

United States Army
Fort Monmouth, New Jersey

**Underground Storage Tank
Closure and Site Investigation
Report**

***Building 1075
Main Post-West Area***

COPY

NJDEP UST Registration No. 0081533-206

December 1997

**UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT**

BUILDING 1075

**MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0081533-206**

DECEMBER 1997

PREPARED FOR:

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

PREPARED BY:

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PROJECT NO. 2429-3080

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EXECUTIVE SUMMARY

UST Closure

On June 11, 1996, a steel underground storage tank (UST) was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) approved closure procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-206 (Fort Monmouth ID No. 1075), was located east of Building 1075. UST No. 0081533-206 was an 1,000-gallon No. 2 fuel oil UST.

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. Following removal, the UST was inspected for corrosion holes. No holes were noted in the UST and no evidence of potentially contaminated soils was observed surrounding the tank. Samples contained non-detectable concentrations of TPHC.

Site Restoration

Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with native backfill and topsoil and restored to its original condition.

Conclusions and Recommendations

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

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-206 at Building 1075.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0081533-206, was closed at Building 1075 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 11, 1996. Refer to site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0081533-206 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. All permits were posted onsite for inspection. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 0081533-206 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 0081533-206 are included in Appendices A and B, respectively.

Based on inspecting the UST, field screening of subsurface soils, and reviewing analytical results of collected samples, the DPW has concluded that no significant historical discharges are associated with the UST or associated piping.

This UST Closure and Site Investigation Report has been prepared by SMC Environmental Services Group, to assist the U.S. Army DPW in complying with the NJDEP-BUST regulations. The applicable NJDEP-BUST 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).

This report was prepared using information collected at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in the final section of this report.

1.2 SITE DESCRIPTION

Building 1075 is located in the Main Post-West area of the Fort Monmouth Army Base, as shown on Figure 1. UST No. 0081533-206 was located east of Building 1075 and appurtenant steel piping ran in two different directions. One set of piping was approximately sixty-two (62) feet in length and ran from the north end of the excavation to a 550 gallon AST which is situated next to Building 1075. The other set of piping was approximately forty-one (41) feet and ran from the south end of the excavation to the mechanical room next to the Emergency Room entrance. 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 1075. 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 (Zapeczka, 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. Over 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 Zapeczka, 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 1075 located approximately 600 feet southeast of Husky Brook Lake, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 1075 is anticipated to be to the northeast.

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

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were identified by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a hole was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 35 gallons of liquid from the UST and its associated piping were transported to the Fort Monmouth waste oil holding facility. Refer to Appendix C for a copy of the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No holes or punctures were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. No evidence of contamination was observed. Soil screening and pressure tests were also performed along the two different piping runs associated with the UST closure. Although one piping run failed a pressure test, no contamination was noted anywhere along the piping length. See Figure 3 for a cross-sectional view of the excavated area.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The tank was transported to Mazza and Sons, Inc., Recycling Division. The UST disposal certificate is included as Appendix D. The transportation of the UST was in compliance with all applicable regulations and laws. Refer to Appendix F for photographs of the UST.

The UST was labeled prior to transport with the following information:

- Site of origin
- Contact person
- NJDEP UST Facility ID number
- Former contents
- Destination site
- Date

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

- Subsurface Evaluator: Eugene W. Lesinski
Employer: U.S. Army, Fort Monmouth
Phone Number: (908) 532-0989
NJDEP Certification No.: 0014537
- Analytical Laboratory: U.S. Army Fort Monmouth Environmental Laboratory
Contact Person: Brian K. McKee and Daniel K. Wright
Phone Number: (908) 532-4359
NJDEP Company Certification No.: 13461

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 and appurtenant piping did not exhibit any evidence of potential contamination.

2.3 SOIL SAMPLING

Soil samples were collected on two separate occasions from the excavation. The first sampling event was June 11 and 12, 1996 and the second event was July 9, 1996. On June 11, 1996, following the removal of the UST, post-excavation soil samples A, B, C, D, and DUP A were collected from a total of four (4) locations at the UST excavation. Samples A, B, and DUP A were collected along the centerline of the excavation floor at a depth of 9.0 feet bgs. Sidewall samples C and D were collected at a depth of 8.5 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

On June 12, 1996, the piping trench which connected to the 550 gallon AST was uncovered and soil samples E, F, G, H, and I were collected at a depth of 4.0 feet bgs. The entire piping run was 62 feet in length. Sample E was collected along the former piping trench, approximately five (5) feet from the northern side of the excavation. Sample F was collected 12 feet from the excavation at the location of a former pipe coupling. Sample G was collected 22 feet from the excavation. Sample H was collected 34 feet from the excavation at the location of a former pipe coupling. Sample I was collected 48 feet from the excavation at the location of a former 90 degree elbow. All samples were analyzed for TPHC and total solids.

On July 9, 1996, approximately 41 feet of piping were uncovered on the southern side of the excavation. Soil samples A, B, C, and DUP A were collected from the piping run which upon inspection, was determined to be unused. Samples A and DUP A were collected at a depth of 3.0 feet bgs. Samples B and C were collected at a depth of 2.5 feet bgs. All samples were analyzed for TPHC and total solids.

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected on two separate occasions (June 11 and 12, and July 9, 1996) from a total of twelve (12) locations. All samples were analyzed for TPHC 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. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected on June 11 and 12, and July 9, 1996, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Samples contained non-detectable levels of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 1075 were below the NJDEP soil cleanup criteria for total organic contaminants.

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

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-206 at Building 1075.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
 BUILDING 1075, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

Page 1 of 1

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	6/11/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
B	6/11/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
C	6/11/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
D	6/11/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
E	6/12/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
F	6/12/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
G	6/12/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
H	6/12/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
I	6/12/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
J (DUP A)	6/11/96	6/14/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
A	7/09/96	7/12/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
B	7/09/96	7/12/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
C	7/09/96	7/12/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025
DUP A	7/09/96	7/12/96	Soil	Post-Excavation	TPHC	OQA - QAM - 025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 1075, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

Page 1 of 2

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
A/9.0'	2089.1	6/11/96	6/14/96	Total Solid	--	--	89.2 %	--	--
				TPHC	200	yes	ND	10,000	No
B/9.0'	2089.2	6/11/96	6/14/96	Total Solid	--	--	72.4 %	--	--
				TPHC	200	yes	ND	10,000	No
C/8.5'	2089.3	6/11/96	6/14/96	Total Solid	--	--	88.5 %	--	--
				TPHC	200	yes	ND	10,000	No
D/8.5'	2089.4	6/11/96	6/14/96	Total Solid	--	--	89.9 %	--	--
				TPHC	200	yes	ND	10,000	No
E/4.0'	2089.5	6/12/96	6/14/96	Total Solid	--	--	87.5 %	--	--
				TPHC	200	yes	ND	10,000	No
F/4.0'	2089.6	6/12/96	6/14/96	Total Solid	--	--	78.9 %	--	--
				TPHC	200	yes	ND	10,000	No
G/4.0'	2089.7	6/12/96	6/14/96	Total Solid	--	--	89.1 %	--	--
				TPHC	200	yes	ND	10,000	No
H/4.0'	2089.8	6/12/96	6/14/96	Total Solid	--	--	90. %	--	--
				TPHC	200	yes	ND	10,000	No
I/4.0'	2089.9	6/12/96	6/14/96	Total Solid	--	--	89.5 %	--	--
				TPHC	200	yes	ND	10,000	No
J(DUP A)/9.0'	2089.10	6/11/96	6/14/96	Total Solid	--	--	89.1 %	--	--
				TPHC	200	yes	ND	10,000	No

Note:

- * Total Solid results are expressed as a percentage.
- ** NJDEP Residential Direct Contact soil cleanup criteria for total organics
- ND Not detected above stated method detection limit
- TPHC Total Petroleum Hydrocarbons
- Not applicable

TABLE 2 (C'ntd)

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 1075, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

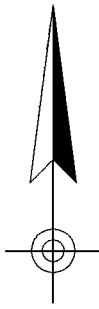
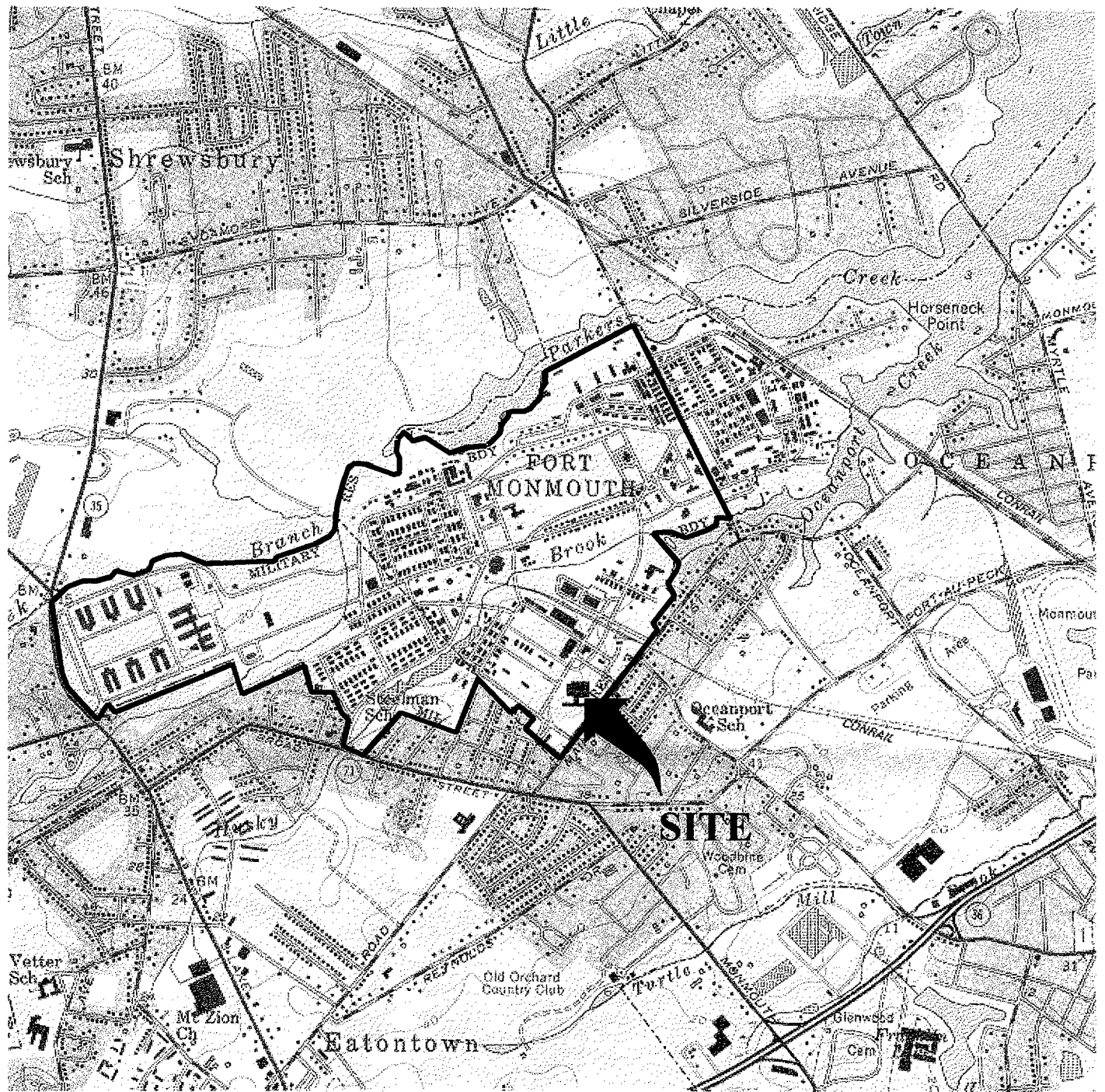
Page 2 of 2

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
A/3.0'	2114.1	7/09/96	7/12/96	Total Solid	--	--	91.7 %	--	--
				TPHC	200	yes	ND	10,000	No
B/2.5'	2114.2	7/09/96	7/12/96	Total Solid	--	--	93.9 %	--	--
				TPHC	200	yes	ND	10,000	No
C/2.5'	2114.3	7/09/96	7/12/96	Total Solid	--	--	91.4 %	--	--
				TPHC	200	yes	ND	10,000	No
DUP A/3.0'	2114.4	7/09/96	7/12/96	Total Solid	--	--	92.3 %	--	--
				TPHC	200	yes	ND	10,000	No

Note:

- * Total Solid results are expressed as a percentage.
- ** NJDEP Residential Direct Contact soil cleanup criteria for total organics
- ND Not detected above stated method detection limit
- TPHC Total Petroleum Hydrocarbons
- Not Applicable

FIGURES



LONG BRANCH, NJ

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE -SERIES V822



New Jersey

Quadrangle Location

FIGURE 1

SITE LOCATION MAP

Building 1075
Main Post-West
Fort Monmouth Army Base
Monmouth County, NJ



SMC Environmental Services Group
Engineers, Managers, Scientists, & Planners
Valley Forge, Pennsylvania

Mapped, edited and published by the Geological Survey

Scale: 1"=2,000'

Date: DEC 1997

1075 2429 FIG2

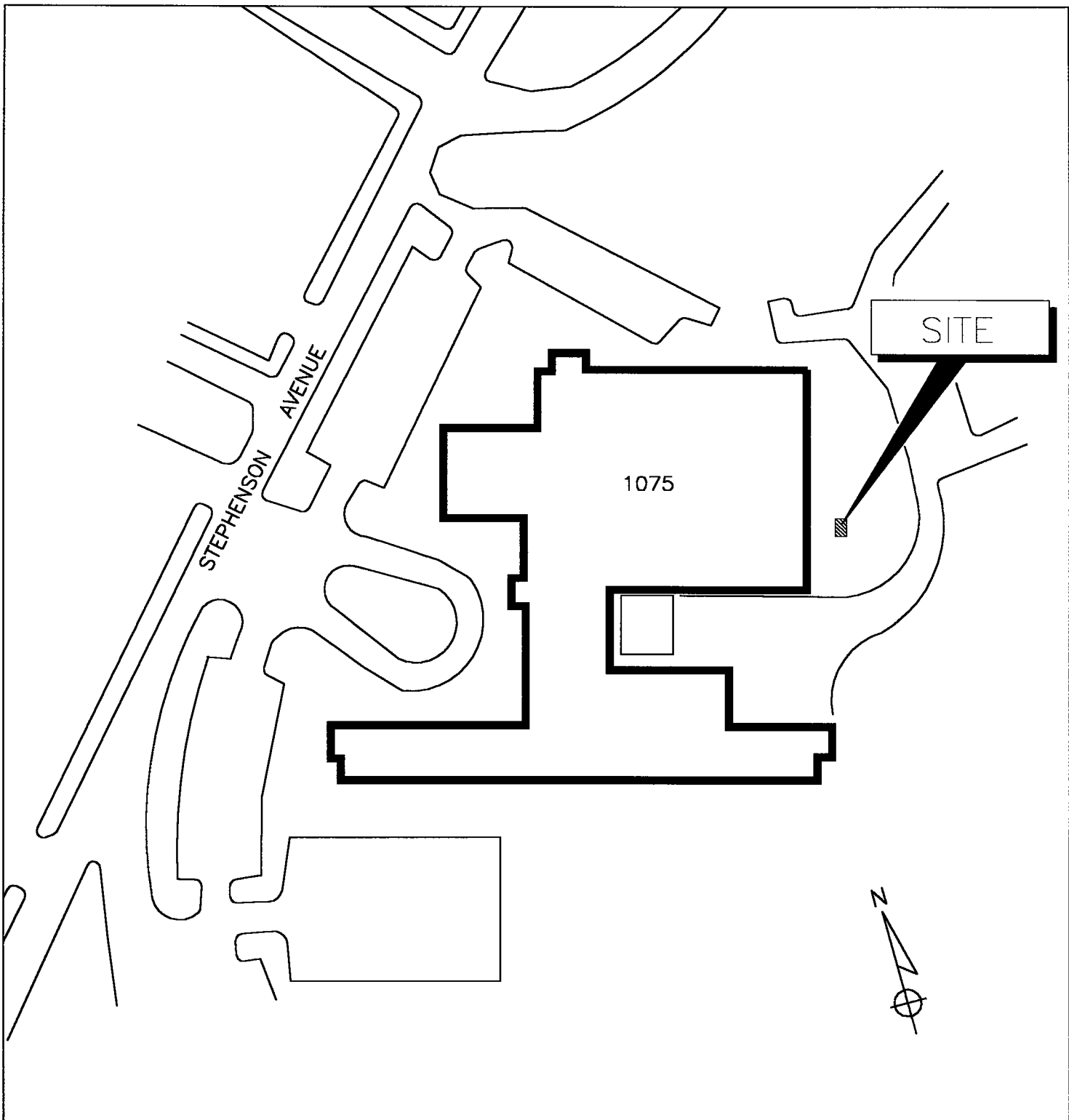



FIGURE 2
SITE MAP
BUILDING 1075
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

 **SMC ENVIRONMENTAL SERVICES GROUP**
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=100'

DATE: DEC. 1997

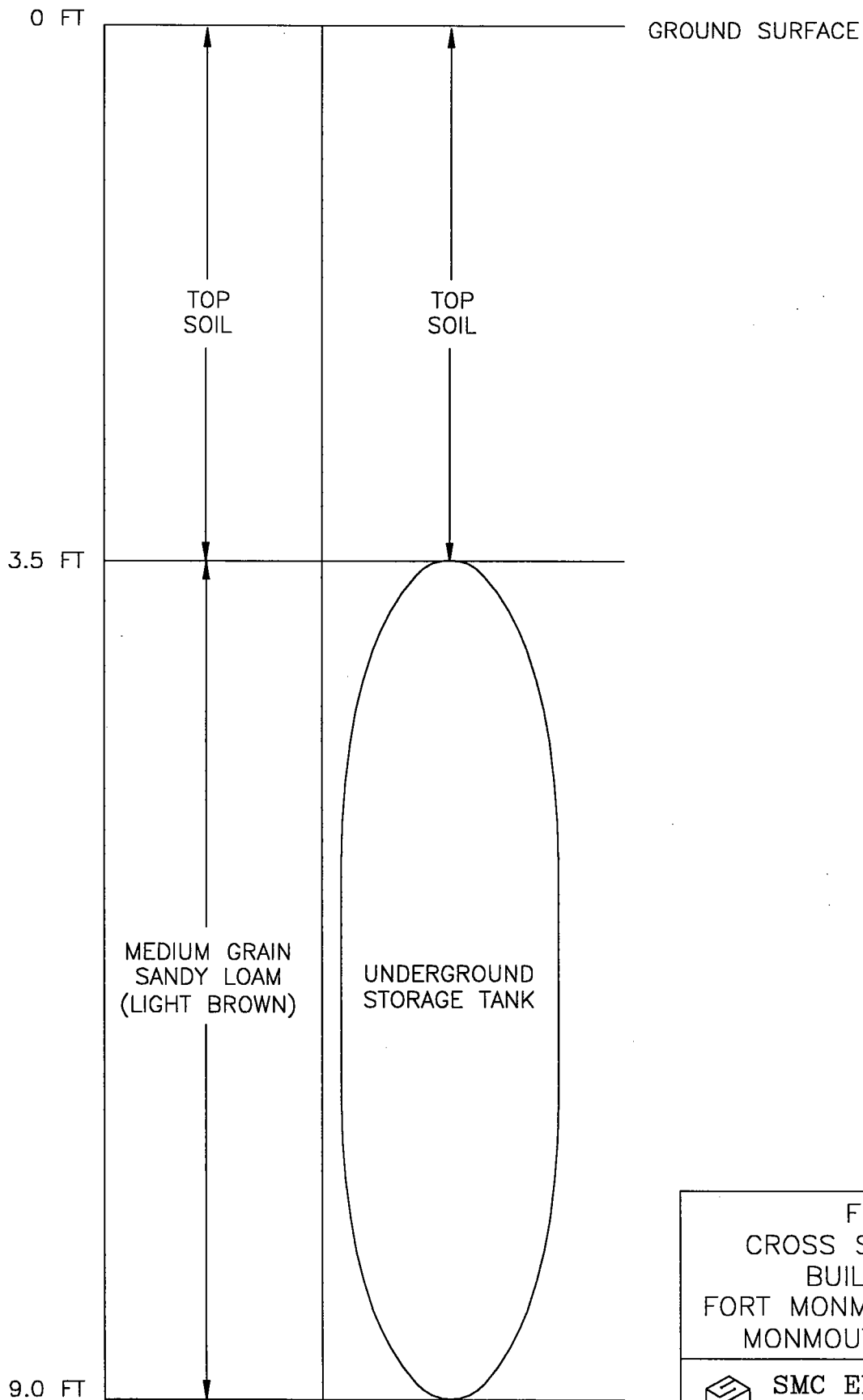


FIGURE 3
 CROSS SECTIONAL VIEW
 BUILDING 1075
 FORT MONMOUTH ARMY BASE
 MONMOUTH COUNTY, NJ

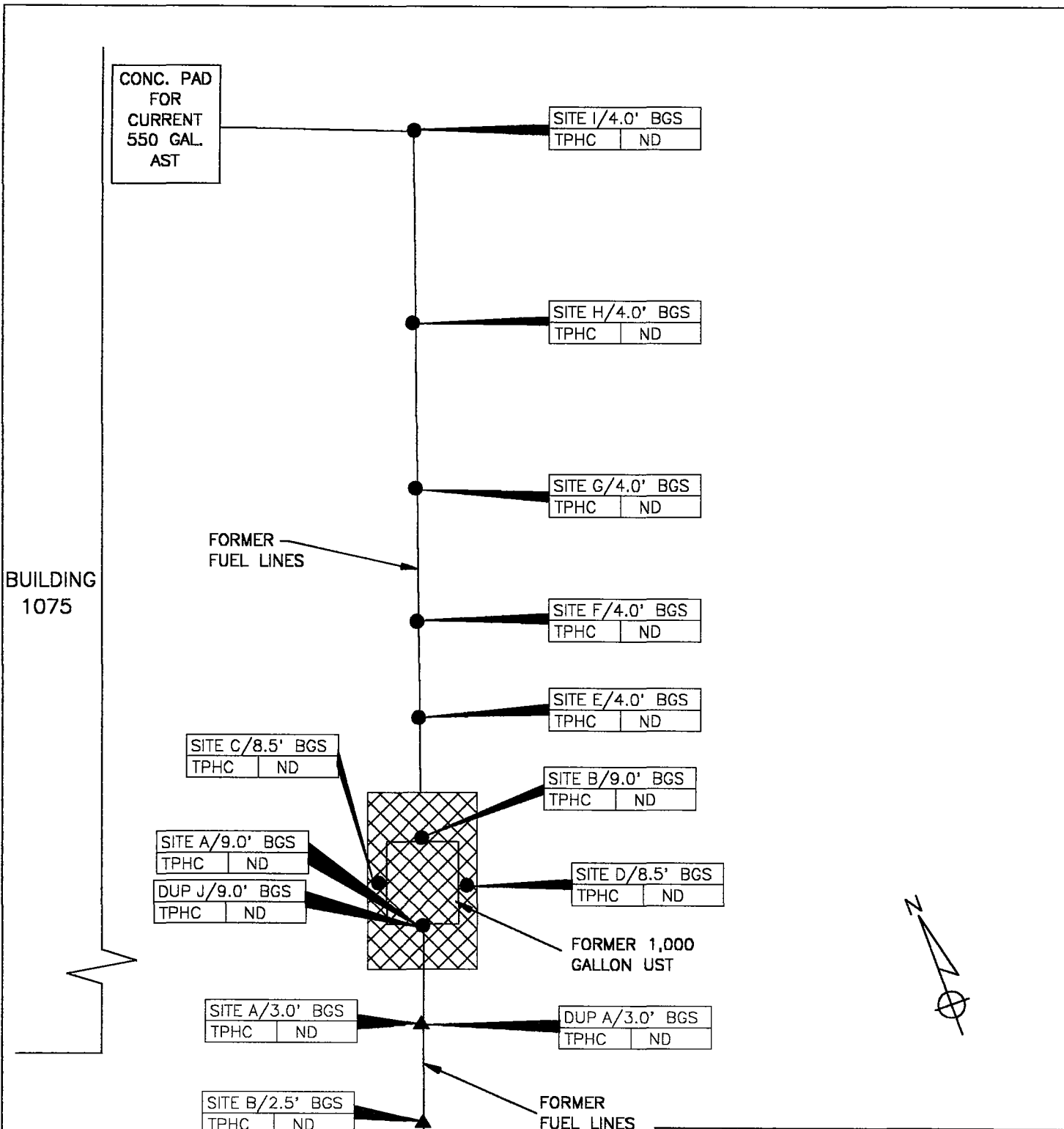


**SMC ENVIRONMENTAL
 SERVICES GROUP**

Engineers, Managers, Scientists & Planners
 VALLEY FORGE, PA.

SCALE: NTS

DATE: OCT. 1997



CONC. PAD
FOR
CURRENT
550 GAL.
AST

SITE I/4.0' BGS
TPHC | ND

SITE H/4.0' BGS
TPHC | ND

SITE G/4.0' BGS
TPHC | ND

FORMER
FUEL LINES

SITE F/4.0' BGS
TPHC | ND

SITE E/4.0' BGS
TPHC | ND

SITE C/8.5' BGS
TPHC | ND

SITE B/9.0' BGS
TPHC | ND

SITE A/9.0' BGS
TPHC | ND

SITE D/8.5' BGS
TPHC | ND

DUP J/9.0' BGS
TPHC | ND

DUP A/3.0' BGS
TPHC | ND

SITE A/3.0' BGS
TPHC | ND

DUP B/2.5' BGS
TPHC | ND

SITE B/2.5' BGS
TPHC | ND

SITE C/2.5' BGS
TPHC | ND

FORMER 1,000
GALLON UST

FORMER
FUEL LINES



LEGEND

● SOIL SAMPLE LOCATION
(JUNE 11, 1996)

▨ LIMIT OF EXCAVATION
(JUNE 11, 1996)

▲ SOIL SAMPLE LOCATION
(JULY 9, 1996)

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

FIGURE 4
SOIL SAMPLING LOCATION MAP
BUILDING 1075
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ



**SMC ENVIRONMENTAL
SERVICES GROUP**

Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=10'

DATE: DEC. 1997

APPENDIX A

NJDEP-BUST STANDARD REPORTING FORM



State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0029

ATTN: UST Program
(609) 984-3156

For State Use Only

Date Rec'd. _____
Auth. _____
Routing _____
UST NO. _____

STANDARD REPORTING FORM
for reporting activities at an UST facility:

- | | |
|--|---|
| <input type="checkbox"/> General Facility Information Changes | <input type="checkbox"/> Sale or Transfer |
| <input checked="" type="checkbox"/> Closure (Abandonment or Removal) | <input type="checkbox"/> Substantial Modification |
| <input type="checkbox"/> Temporary Closure | <input type="checkbox"/> Financial Responsibility |
| <input type="checkbox"/> Change in Service | <input type="checkbox"/> Address Change Only |

Check ONLY One Type of Activity - Complete Form For That Activity

(More than one tank can be listed per activity)

*** NOTE *** ALL NEW tank installations at existing registered facilities must submit a Registration Questionnaire for the new tanks.

Answer questions 1 through 5 and others as applicable.

1. Company name and address (as it appears on registration questionnaire):

U.S. ARMY - FORT MONMOUTH
DPW - BUILDING 173
FORT MONMOUTH NJ 07703
ATTN: EUGENE W. LESINSKI

2. Facility name and location (if different from above):

3. Contact person for this activity:

BLDG 1075

GENE LESINSKI
Telephone Number: (908) 532-0989

4. The identification number of the affected tank as it appears in Question Number 12 on the Registration Questionnaire:

206

5. Registration Number (if known):

UST - 0081533

6. For GENERAL FACILITY INFORMATION changes (address, telephone, contact person, etc. - supply NEW information only):

a. Facility name: _____

b. Facility location: _____

c. Owner's mailing address: _____

_____ NJ _____

d. Block: _____ Lot: _____

e. Contact person (facility operator): _____

f. Contact telephone number: (_____) _____

g. Other (Specify): _____

(OVER)

7. For CLOSURE (abandonment or removal - check all that apply):

a. Abandonment Date: ___/___/___ Case No: _____

Attach the necessary implementation schedule (3 copies) and all documentation needed for abandonment per N.J.A.C. 7:14B-9.1 (d).

b. Removal Date: 6/11/96 Case No. _____

Attach the necessary implementation schedule (3 copies).

8. For CHANGES IN HAZARDOUS SUBSTANCES STORED (check all that apply):

a. Temporary Closure (12 month maximum time - see N.J.A.C. 7:14B-9.1(b)). Remove all hazardous substances; leave tank in place.

b. Change in service from a regulated substance to a non-regulated substance. Tank must be cleaned and site assessment performed per N.J.A.C. 7:14B-9.1(e).

c. Changes in service from one regulated hazardous substance to another regulated hazardous substance.

Tank No. _____ Old _____ New _____

Tank No. _____ Old _____ New _____

Tank No. _____ Old _____ New _____

(Attach additional sheets if more space is needed)

9. For TRANSFER OF OWNERSHIP: Effective Date: ___/___/___

a. New Owner (operator) _____

b. New Facility Name _____

_____ NJ _____

_____ County _____

c. Closing Attorney _____ Tele: (____) _____

10. For SUBSTANTIAL MODIFICATIONS (to include any retrofitted activity - e.g. the addition of spill/overflow protection, monitoring systems, cathodic protection, etc.):

a. Type of Modification _____ Date: ___/___/___

b. * NOTE * Substantial modifications require a permit under N.J.A.C. 7:14B-10.

11. For changes in FINANCIAL RESPONSIBILITY to (check appropriate changes and attach copies of new information):

a. Policy Type:

d. Company/Carrier:

b. Policy Number:

e. Expiration Date:

c. Other:

(Specify)

NOTE: ALL appropriate and applicable permits, licenses and certificates required by the above activity(ies) from any local, state and/or federal agencies must be obtained separately from this notification.

CERTIFICATION

This registration form shall be signed by the highest ranking individual at the facility with overall responsibility for that facility (N.J.A.C. 7:14B-2.3 (a) 1).

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

Signature: *James Ott*

Name (print or type): JAMES OTT

Title: DIRECTOR - DEPT OF PUBLIC WORKS Date: 1/29/97

APPENDIX B
SITE ASSESSMENT SUMMARY

UST-014
2/91

FOR STATE USE ONLY
UST#
Date Rec'd
TMS #
Staff

**STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Responsible Party Site Remediation
CN 029**

Scott A. Weiner
Commissioner

TRENTON, N.J. 08625-0028
Tel. # 609-984-3156
Fax.# 609-292-5604

Karl J. Delaney
Director

**UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY**

*Under the provisions of the Underground Storage
of Hazardous Substances Act
in accordance with N.J.A.C. 7:14B*

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- ◆ Please print legibly or type.
- ◆ Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for UST's, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.
- ◆ Return one original of the form and all required attachments to the above address.
- ◆ Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.
- ◆ Explain any "No" or "N/A" response on a separate sheet.

Date of Submission: _____

Building No. 1075 UST No. 81533-206

0192477-1

Facility Registration #

1. FACILITY NAME AND ADDRESS:

U.S. Army Fort Monmouth New Jersey
Directorate of Engineering and Housing Building 167
Fort Monmouth New Jersey 07703 County Monmouth
Telephone No. 908-532-6224

OWNER'S NAME AND ADDRESS, if different from above.

 Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

- A. Was contamination found? Yes No If Yes, Case No. _____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)
- B. The substance(s) discharged was (were) N/A
- C. Have any vapor hazards been mitigated? Yes No N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure approval No. NJDEP "Blanket Closure"

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A.-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated.

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification and disposal location.

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

- a. North arrow and scale
- b. The locations of the ground water monitoring wells
- c. Location and depth of each soil sample and boring
- d. All major surface and subsurface structures and utilities
- e. Approximate property boundaries
- f. All existing or closed underground storage tank systems, including appurtenant piping
- g. A cross-sectional view indicating depth of tank, stratigraphy and location of water table
- h. Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? Yes No N/A
2. Were soil borings taken at the tank system closure site as prescribed? Yes No N/A
3. Attach the analytical results in tabular form and include the following information about each sample
 - a. Customer sample number (keyed to the site map)
 - b. The depth of the soil sample
 - c. Soil boring logs
 - d. Method detection limit of the method used
 - e. QA/QC Information as required

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed 0
2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:
 - a. Site diagram number for each well installed
 - b. Depth of ground water surface
 - c. Depth of screened interval
 - d. Method detection limit of the method used
 - e. Well logs
 - f. Well permit numbers
 - g. QA/QC Information as required

V. SOIL CONTAMINATION

- A. Was soil contamination found? Yes No
If "Yes", please answer Question B-E
If "No", please answer Question B
- B. The highest soil contamination still remaining in the ground has been determined to be:
 1. N/A ppb total BTEX, N/A ppb total non-targeted VOC
 2. N/A ppb total B/N, N/A ppb total non-targeted B/N
 3. ND ppm TPHC
 4. N/A ppb N/A (for non-petroleum substance)
- C. Remediation of free product contaminated soils
 1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface. Yes No
 2. Free product contaminated soils are suspected to exist below the water table. Yes No
 3. Free product contaminated soils are suspected to exist off the property boundaries. Yes No
- D. Was the vertical and horizontal extent of contamination determined? Yes No N/A
- E. Does soil contamination intersect ground water? Yes No N/A

VI. GROUND WATER CONTAMINATION

- A. Was ground water contamination found? Yes No
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.
- B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be: N/A
 1. ppb total BTEX, ppb total non-targeted VOC
 2. ppb total B/N, ppb total non-targeted B/N
 3. ppb total MTBE, ppb total TBA
 4. ppb (for non-petroleum substance)
 5. greatest thickness of separate phase product found
 6. separate phase product has been delineated Yes No N/A

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

"I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) SAME AS SITE ASSESSMENT SIGNATURE _____

COMPANY NAME _____ DATE _____
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITIES

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)1].

"I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) James Ott SIGNATURE 

COMPANY NAME U.S. Army Fort Monmouth DATE 3/25/98

B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)2]:

1. For a corporation, by a principal executive officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

'S ARMY, SELFM-PW- 7
DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 1075 REG.#: 0081533 - 246 CLOSURE#: N/A
 DATE: 6-11-96 TOA: * 1100 TOD: 1330
 GOV. SSE: LESINSKY NJDEP CERT.#: 0014537
 REMOVAL CONTRACTOR: SEE TAG. TVS
 CLOSURE SUPERVISOR: G. DeMartino NJDEP CERT.#: _____
 WEATHER: Partly Cloudy - 85°F - Humid

ACTIVITY	YES / NO
THE SUPERVISOR (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED TO THE NJDEP (609-292-7172), CASE# _____	N
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT _____ FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	N/A
IF OVA/Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	X
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	X
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	N/A
THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	X
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS ³), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	N

CHECK ALL BOXES, LEAVE NO BLANKS

I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

SIGNATURE: _____ DATE: 6-11-96

APPENDIX C

WASTE MANIFEST

1075



State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039. Expires 9-30-96

In case of an emergency or spill immediately call the NJ Dept. of Environmental Protection and Energy. (908) 292-7172

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NJ321002059-707850	Manifest Document No. 707850	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address US ARMY COMMUNICATIONS ELECTRONICS COMMAND MAIN POST, C/O JAMES SHIRANO BLDG 173 SELF-HAUL				A. State Manifest Document Number NJA 2608850	B. State Generator's ID (Gen. Site Address) STATE	
4. Generator's Phone (908) 532-6722				C. State Trans. ID - NADERE 58217	D. State Trans. ID - NADPER 58217	
5. Transporter 1 Company Name LIONETTI OIL RECOVERY CO., INC.		6. US EPA ID Number 1170999999		E. State Trans. ID - NADPER 58217		F. Decal No. 58217
7. Transporter 2 Company Name		8. US EPA ID Number		G. State Trans. ID - NADPER		H. Decal No.
9. Designated Facility Name and Site Address LIONETTI OIL RECOVERY CO., INC. / OGA LORCO PETROLEUM SVCS. RUMYON & CHEESEQUAKE ROADS OLD BRIDGE NJ 08857				I. State Facility's ID 58217		J. Facility's Phone (908) 721-0900
11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group) HM				12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol Waste No.
a. PETROLEUM OIL (PETROLEUM OIL) COMBUSTIBLE LIQUID UN 1270 PGII				991	1 X 600	5 X 722
b.						
c.						
d.						
15. Special Handling Instructions and Additional Information NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NJ 24 HOUR EMERGENCY RESPONSE (908) 721-0900 DECAL # 73599 EPA 128 DECSIL TEST KIT RESULTS 1000 PPM HALOGENS				K. Handling Codes for Wastes Listed Above UN 1270 PGII		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name EUGENE W LESINSKI		Signature <i>Eugene W Lesinski</i>		Month Day Year 06 21 96		
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name MARK SWANSON		Signature <i>Mark Swanson</i>		Month Day Year 06 21 96		
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name TOM WICKOFF		Signature <i>Tom Wickoff</i>		Month Day Year 06 21 96		

NJ 2608850

APPENDIX D

UST DISPOSAL CERTIFICATE

APPENDIX E
SOIL ANALYTICAL DATA PACKAGE

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 #: 2089.1-.10
Sample Rec'd: 06/12/96
Analysis Start: 06/14/96
Analysis Comp: 06/24/96

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B.McKee
Ext. Meth: Shake

NJDEP UST Reg.#:	
Closure #:	
DICAR #:	
Location #: Bldg. 1075	

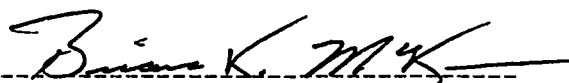
Lab ID.	Description	OVA	%Solid	MDL (mg/Kg)	Surrogate % Recovery	Result (mg/Kg)
2089.1	1075-A (Exc. Floor @ 9')	ND	89.2	200	118.5	ND
2089.2	1075-B (Exc. Floor @ 9')	ND	72.4	200	96.7	ND
2089.3	1075-C (Sidewall @ 8.5')	ND	88.5	200	116.3	ND
2089.4	1075-D (Sidewall @ 8.5')	ND	89.9	200	129.2	ND
2089.5	1075-E (Piping Run @ 4')	ND	87.5	200	91.8	ND
2089.6	1075-F (Piping Run @ 4')	ND	78.9	200	86.2	ND
2089.7	1075-G (Piping Run @ 4')	ND	89.1	200	134.2	ND
2089.8	1075-H (Piping Run @ 4')	ND	90	200	89.7	ND
2089.9	1075-I (Piping Run @ 4')	ND	89.5	200	125.8	ND
2089.10	1075-J (Field Duplicate)	NA	89.1	200	83.0	ND
M. Bl.	Method Blank	NA	100	200	91.3	ND

QC: 2089.9S= 89%, 2089.9SD=107%, RPD=18.0%, 2089.9dup=104%

QC Limits: Surrogate: 50% - 165%

MS/MSD: not established RPD: not established

Notes: ND = Not Detected, MDL = Method Detection Limit
NA = Not Applicable
* = Matrix Interference



Brian K. McKee
Laboratory Director

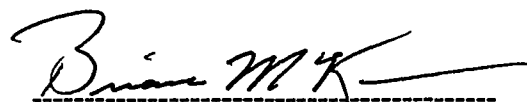
Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

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

Lab. ID #: 2089.1-.10
Sample Rec'd: 06/12/96
Analysis Start: 06/14/96
Analysis Comp: 06/24/96

Analysis: Munsel

Lab ID#	Soil Color
2089.1	10YR 3/4 Dark Yellow Brown
2089.2	10YR 5/6 Yellow Brown
2089.3	10YR 4/6 Dark Yellow Brown
2089.4	10YR 4/4 Dark Yellow Brown
2089.5	10YR 4/6 Dark Yellow Brown
2089.6	10YR 4/6 Dark Yellow Brown
2089.7	10YR 4/3 Brown
2089.8	10YR 4/4 Dark Yellow Brown
2089.9	10YR 4/6 Dark Yellow Brown
2089.10	10YR 4/4 Dark Yellow Brown

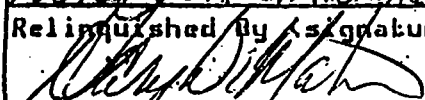
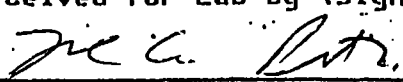


Brian K. McKee
Laboratory Director

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #: _____		Sampler: GARY DiMartini's - TVS		Date / Time: 6-11-96 1300	Analysis Parameters		Start: _____		
Customer: GENE LESINSKI SELF-M-PW-EV		Site Name: BUILDING #1075		<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">TPHC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">% SOLIDS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">MUNSEL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">OVA</div> </div>		Finish: _____			
Phone: (908) 532-0989						Preservation Method			
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles			Remarks		
2089-01	6-11-96 1327	1075-A (EXL FLOOR @ 9')	SOIL	1	X	X	X	ND	*
02	1343	1075-B ↓						ND	* = SAMPLES
03	1338	1075-C (SIDEWALL @ 8.5')						ND	KEPT BELOW
04	↓ 1338	1075-D ↓						ND	4° C.
05	6-12-96 1041	1075-E (Piping Run @ 4')						ND	
06	1048	1075-F						ND	
07	1051	1075-G						ND	
08	1053	1075-H						ND	
09	↓ 1124	1075-I ↓						ND	
10	6-11-96 —	1075-DUP (FIELD DUPLICATE) ↓			↓	↓	↓	—	↓
NOTE: OVA CALIBRATED TO 95 PPM. METER. READING W/ 95 KPMCHALZER (S) A/C BY G. DiMartini's @ 1315									
Relinquished By (signature): 		Date / Time: 6-12-96 1153	Received By (signature): _____		Shipped By: HAND		ON 6-12-96 (SERIAL # 952114)		
Relinquished By (signature): _____		Date / Time: _____	Received for Lab by (signature): 		Date / Time: 6-12-96 1153				
Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS									

Sample Receipt Form

Date Received: 6-12-96

Lab Project ID #: 2089

Site/Project Name: B.1075

Cooler Temp: 24°C

Received by: J. A. R. Jr.

Circle the appropriate answer

- 1. Did the samples come in a cooler? yes no
- 2. Were chain of custody papers filled out correctly and legibly? yes no
- 3. Did you sign the chain of custody in the appropriate place? yes no
- 4. Was the project identifiable from the chain of custody? yes no
- 5. Did all bottles arrive unbroken and were labels in good condition? yes no
- 6. Did all labels agree with the chain of custody? yes no
- 7. Were correct containers and/or preservatives used for the tests indicated? yes no
- 8. Were bubbles absent from aqueous VOC sample containers? yes no

N/A

Fill out the following for each sample bottle.

Sample ID	Preservative	pH	Sample ID	Preservative	pH
ALL SAMPLES	24°C	N/A			

Comments: NONE

Samples Accepted By: J. A. R. Jr.

Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219640.D
 Acq On : 22 Jun 96 06:26 AM
 Sample : 2089.1
 Misc :
 Quant Time: Jun 24 10:23 1996

Vial: 7
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	3105	0.711 mg/L
	Recovery	=	177.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	61734	18.806 mg/L

118.5

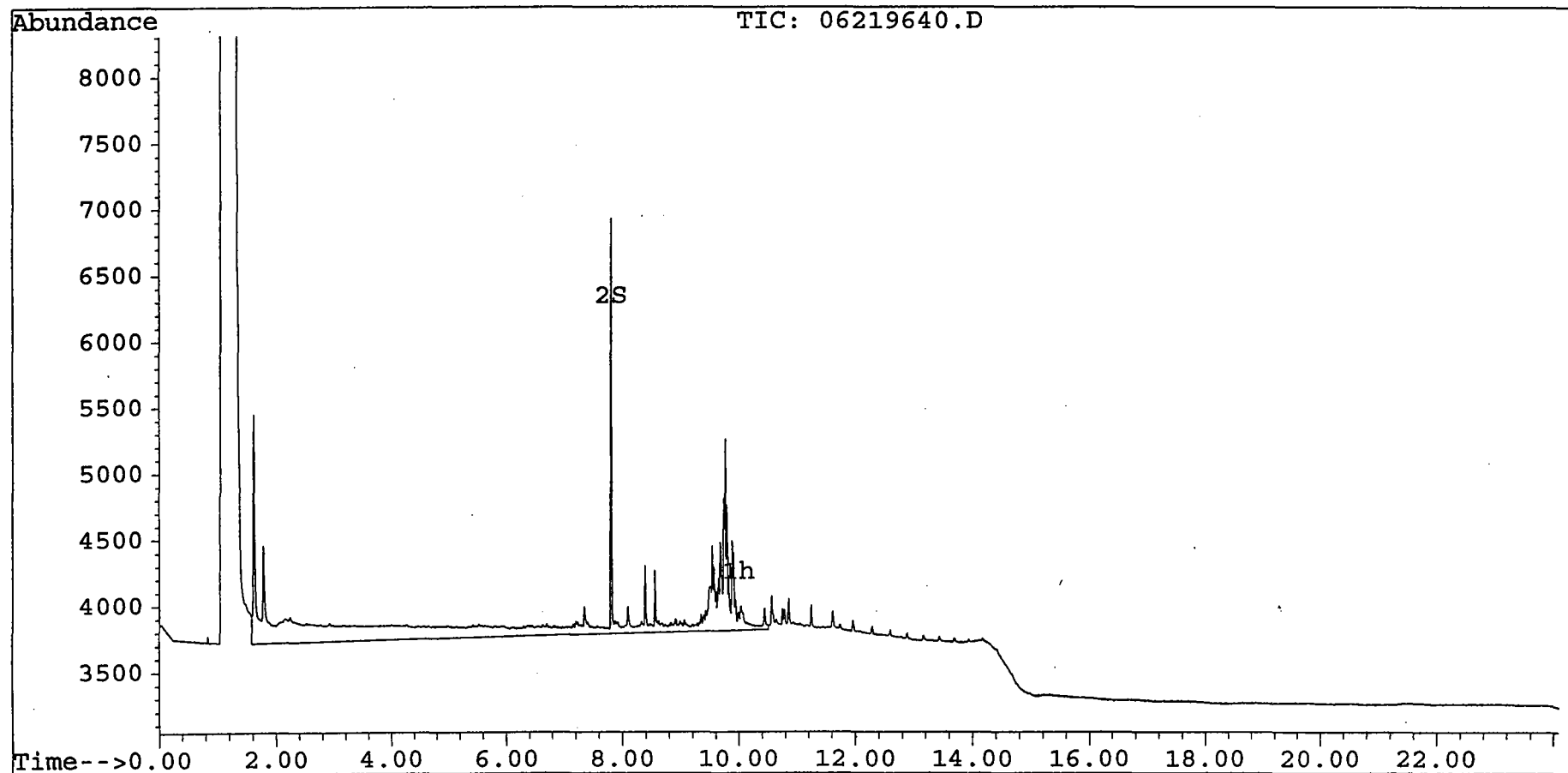
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219640.D
Acq On : 22 Jun 96 06:26 AM
Sample : 2089.1
Misc :
Quant Time: Jun 24 10:23 1996

Vial: 7
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219641.D
 Acq On : 22 Jun 96 07:01 AM
 Sample : 2089.2
 Misc :
 Quant Time: Jun 28 10:23 1996

Vial: 8
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	2530	0.580 mg/L m
	Recovery	=	96.667%
Target Compounds			
1) h #2 Fuel Oil	10.00	9355	2.850 mg/L

(f)=RT Delta > 1/2 Window
 06219641.D TPH3A.M

Fri Jun 28 10:23:39 1996

(m)=manual int.
 SEMI

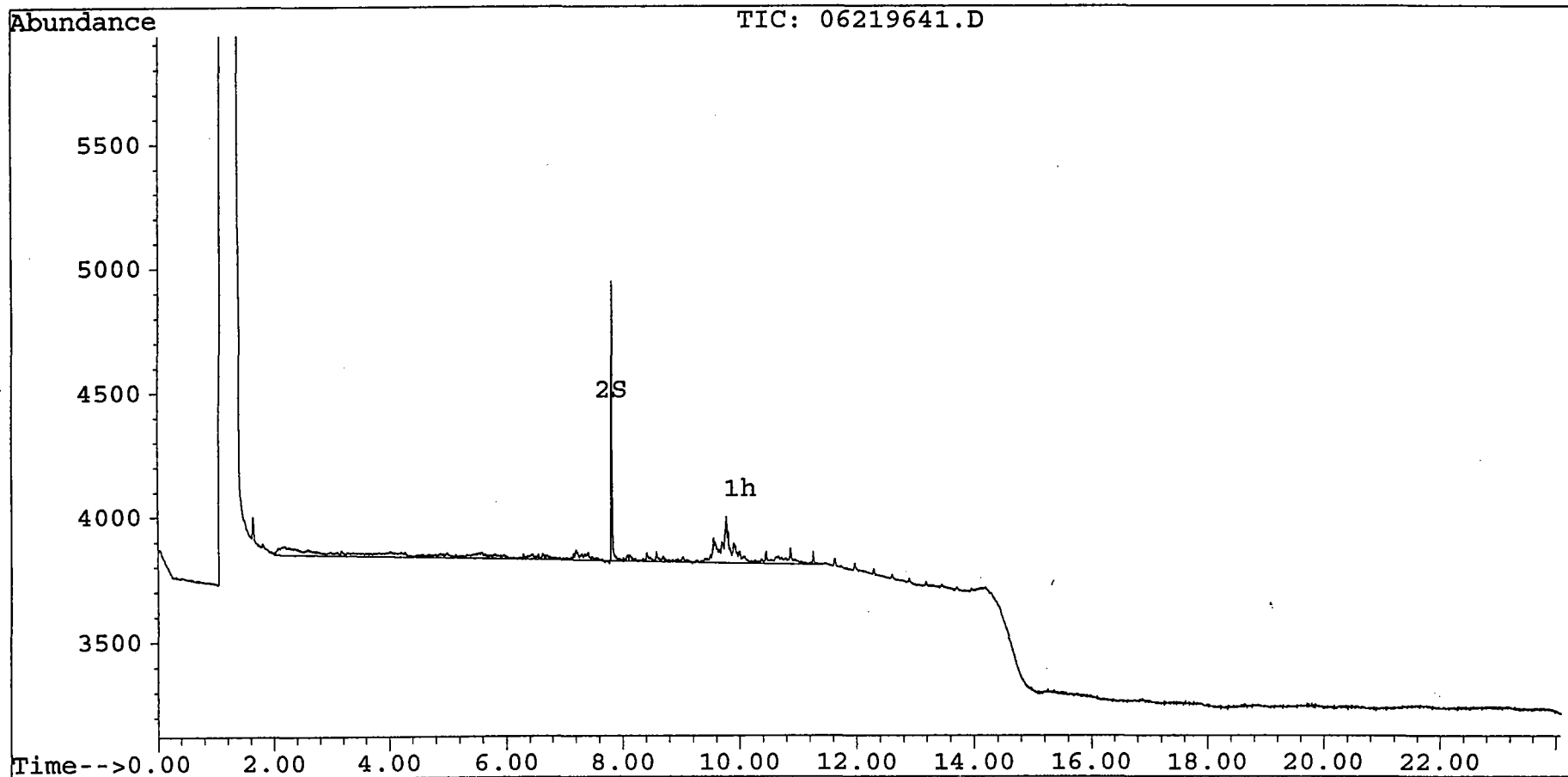
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219641.D
Acq On : 22 Jun 96 07:01 AM
Sample : 2089.2
Misc :
Quant Time: Jun 28 10:23 1996

Vial: 8
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219642.D
 Acq On : 22 Jun 96 07:35 AM
 Sample : 2089.3
 Misc :
 Quant Time: Jun 24 10:23 1996

Vial: 9
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	3050	0.698 mg/L
	Recovery	=	174.50%
Target Compounds			
1) h #2 Fuel Oil	10.00	53210	16.209 mg/L

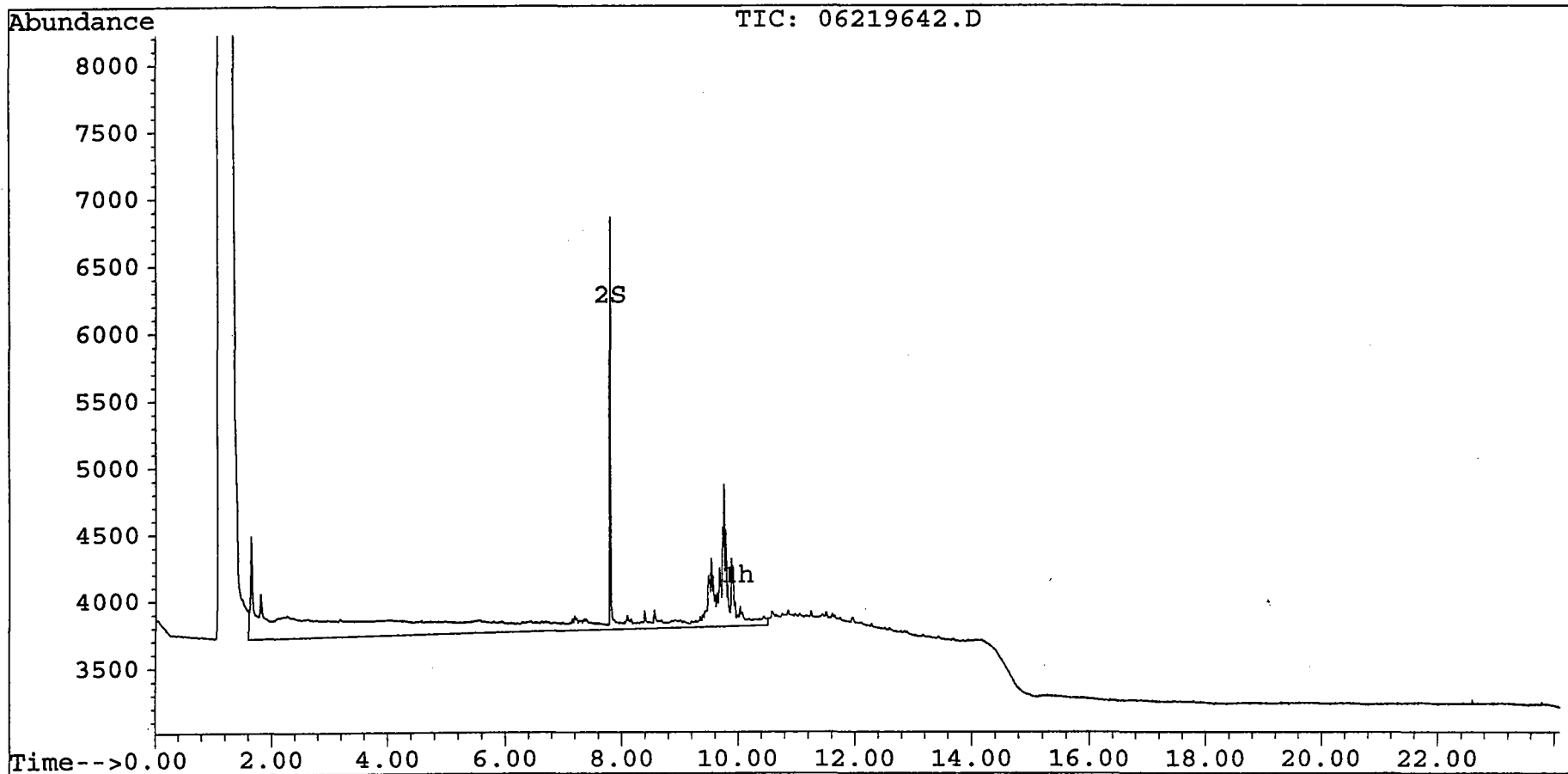
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219642.D
Acq On : 22 Jun 96 07:35 AM
Sample : 2089.3
Misc :
Quant Time: Jun 24 10:23 1996

Vial: 9
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219643.D
 Acq On : 22 Jun 96 08:10 AM
 Sample : 2089.4
 Misc :
 Quant Time: Jun 24 10:24 1996

Vial: 10
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
2) S o-Terphenyl	7.80	3385	0.775 mg/L
	Recovery	=	193.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	47047	14.332 mg/L

129.2

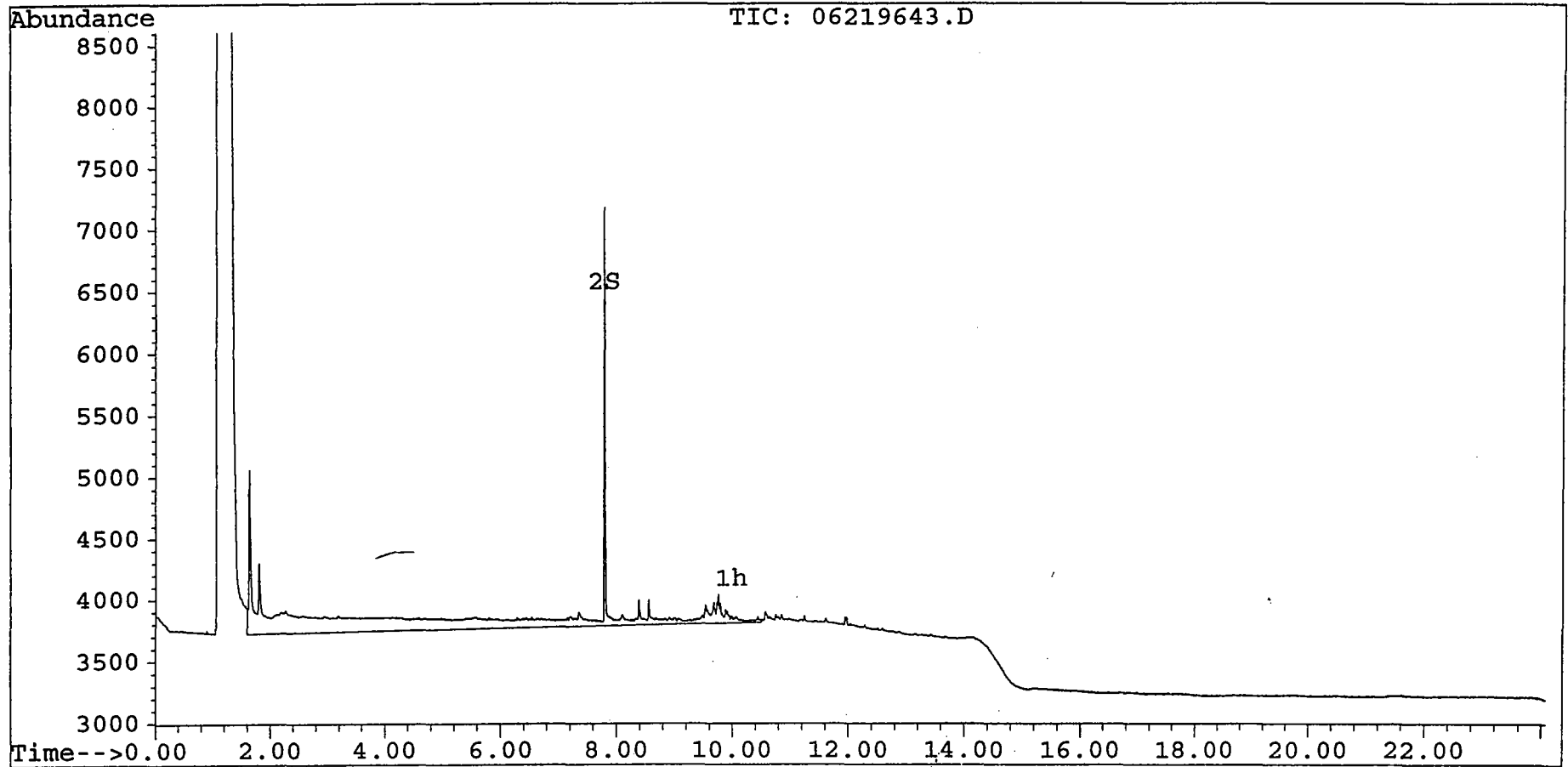
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219643.D
Acq On : 22 Jun 96 08:10 AM
Sample : 2089.4
Misc :
Quant Time: Jun 24 10:24 1996

Vial: 10
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219644.D
 Acq On : 22 Jun 96 08:44 AM
 Sample : 2089.5
 Misc :
 Quant Time: Jun 24 10:24 1996

Vial: 11
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	2409	0.551 mg/L
	Recovery	=	137.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	47854	14.578 mg/L

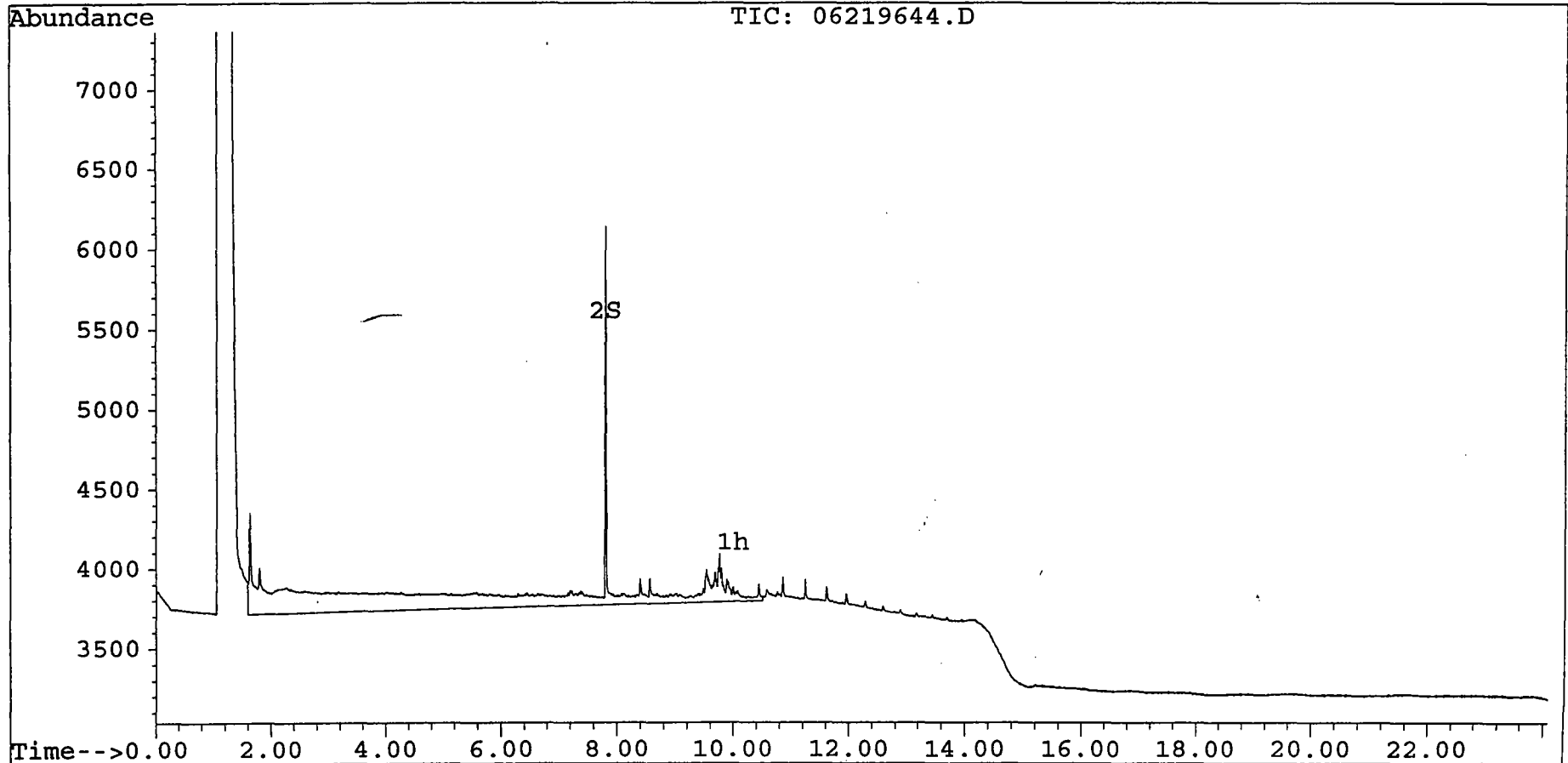
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219644.D
Acq On : 22 Jun 96 08:44 AM
Sample : 2089.5
Misc :
Quant Time: Jun 24 10:24 1996

Vial: 11
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



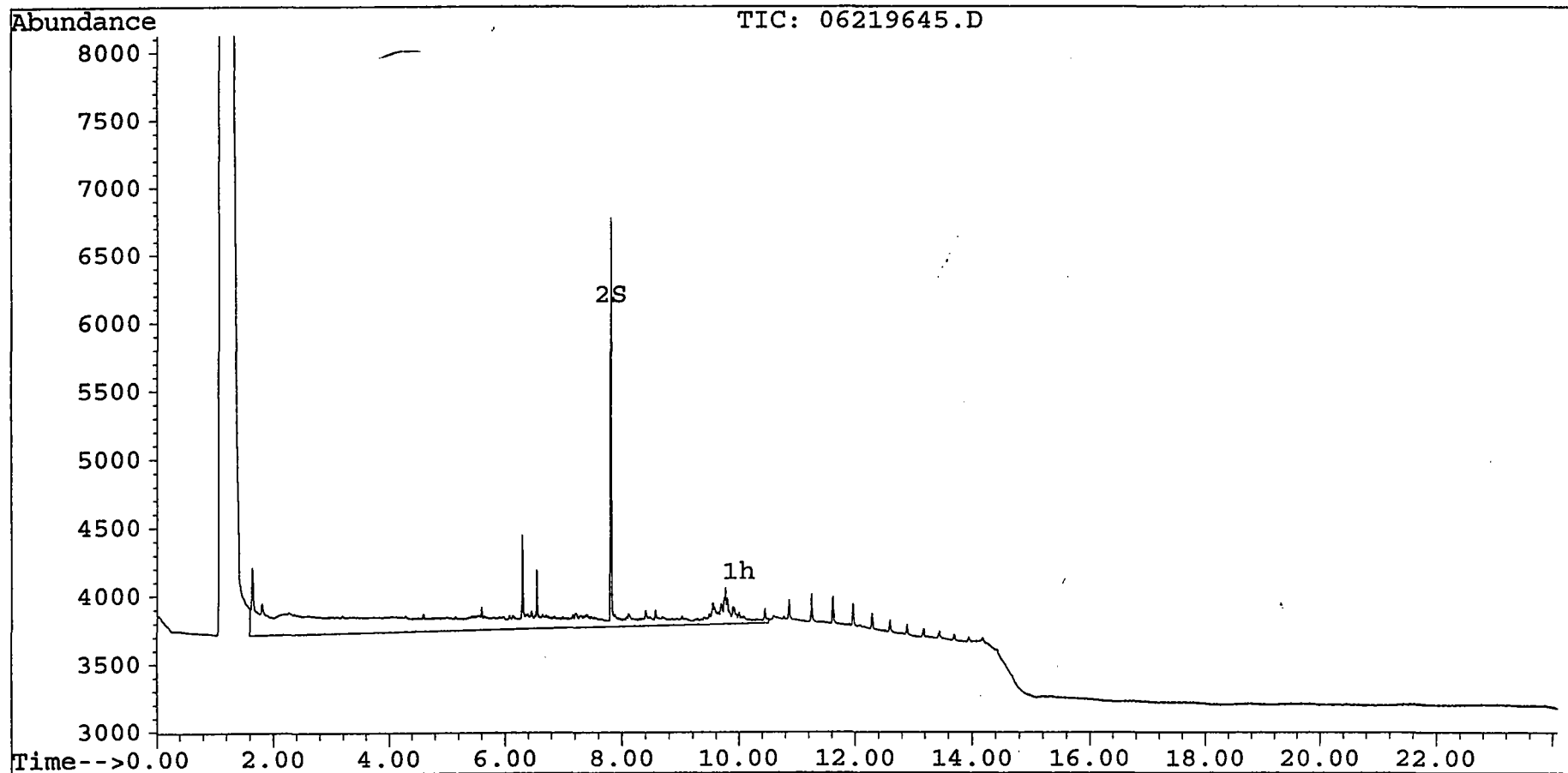
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219645.D
Acq On : 22 Jun 96 09:19 AM
Sample : 2089.6
Misc :
Quant Time: Jun 24 10:24 1996

Vial: 12
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219646.D
 Acq On : 22 Jun 96 09:54 AM
 Sample : 2089.7
 Misc :
 Quant Time: Jun 28 10:30 1996

Vial: 13
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
2) S o-Terphenyl	7.80	3519	0.805 ¹⁶ mg/L
	Recovery	=	201.25%
Target Compounds			
1) h #2 Fuel Oil	10.00	74172	22.595 mg/L

(f)=RT Delta > 1/2 Window
 06219646.D TPH3A.M

Fri Jun 28 10:32:06 1996

(m)=manual int.
 SEMI

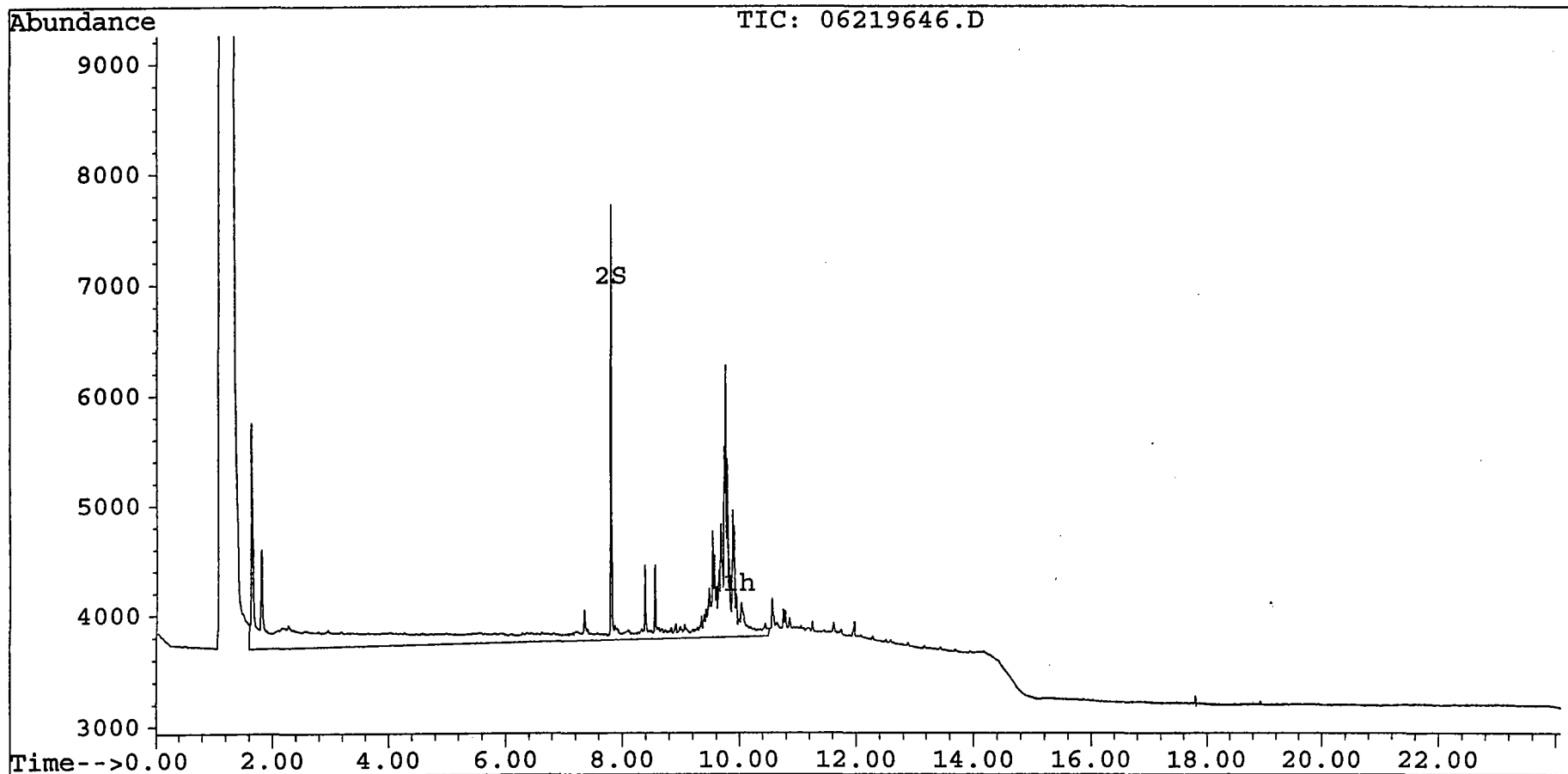
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219646.D
Acq On : 22 Jun 96 09:54 AM
Sample : 2089.7
Misc :
Quant Time: Jun 28 10:30 1996

Vial: 13
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219647.D
 Acq On : 22 Jun 96 10:28 AM
 Sample : 2089.8
 Misc :
 Quant Time: Jun 24 10:25 1996

Vial: 14
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	4699	1.076 mg/L
	Recovery	=	269.00%
Target Compounds			
1) h #2 Fuel Oil	10.00	88570	26.981 mg/L

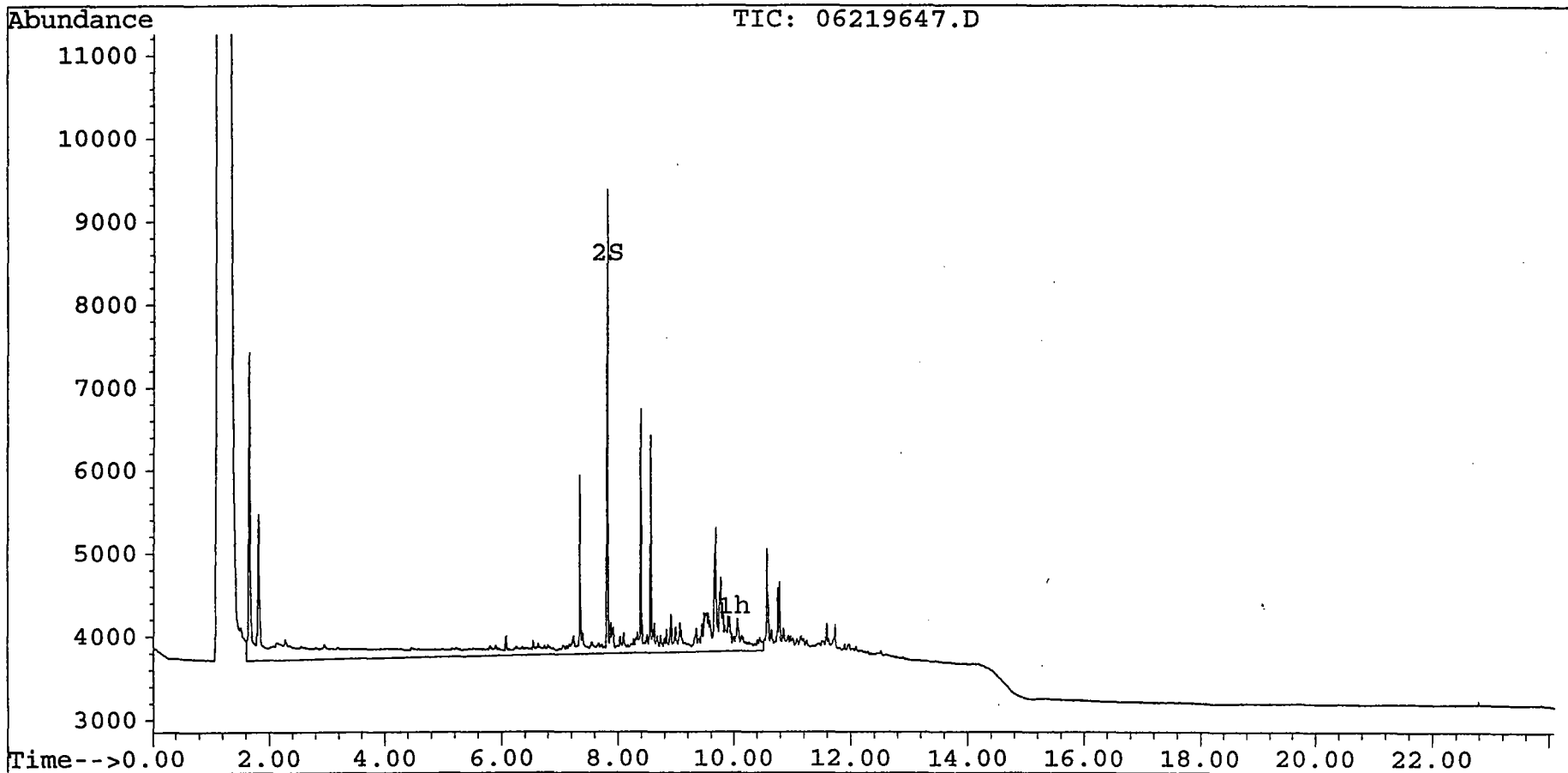
5.7

Data File : C:\HPCHEM\6\DATA\06219647.D
Acq On : 22 Jun 96 10:28 AM
Sample : 2089.8
Misc :
Quant Time: Jun 24 10:25 1996

Vial: 14
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219648.D
 Acq On : 22 Jun 96 11:03 AM
 Sample : 2089.9
 Misc :
 Quant Time: Jun 24 10:25 1996

Vial: 15
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
2) S o-Terphenyl	7.81	3297	0.755 mg/L
	Recovery	=	188.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	48290	14.711 mg/L

1255

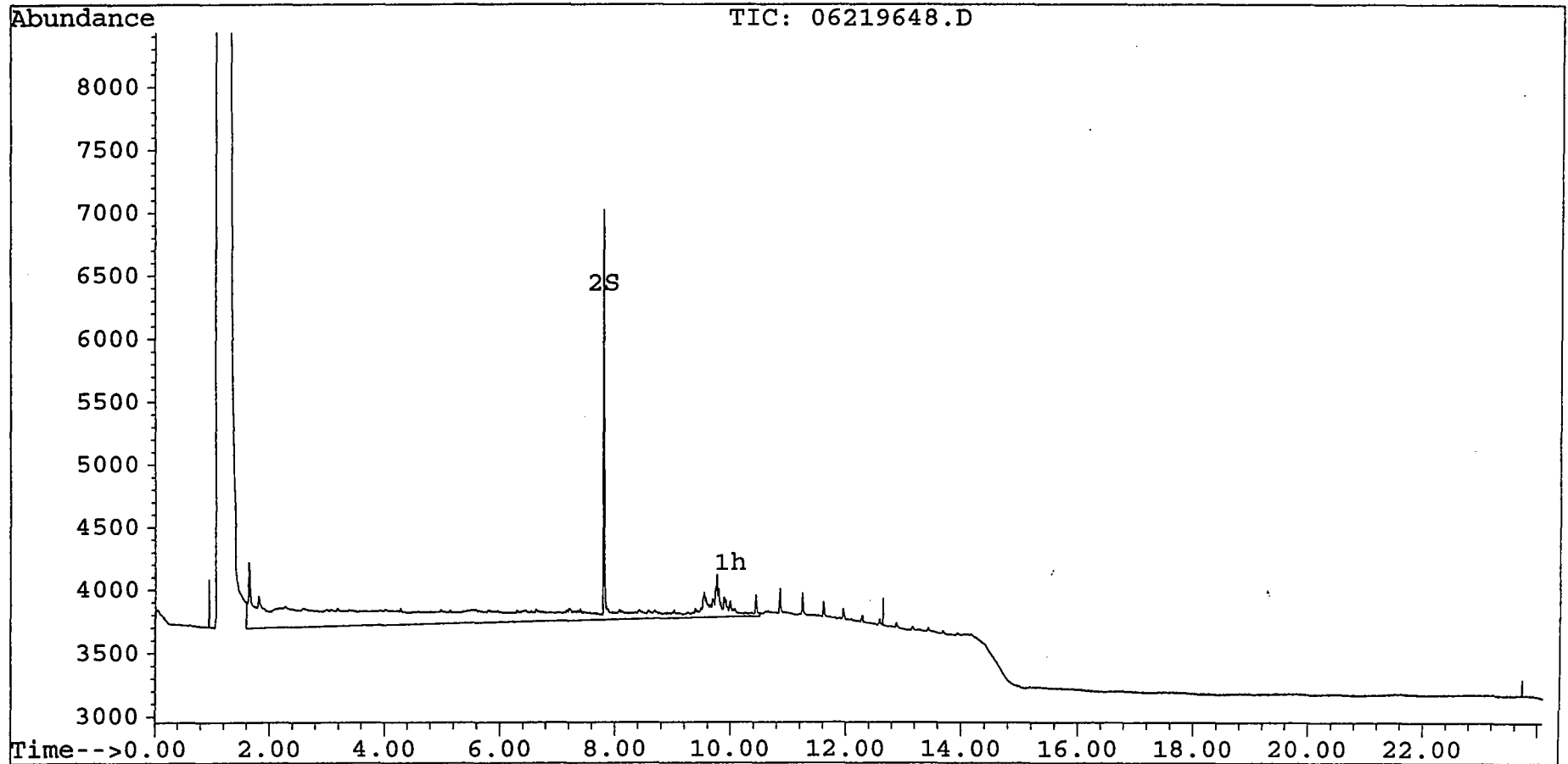
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219648.D
Acq On : 22 Jun 96 11:03 AM
Sample : 2089.9
Misc :
Quant Time: Jun 24 10:25 1996

Vial: 15
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219649.D
 Acq On : 22 Jun 96 11:38 AM
 Sample : 2089.9 dup
 Misc :
 Quant Time: Jun 24 10:25 1996

Vial: 16
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.81	2409	0.551 mg/L
	Recovery	=	137.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	46376	14.128 mg/L

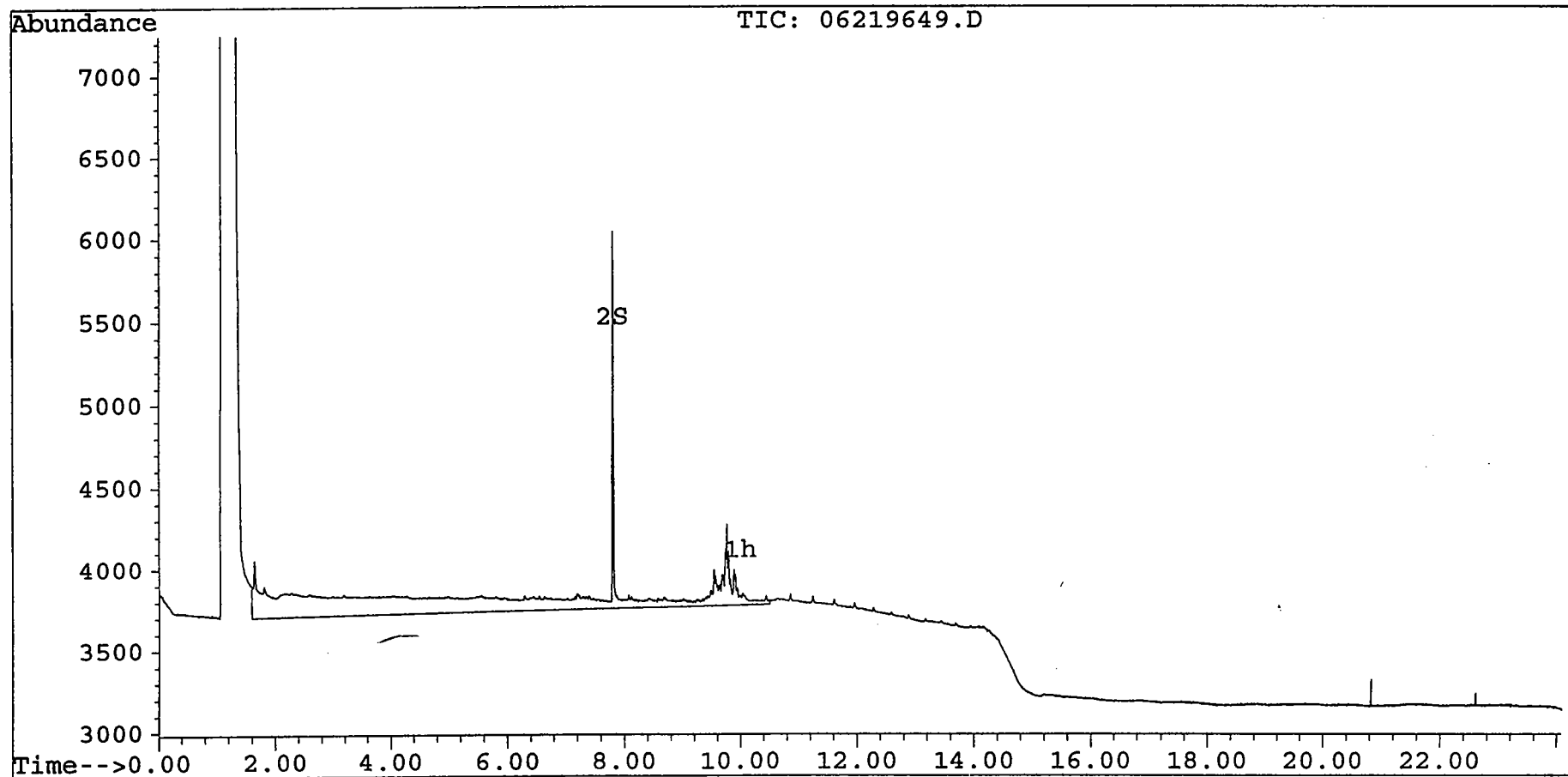
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219649.D
Acq On : 22 Jun 96 11:38 AM
Sample : 2089.9 dup
Misc :
Quant Time: Jun 24 10:25 1996

Vial: 16
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219650.D
 Acq On : 22 Jun 96 12:12 PM
 Sample : 2089.9 spk
 Misc :
 Quant Time: Jun 24 10:26 1996

Vial: 17
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.80	4887	1.119 mg/L
	Recovery	=	279.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	704925	214.743 mg/L

93.3

240 276

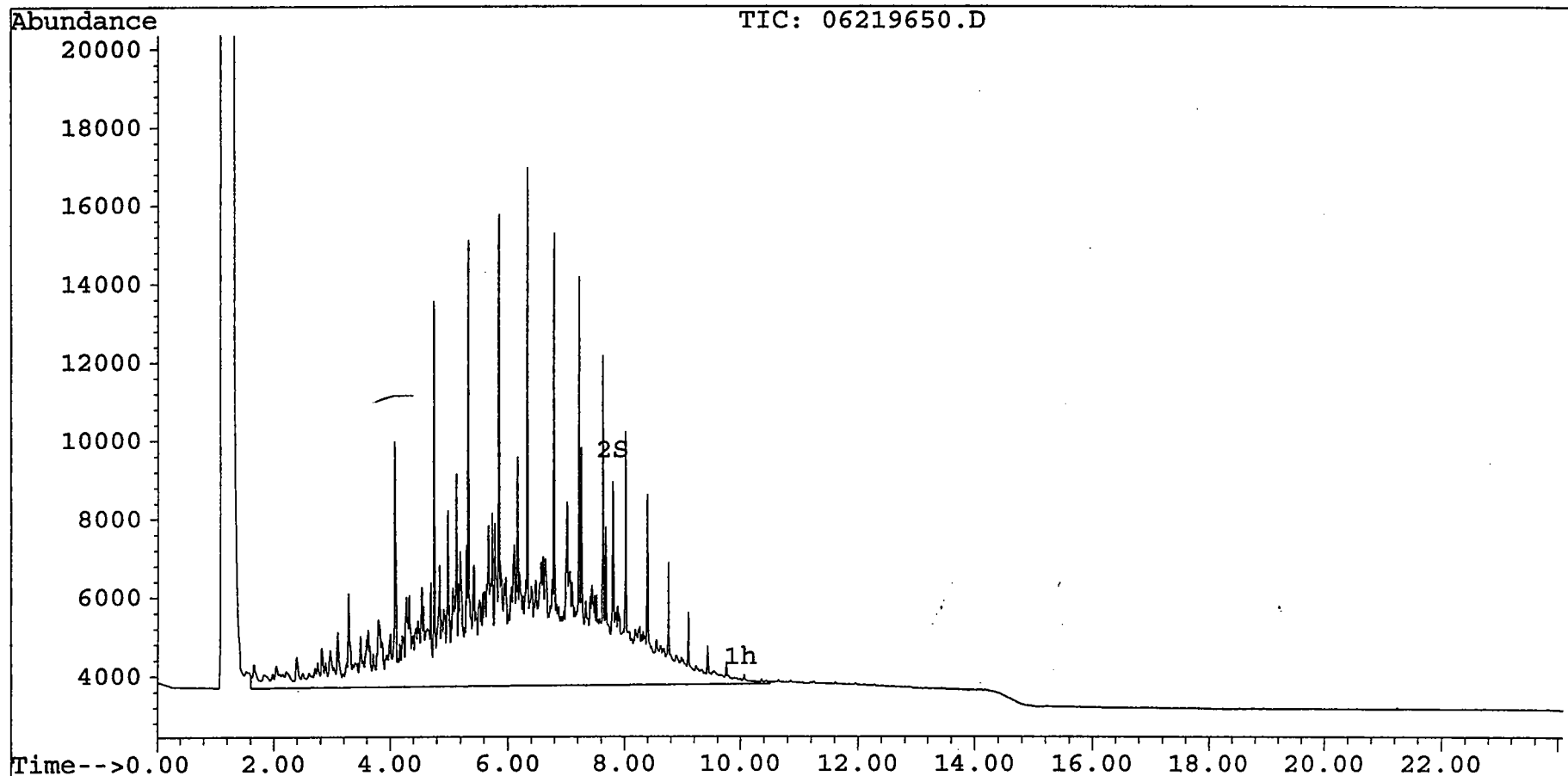
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219650.D
Acq On : 22 Jun 96 12:12 PM
Sample : 2089.9 spk
Misc :
Quant Time: Jun 24 10:26 1996

Vial: 17
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219651.D
 Acq On : 22 Jun 96 12:47 PM
 Sample : 2089.9 skp dup
 Misc :
 Quant Time: Jun 24 10:26 1996

Vial: 18
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.81	5733	1.312 mg/L
	Recovery	=	328.00%
Target Compounds			
1) h #2 Fuel Oil	10.00	840816	256.140 mg/L

Handwritten notes:
 109.5
 245 21570
 400.20 = 52
 205.42

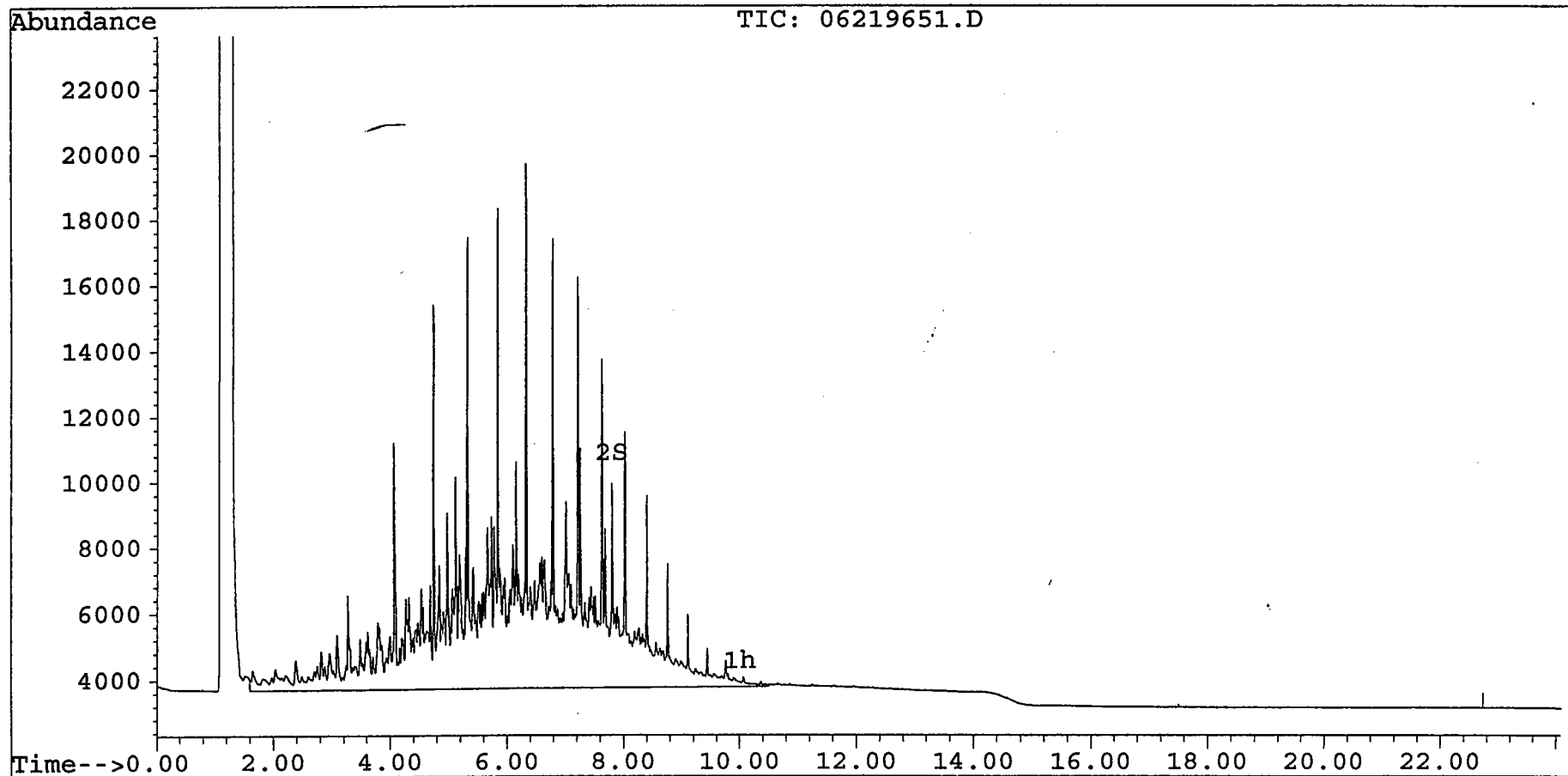
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219651.D
Acq On : 22 Jun 96 12:47 PM
Sample : 2089.9 skp dup
Misc :
Quant Time: Jun 24 10:26 1996

Vial: 18
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219652.D
 Acq On : 22 Jun 96 01:22 PM
 Sample : 2089.10
 Misc :
 Quant Time: Jun 24 10:26 1996

Vial: 19
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.81	2176	0.498 mg/L
	Recovery	=	124.50%
Target Compounds			
1) h #2 Fuel Oil	10.00	49012	14.931 mg/L

43

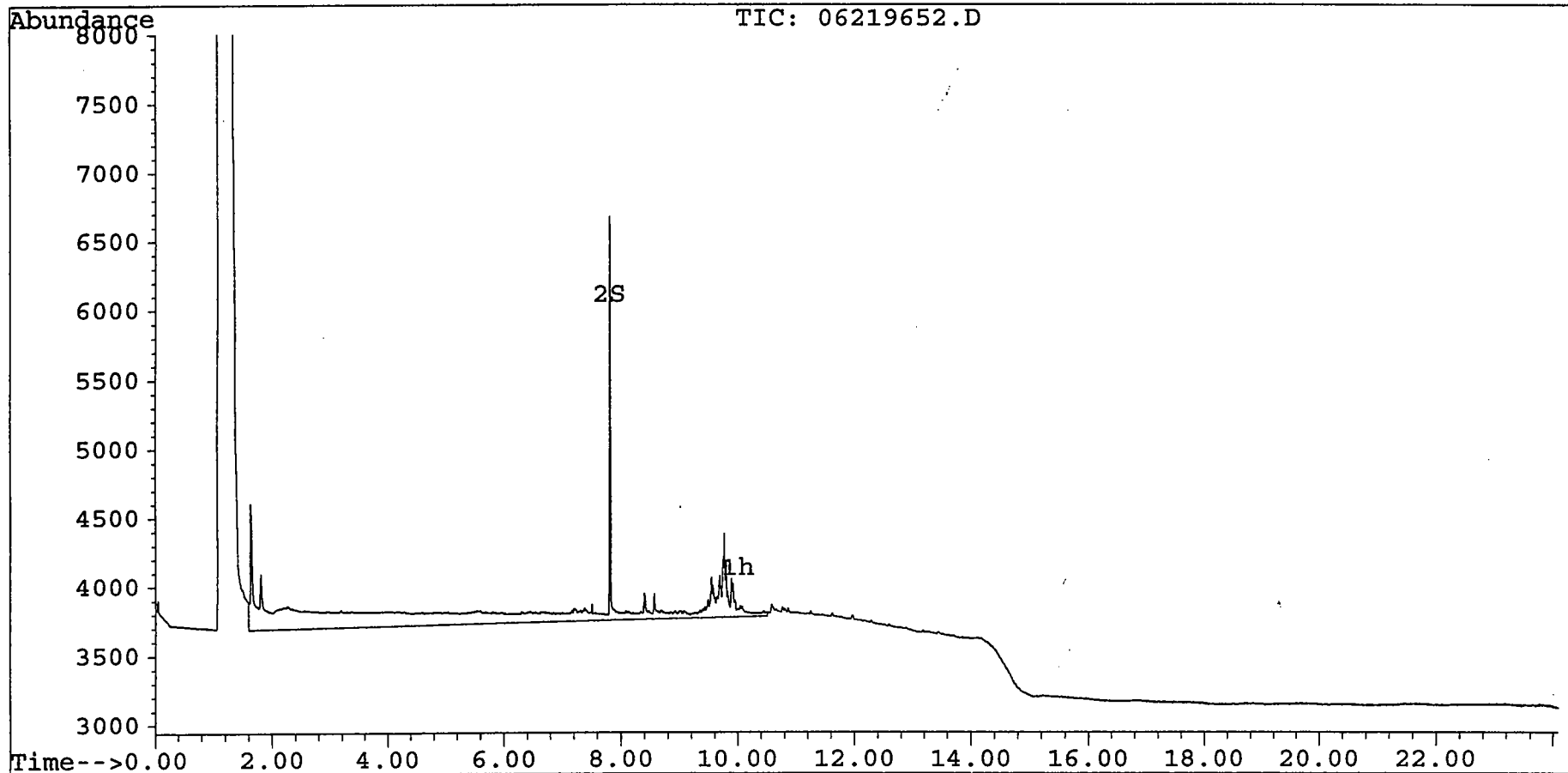
Quantitation report

Data File : C:\HPCHEM\6\DATA\06219652.D
Acq On : 22 Jun 96 01:22 PM
Sample : 2089.10
Misc :
Quant Time: Jun 24 10:26 1996

Vial: 19
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report FID/ECD

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:43:58 1996
 Response via : Initial Calibration

Calibration Files

1 =06219602.D 2 =06219603.D 3 =06219604.D
 4 =06219605.D 5 =06219606.D

Compound	1	2	3	4	5	Avg	%RSD
1) h #2 Fuel Oil	3.1	3.4	3.4	3.2	3.3	3.3 E3	4.59
2) S o-Terphenyl	4.4	4.5	4.2	4.3	4.5	4.4 E3	2.15

(#) = Out of Range

TPH3A.M

Mon Jun 24 09:46:15 1996 SEMI

Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219601.D
 Acq On : 21 Jun 96 07:59 AM
 Sample : Blank
 Misc :
 Quant Time: Jun 24 10:02 1996

Vial: 95
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
2) S o-Terphenyl	7.79	77135	17.655 mg/L
	Recovery	=	4413.75%
Target Compounds			
1) h #2 Fuel Oil	10.00	57005	17.366 mg/L

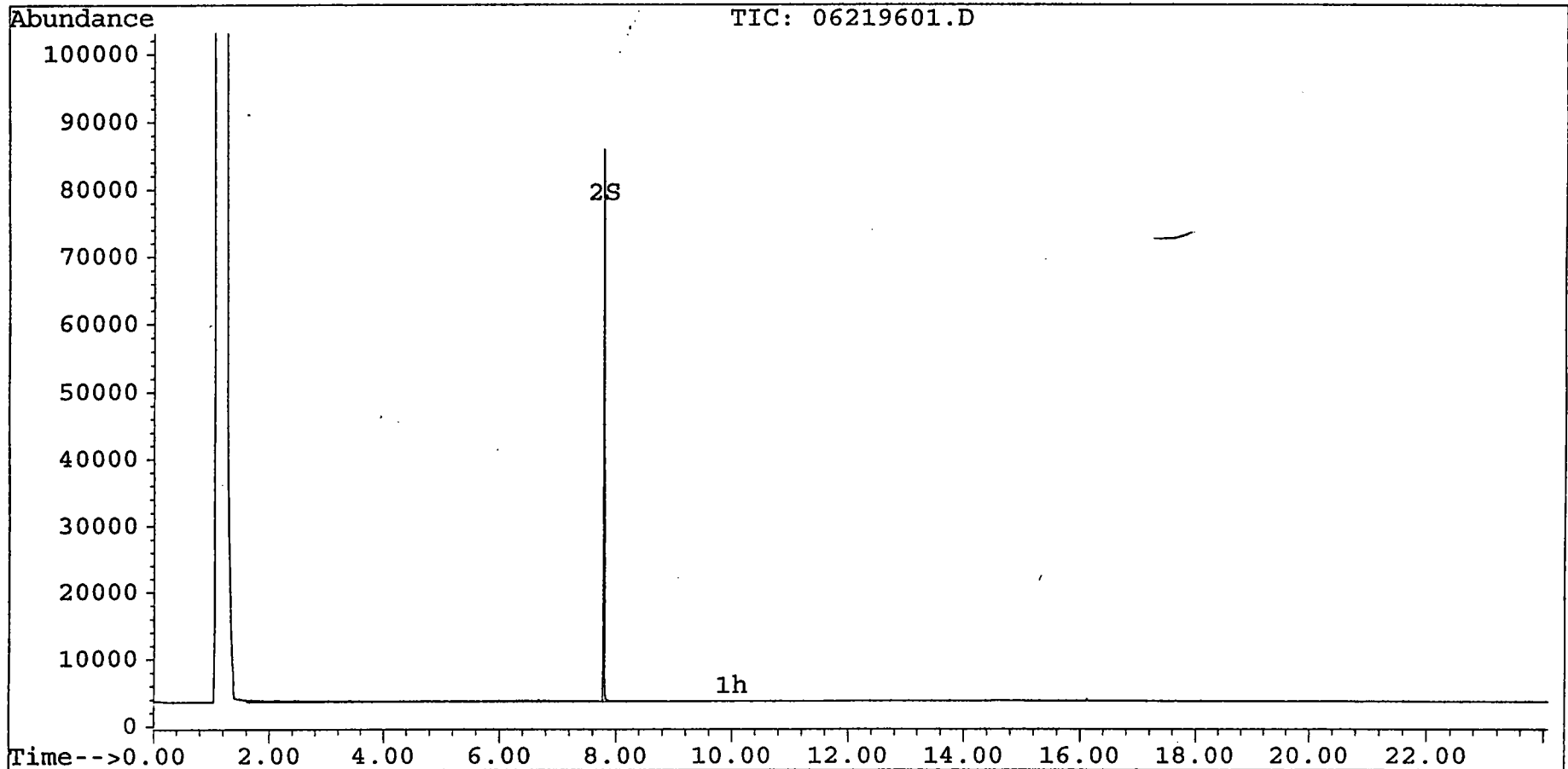
Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219601.D
Acq On : 21 Jun 96 07:59 AM
Sample : Blank
Misc :
Quant Time: Jun 24 10:02 1996

Vial: 95
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219602.D
 Acq On : 21 Jun 96 08:33 AM
 Sample : std 1
 Misc :
 Quant Time: Jun 24 10:02 1996

Vial: 96
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

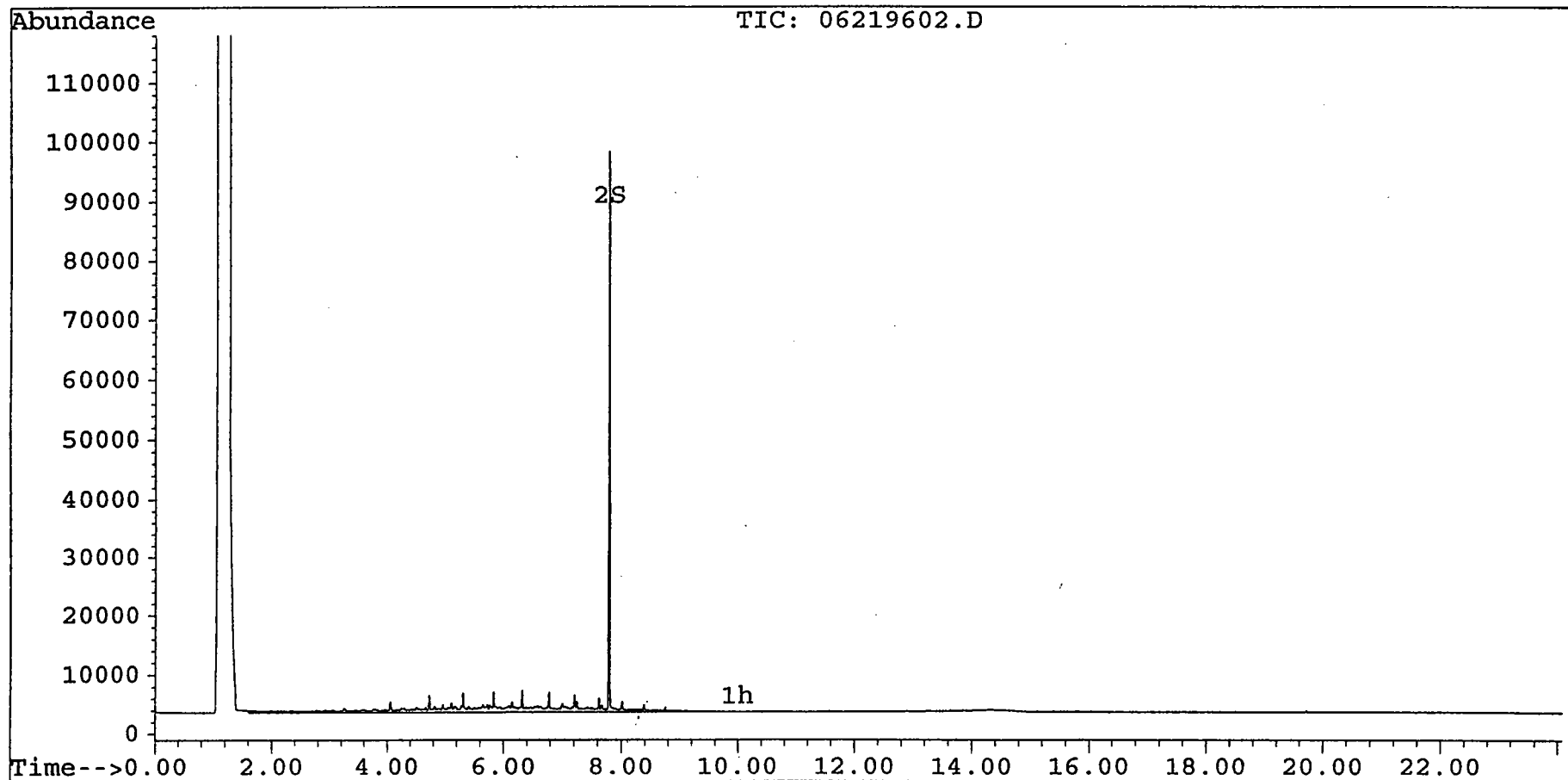
System Monitoring Compounds			
2) S o-Terphenyl	7.79	87136	19.944 mg/L
	Recovery	=	4986.00%
Target Compounds			
1) h #2 Fuel Oil	10.00	248261	75.628 mg/L

Data File : C:\HPCHEM\6\DATA\06219602.D
 Acq On : 21 Jun 96 08:33 AM
 Sample : std 1
 Misc :
 Quant Time: Jun 24 10:02 1996

Vial: 96
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219603.D
 Acq On : 21 Jun 96 09:08 AM
 Sample : std 2
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 97
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

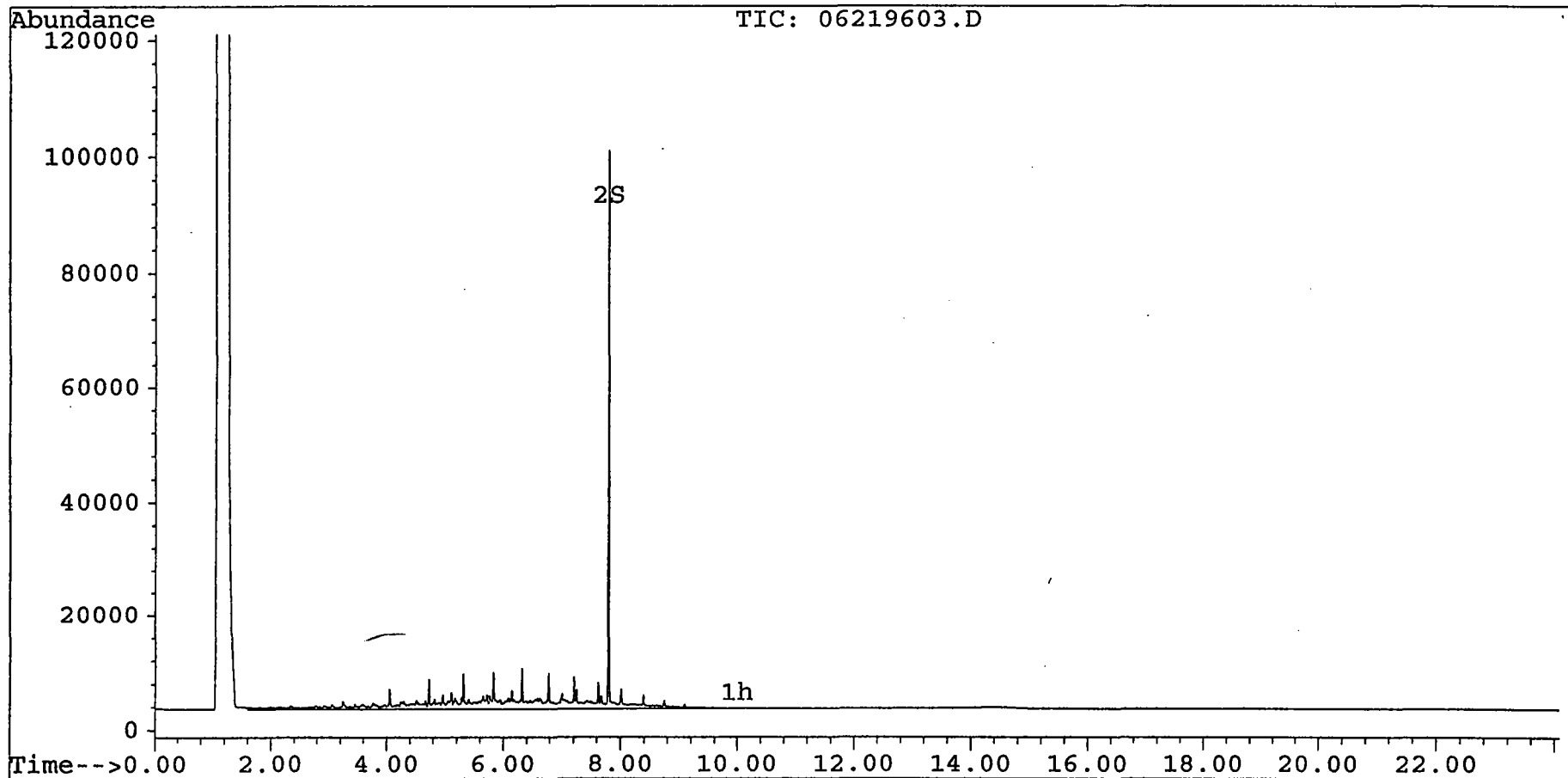
System Monitoring Compounds			
2) S o-Terphenyl	7.79	89291	20.437 mg/L
	Recovery	=	5109.25%
Target Compounds			
1) h #2 Fuel Oil	10.00	411589	125.383 mg/L

Data File : C:\HPCHEM\6\DATA\06219603.D
Acq On : 21 Jun 96 09:08 AM
Sample : std 2
Misc :
Quant Time: Jun 24 10:03 1996

Vial: 97
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219604.D
 Acq On : 21 Jun 96 09:42 AM
 Sample : std 3
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 98
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

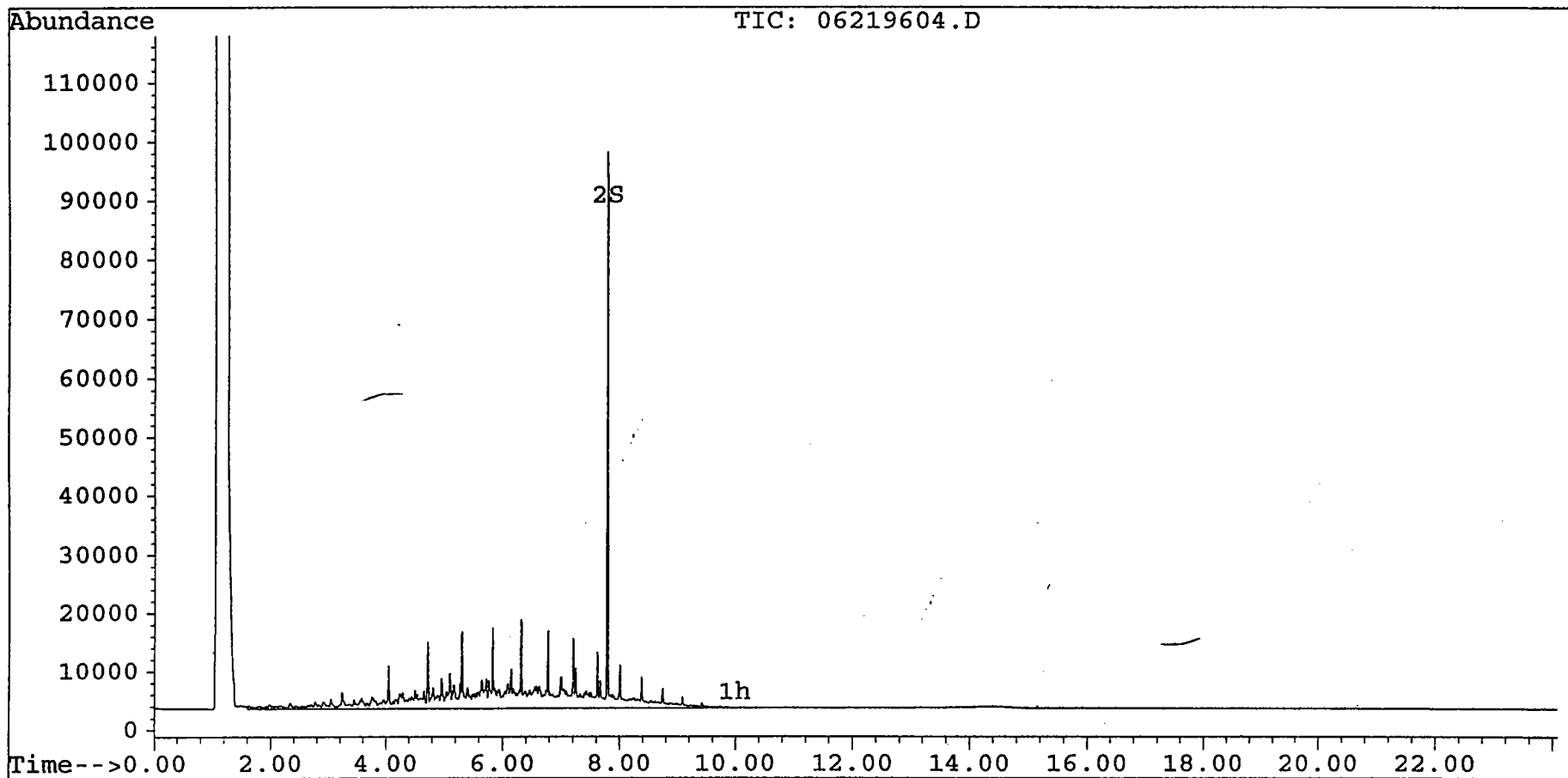
System Monitoring Compounds			
2) S o-Terphenyl	7.79	84917	19.436 mg/L
	Recovery	=	4859.00%
Target Compounds			
1) h #2 Fuel Oil	10.00	819551	249.662 mg/L

Data File : C:\HPCHEM\6\DATA\06219604.D
 Acq On : 21 Jun 96 09:42 AM
 Sample : std 3
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 98
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219605.D
 Acq On : 21 Jun 96 10:17 AM
 Sample : std 4
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 99
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

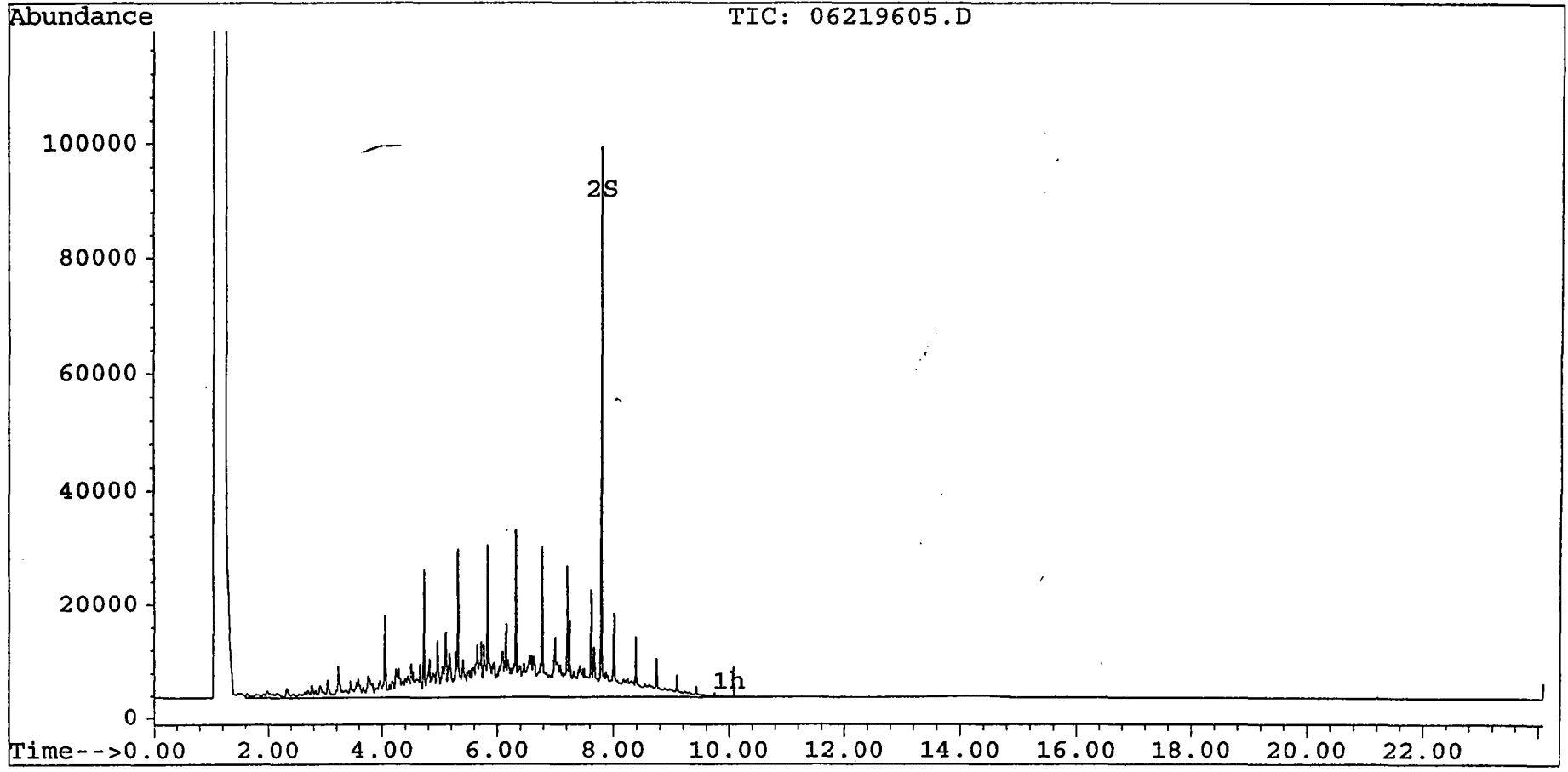
System Monitoring Compounds			
2) S o-Terphenyl	7.79	86376	19.770 mg/L
	Recovery	=	4942.50%
Target Compounds			
1) h #2 Fuel Oil	10.00	1545964	470.950 mg/L

Data File : C:\HPCHEM\6\DATA\06219605.D
Acq On : 21 Jun 96 10:17 AM
Sample : std 4
Misc :
Quant Time: Jun 24 10:03 1996

Vial: 99
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219606.D
 Acq On : 21 Jun 96 10:51 AM
 Sample : std5
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 100
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

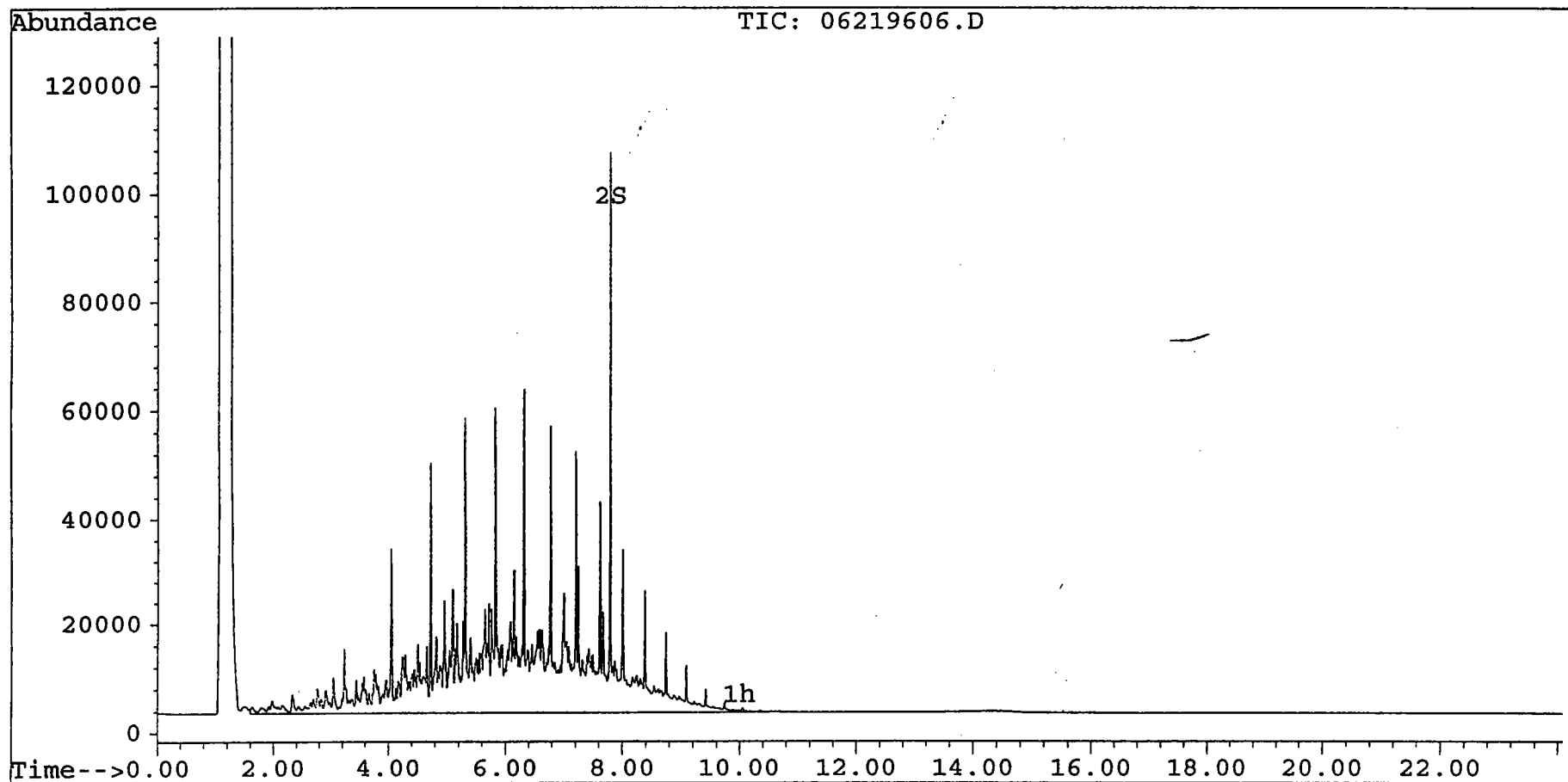
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.79	89188	20.413 mg/L
	Recovery	=	5103.25%
Target Compounds			
1) h #2 Fuel Oil	10.00	3152874	960.467 mg/L

Data File : C:\HPCHEM\6\DATA\06219606.D
 Acq On : 21 Jun 96 10:51 AM
 Sample : std5
 Misc :
 Quant Time: Jun 24 10:03 1996

Vial: 100
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :



Quantitation Report

Data File : C:\HPCHEM\6\DATA\06219607.D
 Acq On : 21 Jun 96 11:26 AM
 Sample : Blank
 Misc :
 Quant Time: Jun 24 10:04 1996

Vial: 95
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
 Title : #2 Fuel Oil
 Last Update : Mon Jun 24 09:52:32 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

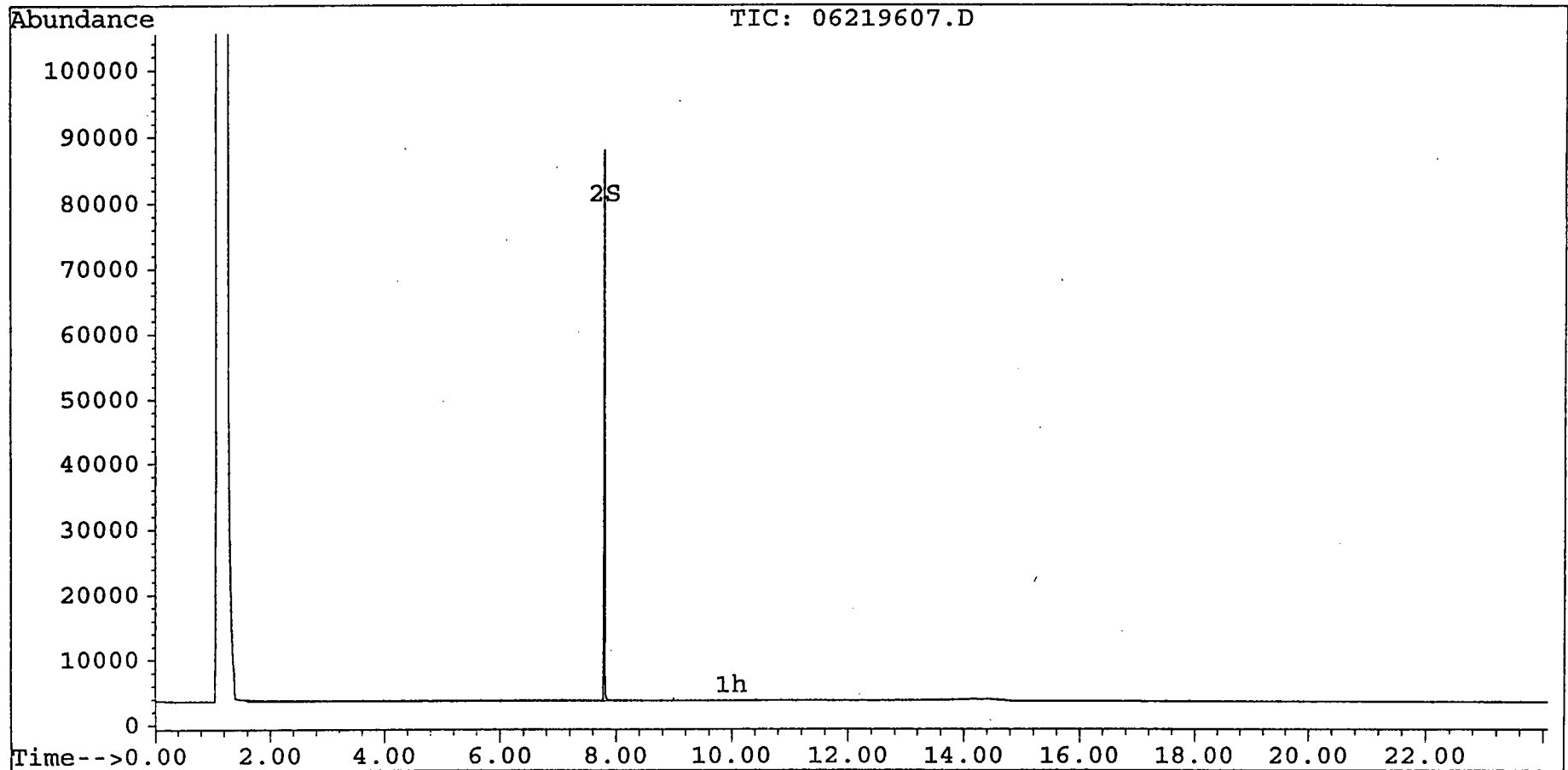
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	7.79	79851	18.276 mg/L
	Recovery	=	4569.00%
Target Compounds			
1) h #2 Fuel Oil	10.00	49987	15.228 mg/L

Data File : C:\HPCHEM\6\DATA\06219607.D
Acq On : 21 Jun 96 11:26 AM
Sample : Blank
Misc :
Quant Time: Jun 24 10:04 1996

Vial: 95
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3A.M
Title : #2 Fuel Oil
Last Update : Mon Jun 24 09:52:32 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank. _____ _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. IR Spectra submitted for standards, blanks, & samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Analysis holding time met. (If not met, list number of days exceeded for each sample) _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional Comments: <u>None</u> _____ _____		

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.

Project #2089


Brian K. McKee
Laboratory Manager

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 #: 2114.1-.4
 Sample Rec'd: 07/09/96
 Analysis Start: 07/12/96
 Analysis Comp: 07/16/96

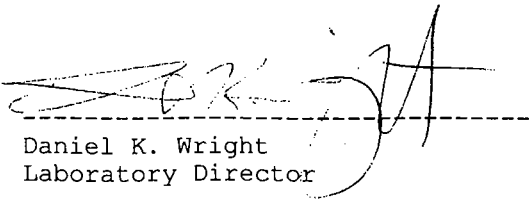
Analysis: OQA-QAM-025
 Matrix: Soil
 Analyst: D. Wright
 Ext. Meth: Shake

NJDEP UST Reg. #:	
Closure #:	
DICAR #:	
Location #: Bldg. 1075	

Description	OVA	%Solid	MDL (mg/Kg)	Surrogate % Recovery	Result (mg/Kg)
1075-A (Piping Run@3')	ND	91.7	200	113.5	ND
1075-B (PipingRun@2.5')	ND	93.9	200	116.2	ND
1075-C (PipingRun@2.5')	ND	91.4	200	111.0	ND
1075-DUP (Field Dup.)	-	92.3	200	104.0	ND
Method Blank	NA	100	200	97.5	ND

QC: 2114.1S=120%, 2114.1SD=110%, RPD=8.7%, 2114.1dup=100% @ ND
 QC Limits: Surrogate: 50% - 165%
 MS/MSD: not established RPD: not established

Notes: ND = Not Detected, MDL = Method Detection Limit
 NA = Not Applicable
 * = Matrix Interference


 Daniel K. Wright
 Laboratory Director

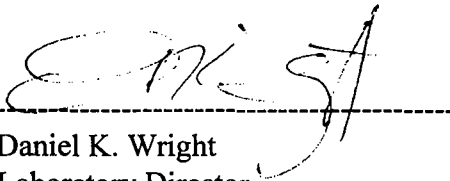
Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

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

Lab. ID #: 2114.1-4
Sample Rec'd: 07/09/96
Analysis Start: 07/12/96
Analysis Comp: 07/12/96

Analysis: Munsel

Lab ID#	Soil Color
2114.1	10YR 5/6 Yellowish brown
2114.2	10YR 5/6 Yellowish brown
2114.3	10YR 4/4 Dark yellowish brown
2114.4	10YR 5/6 Yellowish brown



Daniel K. Wright
Laboratory Director

FORT MONMOUTH ENVIRONMENTAL TESTING LABORA. JR.

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #: _____		Sampler: Gary DiMartinis - TVS		Date / Time: 7-9-96 / 1300	Analysis Parameters		Start: _____	
Customer: GENE LEISINSKI SELF-M-PW-EV		Site Name: BUILDING #1075		<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPHC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SOLIDS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">MUNSEL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">OVA</div> </div>		Finish: _____		
Phone: (908) 532-0989						Preservation Method		
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles			Remarks	
2114-1	7-9-96 1446	1075-A (Piping Run @ 3')	SOIL	1	X	X	ND	*
2	1408	1075-B (Piping Run @ 2.5')	↓	↓	↓	↓	ND	* = SAMPLES
3	1413	1075-C (Piping Run @ 2.5')	↓	↓	↓	↓	ND	KEPT BELOW
4	—	1075-DUP (FIELD DUPLICATE)	↓	↓	↓	↓	-	4°C
<p><i>NOTE: OVA CALIBRATED TO 7.5 PSI METER. READING: 1.145 KPA. (HIT ZERO) BY: G. DiMartinis @ 1300 HRS</i></p>								
Relinquished By (signature): <i>[Signature]</i>		Date / Time: 7-9-96 / 1530	Received By (signature): <i>[Signature]</i>		Shipped By: HAND			on 7-9-96 (SERIAL #A51903)
Relinquished By (signature): _____		Date / Time: _____	Received for Lab by (signature): <i>[Signature]</i>		Date / Time: 7/9/96 / 1530			
<p>Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS</p>								

Methodology Summary

<u>Aqueous Methodologies:</u>	<u>Ref 1</u>	<u>Ref 2</u>	<u>Ref 3</u>	<u>Ref 5</u>
BNA, Pesticides/PCB's Extraction		3510/3520		
AA/ICP Sample Preparation	200.7			
Furnace Sample Preparation	200.0			
Mercury Sample Preparation	245.1			
Haxavalent Chromium Sample Preparation	218.5			
Clean-up		3610/3620/3630 3640/3660		
Organochlorine Pesticide and PCB by GC			608	505
Herbicides by GC			362	515.1
Purgeable Organics by GC/MS			624	524.2
Base/Neutral, Acids by GC/MS			625	525
2,3,7,8-TCDD by GC/MS			613/625	
BTEX			602	502.2
EDB/DBCP by Microextraction				504.1

Non-Aqueous Methodologies:

BNA, Pesticides/PCB's Extraction		3550	
AA/ICP Sample Preparation		3050	
Furnace Sample Preparation		3020/3030/3050	
Mercury Sample Preparation		7471	
Clean-up		3610/3620/3630 3640/3660	
GC, GC/MS:			
Purgeable Organics		8240/8021	
Base/Neutral and Acid Extractables		8270	
Organophosphorus Pesticides		8140	
Organochlorine Pesticide and PCB by GC		8080	
BTEX		8020	
Halogenated Purgeable Organics		8010	
Total Petroleum Hydrocarbon	**		

Ref 1. USEPA-600/4-79-020, Methods for Chemical Analysis of Water and Waste

Ref 2. USEPA SW846, Test Methods for Evaluating Solid Waste, Third Edition

Ref 3. Federal Register 40 CFR Part 136, Vol. 49, No. 209: Test Parameters for the Analysis of Pollutants.

Ref 4. Federal Register Vol. 51, No. 216, Friday, 11/7/86, pp. 40643-40652

Ref 5. Method for the Determination of Organic Compounds in Drinking Water, EPA 500/4-88/039, Dec. 1988.

Ref 6. Standard Methods for the Examination of Water and Wastewater, 18th Ed.

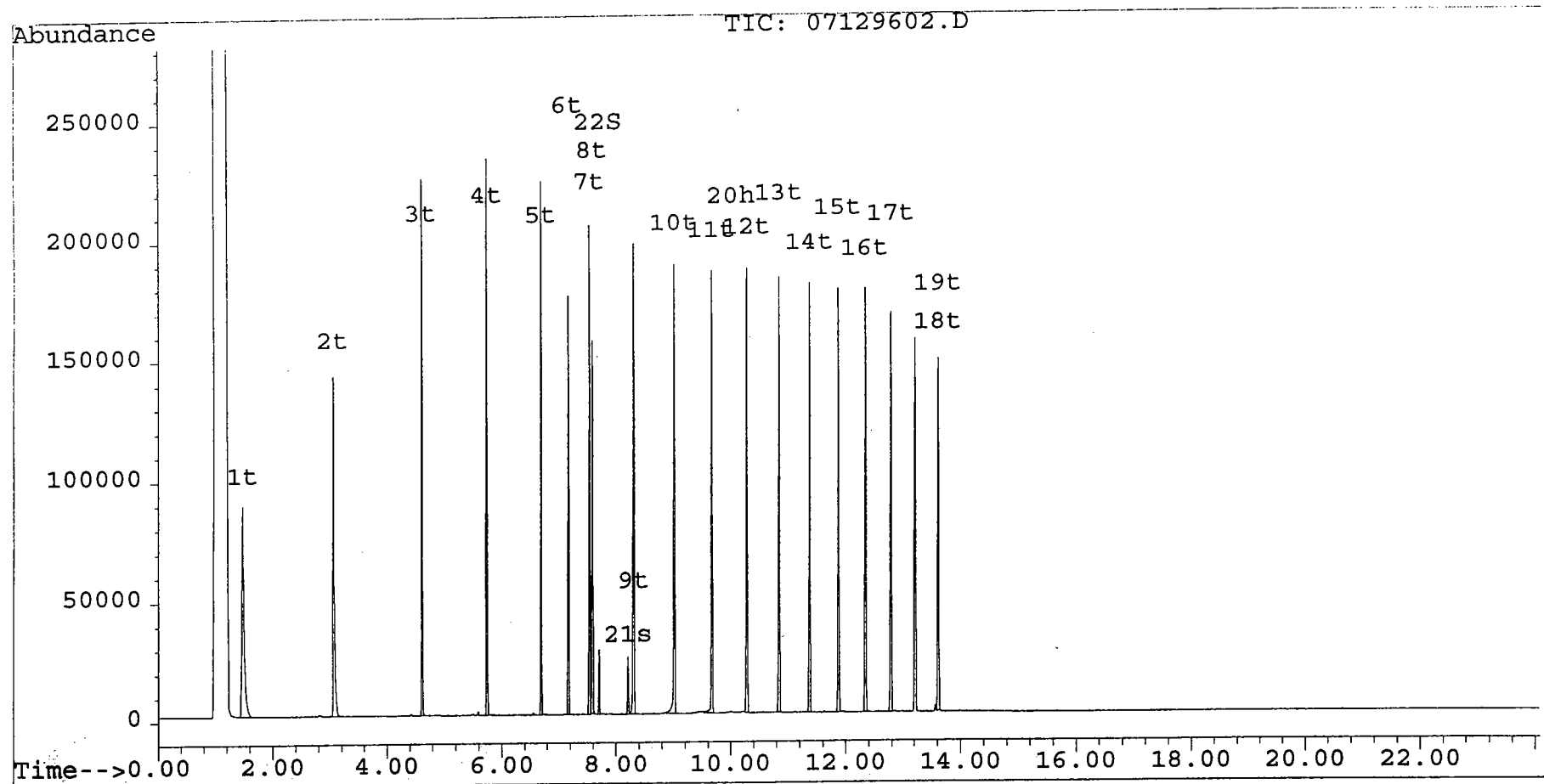
** NJDEP OQA-QAM-025-10/91: Quantitation of Semi-Volatile Petroleum Products in Water, Soil, Sediment and Sludge

Data File : C:\HPCHEM\6\DATA\07129602.D
Acq On : 12 Jul 96 10:21 AM
Sample : 100 ppm
Misc :
Quant Time: Jul 12 10:47 1996

Vial: 2
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :

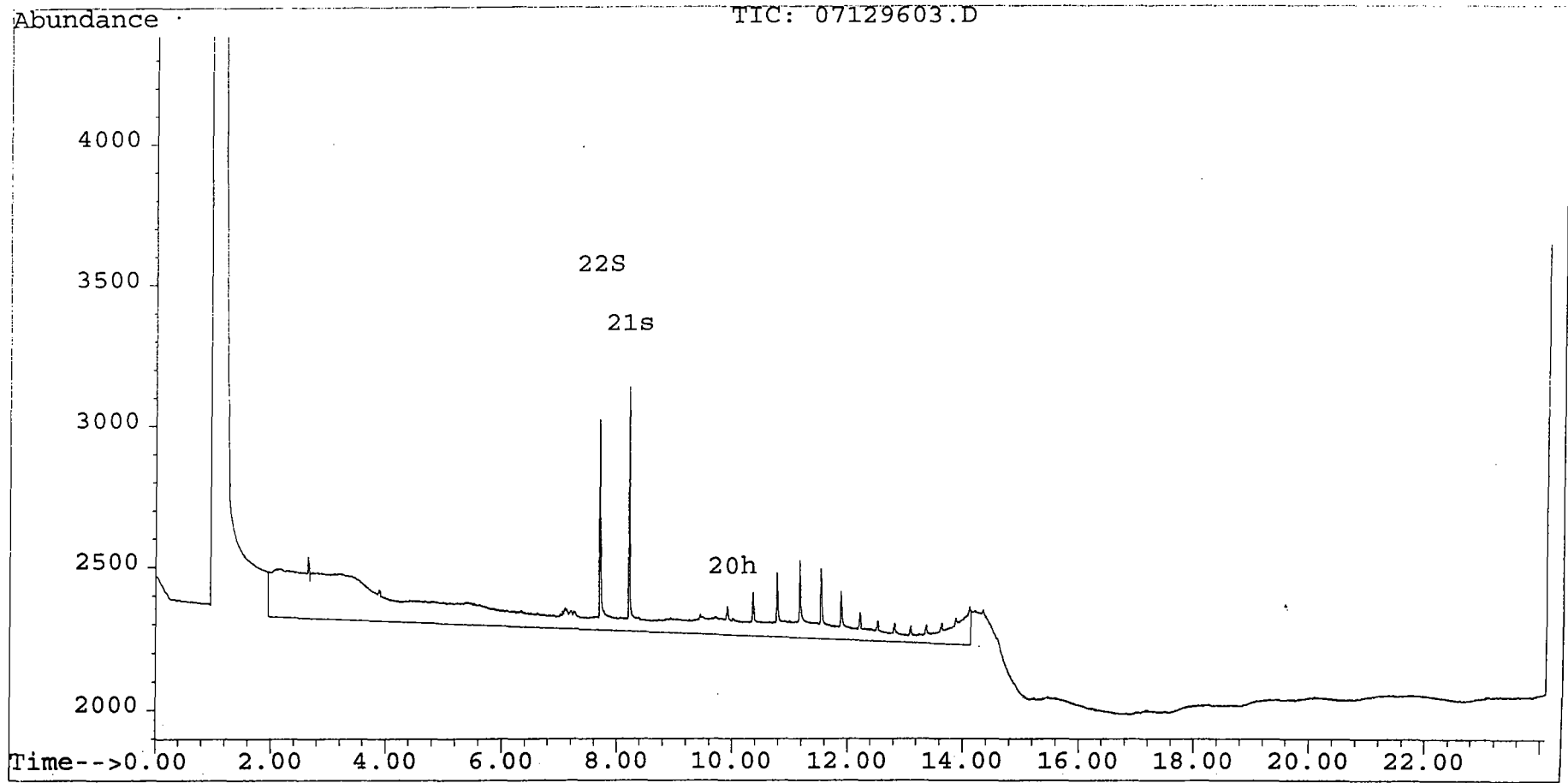


Data File : C:\HPCHEM\6\DATA\07129603.D
Acq On : 12 Jul 96 10:57 AM
Sample : EX BLANK (7/11)
Misc :
Quant Time: Jul 18 13:16 1996

Vial: 3
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



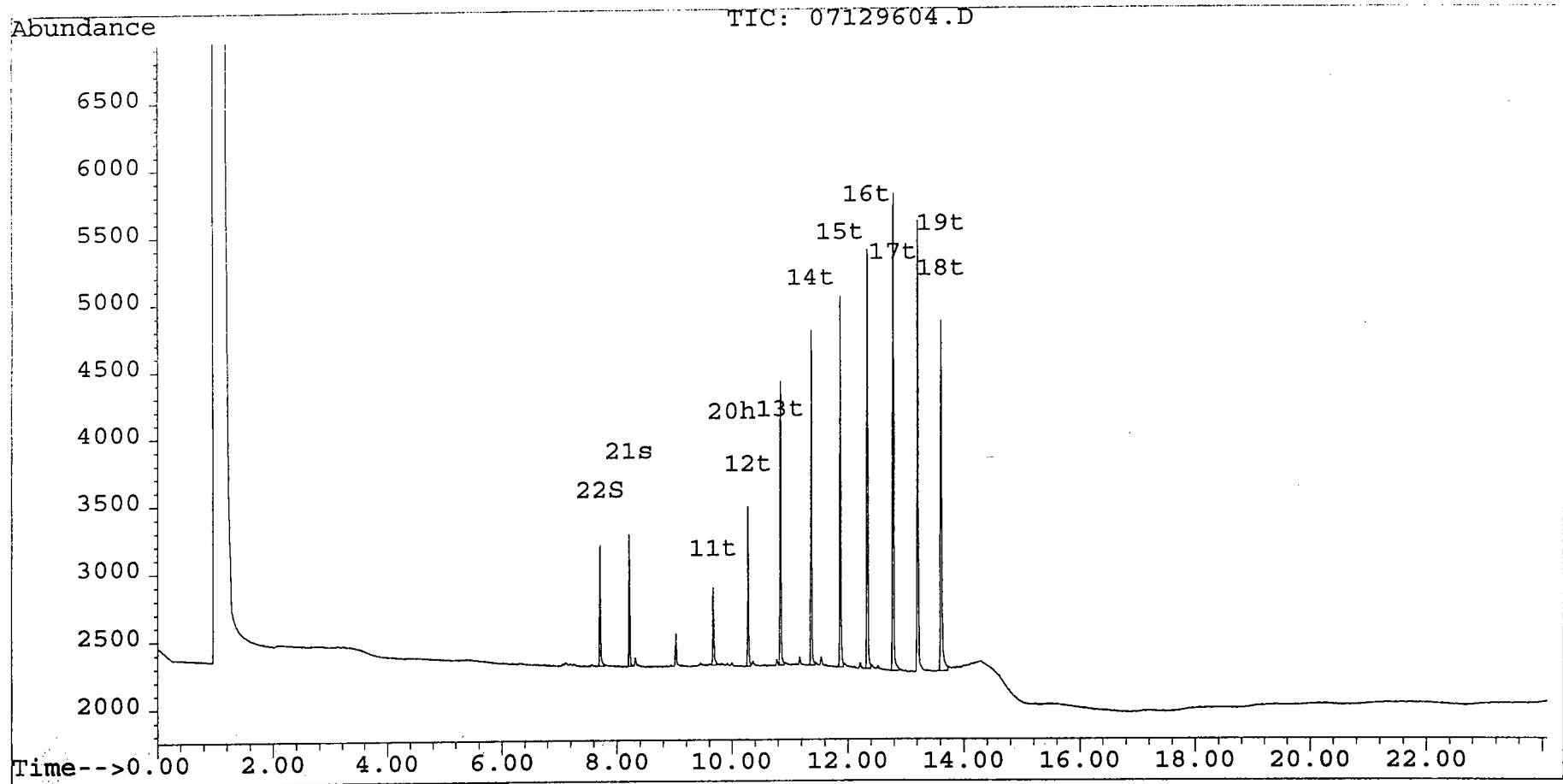
Quantitation Report

Data File : C:\HPCHEM\6\DATA\07129604.D
Acq On : 12 Jul 96 11:39 AM
Sample : 2114.1
Misc :
Quant Time: Jul 18 13:18 1996

Vial: 4
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



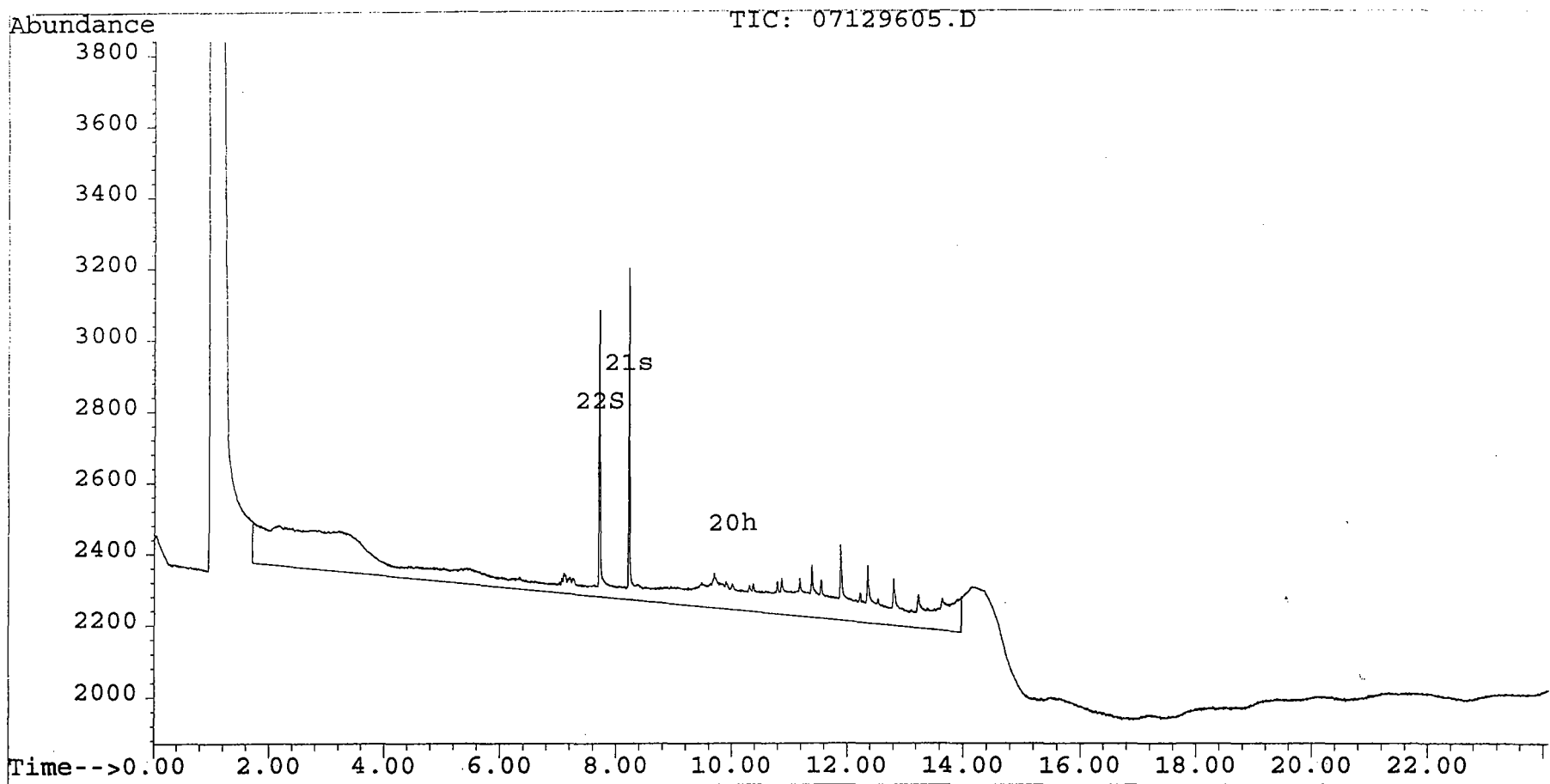
Quantitation Report

Data File : C:\HPCHEM\6\DATA\07129605.D
Acq On : 12 Jul 96 12:14 PM
Sample : 2114.1 DUP
Misc :
Quant Time: Jul 18 13:21 1996

Vial: 5
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :

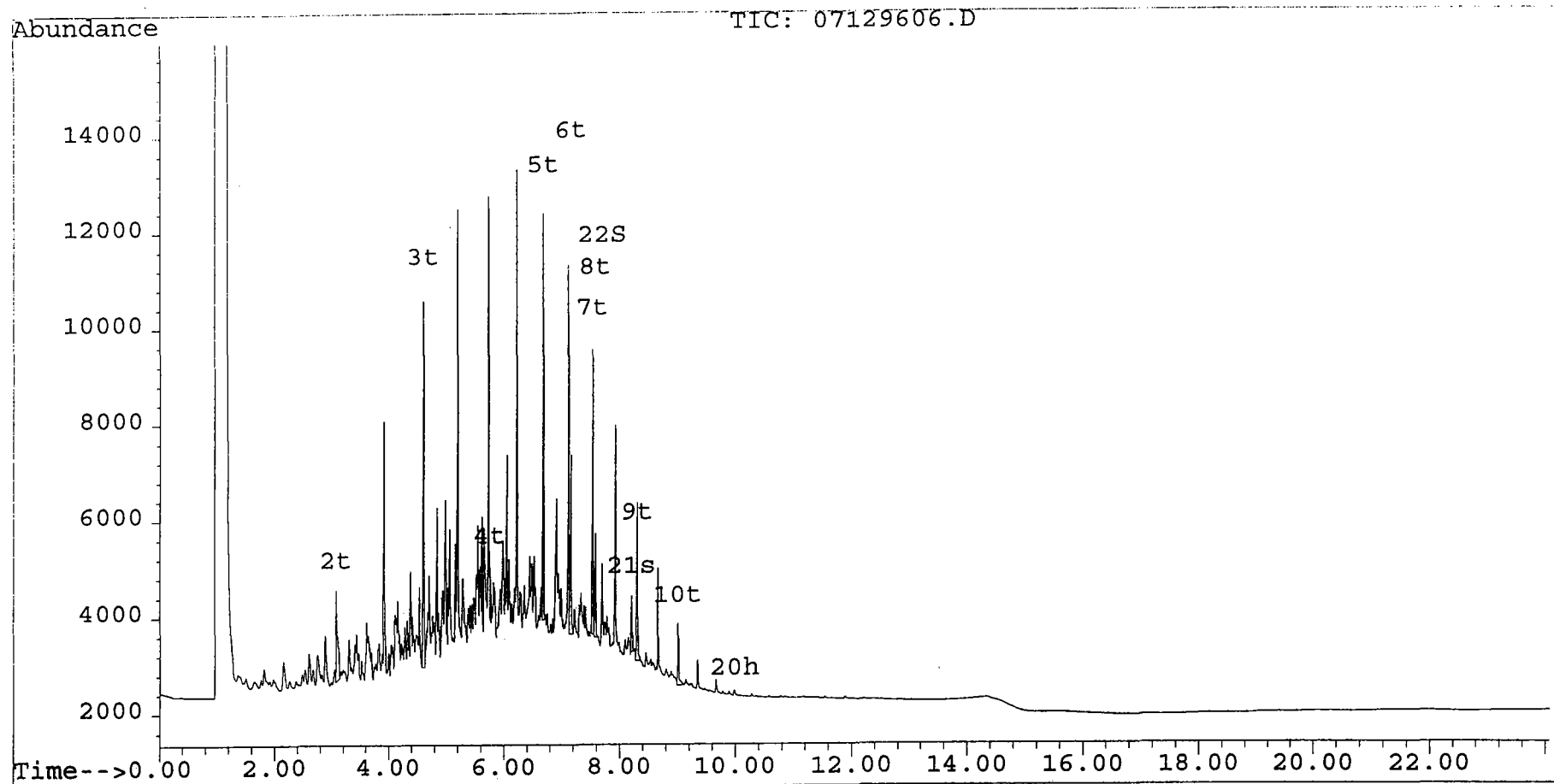


Data File : C:\HPCHEM\6\DATA\07129606.D
 Acq On : 12 Jul 96 12:50 PM
 Sample : 2114.1 MS
 Misc :
 Quant Time: Jul 18 13:25 1996

Vial: 6
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
 Title : TPH
 Last Update : Thu Jul 11 08:21:17 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :



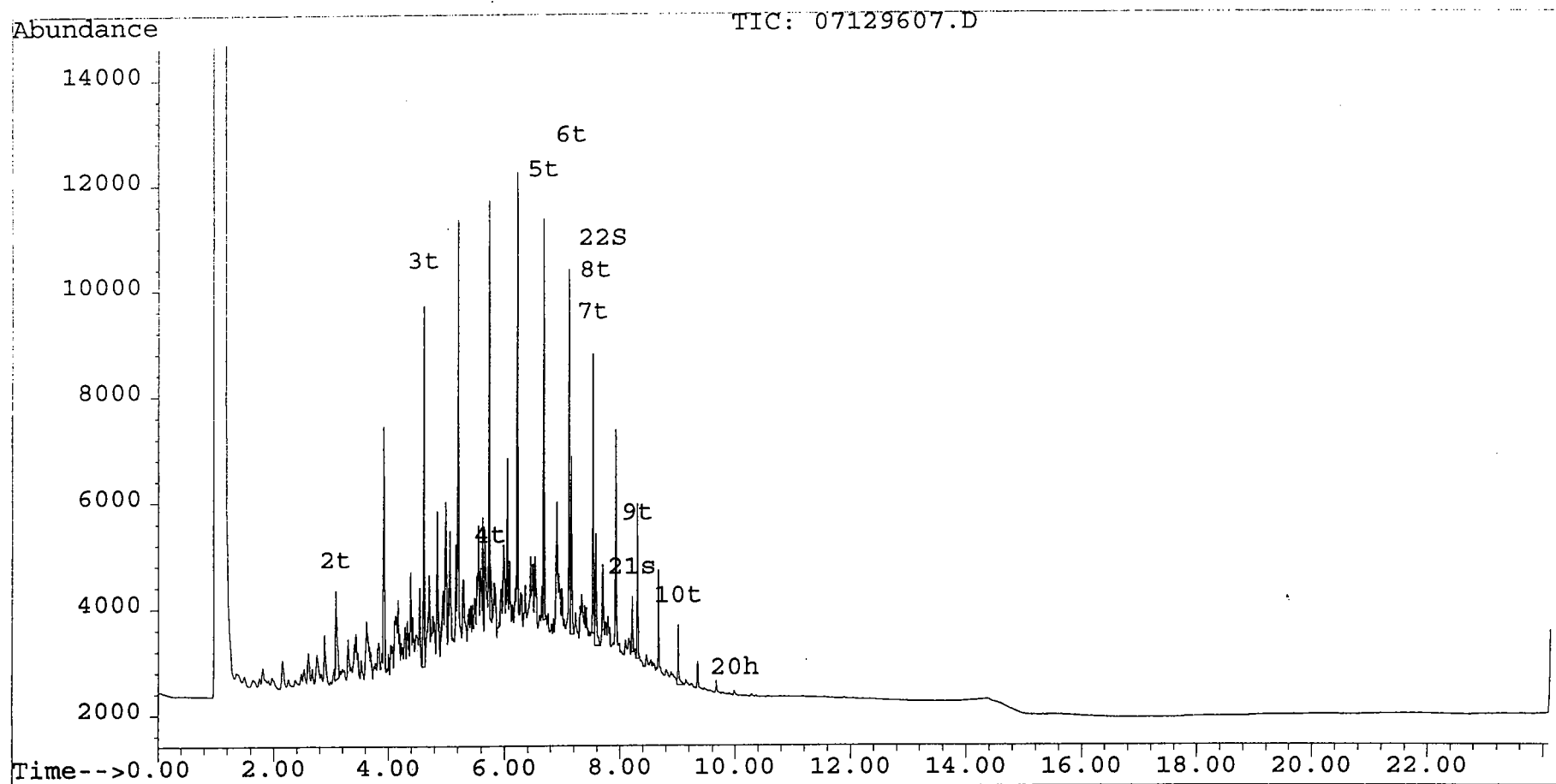
Quantitation Report

Data File : C:\HPCHEM\6\DATA\07129607.D
Acq On : 12 Jul 96 01:25 PM
Sample : 2114.1 MSD
Misc :
Quant Time: Jul 18 13:28 1996

Vial: 7
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



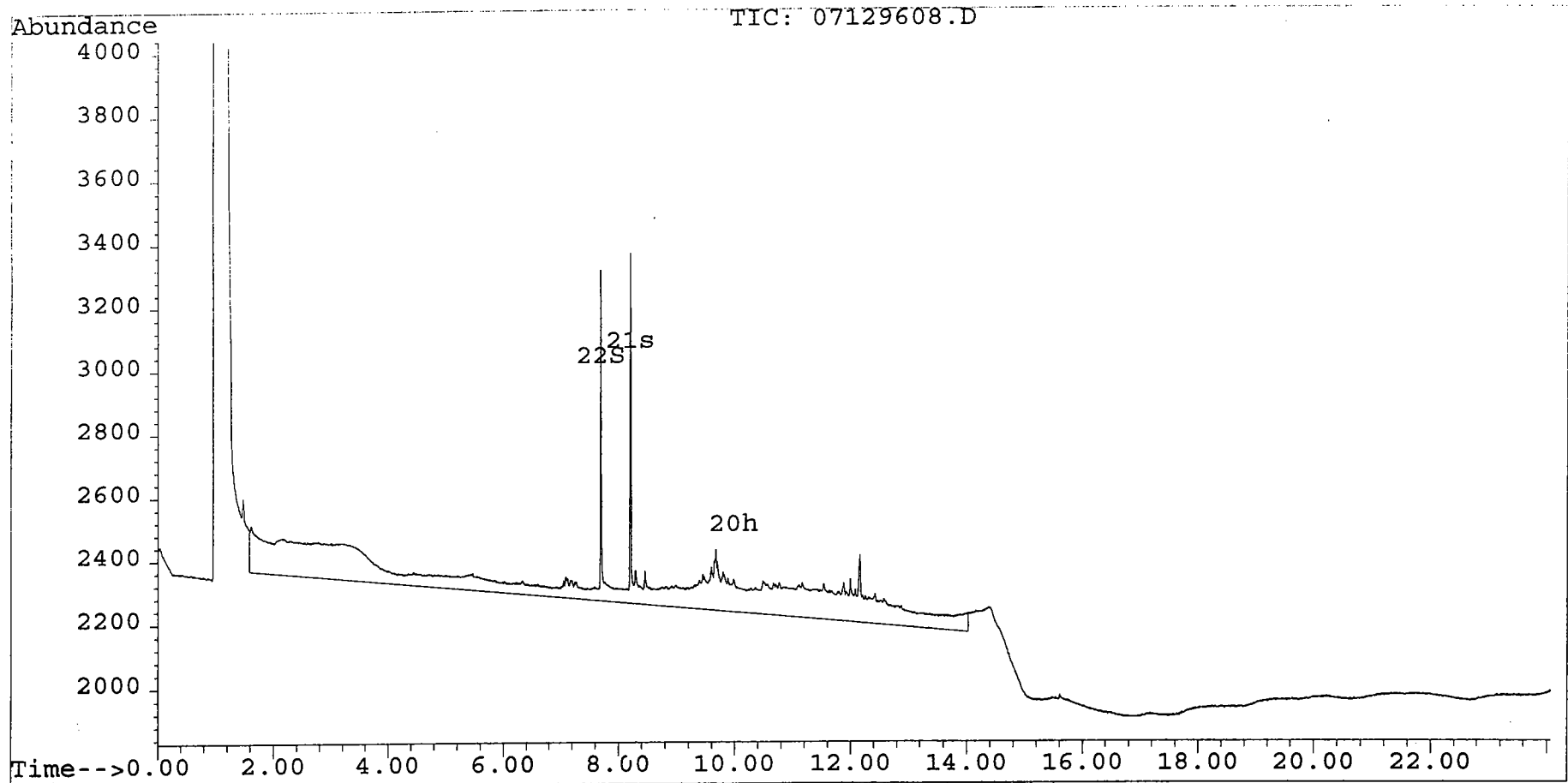
Quantitation Report

Data File : C:\HPCHEM\6\DATA\07129608.D
Acq On : 12 Jul 96 02:00 PM
Sample : 2114.2
Misc :
Quant Time: Jul 18 13:30 1996

Vial: 8
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :

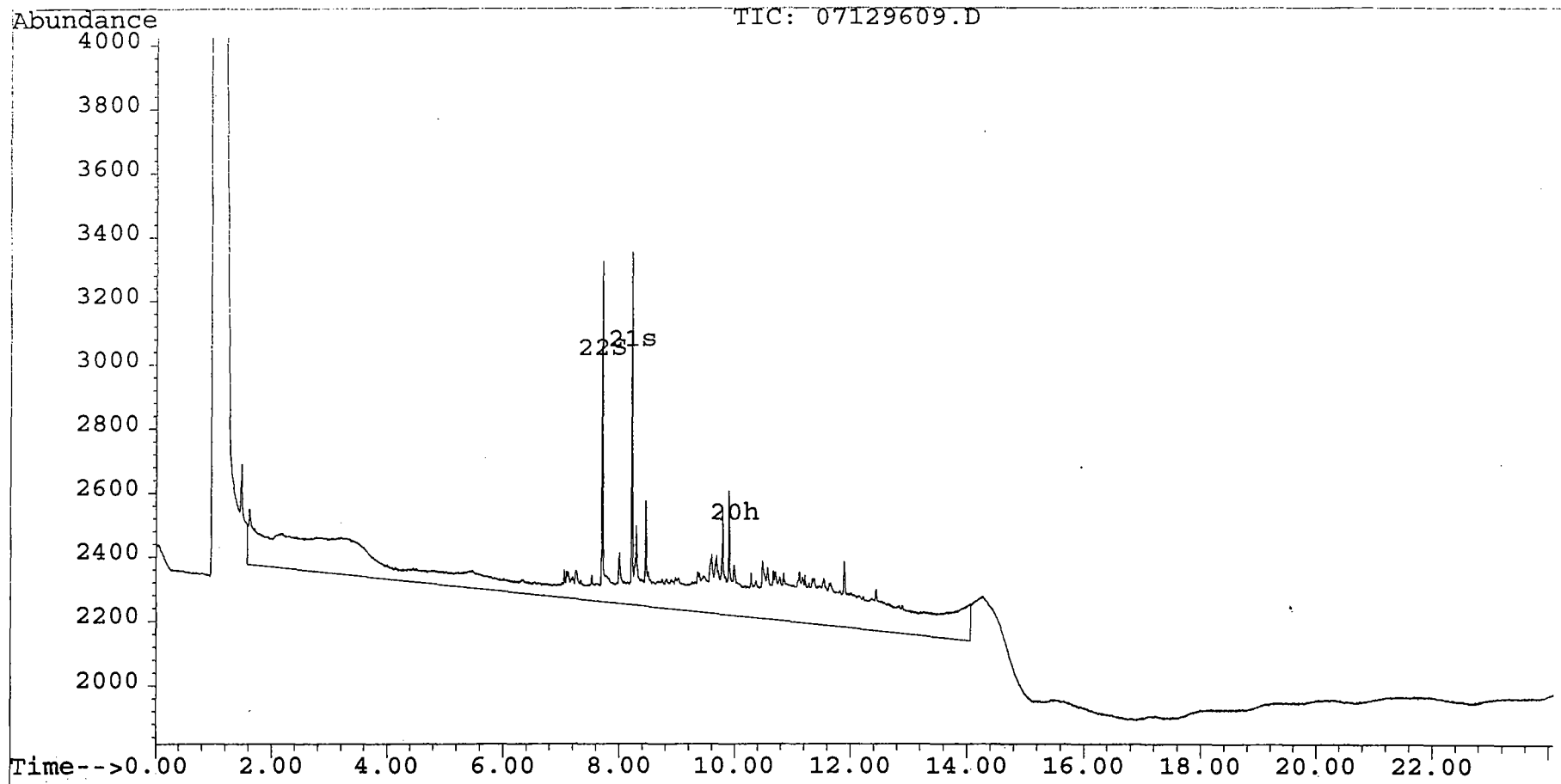


Data File : C:\HPCHEM\6\DATA\07129609.D
 Acq On : 12 Jul 96 02:35 PM
 Sample : 2114.3
 Misc :
 Quant Time: Jul 18 13:32 1996

Vial: 9
 Operator:
 Inst : FID/ECD
 Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
 Title : TPH
 Last Update : Thu Jul 11 08:21:17 1996
 Response via : Multiple Level Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

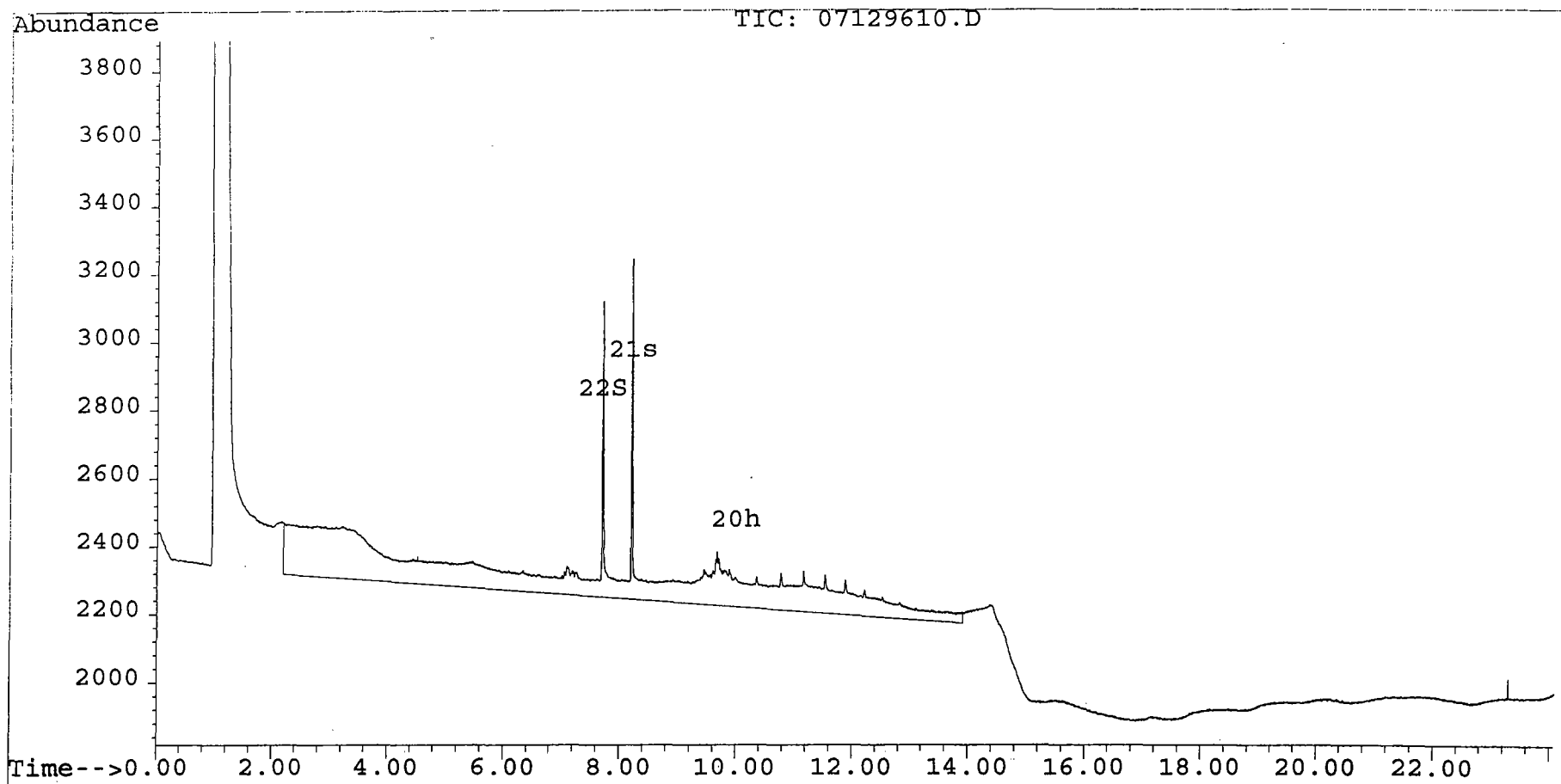


Data File : C:\HPCHEM\6\DATA\07129610.D
Acq On : 12 Jul 96 03:11 PM
Sample : 2114.4
Misc :
Quant Time: Jul 18 13:34 1996

Vial: 10
Operator:
Inst : FID/ECD
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\TPH3.M
Title : TPH
Last Update : Thu Jul 11 08:21:17 1996
Response via : Multiple Level Calibration

Volume Inj. :
Signal Phase :
Signal Info :



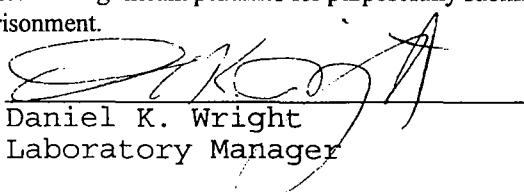
PHC Conformance/Non-conformance Summary Report

	<u>No</u>	<u>Yes</u>
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

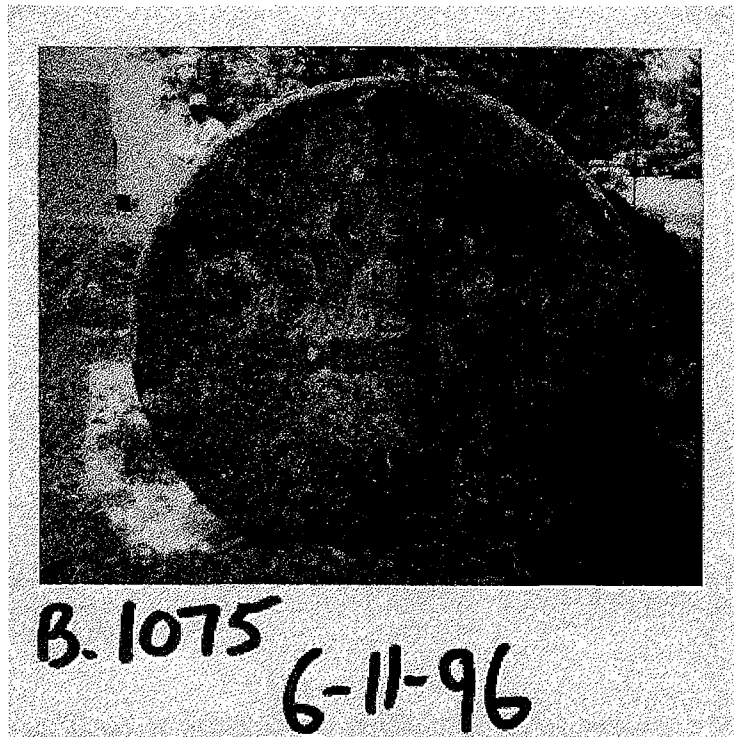
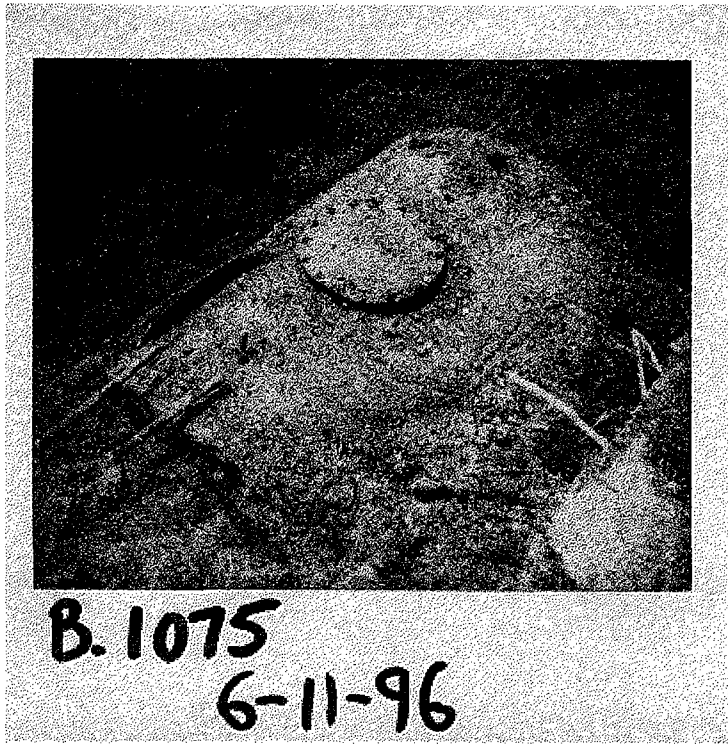
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information 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.

Project #2089



Daniel K. Wright
Laboratory Manager

APPENDIX F
PHOTOGRAPHS



December 1997

PHOTOGRAPHIC LOG

UST No. 81533-206

Building 1075
Main Post-West
Fort Monmouth



SMC Environmental Services Group
Engineers, Managers, Scientists, & Planners
Valley Forge, Pennsylvania