DEPARTMENT OF THE ARMY

HEADQUARTERS, U.S. ARMY GARRISON FORT MONMOUTH

FORT MONMOUTH, NEW JERSEY 07703-5101

August 26, 2009

From: Howard M. Syvarth, TVS Hydrogeologist
To: UST file
Subject: UST Closure Reports for Building 2260/Tank Registration #: 81515-11

Enclosed are the file review sheets for the closure of the Underground Storage Tank(s) (USTs) located at the above referenced location. After performing a file review to include submittals to NJDEP, I have determined that the tank closure and the subsequent report meet the minimum requirements established by NJDEP and as such are considered to be closed by both NJDEP and the Directorate of Public Works, US Army Garrison Fort Monmouth.

This document serves as the official site closure. All supporting documentation for the closure of this site can be found in the UST folder located in the library archive in Bldg. 173, Fort Monmouth, New Jersey.

Any questions regarding the information found in this or any other UST folder should be directed to:

Howard M. Syvarth
TECOM-Vinnell Services (TVS)
Staff Hydrogeologist, UST program
Directorate of Public Works, Ft. Monmouth, NJ
Email: Howard.M.Syvarth@us.army.mil

Sincerely,

Howard M. Syvarth
TVS Staff Hydrogeologist

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION:	2260	***NJDEP REG ID:***	81515 - 11
RESIDENTIAL?	YES		

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS):	550	***CONSTRUCTION:***	FRP
PRODUCT:	#2 FUEL OIL	***YEAR INSTALLED:***	1985

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE:	1/5/2000	***REMOVAL CONTRACTOR:***	TVS
SRF SEND DATE:		***TMS:***	
DICAR NO.		***LEAK DETECT:***	N/A

REMEDIATION COMMENTS: 11/08/94 SAI removed 87 gallons of oil; left 26 gallons of waste in tank. Residential UST with no DICAR and no contamination; no Closure Report required.

REGISTRATION COMMENTS:

SAS DONE:		***CONSULTANT:***	TVS
MWs NEEDED:	0	***MONITORING WELLS:***	0
SUB-SURFACE EVALUATOR:	D. Desai		

CURRENT UST STATUS

UST STATUS:	Removed; Report Submitted/Not Nec.	***CASE STATUS:***	Case Closed
SUBMITTAL DATE:		***APPROVAL DATE:***	

Fort Monmouth Underground Storage Tank Assessment Questionnaire

CASE STATUS: *Case Closed*
NFA ISSUED:
File Review Date: 10/27/08
By: Howard Sywalth

Site Name: *2260 -*

Is the UST Residential: *YES*

There is / are 1 UST(s) located at this site.

This NJDEP UST Registration # is: *81515 - 11* to _____

This UST was *550* Gallons in size, was made of *FRP* and contained *#2 FUEL OIL.*

The UST was installed in *1985* _____ and removed by *TVS* _____ on *1/5/2000* _____. A Standard Reporting Form was sent to the NJDEP on _____ __. NJDEP Closure # _____

Subsurface Evaluator: *D. Desai* _____ NJDEP # _____

A Site Investigation Report was completed by *TVS* _____ and submitted to the NJDEP on _____.

The Current Status is: *Removed: Report Submitted/Not Nec.*

The Revised Status as of _____ completed by _____ is:

_____

_____

The Current UST Database Comments are: *11/08/94 SAI removed 87 gallons of oil; left 26 gallons of waste in tank. Residential UST with no DICAR and no contamination; no Closure Report required. -*

The Revised Comments as of 10/27/08 completed by Howard Sywalth is:

-NO DISCHARGE, Non-REGULATED Residential UST
NO NFA issued by NJDEP

_____

Database updated on _____ by _____.

Remedial Phases: [ ] PA [ ] SI [ ] RI [ ] RAW [ ] CEA [ ] NFA

[ ] Project transferred to the Fort Monmouth Restoration Program

Project # FTMM- _____

Fort Monmouth Underground Storage Tank Assessment Questionnaire

1. Has the property been or is the property currently the subject of any remediation with NJDEP oversight? [ ]Yes [X]No

   If Yes, provide the following:

   Case Number

   Case Lead (US Army) _____

   Case Manager (NJDEP) _____

   Case Status Data base " *Case Closed* , As of this date: _____

2. Was a Preliminary Assessment (PA) performed in accordance with N.J.A.C. 7: 26E-3.1? [ ]Yes [X]No

3. Were any Areas of Concern (AOCs) identified? [X]Yes [ ]No
   If yes proceed to question 4. If no, proceed to Check List (page 8).

4. Were any potentially contaminated AOCs identified? [X]Yes [ ]No

   List and describe all **potentially contaminated** AOCs.

   UST Area [X] Underground Piping Area [X] Dispenser Area [ ] UST Fill Area [X]

   _____

   _____

5. List and describe all AOCs subject to the 7:26E Regulations.

   UST Area [X] Underground Piping Area [X] Dispenser Area [ ] UST Fill Area [X]

   _____

   _____

6. Was a discharge of a hazardous substance, contaminant or pollutant identified? [X]Yes [X]No

   If so, was the discharge to: (check all that apply)

   Soil [ ] Ground Water [ ] Surface Water [ ] Ecologically Sensitive Area [ ]

   Other [ ] (specify) _____

Fort Monmouth Underground Storage Tank Assessment Questionnaire

7. How was the discharge identified? (check all that apply)

Sample Analysis [ ] Olfactory [ ] Visual [ ] Record/ Loss of Product [ ] Field Analysis [ ]

Other [ ] (specify) _____

8. What was the source of the discharge?

UST Area [ ] Underground Piping Area [ ] Dispenser Area [ ] UST Fill Area [ ]

_____

9. Were any of the following conditions present? (Check all that apply.)

Soil Staining [ ] Distressed or Dead Vegetation [ ] Product Entering Storm Sewer [ ]

Product Entering Basement [ ] Off-site Migration [ ] Product Observed on Surface Water [ ]

Other [ ] (specify) _____

10. Were samples collected in accordance with the provisions of N.J.A.C. 7:26E and the Department's applicable Field Sampling Procedures Manual? [X] Yes [ ] No

TPHC [X] VOA+10 [ ] BN+15 [ ] lead [ ] PP+40 [ ]

Other: _____

11. Were soil samples collected at the appropriate depth as per N.J.A.C. 7:26E [X] Yes [ ] No

12. Were samples biased toward the most contaminated areas using field Instruments and/or visual and olfactory observations? [X] Yes [ ] No

How was this accomplished? _____

13. If only TPHC samples taken, were samples >1000mg/kg run for VOA+10? [ ] Yes [X] No

all samples < 1,000ppm

14. Was the vertical and horizontal extent of soil contamination delineated prior to remediation?

[ ] Yes [X] No

Explain: none required, no release/discharge

_____

Fort Monmouth Underground Storage Tank Assessment Questionnaire

15. Fully describe the method of remediation?

Source Removal and Disposal [ ] Free Product removal by Vacuum Truck [ ]

Other: _____

_____

16. If excavation was performed, what was the depth of the bottom of the excavation? 7 feet.

17. What is the approximate depth to saturated zone (seasonally high water table)? _____ feet.

How was this determined? Observed Measurement [ ] Monitoring Well [ ]

Other: _____

18. Is the Site Tidally Impacted? [ ]Yes [ ]No

19. What is the percentage of silt/clay in the soil between the contaminant and the saturated zone?

_____. How was this determined? _____

_____ [X] Not Available

20. Was ground water present in the excavation? [ ]Yes [X]No

If yes, was there a sheen observed on ground water? [ ]Yes [ ]No

21. Are there any Public Supply Wells within 2,000 feet of confirmed soil contamination? [ ]Yes [X]No

How was this determined? Well Search : [ ] _____

22. Was contaminated soil removed from the site? [ ]Yes [X]No

How much soil was removed? _____ tons/cubic yards (circle one)

To what facility was the soil taken? _____

Date taken: _____

23. Were the analytical results for all soil post excavation/remediation samples below the Department's ~~June~~ Sept. 2008 residential soil cleanup criteria? [X]Yes [ ]No

Fort Monmouth Underground Storage Tank Assessment Questionnaire

If No, describe in detail in Comments Page 6

22. Was this an investigation pertaining to a non-regulated heating oil tank? [X]Yes [ ]No

Fort Monmouth Database : : *YES*

If yes, complete the following, If no go to 23

Do on-site structures have a basement/crawl space?		[ ]Yes	[X]No
Was staining observed on the basement/crawl space walls or floor?	[ ]Yes	[ ]No	[X]NA
Were petroleum odors observed in the basement/crawl space?	[ ]Yes	[ ]No	[X]NA
Is a sump present in the basement/crawl space? **If yes, please indicate location on site map.**	[ ]Yes	[ ]No	[X]NA
Was water observed in the sump?	[ ]Yes	[ ]No	[X]NA
Was a sheen observed on the water in sump?	[ ]Yes	[ ]No	[X]NA
If there was no water in the sump was the base of the sump investigated for a petroleum discharge?	[ ]Yes	[ ]No	[X]NA
If the sump was investigated, was a discharge observed?	[ ]Yes	[ ]No	[X]NA

23. Is a regulated underground storage tank the subject of the remediation? [ ]Yes [X]No

If yes, complete the following, If no, go to 24

Was a closure approval or 14 day notification obtained prior to the closure of the tank? [ ]Yes [ ]No

List Closure Approval/Notification Numbers **NJDEP Closure #** _____

Was the closure or any remediation performed by an individual and firm certified in closure and subsurface evaluation? [ ]Yes [ ]No

Subsurface Evaluator: *D. Desai* _____

Individual certification number: _____

Firm certification number: _____

Was an Underground Storage Tank Facility Certification Questionnaire completed and submitted "delisting" the subject tanks? [ ]Yes [ ]No

24. Was a Baseline Ecological Evaluation conducted pursuant to N.J.A.C 7:26E? [ ]Yes [X]No

If No, was the BEE a regulatory requirement at the time? (UST removed prior to 1997 or the UST is Residential?) [ ]Yes [X]NA

If Yes, is there a contaminant of concern present? [ ]Yes [X]No

	Are there environmentally sensitive natural resources within or surrounding the property?	[ ]Yes	[ ]No
	Are there potential contaminant migration pathways present?	[ ]Yes	[ ]No
	Were potential ecological impacts identified?	[ ]Yes	[ ]No
	Is a BEE planned to be completed for this site?	[ ]Yes	[ ]No
25.	Was the site restored in accordance to N. J.A.C. 7:26E-6.4(b)?	[X]Yes	[ ]No
26.	Was the remedial investigation/action report prepared in accordance with N.J.A.C. 7:26E?	[ ]Yes	[X]No

27. Remediation completed date: 1/5/00

28. Are there currently, or have there ever been, any Deed Notices or Declarations of Environmental Restriction pursuant to N.J.S.A. 58:10B-1 et seq. and N.J.A.C. 7:26E-1 et seq. for the Site? [ ]Yes [X]No

If yes, Attach a copy of the Deed Notice or Declaration of Environmental Restriction.

29. Has NJDEP ever issued a no further action letter ("NFA") for any portion of the Site? [ ]Yes [X]No

NFA ISSUED:

If Yes, in accordance with N.J.S.A. 58:10B-13(e), is there an order of magnitude difference between the currently applicable remediation standard or criterion and the contaminant level approved under such previously issued NFA? [ ]Yes [ ]No

31. Subcontractors employed during the investigation/remediation (list all):

Name/Address:TVS

Name/Address: TVS

Name/Address: _____

Name/Address: _____

Name/Address: _____

COMMENTS:

_____

Fort Monmouth Underground Storage Tank Assessment Questionnaire

PRINT LEGIBLE.

Fort Monmouth Underground Storage Tank Assessment Questionnaire

Site Investigation - Remedial Investigation/Action Report Checklist: DATE: _____

• Soil Contamination currently exists on site	[ ]Yes	[ ]No	[X]NA
• GW Contamination currently exists on site	[ ]Yes	[ ]No	[X]NA
• Contaminated Soil Disposal Receipt (fully executed manifest)	[ ]Yes	[ ]No	[X]NA
• Tank Disposal Certificate	[X]Yes	[ ]No	[ ]NA
• Tank Contents Disposal Receipt (fully executed manifest)	[ ]Yes	[X]No	[ ]NA
• Fill was "certified clean" in accordance with N.J.A.C.7:26E-6.4	[ ]Yes	[ ]No	[X]NA
• Scaled site map with AOCs and north arrow	[ ]Yes	[X]No	[ ]NA
• Sample Results Summary Tables (N.J.A.C.7:26E-4.8)	[X]Yes	[ ]No	[ ]NA
• Laboratory was certified to perform the required tests	[X]Yes	[ ]No	[ ]NA
• Chain of Custody forms submitted	[X]Yes	[ ]No	[ ]NA
• Signed laboratory deliverables checklist and Non-Conformance Summaries submitted	[X]Yes	[ ]No	[ ]NA
• Problems identified in the laboratory deliverables checklist and Non-Conformance summaries	[X]Yes	[ ]No	[ ]NA
• Holding times were met for all analyses	[X]Yes	[ ]No	[ ]NA
• MDLs below most stringent soil cleanup criteria	[X]Yes	[ ]No	[ ]NA
• Laboratory sample summary submitted	[X]Yes	[ ]No	[ ]NA
• QA/QC package (reduced deliverables) submitted	[ ]Yes	[ ]No	[X]NA
• VOC soil samples methanol preserved (sample weights included)	[X]Yes	[ ]No	[ ]NA
• Electronic data package (home heating oil tanks exempt)	[ ]Yes	[ ]No	[X]NA
• Well search submitted	[ ]Yes	[X]No	[X]NA
• Baseline Environmental Evaluation (home heating oil tanks exempt)	[ ]Yes	[X]No	[X]NA
• Closure approval notification enclosed	[ ]Yes	[X]No	[X]NA
• No Further Action letter(s) enclosed	[ ]Yes	[X]No	[X]NA

U.S. ARMY FORT MONMOUTH
UST DATABASE INPUT FORM

SELFM-EH-EV

DATE: 11/8/94 BUILDING #: 2260

NJDEPE REG.#: 81515 UST #: 11

PRODUCT: (#2), #6, DIESEL, GASOLINE, OTHER: _____

STATUS: IN USE , NOT IN USE AS OF 11, 8, 94

REASON NOT IN USE: (GASIFICATION) , LEAKER, DEMO

GENERAL COMMENTS:

_____

_____

UST PRODUCT REMOVED: DATE: 11/8/94

CONTRACTOR: SERVAIR P.O.L. T. Smythe

MANIFEST #: NONE

COMMENTS: 26 GALS WASTE IN TANK

87 GALS TO BLDG 2700

NJDEPE DISCHARGE TO ENVIRONMENT NOTIFICATION
(609) 292-7172:

CALLER NAME: _____

DATE: _____ TIME: _____

NJDEPE CASE NUMBER: _____

COMMENTS: _____

_____

ATTACHMENTS (COPIES): __HAZ-MAT MANIFEST,
__LAND BAN __SERVICE ORDER __PURCHASE REQ.
__SPILL REPORT

SUBMITTED BY: _____

SIGNATURE: _____ DATE: _____

UNDERGROUND STORAGE TANK PROJECT
REMOVAL/REMEDIATION WORKSHEET

PROJECT SITE:	DATE OF TANK REMOVAL:	WORKSHEET PREPARED BY:
BLDG. 2260 30+32 GUAM LANE	1-5-00	FRANK ACCORSI

COMMENTS:	CONFINED SPACE ENTRY NOTIFICATIONS: NA FT. MONMOUTH FIRE DEPARTMENT- QC/SAFETY OFFICE- WEATHER:
EVIDENCE OF A DISCHARGE: NONE	CONDITION OF THE TANK/PIPING: UST: 550 GAL. SINGLE WALL FIBERGLASS - EXCELLENT CONDITION. PIPING: 2 x 5/8 IN. COPPER (SUPPLY/RETURN)

TYPICAL SOIL PROFILE:
Brn to grnbrn mf SAND, little silty Clay
TANK SURROUNDED BY PEA GRAVEL

SITE INFORMATION:	SOIL SAMPLING:
PRODUCT REMOVED FROM TANK- ≈ 20-25 GAL SOLIDS (OIL SPILL DEBRIS)- APPROX. DEPTH TO GROUNDWATER- NOT ENCOUNTERED DEPTH OF SOIL COVER- 2 FT 2 IN TANK DIAMETER/LENGTH- 4 FT x 6 FT DEPTH OF EXCAVATION- 7FT.	DATE- 1-5-00 FIELD DUPLICATE = SAMPLE 2260 B COMMENTS-

SOIL SAMPLING:	SOIL SAMPLING:
DATE- FIELD DUPLICATE = SAMPLE _____ COMMENTS-	DATE- FIELD DUPLICATE = SAMPLE _____ COMMENTS-

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 2260 REG.#: 81515 - 11

DATE: 1-5-00 TOA: TOD:

SSE: FRANK ACCORSI NJDEP CERT.#: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042

WEATHER: SUNNY, WINDY, 30's

ACTIVITY	YES / NO
THE TECHNICIAN (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	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	NA
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	NA
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
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	NA
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Y
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Y
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)	

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.

Closure Tech (print Name): FRANK ACCORSI Date: 1-5-00

SIGNATURE: Frank Accorsi

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 2260 REG.#: 81515 - 11

DATE: 1-5-00 TOA: TOD:

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 0010042

PERSONNEL: ED CRAWLEY, MARK VELTRE

ACTIVITY	YES / NO
THE TECHNICIAN (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 HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. YES/NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	Y
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	Y
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	N
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY(ID CARDS COMPLETED)	NA
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP,CW,EV) HWSA	NA
_____ GALLONS OF _____ WASTE WERE REMOVED (MANIFEST#: _____)	NA
_____ CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	NA
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO)_____	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: FA	Y
THE UST WAS TRANSPORTED TO BLDG. 166 YARD FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	Y

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. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: Frank Accorsi DATE: 1-5-00

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

Contract Management Division

SUBJECT: PWS-007, Residential UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 2260 (30/32 GUAM LANE)

TVS Inc.
Field Supervisor, PWS-007
ATTN: Brian Finch
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Finch:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits ~~or that the site requires further investigation outside the scope of this contract.~~ The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Dinker Desai
Environmental Engineer
Directorate of Public Works

CC: UST file copy

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

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

Project # : 5067
Location : Bldg.2260
UST Reg. # :

Analysis : OQA-QAM-025
Matrix : Soil
Inst. ID. : GC TPHC INST. #1
Column Type : RTX-5, 0.32mm ID, 30M
Injection Volume : 1uL

Date Receiv : 05-Jan-00
Date Extrac : 05-Jan-00
Analysis Cc ete : 05-Jan-00
Analyst : B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5067.01	2260-A	1.00	14.97	82.26	191	ND
5067.02	2260-B	1.00	15.01	82.14	191	ND
5067.03	2260-C	1.00	15.10	86.71	179	ND
5067.04	2260-D	1.00	15.20	82.76	187	ND
METHOD BLANK	TBLK305	1.00	15.00	100.00	157	ND

ND = Not Detected
MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

FORT MONMOUTH ENVIRONMENTAL
TESTING LABORATORY
DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6283
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# 100004

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
2260-A North End 6-6.5'	5067.01	Soil	05-Jan-00 10:20	01/05/00
2260-B South End 6-6.5'	5067.02	Soil	05-Jan-00 10:00	01/05/00
2260-C Piping 1.5-2'	5067.03	Soil	05-Jan-00 10:30	01/05/00
2260-D Duplicate	5067.04	Soil	05-Jan-00 10:00	01/05/00
Trip Blank	5067.05	Methanol	05-Jan-00	01/05/00

FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

1-27-00
Daniel Wright/Date
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

TPHC Conformance/Non-conformance Summary Report

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

Additional comments: _____

Laboratory Manager

1-27-00
Date

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dinker Desai
Phone #: X21475
( )DERA (X)OMA UST Assessment

Project No: 100004
Location: BLDG. 2260
UST# 81515-11

Samplers Name / Company : Frank Accorsi/TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% SOLIDS *	VOA+10 *	VOA ID #	PID Reading	Remarks / Preservation Method
5067 01	2260-A, NORTH END 6-6.5 FT	1-5-00	1020	SOIL	2	X	X	X	401	0	ICE
02	2260-B, SOUTH END, 6-6.5 FT		1000		2	X	X	X	402	0	
03	2260-C, PIPING, 1.5-2 FT		1030		2	X	X	X	403	0	
04	2260-D, DUPLICATE		1000		2	X	X	X	404	0	
05	TRIP BLANK		—	AQ.	1			X	405	—	

Comments:
* = Samples Kept <4°C

OVM sn#580U-64455.343 was calibrated with zero air & w/ 245 ppm Isobutylene read 243 ppm. 0935 1-5-00 (time/date & initial)

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	
Frank Accorsi	1-5-00 1130				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	

Report Type: ( )Full, ( )Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 2 wks, (X)Rush 1 Days, ( )ASAP Verbal ___ Hrs.

Remarks: * VO+10 on 25% > 4000 ppm TPH, on highest, min. one
Dedicated Sampling Tools Used
All sample points have been GPS? (X)YES ( )NO ( )NA

print legibly

Page ___ of ___

USTcoc.xls11/5/99

SAMPLE RECEIPT FORM

Date Received: 1/5/00 Lab Project ID#: 5067

Site/Project Name: Bldg 2760 Cooler Temp (°C): 1.5

Received By: J Hemes Sign: J Hemes
(print name)

Check the appropriate answer

1. Did the samples come in a cooler?	☑ yes	☐ no	☐ NA
2. Were the 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. Did all the labels agree with the chain of custody and in good condition?	☑ yes	☐ no	
5. Were the correct containers and/or preservatives used for the tests indicated?	☑ yes	☐ no	
6. Was a sufficient amount of sample sent for the tests indicated?	☑ yes	☐ no	
7. Were bubbles absent from aqueous VOC sample containers?	☐ yes	☐ no	☑ NA
8. Were samples received on ice?	☑ yes	☐ no	

Fill out the following table for each sample bottle

Sample ID	pH	Preservative	Sample ID	pH	Preservative

Comments:

F0201.d0c

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

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :** **Location :** **UST Reg. # :**	5067 Bldg.2260
Analysis :	OQA-QAM-025	**Date Received :**	05-Jan-00
Matrix :	Soil	**Date Extracted :**	05-Jan-00
Inst. ID. :	GC TPHC INST. #1	**Analysis Complete :**	05-Jan-00
Column Type :	RTX-5, 0.32mm ID, 30M	**Analyst :**	B.Patel
Injection Volume :	1uL		

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5067.01	2260-A	1.00	14.97	82.26	191	ND
5067.02	2260-B	1.00	15.01	82.14	191	ND
5067.03	2260-C	1.00	15.10	86.71	179	ND
5067.04	2260-D	1.00	15.20	82.76	187	ND
METHOD BLANK	TBLK305	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

Response Factor Report GC/ Ins

Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999

Calibration Files
100 =T009501.D 50 =T009495.D 20 =T009497.D
10 =T009498.D 5 =T009502.D

	Compound	100	50	20	10	5	Avg	%RSD
1)	tC C8	2.193	2.099	2.050	2.038	1.809	2.038 E4	6.94
2)	tC C10	2.222	2.269	2.122	2.089	1.792	2.099 E4	8.88
3)	TC C12	2.215	2.290	2.140	2.118	1.802	2.113 E4	8.83
4)	tC C14	2.250	2.326	2.182	2.080	1.939	2.155 E4	7.02
5)	tC C16	2.259	2.349	2.187	2.186	1.942	2.185 E4	6.91
6)	tC C18	2.098	2.240	2.182	2.033	1.754	2.061 E4	9.17
7)	tC C20	2.259	2.371	2.154	2.113	1.931	2.166 E4	7.63
8)	tC C22	2.352	2.477	2.298	2.320	2.087	2.307 E4	6.11
9)	tC C24	2.353	2.475	2.306	2.343	2.072	2.310 E4	6.37
10)	tC C26	2.342	2.460	2.318	2.313	2.072	2.301 E4	6.14
11)	tC C28	2.333	2.440	2.269	2.288	2.023	2.271 E4	6.76
12)	tC C30	2.426	2.555	2.391	2.268	2.158	2.360 E4	6.44
13)	tC C32	2.343	2.449	2.239	2.230	1.953	2.243 E4	8.25
14)	tC C34	2.331	2.449	2.209	2.221	1.945	2.231 E4	8.38
15)	tC C36	2.282	2.402	2.189	2.178	1.871	2.184 E4	9.01
16)	tC C38	2.268	2.411	2.176	2.182	1.878	2.183 E4	8.93
17)	tC C40	2.098	2.223	2.030	2.031	1.711	2.019 E4	9.37
18)	tC c42	2.116	2.267	2.046	2.049	1.731	2.042 E4	9.58
19)	TC Pristane	2.411	2.470	2.402	2.487	2.292	2.412 E4	3.18
20)	TC Phytane	2.291	2.443	2.245	2.226	2.200	2.281 E4	4.23
21)	sC o-terphenyl	2.677	2.808	2.609	2.643	2.383	2.624 E4	5.89
22)	tC TPHC - total	2.843	2.960	3.098	3.660	3.801	3.272 E4	13.16

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\00105\T009594.D Via :
Acq On : 5 Jan 2000 1:25 pm Operator: Bhaskar
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.377	22.954 E3	-12.6	109	-0.06
2	tC	C10	20.990	22.892 E3	-9.1	101	0.00
3	TC	C12	21.131	22.794 E3	-7.9	100	0.00
4	tC	C14	21.554	23.097 E3	-7.2	99	0.00
5	tC	C16	21.847	23.241 E3	-6.4	99	0.00
6	tC	C18	20.614	21.861 E3	-6.0	98	0.00
7	tC	C20	21.656	23.037 E3	-6.4	97	0.00
8	tC	C22	23.070	24.127 E3	-4.6	97	0.00
9	tC	C24	23.098	24.020 E3	-4.0	97	0.00
10	tC	C26	23.012	23.822 E3	-3.5	97	0.00
11	tC	C28	22.706	23.665 E3	-4.2	97	0.00
12	tC	C30	23.597	24.511 E3	-3.9	96	0.00
13	tC	C32	22.427	23.509 E3	-4.8	96	0.00
14	tC	C34	22.312	23.125 E3	-3.6	94	0.00
15	tC	C36	21.845	22.661 E3	-3.7	94	-0.01
16	tC	C38	21.829	22.401 E3	-2.6	93	-0.02
17	tC	C40	20.186	20.429 E3	-1.2	92	-0.02
18	tC	c42	20.418	20.523 E3	-0.5	91	-0.04
19	TC	Pristane	24.122	23.930 E3	0.8	97	0.00
20	TC	Phytane	22.810	23.464 E3	-2.9	96	0.00
21	sC	o-terphenyl	26.240	27.723 E3	-5.7	99	0.00
22	tC	TPHC - total	32.725	29.285 E3	10.5	99	0.00

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\00105\T009605.D Via. 12
Acq On : 5 Jan 2000 7:50 pm Operator: Bhaskar
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm std Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.377	22.978 E3	-12.8	109	-0.07
2	tC	C10	20.990	23.708 E3	-12.9	104	-0.01
3	TC	C12	21.131	23.778 E3	-12.5	104	0.00
4	tC	C14	21.554	24.067 E3	-11.7	103	0.00
5	tC	C16	21.847	24.241 E3	-11.0	103	0.00
6	tC	C18	20.614	22.841 E3	-10.8	102	0.00
7	tC	C20	21.656	23.974 E3	-10.7	101	0.00
8	tC	C22	23.070	25.221 E3	-9.3	102	0.00
9	tC	C24	23.098	25.116 E3	-8.7	101	0.00
10	tC	C26	23.012	24.937 E3	-8.4	101	0.00
11	tC	C28	22.706	24.691 E3	-8.7	101	0.00
12	tC	C30	23.597	25.588 E3	-8.4	100	0.00
13	tC	C32	22.427	24.467 E3	-9.1	100	0.00
14	tC	C34	22.312	24.072 E3	-7.9	98	-0.01
15	tC	C36	21.845	23.549 E3	-7.8	98	-0.02
16	tC	C38	21.829	23.199 E3	-6.3	96	-0.03
17	tC	C40	20.186	21.189 E3	-5.0	95	-0.05
18	tC	c42	20.418	20.952 E3	-2.6	92	-0.08
19	TC	Pristane	24.122	25.570 E3	-6.0	104	0.00
20	TC	Phytane	22.810	24.419 E3	-7.1	100	0.00
21	sC	o-terphenyl	26.240	28.948 E3	-10.3	103	0.00
22	tC	TPHC - total	32.725	29.661 E3	9.4	100	0.00

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\00105\T009616.D Via. 23
Acq On : 6 Jan 2000 2:03 am Operator: Bhaskar
Sample : Tstd050 Inst : GC/MS Ins
Misc : 50 ppm standard Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.377	22.827 E3	-12.0	109	-0.07
2	tC	C10	20.990	23.637 E3	-12.6	104	-0.01
3	TC	C12	21.131	23.376 E3	-10.6	102	0.00
4	tC	C14	21.554	23.734 E3	-10.1	102	0.00
5	tC	C16	21.847	23.873 E3	-9.3	102	0.00
6	tC	C18	20.614	22.006 E3	-6.8	98	0.00
7	tC	C20	21.656	23.715 E3	-9.5	100	0.00
8	tC	C22	23.070	24.831 E3	-7.6	100	0.00
9	tC	C24	23.098	24.752 E3	-7.2	100	0.00
10	tC	C26	23.012	24.544 E3	-6.7	100	0.00
11	tC	C28	22.706	24.329 E3	-7.1	100	0.00
12	tC	C30	23.597	25.187 E3	-6.7	99	0.00
13	tC	C32	22.427	24.094 E3	-7.4	98	-0.01
14	tC	C34	22.312	23.390 E3	-4.8	95	-0.02
15	tC	C36	21.845	21.726 E3	0.5	90	-0.03
16	tC	C38	21.829	20.164 E3	7.6	84	-0.04
17	tC	C40	20.186	17.385 E3	13.9	78	-0.06
18	tC	c42	20.418	16.761 E3	17.9	74	-0.10
19	TC	Pristane	24.122	24.843 E3	-3.0	101	0.00
20	TC	Phytane	22.810	24.205 E3	-6.1	99	0.00
21	sC	o-terphenyl	26.240	28.512 E3	-8.7	102	0.00
22	tC	TPHC - total	32.725	28.286 E3	13.6	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
T009616.D TPH70.M Thu Jan 06 10:15:49 2000

000008

Surrogate Recovery Report
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :** **Location :** **UST Reg. # :**	5067 Bldg.2260
Analysis:	OQA-QAM-025	**Date Received :**	5-Jan-00
Matrix:	Soil	**Date Extracted :**	5-Jan-00
Inst. ID.	GC TPHC INST. #1	**Analysis Complete :**	5-Jan-00
Column Type :	RTX-5, 0.32mm ID, 30M	**Analyst :**	B.Patel
Injection Volume :	1uL		

Sample			Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
5067.01			10.00	10.07	**100.71**
5067.02			10.00	10.19	**101.94**
5067.03			10.00	10.07	**100.71**
5067.04			10.00	9.95	**99.47**
METHOD BLANK	**TBLK305**		10.00	10.18	**101.84**

Surrogate Added : **o-Terphenyl**

Quality Control Check Standard Summary
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :** **Location :** **UST Reg. # :**	5067 Bldg.2260
Analysis:	OQA-QAM-025	**Date Received :**	5-Jan-00
Matrix:	Soil	**Date Extracted :**	5-Jan-00
Inst. ID.	GC TPHC INST. #1	**Analysis Complete :**	5-Jan-00
Column Type :	RTX-5, 0.32mm ID, 30M	**Analyst :**	B.Patel
Injection Volume :	1uL		

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
TBLK305BS	05-Jan-00	1000	939.31	93.93	75-125

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

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :** **Location :** **UST Reg. # :**	5067 Bldg.2260
Analysis:	OQA-QAM-025	**Date Received :**	5-Jan-00
Matrix:	Soil	**Date Extracted :**	5-Jan-00
Inst. ID.	GC TPHC INST. #1	**Analysis Complete :**	5-Jan-00
Column Type :	RTX-5, 0.32mm ID, 30M	**Analyst :**	B.Patel
Injection Volume :	1uL		

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
5067.03MS	1000	0.00	936.65	93.67	75-125
5067.03MSD	1000	0.00	873.02	87.30	75-125

RPD	**7.03**	**20.00**

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\[illegible]A\000105\T009600.D
Acq On : 5 Jan 2000 4:56 pm
Sample : Tblk305
Misc : Tblk305 S 000105
IntFile : TPHCINT.E
Quant Time: Jan 6 9:57 2000 Quant Results File: TPH70.RES

Vial: 7
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Initial Calibration
DataAcq Meth : TPH70.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.61	267228	10.184 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 101.84%#	
Target Compounds			

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

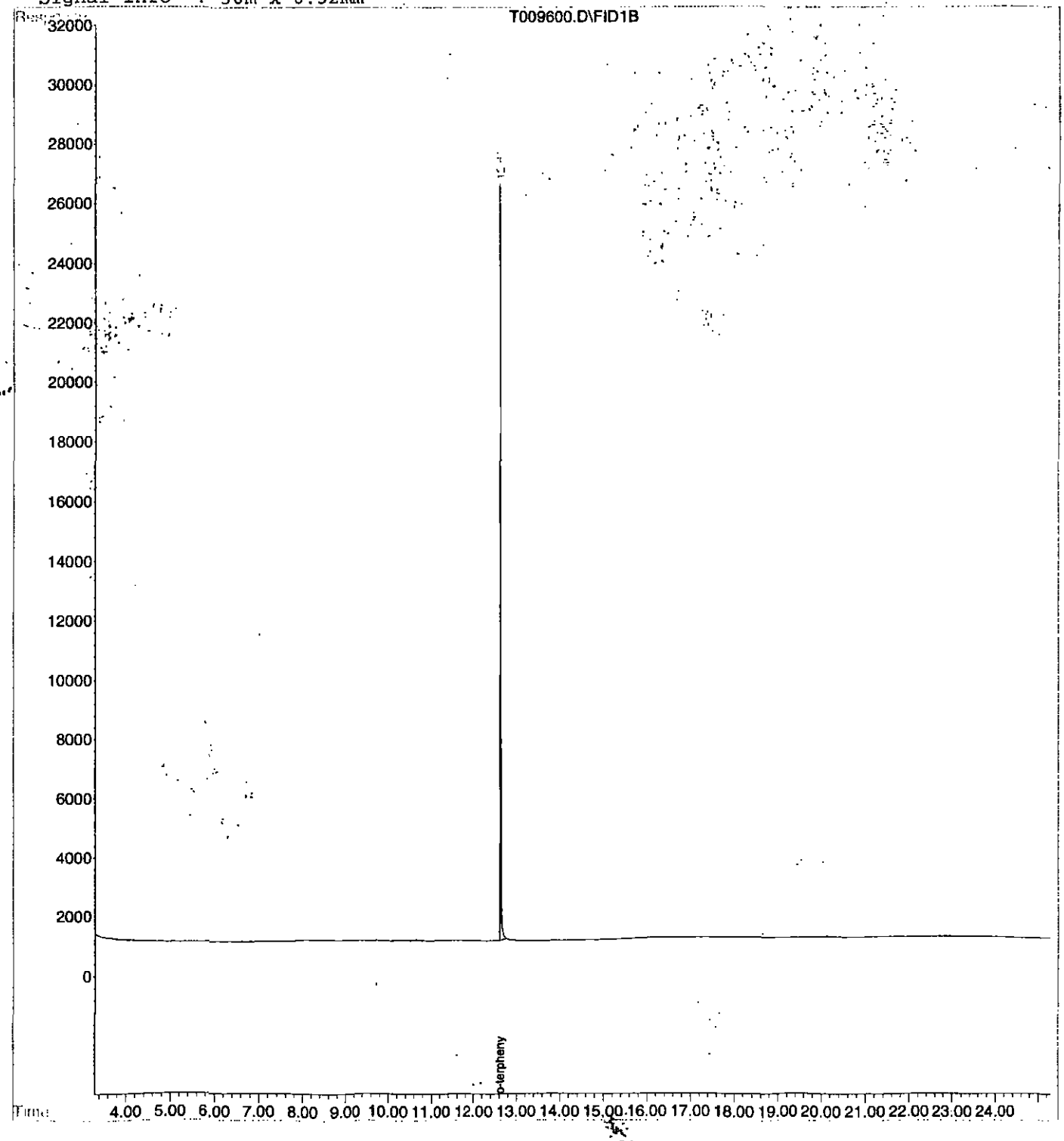
Quantitation Report

Data File : C:\HPCHEM\1\D...A\000105\T009600.D
Acq On : 5 Jan 2000 4:56 pm
Sample : Tblk305
Misc : Tblk305 S 000105
IntFile : TPHCINT.E
Quant Time: Jan 6 9:57 2000 Quant Results File: TPH70.RES

Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPH70.M

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\ A\000105\T009602.D : 9
Acq On : 5 Jan 2000 6:06 pm Operator: Bhaskar
Sample : 5067.01s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 6 9:57 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Initial Calibration
DataAcq Meth : TPH70.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.61	264249	10.071 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 100.71%#	
Target Compounds			

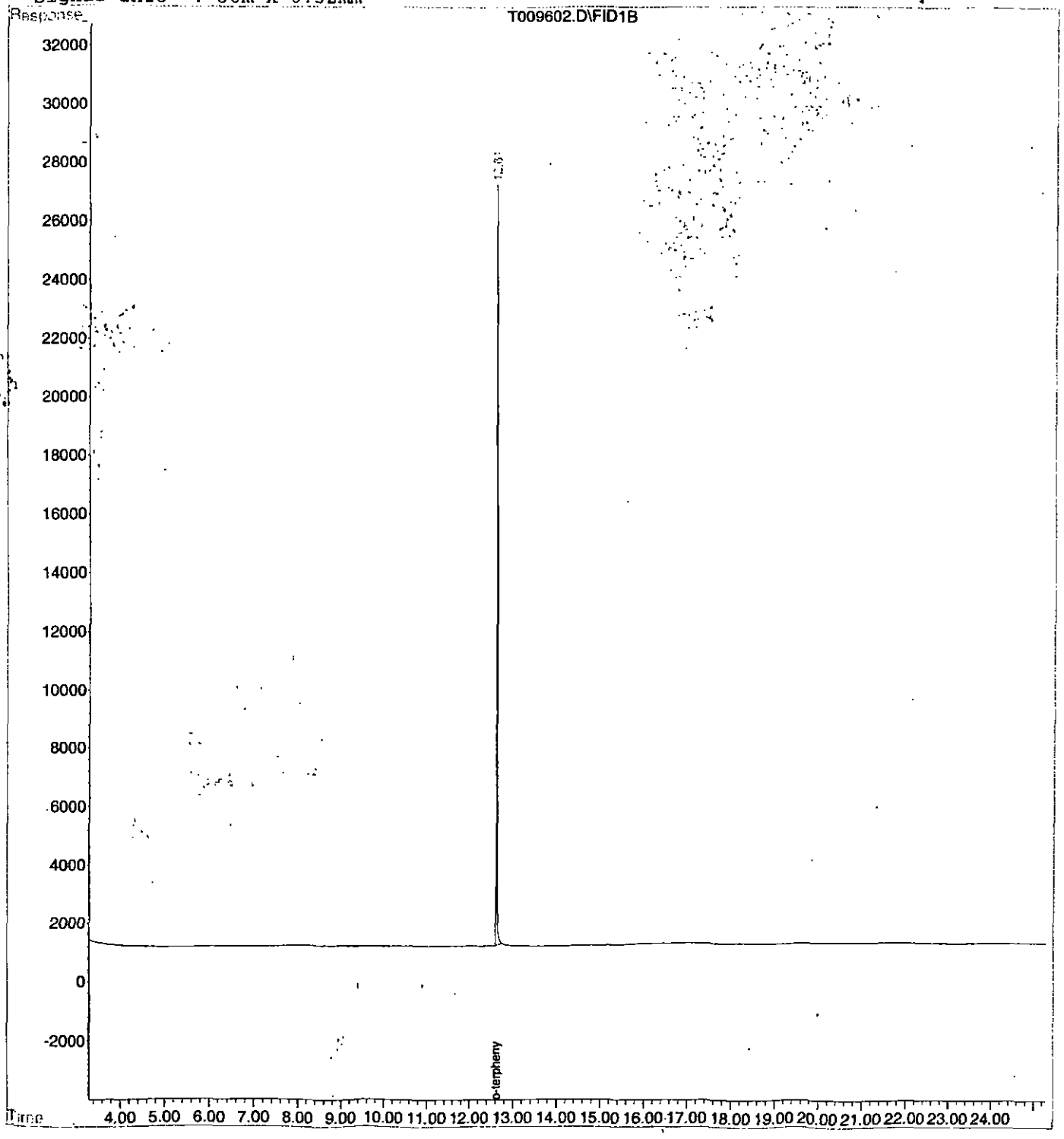
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\...A\000105\T009602.D ...: 9
Acq On : 5 Jan 2000 6:06 pm Operator: Bhaskar
Sample : 5067.01s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 6 9:57 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPH70.M

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



ntitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\ \000105\T009603.D 1: 10
Acq On : 5 Jan 2000 6:41 pm Operator: Bhaskar
Sample : 5067.02s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 6 9:58 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Initial Calibration
DataAcq Meth : TPH70.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.61	267489	10.194 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 101.94%#	
Target Compounds			

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

000016

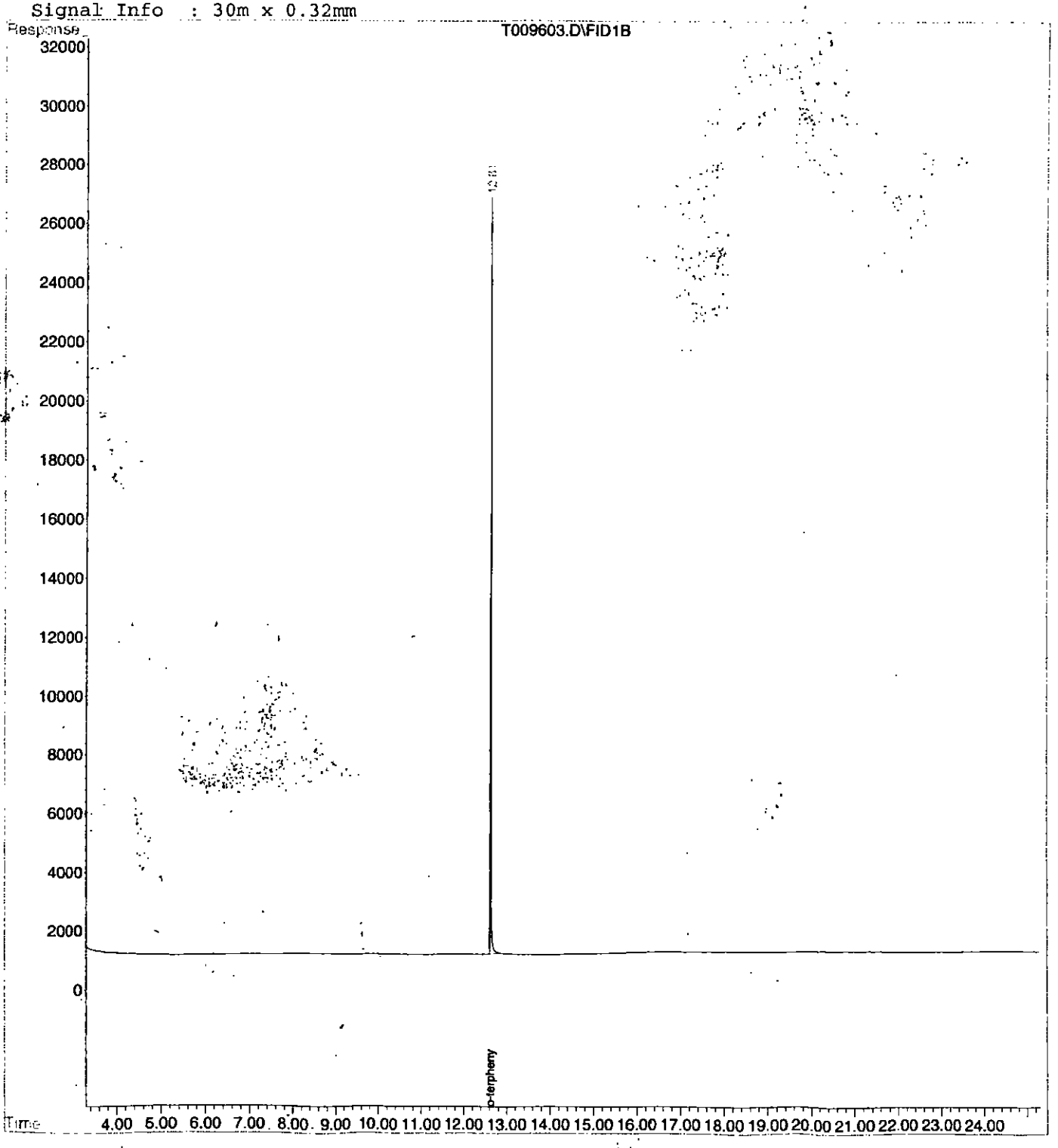
Quantitation Report

Data File : C:\HPCHEM\1\[illegible]\000105\T009603.D
Acq On : 5 Jan 2000 6:41 pm
Sample : 5067.02s
Misc :
IntFile : TPHCINT.E
Quant Time: Jan 6 9:58 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPH70.M

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

[illegible]1: 10
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\ 000105\T009604.D
Acq On : 5 Jan 2000 7:15 pm
Sample : 5067.03s
Misc :
IntFile : TPHCINT.E
Quant Time: Jan 6 9:58 2000 Quant Results File: TPH70.RES

Vial: 11
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Initial Calibration
DataAcq Meth : TPH70.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.61	264250	10.071 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 100.71%#	
Target Compounds			

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

000018

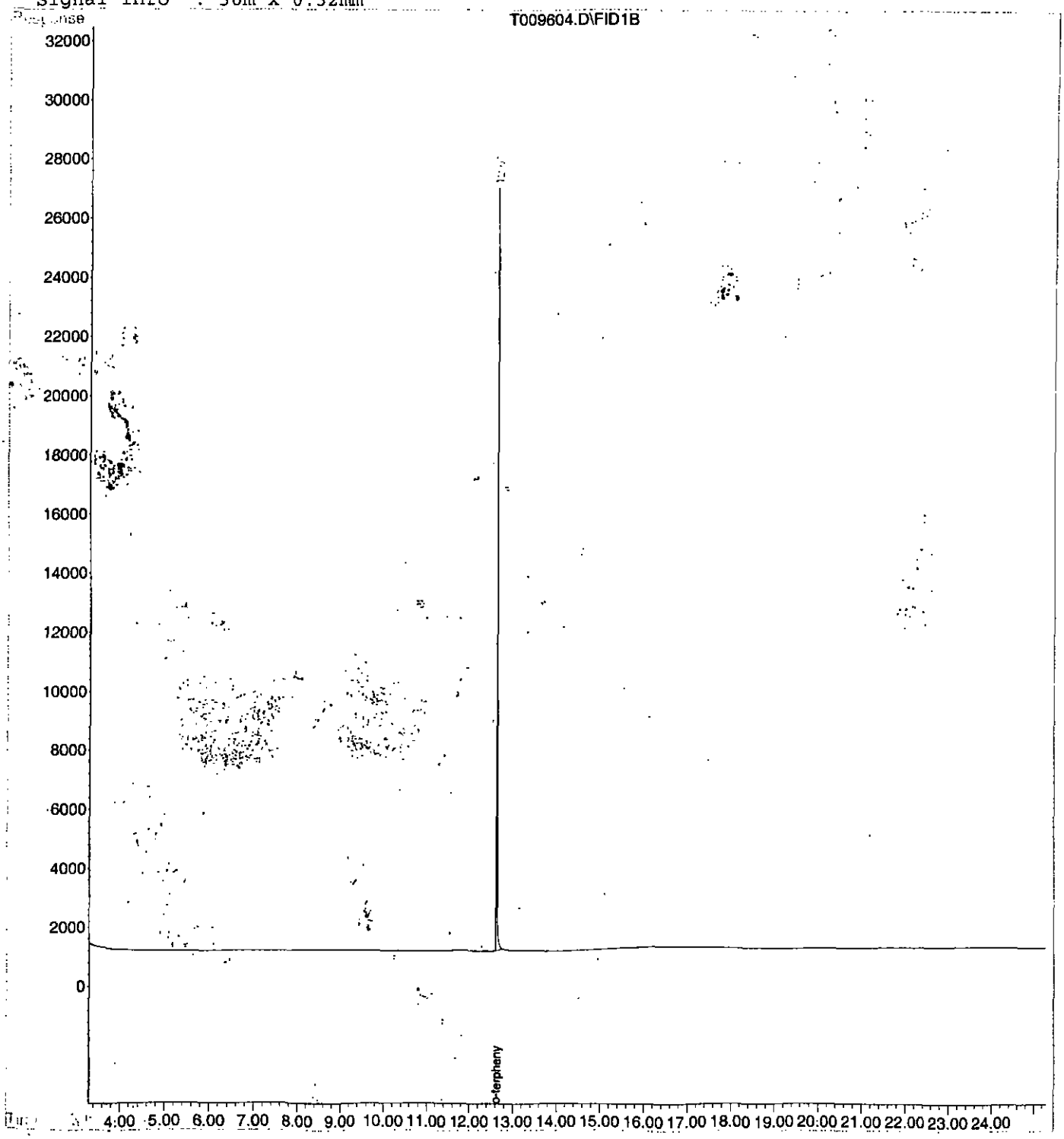
Quantitation Report

Data File : C:\HPCHEM\1\[illegible]\000105\T009604.D
Acq On : 5 Jan 2000 7:15 pm
Sample : 5067.03s
Misc :
IntFile : TPHCINT.E
Quant Time: Jan 6 9:58 2000 Quant Results File: TPH70.RES

[illegible] 1: 11
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPH70.M

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



000019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\ A\000105\T009608.D 1: 15
Acq On : 5 Jan 2000 9:32 pm Operator: Bhaskar
Sample : 5067.04s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 6 9:59 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Initial Calibration
DataAcq Meth : TPH70.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	12.61	260996	9.947 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	99.47%#
Target Compounds			

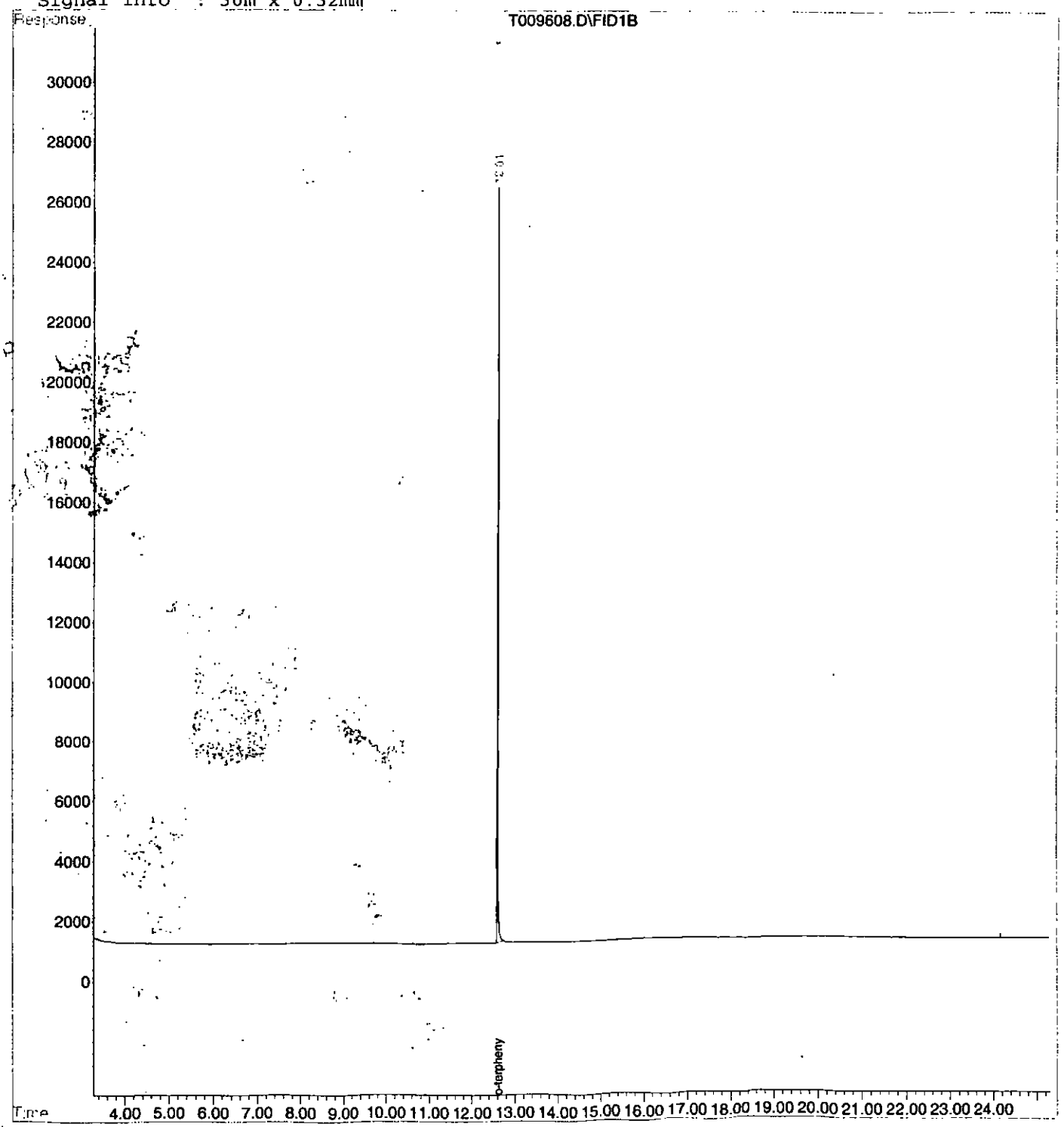
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\ A\000105\T009608.D 1: 15
Acq On : 5 Jan 2000 9:32 pm Operator: Bhaskar
Sample : 5067.04s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 6 9:59 2000 Quant Results File: TPH70.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH70.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Dec 30 08:37:14 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPH70.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 and in the main body of the report.

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 1/27/00

Laboratory Certification #13461

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

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager