56
03	SSTD010	SSTD010	BNA05604.D	7/6/01	10:23
04	SSTD120	SSTD120	BNA05605.D	7/6/01	11:07
05	SSTD080	SSTD080	BNA05606.D	7/6/01	11:53

Data File : D:\DATA\010706\BNA05601.D Vial: 99
Acq On : 6 Jul 2001 7:50 am Operator: Skelton
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Average of 10.306 to 10.315 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.5	83976	PASS
68	69	0.00	2	0.8	722	PASS
69	198	0.00	100	50.4	85472	PASS
70	69	0.00	2	0.8	699	PASS
127	198	40	60	57.5	97456	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	169520	PASS
199	198	5	9	6.7	11379	PASS
275	198	10	30	26.3	44568	PASS
365	198	1	100	4.0	6804	PASS
441	443	1	99	75.5	18237	PASS
442	198	40	100	72.4	122808	PASS
443	442	17	23	19.7	24142	PASS

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05605.D 80 =BNA05606.D 50 =BNA05602.D
20 =BNA05603.D 10 =BNA05604.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD						
2)	T	Pyridine	1.230	1.225	1.236	1.224	1.126	1.208	3.82
3)	T	N-nitroso-dimethylami	0.658	0.663	0.630	0.577	0.561	0.618	7.58
4)	S	2-Fluorophenol	1.140	1.112	1.050	1.028	0.860	1.038	10.55
5)	T	Aniline	1.989	1.931	1.768	1.695	1.508	1.778	10.81
6)	S	Phenol-d6	1.637	1.548	1.429	1.363	1.261	1.448	10.25
7)	TCM	Phenol	1.651	1.753	1.444	1.471	1.218	1.507	13.67
8)	T	bis(2-Chloroethyl)eth	1.227	1.193	1.101	1.037	1.111	1.134	6.70
9)	TM	2-Chlorophenol	1.294	1.240	1.165	1.153	1.061	1.182	7.52
10)	T	1,3-Dichlorobenzene	1.490	1.415	1.337	1.329	1.258	1.366	6.51
11)	TCM	1,4-Dichlorobenzene	1.562	1.473	1.392	1.389	1.300	1.423	6.94
12)	T	Benzyl alcohol	0.870	0.821	0.763	0.708	0.626	0.758	12.63
13)	T	1,2-Dichlorobenzene	1.434	1.363	1.292	1.291	1.239	1.324	5.73
14)	T	2-Methylphenol	1.251	1.184	1.099	1.081	1.026	1.128	7.89
15)	T	bis(2-chloroisopropyl	1.106	1.107	1.033	1.070	1.028	1.069	3.57
16)	T	4-Methylphenol	1.393	1.250	1.164	1.156	0.979	1.188	12.73
17)	TPM	n-Nitroso-di-n-propyl	0.223	0.217	0.202	0.198	0.179	0.204	8.41
18)	T	Hexachloroethane	0.691	0.638	0.599	0.587	0.550	0.613	8.74
19)	I	Naphthalene-d8	ISTD						
20)	S	Nitrobenzene-d5	0.445	0.442	0.423	0.427	0.382	0.424	5.97
21)	T	Nitrobenzene	0.431	0.426	0.413	0.397	0.366	0.407	6.47
22)	T	Isophorone	0.700	0.704	0.678	0.687	0.632	0.680	4.24
23)	TC	2-Nitrophenol	0.185	0.180	0.167	0.166	0.144	0.168	9.43
24)	T	2,4-Dimethylphenol	0.399	0.382	0.358	0.347	0.321	0.361	8.44
25)	T	bis(2-Chloroethoxy)me	0.400	0.384	0.359	0.348	0.315	0.361	9.19
26)	TC	2,4-Dichlorophenol	0.272	0.247	0.206	0.250	0.233	0.242	9.97
27)	T	Benzoic Acid	0.253	0.253	0.211	0.157	0.169	0.208	21.68
28)	TM	1,2,4-Trichlorobenzen	0.334	0.317	0.302	0.297	0.280	0.306	6.79
29)	T	Naphthalene	1.070	1.018	0.953	0.932	0.897	0.974	7.16
30)	T	4-Chloroaniline	0.353	0.332	0.336	0.330	0.298	0.330	6.08
31)	TC	Hexachlorobutadiene	0.217	0.206	0.198	0.196	0.189	0.201	5.35
32)	TCM	4-Chloro-3-methylphen	0.353	0.334	0.312	0.306	0.270	0.315	9.92
33)	T	2-Methylnaphthalene	0.747	0.696	0.641	0.634	0.591	0.662	9.14
34)	I	Acenaphthene-d10	ISTD						
35)	TP	Hexachlorocyclopentad	0.350	0.313	0.270	0.238	0.205	0.275	20.98
36)	TC	2,4,6-Trichlorophenol	0.357	0.335	0.317	0.306	0.268	0.317	10.59
37)	T	2,4,5-Trichlorophenol	0.350	0.349	0.330	0.320	0.310	0.332	5.38
38)	S	2-Fluorobiphenyl	1.257	1.184	1.111	1.114	1.045	1.142	7.08
39)	T	2-Chloronaphthalene	1.039	0.978	0.912	0.899	0.851	0.936	7.84
40)	T	2-Nitroaniline	0.347	0.331	0.314	0.307	0.273	0.314	8.80
41)	T	Dimethylphthalate	1.221	1.176	1.117	1.131	1.053	1.139	5.54
42)	T	Acenaphthylene	1.761	1.667	1.557	1.523	1.420	1.586	8.30
43)	T	2,6-Dinitrotoluene	0.367	0.353	0.336	0.331	0.306	0.339	6.84
44)	T	3-Nitroaniline	0.330	0.286	0.265	0.250	0.218	0.270	15.48
45)	TCM	Acenaphthene	1.174	1.061	0.973	0.957	0.880	1.009	11.16
46)	TP	2,4-Dinitrophenol	0.188	0.178	0.156	0.131	0.085	0.147	27.95
47)	T	Dibenzofuran	1.466	1.394	1.325	1.323	1.258	1.353	5.84
48)	TMP	4-Nitrophenol	0.251	0.191	0.266	0.214	0.156	0.216	20.81
49)	TM	2,4-Dinitrotoluene	0.387	0.375	0.347	0.347	0.310	0.353	8.45
50)	T	Diethylphthalate	1.338	1.302	1.238	1.249	1.177	1.261	4.91
51)	T	Fluorene	1.315	1.224	1.133	1.129	1.065	1.173	8.32
52)	T	4-Chlorophenyl-phenyl	0.657	0.606	0.566	0.562	0.525	0.583	8.60
53)	T	4-Nitroaniline	0.268	0.249	0.242	0.257	0.218	0.247	7.54
54)	I	Phenanthrene-d10	ISTD						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05605.D 80 =BNA05606.D 50 =BNA05602.D
20 =BNA05603.D 10 =BNA05604.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.129	0.125	0.115	0.104	0.085	0.111	16.11
56)	TC	n-Nitrosodiphenylamin	0.434	0.416	0.397	0.392	0.365	0.401	6.51
57)	T	Azobenzene	0.748	0.756	0.738	0.737	0.704	0.737	2.66
58)	S	2,4,6-Tribromophenol	0.099	0.092	0.087	0.080	0.072	0.086	12.52
59)	T	4-Bromophenyl-phenyle	0.191	0.179	0.169	0.161	0.152	0.170	8.96
60)	T	Hexachlorobenzene	0.210	0.196	0.186	0.177	0.168	0.188	8.79
61)	TCM	Pentachlorophenol	0.123	0.112	0.104	0.087	0.072	0.100	20.12
62)	T	Phenanthrene	0.951	0.923	0.877	0.864	0.814	0.886	6.03
63)	T	Anthracene	0.960	0.926	0.879	0.875	0.824	0.893	5.84
64)	T	Di-n-butylphthalate	1.095	1.070	1.034	1.025	0.952	1.035	5.25
65)	TC	Fluoranthene	1.037	1.005	0.963	0.943	0.881	0.966	6.22
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.187	0.198	0.230	0.219	0.198	0.207	8.53
68)	TM	Pyrene	0.813	0.879	0.881	0.985	0.952	0.902	7.47
69)	S	p-Terphenyl-d14	0.641	0.667	0.651	0.694	0.655	0.661	3.09
70)	T	Butylbenzylphthalate	0.424	0.449	0.447	0.487	0.455	0.453	5.02
71)	T	Benzo[a]anthracene	0.854	0.901	0.886	0.972	0.941	0.911	5.08
72)	T	3,3'-Dichlorobenzidin	0.359	0.365	0.370	0.368	0.321	0.357	5.74
73)	T	Chrysene	0.807	0.849	0.837	0.905	0.872	0.854	4.33
74)	T	bis(2-Ethylhexyl)phth	0.602	0.634	0.630	0.664	0.620	0.630	3.62
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.426	1.402	1.305	1.258	1.127	1.304	9.24
77)	T	Benzo[b]fluoranthene	1.195	1.131	1.034	0.989	0.904	1.051	10.95
78)	T	Benzo[k]fluoranthene	1.224	1.173	1.050	1.006	0.941	1.079	10.86
79)	TC	Benzo[a]pyrene	1.157	1.095	0.997	0.963	0.884	1.019	10.58
80)	T	Indeno[1,2,3-cd]pyren	1.329	1.093	0.979	1.117	1.004	1.104	12.50
81)	T	Dibenz[a,h]anthracene	1.235	1.125	1.017	0.963	0.870	1.042	13.62
82)	T	Benzo[g,h,i]perylene	1.035	1.011	0.937	0.905	0.851	0.948	8.00

(#) = Out of Range

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: BNA05686.D DFTPP Injection Date: 7/11/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 8:24

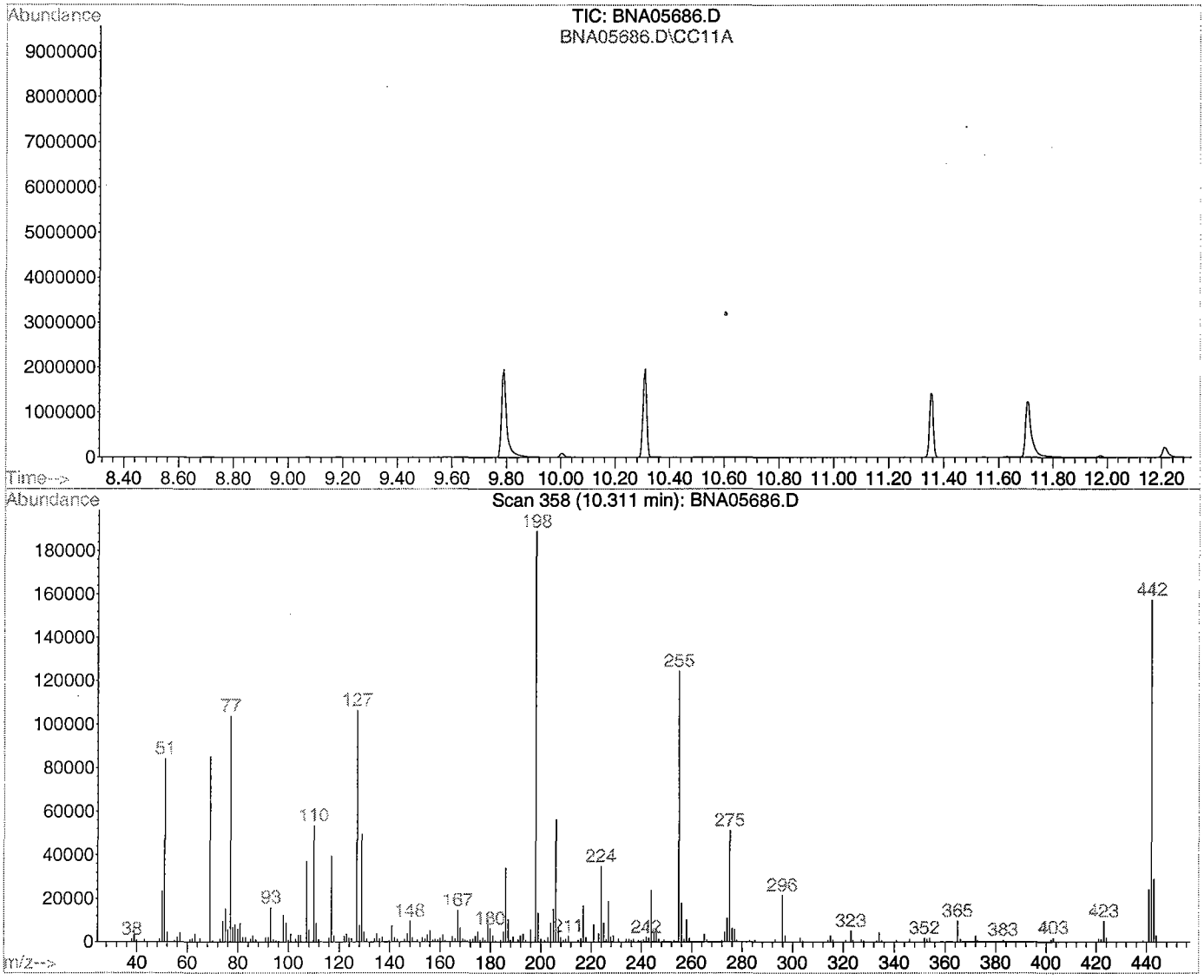
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	44.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	45.2
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	25.0 - 75.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	27.1
365	Greater than 0.75% of mass 198	5.1
441	Present, but less than mass 443	12.7
442	40.0 - 110.0% of mass 198	83.2
443	15.0 - 24.0% of mass 442	15.3 (18.3)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	SSTD050	BNA05687.D	7/11/01	8:47
02	MB 1995	MB 1995	BNA05688.D	7/11/01	9:30
03	LCS 1996	LCS 1996	BNA05689.D	7/11/01	10:14
04	106	1623601	BNA05690.D	7/11/01	10:58

Data File : D:\DATA\010711\BNA05686.D Vial: 99
Acq On : 11 Jul 2001 8:24 am Operator: Skelton
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 358

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.5	84144	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.2	85448	PASS
70	69	0.00	2	0.7	612	PASS
127	198	40	60	56.2	106320	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	189056	PASS
199	198	5	9	7.0	13323	PASS
275	198	10	30	27.1	51160	PASS
365	198	1	100	5.1	9683	PASS
441	443	1	99	83.4	24064	PASS
442	198	40	100	83.2	157376	PASS
443	442	17	23	18.3	28848	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010711\BNA05687.D Vial: 100
Acq On : 11 Jul 2001 8:47 am Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
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	87	0.00
2	T	Pyridine	1.208	1.140	5.6	80	0.00
3	T	N-nitroso-dimethylamine	0.618	0.564	8.7	78	0.00
4	S	2-Fluorophenol	1.038	1.004	3.3	83	0.00
5	T	Aniline	1.778	1.739	2.2	85	0.00
6	S	Phenol-d6	1.448	1.366	5.7	83	0.00
7	TCM	Phenol	1.507	1.378	8.6	83	0.00
8	T	bis(2-Chloroethyl)ether	1.134	1.049	7.5	83	0.00
9	TM	2-Chlorophenol	1.182	1.117	5.5	83	0.00
10	T	1,3-Dichlorobenzene	1.366	1.289	5.6	84	0.00
11	TCM	1,4-Dichlorobenzene	1.423	1.340	5.8	84	0.00
12	T	Benzyl alcohol	0.758	0.718	5.3	82	0.00
13	T	1,2-Dichlorobenzene	1.324	1.247	5.8	84	0.00
14	T	2-Methylphenol	1.128	1.064	5.7	84	0.00
15	T	bis(2-chloroisopropyl)ether	1.069	0.981	8.2	83	0.00
16	T	4-Methylphenol	1.188	1.102	7.2	82	0.00
17	TPM	n-Nitroso-di-n-propylamine	0.204	0.195	4.4	84	0.00
18	T	Hexachloroethane	0.613	0.585	4.6	85	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	89	0.00
20	S	Nitrobenzene-d5	0.424	0.409	3.5	86	0.00
21	T	Nitrobenzene	0.407	0.394	3.2	85	0.00
22	T	Isophorone	0.680	0.647	4.9	85	0.00
23	TC	2-Nitrophenol	0.168	0.157	6.5	84	0.00
24	T	2,4-Dimethylphenol	0.361	0.344	4.7	85	0.00
25	T	bis(2-Chloroethoxy)methane	0.361	0.335	7.2	83	0.00
26	TC	2,4-Dichlorophenol	0.242	0.218	9.9	94	0.00
27	T	Benzoic Acid	0.208	0.182	12.5	77	0.00
28	TM	1,2,4-Trichlorobenzene	0.306	0.285	6.9	84	0.00
29	T	Naphthalene	0.974	0.897	7.9	83	0.00
30	T	4-Chloroaniline	0.330	0.317	3.9	84	0.00
31	TC	Hexachlorobutadiene	0.201	0.194	3.5	87	0.00
32	TCM	4-Chloro-3-methylphenol	0.315	0.292	7.3	83	0.00
33	T	2-Methylnaphthalene	0.662	0.603	8.9	83	0.00
34	I	Acenaphthene-d10	1.000	1.000	0.0	88	0.00
35	TP	Hexachlorocyclopentadiene	0.275	0.283	-2.9	93	0.00
36	TC	2,4,6-Trichlorophenol	0.317	0.302	4.7	84	0.00
37	T	2,4,5-Trichlorophenol	0.332	0.302	9.0	81	0.00
38	S	2-Fluorobiphenyl	1.142	1.053	7.8	84	0.00
39	T	2-Chloronaphthalene	0.936	0.867	7.4	84	0.00
40	T	2-Nitroaniline	0.314	0.293	6.7	83	0.00
41	T	Dimethylphthalate	1.139	1.048	8.0	83	0.00
42	T	Acenaphthylene	1.586	1.478	6.8	84	0.00
43	T	2,6-Dinitrotoluene	0.339	0.325	4.1	86	0.00
44	T	3-Nitroaniline	0.270	0.241	10.7	80	0.00
45	TCM	Acenaphthene	1.009	0.913	9.5	83	0.00
46	TP	2,4-Dinitrophenol	0.147	0.130	11.6	74	0.00
47	T	Dibenzofuran	1.353	1.249	7.7	83	0.00
48	TMP	4-Nitrophenol	0.216	0.226	-4.6	75	0.00
49	TM	2,4-Dinitrotoluene	0.353	0.330	6.5	84	0.00
50	T	Diethylphthalate	1.261	1.175	6.8	84	0.00
51	T	Fluorene	1.173	1.072	8.6	84	0.00
52	T	4-Chlorophenyl-phenylether	0.583	0.538	7.7	84	0.00
53	T	4-Nitroaniline	0.247	0.222	10.1	81	0.00

(#) = Out of Range

000048

Evaluate Continuing Calibration Report

Data File : D:\DATA\010711\BNA05687.D Vial: 100
Acq On : 11 Jul 2001 8:47 am Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
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	91	0.00
55	T	4,6-Dinitro-2-methylphenol	0.111	0.099	10.8	78	0.00
56	TC	n-Nitrosodiphenylamine	0.401	0.365	9.0	83	0.00
57	T	Azobenzene	0.737	0.690	6.4	85	0.00
58	S	2,4,6-Tribromophenol	0.086	0.082	4.7	86	0.00
59	T	4-Bromophenyl-phenylether	0.170	0.157	7.6	84	0.00
60	T	Hexachlorobenzene	0.188	0.176	6.4	86	0.00
61	TCM	Pentachlorophenol	0.100	0.099	1.0	86	0.00
62	T	Phenanthrene	0.886	0.815	8.0	84	0.00
63	T	Anthracene	0.893	0.814	8.8	84	0.00
64	T	Di-n-butylphthalate	1.035	0.965	6.8	85	0.00
65	TC	Fluoranthene	0.966	0.907	6.1	85	0.00
66	I	Chrysene-d12	1.000	1.000	0.0	89	0.00
67	T	Benzidine	0.207	0.246	-18.8	95	0.00
68	TM	Pyrene	0.902	0.834	7.5	84	0.00
69	S	p-Terphenyl-d14	0.661	0.630	4.7	86	0.00
70	T	Butylbenzylphthalate	0.453	0.419	7.5	84	0.00
71	T	Benzo[a]anthracene	0.911	0.853	6.4	86	0.00
72	T	3,3'-Dichlorobenzidine	0.357	0.356	0.3	86	0.00
73	T	Chrysene	0.854	0.800	6.3	85	0.00
74	T	bis(2-Ethylhexyl)phthalate	0.630	0.581	7.8	82	0.00
75	I	Perylene-d12	1.000	1.000	0.0	88	0.00
76	TC	Di-n-octylphthalate	1.304	1.235	5.3	83	0.00
77	T	Benzo[b]fluoranthene	1.051	1.002	4.7	85	0.00
78	T	Benzo[k]fluoranthene	1.079	1.018	5.7	85	0.00
79	TC	Benzo[a]pyrene	1.019	0.965	5.3	85	0.00
80	T	Indeno[1,2,3-cd]pyrene	1.104	1.072	2.9	96	0.00
81	T	Dibenz[a,h]anthracene	1.042	0.935	10.3	81	0.00
82	T	Benzo[g,h,i]perylene	0.948	0.861	9.2	81	0.00

4B

Field Id:

SEMIVOLATILE METHOD BLANK SUMMARY

MB 1995

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: BNA05688.D Lab Sample ID: MB 1995

Instrument ID: GC/MS Ins Date Extracted: 7/10/01

Matrix: (soil/water) WATER Date Analyzed: 7/11/01

Level: (low/med) LOW Time Analyzed: 9:30

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1996	LCS 1996	BNA05689.D	7/11/01
02	106	1623601	BNA05690.D	7/11/01

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

	Field Id:	S1 2FP #	S2 PHL #	S3 NBZ #	S4 2FP #	S5 TBP #	S6 TPL #	TOT OUT
01	MB 1995	46	22	62	70	84	85	0
02	LCS 1996	47	29	75	82	96	85	0
03	106	42	21	66	76	97	76	0

QC LIMITS

S1	2FP	=	2-Fluorophenol	(24-71)
S2	PHL	=	Phenol-d6	(10-126)
S3	NBZ	=	Nitrobenzene-d5	(42-106)
S4	2FP	=	2-Fluorobiphenyl	(10-118)
S5	TBP	=	2,4,6-Tribromophenol	(50-117)
S6	TPL	=	p-Terphenyl-d14	(43-142)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

000051

Semi-Volatiles Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05689.D** Sample Name **LCS 1996**

Date Acquired **11-Jul-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		8.02 ug/L	40.09
62-75-9	N-nitroso-dimethylamine		7.59 ug/L	37.94
62-53-3	Aniline		11.13 ug/L	55.65
108-95-2	Phenol		7.39 ug/L	36.94
111-44-4	bis(2-Chloroethyl)ether		11.68 ug/L	58.38
95-57-8	2-Chlorophenol		13.00 ug/L	65.01
541-73-1	1,3-Dichlorobenzene		11.68 ug/L	58.41
106-46-7	1,4-Dichlorobenzene		11.57 ug/L	57.83
100-51-6	Benzyl alcohol		10.32 ug/L	51.62
95-50-1	1,2-Dichlorobenzene		11.86 ug/L	59.29
95-48-7	2-Methylphenol		11.51 ug/L	57.56
39638-32-9	bis(2-chloroisopropyl)ether		18.84 ug/L	94.18
106-44-5	4-Methylphenol		10.13 ug/L	50.63
621-64-7	n-Nitroso-di-n-propylamine		13.50 ug/L	67.48
67-72-1	Hexachloroethane		11.18 ug/L	55.92
98-95-3	Nitrobenzene		13.64 ug/L	68.19
78-59-1	Isophorone		15.69 ug/L	78.45
88-75-5	2-Nitrophenol		13.44 ug/L	67.22
105-67-9	2,4-Dimethylphenol		13.26 ug/L	66.31
111-91-1	bis(2-Chloroethoxy)methane		13.65 ug/L	68.24
120-83-2	2,4-Dichlorophenol		9.34 ug/L	46.72
65-85-0	Benzoic Acid		4.63 ug/L	23.17
120-82-1	1,2,4-Trichlorobenzene		12.43 ug/L	62.14
91-20-3	Naphthalene		12.52 ug/L	62.59
106-47-8	4-Chloroaniline		12.82 ug/L	64.12
87-68-3	Hexachlorobutadiene		12.08 ug/L	60.38
59-50-7	4-Chloro-3-methylphenol		13.58 ug/L	67.90
91-57-6	2-Methylnaphthalene		13.28 ug/L	66.39
77-47-4	Hexachlorocyclopentadiene		9.99 ug/L	49.93
88-06-2	2,4,6-Trichlorophenol		16.38 ug/L	81.88
95-95-4	2,4,5-Trichlorophenol		13.06 ug/L	65.31
91-58-7	2-Chloronaphthalene		15.00 ug/L	75.02
88-74-4	2-Nitroaniline		10.23 ug/L	51.15
131-11-3	Dimethylphthalate		16.32 ug/L	81.59
208-96-8	Acenaphthylene		14.88 ug/L	74.42
606-20-2	2,6-Dinitrotoluene		16.43 ug/L	82.13
99-09-2	3-Nitroaniline		11.30 ug/L	56.51
83-32-9	Acenaphthene		14.96 ug/L	74.82
51-28-5	2,4-Dinitrophenol		7.86 ug/L	39.30
132-64-9	Dibenzofuran		15.94 ug/L	79.72
100-02-7	4-Nitrophenol		2.16 ug/L	10.78

Semi-Volatiles Spike Report
Page 2

Data File Name **BNA05689.D** Sample Name **LCS 1996**

Date Acquired **11-Jul-01**

CAS#	Name		Amount Recovered	Percent Recovered
121-14-2	2,4-Dinitrotoluene		16.29 ug/L	81.45
84-66-2	Diethylphthalate		16.12 ug/L	80.59
86-73-7	Fluorene		15.33 ug/L	76.65
7005-72-3	4-Chlorophenyl-phenylether		15.73 ug/L	78.65
100-01-6	4-Nitroaniline		5.20 ug/L	26.00
534-52-1	4,6-Dinitro-2-methylphenol		12.52 ug/L	62.60
86-30-6	n-Nitrosodiphenylamine		16.46 ug/L	82.32
103-33-3	Azobenzene		16.82 ug/L	84.10
101-55-3	4-Bromophenyl-phenylether		16.21 ug/L	81.05
118-74-1	Hexachlorobenzene		16.27 ug/L	81.37
87-86-5	Pentachlorophenol		13.63 ug/L	68.13
85-01-8	Phenanthrene		16.52 ug/L	82.59
120-12-7	Anthracene		16.18 ug/L	80.92
84-74-2	Di-n-butylphthalate		16.82 ug/L	84.09
206-44-0	Fluoranthene		16.50 ug/L	82.52
92-87-5	Benzidine		3.00 ug/L	15.01
129-00-0	Pyrene		18.30 ug/L	91.48
85-68-7	Butylbenzylphthalate		17.76 ug/L	88.82
56-55-3	Benzo[a]anthracene		17.46 ug/L	87.29
91-94-1	3,3'-Dichlorobenzidine		13.79 ug/L	68.94
218-01-9	Chrysene		14.89 ug/L	74.44
117-81-7	bis(2-Ethylhexyl)phthalate		17.21 ug/L	86.04
117-84-0	Di-n-octylphthalate		18.70 ug/L	93.50
205-99-2	Benzo[b]fluoranthene		18.92 ug/L	94.62
207-08-9	Benzo[k]fluoranthene		19.03 ug/L	95.13
50-32-8	Benzo[a]pyrene		18.19 ug/L	90.95
193-39-5	Indeno[1,2,3-cd]pyrene		18.84 ug/L	94.19
53-70-3	Dibenz[a,h]anthracene		15.88 ug/L	79.42
191-24-2	Benzo[g,h,i]perylene		18.25 ug/L	91.26

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID (Standard): BNA05687.D Date Analyzed: 7/11/01

Instrument ID: GC_BNA_2 Time Analyzed: 8:47

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	334169	10.06	1349951	12.99	913813	17.22
	UPPER LIMIT	668338	10.56	2699902	13.49	1827626	17.72
	LOWER LIMIT	167085	9.56	674976	12.49	456907	16.72
	Field Id:						
01	MB 1995	243980	10.07	956738	12.99	587096	17.22
02	LCS 1996	265823	10.06	1056547	12.99	638164	17.22
03	106	261020	10.07	1029527	12.99	622515	17.22

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

000054

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID (Standard): BNA05687.D Date Analyzed: 07/11/01

Instrument ID: GC_BNA_2 Time Analyzed: 08:47

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1840557	20.81	1972299	27.27	1581041	30.50
	UPPER LIMIT	3681114	20.31	3944598	26.77	3162082	30.00
	LOWER LIMIT	920279	21.31	986150	27.77	790521	31.00
	EPA SAMPLE NO.						
01	MB 1995	1144934	20.81	1134540	27.26	844103	30.48
02	LCS 1996	1250479	20.81	1258358	27.26	894189	30.48
03	106	1210216	20.81	1240911	27.26	922665	30.49

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

000055

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010711\BNA05688.D Vial: 1
Acq On : 11 Jul 2001 9:30 am Operator: Skelton
Sample : MB 1995 Inst : GC/MS Ins
Misc : 7-10-2001 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 23 11:55 2001 Quant Results File: M262547.RES

Quant Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration
DataAcq Meth : M262547

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.07	152	243980	40.00	ug/L	0.00
19) Naphthalene-d8	12.99	136	956738	40.00	ug/L	0.00
34) Acenaphthene-d10	17.22	164	587096	40.00	ug/L	0.00
54) Phenanthrene-d10	20.81	188	1144934	40.00	ug/L	0.00
66) Chrysene-d12	27.26	240	1134540	40.00	ug/L	0.00
75) Perylene-d12	30.48	264	844103	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.38	112	292024	46.12	ug/L	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery = 46.12%			
6) Phenol-d6	9.47	99	191432	21.68	ug/L	0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 21.68%			
20) Nitrobenzene-d5	11.40	82	313783	30.95	ug/L	0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 61.90%			
38) 2-Fluorobiphenyl	15.63	172	590477	35.22	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 70.44%			
58) 2,4,6-Tribromophenol	19.17	330	205887	83.66	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 83.66%			
69) p-Terphenyl-d14	24.75	244	798446	42.56	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 85.12%			
Target Compounds						Qvalue
50) Diethylphthalate	18.42	149	23315	1.26	ug/L	98

000056

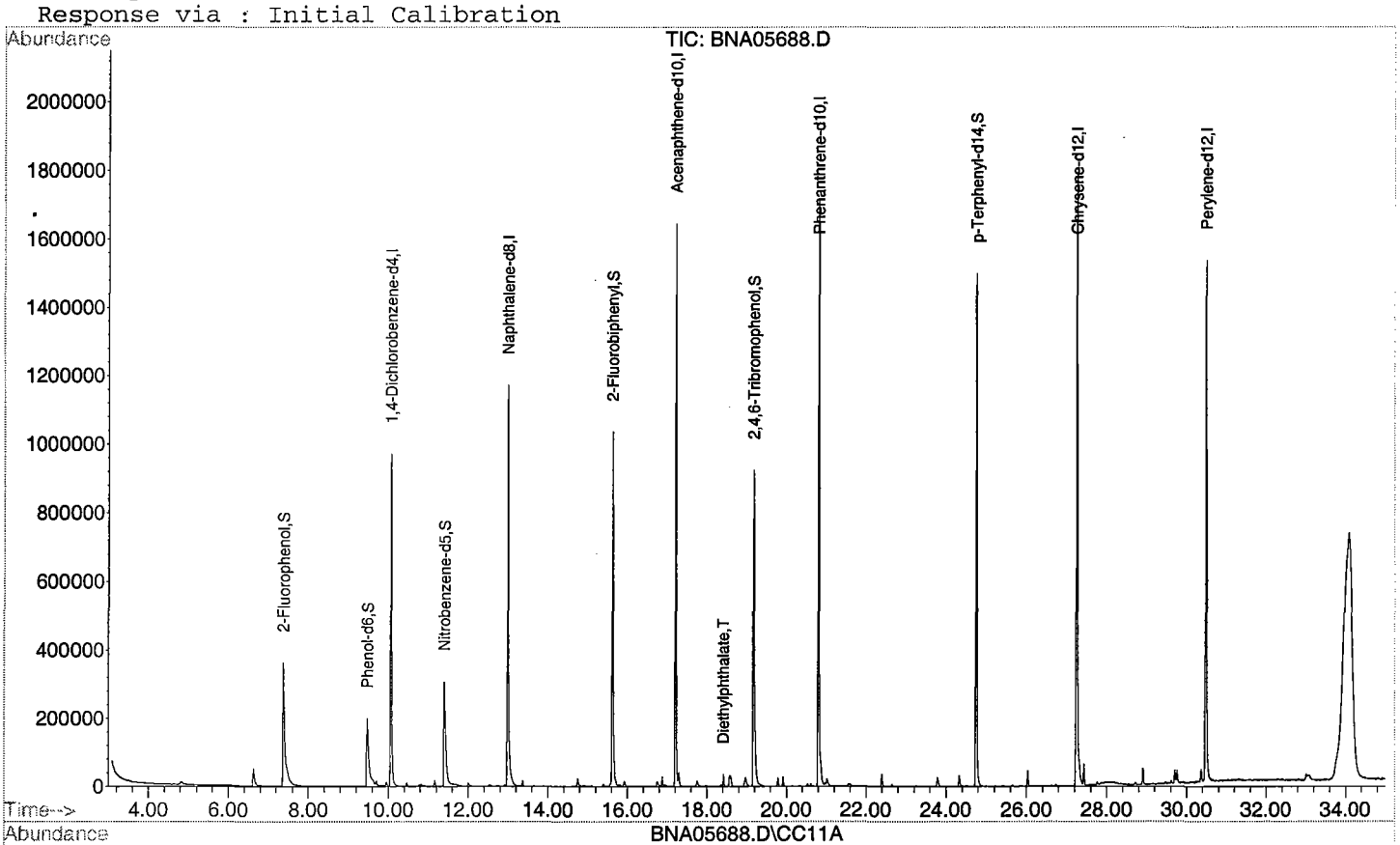
(#) = qualifier out of range (m) = manual integration

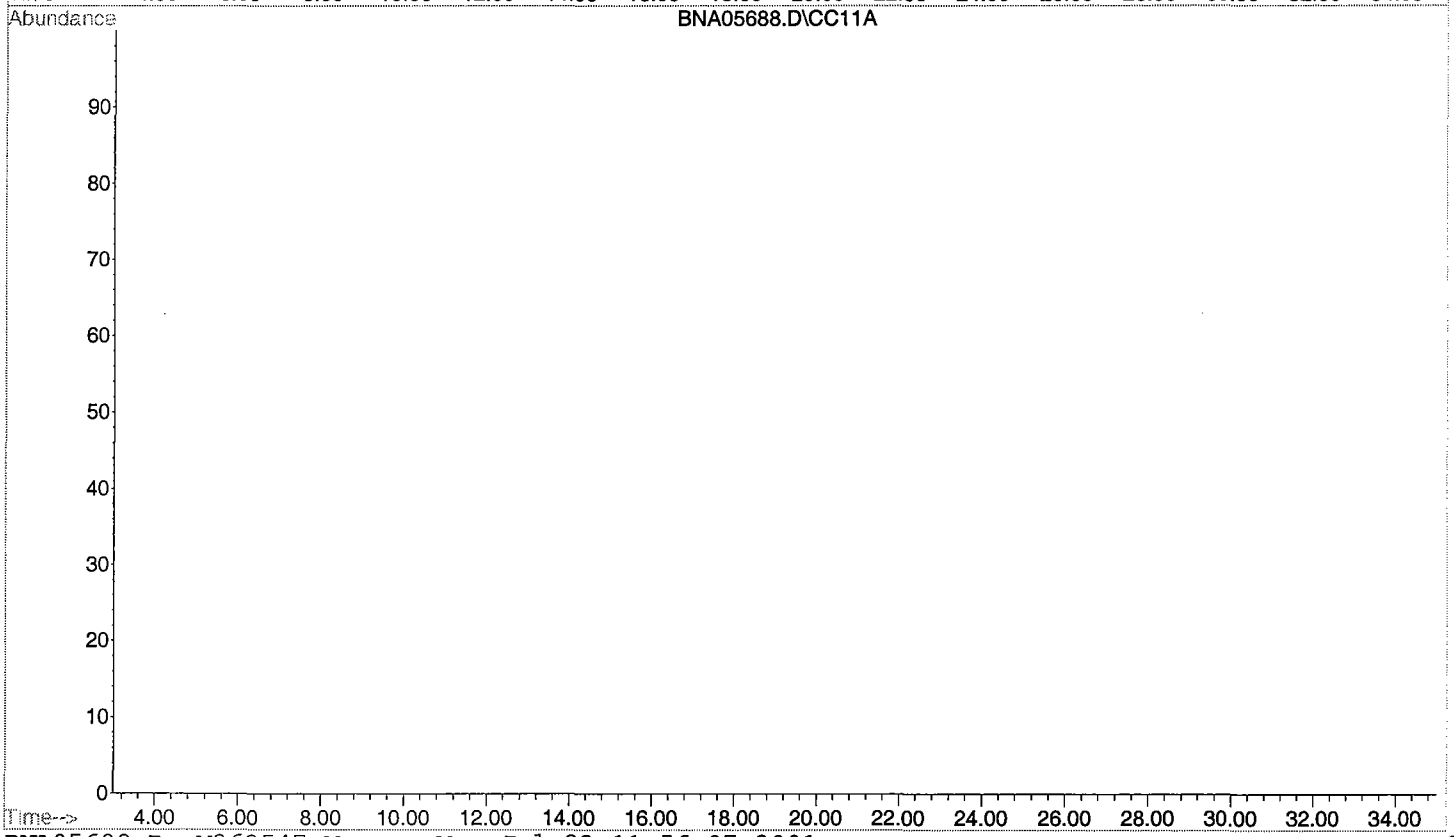
Quantitation Report

Data File : D:\DATA\010711\BNA05688.D
Acq On : 11 Jul 2001 9:30 am
Sample : MB 1995
Misc : 7-10-2001
MS Integration Params: RTEINT.P
Quant Time: Jul 23 11:55 2001

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262547.RES

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data File : D:\DATA\010711\BNA05690.D Vial: 3
Acq On : 11 Jul 2001 10:58 am Operator: Skelton
Sample : 1623601 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 11 11:33 2001 Quant Results File: M262547.RES

Quant Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration
DataAcq Meth : M262547

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.07	152	261020	40.00	ug/L	0.00
19) Naphthalene-d8	12.99	136	1029527	40.00	ug/L	0.00
34) Acenaphthene-d10	17.22	164	622515	40.00	ug/L	0.00
54) Phenanthrene-d10	20.81	188	1210216	40.00	ug/L	0.00
66) Chrysene-d12	27.26	240	1240911	40.00	ug/L	-0.01
75) Perylene-d12	30.49	264	922665	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.38	112	285016	42.08	ug/L	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery = 42.08%			
6) Phenol-d6	9.48	99	194555	20.60	ug/L	0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 20.60%			
20) Nitrobenzene-d5	11.40	82	362300	33.21	ug/L	0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 66.42%			
38) 2-Fluorobiphenyl	15.62	172	672539	37.84	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 75.68%			
58) 2,4,6-Tribromophenol	19.17	330	252836	97.20	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 97.20%			
69) p-Terphenyl-d14	24.75	244	774815	37.76	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 75.52%			

Target Compounds Qvalue

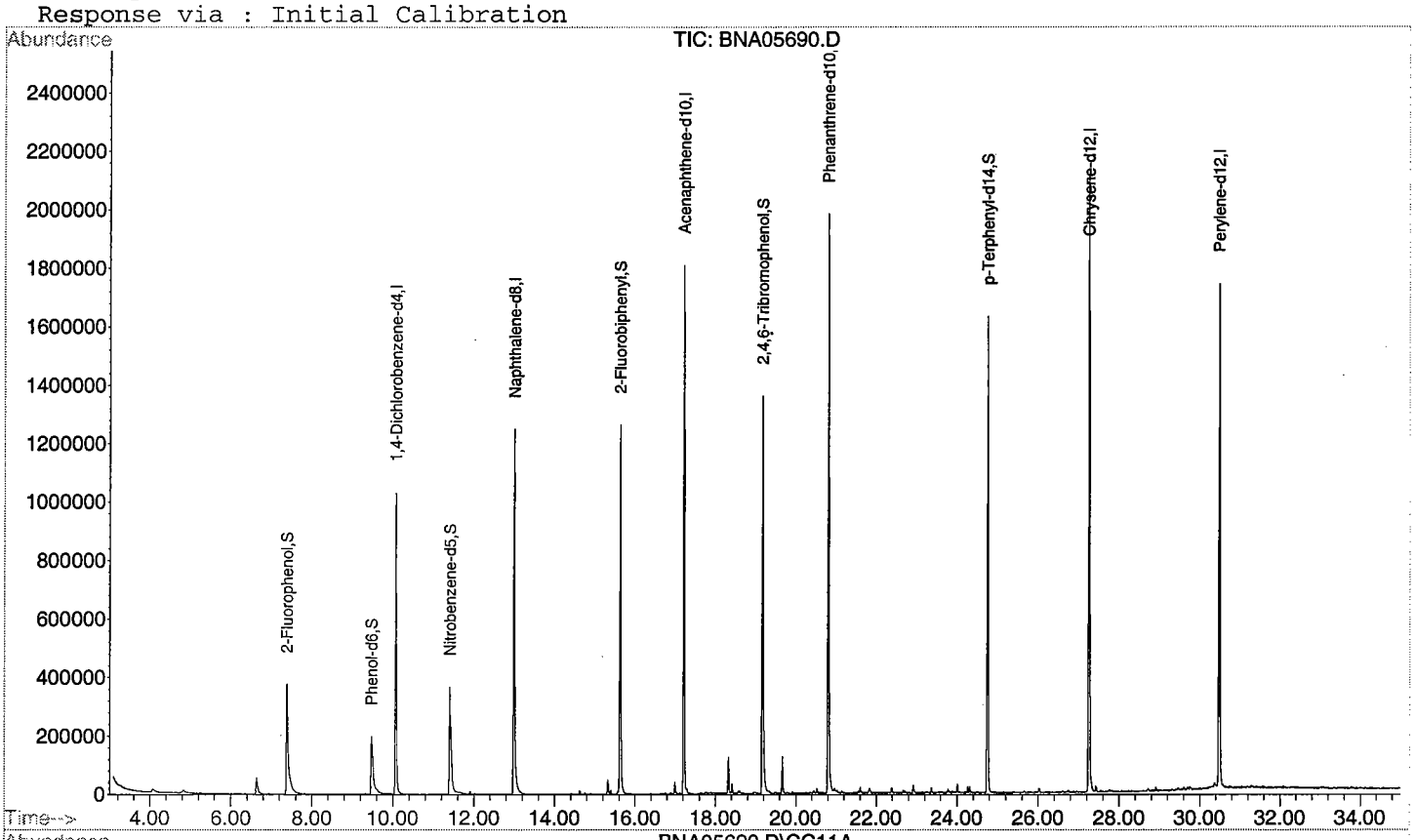
(#) = qualifier out of range (m) = manual integration

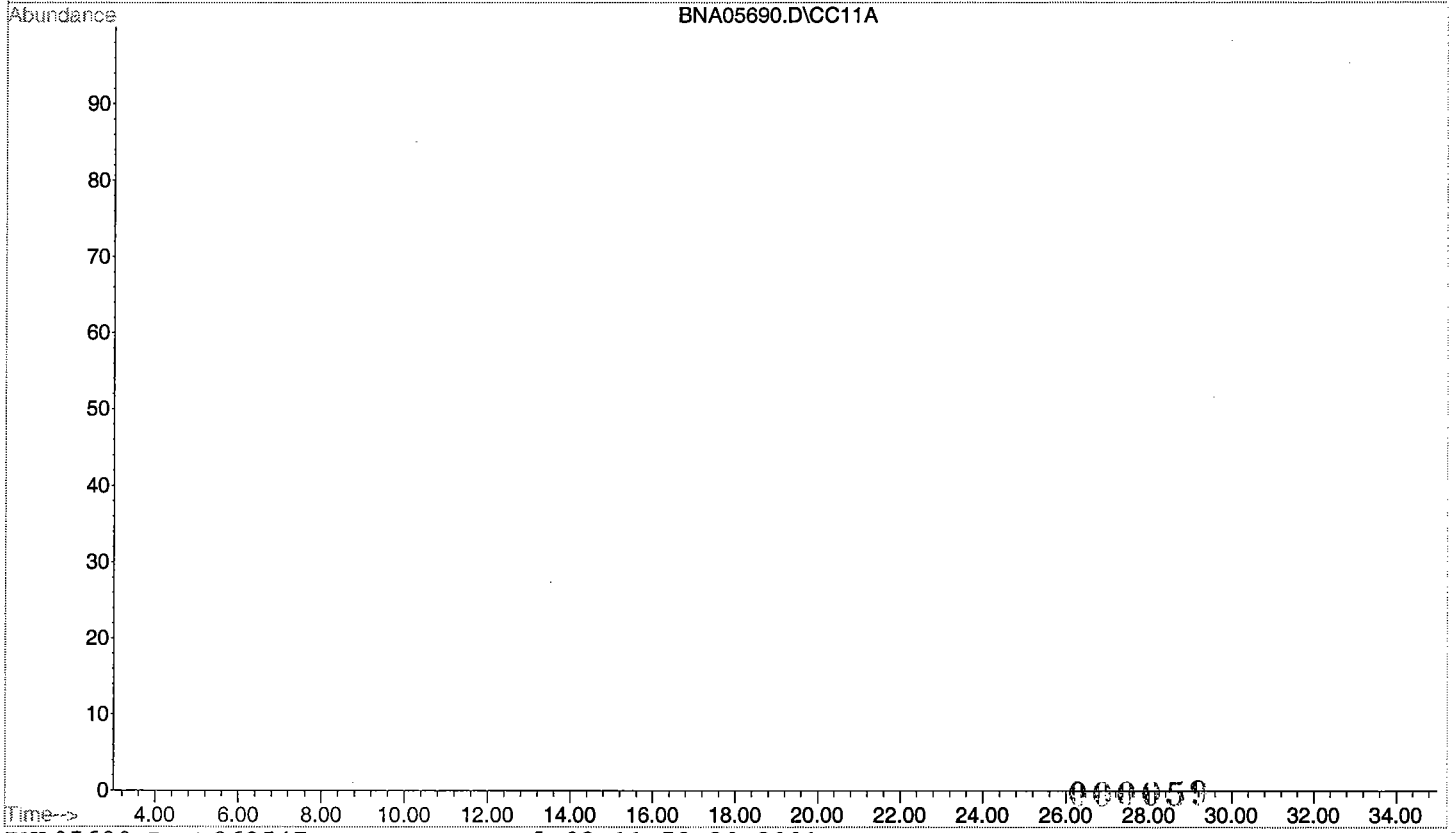
Quantitation Report

Data File : D:\DATA\010711\BNA05690.D
Acq On : 11 Jul 2001 10:58 am
Sample : 1623601
Misc : 106
MS Integration Params: RTEINT.P
Quant Time: Jul 11 11:33 2001

Vial: 3
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262547.RES

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration





000059

PEST/PCB's

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

Client :	U.S. Army	**Lab. ID # :**	MB-1989
	DPW, SELFM-PW-EV	**Date Rec'd:**	
	Bldg. 173	**Extraction Date:**	7/20/01
	Ft. Monmouth, NJ 07703	**Analysis Date:**	7/26/01
Analysis:	EPA Method 608	**Location :**	
Matrix:	Aqueous		
Analyst:	T. Frankovich	**Field ID:**	
Ext. Meth:	Sep. Funnel		

Pesticide/PCB	Dilution Factor	Retention Time	Regulatory Level * (ug/L)	MDL (ug/L)	Result (ug/L)
alpha-BHC	1		0.02	0.0011	ND
beta-BHC	1		0.20	0.0050	ND
gamma-BHC	1		0.20	0.0013	ND
delta-BHC	1		NLE	0.0016	ND
Heptachlor	1		0.40	0.0035	ND
Aldrin	1		0.04	0.0026	ND
Heptachlor Epoxide	1		0.20	0.0020	ND
Endosulfan I	1		0.40	0.0016	ND
4,4'-DDE	1		0.10	0.0021	ND
Dieldrin	1		0.03	0.0020	ND
Endrin	1		2.00	0.0032	ND
Endrin Ketone	1		NLE	0.0026	ND
Endosulfan II	1		0.40	0.0022	ND
4,4'-DDD	1		0.10	0.0020	ND
4,4'-DDT	1		0.10	0.0052	ND
Endosulfan-Sulfate	1		0.40	0.0026	ND
Alpha-chlordane	1		0.50	0.0036	ND
Gamma-chlordane	1		0.50	0.0007	ND
Toxaphene	1		3.00	0.1517	ND
Arochlor 1016	1		0.50	0.0683	ND
Arochlor 1221	1		0.50	0.0666	ND
Arochlor 1232	1		0.50	0.0648	ND
Arochlor 1242	1		0.50	0.0485	ND
Arochlor 1248	1		0.50	0.0544	ND
Arochlor 1254	1		0.50	0.0608	ND
Arochlor 1260	1		0.50	0.0732	ND

* Higher of PQL's and ground water criteria as per NJAC 7:9-6

ND = Not Detected
MDL = Method Detection Limit
NLE = No Limit Established
PQL = Practical Quantitation Limit

Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.25um

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

Client :	U.S. Army	**Lab. ID # :**	1623601
	DPW, SELFM-PW-EV	**Date Rec'd:**	7/9/01
	Bldg. 173	**Extraction Date:**	7/20/01
	Ft. Monmouth, NJ 07703	**Analysis Date:**	7/26/01
Analysis:	EPA Method 608	**Location :**	BLDG. 106
Matrix:	Aqueous		
Analyst:	T. Frankovich	**Field ID:**	106 2-9'
Ext. Meth:	Sep. Funnel		

Pesticide/PCB	Dilution Factor	Retention Time	Regulatory Level * (ug/L)	MDL (ug/L)	Result (ug/L)
alpha-BHC	**1**		0.02	0.0011	**ND**
beta-BHC	**1**		0.20	0.0050	**ND**
gamma-BHC	**1**		0.20	0.0013	**ND**
delta-BHC	**1**		NLE	0.0016	**ND**
Heptachlor	**1**		0.40	0.0035	**ND**
Aldrin	**1**		0.04	0.0026	**ND**
Heptachlor Epoxide	**1**		0.20	0.0020	**ND**
Endosulfan I	**1**		0.40	0.0016	**ND**
4,4'-DDE	**1**		0.10	0.0021	**ND**
Dieldrin	**1**		0.03	0.0020	**ND**
Endrin	**1**		2.00	0.0032	**ND**
Endrin Ketone	**1**		NLE	0.0026	**ND**
Endosulfan II	**1**		0.40	0.0022	**ND**
4,4'-DDD	**1**		0.10	0.0020	**ND**
4,4'-DDT	**1**		0.10	0.0052	**ND**
Endosulfan-Sulfate	**1**		0.40	0.0026	**ND**
Alpha-chlordane	**10**	16.95	0.50	0.0036	**1.707**
Gamma-chlordane	**10**	16.60	0.50	0.0007	**1.790**
Toxaphene	**1**		3.00	0.1517	**ND**
Arochlor 1016	**1**		0.50	0.0683	**ND**
Arochlor 1221	**1**		0.50	0.0666	**ND**
Arochlor 1232	**1**		0.50	0.0648	**ND**
Arochlor 1242	**1**		0.50	0.0485	**ND**
Arochlor 1248	**1**		0.50	0.0544	**ND**
Arochlor 1254	**1**		0.50	0.0608	**ND**
Arochlor 1260	**1**		0.50	0.0732	**ND**

* Higher of PQL's and ground water criteria as per NJAC 7:9-6

ND = Not Detected
MDL = Method Detection Limit
NLE = No Limit Established
PQL = Practical Quantitation Limit

Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.25um

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 2001

Calibration Files
40 =PPB04731.D 20 =PPB04730.D 1 =PPB04728.D
10 =PPB04729.D 60 =PPB04732.D

		Compound	40	20	1	10	60	Avg		%RSD	
1)	S	Tetrachlor-m-xylene	4.436	4.756	5.480	5.107	4.391	4.834	E4	9.55	
2)	TCM	alpha-BHC	6.550	6.431	7.351	6.237	6.685	6.651	E4	6.38	
3)	TCM	beta-BHC	2.690	2.944	3.016	3.117	2.644	2.882	E4	7.15	
4)	TCM	gamma-BHC	6.038	6.033	7.224	5.924	6.134	6.270	E4	8.58	
5)	TCM	delta-BHC	5.599	5.493	6.371	5.362	5.755	5.716	E4	6.88	
6)	TCM	Heptachlor	4.769	4.783	6.156	4.947	4.840	5.099	E4	11.66	*
7)	TCM	Aldrin	5.319	5.369	6.543	5.437	5.425	5.619	E4	9.24	
8)	TCM	Heptachlor epoxide	5.045	5.170	6.283	5.420	5.041	5.392	E4	9.67	
9)	TCM	gamma-Chlordane	5.022	5.189	6.185	5.407	5.061	5.373	E4	8.91	
10)	TCM	alpha-Chlordane	4.951	5.117	5.969	5.316	4.936	5.258	E4	8.11	
11)	TCM	Endosulfan I	4.998	5.205	6.150	5.372	4.956	5.336	E4	9.09	
12)	TCM	4,4'-DDE	4.197	4.170	4.598	4.286	4.302	4.310	E4	3.95	
13)	TCM	Dieldrin	4.976	4.997	6.015	5.184	5.045	5.243	E4	8.37	
14)	TCM	Endrin	3.785	3.705	4.601	3.950	3.695	3.947	E4	9.62	
15)	TCM	Endosulfan II	4.464	4.625	5.394	4.877	4.453	4.762	E4	8.24	
16)	TCM	4,4'-DDD	3.782	3.986	4.175	4.259	3.793	3.999	E4	5.43	
17)	TCM	Endrin aldehyde	3.266	3.421	3.760	3.570	3.269	3.457	E4	6.10	
18)	TCM	4,4'-DDT	3.299	3.259	3.727	3.400	3.363	3.410	E4	5.45	
19)	TCM	Endosulfan sulfate	3.747	3.881	4.371	4.099	3.719	3.963	E4	6.88	
20)	TC	Endrin ketone	4.979	5.137	5.768	5.462	5.052	5.280	E4	6.24	
21)	TC	Methoxychlor	1.730	1.690	1.754	1.718	1.650	1.709	E4	2.34	
22)	S	Decachlorobiphenyl	3.551	3.922	3.937	4.319	3.568	3.859	E4	8.21	

Signal #2 Calibration Files
40 =PPB04731.D 20 =PPB04730.D 1 =PPB04728.D
10 =PPB04729.D 60 =PPB04732.D

		Compound	40	20	1	10	60	Avg		%RSD	
1)	S	Tetrachlor-m-xylene	8.543	8.845	9.118	8.597	8.670	8.755	E4	2.66	
2)	TC	alpha-BHC	1.351	1.283	1.033	1.133	1.412	1.243	E5	12.59	*
3)	TC	beta-BHC	5.383	5.573	5.171	5.329	5.365	5.364	E4	2.68	
4)	TC	gamma-BHC	1.236	1.196	1.053	1.071	1.285	1.169	E5	8.73	
5)	TC	delta-BHC	1.140	1.057	0.880	0.916	1.186	1.036	E5	12.98	*
6)	TC	Heptachlor	1.050	1.011	0.956	0.944	1.063	1.005	E5	5.34	
7)	TC	Aldrin	1.147	1.106	0.951	1.029	1.178	1.082	E5	8.51	
8)	TC	Heptachlor epoxide	1.053	1.042	1.018	1.014	1.072	1.040	E5	2.35	
9)	TC	gamma-Chlordane	1.077	1.077	1.025	1.009	1.107	1.059	E5	3.84	
10)	TC	alpha-Chlordane	1.048	1.053	1.043	0.994	1.066	1.041	E5	2.62	
11)	TC	Endosulfan I	9.932	9.914	9.460	9.327	9.975	9.722	E4	3.13	
12)	TC	4,4'-DDE	9.305	9.030	7.823	8.112	9.625	8.779	E4	8.85	
13)	TC	Dieldrin	1.049	1.027	0.952	0.954	1.082	1.013	E5	5.73	
14)	TC	Endrin	7.654	7.191	7.315	6.832	7.545	7.307	E4	4.41	
15)	TC	Endosulfan II	9.569	9.573	9.186	9.315	9.539	9.437	E4	1.87	
16)	TC	4,4'-DDD	7.461	7.235	6.530	6.802	7.617	7.129	E4	6.37	
17)	TC	Endrin aldehyde	6.775	6.966	7.855	6.935	6.887	7.083	E4	6.17	
18)	TC	4,4'-DDT	6.683	6.005	5.562	5.876	6.742	6.174	E4	8.39	
19)	TC	Endosulfan sulfate	7.746	7.622	7.403	7.639	7.766	7.635	E4	1.89	
20)	TC	Endrin ketone	0.999	1.021	0.923	1.050	1.011	1.001	E5	4.72	
21)	TC	Methoxychlor	3.339	3.207	2.718	2.870	3.316	3.090	E4	9.06	
22)	S	Decachlorobiphenyl	7.774	8.167	9.189	8.347	7.292	8.154	E4	8.66	

(#) = Out of Range
(*) = Calibration Curve Used

PP061101.M Mon Jul 30 10:30:29 2001 GC

Calibration Retention Time Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 2001
Response via : Initial Calibration

First Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04729.D\ECD1A.CH
Second Calibration Standard : PPB04730.D
Third Calibration Standard : PPB04731.D

	Compound	RT of Standard First	Second	Third	Mean RT	RT Window From	To
1	Tetrachlor-m-xylene	9.780	9.779	9.778	9.779	9.762	9.820
2	alpha-BHC	11.467	11.466	11.466	11.466	11.445	11.515
3	beta-BHC	12.631	12.630	12.629	12.630	12.611	12.679
4	gamma-BHC	12.372	12.371	12.371	12.371	12.350	12.422
5	delta-BHC	13.110	13.109	13.108	13.109	13.091	13.159
6	Heptachlor	13.662	13.661	13.661	13.661	13.643	13.713
7	Aldrin	14.446	14.445	14.445	14.446	14.430	14.498
8	Heptachlor epoxide	15.986	15.984	15.985	15.985	15.969	16.043
9	gamma-Chlordane	16.290	16.289	16.289	16.289	16.275	16.347
10	alpha-Chlordane	16.614	16.613	16.613	16.613	16.600	16.670
11	Endosulfan I	16.950	16.948	16.949	16.949	16.931	17.013
12	4,4'-DDE	16.802	16.800	16.800	16.801	16.786	16.858
13	Dieldrin	17.525	17.524	17.523	17.524	17.508	17.586
14	Endrin	18.082	18.080	18.080	18.081	18.066	18.144
15	Endosulfan II	18.615	18.614	18.613	18.614	18.597	18.679
16	4,4'-DDD	18.227	18.223	18.221	18.224	18.210	18.280
17	Endrin aldehyde	19.602	19.599	19.598	19.600	19.583	19.665
18	4,4'-DDT	18.873	18.870	18.869	18.871	18.860	18.930
19	Endosulfan sulfate	20.624	20.623	20.622	20.623	20.609	20.689
20	Endrin ketone	21.289	21.287	21.285	21.287	21.270	21.358
21	Methoxychlor	19.978	19.975	19.973	19.975	19.962	20.036
22	Decachlorobiphenyl	23.670	23.666	23.666	23.668	23.665	23.735

Signal #2

First Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04729.D\ECD2B.CH
Second Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04730.D\ECD2B.CH
Third Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04731.D\ECD2B.CH

	Compound	RT of Standard First	Second	Third	Mean RT	RT Window From	To
1	Tetrachlor-m-xylene	9.860	9.859	9.858	9.859	9.838	9.896
2	alpha-BHC	11.708	11.708	11.708	11.708	11.683	11.753
3	beta-BHC	12.952	12.951	12.950	12.951	12.927	12.995
4	gamma-BHC	12.707	12.707	12.706	12.707	12.682	12.753
5	delta-BHC	13.730	13.728	13.728	13.729	13.707	13.775
6	Heptachlor	13.863	13.863	13.864	13.863	13.841	13.911
7	Aldrin	14.690	14.689	14.690	14.690	14.670	14.738
8	Heptachlor epoxide	16.126	16.125	16.125	16.126	16.104	16.178
9	gamma-Chlordane	16.581	16.579	16.580	16.580	16.561	16.633
10	alpha-Chlordane	16.935	16.934	16.935	16.935	16.917	16.987
11	Endosulfan I	17.071	17.070	17.071	17.071	17.046	17.128
12	4,4'-DDE	17.343	17.342	17.340	17.342	17.321	17.393
13	Dieldrin	17.725	17.724	17.724	17.725	17.703	17.781
14	Endrin	18.447	18.447	18.447	18.447	18.426	18.504
15	Endosulfan II	18.943	18.941	18.940	18.941	18.919	19.001
16	4,4'-DDD	18.701	18.697	18.695	18.698	18.678	18.748
17	Endrin aldehyde	19.730	19.728	19.727	19.728	19.706	19.788
18	4,4'-DDT	19.420	19.418	19.417	19.419	19.400	19.470
19	Endosulfan sulfate	20.368	20.366	20.365	20.366	20.346	20.426
20	Endrin ketone	21.631	21.630	21.629	21.630	21.605	21.693
21	Methoxychlor	20.992	20.992	20.990	20.991	20.972	21.046
22	Decachlorobiphenyl	24.779	24.777	24.776	24.777	24.747	24.857

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04929.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04929.D\ECD2B.CH
Acq On : 7-26-01 3:03:25 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachlor-m-xylene	40.000	35.845	10.4	97	0.00
2	TCM	alpha-BHC	40.000	37.899	5.3	98	0.00
3	TCM	beta-BHC	40.000	36.259	9.4	97	0.00
4	TCM	gamma-BHC	40.000	36.778	8.1	97	0.00
5	TCM	delta-BHC	40.000	37.849	5.4	97	0.00
6	TCM	Heptachlor	40.000	40.143	-0.4	97	0.00
7	TCM	Aldrin	40.000	36.047	9.9	98	0.00
8	TCM	Heptachlor epoxide	40.000	35.598	11.0	98	0.00
9	TCM	gamma-Chlordane	40.000	35.919	10.2	99	0.00
10	TCM	alpha-Chlordane	40.000	36.120	9.7	98	0.00
11	TCM	Endosulfan I	40.000	35.655	10.9	99	0.00
12	TCM	4,4'-DDE	40.000	37.054	7.4	98	0.00
13	TCM	Dieldrin	40.000	36.003	10.0	98	0.00
14	TCM	Endrin	40.000	37.528	6.2	98	-0.01
15	TCM	Endosulfan II	40.000	35.622	10.9	99	-0.01
16	TCM	4,4'-DDD	40.000	35.364	11.6	97	0.00
17	TCM	Endrin aldehyde	40.000	34.014	15.0	95	0.00
18	TCM	4,4'-DDT	40.000	39.248	1.9	101	-0.01
19	TCM	Endosulfan sulfate	40.000	37.561	6.1	100	-0.01
20	TC	Endrin ketone	40.000	36.185	9.5	101	-0.01
21	TC	Methoxychlor	40.000	42.540	-6.3	103	-0.01
22	S	Decachlorobiphenyl	40.000	35.735	10.7	101	-0.01
		Signal #2					
1	S	Tetrachlor-m-xylene	40.000	37.337	6.7	97	0.00
2	TC	alpha-BHC	40.000	37.555	6.1	98	0.00
3	TC	beta-BHC	40.000	37.981	5.0	97	0.00
4	TC	gamma-BHC	40.000	40.910	-2.3	97	0.00
5	TC	delta-BHC	40.000	38.043	4.9	97	0.00
6	TC	Heptachlor	40.000	42.164	-5.4	101	0.00
7	TC	Aldrin	40.000	40.242	-0.6	98	0.00
8	TC	Heptachlor epoxide	40.000	38.818	3.0	98	-0.01
9	TC	gamma-Chlordane	40.000	38.994	2.5	99	-0.01
10	TC	alpha-Chlordane	40.000	38.428	3.9	99	-0.01
11	TC	Endosulfan I	40.000	38.615	3.5	99	-0.01
12	TC	4,4'-DDE	40.000	40.739	-1.8	99	0.00
13	TC	Dieldrin	40.000	39.632	0.9	99	-0.01
14	TC	Endrin	40.000	41.169	-2.9	99	-0.01
15	TC	Endosulfan II	40.000	38.754	3.1	101	-0.01
16	TC	4,4'-DDD	40.000	39.694	0.8	97	-0.01
17	TC	Endrin aldehyde	40.000	35.385	11.5	102	-0.01
18	TC	4,4'-DDT	40.000	43.331	-8.3	101	-0.01
19	TC	Endosulfan sulfate	40.000	40.531	-1.3	100	-0.01
20	TC	Endrin ketone	40.000	40.124	-0.3	105	-0.01
21	TC	Methoxychlor	40.000	41.255	-3.1	92	-0.01
22	S	Decachlorobiphenyl	40.000	36.090	9.8	105	-0.02

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

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04929.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04929.D\ECD2B.CH
Acq On : 7-26-01 3:03:25 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

000066

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

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04946.D\ECD1A.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04946.D\ECD2B.CH
Acq On : 7-27-01 12:31:21 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachlor-m-xylene	40.000	35.200	12.0	95	0.00
2	TCM	alpha-BHC	40.000	37.190	7.0	96	0.00
3	TCM	beta-BHC	40.000	35.526	11.2	95	0.00
4	TCM	gamma-BHC	40.000	36.111	9.7	95	0.00
5	TCM	delta-BHC	40.000	37.566	6.1	97	0.00
6	TCM	Heptachlor	40.000	39.380	1.5	95	0.00
7	TCM	Aldrin	40.000	35.498	11.3	97	0.00
8	TCM	Heptachlor epoxide	40.000	34.825	12.9	96	0.00
9	TCM	gamma-Chlordane	40.000	35.066	12.3	96	0.00
10	TCM	alpha-Chlordane	40.000	35.026	12.4	95	0.00
11	TCM	Endosulfan I	40.000	34.779	13.1	96	0.00
12	TCM	4,4'-DDE	40.000	36.664	8.3	97	0.00
13	TCM	Dieldrin	40.000	35.379	11.6	96	0.00
14	TCM	Endrin	40.000	37.381	6.5	98	0.00
15	TCM	Endosulfan II	40.000	34.559	13.6	96	0.00
16	TCM	4,4'-DDD	40.000	35.862	10.3	98	0.00
17	TCM	Endrin aldehyde	40.000	36.741	8.1	103	0.00
18	TCM	4,4'-DDT	40.000	37.501	6.2	97	0.00
19	TCM	Endosulfan sulfate	40.000	36.373	9.1	97	0.00
20	TC	Endrin ketone	40.000	34.422	13.9	96	0.00
21	TC	Methoxychlor	40.000	40.716	-1.8	98	0.00
22	S	Decachlorobiphenyl	40.000	34.485	13.8	98	0.00
		Signal #2					
1	S	Tetrachlor-m-xylene	40.000	38.012	5.0	99	0.00
2	TC	alpha-BHC	40.000	38.050	4.9	99	0.00
3	TC	beta-BHC	40.000	38.603	3.5	98	0.00
4	TC	gamma-BHC	40.000	41.074	-2.7	98	0.00
5	TC	delta-BHC	40.000	38.888	2.8	99	0.00
6	TC	Heptachlor	40.000	41.530	-3.8	99	0.00
7	TC	Aldrin	40.000	40.393	-1.0	99	0.00
8	TC	Heptachlor epoxide	40.000	39.254	1.9	99	0.00
9	TC	gamma-Chlordane	40.000	39.556	1.1	100	0.00
10	TC	alpha-Chlordane	40.000	38.937	2.7	100	0.00
11	TC	Endosulfan I	40.000	39.192	2.0	100	0.00
12	TC	4,4'-DDE	40.000	41.625	-4.1	101	0.00
13	TC	Dieldrin	40.000	41.229	-3.1	103	0.00
14	TC	Endrin	40.000	42.572	-6.4	102	0.00
15	TC	Endosulfan II	40.000	39.908	0.2	104	0.00
16	TC	4,4'-DDD	40.000	41.720	-4.3	102	0.00
17	TC	Endrin aldehyde	40.000	36.001	10.0	104	0.00
18	TC	4,4'-DDT	40.000	44.243	-10.6	103	0.00
19	TC	Endosulfan sulfate	40.000	42.446	-6.1	105	0.00
20	TC	Endrin ketone	40.000	38.848	2.9	101	0.00
21	TC	Methoxychlor	40.000	42.118	-5.3	94	0.00
22	S	Decachlorobiphenyl	40.000	38.191	4.5	111	0.00

000067

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

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04946.D\ECD1A.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04946.D\ECD2B.CH
Acq On : 7-27-01 12:31:21 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

000068

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\010727\PPB04957.D\ECD1A.CH Vial: 2
Acq On : 7-27-01 11:55:56 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\010727\PPB04957.D\ECD2B.CH Vial: 2
Acq On : 7-27-01 11:55:57 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachlor-m-xylene	40.000	37.132	7.2	100	0.00
2	TCM	alpha-BHC	40.000	38.827	2.9	100	0.00
3	TCM	beta-BHC	40.000	37.539	6.2	100	0.00
4	TCM	gamma-BHC	40.000	38.014	5.0	100	0.00
5	TCM	delta-BHC	40.000	38.928	2.7	100	0.00
6	TCM	Heptachlor	40.000	41.594	-4.0	100	0.00
7	TCM	Aldrin	40.000	36.755	8.1	100	0.00
8	TCM	Heptachlor epoxide	40.000	36.342	9.1	100	0.00
9	TCM	gamma-Chlordane	40.000	36.428	8.9	100	0.00
10	TCM	alpha-Chlordane	40.000	36.717	8.2	100	0.00
11	TCM	Endosulfan I	40.000	36.137	9.7	100	0.00
12	TCM	4,4'-DDE	40.000	37.945	5.1	100	0.00
13	TCM	Dieldrin	40.000	36.796	8.0	100	0.00
14	TCM	Endrin	40.000	38.175	4.6	100	0.00
15	TCM	Endosulfan II	40.000	35.832	10.4	100	0.00
16	TCM	4,4'-DDD	40.000	36.433	8.9	100	0.00
17	TCM	Endrin aldehyde	40.000	35.724	10.7	100	0.00
18	TCM	4,4'-DDT	40.000	38.798	3.0	100	0.00
19	TCM	Endosulfan sulfate	40.000	37.579	6.1	100	0.00
20	TC	Endrin ketone	40.000	35.861	10.3	100	0.00
21	TC	Methoxychlor	40.000	41.345	-3.4	100	0.00
22	S	Decachlorobiphenyl	40.000	35.336	11.7	100	0.00

Signal #2

1	S	Tetrachlor-m-xylene	40.000	38.536	3.7	100	0.00
2	TC	alpha-BHC	40.000	38.473	3.8	100	0.00
3	TC	beta-BHC	40.000	39.300	1.8	100	0.00
4	TC	gamma-BHC	40.000	42.043	-5.1	100	0.00
5	TC	delta-BHC	40.000	39.276	1.8	100	0.00
6	TC	Heptachlor	40.000	41.910	-4.8	100	0.00
7	TC	Aldrin	40.000	40.904	-2.3	100	0.00
8	TC	Heptachlor epoxide	40.000	39.682	0.8	100	0.00
9	TC	gamma-Chlordane	40.000	39.514	1.2	100	0.00
10	TC	alpha-Chlordane	40.000	38.846	2.9	100	0.00
11	TC	Endosulfan I	40.000	39.036	2.4	100	0.00
12	TC	4,4'-DDE	40.000	41.244	-3.1	100	0.00
13	TC	Dieldrin	40.000	40.012	-0.0	100	0.00
14	TC	Endrin	40.000	41.717	-4.3	100	0.00
15	TC	Endosulfan II	40.000	38.482	3.8	100	0.00
16	TC	4,4'-DDD	40.000	40.771	-1.9	100	0.00
17	TC	Endrin aldehyde	40.000	34.549	13.6	100	0.00
18	TC	4,4'-DDT	40.000	42.825	-7.1	100	0.00
19	TC	Endosulfan sulfate	40.000	40.423	-1.1	100	0.00
20	TC	Endrin ketone	40.000	38.361	4.1	100	0.00
21	TC	Methoxychlor	40.000	44.798	-12.0	100	0.00
22	S	Decachlorobiphenyl	40.000	34.325	14.2	100	0.00

000069

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

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\1\DATA\010727\PPB04957.D\ECD1A.CH Vial: 2
Acq On : 7-27-01 11:55:56 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\010727\PPB04957.D\ECD2B.CH Vial: 2
Acq On : 7-27-01 11:55:57 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010727\PPB04959.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010727\PPB04959.D\ECD2B.CH
Acq On : 7-27-01 1:03:11 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachlor-m-xylene	40.000	37.293	6.8	100	0.00
2	TCM	alpha-BHC	40.000	39.270	1.8	101	0.00
3	TCM	beta-BHC	40.000	37.990	5.0	101	0.00
4	TCM	gamma-BHC	40.000	38.831	2.9	102	0.00
5	TCM	delta-BHC	40.000	39.986	0.0	103	0.00
6	TCM	Heptachlor	40.000	41.522	-3.8	100	0.00
7	TCM	Aldrin	40.000	37.894	5.3	103	0.00
8	TCM	Heptachlor epoxide	40.000	37.287	6.8	103	0.00
9	TCM	gamma-Chlordane	40.000	37.309	6.7	102	0.00
10	TCM	alpha-Chlordane	40.000	37.346	6.6	102	0.00
11	TCM	Endosulfan I	40.000	36.840	7.9	102	0.00
12	TCM	4,4'-DDE	40.000	38.746	3.1	102	0.00
13	TCM	Dieldrin	40.000	37.870	5.3	103	0.00
14	TCM	Endrin	40.000	39.065	2.3	102	0.00
15	TCM	Endosulfan II	40.000	36.907	7.7	103	0.00
16	TCM	4,4'-DDD	40.000	37.511	6.2	103	0.00
17	TCM	Endrin aldehyde	40.000	34.755	13.1	97	0.00
18	TCM	4,4'-DDT	40.000	38.957	2.6	100	0.00
19	TCM	Endosulfan sulfate	40.000	38.635	3.4	103	0.00
20	TC	Endrin ketone	40.000	37.029	7.4	103	0.00
21	TC	Methoxychlor	40.000	41.024	-2.6	99	0.00
22	S	Decachlorobiphenyl	40.000	35.206	12.0	100	0.00
		Signal #2					
1	S	Tetrachlor-m-xylene	40.000	39.521	1.2	103	0.00
2	TC	alpha-BHC	40.000	39.426	1.4	102	0.00
3	TC	beta-BHC	40.000	40.180	-0.4	102	0.00
4	TC	gamma-BHC	40.000	42.865	-7.2	102	0.00
5	TC	delta-BHC	40.000	40.446	-1.1	103	0.00
6	TC	Heptachlor	40.000	42.861	-7.2	102	0.00
7	TC	Aldrin	40.000	42.094	-5.2	103	0.00
8	TC	Heptachlor epoxide	40.000	40.788	-2.0	103	0.00
9	TC	gamma-Chlordane	40.000	40.873	-2.2	103	0.00
10	TC	alpha-Chlordane	40.000	40.502	-1.3	104	0.00
11	TC	Endosulfan I	40.000	40.551	-1.4	104	0.00
12	TC	4,4'-DDE	40.000	43.029	-7.6	104	0.00
13	TC	Dieldrin	40.000	41.725	-4.3	104	0.00
14	TC	Endrin	40.000	42.766	-6.9	103	0.00
15	TC	Endosulfan II	40.000	40.036	-0.1	104	0.00
16	TC	4,4'-DDD	40.000	42.390	-6.0	104	0.00
17	TC	Endrin aldehyde	40.000	35.744	10.6	103	0.00
18	TC	4,4'-DDT	40.000	43.825	-9.6	102	0.00
19	TC	Endosulfan sulfate	40.000	41.754	-4.4	103	0.00
20	TC	Endrin ketone	40.000	39.670	0.8	103	0.00
21	TC	Methoxychlor	40.000	45.440	-13.6	101	0.00
22	S	Decachlorobiphenyl	40.000	35.120	12.2	102	0.00

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

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010727\PPB04959.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010727\PPB04959.D\ECD2B.CH
Acq On : 7-27-01 1:03:11 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 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	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\PC030201.M (Chemstation Integrator)
Title : pesticide cali table
Last Update : Tue Jul 17 15:43:00 2001

Calibration Files
0.5 =PPB04150.D = 1.0 =PPB04149.D
0.1 =PPB04151.D 0.05 =PPB04147.D

		Compound	0.5	1.0	0.1	0.05	Avg	%RSD	
1)	S	Tetrachlor-m-xylene	5.576	5.192	6.110		5.626 E4	8.20	
2)	TCM	Aroclor-1016{1}	1.002	0.906	1.230	1.230	1.092 E3	15.02	*
3)	TCM	Aroclor-1016{2}	1.526	1.464	1.859	1.814	1.666 E3	11.98	*
4)	TCM	Aroclor-1016{3}	2.157	2.083	2.079	2.500	2.205 E3	9.07	
5)	TCM	Aroclor-1016{4}	1.166	1.038	0.979	0.985	1.042 E3	8.33	
6)	TCM	Aroclor-1016{5}	1.243	1.159	1.400	1.426	1.307 E3	9.74	
7)	TCM	Aroclor-1260{1}	2.511	2.296	2.938	3.014	2.690 E3	12.76	*
8)	TCM	Aroclor-1260{2}	3.420	3.316	3.640	3.496	3.468 E3	3.93	
9)	TCM	Aroclor-1260{3}	4.056	3.866	4.499	4.645	4.266 E3	8.58	
10)	TCM	Aroclor-1260{4}	2.050	1.945	2.021	2.130	2.037 E3	3.76	
11)	TCM	Aroclor-1260{5}	3.130	3.029	3.605	3.461	3.306 E3	8.21	
12)	S	Decachlorobiphenyl	5.920	4.967	5.736		5.541 E4	9.13	

Signal #2 Calibration Files
0.5 =PPB04150.D = 1.0 =PPB04149.D
1.0 =PPB04149.D 0.1 =PPB04151.D

		Compound	0.5	1.0	1.0	0.1	Avg	%RSD	
1)	S	Tetrachlor-m-xylene	0.979	0.950	1.023		0.984 E5	3.78	
2)		Aroclor-1016{1}	1.760	1.628	2.049	2.319	1.939 E3	15.90	*
3)		Aroclor-1016{2}	2.730	2.896	2.680	2.701	2.752 E3	3.56	
4)		Aroclor-1016{3}	4.563	3.983	3.944	4.691	4.295 E3	9.00	
5)		Aroclor-1016{4}	2.928	3.069	2.658	2.734	2.847 E3	6.55	
6)		Aroclor-1016{5}	1.758	1.623	1.885	1.969	1.809 E3	8.36	
7)		Aroclor-1260{1}	5.164	4.797	5.745	5.987	5.423 E3	9.99	
8)		Aroclor-1260{2}	5.794	5.343	6.392	6.345	5.968 E3	8.33	
9)		Aroclor-1260{3}	3.724	3.368	4.037	4.151	3.820 E3	9.19	
10)		Aroclor-1260{4}	4.389	4.156	4.842	4.923	4.577 E3	8.00	
11)		Aroclor-1260{5}	5.639	5.795	5.518	5.588	5.635 E3	2.09	
12)	S	Decachlorobiphenyl	0.998	0.878	1.060		0.979 E5	9.43	

(#) = Out of Range
(*) = Calibration Curve Used

PC030201.M Mon Jul 30 10:26:26 2001 GC

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04930.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04930.D\ECD2B.CH
Acq On : 7-26-01 3:32:58 PM Operator:
Sample : A-1016/1260 0.5 PPM Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\608\PC030201.M (Chemstation Integrator)
Title : pesticide cali table
Last Update : Tue Jul 17 15:43:00 2001
Response via : Single 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	Amount	Calc.	%Dev	Area%	Dev(Min)
Signal #2							
2		Aroclor-1016{1}	500.000	500.197	-0.0	116	0.00
3		Aroclor-1016{2}	500.000	450.244	10.0	95	0.00
4		Aroclor-1016{3}	500.000	508.844	-1.8	117	0.00
5		Aroclor-1016{4}	500.000	489.435	2.1	112	0.00
6		Aroclor-1016{5}	500.000	458.534	8.3	102	0.00
7		Aroclor-1260{1}	500.000	408.445	18.3	76	-0.01
8		Aroclor-1260{2}	500.000	422.827	15.4	92	0.00
9		Aroclor-1260{3}	500.000	428.733	14.3	78	-0.01
0		Aroclor-1260{4}	500.000	431.149	13.8	94	-0.01
1		Aroclor-1260{5}	500.000	475.316	4.9	87	-0.01
12	S	Decachlorobiphenyl	50.000	4.102	91.8#	9	-0.02

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04930.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04930.D\ECD2B.CH
Acq On : 7-26-01 3:32:58 PM Operator:
Sample : A-1016/1260 0.5 PPM Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\608\PC030201.M (Chemstation Integrator)
Title : pesticide cali table
Last Update : Tue Jul 17 15:43:00 2001
Response via : Single 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	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Tetrachlor-m-xylene	50.000	0.000	100.0#	0	-9.80#
Signal #2							
1	S	Tetrachlor-m-xylene	50.000	0.000	100.0#	0	-9.87#

(#) = Out of Range SPCC's out = 0 CCC's out = 6
PPB04905.D PC030201.M Mon Jul 30 10:25:02 2001 GC

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\TX120100.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Mar 22 11:01:16 2001

Calibration Files
2.5 =PPB03687.D 1.0 =PPB03688.D 0.5 =PPB03689.D
0.1 =PPB03690.D 0.05 =PPB03691.D 5.0 =PPB02968.D

	Compound	2.5	1.0	0.5	0.1	0.05	5.0	Avg	%RSD
1) T	Toxaphene 1	4.956	5.722	6.065	5.398	5.571		5.542 E4	7.39

gnal #2 Calibration Files
2.5 =PPB03687.D 1.0 =PPB03688.D 0.5 =PPB03689.D
0.1 =PPB03690.D 0.05 =PPB03691.D 5.0 =PPB02968.D

	Compound	2.5	1.0	0.5	0.1	0.05	5.0	Avg	%RSD
1) T	Toxaphene 1	0.894	0.988	0.947	1.065	0.996		0.978 E5	6.46

#) = Out of Range

TX120100.M Mon Jul 30 10:27:45 2001 GC

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04931.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04931.D\ECD2B.CH
Acq On : 7-26-01 4:06:39 PM Operator:
Sample : TOXAPHENE 0.5 PPM Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\608\TX120100.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Mar 22 11:01:16 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	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Toxaphene 1	500.000	468.059	6.4	84	0.00
		Signal #2					
1	T	Toxaphene 1	500.000	553.606	-10.7	108	-0.04

000076

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

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04931.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04931.D\ECD2B.CH
Acq On : 7-26-01 4:06:39 PM Operator:
Sample : TOXAPHENE 0.5 PPM Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\608\TX120100.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Mar 22 11:01:16 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	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

000077

GC QA-QC Check Report

ily Calibration File : C:\HPCHEM\1\DATA\980821\PPC02560.D
Time Acquired : 8-23-98 12:53:00 AM

File	Sample	Surrogate Recovery %				Internal Standard Responses
PB04932.Dt	MB-1989A	69	62	59	65	
PPB04933.Dt	LCS-1990	86	81	79	103	
PB04934.Dt	1623601A	95	57	95	61	
PPB04958.D	16236101	109	74	95	73	

t - fails 24hr time check * - fails criteria

Created: Mon Jul 30 10:21:03 2001 GC
Ins

Spike Recovery Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 2001
Response via : Initial Calibration

Non-Spiked Sample: PPB04932.D

Spike Sample

File ID : PPB04933.D
Sample : LCS-1990A
Acq Time: 7-26-01 5:13:57 PM

Compound	Sample Conc	Spike Added	Spike Res	Spi %Rec	QC Limits % Rec
alpha-BHC	0.0	10	8	76	31-158
beta-BHC	0.0	10	10	98	28-158
gamma-BHC	0.0	10	8	78	41-156
delta-BHC	0.0	10	9	88	0-191
Heptachlor	0.0	10	10	102	39-148
Aldrin	0.0	10	8	75	24-152
Heptachlor epoxide	0.0	10	9	88	42-155
gamma-Chlordane	0.0	10	8	82	D
alpha-Chlordane	0.0	10	9	93	D
Endosulfan I	0.0	10	9	87	39-156
4,4'-DDE	0.0	10	10	103	43-166
Dieldrin	0.0	10	10	95	39-156
Endrin	0.0	10	11	109	48-174
Endosulfan II	0.0	10	10	99	45-162
4,4'-DDD	0.0	10	10	102	50-184
Endrin aldehyde	0.0	10	10	102	54-146
4,4'-DDT	0.0	10	11	112	52-175
Endosulfan sulfate	0.0	10	11	106	54-164

- Fails Limit Check

PP061101.M Mon Jul 30 10:21:35 2001 GC

Injection Log

Directory: C:\HPCHEM\1\DATA\010726

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	PPB04928.D	0.	ED		7/26/012002 2:29:4
2	2	PPB04929.D	0.	PST STD 40 PPB		7/26/012003 3:03:2
3	3	PPB04930.D	0.	A-1016/1260 0.5 PPM		7/26/012003 3:32:5
4	4	PPB04931.D	0.	TOXAPHENE 0.5 PPM		7/26/012004 4:06:3
5	5	PPB04932.D	0.	MB-1989A		7/26/012004 4:40:1
6	6	PPB04933.D	0.	LCS-1990A		7/26/012005 5:13:5
7	7	PPB04934.D	0.	1623601A		7/26/012005 5:47:3
8	5	PPB04935.D	0.	MB-2005A		7/26/012006 6:21:1
9	9	PPB04936.D	0.	LCS-2006A		7/26/012006 6:54:5
10	10	PPB04937.D	0.	1624302A		7/26/012007 7:28:3
11	11	PPB04938.D	0.	1624303A		7/26/012008 8:02:1
12	12	PPB04939.D	0.	1624304A		7/26/012008 8:35:5
13	13	PPB04940.D	0.	1624305A		7/26/012009 9:09:3
14	14	PPB04941.D	0.	1624306A		7/26/012009 9:43:0
15	15	PPB04942.D	0.	1624307A		7/26/012010 10:16:4
16	16	PPB04943.D	0.	1624601A		7/26/012010 10:50:2
17	5	PPB04944.D	0.	MB-2061A		7/26/012011 11:24:0
18	18	PPB04945.D	0.	LCS-2062A		7/26/012011 11:57:4
19	19	PPB04946.D	0.	PST STD 40 PPB		7/27/012012 12:31:2
20	20	PPB04947.D	0.	ED		7/27/012001 1:05:0
21	21	PPB04948.D	0.	1625102A		7/27/012001 1:38:3
22	22	PPB04949.D	0.	1625103A		7/27/012002 2:12:1
23	23	PPB04950.D	0.	1625104A		7/27/012002 2:45:5
24	24	PPB04951.D	0.	1625105A		7/27/012003 3:19:3
25	25	PPB04952.D	0.	1625106A		7/27/012003 3:53:0
26	26	PPB04953.D	0.	1625107A		7/27/012004 4:26:4
27	27	PPB04954.D	0.	1625108A		7/27/012005 5:00:2
28	19	PPB04955.D	0.	PST STD 40 PPB		7/27/012005 5:34:0

000080

Injection Log

Directory: C:\HPCHEM\1\DATA\010727

ne	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	PPB04956.D	0.	ED		7/27/012011 11:22:1
2	2	PPB04957.D	0.	PST STD 40 PPB		7/27/012011 11:55:5
3	3	PPB04958.D	10.	16236101ADL 10		7/27/012012 12:29:3
4	2	PPB04959.D	0.	PST STD 40 PPB		7/27/012001 1:03:1

000081

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04932.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04932.D\ECD2B.CH
Acq On : 7-26-01 4:40:19 PM Operator:
Sample : MB-1989A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jul 27 10:46 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Jul 26 15:32:02 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) S Tetrachlor-m-xyl	9.79	9.87	331839	519062	6.865	5.929
Spiked Amount 10.000	Range 49 - 136		Recovery =		68.65%	59.29%
) S Decachlorobiphen	23.68	24.79	238548	532226	6.181	6.527
Spiked Amount 10.000	Range 0 - 137		Recovery =		61.81%	65.27%
Target Compounds						

000082

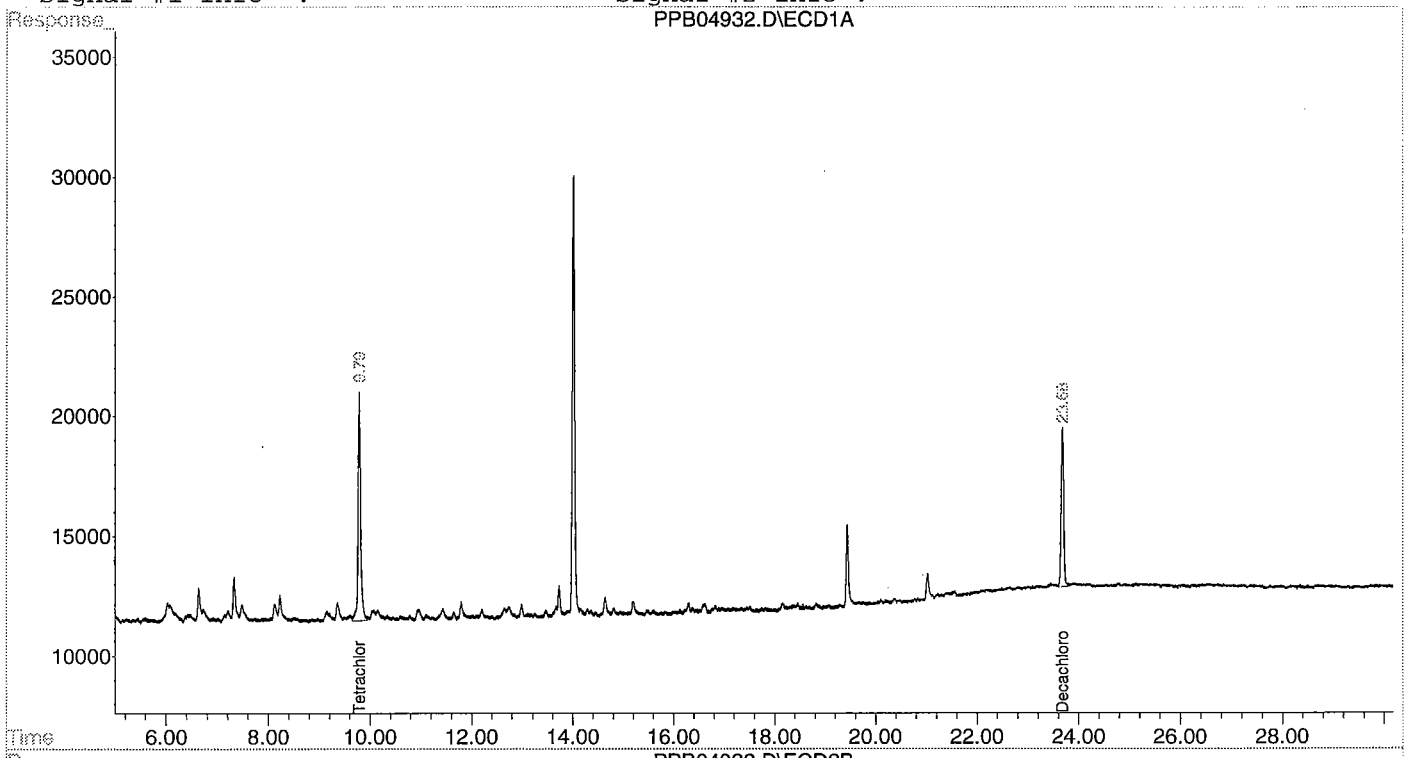
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

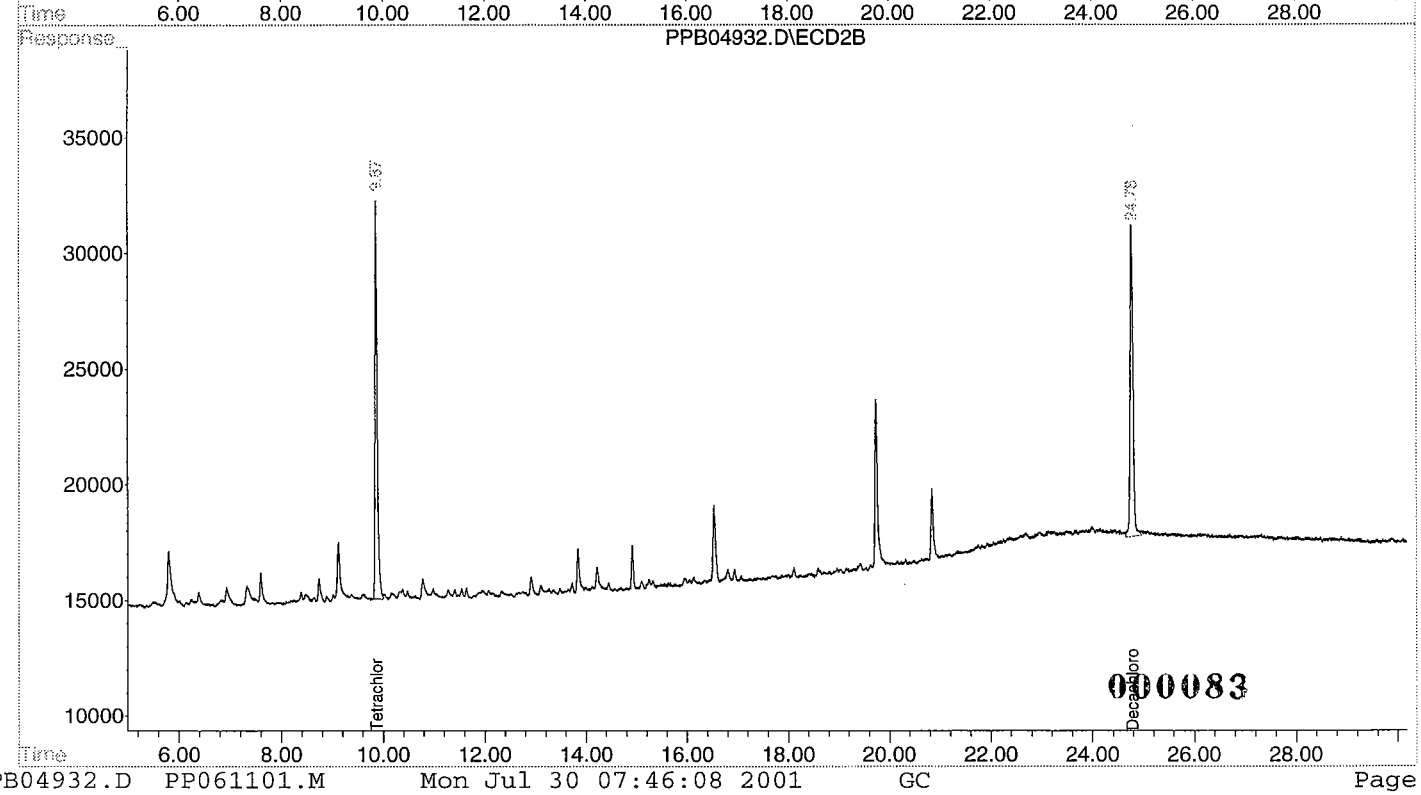
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04932.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04932.D\ECD2B.CH
Acq On : 7-26-01 4:40:19 PM Operator:
Sample : MB-1989A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jul 27 10:46 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Jul 26 15:32:02 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000083

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04934.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04934.D\ECD2B.CH
Acq On : 7-26-01 5:47:35 PM Operator:
Sample : 1623601A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jul 27 10:59 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Jul 26 15:32:02 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
1)	S Tetrachlor-m-xyl	9.79	9.87	458789	832873	9.491	9.513
	Spiked Amount 10.000	Range 49 - 136		Recovery =		94.91%	95.13%
)	S Decachlorobiphen	23.69	24.79	221621	501450	5.742m	6.150m
	Spiked Amount 10.000	Range 0 - 137		Recovery =		57.42%	61.50%
	Target Compounds						
)	TC gamma-Chlordane	16.30	16.59	8823687	17675623	164.228	166.900
)	TC alpha-Chlordane	16.63	16.95	5700472	18158574	108.422m	174.494 #

000084

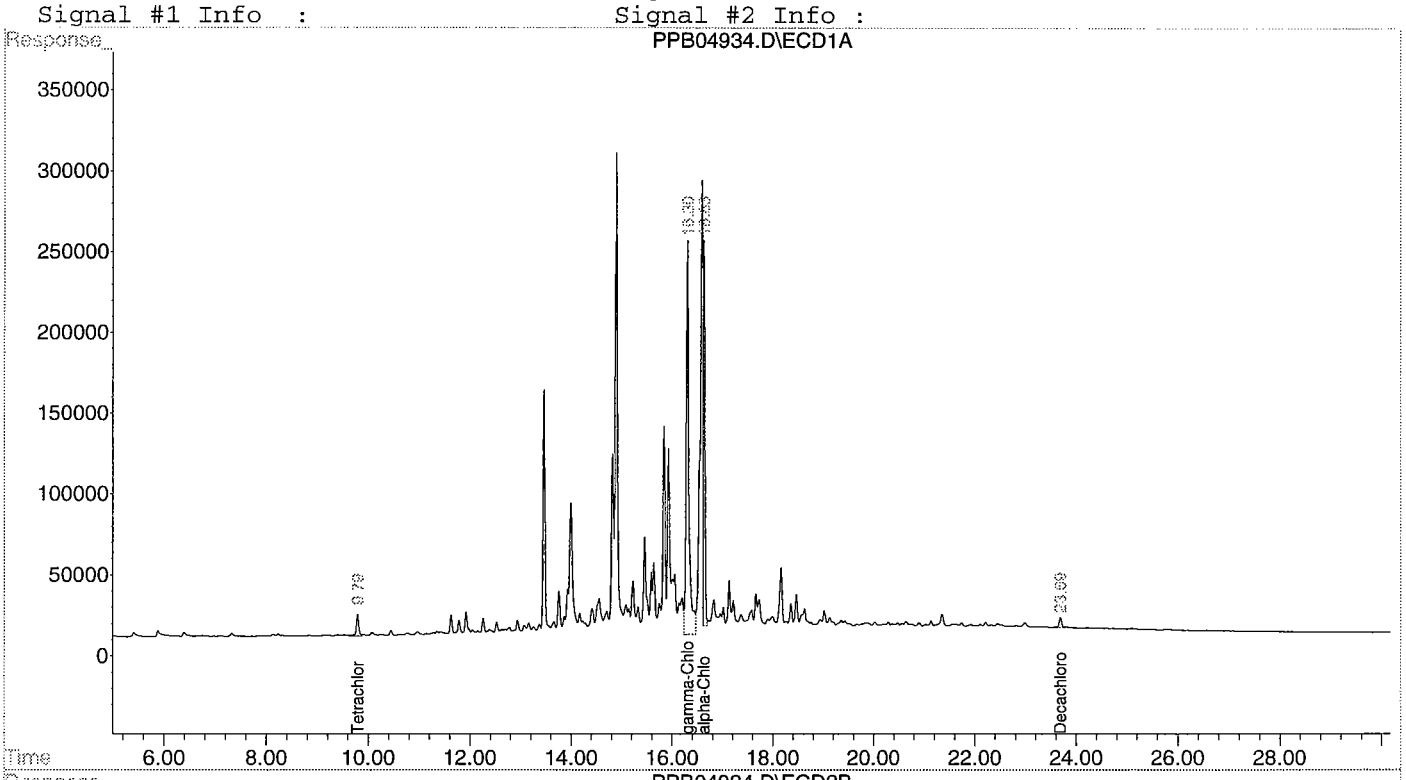
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

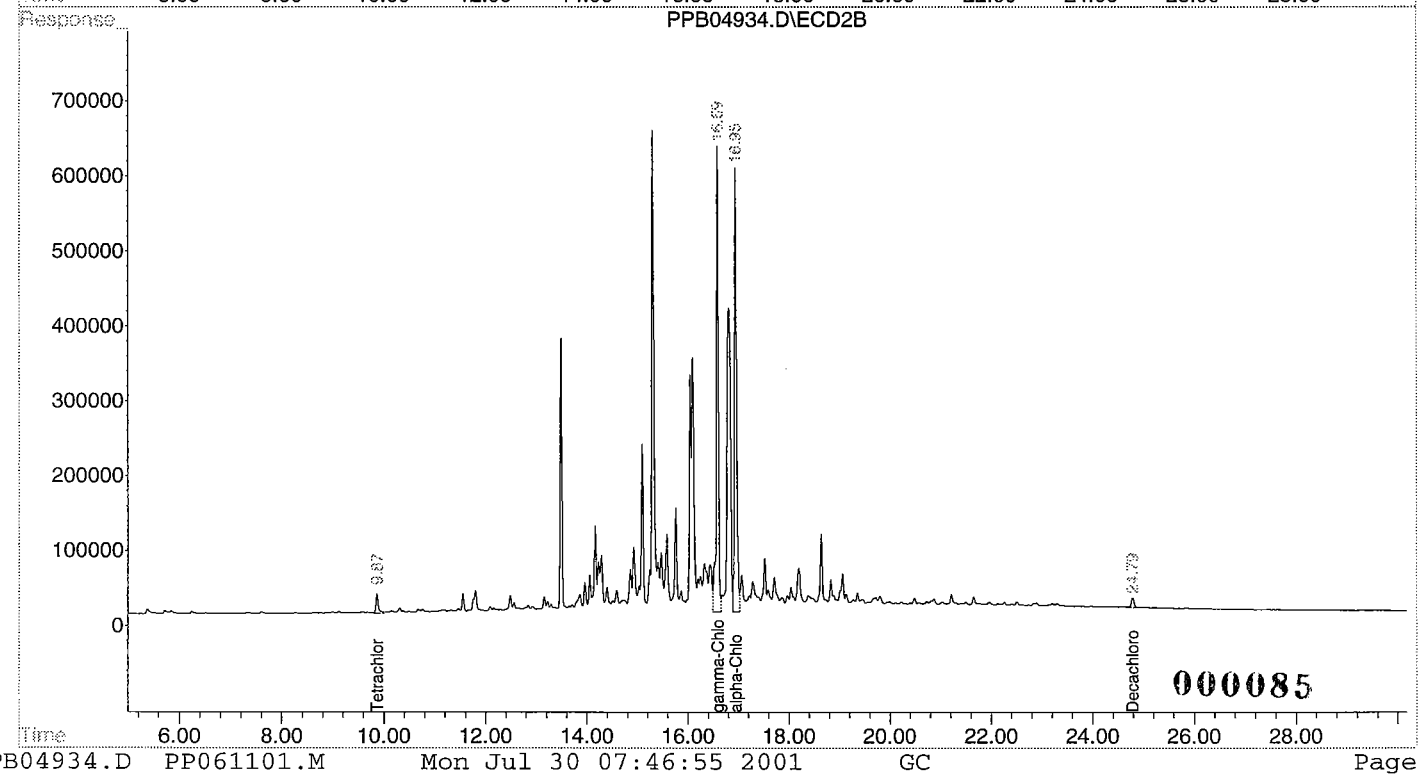
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\010726\PPB04934.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\010726\PPB04934.D\ECD2B.CH
Acq On : 7-26-01 5:47:35 PM Operator:
Sample : 1623601A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jul 27 10:59 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Thu Jul 26 15:32:02 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000085

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\010727\PPB04958.D\ECD1A.CH Vial: 3
Acq On : 7-27-01 12:29:34 PM Operator:
Sample : 16236101ADL 10 Inst : GC/MS Ins
Misc : Multiplr: 10.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\010727\PPB04958.D\ECD2B.CH Vial: 3
Acq On : 7-27-01 12:29:34 PM Operator:
Sample : 16236101ADL 10 Inst : GC/MS Ins
Misc : Multiplr: 10.00
IntFile : autoint2.e
Quant Time: Jul 30 10:17 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
1)	S Tetrachlor-m-xyl	9.79	9.87	52634	82806	10.888m	9.458m
	Spiked Amount 10.000	Range 49 - 136		Recovery =		108.88%	94.58%
22)	S Decachlorobiphen	23.69	24.80	28611	59668	7.414m	7.318m
	Spiked Amount 10.000	Range 0 - 137		Recovery =		74.14%	73.18%
	Target Compounds						
9)	TC gamma-Chlordane	16.31	16.60	957083	1896027	178.133	179.030
10)	TC alpha-Chlordane	16.63	16.95	568132	1776219	108.058m	170.685 #

000086

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

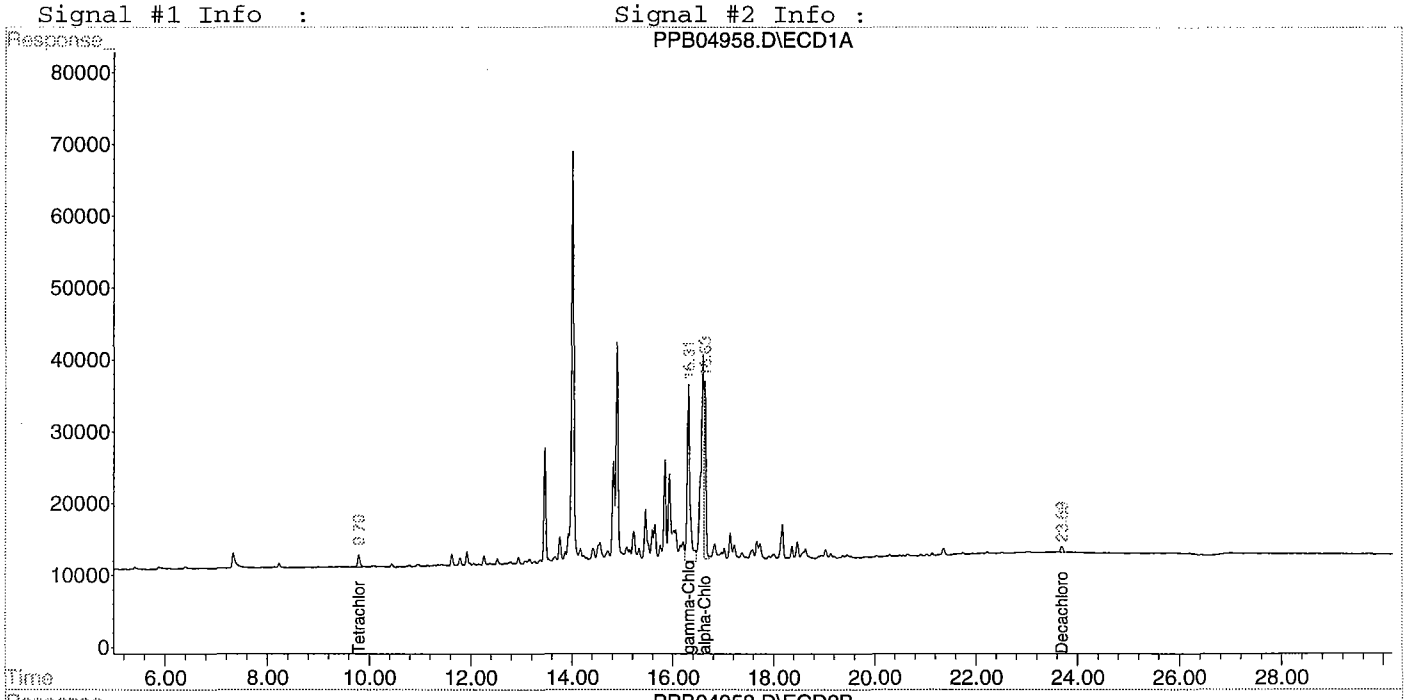
Quantitation Report

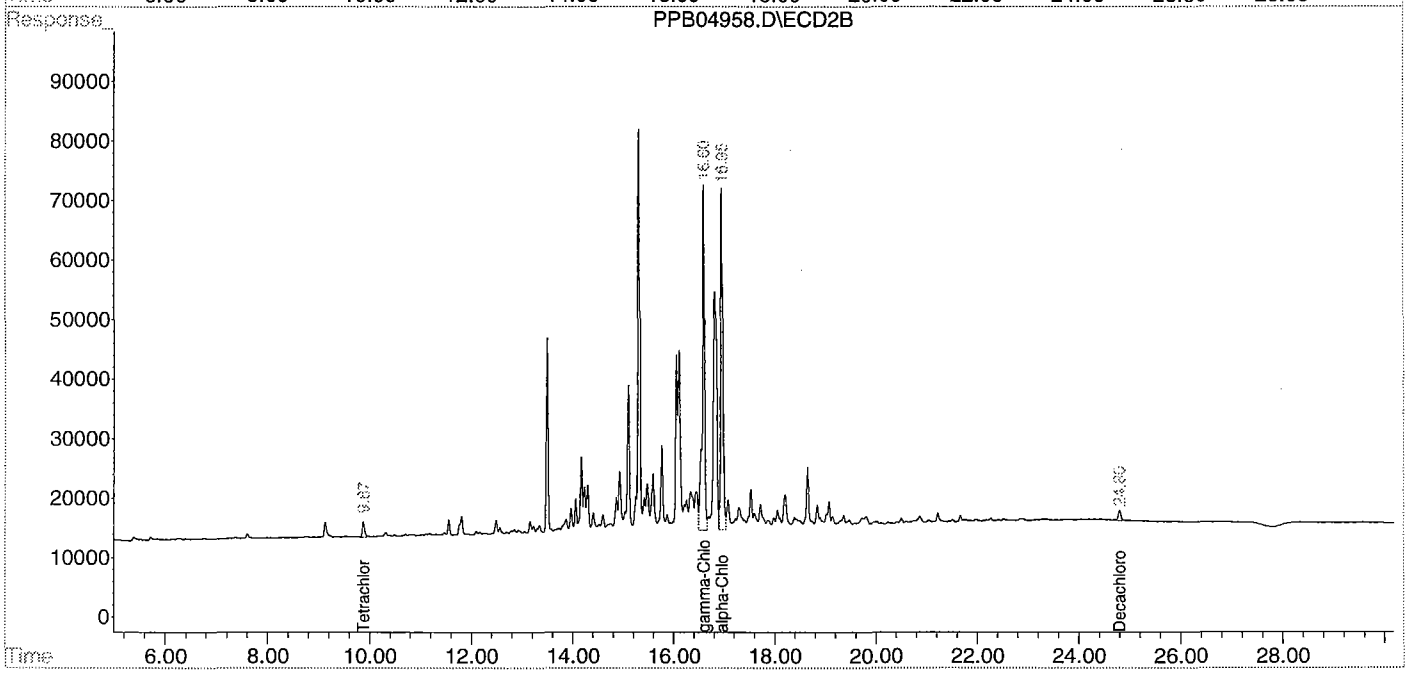
Data File : C:\HPCHEM\1\DATA\010727\PPB04958.D\ECD1A.CH Vial: 3
Acq On : 7-27-01 12:29:34 PM Operator:
Sample : 16236101ADL 10 Inst : GC/MS Ins
Misc : Multiplr: 10.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\010727\PPB04958.D\ECD2B.CH Vial: 3
Acq On : 7-27-01 12:29:34 PM Operator:
Sample : 16236101ADL 10 Inst : GC/MS Ins
Misc : Multiplr: 10.00
IntFile : autoint2.e
Quant Time: Jul 30 10:17 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Mon Jul 30 10:15:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





METALS

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

Lab ID #: 16236
Sample Prepared: 07/18/01

Site: 106
Ft. Monmouth, New Jersey

Field ID#: Method Blank

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	07/26/01	ND	200	10.0
Antimony	07/26/01	ND	20	2.0
Arsenic	07/26/01	ND	8	2.0
Barium	07/26/01	0.976	2000	0.5
Beryllium	07/26/01	ND	20	0.5
Cadmium	07/26/01	0.54	4	0.5
Calcium	07/26/01	39.8	NLE	20.0
Chromium	07/26/01	ND	100	0.5
Cobalt	07/26/01	ND	NLE	0.5
Copper	07/26/01	11.7	1000	2.0
Iron	07/26/01	12.1	300	10.0
Lead	07/26/01	ND	10	1.0
Magnesium	07/26/01	ND	NLE	10.0
Manganese	07/26/01	ND	50	0.5
Mercury	07/13/01	ND	2	0.1
Nickel	07/26/01	ND	100	1.0
Potassium	07/26/01	ND	NLE	40.0
Selenium	07/26/01	4.17	50	3.0
Silver	07/26/01	ND	20	1.0
Sodium	07/26/01	693	50000	20.0
Thallium	07/26/01	ND	10	2.0
Vanadium	07/26/01	ND	NLE	0.5
Zinc	07/26/01	9.23	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

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

Lab ID #: 1623601
Sample Received: 07/09/01
Sample Matrix: Aqueous

Site: 106
Ft. Monmouth, New Jersey

Field ID#: 106

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	07/30/01	3250	200	10.0
Antimony	07/30/01	ND	20	2.0
Arsenic	07/30/01	5.88	8	2.0
Barium	07/30/01	35.8	2000	0.5
Beryllium	07/30/01	1.28	20	0.5
Cadmium	07/30/01	ND	4	0.5
Calcium	07/30/01	54900	NLE	20.0
Chromium	07/30/01	1.5	100	0.5
Cobalt	07/30/01	11.5	NLE	0.5
Copper	07/30/01	15.6	1000	2.0
Iron	07/30/01	6470	300	10.0
Lead	07/30/01	ND	10	1.0
Magnesium	07/30/01	8700	NLE	10.0
Manganese	07/30/01	319	50	0.5
Mercury	07/19/01	ND	2	0.1
Nickel	07/30/01	15.8	100	1.0
Potassium	07/30/01	5760	NLE	40.0
Selenium	07/30/01	12	50	3.0
Silver	07/30/01	ND	20	1.0
Sodium	07/30/01	23000	50000	20.0
Thallium	07/30/01	ND	10	2.0
Vanadium	07/30/01	0.716	NLE	0.5
Zinc	07/30/01	233	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Initial and Continuing Calibration Verification

Lab ID#: 13461 Lab Sample ID: 16236

Units: mg/l

Metals:	True Value ICV CCV	Found ICV	%R ICV	Found CCV1	%R CCV1	Found CCV2	%R CCV2	Method
Aluminum	0.5	97.0	97.0	101	101.0			6010B
Antimony*	0.5	0.501	100.2	0.488	97.6			6010B
Arsenic*	0.5	0.505	101.0	0.493	98.6			6010B
Barium	0.5	0.453	90.6	0.454	90.8			6010B
Beryllium*	0.5	0.465	93.0	0.458	91.6			6010B
Cadmium*	0.5	0.457	91.4	0.451	90.2			6010B
Calcium	0.5	92.3	92.3	91.9	91.9			6010B
Chromium*	0.5	0.454	90.8	0.453	90.6			6010B
Cobalt	0.5	0.457	91.4	0.454	90.8			6010B
Copper*	0.5	0.516	103.2	0.510	102.0			6010B
Iron	0.5	0.500	100.0	0.498	99.6			6010B
Lead*	0.5	0.466	93.2	0.459	91.8			6010B
Magnesium	0.5	95.2	95.2	95.1	95.1			6010B
Manganese	0.5	0.468	93.6	0.464	92.8			6010B
Mercury*	0.0001	0.0020	100	0.0018	90.0			7470B
Nickel*	0.5	0.473	94.6	0.471	94.2			6010B
Potassium	20	19.3	96.5	19.10	95.5			6010B
Selenium*	0.5	0.502	100.4	0.492	98.4			6010B
Silver*	0.5	0.472	94.4	0.466	93.2			6010B
Sodium	20.0	19.4	97.0	19.6	98.0			6010B
Thallium*	0.5	0.491	98.2	0.490	98.0			6010B
Vanadium	0.5	0.470	94.0	0.466	93.2			6010B
Zinc*	0.5	0.467	93.4	0.460	92.0			6010B

* = Priority Pollutant Metals

QC Blanks

Lab ID#: 13461
Date Analyzed: 07/23,30/01

Lab Sample ID: 16236
Units: mg/l

Matrix: Aq

METALS:	Date Analyzed	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	Preparation Blank Matrix: 1	Matrix 2
Aluminum	07/30/01	<0.01	0.120			<0.01	
Antimony*	07/30/01	<0.002	<0.002			<0.002	
Arsenic*	07/30/01	<0.002	<0.002			<0.002	
Barium	07/30/01	<0.0005	<0.0005			0.001	
Beryllium*	07/30/01	<0.0005	<0.0005			<0.0005	
Cadmium*	07/30/01	<0.0005	<0.0005			0.0005	
Calcium	07/30/01	<0.02	0.05			0.040	
Chromium*	07/30/01	<0.0005	<0.0005			<0.0005	
Cobalt	07/30/01	<0.0005	<0.0005			<0.0005	
Copper*	07/30/01	<0.002	<0.002			0.012	
Iron	07/30/01	<0.002	<0.002			0.009	
Lead*	07/30/01	<0.001	<0.001			<0.001	
Magnesium	07/30/01	<0.01	0.18			<0.01	
Manganese	07/30/01	<0.0005	<0.0005			<0.0005	
Mercury*	07/19/01	<0.0001	<0.0001			<0.0001	
Nickel*	07/30/01	<0.001	<0.001			<0.001	
Potassium	07/30/01	<0.04	<0.04			<0.04	
Selenium*	07/30/01	<0.003	<0.003			0.004	
Silver*	07/30/01	<0.001	<0.001			<0.001	
Sodium	07/30/01	<0.02	<0.02			0.075	
Thallium*	07/30/01	<0.003	<0.003			<0.003	
Vanadium	07/30/01	<0.0005	<0.0005			<0.0005	
Zinc*	07/30/01	<0.005	<0.005			0.010	

* = Priority Pollutant Metals

ICP INTERFERENCE CHECK SAMPLE

Lab ID#: 13461

Lab Sample ID: 16236

Date Analyzed: 07/30/01

Units: mg/l

Matrix: Aqueous

Compound	Control Limits % rec.	True Value	Initial Observed	% Rec	Final Observed	% Rec
Aluminum	80-120	500	498	99.6	502	100.4
Antimony	80-120	1	1.09	109.0	1.07	107
Arsenic	80-120	1	1.1	110.0	1.06	106.0
Barium	80-120	0.5	0.47	94.0	0.469	93.8
Beryllium	80-120	0.5	0.46	92.0	0.454	90.8
Calcium	80-120	500	469	93.8	468	93.6
Cadmium	80-120	1	0.881	88.1	0.850	85.0
Cobalt	80-120	0.5	0.407	81.4	0.398	79.6
Chromium	80-120	0.5	0.45	90.0	0.446	89.2
Copper	80-120	0.5	0.590	118.0	0.585	117.0
Iron	80-120	200	175	87.5	175	87.5
Magnesium	80-120	500	474	94.8	474	94.8
Manganese	80-120	0.5	0.452	90.4	0.444	88.8
Nickel	80-120	1	0.98	98.0	0.97	97.0
Lead	80-120	1	0.911	91.1	0.888	88.8
Silver	80-120	1	1.08	108.0	1.07	107
Selenium	80-120	1	1.08	108.0	1.06	106
Thallium	80-120	1	0.94	94.1	0.933	93.3
Vanadium	80-120	0.5	0.476	95.2	0.472	94.4
Zinc	80-120	1	0.993	99.3	0.951	95.1

Spike Sample Recovery

Lab ID#: 13461 Lab Sample ID: 16236

Matrix: Aqueous
Units: mg/L

Metals:	Spiked Sample ID	Control Limit (%R)	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R
Aluminum	1620704	80-120	0.912	0.374	0.5	107.6
Antimony*	1620704	80-120	0.568	0	0.5	113.6
Arsenic*	1620704	80-120	0.546	0	0.5	109.2
Barium	1620704	80-120	2.32	0.169	2	107.6
Beryllium*	1620704	80-120	0.101	0	0.1	101.0
Cadmium*	1620704	80-120	0.0501	0.0009	0.05	98.4
Calcium	1620704	80-120	51.4	51.9	NA	NA
Chromium*	1620704	80-120	0.258	0	0.25	103.2
Cobalt	1620704	80-120	0.507	0	0.5	101.4
Copper*	1620704	80-120	0.611	0.003	0.5	121.6
Iron	1620704	80-120	11.9	11.0	NA	NA
Lead*	1620704	80-120	0.514	0.002	0.5	102.4
Magnesium	1620704	80-120	8.54	8.71	NA	NA
Manganese	1620704	80-120	0.619	0.0881	0.5	106.2
Mercury*	1625104	80-120	0.002	0	0.002	95.0
Nickel*	1620704	80-120	0.513	0	0.5	102.6
Potassium	1620704	80-120	9.76	0	NA	NA
Selenium*	1620704	80-120	0.510	0	0.5	102.0
Silver*	1620704	80-120	0.03	0	0.1	30.0 N
Sodium	1620704	80-120	33.9	34.4	NA	NA
Thallium*	1620704	80-120	0.553	0	0.5	110.6
Vanadium	1620704	80-120	0.539	0	0.5	107.8
Zinc*	1620704	80-120	1.02	0.032	1	98.8

%R = {(SSR-SR)/SA} x 100
* = Priority Pollutant Metals
"N" - out of control
"NR" - Not Required
"NA"- Not Available
"NC" - Not calculable sample result is greater than 4X' spike concentration

Duplicates

Lab ID#: 13461 Lab Sample ID: 16236

Units: mg/l
Matrix: Aqueous

METALS:	Duplicate Sample ID	Control Limit	Sample (S)	Duplicate (D)	RPD
Aluminum	1620704	20	0.821	0.802	2.34
Antimony*	1620704	20	0.512	0.513	0.20
Arsenic*	1620704	20	0.491	0.493	0.41
Barium	1620704	20	2.09	2.09	0
Beryllium*	1620704	20	0.0911	0.0913	0.22
Cadmium*	1620704	20	0.0451	0.045	0.22
Calcium	1620704	20	46.3	46.5	0.43
Chromium*	1620704	20	0.232	0.234	0.86
Cobalt	1620704	20	0.456	0.460	0.87
Copper*	1620704	20	0.55	0.557	1.26
Iron	1620704	20	10.7	10.8	0.93
Lead*	1620704	20	0.463	0.462	0.22
Magnesium	1620704	20	7.69	7.69	0
Manganese	1620704	20	0.557	0.558	0.18
Mercury*	1625104	20	0.0019	0.0018	5.41
Nickel*	1620704	20	0.462	0.464	0.43
Potassium	1620704	20	8.78	8.87	1.02
Selenium*	1620704	20	0.459	0.472	2.79
Silver*	1620704	20	0.027	0.026	3.77
Sodium	1620704	20	30.5	30.8	0.98
Thallium*	1620704	20	0.498	0.491	1.42
Vanadium	1620704	20	0.485	0.489	0.82
Zinc*	1620704	20	0.918	0.920	0.22

N - Out of Control
RPD = {[S-D] / ((S + D) / 2)} x 100
NC - Not calculable RPD due to value(s) less than 10 x's MDL
* = Priority Pollutant Metals

Laboratory Control Sample

Lab ID#: 13461 Lab Sample ID: 16236

METALS:	Lab Control Sample mg/l		
	True	Found	%R
Aluminum	0.5	0.524	104.8
Antimony*	0.5	0.548	109.6
Arsenic*	0.5	0.524	104.8
Barium	2	2.330	116.5
Beryllium*	0.1	0.111	111.0
Cadmium*	0.05	0.0534	106.8
Chromium*	0.25	0.286	114.4
Cobalt	0.5	0.549	109.8
Copper*	0.5	0.581	116.2
Iron	1	1.140	114.0
Lead*	0.5	0.533	106.6
Manganese	0.5	0.553	110.6
Mercury*	0.01	0.002	100.0
Nickel*	0.5	0.574	114.8
Selenium*	0.5	0.521	104.2
Silver*	0.1	0.115	115.0
Thallium*	0.5	0.511	102.2
Vanadium	0.5	0.583	116.6
Zinc*	1	1.02	102.0

NR - Not Required
* = Priority Pollutant Metals

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 9/24/01

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

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. 106

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	16175.01	Aqueous	08-Jun-01	06/08/01
Field Blank	16175.02	Aqueous	08-Jun-01 09:50	06/08/01
106-2.9'	16175.03	Aqueous	08-Jun-01 14:50	06/08/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, ABN+25, PEST/PCB
METALS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

8-8-01

Daniel Wright/Date
Laboratory Director

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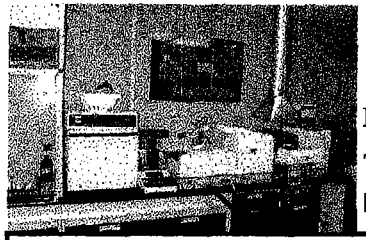
CHAIN OF CUSTODY



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 - VERSAR
Phone #: 732 1475
( )DERA (✓)OMA ( )Other:_____

Project No: 01-0001
Location: Bldg 106

Samplers Name / Company: MARK LAUCA - TWS-PWS 07

Lims Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA+IS	ABN	Pest PCB	THC METALS					Remarks / Preservation Method
106B - 1	T.B.	6-8-01	—	AQ.	2	X								HCL
2	F.B.	"	0950	"	5	X	X	X	X					HCL, HNO3, <4°C
3	106 - 2.9'	"	1450	"	5	X	X	X	X					" , " , "

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	6-8-01 500	[signature]			
[signature]		[signature]			

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ____ Days, (_)ASAP Verbal ____ Hrs.

Remarks:

print legibly

Coc.xls2/6/01

METHOD SUMMARY

Method Summary

EPA Method 624 – Aqueous
Gas Chromatographic Determination of Volatiles in Water

A 5-ml volume of sample is added to 5-ml aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample is purged and desorbed into a GC/MS system. Volatiles are then identified and quantitated.

EPA Method 625
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.

EPA Method 608
Gas Chromatographic Determination of Pesticide and PCB's in Water

Surrogates are added to a measured volume of sample, usually 1 liter. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract is concentrated and exchanged into Hexane. The sample is injected into a GC/ECD system. Pesticides and PCB's are identified and quantitated.

Methodology Summary

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) micro-vessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50-ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77
The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16175 **Site:** Bldg. 106

	Date	Hold Time
Date Sampled	06/08/01	NA
Receipt/Refrigeration	06/08/01	NA
Extractions		
1. Semivolatiles	06/12/01	7 Days
2. Pest/PCB's	06/14/01	7 Days
Analyses		
1. Volatile Organics	06/11/01	14 Days
2. Semivolatiles	06/12,13/01	40 Days
3. Pest/PCB's	06/26/01	40 Days
4. Metals	07/17/01	6 Months
5. Mercury	07/03/01	28 Days

CONFORMANCE/ NON CONFORMANCE

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_____
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_____

   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_____

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — NO
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction _____
    b. B/N Fraction Low in SB
    c. Acid Fraction Low in FB

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 8-8-01

GC 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.	Standards Summary Meet Criteria	Yes
4.	Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 12 hours of sample analysis	Yes
5.	Blank Contamination – If yes, list compounds and concentrations in each blank:	NO
	a. VOA Fraction NA	
	b. B/N Fraction NA	
	c. Acid Fraction NA	
	d. Pesticide/PCB's	
	e. Other	
6.	Surrogate Recoveries Meet Criteria	Yes
	If not met, list those compounds and their recoveries which fall outside the acceptable range:	
	a. VOA Fraction NA	
	b. B/N Fraction NA	
	c. Acid Fraction NA	
	d. Pesticide/PCB's	
	e. Other	
	If not met, were the calculations checked and the results qualified as "estimated"?	
7.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria	NO
	If not met, list those compounds and their recoveries which fall outside the acceptable range	
	a. VOA Fraction NA	
	f. B/N Fraction NA	
	g. Acid Fraction NA	
	h. Pesticide/PCB's Endosulfan I + II Low	
	i. Other	
8.	Retention Time Summary for primary and confirmation analyses meet criteria	Yes
9.	Were samples run on dissimilar columns?	Yes

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

Indicate
Yes, No, N/A

10. Extraction Holding Time Met — yes

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

11. Analysis Holding Time Met — yes

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

Additional Comments: _____

Laboratory Manager: _____ Date: 8-8-01

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	yes
2.	ICP Interference Check Sample Results Meet Criteria	yes
3.	Serial Dilutions Meet Criteria	yes
4.	Laboratory Control Samples Meet Criteria	yes
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank Al 0.018 Ba 0.0018 Cu 0.043 Fe 0.10 Mn 0.0006 Se 0.005 Na 0.89	yes
6.	Spike Sample Recoveries Meet Criteria	yes
7.	Duplicates Meet Criteria	yes
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	yes

Additional Comments_____

Laboratory Manager _____ Date 8-8-01

VOLATILE 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 found in blank**
D	:	**Results are from a dilution of the sample**
U	:	**Compound searched for but not detected**
E	:	**Compound exceeds calibration limit**
PQL	:	**Practical Quantitation Limit**
NLE	:	**No limit established**
RT	:	**Retention time**

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

Data File	**VC006097.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**11-Jun-01**	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	
156594	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 97

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.: _____

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006097.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. _____ Date Analyzed: 6/11/01

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 Number #13461

Data File	**VC006107.D**	Sample Name	**1617501**
Operator	**Skelton**	Field ID	**TB**
Date Aquired	**11-Jun-01**	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	
156594	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 97

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

6/21/01 9:53 AM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **TB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617501

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006107.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. Date Analyzed: 6/11/01

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 Number #13461

Data File	**VC006108.D**	Sample Name	**1617502**
Operator	**Skelton**	Field ID	**FB**
Date Aquired	**11-Jun-01**	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	
156594	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 97

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **FB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1617502

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006108.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. _____ Date Analyzed: 6/11/01

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 Number #13461

Data File	**VC006109.D**	Sample Name	**1617503**
Operator	**Skelton**	Field ID	**106**
Date Aquired	**11-Jun-01**	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	
156594	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 97

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **106**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617503

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006109.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. Date Analyzed: 6/11/01

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: LTM Case No.: 16175 Location: B106 SDG No.:

Lab File ID: VC005963.D BFB Injection Date: 5/30/01

Instrument ID: VoaInst#3 BFB Injection Time: 13:52

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

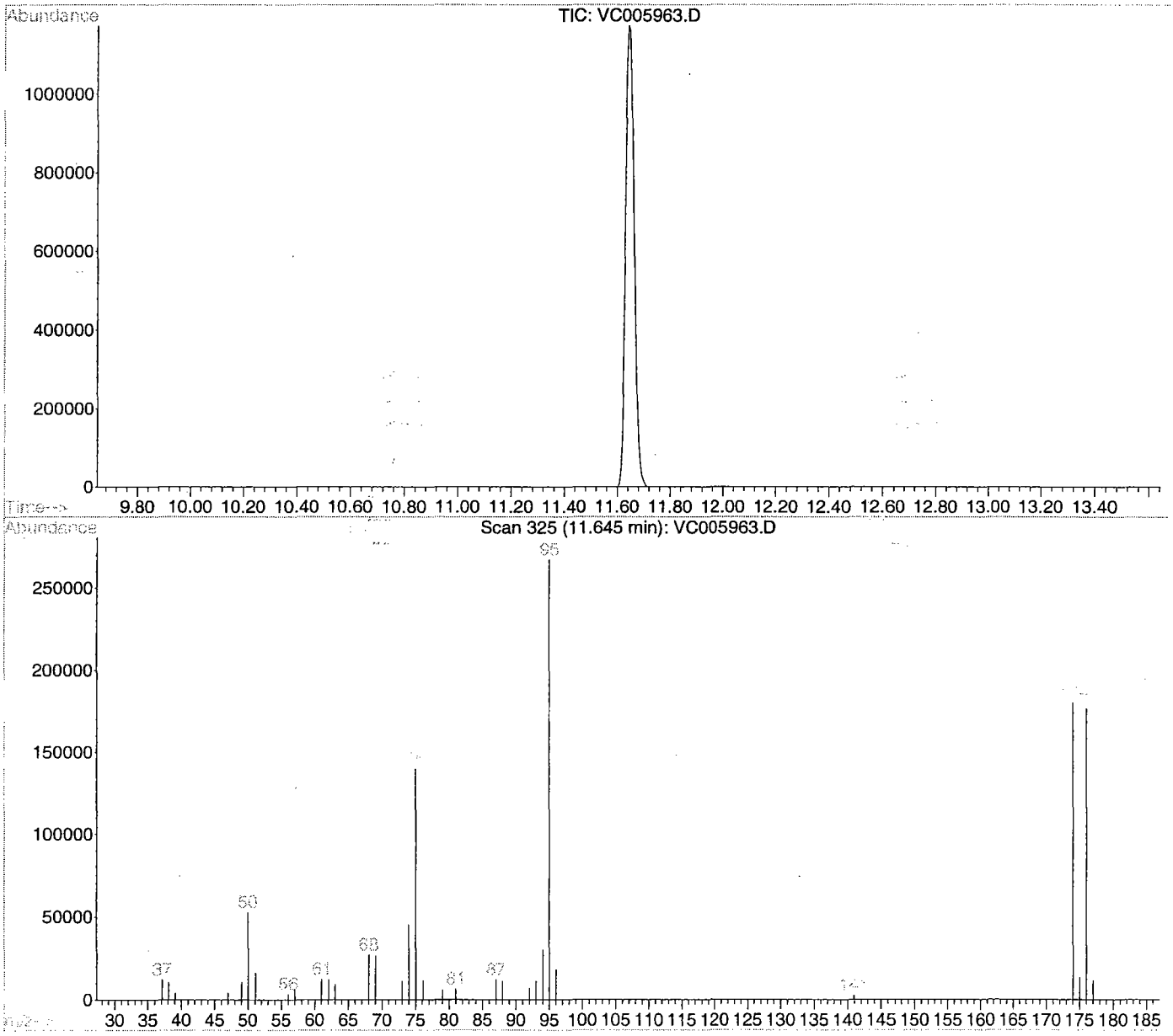
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.8
75	30.0 - 66.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	67.6
175	4.0 - 9.0% of mass 174	5.0 (7.4)1
176	93.0 - 101.0% of mass 174	66.1 (97.9)1
177	5.0 - 9.0% of mass 176	4.4 (6.6)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	VC005964.D	5/30/01	14:21
02	VSTD050	VSTD050	VC005965.D	5/30/01	15:03
03	VSTD020	VSTD020	VC005966.D	5/30/01	15:44
04	VSTD010	VSTD010	VC005967.D	5/30/01	16:25
05	VSTD005	VSTD005	VC005968.D	5/30/01	17:06

Data File : D:\HPCHEM\1\DATA\010530\VC005963.D Vial: 2
Acq On : 30 May 2001 1:52 pm Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 325

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	52848	PASS
75	95	30	60	52.4	140096	PASS
95	95	100	100	100.0	267520	PASS
96	95	5	9	6.9	18496	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	67.6	180736	PASS
175	174	5	9	7.4	13443	PASS
176	174	95	101	97.9	176896	PASS
177	176	5	9	6.6	11645	PASS

VC005963.D M362444.M Thu Jun 21 09:49:44 2001

Response Factor Report GC/MS Ins

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration

Calibration Files
50 =VC005965.D 5 =VC005968.D 10 =VC005967.D
20 =VC005966.D 100 =VC005964.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.655	0.600	0.650	0.602	0.627	0.627	4.14
3)	t	Acrylonitrile	1.332	1.316	1.406	1.285	1.236	1.315	4.75
4)	t	tert-Butyl alcohol	0.269	0.190	0.235	0.230	0.285	0.242	15.22
5)	t	Methyl-tert-Butyl eth	7.186	6.328	6.860	6.596	7.107	6.815	5.24
6)	t	Di-isopropyl ether	1.946	1.637	1.831	1.812	1.925	1.830	6.68
7)	T	Dichlorodifluorometha	2.492	2.322	2.337	2.309	2.439	2.380	3.40
8)	TP	Chloromethane	2.152	2.189	2.197	2.036	2.105	2.136	3.11
9)	TC	Vinyl Chloride	1.918	2.114	2.032	1.874	1.810	1.950	6.29
10)	T	Bromomethane	1.479	1.516	1.508	1.421	1.416	1.468	3.23
11)	T	Chloroethane	1.714	1.654	1.680	1.610	1.700	1.672	2.47
12)	T	Trichlorofluoromethan	3.002	2.910	2.946	2.835	2.913	2.921	2.08
13)	MC	1,1-Dichloroethene	3.457	3.282	3.392	3.241	3.395	3.353	2.65
14)	T	Acetone	0.954	1.353	1.152	0.932	1.069	1.092	15.64
15)	T	Carbon Disulfide	6.478	5.906	6.262	6.140	6.406	6.239	3.64
16)	T	Methylene Chloride	2.206	2.134	2.248	2.110	2.175	2.175	2.54
17)	T	trans-1,2-Dichloroeth	3.358	3.243	3.357	3.193	3.283	3.287	2.19
18)	TP	1,1-Dichloroethane	4.191	4.040	4.181	3.965	4.094	4.094	2.33
19)	T	Vinyl Acetate	5.818	4.756	5.355	5.281	5.680	5.378	7.68
20)	T	2-Butanone	1.373	1.129	1.279	1.215	1.480	1.295	10.53
21)	T	cis-1,2-Dichloroethen	3.293	3.124	3.303	3.130	3.203	3.211	2.67
22)	TC	Chloroform	3.802	3.710	3.816	3.627	3.678	3.726	2.18
23)	T	1,1,1-Trichloroethane	3.189	2.877	3.074	2.971	3.116	3.045	4.03
24)	T	Carbon Tetrachloride	2.661	2.394	2.481	2.447	2.651	2.527	4.84
25)	S	1,2-Dichloroethane-d4	2.823	2.824	2.794	2.806	2.806	2.811	0.46
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.341	1.358	1.398	1.312	1.259	1.334	3.90
28)	T	1,2-Dichloroethane	0.482	0.509	0.511	0.471	0.468	0.488	4.21
29)	TM	Trichloroethene	0.331	0.319	0.331	0.317	0.325	0.324	2.03
30)	TC	1,2-Dichloropropane	0.365	0.353	0.367	0.349	0.357	0.358	2.24
31)	T	Bromodichloromethane	0.386	0.337	0.367	0.361	0.388	0.368	5.74
32)	T	2-Chloroethyl vinyl e	0.130	0.129	0.133	0.126	0.128	0.129	2.04
33)	T	cis-1,3-Dichloroprope	0.530	0.438	0.486	0.487	0.529	0.494	7.67
34)	T	4-Methyl-2-Pentanone	0.166	0.130	0.156	0.149	0.171	0.154	10.28
35)	S	Toluene-d8	1.212	1.214	1.207	1.208	1.219	1.212	0.40
36)	TCM	Toluene	1.318	1.368	1.388	1.304	1.227	1.321	4.76
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.731	1.351	1.568	1.586	1.730	1.593	9.78
39)	T	1,1,2-Trichloroethane	0.985	0.956	1.014	0.958	0.958	0.974	2.60
40)	T	Tetrachloroethene	1.006	0.992	1.028	0.977	0.973	0.995	2.26
41)	T	2-Hexanone	0.872	0.628	0.787	0.779	0.902	0.794	13.43
42)	T	Dibromochloromethane	0.887	0.680	0.789	0.791	0.905	0.810	11.16
43)	TMP	Chlorobenzene	2.876	2.962	3.067	2.866	2.749	2.904	4.08
44)	TC	Ethylbenzene	5.054	5.148	5.347	5.082	4.595	5.045	5.48
45)	T	m+p-Xylenes	1.927	1.979	2.049	1.933	1.805	1.939	4.59
46)	T	o-Xylene	3.958	3.815	4.074	3.912	3.732	3.898	3.38
47)	T	Styrene	3.339	3.010	3.346	3.248	3.212	3.231	4.22
48)	TP	Bromoform	0.571	0.373	0.469	0.486	0.596	0.499	17.81
49)	S	Bromofluorobenzene	1.669	1.658	1.672	1.672	1.694	1.673	0.77
50)	TP	1,1,2,2-Tetrachloroet	1.303	1.248	1.365	1.289	1.273	1.295	3.36
51)	T	1,3-Dichlorobenzene	2.092	1.991	2.132	2.050	2.001	2.053	2.91
52)	T	1,4-Dichlorobenzene	2.078	1.952	2.102	2.033	1.989	2.031	3.05
53)	T	1,2-Dichlorobenzene	1.966	1.847	1.999	1.933	1.881	1.925	3.22

(#) = Out of Range

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.: _____

Lab File ID: VC006095.D BFB Injection Date: 6/11/01

Instrument ID: VoaInst#3 BFB Injection Time: 13:33

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

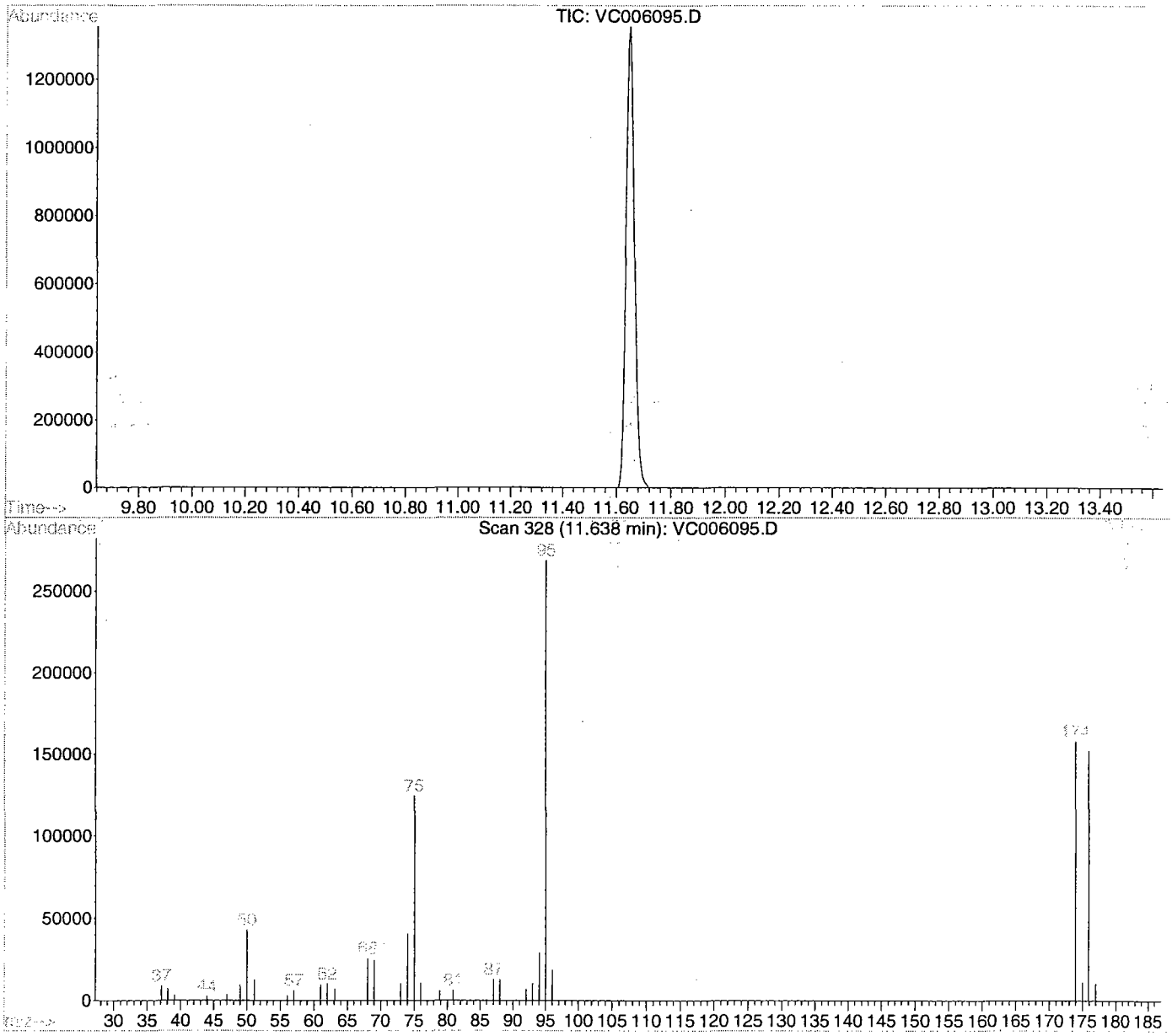
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	16.0
75	30.0 - 66.0% of mass 95	46.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	58.8
175	4.0 - 9.0% of mass 174	4.2 (7.2)1
176	93.0 - 101.0% of mass 174	56.7 (96.4)1
177	5.0 - 9.0% of mass 176	4.0 (7.0)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	VC006096.D	6/11/01	14:03
02	MB	MB	VC006097.D	6/11/01	14:53
03	TB	1617501	VC006107.D	6/11/01	22:00
04	FB	1617502	VC006108.D	6/11/01	22:41
05	106	1617503	VC006109.D	6/11/01	23:22
06	1617601 MS	1617601 MS	VC006111.D	6/12/01	0:45
07	1617601 MSD	1617601 MSD	VC006112.D	6/12/01	1:26

Data File : D:\HPCHEM\1\DATA\010611\VC006095.D Vial: 1
Acq On : 11 Jun 2001 1:33 pm Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 328

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.0	43008	PASS
75	95	30	60	46.4	124624	PASS
95	95	100	100	100.0	268864	PASS
96	95	5	9	7.0	18776	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	58.8	158208	PASS
175	174	5	9	7.2	11341	PASS
176	174	95	101	96.4	152448	PASS
177	176	5	9	7.0	10680	PASS

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\010611\VC006096.D Vial: 2
Acq On : 11 Jun 2001 2:03 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Multiple Level Calibration

Min. RRF : 0.025 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	129	0.00
2	t	Acrolein	0.627	0.576	8.1	124	0.00
3	t	Acrylonitrile	1.315	1.249	5.0	126	0.00
4	t	tert-Butyl alcohol	0.242	0.162	33.1#	91	-0.01
5	t	Methyl-tert-Butyl ether	6.815	5.783	15.1	113	-0.01
6	t	Di-isopropyl ether	1.830	1.741	4.9	124	0.01
7	T	Dichlorodifluoromethane	2.380	2.667	-12.1	149	0.00
8	TP	Chloromethane	2.136	2.140	-0.2	136	0.00
9	TC	Vinyl Chloride	1.950	2.158	-10.7	149	0.00
10	T	Bromomethane	1.468	1.447	1.4	132	0.00
11	T	Chloroethane	1.672	1.621	3.1	130	0.00
12	T	Trichlorofluoromethane	2.921	2.824	3.3	129	-0.01
13	MC	1,1-Dichloroethene	3.353	2.994	10.7	120	0.00
14	T	Acetone	1.092	0.783	28.3#	109	0.00
15	T	Carbon Disulfide	6.239	6.547	-4.9	138	0.00
16	T	Methylene Chloride	2.175	2.346	-7.9	144	0.00
17	T	trans-1,2-Dichloroethene	3.287	3.024	8.0	123	0.00
18	TP	1,1-Dichloroethane	4.094	3.891	5.0	127	0.00
19	T	Vinyl Acetate	5.378	3.951	26.5#	97	0.01
20	T	2-Butanone	1.295	0.908	29.9#	97	0.00
21	T	cis-1,2-Dichloroethene	3.211	2.901	9.7	120	0.00
22	TC	Chloroform	3.726	3.769	-1.2	134	0.00
23	T	1,1,1-Trichloroethane	3.045	2.989	1.8	130	0.01
24	T	Carbon Tetrachloride	2.527	2.614	-3.4	138	0.00
25	S	1,2-Dichloroethane-d4	2.811	2.297	18.3	106	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	129	0.00
27	TM	Benzene	1.334	1.430	-7.2	141	0.01
28	T	1,2-Dichloroethane	0.488	0.422	13.5	116	0.00
29	TM	Trichloroethene	0.324	0.344	-6.2	140	0.00
30	TC	1,2-Dichloropropane	0.358	0.343	4.2	127	-0.01
31	T	Bromodichloromethane	0.368	0.386	-4.9	138	0.00
32	T	2-Chloroethyl vinyl ether	0.129	0.120	7.0	123	-0.01
33	T	cis-1,3-Dichloropropene	0.494	0.487	1.4	129	0.00
34	T	4-Methyl-2-Pentanone	0.154	0.134	13.0	116	-0.01
35	S	Toluene-d8	1.212	1.195	1.4	128	0.00
36	TCM	Toluene	1.321	1.443	-9.2	143	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	127	0.00
38	T	trans-1,3-Dichloropropene	1.593	1.559	2.1	125	0.00
39	T	1,1,2-Trichloroethane	0.974	1.115	-14.5	148	0.00
40	T	Tetrachloroethene	0.995	1.009	-1.4	131	0.00
41	T	2-Hexanone	0.794	0.611	23.0	99	0.00
42	T	Dibromochloromethane	0.810	0.914	-12.8	146	0.00
43	TMP	Chlorobenzene	2.904	3.252	-12.0	144	0.01
44	TC	Ethylbenzene	5.045	5.591	-10.8	140	0.00
45	T	m+p-Xylenes	1.939	2.093	-7.9	137	0.01
46	T	o-Xylene	3.898	3.960	-1.6	128	0.00
47	T	Styrene	3.231	3.486	-7.9	136	0.00
48	TP	Bromoform	0.499	0.568	-13.8	148	0.00
49	S	Bromofluorobenzene	1.673	1.580	5.6	120	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.295	1.431	-10.5	141	0.00
51	T	1,3-Dichlorobenzene	2.053	2.003	2.4	124	0.00
52	T	1,4-Dichlorobenzene	2.031	1.970	3.0	123	0.00
53	T	1,2-Dichlorobenzene	1.925	1.898	1.4	125	0.00

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

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID: **MB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.:

Lab File ID: VC006097.D Lab Sample ID: MB

Date Analyzed: 6/11/01 Time Analyzed: 14:53

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	TB	1617501	VC006107.D	22:00
02	FB	1617502	VC006108.D	22:41
03	106	1617503	VC006109.D	23:22
04	1617601 MS	1617601 MS	VC006111.D	0:45
05	1617601 MSD	1617601 MSD	VC006112.D	1:26

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB	83	98	89	0
02	TB	87	98	93	0
03	FB	87	98	93	0
04	106	87	98	93	0
05	1617601 MS	88	99	97	0
06	1617601 MSD	87	99	97	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(88-110)
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

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006111.D**	Sample Name	**1617601 MS**
Date Aquired	**12-Jun-01**	Field ID	**164 MS**

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	153.37 ug/L	76.68
Acrylonitrile	200	188.58 ug/L	94.29
tert-Butyl alcohol	200	107.16 ug/L	53.58
Methyl-tert-Butyl ether	20	17.27 ug/L	86.33
Di-isopropyl ether	20	19.36 ug/L	96.82
Dichlorodifluoromethane	20	21.41 ug/L	107.05
Chloromethane	20	19.53 ug/L	97.67
Vinyl Chloride	20	22.59 ug/L	112.95
Bromomethane	20	19.83 ug/L	99.16
Chloroethane	20	19.61 ug/L	98.06
Trichlorofluoromethane	20	19.55 ug/L	97.77
1,1-Dichloroethene	20	18.60 ug/L	92.99
Acetone	20	13.52 ug/L	67.62
Carbon Disulfide	20	20.22 ug/L	101.08
Methylene Chloride	20	21.16 ug/L	105.81
trans-1,2-Dichloroethene	20	19.01 ug/L	95.06
1,1-Dichloroethane	20	19.38 ug/L	96.89
Vinyl Acetate	20	13.62 ug/L	68.09
2-Butanone	20	15.28 ug/L	76.42
cis-1,2-Dichloroethene	20	19.01 ug/L	95.06
Chloroform	20	20.52 ug/L	102.58
1,1,1-Trichloroethane	20	19.65 ug/L	98.23
Carbon Tetrachloride	20	19.70 ug/L	98.50
Benzene	20	21.36 ug/L	106.78
1,2-Dichloroethane	20	18.56 ug/L	92.81
Trichloroethene	20	22.73 ug/L	113.67
1,2-Dichloropropane	20	19.51 ug/L	97.57
Bromodichloromethane	20	20.21 ug/L	101.05
2-Chloroethyl vinyl ether	20	19.49 ug/L	97.45
cis-1,3-Dichloropropene	20	18.74 ug/L	93.69
4-Methyl-2-Pentanone	20	17.26 ug/L	86.30
Toluene	20	21.32 ug/L	106.59
trans-1,3-Dichloropropene	20	18.19 ug/L	90.96
1,1,2-Trichloroethane	20	21.43 ug/L	107.15
Tetrachloroethene	20	19.95 ug/L	99.76
2-Hexanone	20	16.39 ug/L	81.97
Dibromochloromethane	20	20.76 ug/L	103.79
Chlorobenzene	20	21.39 ug/L	106.93
Ethylbenzene	20	21.96 ug/L	109.79
m+p-Xylenes	40	41.34 ug/L	103.35
o-Xylene	20	20.49 ug/L	102.47
Styrene	20	20.09 ug/L	100.44
Bromoform	20	20.14 ug/L	100.70
1,1,2,2-Tetrachloroethane	20	18.11 ug/L	90.55
1,3-Dichlorobenzene	20	20.93 ug/L	104.63
1,4-Dichlorobenzene	20	21.04 ug/L	105.19
1,2-Dichlorobenzene	20	22.00 ug/L	110.00

Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006112.D**	Sample Name	**1617601 MSD**
Date Aquired	**12-Jun-01**	Field ID	**164 MSD**

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	152.06 ug/L	76.03
Acrylonitrile	200	184.98 ug/L	92.49
tert-Butyl alcohol	200	110.71 ug/L	55.36
Methyl-tert-Butyl ether	20	17.68 ug/L	88.41
Di-isopropyl ether	20	19.59 ug/L	97.93
Dichlorodifluoromethane	20	20.31 ug/L	101.57
Chloromethane	20	18.95 ug/L	94.77
Vinyl Chloride	20	21.23 ug/L	106.14
Bromomethane	20	18.96 ug/L	94.80
Chloroethane	20	19.13 ug/L	95.65
Trichlorofluoromethane	20	18.65 ug/L	93.26
1,1-Dichloroethene	20	17.97 ug/L	89.84
Acetone	20	13.81 ug/L	69.06
Carbon Disulfide	20	19.58 ug/L	97.91
Methylene Chloride	20	20.97 ug/L	104.84
trans-1,2-Dichloroethene	20	18.33 ug/L	91.64
1,1-Dichloroethane	20	19.04 ug/L	95.21
Vinyl Acetate	20	13.77 ug/L	68.83
2-Butanone	20	15.21 ug/L	76.03
cis-1,2-Dichloroethene	20	18.69 ug/L	93.47
Chloroform	20	20.13 ug/L	100.67
1,1,1-Trichloroethane	20	19.14 ug/L	95.68
Carbon Tetrachloride	20	19.07 ug/L	95.34
Benzene	20	20.84 ug/L	104.19
1,2-Dichloroethane	20	18.54 ug/L	92.72
Trichloroethene	20	21.80 ug/L	108.98
1,2-Dichloropropane	20	19.55 ug/L	97.74
Bromodichloromethane	20	20.19 ug/L	100.93
2-Chloroethyl vinyl ether	20	18.99 ug/L	94.93
cis-1,3-Dichloropropene	20	18.66 ug/L	93.29
4-Methyl-2-Pentanone	20	17.39 ug/L	86.93
Toluene	20	20.94 ug/L	104.72
trans-1,3-Dichloropropene	20	18.27 ug/L	91.36
1,1,2-Trichloroethane	20	21.75 ug/L	108.75
Tetrachloroethene	20	19.37 ug/L	96.84
2-Hexanone	20	16.93 ug/L	84.65
Dibromochloromethane	20	21.17 ug/L	105.83
Chlorobenzene	20	21.10 ug/L	105.48
Ethylbenzene	20	21.43 ug/L	107.17
m+p-Xylenes	40	40.32 ug/L	100.81
o-Xylene	20	20.14 ug/L	100.70
Styrene	20	19.94 ug/L	99.68
Bromoform	20	20.32 ug/L	101.62
1,1,2,2-Tetrachloroethane	20	18.50 ug/L	92.50
1,3-Dichlorobenzene	20	20.56 ug/L	102.79
1,4-Dichlorobenzene	20	20.73 ug/L	103.66
1,2-Dichlorobenzene	20	21.88 ug/L	109.42

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16175 Location: B106 SDG No.:

Lab File ID (Standard): VC006096.D Date Analyzed: 6/11/01

Instrument ID: VoaInst#3 Time Analyzed: 14:03

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	757601	16.70	5102597	19.42	1476091	27.25
	UPPER LIMIT	1515202	17.20	10205194	19.92	2952182	27.75
	LOWER LIMIT	378801	16.20	2551299	18.92	738046	26.75
	FIELD ID:						
01	MB	703030	16.70	4701478	19.42	1338453	27.25
02	TB	835151	16.70	5641809	19.42	1645652	27.25
03	FB	825809	16.70	5564707	19.42	1608182	27.24
04	106	821304	16.70	5503360	19.42	1594590	27.24
05	1617601 MS	824248	16.70	5552281	19.42	1647161	27.25
06	1617601 MSD	840438	16.70	5657440	19.42	1673464	27.24

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 : D:\HPCHEM\1\DATA\010611\VC006097.D Vial: 2
Acq On : 11 Jun 2001 2:53 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 15:29 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	703030	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	4701478	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1338453	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	1639305	24.89	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 82.97%			
35) Toluene-d8	23.42	98	5563271	29.29	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 97.63%			
49) Bromofluorobenzene	30.25	95	1985282	26.60	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 88.67%			
Target Compounds						Qvalue

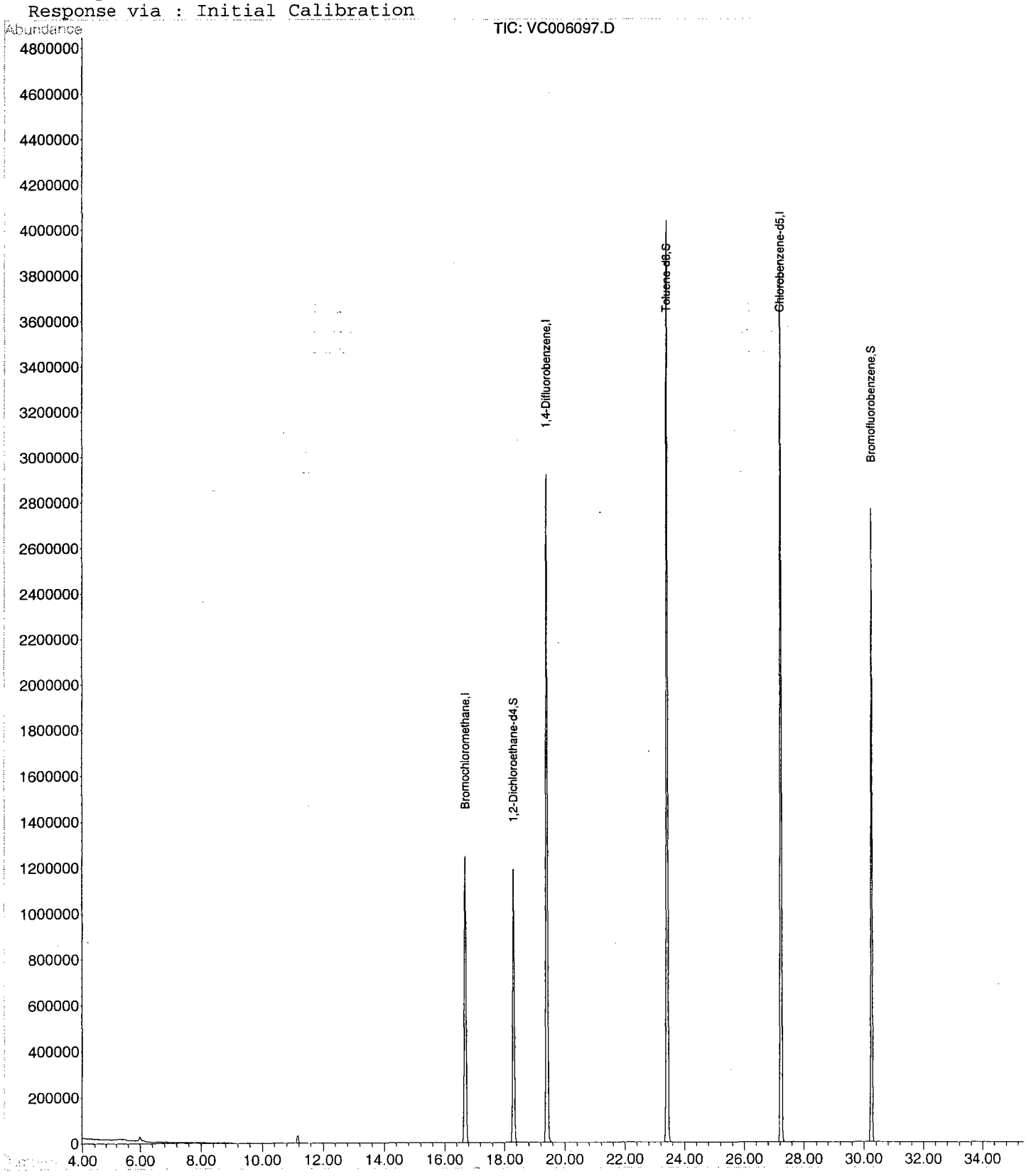
(#) = qualifier out of range (m) = manual integration
VC006097.D M362444.M Thu Jun 21 09:51:30 2001

000035

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006097.D Vial: 2
Acq On : 11 Jun 2001 2:53 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 15:29 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006107.D Vial: 10
Acq On : 11 Jun 2001 10:00 pm Operator: Skelton
Sample : 1617501 Inst : GC/MS Ins
Misc : TB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 22:35 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	835151	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5641809	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1645652	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	2030929	25.96	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 86.53%			
35) Toluene-d8	23.42	98	6688267	29.35	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 97.83%			
49) Bromofluorobenzene	30.25	95	2560806	27.91	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 93.03%			

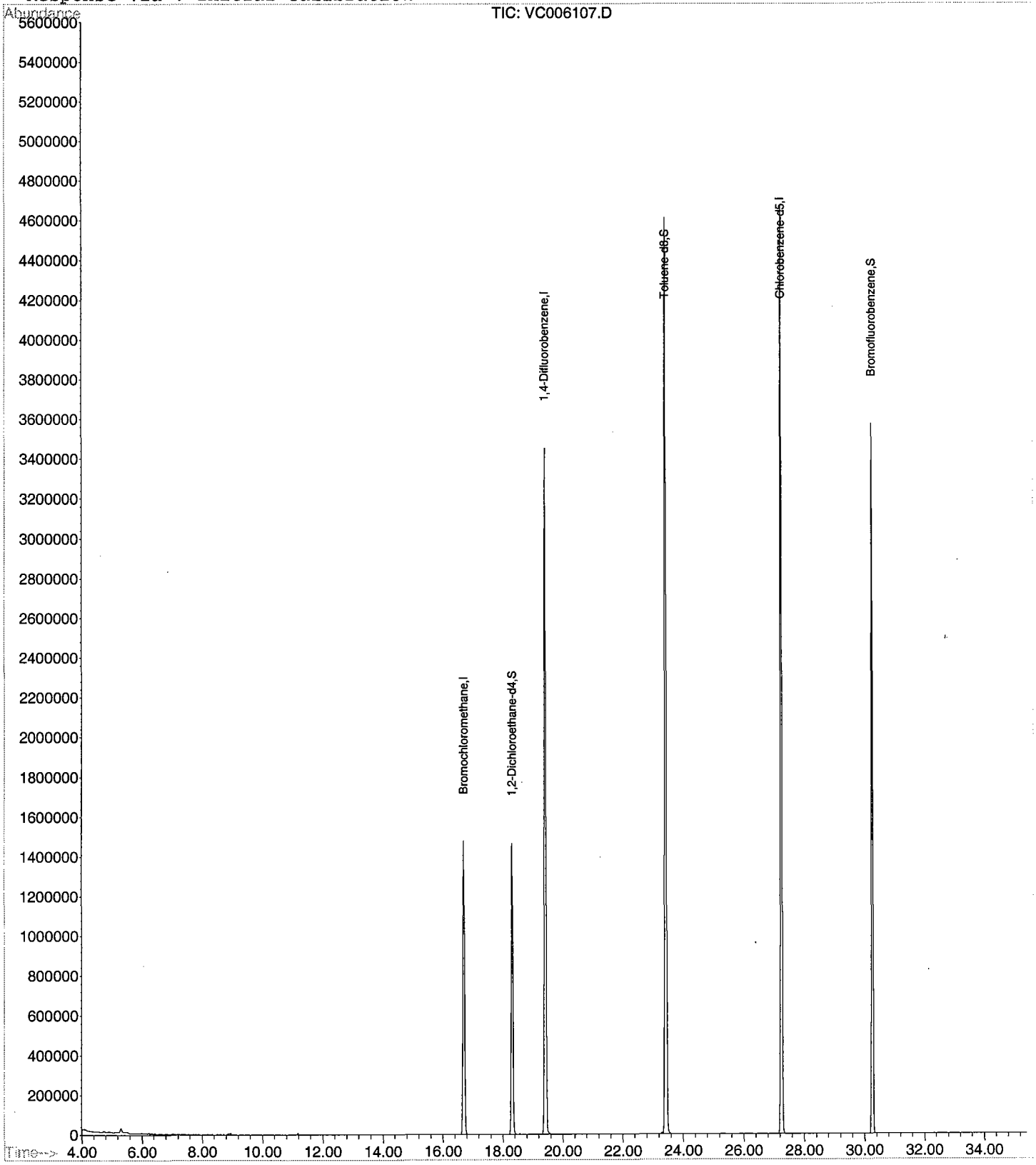
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006107.D Vial: 10
Acq On : 11 Jun 2001 10:00 pm Operator: Skelton
Sample : 1617501 Inst : GC/MS Ins
Misc : TB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 22:35 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006108.D Vial: 11
Acq On : 11 Jun 2001 10:41 pm Operator: Skelton
Sample : 1617502 Inst : GC/MS Ins
Misc : FB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 23:17 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	825809	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5564707	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	1608182	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	2019723	26.11	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 87.03%			
35) Toluene-d8	23.42	98	6579389	29.27	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 97.57%			
49) Bromofluorobenzene	30.25	95	2505162	27.94	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 93.13%			

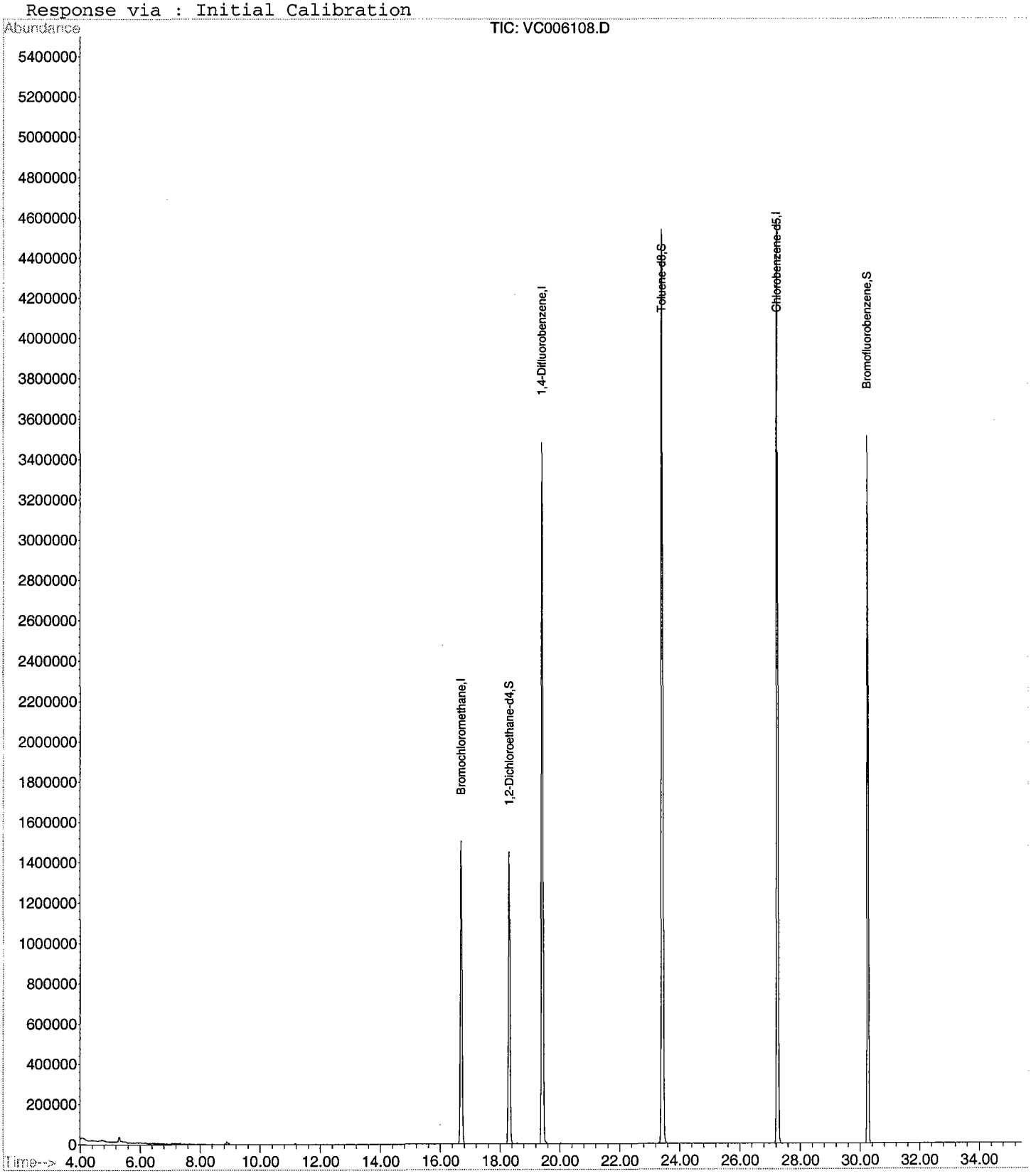
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006108.D Vial: 11
Acq On : 11 Jun 2001 10:41 pm Operator: Skelton
Sample : 1617502 Inst : GC/MS Ins
Misc : FB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 23:17 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



000040

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006109.D Vial: 12
Acq On : 11 Jun 2001 11:22 pm Operator: Skelton
Sample : 1617503 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 23:58 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	821304	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5503360	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	1594590	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	2014124	26.18	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 87.27%			
35) Toluene-d8	23.42	98	6513381	29.30	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 97.67%			
49) Bromofluorobenzene	30.25	95	2470747	27.79	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 92.63%			

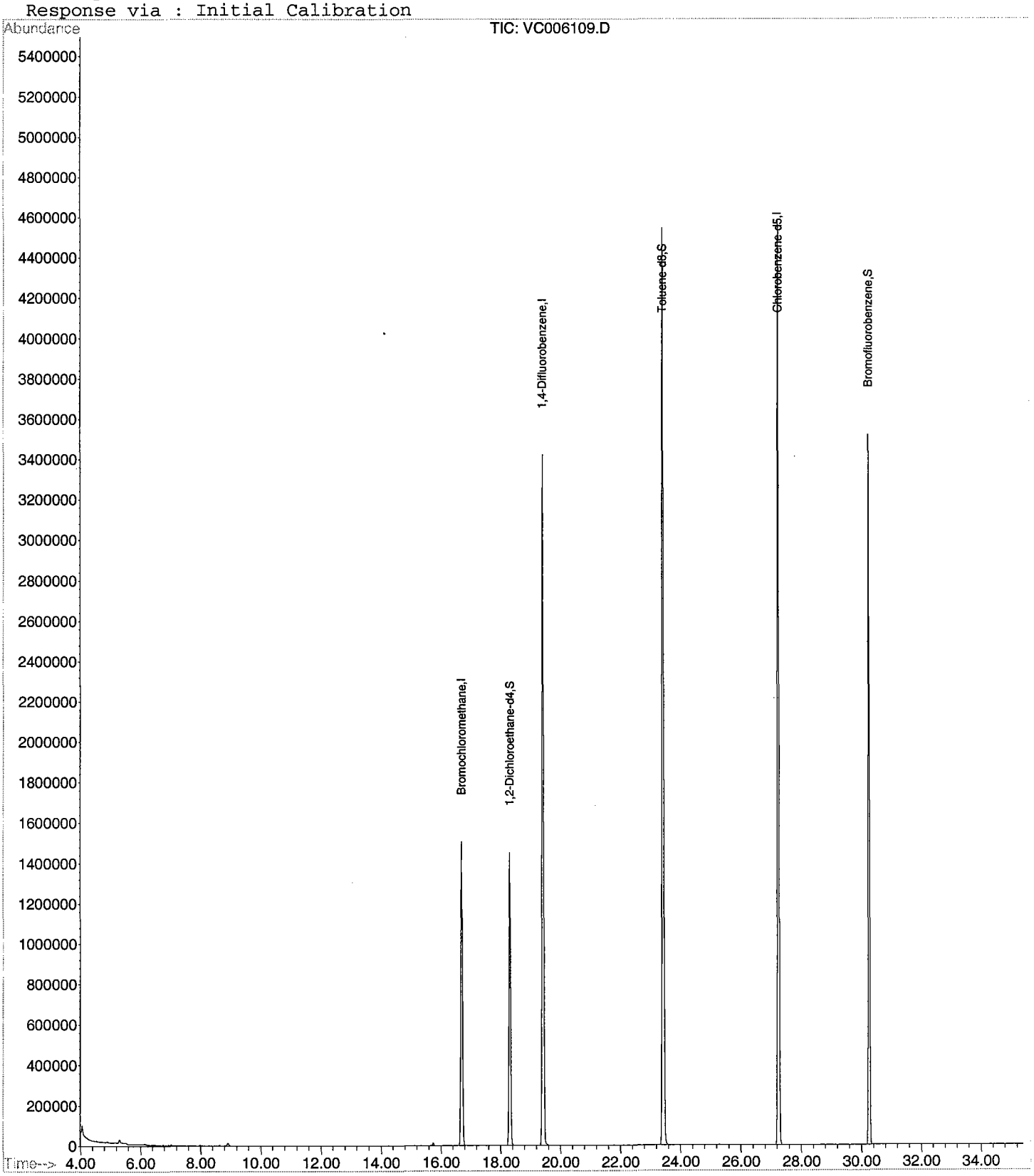
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006109.D Vial: 12
Acq On : 11 Jun 2001 11:22 pm Operator: Skelton
Sample : 1617503 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 23:58 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



SEMI-VOLATILES

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05439.D**	Sample Name	**MB 1892**
Operator	**Bhaskar**	Misc Info	**12June2001**
Date Acquired	**12-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
108-95-2	Phenol			not detected	4000	0.52	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
95-57-8	2-Chlorophenol			not detected	40	0.61	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	0.59	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.48	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	0.52	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	0.93	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	0.39	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.15	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	0.59	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	0.96	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.84	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.41	ug/L	

Semi-Volatile Analysis Report
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Data File Name	**BNA05439.D**	Sample Name	**MB 1892**
Operator	**Bhaskar**	Misc Info	**12June2001**
Date Acquired	**12-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	2.10	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.74	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **MB 1892**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 1892

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05439.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: decanted: (Y/N) N Date Extracted: 6/12/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/12/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05447.D**	Sample Name	**1617502**
Operator	**Bhaskar**	Misc Info	**FB**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
108-95-2	Phenol			not detected	4000	0.52	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
95-57-8	2-Chlorophenol			not detected	40	0.61	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	0.59	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.48	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	0.52	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	0.93	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	0.39	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.15	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	0.59	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	0.96	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.84	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.41	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05447.D**	Sample Name	**1617502**
Operator	**Bhaskar**	Misc Info	**FB**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	2.10	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.74	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **FB**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617502

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05447.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: decanted: (Y/N) N Date Extracted: 6/12/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/13/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05448.D**	Sample Name	**1617503**
Operator	**Bhaskar**	Misc Info	**106**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
108-95-2	Phenol			not detected	4000	0.52	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
95-57-8	2-Chlorophenol			not detected	40	0.61	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	0.59	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.48	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	0.52	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	0.93	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	0.39	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.15	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	0.59	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	0.96	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.84	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.41	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05448.D**	Sample Name	**1617503**
Operator	**Bhaskar**	Misc Info	**106**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate	18.42	143095	5.90 ug/L	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	2.10	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.74	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **106**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617503

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05448.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: decanted: (Y/N) N Date Extracted: 6/12/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/13/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	9.34	23	J
2.	unknown	18.34	8	J
3. 000141-79-7	3-Penten-2-one, 4-methyl-	5.65	9	JN
4. 000541-05-9	Cyclotrisiloxane, hexamethyl-	5.95	62	JN
5.	unknown	7.09	7	J

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05123.D DFTPP Injection Date: 3/27/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 8:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.3
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	53.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	23.7
365	Greater than 0.75% of mass 198	2.7
441	Present, but less than mass 443	10.0
442	40.0 - 110.0% of mass 198	68.7
443	15.0 - 24.0% of mass 442	13.7 (19.9)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	BNA05124.D	3/27/01	9:08
02	SSTD010	10 PPM CAL	BNA05125.D	3/27/01	9:55
03	SSTD050	50 PPM CAL	BNA05126.D	3/27/01	10:42
04	SSTD080	80 PPM CAL	BNA05127.D	3/27/01	11:28
05	SSTD020	20 PPM CAL	BNA05128.D	3/27/01	12:13

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.463	1.406	1.422	1.443	1.442	1.435	1.51
3)	T	N-nitroso-dimethylami	0.781	0.744	0.751	0.733	0.740	0.750	2.47
4)	S	2-Fluorophenol	1.158	1.132	1.141	1.133	1.124	1.137	1.13
5)	T	Aniline	1.794	1.806	1.875	1.892	1.891	1.852	2.57
6)	S	Phenol-d6	1.412	1.409	1.440	1.456	1.453	1.434	1.56
7)	TCM	Phenol	1.590	1.610	1.683	1.694	1.713	1.658	3.28
8)	T	bis(2-Chloroethyl)eth	1.192	1.165	1.186	1.231	1.228	1.201	2.37
9)	TM	2-Chlorophenol	1.154	1.146	1.172	1.191	1.186	1.170	1.66
10)	T	1,3-Dichlorobenzene	1.223	1.237	1.278	1.304	1.339	1.276	3.75
11)	TCM	1,4-Dichlorobenzene	1.235	1.256	1.305	1.344	1.379	1.304	4.59
12)	T	Benzyl alcohol	0.775	0.763	0.777	0.748	0.747	0.762	1.87
13)	T	1,2-Dichlorobenzene	1.117	1.134	1.197	1.242	1.280	1.194	5.79
14)	T	2-Methylphenol	1.051	1.047	1.081	1.098	1.107	1.077	2.50
15)	T	bis(2-chloroisopropyl	1.215	1.194	1.233	1.244	1.288	1.235	2.83
16)	T	4-Methylphenol	1.085	1.101	1.143	1.156	1.147	1.126	2.78
17)	TPM	n-Nitroso-di-n-propyl	0.187	0.192	0.195	0.195	0.188	0.191	1.93
18)	T	Hexachloroethane	0.489	0.488	0.499	0.503	0.514	0.498	2.16
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.399	0.393	0.401	0.404	0.412	0.402	1.70
21)	T	Nitrobenzene	0.389	0.391	0.400	0.411	0.424	0.403	3.62
22)	T	Isophorone	0.668	0.657	0.669	0.684	0.701	0.676	2.54
23)	TC	2-Nitrophenol	0.185	0.185	0.185	0.185	0.178	0.184	1.82
24)	T	2,4-Dimethylphenol	0.330	0.328	0.337	0.345	0.353	0.339	3.12
25)	T	bis(2-Chloroethoxy)me	0.388	0.389	0.397	0.409	0.412	0.399	2.74
26)	TC	2,4-Dichlorophenol	0.242	0.245	0.249	0.234	0.208	0.235	6.97
27)	T	Benzoic Acid	0.259	0.240	0.219	0.216	0.198	0.226	10.40
28)	TM	1,2,4-Trichlorobenzen	0.271	0.276	0.286	0.297	0.306	0.287	5.12
29)	T	Naphthalene	0.813	0.882	0.948	1.011	1.054	0.942	10.28
30)	T	4-Chloroaniline	0.357	0.377	0.388	0.389	0.384	0.379	3.44
31)	TC	Hexachlorobutadiene	0.147	0.153	0.159	0.165	0.170	0.159	6.03
32)	TCM	4-Chloro-3-methylphen	0.287	0.289	0.294	0.290	0.288	0.289	0.93
33)	T	2-Methylnaphthalene	0.554	0.579	0.614	0.644	0.666	0.612	7.47
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.255	0.261	0.251	0.214	0.167	0.230	17.16
36)	TC	2,4,6-Trichlorophenol	0.307	0.312	0.320	0.317	0.313	0.314	1.58
37)	T	2,4,5-Trichlorophenol	0.337	0.338	0.346	0.326	0.315	0.332	3.58
38)	S	2-Fluorobiphenyl	0.986	1.046	1.128	1.184	1.222	1.113	8.73
39)	T	2-Chloronaphthalene	0.884	0.917	0.965	1.011	1.029	0.961	6.37
40)	T	2-Nitroaniline	0.370	0.366	0.375	0.360	0.345	0.363	3.21
41)	T	Dimethylphthalate	1.010	1.049	1.104	1.148	1.172	1.097	6.17
42)	T	Acenaphthylene	1.345	1.438	1.568	1.680	1.734	1.553	10.46
43)	T	2,6-Dinitrotoluene	0.266	0.270	0.285	0.291	0.295	0.281	4.59
44)	T	3-Nitroaniline	0.263	0.279	0.289	0.289	0.280	0.280	3.86
45)	TCM	Acenaphthene	0.892	0.925	0.986	1.031	1.065	0.980	7.32
46)	TP	2,4-Dinitrophenol	0.186	0.177	0.164	0.124	0.096	0.149	25.46
47)	T	Dibenzofuran	1.169	1.233	1.341	1.417	1.470	1.326	9.43
48)	TMP	4-Nitrophenol	0.239	0.203	0.198	0.199	0.186	0.205	9.69
49)	TM	2,4-Dinitrotoluene	0.356	0.355	0.362	0.366	0.354	0.359	1.40
50)	T	Diethylphthalate	1.025	1.063	1.120	1.162	1.196	1.113	6.27
51)	T	Fluorene	0.998	1.040	1.117	1.173	1.206	1.107	7.92
52)	T	4-Chlorophenyl-phenyl	0.489	0.507	0.534	0.549	0.564	0.529	5.75
53)	T	4-Nitroaniline	0.296	0.288	0.291	0.283	0.292	0.290	1.74
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.143	0.142	0.139	0.129	0.114	0.133	9.09
56)	TC	n-Nitrosodiphenylamin	0.435	0.452	0.471	0.496	0.510	0.473	6.47
57)	T	Azobenzene	0.729	0.777	0.819	0.855	0.879	0.812	7.39
58)	S	2,4,6-Tribromophenol	0.090	0.090	0.091	0.090	0.089	0.090	0.84
59)	T	4-Bromophenyl-phenyle	0.172	0.175	0.182	0.190	0.194	0.182	5.12
60)	T	Hexachlorobenzene	0.184	0.188	0.193	0.202	0.212	0.196	5.74
61)	TCM	Pentachlorophenol	0.124	0.123	0.122	0.109	0.103	0.116	8.31
62)	T	Phenanthrene	0.841	0.901	0.974	1.046	1.102	0.973	10.83
63)	T	Anthracene	0.863	0.922	0.991	1.063	1.107	0.989	10.08
64)	T	Di-n-butylphthalate	0.955	1.039	1.108	1.177	1.200	1.096	9.21
65)	TC	Fluoranthene	0.895	0.950	1.019	1.096	1.136	1.019	9.80
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.361	0.366	0.394	0.424	0.434	0.396	8.29
68)	TM	Pyrene	1.050	1.100	1.153	1.229	1.263	1.159	7.59
69)	S	p-Terphenyl-d14	0.751	0.772	0.793	0.823	0.844	0.797	4.74
70)	T	Butylbenzylphthalate	0.562	0.570	0.574	0.574	0.565	0.569	0.96
71)	T	Benzo[a]anthracene	1.023	1.057	1.094	1.125	1.162	1.092	5.02
72)	T	3,3'-Dichlorobenzidin	0.334	0.346	0.353	0.368	0.366	0.354	4.06
73)	T	Chrysene	0.964	1.001	1.031	1.071	1.116	1.037	5.74
74)	T	bis(2-Ethylhexyl)phth	0.760	0.780	0.791	0.792	0.772	0.779	1.72
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.214	1.325	1.400	1.410	1.374	1.345	5.98
77)	T	Benzo[b]fluoranthene	1.045	1.067	1.130	1.144	1.184	1.114	5.12
78)	T	Benzo[k]fluoranthene	1.001	1.043	1.117	1.192	1.220	1.115	8.40
79)	TC	Benzo[a]pyrene	0.993	1.031	1.084	1.117	1.139	1.073	5.65
80)	T	Indeno[1,2,3-cd]pyren	1.131	1.093	1.092	1.069	1.043	1.086	3.01
81)	T	Dibenz[a,h]anthracene	1.065	1.095	1.119	1.128	1.111	1.104	2.24
82)	T	Benzo[g,h,i]perylene	1.073	1.079	1.100	1.107	1.120	1.096	1.77

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05425.D DFTPP Injection Date: 6/12/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 9:15

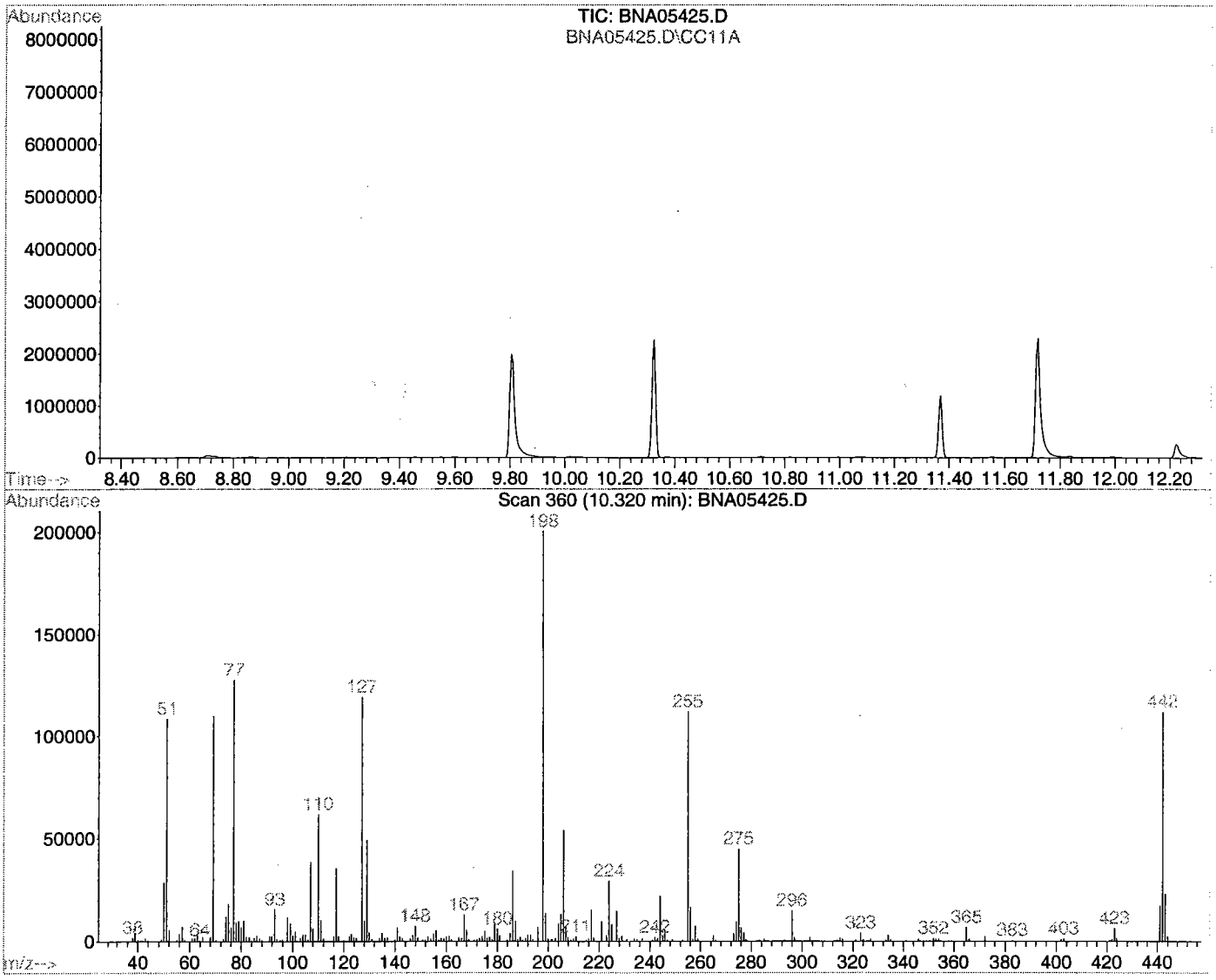
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	43.1
68	Less than 2.0% of mass 69	1.0 (2.1)1
69	Mass 69 Relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	54.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	26.7
365	Greater than 0.75% of mass 198	4.1
441	Present, but less than mass 443	12.4
442	40.0 - 110.0% of mass 198	82.2
443	15.0 - 24.0% of mass 442	15.9 (19.3)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	SSTD050	BNA05426.D	6/12/01	9:38
02	MB 1892	MB 1892	BNA05439.D	6/12/01	19:20
03	LCS 1893	LCS 1893	BNA05440.D	6/12/01	20:03
04	FB	1617502	BNA05447.D	6/13/01	1:06
05	106	1617503	BNA05448.D	6/13/01	1:49
06	804	1617701	BNA05449.D	6/13/01	2:33
07	FIELD DUPE	1617702	BNA05450.D	6/13/01	3:16

Data File : D:\DATA\010612\BNA05425.D Vial: 99
Acq On : 12 Jun 2001 9:15 am Operator: Bhaskar
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 360

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.2	108632	PASS
68	69	0.00	2	1.9	2078	PASS
69	198	0.00	100	54.8	109896	PASS
70	69	0.00	2	0.6	696	PASS
127	198	40	60	59.5	119216	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	200512	PASS
199	198	5	9	6.8	13586	PASS
275	198	10	30	22.4	44944	PASS
365	198	1	100	3.4	6819	PASS
441	443	1	99	74.4	17176	PASS
442	198	40	100	55.9	112144	PASS
443	442	17	23	20.6	23096	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010612\BNA05426.D Vial: 100
Acq On : 12 Jun 2001 9:38 am Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	63	-0.04
2	T	Pyridine	1.435	1.227	14.5	54	-0.02
3	T	N-nitroso-dimethylamine	0.750	0.657	12.4	55	-0.02
4	S	2-Fluorophenol	1.137	1.086	4.5	60	0.05
5	T	Aniline	1.852	1.868	-0.9	62	-0.02
6	S	Phenol-d6	1.434	1.427	0.5	62	0.05
7	TCM	Phenol	1.658	1.518	8.4	57	0.05
8	T	bis(2-Chloroethyl)ether	1.201	1.139	5.2	60	-0.04
9	TM	2-Chlorophenol	1.170	1.182	-1.0	63	0.00
10	T	1,3-Dichlorobenzene	1.276	1.334	-4.5	65	-0.05
11	TCM	1,4-Dichlorobenzene	1.304	1.387	-6.4	67	-0.04
12	T	Benzyl alcohol	0.762	0.773	-1.4	62	-0.01
13	T	1,2-Dichlorobenzene	1.194	1.282	-7.4	67	-0.04
14	T	2-Methylphenol	1.077	1.126	-4.5	65	0.03
15	T	bis(2-chloroisopropyl)ether	1.235	1.084	12.2	55	-0.04
16	T	4-Methylphenol	1.126	1.173	-4.2	64	0.03
17	TPM	n-Nitroso-di-n-propylamine	0.191	0.201	-5.2	65	-0.04
18	T	Hexachloroethane	0.498	0.574	-15.3	72	-0.05
19	I	Naphthalene-d8	1.000	1.000	0.0	71	-0.04
20	S	Nitrobenzene-d5	0.402	0.395	1.7	70	-0.04
21	T	Nitrobenzene	0.403	0.383	5.0	68	-0.04
22	T	Isophorone	0.676	0.635	6.1	68	-0.04
23	TC	2-Nitrophenol	0.184	0.169	8.2	65	-0.04
24	T	2,4-Dimethylphenol	0.339	0.338	0.3	71	0.00
25	T	bis(2-Chloroethoxy)methane	0.399	0.352	11.8	63	-0.04
26	TC	2,4-Dichlorophenol	0.235	0.229	2.6	66	0.01
27	T	Benzoic Acid	0.226	0.124	45.1#	41#	0.02
28	TM	1,2,4-Trichlorobenzene	0.287	0.286	0.3	71	-0.05
29	T	Naphthalene	0.942	0.928	1.5	70	-0.05
30	T	4-Chloroaniline	0.379	0.334	11.9	61	-0.03
31	TC	Hexachlorobutadiene	0.159	0.175	-10.1	79	-0.05
32	TCM	4-Chloro-3-methylphenol	0.289	0.293	-1.4	71	0.03
33	T	2-Methylnaphthalene	0.612	0.619	-1.1	72	-0.05
34	I	Acenaphthene-d10	1.000	1.000	0.0	79	-0.05
35	TP	Hexachlorocyclopentadiene	0.230	0.269	-17.0	85	-0.05
36	TC	2,4,6-Trichlorophenol	0.314	0.301	4.1	74	-0.02
37	T	2,4,5-Trichlorophenol	0.332	0.317	4.5	72	0.03
38	S	2-Fluorobiphenyl	1.113	1.081	2.9	76	-0.05
39	T	2-Chloronaphthalene	0.961	0.899	6.5	73	-0.05
40	T	2-Nitroaniline	0.363	0.318	12.4	67	-0.02
41	T	Dimethylphthalate	1.097	1.069	2.6	76	-0.04
42	T	Acenaphthylene	1.553	1.522	2.0	77	-0.05
43	T	2,6-Dinitrotoluene	0.281	0.299	-6.4	83	-0.04
44	T	3-Nitroaniline	0.280	0.270	3.6	74	-0.02
45	TCM	Acenaphthene	0.980	0.941	4.0	75	-0.05
46	TP	2,4-Dinitrophenol	0.149	0.149	0.0	72	-0.03
47	T	Dibenzofuran	1.326	1.269	4.3	75	-0.05
48	TMP	4-Nitrophenol	0.205	0.210	-2.4	83	0.12
49	TM	2,4-Dinitrotoluene	0.359	0.338	5.8	74	-0.03
50	T	Diethylphthalate	1.113	1.138	-2.2	80	-0.05
51	T	Fluorene	1.107	1.082	2.3	76	-0.05
52	T	4-Chlorophenyl-phenylether	0.529	0.528	0.2	78	-0.05
53	T	4-Nitroaniline	0.290	0.258	11.0	70	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\DATA\010612\BNA05426.D Vial: 100
Acq On : 12 Jun 2001 9:38 am Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	90	-0.05
55	T	4,6-Dinitro-2-methylphenol	0.133	0.116	12.8	75	-0.03
56	TC	n-Nitrosodiphenylamine	0.473	0.399	15.6	76	-0.04
57	T	Azobenzene	0.812	0.687	15.4	76	-0.05
58	S	2,4,6-Tribromophenol	0.090	0.081	10.0	79	-0.04
59	T	4-Bromophenyl-phenylether	0.182	0.159	12.6	78	-0.05
60	T	Hexachlorobenzene	0.196	0.172	12.2	80	-0.05
61	TCM	Pentachlorophenol	0.116	0.095	18.1	70	-0.03
62	T	Phenanthrene	0.973	0.842	13.5	78	-0.05
63	T	Anthracene	0.989	0.854	13.7	78	-0.05
64	T	Di-n-butylphthalate	1.096	0.989	9.8	80	-0.05
65	TC	Fluoranthene	1.019	0.924	9.3	82	-0.05
66	I	Chrysene-d12	1.000	1.000	0.0	104	-0.05
67	T	Benzidine	0.396	0.336	15.2	89	-0.03
68	TM	Pyrene	1.159	0.902	22.2	82	-0.05
69	S	p-Terphenyl-d14	0.797	0.654	17.9	86	-0.05
70	T	Butylbenzylphthalate	0.569	0.460	19.2	83	-0.05
71	T	Benzo[a]anthracene	1.092	0.904	17.2	86	-0.05
72	T	3,3'-Dichlorobenzidine	0.354	0.370	-4.5	109	-0.04
73	T	Chrysene	1.037	0.855	17.6	86	-0.05
74	T	bis(2-Ethylhexyl)phthalate	0.779	0.643	17.5	85	-0.06
75	I	Perylene-d12	1.000	1.000	0.0	96	-0.05
76	TC	Di-n-octylphthalate	1.345	1.249	7.1	86	-0.06
77	T	Benzo[b]fluoranthene	1.114	0.999	10.3	85	-0.05
78	T	Benzo[k]fluoranthene	1.115	1.012	9.2	87	-0.05
79	TC	Benzo[a]pyrene	1.073	0.961	10.4	85	-0.05
80	T	Indeno[1,2,3-cd]pyrene	1.086	0.932	14.2	82	-0.08
81	T	Dibenz[a,h]anthracene	1.104	0.962	12.9	83	-0.08
82	T	Benzo[g,h,i]perylene	1.096	0.895	18.3	78	-0.08

4B

Field Id:

SEMIVOLATILE METHOD BLANK SUMMARY

MB 1892

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05439.D Lab Sample ID: MB 1892

Instrument ID: GC/MS Ins Date Extracted: 6/15/01

Matrix: (soil/water) WATER Date Analyzed: 6/12/01

Level: (low/med) LOW Time Analyzed: 19:20

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1893	LCS 1893	BNA05440.D	6/12/01
02	FB	1617502	BNA05447.D	6/13/01
03	106	1617503	BNA05448.D	6/13/01
04	804	1617701	BNA05449.D	6/13/01
05	FIELD DUPE	1617702	BNA05450.D	6/13/01

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.: _____

	Field Id:	S1 2FP #	S2 PHL #	S3 NBZ #	S4 2FP #	S5 TBP #	S6 TPL #	TOT OUT
01	MB 1892	42	22	54	62	63	62	0
02	LCS 1893	43	29	64	73	76	72	0
03	FB	63	37	90	107	108	127	0
04	106	46	23	62	107	86	84	0
05	FB	63	37	93	107	107	122	0

QC LIMITS

S1	2FP	=	2-Fluorophenol	(21-100)
S2	PHL	=	Phenol-d6	(10-94)
S3	NBZ	=	Nitrobenzene-d5	(35-114)
S4	2FP	=	2-Fluorobiphenyl	(43-116)
S5	TBP	=	2,4,6-Tribromophenol	(10-123)
S6	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

Semi-Volatiles Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05421.D** Sample Name **1615108 MS**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		5.36 ug/L	26.79
62-75-9	N-nitroso-dimethylamine		6.88 ug/L	34.40
62-53-3	Aniline		10.36 ug/L	51.78
108-95-2	Phenol		5.17 ug/L	25.84
111-44-4	bis(2-Chloroethyl)ether		10.61 ug/L	53.06
95-57-8	2-Chlorophenol		12.15 ug/L	60.75
541-73-1	1,3-Dichlorobenzene		11.85 ug/L	59.25
106-46-7	1,4-Dichlorobenzene		11.93 ug/L	59.67
100-51-6	Benzyl alcohol		9.00 ug/L	45.00
95-50-1	1,2-Dichlorobenzene		12.33 ug/L	61.66
95-48-7	2-Methylphenol		11.80 ug/L	59.00
39638-32-9	bis(2-chloroisopropyl)ether		14.89 ug/L	74.45
106-44-5	4-Methylphenol		10.57 ug/L	52.86
621-64-7	n-Nitroso-di-n-propylamine		12.90 ug/L	64.52
67-72-1	Hexachloroethane		12.14 ug/L	60.68
98-95-3	Nitrobenzene		12.09 ug/L	60.47
78-59-1	Isophorone		13.01 ug/L	65.04
88-75-5	2-Nitrophenol		10.36 ug/L	51.80
105-67-9	2,4-Dimethylphenol		10.90 ug/L	54.52
111-91-1	bis(2-Chloroethoxy)methane		10.68 ug/L	53.38
120-83-2	2,4-Dichlorophenol		9.42 ug/L	47.12
65-85-0	Benzoic Acid		0.00 ug/L	0.00
120-82-1	1,2,4-Trichlorobenzene		11.74 ug/L	58.69
91-20-3	Naphthalene		11.91 ug/L	59.57
106-47-8	4-Chloroaniline		11.04 ug/L	55.20
87-68-3	Hexachlorobutadiene		12.65 ug/L	63.27
59-50-7	4-Chloro-3-methylphenol		13.41 ug/L	67.07
91-57-6	2-Methylnaphthalene		13.33 ug/L	66.63
77-47-4	Hexachlorocyclopentadiene		8.51 ug/L	42.54
88-06-2	2,4,6-Trichlorophenol		14.33 ug/L	71.67
95-95-4	2,4,5-Trichlorophenol		14.47 ug/L	72.36
91-58-7	2-Chloronaphthalene		13.52 ug/L	67.58
88-74-4	2-Nitroaniline		11.01 ug/L	55.05
131-11-3	Dimethylphthalate		15.66 ug/L	78.31
208-96-8	Acenaphthylene		13.99 ug/L	69.93
606-20-2	2,6-Dinitrotoluene		15.97 ug/L	79.85
99-09-2	3-Nitroaniline		13.14 ug/L	65.71
83-32-9	Acenaphthene		14.18 ug/L	70.91
51-28-5	2,4-Dinitrophenol		6.06 ug/L	30.28
132-64-9	Dibenzofuran		15.04 ug/L	75.21
100-02-7	4-Nitrophenol		5.32 ug/L	26.62

Semi-Volatiles Spike Report
Page 2

Data File Name **BNA05421.D** Sample Name **1615108 MS**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
121-14-2	2,4-Dinitrotoluene		14.99 ug/L	74.93
84-66-2	Diethylphthalate		16.94 ug/L	84.68
86-73-7	Fluorene		15.41 ug/L	77.06
7005-72-3	4-Chlorophenyl-phenylether		15.23 ug/L	76.16
100-01-6	4-Nitroaniline		12.19 ug/L	60.95
534-52-1	4,6-Dinitro-2-methylphenol		10.38 ug/L	51.90
86-30-6	n-Nitrosodiphenylamine		14.11 ug/L	70.56
103-33-3	Azobenzene		13.68 ug/L	68.38
101-55-3	4-Bromophenyl-phenylether		14.01 ug/L	70.04
118-74-1	Hexachlorobenzene		14.41 ug/L	72.06
87-86-5	Pentachlorophenol		8.37 ug/L	41.84
85-01-8	Phenanthrene		14.57 ug/L	72.83
120-12-7	Anthracene		14.21 ug/L	71.05
84-74-2	Di-n-butylphthalate		15.31 ug/L	76.57
206-44-0	Fluoranthene		14.86 ug/L	74.32
92-87-5	Benzidine		1.90 ug/L	9.49
129-00-0	Pyrene		13.57 ug/L	67.85
85-68-7	Butylbenzylphthalate		13.62 ug/L	68.10
56-55-3	Benzo[a]anthracene		14.15 ug/L	70.77
91-94-1	3,3'-Dichlorobenzidine		13.75 ug/L	68.76
218-01-9	Chrysene		12.45 ug/L	62.27
117-81-7	bis(2-Ethylhexyl)phthalate		13.88 ug/L	69.42
117-84-0	Di-n-octylphthalate		17.05 ug/L	85.26
205-99-2	Benzo[b]fluoranthene		16.99 ug/L	84.96
207-08-9	Benzo[k]fluoranthene		17.75 ug/L	88.76
50-32-8	Benzo[a]pyrene		16.55 ug/L	82.76
193-39-5	Indeno[1,2,3-cd]pyrene		15.73 ug/L	78.67
53-70-3	Dibenz[a,h]anthracene		15.69 ug/L	78.47
191-24-2	Benzo[g,h,i]perylene		16.06 ug/L	80.32

Semi-Volatiles Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05422.D** Sample Name **1615108 MSD**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		3.06 ug/L	15.31
62-75-9	N-nitroso-dimethylamine		7.78 ug/L	38.88
62-53-3	Aniline		8.84 ug/L	44.20
108-95-2	Phenol		9.05 ug/L	45.24
111-44-4	bis(2-Chloroethyl)ether		11.93 ug/L	59.65
95-57-8	2-Chlorophenol		14.03 ug/L	70.16
541-73-1	1,3-Dichlorobenzene		13.23 ug/L	66.17
106-46-7	1,4-Dichlorobenzene		13.48 ug/L	67.42
100-51-6	Benzyl alcohol		10.08 ug/L	50.40
95-50-1	1,2-Dichlorobenzene		14.14 ug/L	70.69
95-48-7	2-Methylphenol		14.06 ug/L	70.28
39638-32-9	bis(2-chloroisopropyl)ether		16.50 ug/L	82.48
106-44-5	4-Methylphenol		13.42 ug/L	67.12
621-64-7	n-Nitroso-di-n-propylamine		14.56 ug/L	72.79
67-72-1	Hexachloroethane		13.73 ug/L	68.66
98-95-3	Nitrobenzene		12.86 ug/L	64.29
78-59-1	Isophorone		14.46 ug/L	72.32
88-75-5	2-Nitrophenol		12.33 ug/L	61.67
105-67-9	2,4-Dimethylphenol		12.47 ug/L	62.37
111-91-1	bis(2-Chloroethoxy)methane		12.10 ug/L	60.50
120-83-2	2,4-Dichlorophenol		9.33 ug/L	46.66
65-85-0	Benzoic Acid		3.23 ug/L	16.15
120-82-1	1,2,4-Trichlorobenzene		13.08 ug/L	65.40
91-20-3	Naphthalene		13.44 ug/L	67.20
106-47-8	4-Chloroaniline		9.89 ug/L	49.47
87-68-3	Hexachlorobutadiene		14.39 ug/L	71.94
59-50-7	4-Chloro-3-methylphenol		14.76 ug/L	73.79
91-57-6	2-Methylnaphthalene		14.70 ug/L	73.52
77-47-4	Hexachlorocyclopentadiene		11.74 ug/L	58.68
88-06-2	2,4,6-Trichlorophenol		16.12 ug/L	80.60
95-95-4	2,4,5-Trichlorophenol		15.37 ug/L	76.84
91-58-7	2-Chloronaphthalene		15.00 ug/L	75.02
88-74-4	2-Nitroaniline		13.94 ug/L	69.70
131-11-3	Dimethylphthalate		16.74 ug/L	83.69
208-96-8	Acenaphthylene		15.29 ug/L	76.47
606-20-2	2,6-Dinitrotoluene		17.14 ug/L	85.70
99-09-2	3-Nitroaniline		12.95 ug/L	64.75
83-32-9	Acenaphthene		15.51 ug/L	77.55
51-28-5	2,4-Dinitrophenol		10.41 ug/L	52.06
132-64-9	Dibenzofuran		16.24 ug/L	81.21
100-02-7	4-Nitrophenol		1.50 ug/L	7.52

Semi-Volatiles Spike Report
Page 2

Data File Name **BNA05422.D** Sample Name **1615108 MSD**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
121-14-2	2,4-Dinitrotoluene		15.57 ug/L	77.83
84-66-2	Diethylphthalate		17.50 ug/L	87.49
86-73-7	Fluorene		16.38 ug/L	81.92
7005-72-3	4-Chlorophenyl-phenylether		16.38 ug/L	81.90
100-01-6	4-Nitroaniline		12.05 ug/L	60.25
534-52-1	4,6-Dinitro-2-methylphenol		13.21 ug/L	66.05
86-30-6	n-Nitrosodiphenylamine		14.99 ug/L	74.94
103-33-3	Azobenzene		14.69 ug/L	73.46
101-55-3	4-Bromophenyl-phenylether		15.00 ug/L	75.01
118-74-1	Hexachlorobenzene		14.95 ug/L	74.75
87-86-5	Pentachlorophenol		10.06 ug/L	50.29
85-01-8	Phenanthrene		15.20 ug/L	75.98
120-12-7	Anthracene		14.75 ug/L	73.75
84-74-2	Di-n-butylphthalate		15.99 ug/L	79.94
206-44-0	Fluoranthene		15.32 ug/L	76.58
92-87-5	Benzidine		0.00 ug/L	0.00
129-00-0	Pyrene		14.37 ug/L	71.84
85-68-7	Butylbenzylphthalate		14.45 ug/L	72.23
56-55-3	Benzo[a]anthracene		14.91 ug/L	74.55
91-94-1	3,3'-Dichlorobenzidine		12.99 ug/L	64.95
218-01-9	Chrysene		13.21 ug/L	66.07
117-81-7	bis(2-Ethylhexyl)phthalate		14.58 ug/L	72.92
117-84-0	Di-n-octylphthalate		17.72 ug/L	88.62
205-99-2	Benzo[b]fluoranthene		17.76 ug/L	88.79
207-08-9	Benzo[k]fluoranthene		17.93 ug/L	89.66
50-32-8	Benzo[a]pyrene		17.18 ug/L	85.92
193-39-5	Indeno[1,2,3-cd]pyrene		16.54 ug/L	82.70
53-70-3	Dibenz[a,h]anthracene		16.52 ug/L	82.60
191-24-2	Benzo[g,h,i]perylene		16.46 ug/L	82.28

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID (Standard): BNA05426.D Date Analyzed: 6/12/01

Instrument ID: GC_BNA_2 Time Analyzed: 9:38

		IS1DCB AREA	#	RT	#	IS2NAP AREA	#	RT	#	IS3ANE AREA	#	RT	#
	12 HOUR STD	602693		10.08		2407192		13.01		1561204		17.24	
	UPPER LIMIT	1205386		10.58		4814384		13.51		3122408		17.74	
	LOWER LIMIT	301347		9.58		1203596		12.51		780602		16.74	
	Field Id:												
01	MB 1892	509471		10.08		1986354		13.01		1132004		17.23	
02	LCS 1893	526889		10.08		2051839		13.01		1161068		17.23	
03	FB	324776		10.08		1280999		13.00		719072	*	17.23	
04	106	576285		10.08		2260589		13.00		871075		17.23	
05	804	577743		10.08		2292681		13.01		1307751		17.23	
06	FIELD DUPE	573238		10.08		2285663		13.00		1294734		17.23	
07	FB	321959		10.08		1235742		13.00		715388	*	17.23	

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: 010001 Case No.: 16175 Location: 106 SDG No.: _____

Lab File ID (Standard): BNA05426.D Date Analyzed: 06/12/01

Instrument ID: GC_BNA_2 Time Analyzed: 09:38

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2944443	20.83	3021758	27.29	2613074	30.51
	UPPER LIMIT	5888886	20.33	6043516	26.79	5226148	30.01
	LOWER LIMIT	1472222	21.33	1510879	27.79	1306537	31.01
	EPA SAMPLE NO.						
01	MB 1892	2105806	20.83	2084350	27.28	1584440	30.51
02	LCS 1893	2175953	20.83	2134466	27.28	1598915	30.51
03	FB	1318744*	20.82	1240702*	27.27	927838*	30.50
04	106	2181593	20.82	1760462	27.27	318564*	30.49
05	804	2406232	20.82	2370602	27.27	1766100	30.50
06	FIELD DUPE	2394107	20.82	2385039	27.27	1767444	30.50
07	FB	1334688*	20.82	1327761*	27.27	988829*	30.49

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 Reviewed)

Data File : D:\DATA\010612\BNA05439.D Vial: 13
Acq On : 12 Jun 2001 7:20 pm Operator: Bhaskar
Sample : MB 1892 Inst : GC/MS Ins
Misc : 12June2001 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 12 19:55 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.08	152	509471	40.00	ug/L	-0.04
19) Naphthalene-d8	13.01	136	1986354	40.00	ug/L	-0.04
34) Acenaphthene-d10	17.23	164	1132004	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.83	188	2105806	40.00	ug/L	-0.05
66) Chrysene-d12	27.28	240	2084350	40.00	ug/L	-0.06
75) Perylene-d12	30.51	264	1584440	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.42	112	576735	39.81	ug/L	0.06
Spiked Amount 100.000	Range 21 - 100		Recovery = 39.81%			
6) Phenol-d6	9.52	99	391758	21.45	ug/L	0.09
Spiked Amount 100.000	Range 10 - 94		Recovery = 21.45%			
20) Nitrobenzene-d5	11.41	82	529453	26.54	ug/L	-0.02
Spiked Amount 50.000	Range 35 - 114		Recovery = 53.08%			
38) 2-Fluorobiphenyl	15.64	172	950654	30.18	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery = 60.36%			
58) 2,4,6-Tribromophenol	19.19	330	287783	60.63	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 60.63%			
69) p-Terphenyl-d14	24.77	244	1219483	29.38	ug/L	-0.05
Spiked Amount 50.000	Range 33 - 141		Recovery = 58.76%			

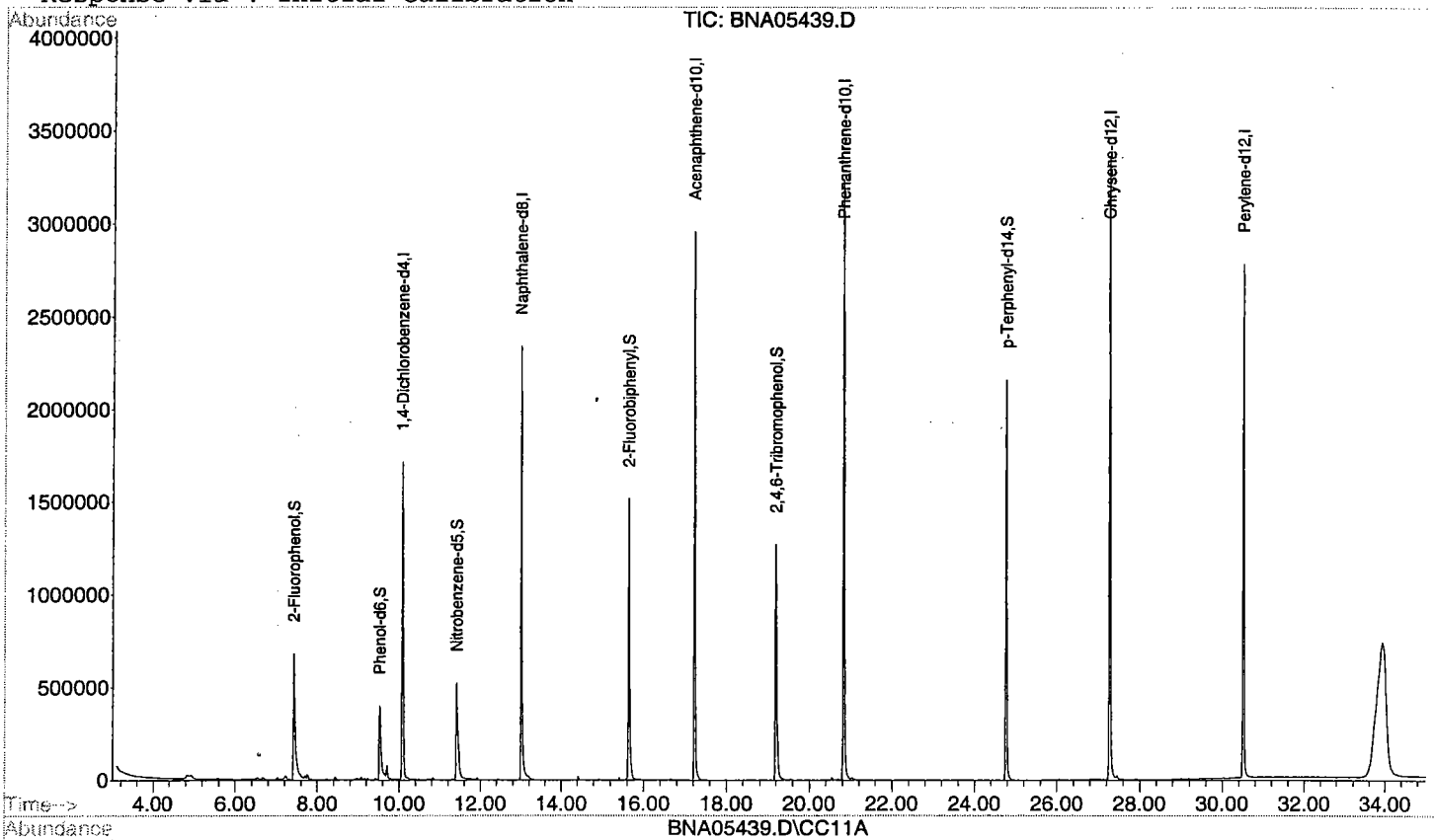
Target Compounds Qvalue

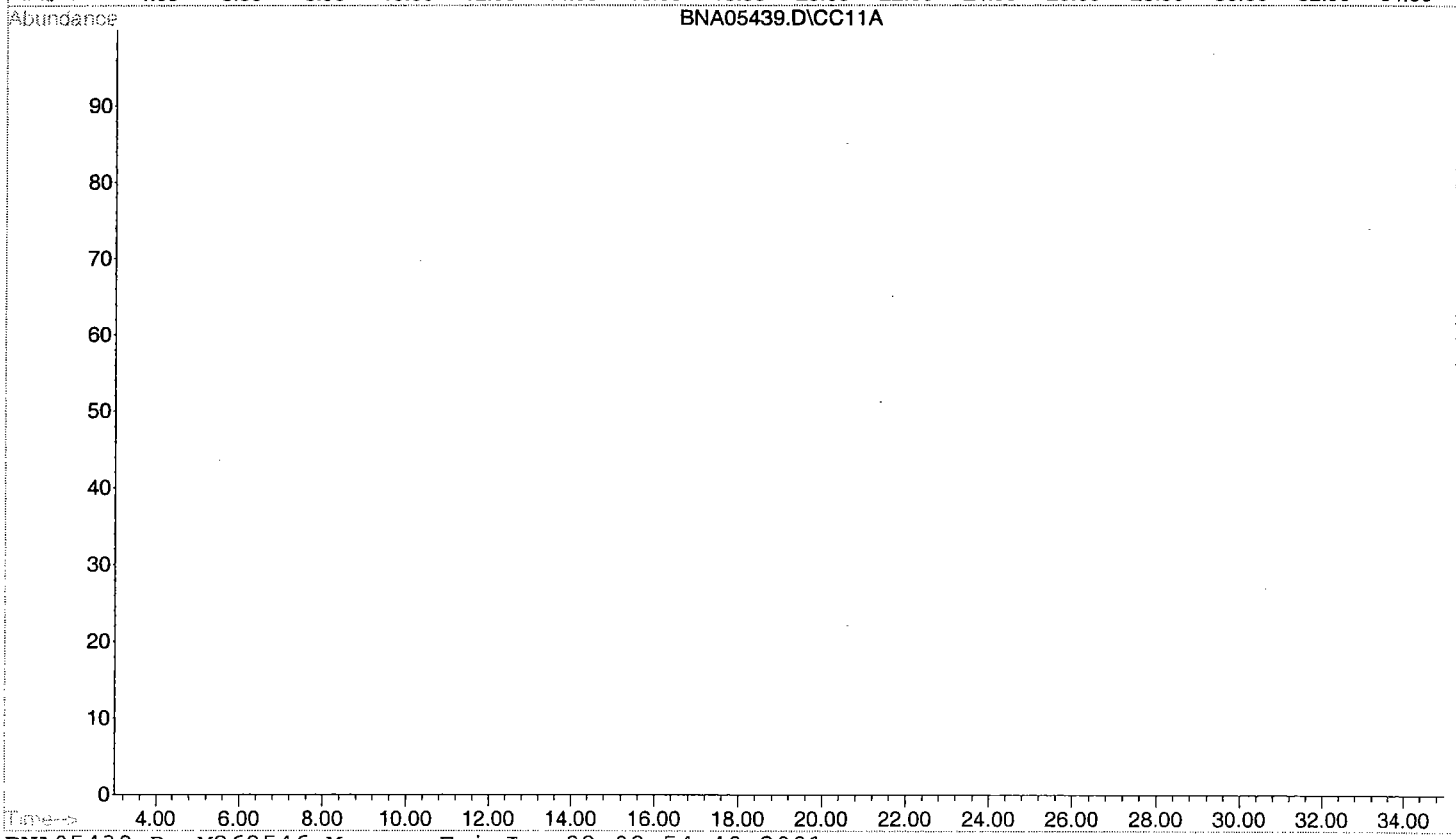
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\010612\BNA05439.D Vial: 13
Acq On : 12 Jun 2001 7:20 pm Operator: Bhaskar
Sample : MB 1892 Inst : GC/MS Ins
Misc : 12June2001 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 12 19:55 2001 Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data File : D:\DATA\010612\BNA05447.D Vial: 21
Acq On : 13 Jun 2001 1:06 am Operator: Bhaskar
Sample : 1617502 Inst : GC/MS Ins
Misc : FB Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 1:41 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.08	152	324776	40.00	ug/L	-0.04
19) Naphthalene-d8	13.00	136	1280999	40.00	ug/L	-0.05
34) Acenaphthene-d10	17.23	164	719072	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.82	188	1318744	40.00	ug/L	-0.06
66) Chrysene-d12	27.27	240	1240702	40.00	ug/L	-0.07
75) Perylene-d12	30.50	264	927838	40.00	ug/L	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.42	112	556186	60.22	ug/L	0.06
Spiked Amount 100.000	Range 21 - 100		Recovery = 60.22%			
6) Phenol-d6	9.52	99	415332	35.67	ug/L	0.09
Spiked Amount 100.000	Range 10 - 94		Recovery = 35.67%			
20) Nitrobenzene-d5	11.41	82	569258	44.25	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 88.50%			
38) 2-Fluorobiphenyl	15.64	172	1038289	51.89	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery = 103.78%			
58) 2,4,6-Tribromophenol	19.19	330	309198	104.03	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 123		Recovery = 104.03%			
69) p-Terphenyl-d14	24.77	244	1490543	60.32	ug/L	-0.06
Spiked Amount 50.000	Range 33 - 141		Recovery = 120.64%			

Target Compounds Qvalue

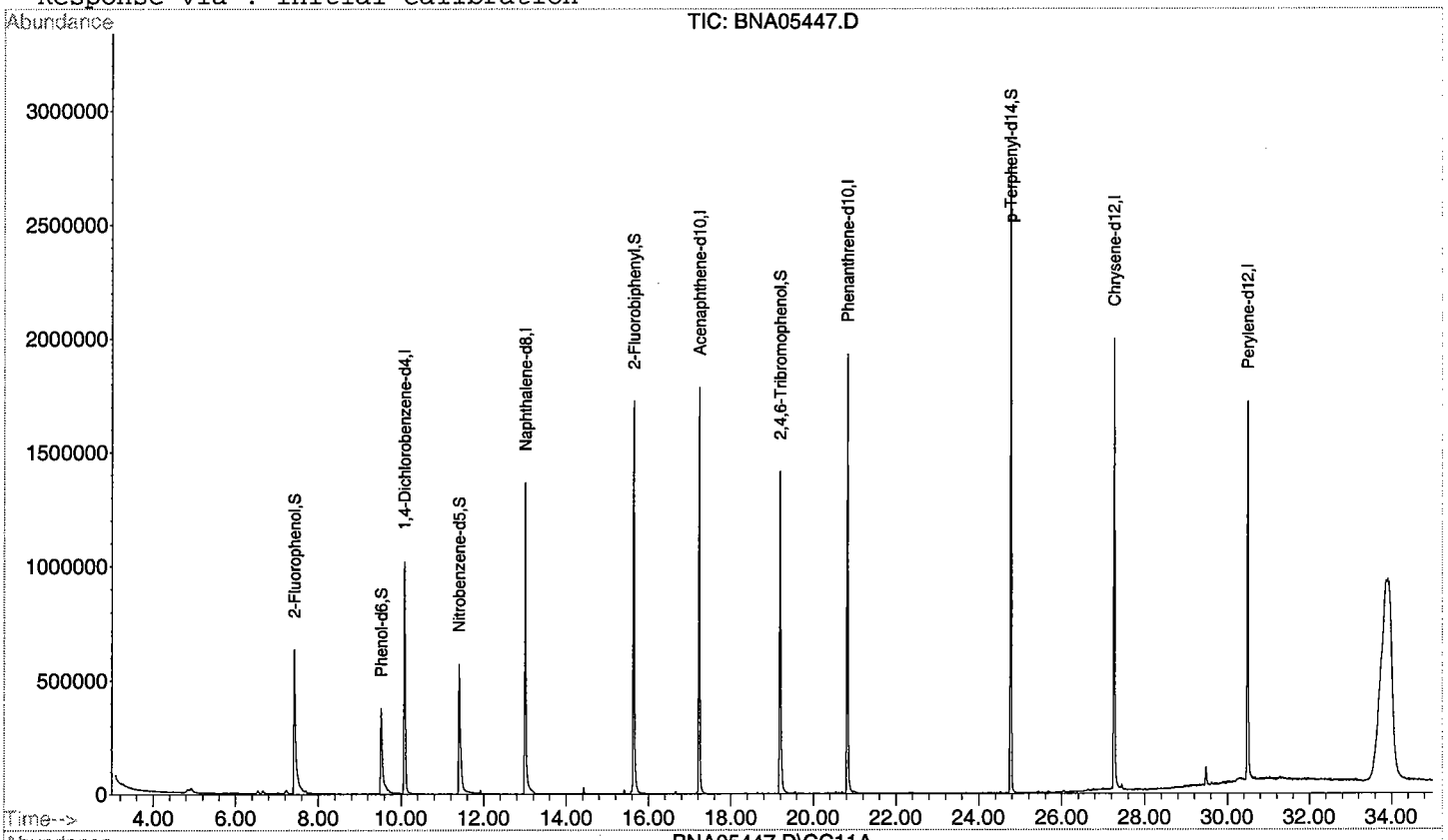
(#) = qualifier out of range (m) = manual integration

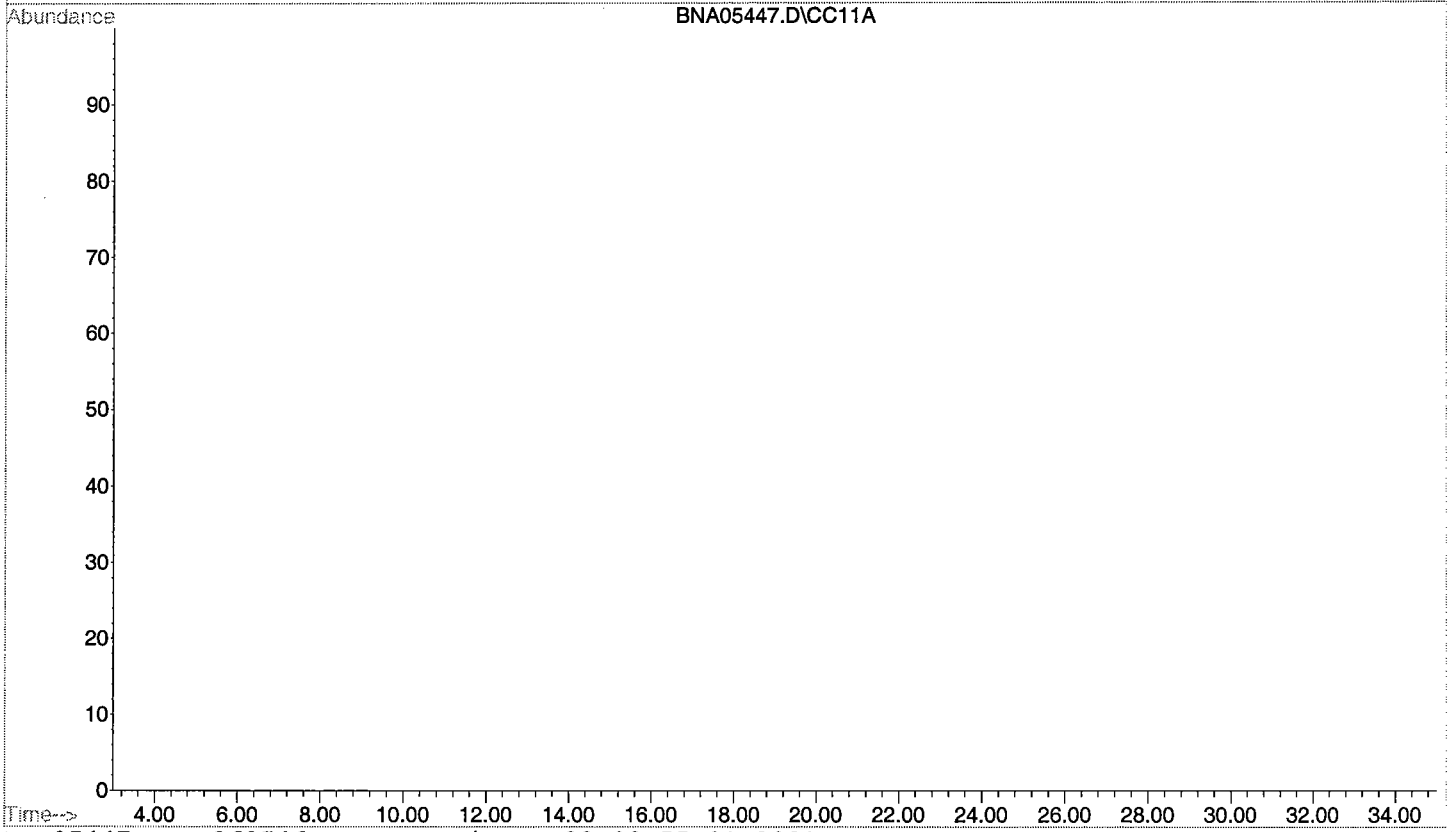
Quantitation Report

Data File : D:\DATA\010612\BNA05447.D
Acq On : 13 Jun 2001 1:06 am
Sample : 1617502
Misc : FB
MS Integration Params: RTEINT.P
Quant Time: Jun 13 1:41 2001

Vial: 21
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





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Quantitation Report (QT/LSC Reviewed)

Data File : D:\DATA\010612\BNA05448.D Vial: 22
Acq On : 13 Jun 2001 1:49 am Operator: Bhaskar
Sample : 1617503 Inst : GC/MS Ins
Misc : 106 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 2:24 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.08	152	576285	40.00	ug/L	-0.04
19) Naphthalene-d8	13.00	136	2260589	40.00	ug/L	-0.05
34) Acenaphthene-d10	17.23	164	871075	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.82	188	2181593	40.00	ug/L	-0.06
66) Chrysene-d12	27.27	240	1760462	40.00	ug/L	-0.07
75) Perylene-d12	30.49	264	318564	40.00	ug/L	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.43	112	719812	43.93	ug/L	0.07
Spiked Amount 100.000	Range 21 - 100		Recovery = 43.93%			
6) Phenol-d6	9.52	99	467004	22.61	ug/L	0.10
Spiked Amount 100.000	Range 10 - 94		Recovery = 22.61%			
20) Nitrobenzene-d5	11.40	82	688750	30.34	ug/L	-0.04
Spiked Amount 50.000	Range 35 - 114		Recovery = 60.68%			
38) 2-Fluorobiphenyl	15.64	172	1252211	51.66	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery = 103.32%			
58) 2,4,6-Tribromophenol	19.19	330	408102	83.00	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 123		Recovery = 83.00%			
69) p-Terphenyl-d14	24.77	244	1406468	40.11	ug/L	-0.06
Spiked Amount 50.000	Range 33 - 141		Recovery = 80.22%			
Target Compounds						Qvalue
50) Diethylphthalate	18.42	149	143095	5.90	ug/L	98

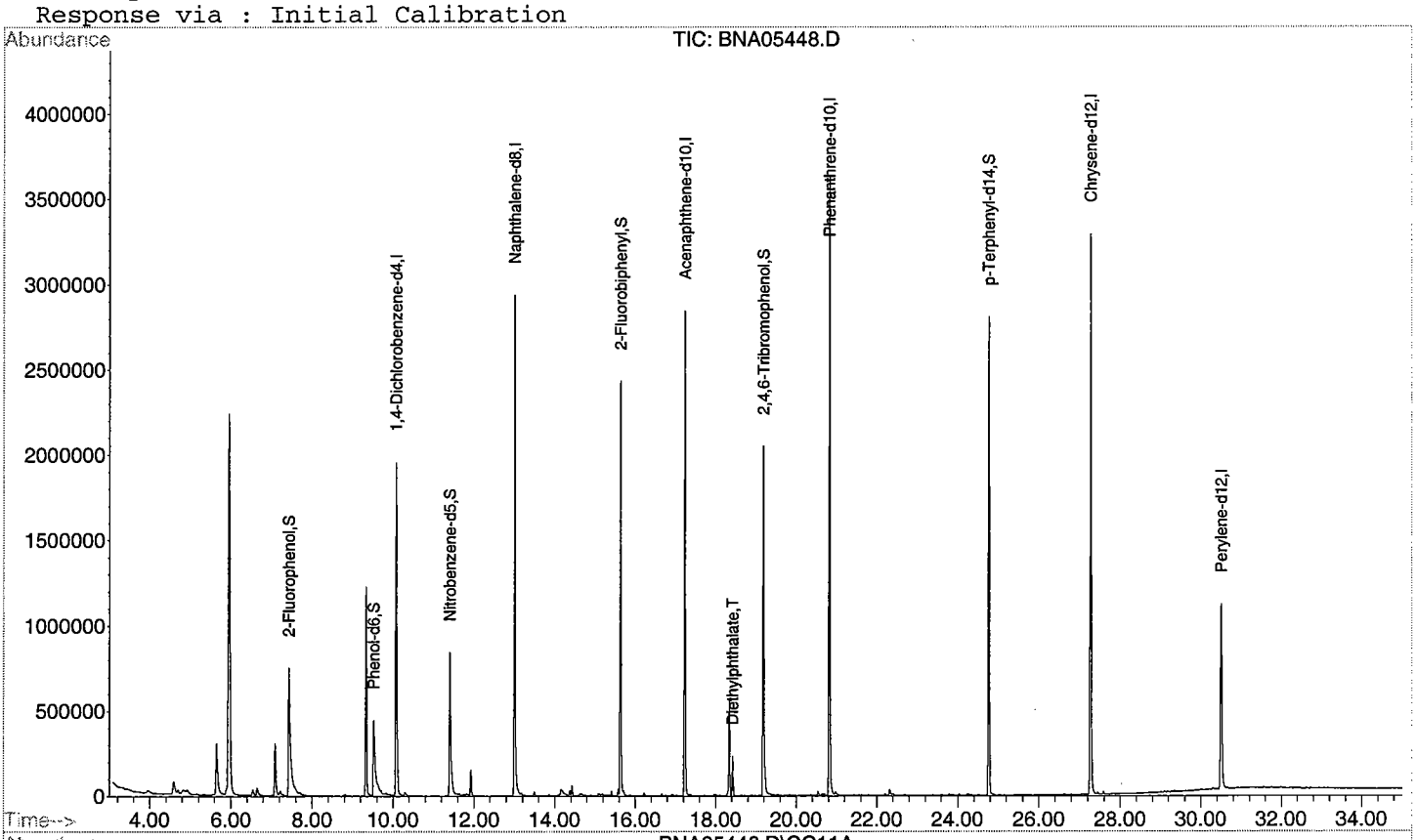
(#) = qualifier out of range (m) = manual integration

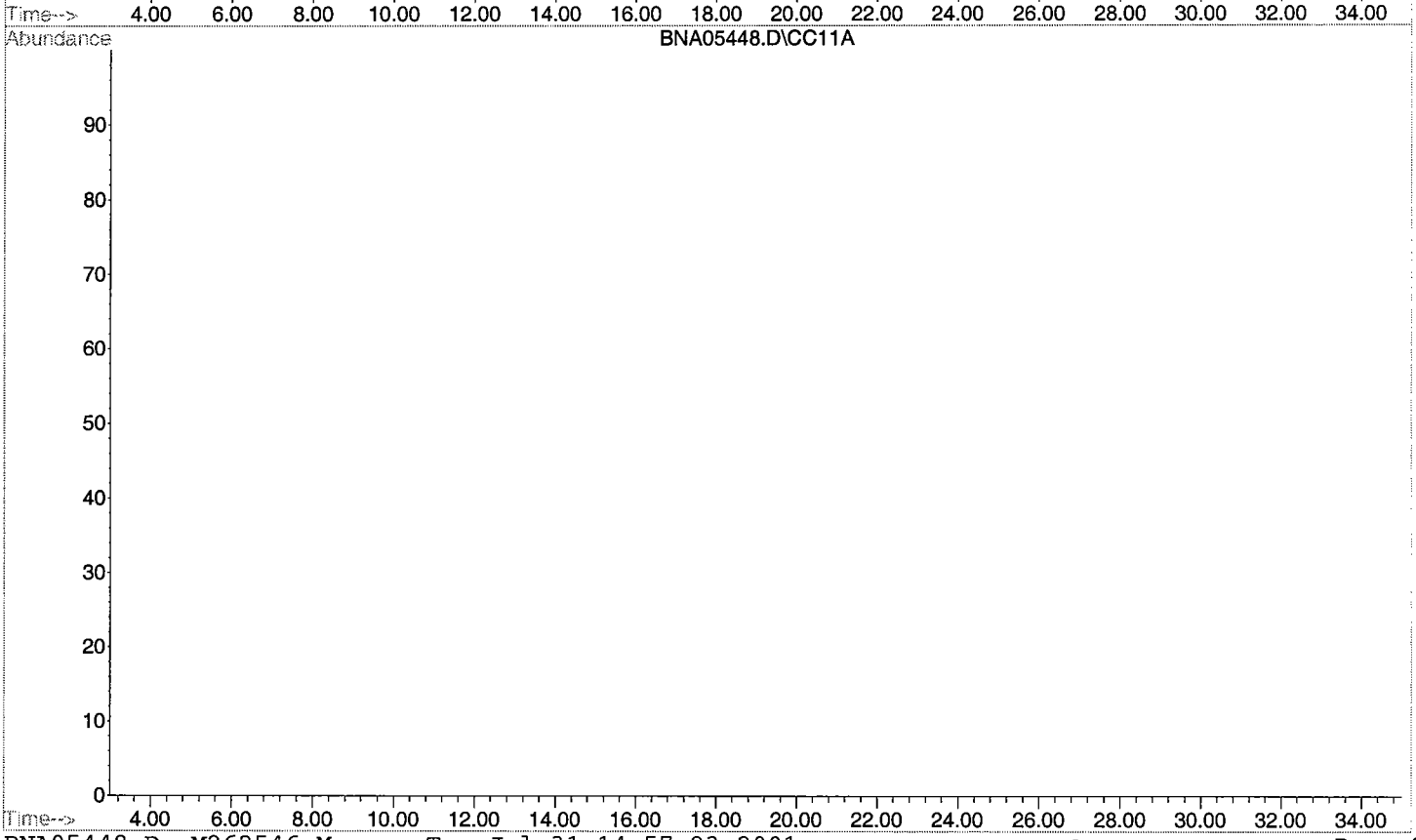
Quantitation Report

Data File : D:\DATA\010612\BNA05448.D
Acq On : 13 Jun 2001 1:49 am
Sample : 1617503
Misc : 106
MS Integration Params: RTEINT.P
Quant Time: Jun 13 2:24 2001

Vial: 22
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 07:39:38 2001
Response via : Initial Calibration





PECT/PCB's

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

Client :	U.S. Army	**Lab. ID # :**	MB-1898
	DPW, SELFM-PW-EV	**Date Rec'd:**	
	Bldg. 173	**Extraction Date:**	6/14/01
	Ft. Monmouth, NJ 07703	**Analysis Date:**	6/26/01
Analysis:	EPA Method 608	**Location :**	
Matrix:	Aqueous		
Analyst:	T. Frankovich	**Field ID:**	
Ext. Meth:	Sep. Funnel		

Pesticide/PCB	Dilution Factor	Retention Time	Regulatory Level * (ug/L)	MDL (ug/L)	Result (ug/L)
alpha-BHC	1		0.02	0.0011	ND
beta-BHC	1		0.20	0.0050	ND
gamma-BHC	1		0.20	0.0013	ND
delta-BHC	1		NLE	0.0016	ND
Heptachlor	1		0.40	0.0035	ND
Aldrin	1		0.04	0.0026	ND
Heptachlor Epoxide	1		0.20	0.0020	ND
Endosulfan I	1		0.40	0.0016	ND
4,4'-DDE	1		0.10	0.0021	ND
Dieldrin	1		0.03	0.0020	ND
Endrin	1		2.00	0.0032	ND
Endrin Ketone	1		NLE	0.0026	ND
Endosulfan II	1		0.40	0.0022	ND
4,4'-DDD	1		0.10	0.0020	ND
4,4'-DDT	1		0.10	0.0052	ND
Endosulfan-Sulfate	1		0.40	0.0026	ND
Alpha-chlordane	1		0.50	0.0036	ND
Gamma-chlordane	1		0.50	0.0007	ND
Toxaphene	1		3.00	0.1517	ND
Arochlor 1016	1		0.50	0.0683	ND
Arochlor 1221	1		0.50	0.0666	ND
Arochlor 1232	1		0.50	0.0648	ND
Arochlor 1242	1		0.50	0.0485	ND
Arochlor 1248	1		0.50	0.0544	ND
Arochlor 1254	1		0.50	0.0608	ND
Arochlor 1260	1		0.50	0.0732	ND

* Higher of PQL's and ground water criteria as per NJAC 7:9-6

ND = Not Detected
MDL = Method Detection Limit
NLE = No Limit Established
PQL = Practical Quantitation Limit

Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.25um

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

Client :	U.S. Army	**Lab. ID # :**	16175.02
	DPW, SELFM-PW-EV	**Date Rec'd:**	6/8/01
	Bldg. 173	**Extraction Date:**	6/14/01
	Ft. Monmouth, NJ 07703	**Analysis Date:**	6/26/01
Analysis:	EPA Method 608	**Location :**	Bldg 106
Matrix:	Aqueous		
Analyst:	T. Frankovich	**Field ID:**	F.B.
Ext. Meth:	Sep. Funnel		

Pesticide/PCB	Dilution Factor	Retention Time	Regulatory Level * (ug/L)	MDL (ug/L)	Result (ug/L)
alpha-BHC	1		0.02	0.0011	ND
beta-BHC	1		0.20	0.0050	ND
gamma-BHC	1		0.20	0.0013	ND
delta-BHC	1		NLE	0.0016	ND
Heptachlor	1		0.40	0.0035	ND
Aldrin	1		0.04	0.0026	ND
Heptachlor Epoxide	1		0.20	0.0020	ND
Endosulfan I	1		0.40	0.0016	ND
4,4'-DDE	1		0.10	0.0021	ND
Dieldrin	1		0.03	0.0020	ND
Endrin	1		2.00	0.0032	ND
Endrin Ketone	1		NLE	0.0026	ND
Endosulfan II	1		0.40	0.0022	ND
4,4'-DDD	1		0.10	0.0020	ND
4,4'-DDT	1		0.10	0.0052	ND
Endosulfan-Sulfate	1		0.40	0.0026	ND
Alpha-chlordane	1		0.50	0.0036	ND
Gamma-chlordane	1		0.50	0.0007	ND
Toxaphene	1		3.00	0.1517	ND
Arochlor 1016	1		0.50	0.0683	ND
Arochlor 1221	1		0.50	0.0666	ND
Arochlor 1232	1		0.50	0.0648	ND
Arochlor 1242	1		0.50	0.0485	ND
Arochlor 1248	1		0.50	0.0544	ND
Arochlor 1254	1		0.50	0.0608	ND
Arochlor 1260	1		0.50	0.0732	ND

* Higher of PQL's and ground water criteria as per NJAC 7:9-6

ND = Not Detected
MDL = Method Detection Limit
NLE = No Limit Established
PQL = Practical Quantitation Limit

Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.25um

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

[redacted]

Client :	U.S. Army	**Lab. ID # :**	16175.03
	DPW, SELFM-PW-EV	**Date Rec'd:**	6/8/01
	Bldg. 173	**Extraction Date:**	6/14/01
	Ft. Monmouth, NJ 07703	**Analysis Date:**	6/26/01
Analysis:	EPA Method 608	**Location :**	Bldg 106
Matrix:	Aqueous		
Analyst:	T. Frankovich	**Field ID:**	106-2 9'
Ext. Meth:	Sep. Funnel		

Pesticide/PCB	Dilution Factor	Retention Time	Regulatory Level * (ug/L)	MDL (ug/L)	Result (ug/L)
alpha-BHC	1		0.02	0.0011	ND
beta-BHC	1		0.20	0.0050	ND
gamma-BHC	1		0.20	0.0013	ND
delta-BHC	1		NLE	0.0016	ND
Heptachlor	1		0.40	0.0035	ND
Aldrin	1		0.04	0.0026	ND
Heptachlor Epoxide	1		0.20	0.0020	ND
Endosulfan I	1		0.40	0.0016	ND
4,4'-DDE	1		0.10	0.0021	ND
Dieldrin	1		0.03	0.0020	ND
Endrin	1		2.00	0.0032	ND
Endrin Ketone	1		NLE	0.0026	ND
Endosulfan II	1		0.40	0.0022	ND
4,4'-DDD	1		0.10	0.0020	ND
4,4'-DDT	1		0.10	0.0052	ND
Endosulfan-Sulfate	1		0.40	0.0026	ND
Alpha-chlordane	1	16.94	0.50	0.0036	**0.605**
Gamma-chlordane	1	16.30	0.50	0.0007	**0.572**
Toxaphene	1		3.00	0.1517	ND
Arochlor 1016	1		0.50	0.0683	ND
Arochlor 1221	1		0.50	0.0666	ND
Arochlor 1232	1		0.50	0.0648	ND
Arochlor 1242	1		0.50	0.0485	ND
Arochlor 1248	1		0.50	0.0544	ND
Arochlor 1254	1		0.50	0.0608	ND
Arochlor 1260	1		0.50	0.0732	ND

* Higher of PQL's and ground water criteria as per NJAC 7:9-6

ND = Not Detected
MDL = Method Detection Limit
NLE = No Limit Established
PQL = Practical Quantitation Limit

Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.25um

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 2001

Calibration Files
40 =PPB04731.D 20 =PPB04730.D 1 =PPB04728.D
10 =PPB04729.D 60 =PPB04732.D

		Compound	40	20	1	10	60	Avg		%RSD
1)	S	Tetrachlor-m-xylene	4.436	4.756	5.480	5.107	4.391	4.834	E4	9.55
2)	TCM	alpha-BHC	6.550	6.431	7.351	6.237	6.685	6.651	E4	6.38
3)	TCM	beta-BHC	2.690	2.944	3.016	3.117	2.644	2.882	E4	7.15
4)	TCM	gamma-BHC	6.038	6.033	7.224	5.924	6.134	6.270	E4	8.58
5)	TCM	delta-BHC	5.599	5.493	6.371	5.362	5.755	5.716	E4	6.88
6)	TCM	Heptachlor	4.769	4.783	6.156	4.947	4.840	5.099	E4	11.66
7)	TCM	Aldrin	5.319	5.369	6.543	5.437	5.425	5.619	E4	9.24
8)	TCM	Heptachlor epoxide	5.045	5.170	6.283	5.420	5.041	5.392	E4	9.67
9)	TCM	gamma-Chlordane	5.022	5.189	6.185	5.407	5.061	5.373	E4	8.91
10)	TCM	alpha-Chlordane	4.951	5.117	5.969	5.316	4.936	5.258	E4	8.11
11)	TCM	Endosulfan I	4.998	5.205	6.150	5.372	4.956	5.336	E4	9.09
12)	TCM	4,4'-DDE	4.197	4.170	4.598	4.286	4.302	4.310	E4	3.95
13)	TCM	Dieldrin	4.976	4.997	6.015	5.184	5.045	5.243	E4	8.37
14)	TCM	Endrin	3.785	3.705	4.601	3.950	3.695	3.947	E4	9.62
15)	TCM	Endosulfan II	4.464	4.625	5.394	4.877	4.453	4.762	E4	8.24
16)	TCM	4,4'-DDD	3.782	3.986	4.175	4.259	3.793	3.999	E4	5.43
17)	TCM	Endrin aldehyde	3.266	3.421	3.760	3.570	3.269	3.457	E4	6.10
18)	TCM	4,4'-DDT	3.299	3.259	3.727	3.400	3.363	3.410	E4	5.45
19)	TCM	Endosulfan sulfate	3.747	3.881	4.371	4.099	3.719	3.963	E4	6.88
20)	TC	Endrin ketone	4.979	5.137	5.768	5.462	5.052	5.280	E4	6.24
21)	TC	Methoxychlor	1.730	1.690	1.754	1.718	1.650	1.709	E4	2.34
22)	S	Decachlorobiphenyl	3.551	3.922	3.937	4.319	3.568	3.859	E4	8.21

Signal #2 Calibration Files
40 =PPB04731.D 20 =PPB04730.D 1 =PPB04728.D
10 =PPB04729.D 60 =PPB04732.D

		Compound	40	20	1	10	60	Avg		%RSD
1)	S	Tetrachlor-m-xylene	8.543	8.845	9.118	8.597	8.670	8.755	E4	2.66
2)	TC	alpha-BHC	1.351	1.283	1.033	1.133	1.412	1.243	E5	12.59
3)	TC	beta-BHC	5.383	5.573	5.171	5.329	5.365	5.364	E4	2.68
4)	TC	gamma-BHC	1.236	1.196	1.053	1.071	1.285	1.169	E5	8.73
5)	TC	delta-BHC	1.140	1.057	0.880	0.916	1.186	1.036	E5	12.98
6)	TC	Heptachlor	1.050	1.011	0.956	0.944	1.063	1.005	E5	5.34
7)	TC	Aldrin	1.147	1.106	0.951	1.029	1.178	1.082	E5	8.51
8)	TC	Heptachlor epoxide	1.053	1.042	1.018	1.014	1.072	1.040	E5	2.35
9)	TC	gamma-Chlordane	1.077	1.077	1.025	1.009	1.107	1.059	E5	3.84
10)	TC	alpha-Chlordane	1.048	1.053	1.043	0.994	1.066	1.041	E5	2.62
11)	TC	Endosulfan I	9.932	9.914	9.460	9.327	9.975	9.722	E4	3.13
12)	TC	4,4'-DDE	9.305	9.030	7.823	8.112	9.625	8.779	E4	8.85
13)	TC	Dieldrin	1.049	1.027	0.952	0.954	1.082	1.013	E5	5.73
14)	TC	Endrin	7.654	7.191	7.315	6.832	7.545	7.307	E4	4.41
15)	TC	Endosulfan II	9.569	9.573	9.186	9.315	9.539	9.437	E4	1.87
16)	TC	4,4'-DDD	7.461	7.235	6.530	6.802	7.617	7.129	E4	6.37
17)	TC	Endrin aldehyde	6.775	6.966	7.855	6.935	6.887	7.083	E4	6.17
18)	TC	4,4'-DDT	6.683	6.005	5.562	5.876	6.742	6.174	E4	8.39
19)	TC	Endosulfan sulfate	7.746	7.622	7.403	7.639	7.766	7.635	E4	1.89
20)	TC	Endrin ketone	0.999	1.021	0.923	1.050	1.011	1.001	E5	4.72
21)	TC	Methoxychlor	3.339	3.207	2.718	2.870	3.316	3.090	E4	9.06
22)	S	Decachlorobiphenyl	7.774	8.167	9.189	8.347	7.292	8.154	E4	8.66

(#) = Out of Range

PP061101.M Thu Jul 19 10:18:51 2001 GC

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04829.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04829.D\ECD2B.CH
Acq On : 6-26-01 8:33:48 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 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	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Tetrachlor-m-xylene	40.000	34.833	12.9	97	0.00
2	TCM	alpha-BHC	40.000	36.776	8.1	95	0.00
3	TCM	beta-BHC	40.000	35.656	10.9	96	0.00
4	TCM	gamma-BHC	40.000	36.072	9.8	96	0.00
5	TCM	delta-BHC	40.000	36.774	8.1	96	0.00
6	TCM	Heptachlor	40.000	39.777	0.6	97	0.00
7	TCM	Aldrin	40.000	35.127	12.2	95	0.00
8	TCM	Heptachlor epoxide	40.000	34.978	12.6	96	0.00
9	TCM	gamma-Chlordane	40.000	34.736	13.2	96	0.00
10	TCM	alpha-Chlordane	40.000	34.999	12.5	96	0.00
11	TCM	Endosulfan I	40.000	34.938	12.7	97	0.00
12	TCM	4,4'-DDE	40.000	35.892	10.3	94	0.00
13	TCM	Dieldrin	40.000	35.170	12.1	96	0.00
14	TCM	Endrin	40.000	36.578	8.6	91	0.00
15	TCM	Endosulfan II	40.000	34.494	13.8	95	0.00
16	TCM	4,4'-DDD	40.000	34.513	13.7	91	0.00
17	TCM	Endrin aldehyde	40.000	34.689	13.3	100	0.00
18	TCM	4,4'-DDT	40.000	37.792	5.5	94	0.00
19	TCM	Endosulfan sulfate	40.000	35.551	11.1	93	0.00
20	TC	Endrin ketone	40.000	34.778	13.1	95	0.00
21	TC	Methoxychlor	40.000	39.928	0.2	88	0.00
22	S	Decachlorobiphenyl	40.000	34.352	14.1	94	0.00

Signal #2

1	S	Tetrachlor-m-xylene	40.000	36.933	7.7	95	0.00
2	TC	alpha-BHC	40.000	36.846	7.9	95	0.00
3	TC	beta-BHC	40.000	37.506	6.2	95	0.00
4	TC	gamma-BHC	40.000	39.909	0.2	95	0.00
5	TC	delta-BHC	40.000	36.904	7.7	95	0.00
6	TC	Heptachlor	40.000	40.847	-2.1	95	0.00
7	TC	Aldrin	40.000	38.814	3.0	94	0.00
8	TC	Heptachlor epoxide	40.000	37.818	5.5	92	0.00
9	TC	gamma-Chlordane	40.000	37.942	5.1	94	0.00
10	TC	alpha-Chlordane	40.000	37.406	6.5	94	0.00
11	TC	Endosulfan I	40.000	37.539	6.2	93	0.00
12	TC	4,4'-DDE	40.000	39.098	2.3	90	0.00
13	TC	Dieldrin	40.000	38.415	4.0	94	0.00
14	TC	Endrin	40.000	39.785	0.5	87	0.00
15	TC	Endosulfan II	40.000	37.309	6.7	89	0.00
16	TC	4,4'-DDD	40.000	37.982	5.0	87	0.00
17	TC	Endrin aldehyde	40.000	35.300	11.8	95	0.00
18	TC	4,4'-DDT	40.000	41.657	-4.1	98	0.00
19	TC	Endosulfan sulfate	40.000	37.566	6.1	87	0.00
20	TC	Endrin ketone	40.000	36.752	8.1	93	0.00
21	TC	Methoxychlor	40.000	40.875	-2.2	94	0.00
22	S	Decachlorobiphenyl	40.000	34.168	14.6	82	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04829.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04829.D\ECD2B.CH
Acq On : 6-26-01 8:33:48 AM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 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	Amount	Calc.	%Dev	Area%	Dev(Min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PPB04894.D PP061101.M Thu Jul 19 10:18:26 2001 GC

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04846.D\ECD1A.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04846.D\ECD2B.CH
Acq On : 6-26-01 6:08:37 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 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	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Tetrachlor-m-xylene	40.000	35.128	12.2	98	0.00
2	TCM	alpha-BHC	40.000	37.081	7.3	96	0.00
3	TCM	beta-BHC	40.000	35.758	10.6	97	0.00
4	TCM	gamma-BHC	40.000	36.429	8.9	97	0.00
5	TCM	delta-BHC	40.000	37.329	6.7	98	0.00
6	TCM	Heptachlor	40.000	38.468	3.8	94	0.00
7	TCM	Aldrin	40.000	35.169	12.1	96	0.00
8	TCM	Heptachlor epoxide	40.000	35.114	12.2	96	0.00
9	TCM	gamma-Chlordane	40.000	35.084	12.3	97	0.00
10	TCM	alpha-Chlordane	40.000	35.109	12.2	96	0.00
11	TCM	Endosulfan I	40.000	34.967	12.6	97	0.00
12	TCM	4,4'-DDE	40.000	36.363	9.1	95	0.00
13	TCM	Dieldrin	40.000	35.053	12.4	96	0.00
14	TCM	Endrin	40.000	37.752	5.6	94	0.00
15	TCM	Endosulfan II	40.000	34.571	13.6	96	0.00
16	TCM	4,4'-DDD	40.000	36.129	9.7	95	0.00
17	TCM	Endrin aldehyde	40.000	35.440	11.4	102	0.00
18	TCM	4,4'-DDT	40.000	38.682	3.3	96	0.00
19	TCM	Endosulfan sulfate	40.000	37.225	6.9	98	0.00
20	TC	Endrin ketone	40.000	36.169	9.6	99	0.00
21	TC	Methoxychlor	40.000	41.143	-2.9	91	0.00
22	S	Decachlorobiphenyl	40.000	34.733	13.2	95	0.00

Signal #2

1	S	Tetrachlor-m-xylene	40.000	36.678	8.3	95	0.00
2	TC	alpha-BHC	40.000	36.098	9.8	93	0.00
3	TC	beta-BHC	40.000	36.912	7.7	93	0.00
4	TC	gamma-BHC	40.000	39.277	1.8	94	0.00
5	TC	delta-BHC	40.000	35.958	10.1	93	0.00
6	TC	Heptachlor	40.000	38.808	3.0	90	0.00
7	TC	Aldrin	40.000	37.864	5.3	91	0.00
8	TC	Heptachlor epoxide	40.000	36.961	7.6	90	0.00
9	TC	gamma-Chlordane	40.000	36.740	8.1	91	0.00
10	TC	alpha-Chlordane	40.000	36.290	9.3	92	0.00
11	TC	Endosulfan I	40.000	36.365	9.1	90	0.00
12	TC	4,4'-DDE	40.000	37.997	5.0	87	0.00
13	TC	Dieldrin	40.000	37.178	7.1	91	0.00
14	TC	Endrin	40.000	39.835	0.4	87	0.00
15	TC	Endosulfan II	40.000	36.333	9.2	87	0.00
16	TC	4,4'-DDD	40.000	37.608	6.0	86	0.00
17	TC	Endrin aldehyde	40.000	34.838	12.9	94	0.00
18	TC	4,4'-DDT	40.000	40.704	-1.8	95	0.00
19	TC	Endosulfan sulfate	40.000	37.998	5.0	88	0.00
20	TC	Endrin ketone	40.000	36.228	9.4	92	0.00
21	TC	Methoxychlor	40.000	44.094	-10.2	102	0.00
22	S	Decachlorobiphenyl	40.000	34.291	14.3	82	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04846.D\ECD1A.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04846.D\ECD2B.CH
Acq On : 6-26-01 6:08:37 PM Operator:
Sample : PST STD 40 PPB Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 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	Amount	Calc.	%Dev	Area% Dev(Min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PPB04894.D PP061101.M Thu Jul 19 10:19:18 2001 GC

Calibration Retention Time Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 2001
Response via : Initial Calibration

First Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04729.D\ECD1A.CH
Second Calibration Standard : PPB04730.D
Third Calibration Standard : PPB04732.D

	Compound	RT of Standard First	Second	Third	Mean RT	RT Window From	To
1	Tetrachlor-m-xylene	9.780	9.779	9.778	9.779	9.763	9.821
2	alpha-BHC	11.467	11.466	11.466	11.466	11.444	11.514
3	beta-BHC	12.631	12.630	12.629	12.630	12.608	12.676
4	gamma-BHC	12.372	12.371	12.371	12.371	12.348	12.420
5	delta-BHC	13.110	13.109	13.108	13.109	13.088	13.156
6	Heptachlor	13.662	13.661	13.661	13.661	13.640	13.710
7	Aldrin	14.446	14.445	14.445	14.446	14.425	14.493
8	Heptachlor epoxide	15.986	15.984	15.984	15.985	15.962	16.036
9	gamma-Chlordane	16.290	16.289	16.289	16.289	16.268	16.340
10	alpha-Chlordane	16.614	16.613	16.613	16.613	16.593	16.663
11	Endosulfan I	16.950	16.948	16.948	16.949	16.922	17.004
12	4,4'-DDE	16.802	16.800	16.799	16.800	16.779	16.851
13	Dieldrin	17.525	17.524	17.523	17.524	17.501	17.579
14	Endrin	18.082	18.080	18.081	18.081	18.058	18.136
15	Endosulfan II	18.615	18.614	18.613	18.614	18.589	18.671
16	4,4'-DDD	18.227	18.223	18.220	18.223	18.203	18.273
17	Endrin aldehyde	19.602	19.599	19.598	19.600	19.575	19.657
18	4,4'-DDT	18.873	18.870	18.869	18.870	18.851	18.921
19	Endosulfan sulfate	20.624	20.623	20.622	20.623	20.599	20.679
20	Endrin ketone	21.289	21.287	21.285	21.287	21.260	21.348
21	Methoxychlor	19.978	19.975	19.972	19.975	19.953	20.027
22	Decachlorobiphenyl	23.670	23.666	23.666	23.667	23.652	23.722

Signal #2

First Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04729.D\ECD2B.CH
Second Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04730.D\ECD2B.CH
Third Calibration Standard : C:\HPCHEM\1\DATA\010611\PPB04732.D\ECD2B.CH

	Compound	RT of Standard First	Second	Third	Mean RT	RT Window From	To
1	Tetrachlor-m-xylene	9.860	9.859	9.858	9.859	9.841	9.899
2	alpha-BHC	11.708	11.708	11.707	11.708	11.683	11.753
3	beta-BHC	12.952	12.951	12.950	12.951	12.927	12.995
4	gamma-BHC	12.707	12.707	12.706	12.707	12.681	12.753
5	delta-BHC	13.730	13.728	13.727	13.729	13.705	13.773
6	Heptachlor	13.863	13.863	13.863	13.863	13.838	13.908
7	Aldrin	14.690	14.689	14.690	14.690	14.666	14.734
8	Heptachlor epoxide	16.126	16.125	16.126	16.126	16.100	16.174
9	gamma-Chlordane	16.581	16.579	16.579	16.580	16.555	16.627
10	alpha-Chlordane	16.935	16.934	16.934	16.935	16.910	16.980
11	Endosulfan I	17.071	17.070	17.070	17.070	17.040	17.122
12	4,4'-DDE	17.343	17.342	17.340	17.342	17.316	17.388
13	Dieldrin	17.725	17.724	17.724	17.725	17.697	17.775
14	Endrin	18.447	18.447	18.447	18.447	18.420	18.498
15	Endosulfan II	18.943	18.941	18.941	18.941	18.912	18.994
16	4,4'-DDD	18.701	18.697	18.694	18.697	18.673	18.743
17	Endrin aldehyde	19.730	19.728	19.727	19.728	19.700	19.782
18	4,4'-DDT	19.420	19.418	19.416	19.418	19.394	19.464
19	Endosulfan sulfate	20.368	20.366	20.365	20.366	20.339	20.419
20	Endrin ketone	21.631	21.630	21.628	21.629	21.597	21.685
21	Methoxychlor	20.992	20.992	20.989	20.991	20.963	21.037
22	Decachlorobiphenyl	24.779	24.777	24.777	24.778	24.738	24.848

GC QA-QC Check Report

Daily Calibration File : C:\HPCHEM\1\DATA\980821\PPC02560.D
Time Acquired : 8-23-98 12:53:00 AM

File	Sample	Surrogate Recovery %				Internal Standard Responses
PPB04832.Dt	MB-1898A	80	80	75	73	
PPB04833.Dt	LCS-1899	80	25	76	25	
PPB04835.Dt	16175.02	73	68	64	60	
PPB04836.Dt	16175.03	94	26	74	28	

t - fails 24hr time check * - fails criteria

Created: Thu Jul 19 10:20:13 2001 GC
MS Ins

Spike Recovery Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\608\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Fri Jul 13 14:18:47 2001
Response via : Initial Calibration

Non-Spiked Sample: PPB04832.D

Spike Sample

File ID : PPB04833.D
Sample : LCS-1899A
Acq Time: 6-26-01 10:47:53 AM

Compound	Sample Conc	Spike Added	Spike Res	Spike %Rec	QC Limits % Rec
alpha-BHC	0.0	10	8	76	31-158
beta-BHC	0.0	10	11	111	58-158
gamma-BHC	0.0	10	8	79	41-156
delta-BHC	0.0	10	8	79	0-191
Heptachlor	0.0	10	10	101	39-148
Aldrin	0.0	10	8	81	24-152
Heptachlor epoxide	0.0	10	9	92	42-155
gamma-Chlordane	0.0	10	8	80	0-D
alpha-Chlordane	0.0	10	8	84	0-D
Endosulfan I	0.0	10	1	10#	39-156
4,4'-DDE	0.0	10	10	96	43-166
Dieldrin	0.0	10	9	94	39-156
Endrin	0.0	10	11	106	48-174
Endosulfan II	0.0	10	1	15#	45-162
4,4'-DDD	0.0	10	10	99	50-184
Endrin aldehyde	0.0	10	11	107	54-146
4,4'-DDT	0.0	10	10	103	52-175
Endosulfan sulfate	0.0	10	11	111	54-164

- Fails Limit Check

PP061101.M Thu Jul 19 10:20:37 2001 GC

Injection Log

Directory: C:\HPCHEM\1\DATA\010626

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	PPB04828.D	0.	ED		6/26/012008 8:00:0
2	2	PPB04829.D	0.	PST STD 40 PPB		6/26/012008 8:33:4
3	3	PPB04830.D	0.	A-1016/1260 0.5 PPM		6/26/012009 9:07:4
4	4	PPB04831.D	0.	TOXAPHENE 0.5 PPM		6/26/012009 9:40:1
5	5	PPB04832.D	0.	MB-1898A		6/26/012010 10:14:0
6	6	PPB04833.D	0.	LCS-1899A		6/26/012010 10:47:5
7	7	PPB04834.D	0.	16174.16A		6/26/012011 11:21:4
8	8	PPB04835.D	0.	16175.02A		6/26/012011 11:56:4
9	9	PPB04836.D	0.	16175.03A		6/26/012012 12:30:3
10	10	PPB04837.D	0.	MBA		6/26/012001 1:04:2
11	11	PPB04838.D	0.	LCSA		6/26/012001 1:38:0
12	12	PPB04839.D	0.	16201.02A		6/26/012002 2:11:5
13	13	PPB04840.D	0.	16201.03A		6/26/012002 2:45:4
14	14	PPB04841.D	0.	16201.04A		6/26/012003 3:19:3
15	15	PPB04842.D	0.	16201.05A		6/26/012003 3:53:2
16	16	PPB04843.D	0.	16201.06A		6/26/012004 4:27:1
17	17	PPB04844.D	0.	16205.02A		6/26/012005 5:01:0
18	18	PPB04845.D	0.	16205.03A		6/26/012005 5:34:4
19	19	PPB04846.D	0.	PST STD 40 PPB		6/26/012006 6:08:3
20	20	PPB04847.D	0.	ED		6/26/012006 6:42:2
21	21	PPB04848.D	0.	16205.04A		6/26/012007 7:16:1
22	22	PPB04849.D	0.	16205.05A		6/26/012007 7:49:5
23	23	PPB04850.D	0.	16205.06A		6/26/012008 8:23:4
24	24	PPB04851.D	0.	16205.07A		6/26/012008 8:57:2
25	25	PPB04852.D	0.	16205.08A		6/26/012009 9:31:1
26	26	PPB04853.D	0.	16205.09A		6/26/012010 10:04:5
27	19	PPB04854.D	0.	PST STD 40 PPB		6/26/012010 10:38:4

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04832.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04832.D\ECD2B.CH
Acq On : 6-26-01 10:14:04 AM Operator:
Sample : MB-1898A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 10:54 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) S Tetrachlor-m-xyl	9.79	9.87	386831	656634	8.002	7.500
Spiked Amount 10.000	Range 49 - 136		Recovery =		80.02%	75.00%
22) S Decachlorobiphen	23.68	24.79	308750	593832	8.000	7.283
Spiked Amount 10.000	Range 0 - 137		Recovery =		80.00%	72.83%
Target Compounds						

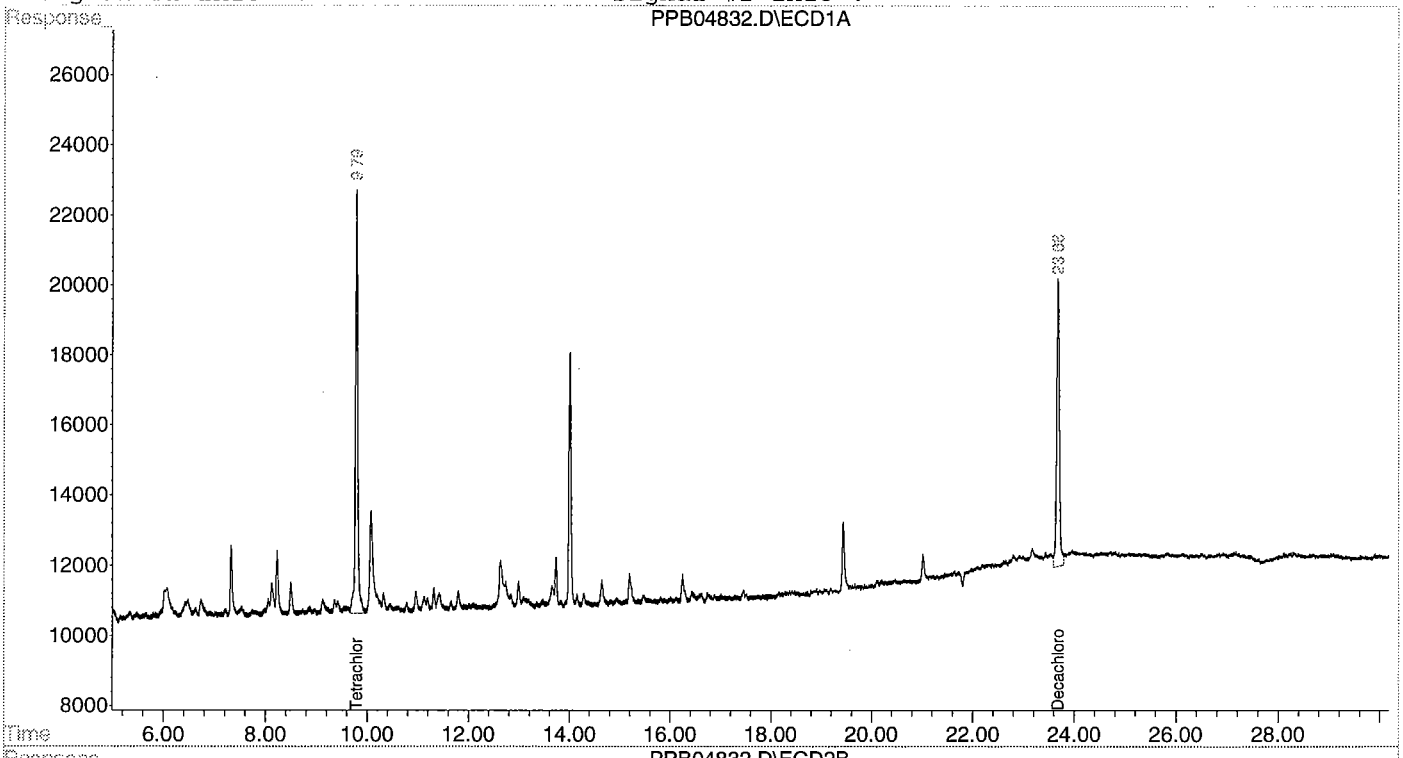
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

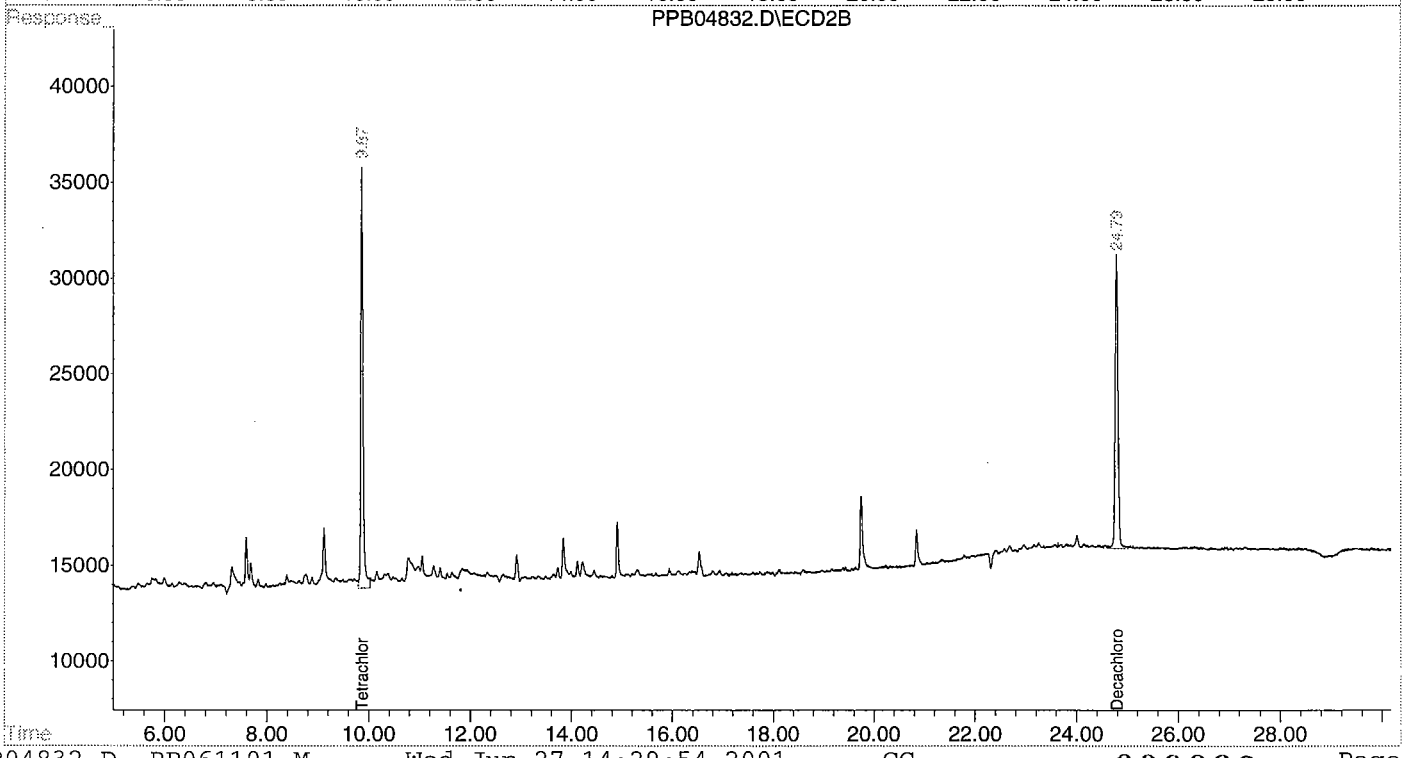
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04832.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04832.D\ECD2B.CH
Acq On : 6-26-01 10:14:04 AM Operator:
Sample : MB-1898A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 10:54 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04835.D\ECD1A.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04835.D\ECD2B.CH
Acq On : 6-26-01 11:56:43 AM Operator:
Sample : 16175.02A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 13:44 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) S Tetrachlor-m-xyl	9.79	9.87	351125	564473	7.264	6.448
Spiked Amount 10.000	Range 49 - 136		Recovery =		72.64%	64.48%
22) S Decachlorobiphen	23.69	24.79	263962	489148	6.840	5.999
Spiked Amount 10.000	Range 0 - 137		Recovery =		68.40%	59.99%
Target Compounds						

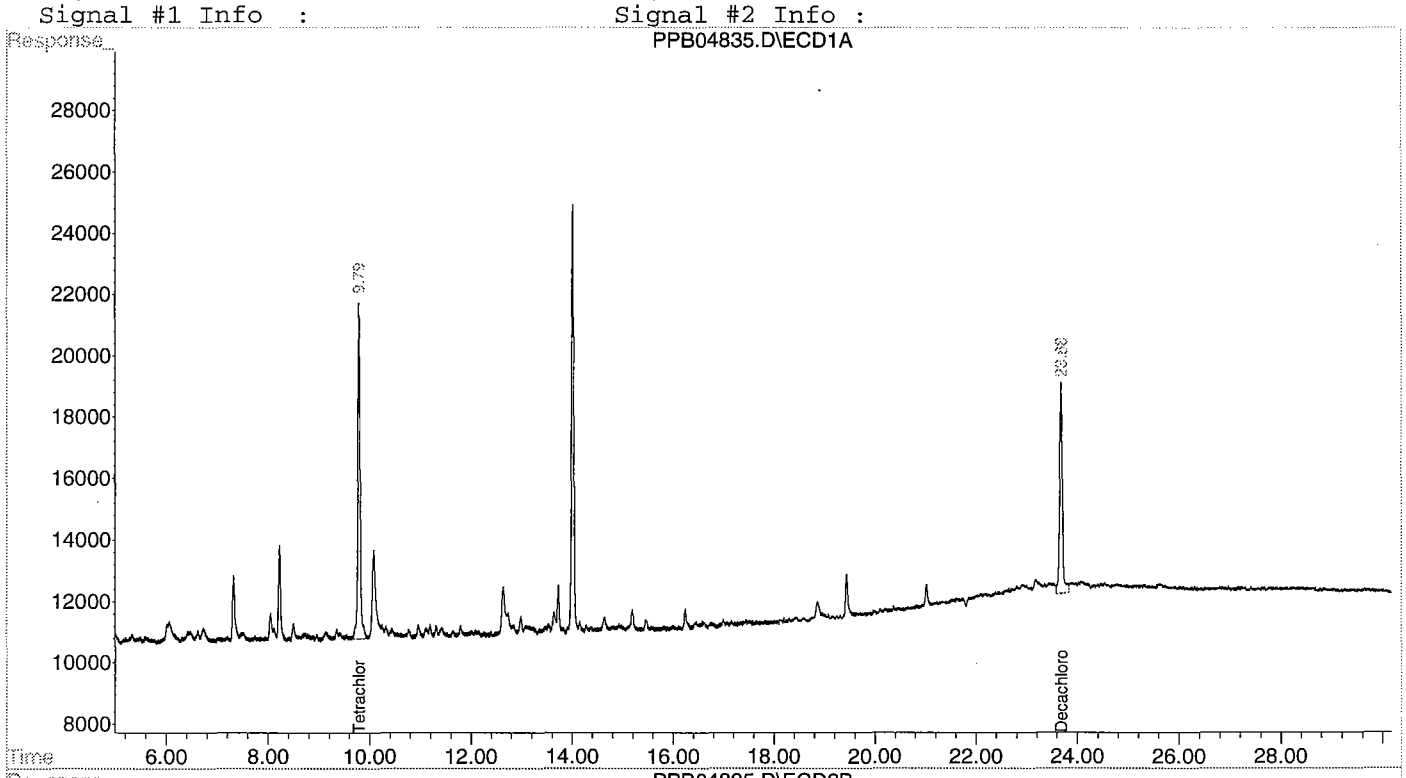
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

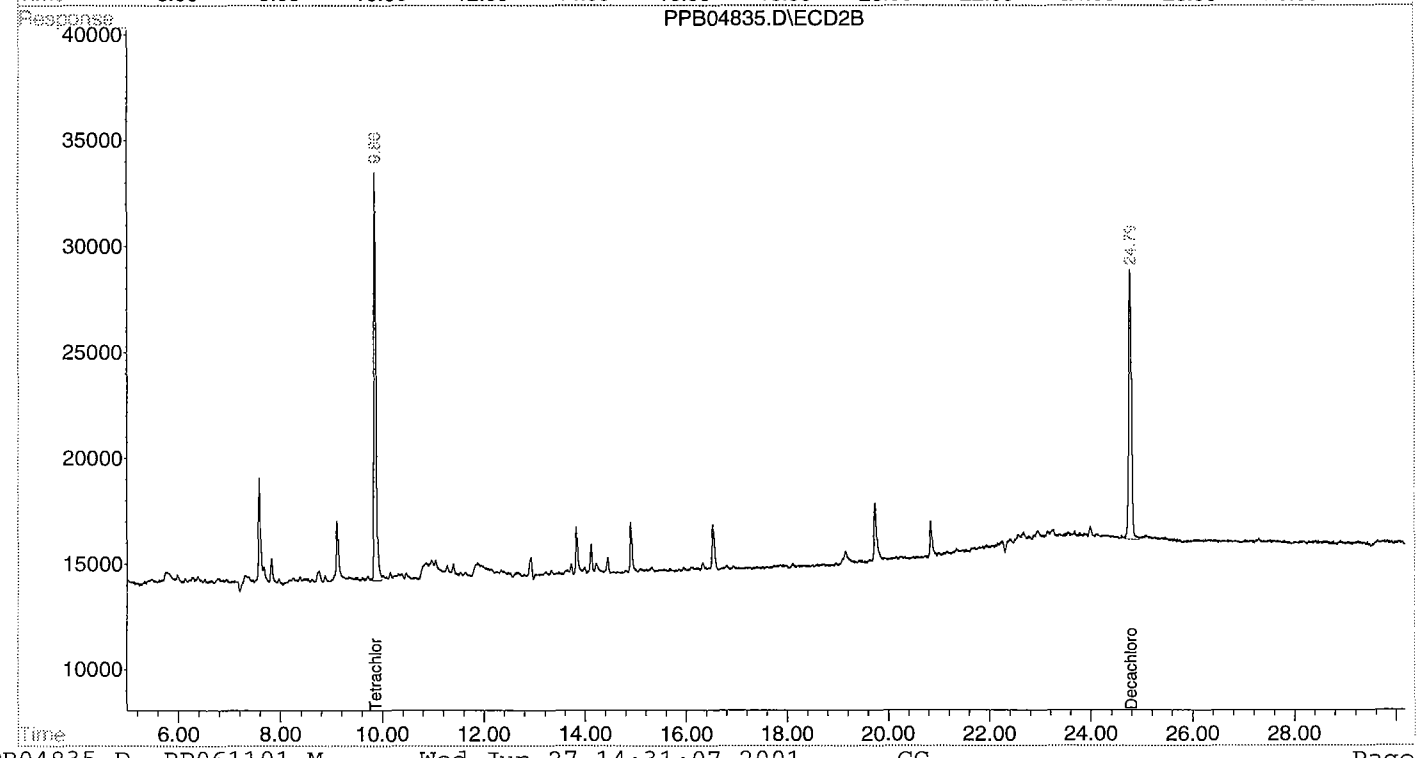
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04835.D\ECD1A.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04835.D\ECD2B.CH
Acq On : 6-26-01 11:56:43 AM Operator:
Sample : 16175.02A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 13:44 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04836.D\ECD1A.CH Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04836.D\ECD2B.CH
Acq On : 6-26-01 12:30:31 PM Operator:
Sample : 16175.03A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 13:50 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Initial Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
1)	S Tetrachlor-m-xyl	9.79	9.87	453441	648672	9.380	7.409
	Spiked Amount 10.000	Range 49 - 136		Recovery =		93.80%	74.09%
22)	S Decachlorobiphen	23.68	24.79	99899	230653	2.589m	2.829m
	Spiked Amount 10.000	Range 0 - 137		Recovery =		25.89%	28.29%
	Target Compounds						
9)	TC gamma-Chlordane	16.30	16.59	3071319	5254747	57.164m	49.617m
10)	TC alpha-Chlordane	16.62	16.94	2150154	6292657	40.896m	60.469m#

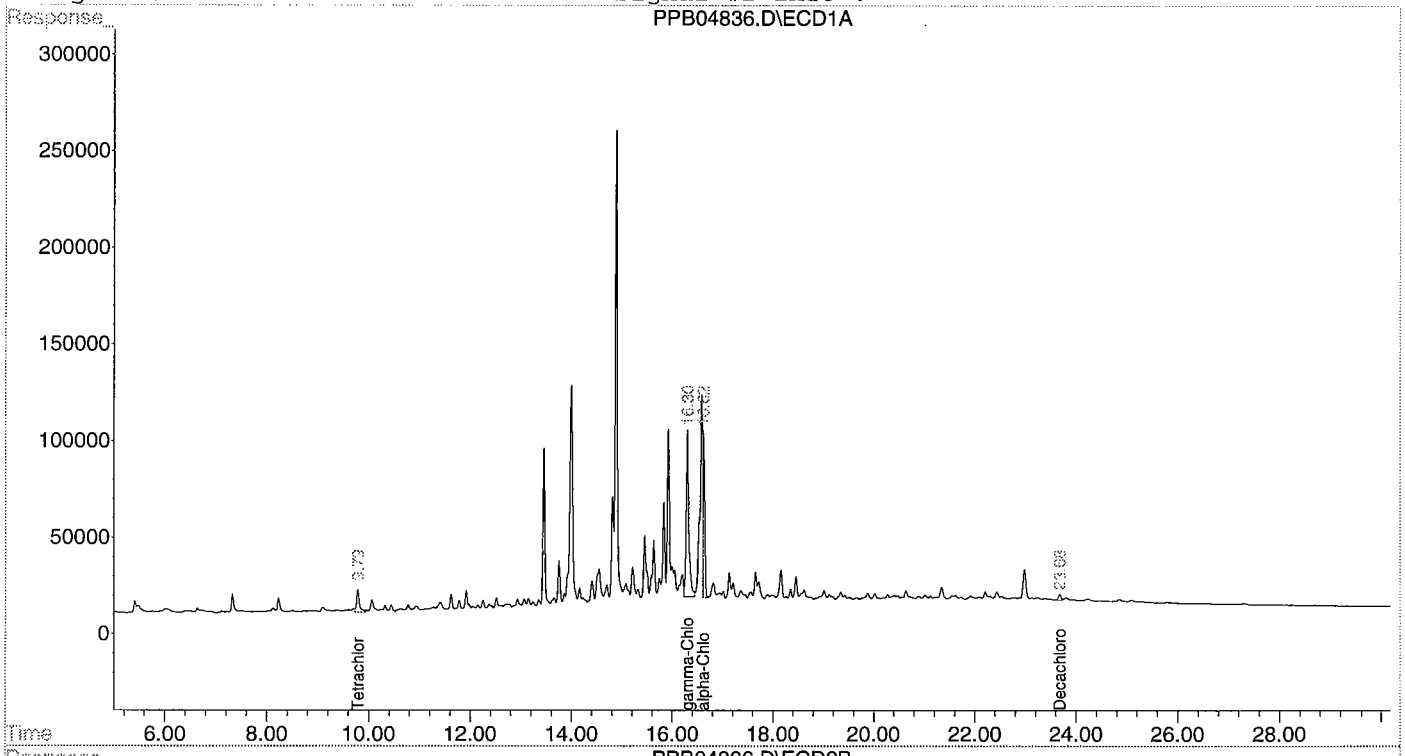
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int

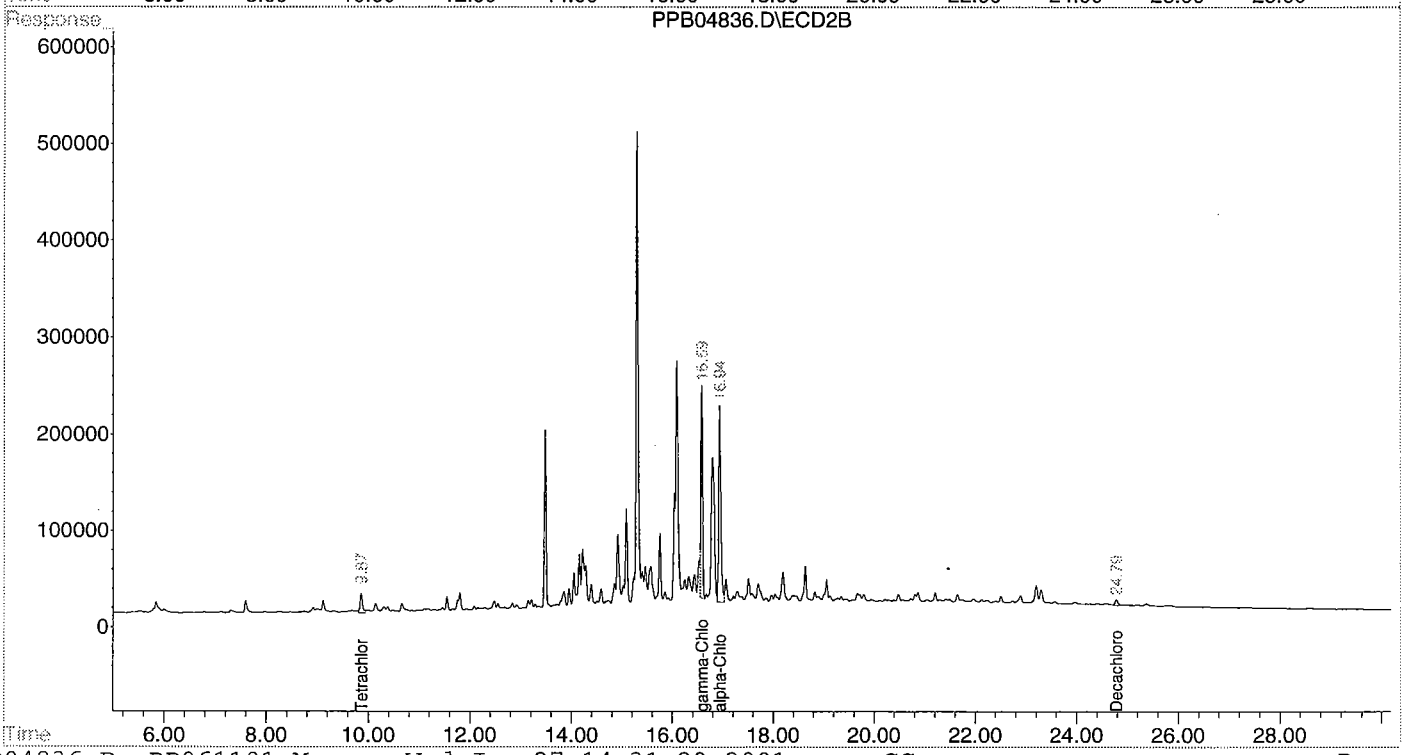
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\010626\PPB04836.D\ECD1A.CH Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\010626\PPB04836.D\ECD2B.CH
Acq On : 6-26-01 12:30:31 PM Operator:
Sample : 16175.03A Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jun 26 13:50 2001 Quant Results File: PP061101.RES

Quant Method : C:\HPCHEM\1...\PP061101.M (Chemstation Integrator)
Title : Pesticide/PCB Calibration Table Instrument 2
Last Update : Tue Jun 26 09:13:37 2001
Response via : Multiple Level Calibration
DataAcq Meth : B608RUN.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





METALS

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 106
Ft. Monmouth, NJ 07703

Lab ID #: 1617501
Sample Prepared: 06/11/01

Site: 106-2.9'
Ft. Monmouth, New Jersey

Field ID#: Method Blank

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	07/17/01	18.0	200	10.0
Antimony	07/17/01	ND	20	2.0
Arsenic	07/17/01	ND	8	2.0
Barium	07/17/01	1.85	2000	0.5
Beryllium	07/17/01	ND	20	0.5
Cadmium	07/17/01	ND	4	0.5
Calcium	07/17/01	43.2	NLE	20.0
Chromium	07/17/01	ND	100	0.5
Cobalt	07/17/01	ND	NLE	0.5
Copper	07/17/01	ND	1000	2.0
Iron	07/17/01	100	300	10.0
Lead	07/17/01	ND	10	1.0
Magnesium	07/17/01	ND	NLE	10.0
Manganese	07/17/01	0.634	50	0.5
Mercury	07/03/01	ND	2	0.1
Nickel	07/17/01	ND	100	1.0
Potassium	07/17/01	ND	NLE	40.0
Selenium	07/17/01	4.86	50	3.0
Silver	07/17/01	ND	20	1.0
Sodium	07/17/01	888	50000	20.0
Thallium	07/17/01	ND	10	2.0
Vanadium	07/17/01	ND	NLE	0.5
Zinc	07/17/01	ND	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 106
Ft. Monmouth, NJ 07703

Lab ID #: 1617502
Sample Received: 06/08/01
Sample Matrix: Aqueous

Site: 106-2.9'
Ft. Monmouth, New Jersey

Field ID#: Field Blank

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	07/17/01	ND	200	10.0
Antimony	07/17/01	ND	20	2.0
Arsenic	07/17/01	ND	8	2.0
Barium	07/17/01	ND	2000	0.5
Beryllium	07/17/01	ND	20	0.5
Cadmium	07/17/01	ND	4	0.5
Calcium	07/17/01	ND	NLE	20.0
Chromium	07/17/01	ND	100	0.5
Cobalt	07/17/01	ND	NLE	0.5
Copper	07/17/01	ND	1000	2.0
Iron	07/17/01	ND	300	10.0
Lead	07/17/01	ND	10	1.0
Magnesium	07/17/01	ND	NLE	10.0
Manganese	07/17/01	ND	50	0.5
Mercury	07/03/01	ND	2	0.1
Nickel	07/17/01	ND	100	1.0
Potassium	07/17/01	ND	NLE	40.0
Selenium	07/17/01	ND	50	3.0
Silver	07/17/01	ND	20	1.0
Sodium	07/17/01	1010	50000	20.0
Thallium	07/17/01	ND	10	2.0
Vanadium	07/17/01	ND	NLE	0.5
Zinc	07/17/01	ND	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 106
Ft. Monmouth, NJ 07703

Lab ID #: 1617503
Sample Received: 06/08/01
Sample Matrix: Aqueous

Site: 106-2.9'
Ft. Monmouth, New Jersey

Field ID#: 106-2.9'

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	07/17/01	12300	200	10.0
Antimony	07/17/01	ND	20	2.0
Arsenic	07/17/01	24.6	8	2.0
Barium	07/17/01	75.7	2000	0.5
Beryllium	07/17/01	1.80	20	0.5
Cadmium	07/17/01	1.57	4	0.5
Calcium	07/17/01	46200	NLE	20.0
Chromium	07/17/01	77.0	100	0.5
Cobalt	07/17/01	11.7	NLE	0.5
Copper	07/17/01	27.7	1000	2.0
Iron	07/17/01	32300	300	10.0
Lead	07/17/01	24.4	10	1.0
Magnesium	07/17/01	10700	NLE	10.0
Manganese	07/17/01	297	50	0.5
Mercury	07/03/01	0.13	2	0.1
Nickel	07/17/01	21.7	100	1.0
Potassium	07/17/01	9200	NLE	40.0
Selenium	07/17/01	ND	50	3.0
Silver	07/17/01	ND	20	1.0
Sodium	07/17/01	21000	50000	20.0
Thallium	07/17/01	ND	10	2.0
Vanadium	07/17/01	45.6	NLE	0.5
Zinc	07/17/01	226	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Initial and Continuing Calibration Verification

Lab ID #: 13461 Sample ID: 16175

Units: mg/l

Metals:	True Value ICV CCV	Found ICV	%R ICV	Found CCV1	%R CCV1	Found CCV2	%R CCV2	Method
Aluminum	100.0	98.9	98.9	99.2	99.2	96.6	96.6	6010B
Antimony*	0.5	0.494	98.8	0.511	102.1	0.519	103.8	6010B
Arsenic*	0.5	0.495	99.1	0.517	103.5	0.535	107.0	6010B
Barium	0.5	0.485	97.0	0.483	96.5	0.482	96.3	6010B
Beryllium*	0.5	0.501	100.1	0.498	99.7	0.492	98.5	6010B
Cadmium*	0.5	0.487	97.4	0.491	98.3	0.484	96.8	6010B
Calcium	100.0	98.7	98.7	98.2	98.2	93.7	93.7	6010B
Chromium*	0.5	0.486	97.2	0.491	98.2	0.486	97.2	6010B
Cobalt	0.5	0.468	93.6	0.486	97.3	0.467	93.4	6010B
Copper*	0.5	0.492	98.4	0.491	98.2	0.492	98.4	6010B
Iron	50.0	50.6	101.2	50.3	100.6	48.5	97.1	6010B
Lead*	0.5	0.488	97.6	0.491	98.2	0.490	98.0	6010B
Magnesium	100.0	100.0	100.0	98.8	98.8	94.3	94.3	6010B
Manganese	0.5	0.485	97.0	0.492	98.3	0.483	96.6	6010B
Mercury*	0.0020	0.0021	103.5	0.0020	100.5	0.0018	90.5	7471B
Nickel*	0.5	0.490	97.9	0.492	98.5	0.485	97.0	6010B
Potassium	20.0	18.4	92.0	18.6	92.9	18.8	94.2	6010B
Selenium*	0.5	0.494	98.8	0.505	101.0	0.519	103.8	6010B
Silver*	0.5	0.489	97.8	0.488	97.7	0.480	95.9	6010B
Sodium	20.0	20.5	102.4	20.2	101.0	20.1	100.3	6010B
Thallium*	0.5	0.481	96.2	0.496	99.2	0.502	100.3	6010B
Vanadium	0.5	0.491	98.2	0.493	98.6	0.488	97.6	6010B
Zinc*	0.5	0.480	96.1	0.490	100.1	0.489	97.9	6010B

* = Priority Pollutant Metals

QC Blanks

Lab ID#: 13461 Lab Sample ID: 16175

Date Analyzed: 7/17/01 Units: mg/l

Matrix: Aq

METALS:	**Date Analyzed**	**Initial Calibration Blank Value**	**Continuing Calibration Blank Value** 1	2	3	**Preparation Blank Matrix:** 1	**Matrix** 2
Aluminum	7/17/01	<0.01	<0.01	0.02		0.018	
Antimony*	7/17/01	<0.002	<0.002	<0.002		<0.002	
Arsenic*	7/17/01	<0.002	<0.002	<0.002		<0.002	
Barium	7/17/01	<0.0005	<0.0005	<0.0005		0.0018	
Beryllium*	7/17/01	<0.0005	<0.0005	<0.0005		<0.0005	
Cadmium*	7/17/01	<0.0005	<0.0005	<0.0005		<0.0005	
Calcium	7/17/01	<0.02	<0.02	<0.02		0.043	
Chromium*	7/17/01	<0.0005	<0.0005	<0.0005		<0.0005	
Cobalt	7/17/01	<0.0005	<0.0005	<0.0005		<0.0005	
Copper*	7/17/01	<0.002	<0.002	<0.002		<0.002	
Iron	7/17/01	<0.02	<0.02	<0.02		0.10	
Lead*	7/17/01	<0.001	<0.001	<0.001		<0.001	
Magnesium	7/17/01	<0.01	<0.01	<0.01		<0.01	
Manganese	7/17/01	<0.0005	<0.0005	<0.0005		0.0006	
Mercury*	7/3/01	<0.0001	<0.0001	<0.0001		<0.0001	
Nickel*	7/17/01	<0.001	<0.001	0.001		<0.001	
Potassium	7/17/01	<0.04	<0.04	0.10		<0.04	
Selenium*	7/17/01	<0.003	<0.003	<0.003		0.005	
Silver*	7/17/01	<0.001	<0.001	<0.001		<0.001	
Sodium	7/17/01	<0.02	<0.02	0.80		0.89	
Thallium*	7/17/01	<0.003	<0.003	<0.003		<0.003	
Vanadium	7/17/01	<0.0005	<0.0005	<0.0005		<0.0005	
Zinc*	7/17/01	<0.005	<0.005	<0.005		<0.005	

* = Priority Pollutant Metals

ICP INTERFERENCE CHECK SAMPLE

Lab ID#: 13461

Lab Sample ID: 16175

Date Analyzed: 07/17/01

Units: mg/L

Matrix: Aqueous

Compound	Control Limits % rec.	True Value	Initial Observed	% Rec	Final Observed	% Rec
Aluminum	80-120	500	520	104.1	514	102.81
Antimony	80-120	1	1.05	104.85	1.13	112.84
Arsenic	80-120	1	1.03	103.19	1.15	115.25
Barium	80-120	0.5	0.491	98.12	0.499	99.78
Beryllium	80-120	0.5	0.493	98.53	0.498	99.66
Calcium	80-120	500	510	102.06	490	98.09
Cadmium	80-120	1	0.895	89.54	0.915	91.52
Cobalt	80-120	0.5	0.420	83.94	0.426	85.27
Chromium	80-120	0.5	0.471	94.13	0.480	96.02
Copper	80-120	0.5	0.518	103.66	0.560	111.90
Iron	80-120	200	213	106.68	208	104.09
Magnesium	80-120	500	516	103.23	494	98.88
Manganese	80-120	0.5	0.468	93.69	0.477	95.40
Nickel	80-120	1	0.92	91.85	0.88	88.26
Lead	80-120	1	0.895	89.52	0.916	91.59
Silver	80-120	1	1.05	104.78	1.07	106.90
Selenium	80-120	1	1.02	101.99	1.09	108.72
Thallium	80-120	1	0.940	94.00	0.973	97.34
Vanadium	80-120	0.5	0.490	98.03	0.499	99.80
Zinc	80-120	1	0.885	88.52	0.912	91.18

Spike Sample Recovery

Lab ID #: 13461 Lab Sample ID: 16175

Matrix: Aqueous

Units: mg/L

Metals:	Spiked Sample ID	Control Limit (%R)	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R
Aluminum	1617503	75-125	12.3	12.5	0.5	NC
Antimony*	1617503	75-125	0.527	0	0.5	105.9
Arsenic*	1617503	75-125	0.548	0.021	0.5	105.4
Barium	1617503	75-125	2.15	0.0681	2	104.1
Beryllium*	1617503	75-125	0.105	0.0015	0.1	103.3
Cadmium*	1617503	75-125	0.0502	0.0014	0.05	97.5
Calcium	1617503	75-125			NA	
Chromium*	1617503	75-125	0.311	0.0652	0.25	98.5
Cobalt	1617503	75-125	0.507	0.0105	0.5	99.4
Copper*	1617503	75-125	0.579	0.025	0.5	110.7
Iron	1617503	75-125	28.0	29.0	1	NC
Lead*	1617503	75-125	0.530	0.022	0.5	101.5
Magnesium	1617503	75-125			NA	
Manganese	1617503	75-125	0.782	0.267	0.5	102.9
Mercury*	1617502	75-125	0.00205	0.0005	0.002	100.0
Nickel*	1617503	75-125	0.527	0.02	0.5	101.6
Potassium	1617503	75-125			NA	
Selenium*	1617503	75-125	0.505	0.001	0.5	100.6
Silver*	1617503	75-125	0.085	0	0.1	85.6
Sodium	1617503	75-125			NA	
Thallium*	1617503	75-125	0.475	0	0.5	96.3
Vanadium	1617503	75-125	0.561	0.041	0.5	104.0
Zinc*	1617503	75-125	1.23	0.204	1	102.2

%R = {(SSR-SR)/SA} x 100

* = Priority Pollutant Metals

"N" - out of control

"NR" - Not Required

"NA"- Not Available

"NC" - Not calculable sample result is greater than 4X' spike concentration

Duplicates

Lab ID #: 13461 Lab Sample ID: 16175

Units: mg/l

Matrix: Aqueous

METALS:	Duplicate Sample ID	Control Limit	Sample (S)	Duplicate (D)	RPD
Aluminum	1617503MS	20	10.8	12.5	14.6
Antimony*	1617503MS	20	0.527	0.537	1.9
Arsenic*	1617503MS	20	0.548	0.548	0.1
Barium	1617503MS	20	2.15	2.17	0.9
Beryllium*	1617503MS	20	0.105	0.105	0.5
Cadmium*	1617503MS	20	0.0502	0.0504	0.5
Calcium	1617503MS	20	40.4	40.3	0.4
Chromium*	1617503MS	20	0.311	0.317	1.7
Cobalt	1617503MS	20	0.507	0.507	0.1
Copper*	1617503MS	20	0.579	0.582	0.6
Iron	1617503MS	20	28.0	28.8	2.6
Lead*	1617503MS	20	0.530	0.531	0.2
Magnesium	1617503MS	20	9.14	9.37	2.5
Manganese	1617503MS	20	0.782	0.786	0.6
Mercury*	1617502MS	20	0.00205	0.0021	0.0024
Nickel*	1617503MS	20	0.527	0.534	1.3
Potassium	1617503MS	20	7.90	8.33	5.3
Selenium*	1617503MS	20	0.505	0.504	0.1
Silver*	1617503MS	20	0.085	0.090	6.0
Sodium	1617503MS	20	19.8	19.7	0.8
Thallium*	1617503MS	20	0.475	0.486	2.3
Vanadium	1617503MS	20	0.561	0.567	1.0
Zinc*	1617503MS	20	1.23	1.23	0.3

N - Out of Control

RPD = {[S-D] / ((S + D) / 2)} x 100

NC - Not calculable RPD due to value(s) less than 10 x's MDL

* = Priority Pollutant Metals

Laboratory Control Sample

Lab ID #: 13461 Sample ID: 16175

METALS:	Lab Control Sample mg/l		
	True	Found	%R
Aluminum	0.5	0.501	100.2
Antimony*	0.5	0.528	105.6
Arsenic*	0.5	0.511	102.2
Barium	2	2.16	108.0
Beryllium*	0.1	0.102	102.0
Cadmium*	0.05	0.0484	96.8
Chromium*	0.25	0.261	104.4
Cobalt	0.5	0.520	104.0
Copper*	0.5	0.530	106.0
Iron	1	1.08	108.0
Lead*	0.5	0.517	103.4
Manganese	0.5	0.531	106.2
Mercury*	0.002	0.00196	98.0
Nickel*	0.5	0.52	104.0
Selenium*	0.5	0.491	98.2
Silver*	0.1	0.088	88.0
Thallium*	0.5	0.499	99.8
Vanadium	0.5	0.521	104.2
Zinc*	1	1.00	100.0

NR - Not Required
* = Priority Pollutant Metals

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 8/8/01

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 F

PHOTOGRAPHS

FEBRUARY 18, 1998

PHOTOGRAPHIC LOG

Building 106
Main Post-East
Fort Monmouth

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA