



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 2239/Tank Registration #: 81515-9

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: 2239 **NJDEP REG ID:** 81515-9
RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

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

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 12/29/1999 **REMOVAL CONTRACTOR:** TVS
SRF SEND DATE: **TMS:**
DICAR NO. **LEAK DETECT:** N/A
REMEDIALATION COMMENTS: 11/08/94 SAI removed 0 gallons of oil; left 64 gallons of waste in tank.
Residential UST with no DICAR and no contamination; no Closure Report required.

REGISTRATION COMMENTS:

SAS DONE: **CONSULTANT:** TVS
MW's 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

Site Name: 2239 -

Is the UST Residential: YES

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

CASE STATUS: Case Closed

NFA ISSUED:

File Review Date: 10/27/08

By: Howard Syvrett

This NJDEP UST Registration # is: 81515 - 9 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 12/29/1999 _____. 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 0 gallons of oil; left 64 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 Syvrett is:

-NO NFA issued, non-leaking, non-regulated residential fuel oil tank.

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

☒ 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

☒ No

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

☒ Yes

☒ No

4. Were any potentially contaminated AOCs identified?

☒ Yes

[] No

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

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

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

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

6. Was a discharge of a hazardous substance, contaminant or pollutant identified?

[] Yes

☒ 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?

☒ Yes ☐ No

TPHC ☒ 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

☒ Yes ☐ No

12. Were samples biased toward the most contaminated areas using field Instruments and/or visual and olfactory observations?

☒ Yes ☐ No

How was this accomplished? _____

13. If only TPHC samples taken, were samples >1000mg/kg run for VOA+10?

☐ Yes ☒ No

all samples were < 1,000 ppm

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

☐ Yes ☒ No

Explain: *- no discharge, no remediation*

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? _____

☒ Not Available

20. Was ground water present in the excavation? ☐ Yes ☒ 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 ☐ No

How was this determined? Well Search : ☐ _____

22. Was contaminated soil removed from the site? ☐ Yes ☒ 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?

☒ 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? ☒ 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 ☒ No

Was staining observed on the basement/crawl space walls or floor? ☐ Yes ☐ No ☒ NA

Were petroleum odors observed in the basement/crawl space? ☐ Yes ☐ No ☒ NA

Is a sump present in the basement/crawl space? ☐ Yes ☐ No ☒ NA

If yes, please indicate location on site map.

Was water observed in the sump? ☐ Yes ☐ No ☒ NA

Was a sheen observed on the water in sump? ☐ Yes ☐ No ☒ NA

If there was no water in the sump was the base of the sump investigated for a petroleum discharge? ☐ Yes ☐ No ☒ NA

If the sump was investigated, was a discharge observed? ☐ Yes ☐ No ☒ NA

23. Is a regulated underground storage tank the subject of the remediation? ☐ Yes ☒ 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 ☒ No

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

If Yes, is there a contaminant of concern present? ☐ Yes ☒ No

Fort Monmouth Underground Storage Tank Assessment Questionnaire

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)? ☒ Yes ☐ No

26. Was the remedial investigation/action report prepared in accordance with N.J.A.C. 7:26E? ☐ Yes ☒ No

27. Remediation completed date: 12/29/99

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 ☒ 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 ☒ 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**

Lined area for handwritten responses.

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

U.S. ARMY FORT MONMOUTH
UST DATABASE INPUT FORM

SELEM-EH-EV

CA

DATE: 11/8/94 BUILDING #: 2239
NJDEPE REG. #: 8/515 UST #: 9
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: SERV Air P.O.L. T. Smythe

MANIFEST #: NONE

COMMENTS: 64 GALS WASTE IN TANK
0 GALS TO BLDG

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: _____

TVS
UTILITY MARKING REQUEST

Request marking of circled utility lines in the area indicated below.

NJ Nat. Gas Co.
NJ Bell
NJ American Water Co.
JCP&L
Cable TV Co.

Post Telephone
Post water/sewer
Post Electric
Co. Sewage Auth.

COUNTY: Monmouth
TOWNSHIP: TINTON FALLS (See municipality list)
TOWN: Fort Monmouth
BUILDING NUMBER: 2239
STREET ADDRESS: 27+29 HEMPHILL RD
NEAREST CROSS STREET: GUAM LANE + HOPE RD.
LOCATION OF EXCAVATION: BUILDING FRONT
(e.g. street, sidewalk, etc.)
DATE OF EXCAVATION: 11-2-99 0800
DEPTH OF EXCAVATION: 10 FT. MAX
COMPANY NAME: TVS
COMPANY ADDRESS: P.O. Box 60
Ft. Monmouth, NJ 07703
S.O. (I.J.O.) NUMBER: 100004
NAME OF REQUESTOR: FRANK ACCORSI
DATE OF REQUEST: _____
NAME OF CALLER: _____
DATE OF CALL: _____
MARKING NUMBER: 993000433

Approval for emergency digging without marking:

UNDERGROUND STORAGE TANK REMOVAL
(550 G.)

New Jersey One Call System

SEQUENCE NUMBER 0006

CDC = FOM

Transmit: Date: 10/27/99 At: 0953

*** R O U T I N E

*** Request No.: 993000433

Operators Notified:

CC4=/COMCAS-MNMOUTH / NJN=/NJNG-UTILIQUEST/ NJA=/NJ AMER WTR /
GP9=/GPU ENERGY-CLS / BAN=/BELL ATL NJ-CLS/ FOM=/FORT MONMOUTH /

Location Information:

County: MONMOUTH Municipality: TINTON FALLS

Subdivision/Community: FORT MONMOUTH

Street: 27 - 29 HEMPHILL RD

Nearest Intersection: HOPE RD

Other Intersection: GUAM LN

Type of Work : REMOVE UST

Extent of Work: ENTIRE FRONT

DEPTH: 10FT

Location Reference:

FRONT-

Start Date/Time: 11/02/99 At 0800

Remarks:

EXPIRATION DATE 12/13/99

1 BLDG 2 UNITS BLG 2239

Working For: TVS

Address: PO BOX 60.

City: FORT MONMOUTH 07703

Phone: 732-532-6955

Contact: EILEEN MAIAR

Title:

Excavator Information:

Caller: EILEEN MAIAR

Phone: 732-532-6955

Title: WORK CNTRL

Excavator: TVS

Address: PO BOX 60

City: FORT MONMOUTH, NJ 07703.

Phone: 732-532-6955

Fax: 732-542-1107

Contact: EILEEN MAIER

Title: WORK CNTRL

Phone: 732-532-6955

Best Time: 0800-1600

Cellular:

Alternate Field Contact:

Name: FRANK ACCORSCK

Phone: 732-532-2577

Title: SUBSRFC EV

Fax:

Cellular:

Best Time: 0800-1600

End Request

A/C

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 2239 REG.#: 81515 - 9
 DATE: 12-29-99 TOA: _____ TOD: _____
 CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: _____
 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. <u>(YES)</u> /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	N
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	
_____ GALLONS OF _____ WASTE WERE REMOVED (MANIFEST#: _____)	
_____ CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	
T. _____ NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) _____	
CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
_____ ORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	Y
THE _____ TRANSPORTED TO <u>BLD. 166</u> FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADD _____ ES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) _____	
SCRAPE PERMIT, ACCIDENT REPORT, _____	NA

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: 12-29-99

UNDERGROUND STORAGE TANK PROJECT
REMOVAL/REMEDATION WORKSHEET

PROJECT SITE: BLDG. 2239

DATE OF TANK REMOVAL:

WORKSHEET PREPARED BY:

27/29 HEMPHILL RD

12-29-99

FRANK ACCORSI

COMMENTS:

CONCRETE HOLD-DOWN SLAB
LEFT IN EXCAVATION.

CONFINED SPACE ENTRY NOTIFICATIONS: N A

FT. MONMOUTH FIRE DEPARTMENT-

QC/SAFETY OFFICE-

WEATHER: PT. CLOUDY, 40'S

EVIDENCE OF A DISCHARGE:

NONE

CONDITION OF THE TANK/PIPING:

550 G. SINGLE WALL
FIBERGLASS (#2 HEATING OIL).
IN VERY GOOD CONDITION - NO
HOLES. PIPING 2 x 5/8 IN
SUPPLY/RETURN PIPING

TYPICAL SOIL PROFILE:

Brown med-fine SAND, little clayey silt
UST SURROUNDED BY PEA GRAVEL

SITE INFORMATION:

PRODUCT REMOVED FROM TANK- $\approx$ 25 GAL.

SOLIDS (OIL SPILL DEBRIS)-

APPROX. DEPTH TO GROUNDWATER- NOT
ENCOUNTERED

DEPTH OF SOIL COVER- $\approx$ 2 FT.

TANK DIAMETER/LENGTH- 4 FT. x 6 FT.

DEPTH OF EXCAVATION- 7 FT.

SOIL SAMPLING:

DATE- 12-29-99

FIELD DUPLICATE = SAMPLE 2239A (WEST
END)

COMMENTS-

SOIL SAMPLING:

DATE-

FIELD DUPLICATE = SAMPLE _____

COMMENTS-

SOIL SAMPLING:

DATE-

FIELD DUPLICATE = SAMPLE _____

COMMENTS-

US ARMY, SELF-M-PW-EV
DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 2239 REG.#: 81515 - 9
 DATE: 12-29-99 TOA: _____ TOD: _____
 SSE: FRANK ACCORSI NJDEP CERT.#: 0010042
 REMOVAL CONTRACTOR: TVS Inc. PWS-007
 CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042
 WEATHER: SUNNY-PTLY. CLOUDY, 40'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 BY 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 <u>OVA</u> /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, <u>DAILY UST CLOSURE LOG</u> , SCALED SITE MAP (SAMPLING), <u>SRF-CLOSURE</u> , <u>CHAIN OF CUSTODY</u> , <u>SOIL ANALYTICAL RESULTS</u> , 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: 12-29-99

SIGNATURE: Frank Accorsi

**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,

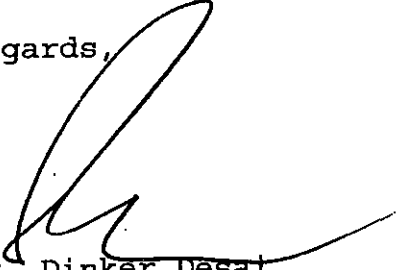
BUILDING #: 2239 (27,29 HEMPHILL RD)

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

Lab. ID # : 5052
Date Rec'd: 29-Dec-99
Analysis Start: 30-Dec-99
Analysis Complete: 31-Dec-99

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B.Patel
Inst. ID. GC TPHC INST. #1
Column Type RTX 5
Ext. Meth: Shake

UST Reg. #: 81515-9
Closure #:
DICAR #:
Injection Volume 1 ul
Column ID 0.32 mm
Location #: Bldg.2239

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5052.01	2239-A	1.00	15.45	81.87	186	ND
5052.02	2239-B	1.00	15.20	85.42	181	ND
5052.03	2239-C	1.00	15.15	82.53	188	ND
5052.04	2239-D	1.00	15.23	82.89	186	ND
METHOD BLANK	TBLK300	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit


 Daniel K. Wright
 Laboratory Director

NJDEP Certification #13461

Chain of Custody Record

[illegible]

Date Received: 12-29-99

Lab Project ID# 1A5052

Site/Project Name: _____

Cooler Temp (°C): 24.0

Received By: MARK LUNA
(print name)

Sign: _____

1. Did the samples come in a cooler?

☒_yes

☐ no

 $\square \cdot \dot{N} \dot{A}$

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

Comments: _____

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 632-6224 FAX: (732) 632-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13481, 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
2239-A West End 6-6.5'	5052.01	Soil	29-Dec-99 10:40	12/29/99
2239-B East End 6-6.5'	5052.02	Soil	29-Dec-99 11:00	12/29/99
2239-C Piping 1.5-2'	5052.03	Soil	29-Dec-99 11:10	12/29/99
2239-D Duplicate	5052.04	Soil	29-Dec-99 10:40	12/29/99
Triq Blank	5052.05	Methanol	29-Dec-99	12/29/99

**FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS**

**ENCLOSURE:
CHAIN OF CUSTODY
RESULTS**


**Daniel Wright/Date
Laboratory Director**

1-12-00

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Method Summary

NJDEP Method OOA-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 then 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.
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 and samples.
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).

yes

NO

yes

yes

NA

yes

yes

Additional comments: _____

Laboratory Manager

Date

1-12-00

000002



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

[illegible]

SAMPLE RECEIPT FORM

Date Received: 12-29-99

Lab Project ID#: 5052

Site/Project Name: _____

Cooler Temp (°C): 24°C

Received By: MARK LAURA
(print name)

Sign: Mach

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

[illegible]

Comments:

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 # : 5052
Date Rec'd: 29-Dec-99
Analysis Start: 30-Dec-99
Analysis Complete: 31-Dec-99

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B. Patel
Inst. ID. GC TPHC INST. #1
Column Type RTX 5
Ext. Meth: Shake

UST Reg. #: 81515-9
Closure #:
DICAR #:
Injection Volume 1 ul
Column ID 0.32 mm
Location #: Bldg. 2239

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5052.01	2239-A	1.00	15.45	81.87	186	ND
5052.02	2239-B	1.00	15.20	85.42	181	ND
5052.03	2239-C	1.00	15.15	82.53	188	ND
5052.04	2239-D	1.00	15.23	82.89	186	ND
METHOD BLANK	TBLK300	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit


 Daniel K. Wright
 Laboratory Director

000004

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

Client :	U.S. Army	Lab. ID # :	5052
	DPW. SELFM-PW-EV	Date Rec'd:	29-Dec-99
	Bldg. 173	Analysis Start:	30-Dec-99
	Ft. Monmouth, NJ 07703	Analysis Complete:	31-Dec-99
		UST Reg. #:	81515-9
Analysis:	OQA-QAM-025	Closure #:	
Matrix:	Soil	DICAR #:	
Analyst:	B.Patel	Injection Volume	1 ul
Inst. ID.	GC TPHC INST. #1	Column ID	0.32 mm
Column Type	RTX 5	Location #:	Bldg 2239
Ext. Meth:	Shake		

Sample			Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
5052.01			10.00	10.69	106.92
5052.02			10.00	10.62	106.17
5052.03			10.00	10.44	104.44
5052.04			10.00	10.21	102.05
METHOD BLANK	TBLK300		10.00	11.05	110.45

Surrogate Added : **o-Terphenyl**

000005

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

Client :	U.S. Army	Lab. ID # :	5052
	DPW. SELFM-PW-EV	Date Rec'd:	29-Dec-99
	Bldg. 173	Analysis Start:	30-Dec-99
	Ft. Monmouth, NJ 07703	Analysis Complete:	31-Dec-99
Analysis:	OQA-QAM-025	UST Reg. #:	81515-9
Matrix:	Soil	Closure #:	
Analyst:	B.Patel	DICAR #:	
Inst. ID.	GC TPHC INST. #1	Injection Volume	1 ul
Column Type	RTX 5	Column ID	0.32 mm
Ext. Meth:	Shake	Location #:	Bldg.2239

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
5052.04MS	1000	0.00	890.99	89.10	75-125
5052.04MSD	1000	0.00	807.24	80.72	75-125

RPD	9.86	20.00
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000006

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

Client :	U.S. Army	Lab. ID # :	5052
	DPW. SELFM-PW-EV	Date Rec'd:	29-Dec-99
	Bldg. 173	Analysis Start:	30-Dec-99
	Ft. Monmouth, NJ 07703	Analysis Complete:	31-Dec-99
Analysis:	OQA-QAM-025	UST Reg. #:	81515-9
Matrix:	Soil	Closure #:	
Analyst:	B.Patel	DICAR #:	
Inst. ID.	GC TPHC INST. #1	Injection Volume	1 ul
Column Type	RTX 5	Column ID	0.32 mm
Ext. Meth:	Shake	Location #:	Bldg.2239

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Tblk300BS	30-Dec-99	1000	869.27	86.93	75-125

000007

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

000008

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\91229\T009554.D
 Acq On : 30 Dec 1999 7:18 pm
 Sample : Tstd050
 Misc : 50 ppm std
 IntFile : TPHCINT.E

Via: 1
 Operator: Bhaskar
 Inst : GC/MS Ins
 Multiplr: 1.00

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	22.903 E3	-12.4	109	-0.06
2 tC C10	20.990	23.267 E3	-10.8	103	-0.01
3 TC C12	21.131	23.344 E3	-10.5	102	0.00
4 tC C14	21.554	23.377 E3	-8.5	100	0.00
5 tC C16	21.847	23.531 E3	-7.7	100	0.00
6 tC C18	20.614	23.610 E3	-14.5	105	0.00
7 tC C20	21.656	23.436 E3	-8.2	99	0.00
8 tC C22	23.070	24.409 E3	-5.8	99	0.00
9 tC C24	23.098	24.402 E3	-5.6	99	0.00
10 tC C26	23.012	24.186 E3	-5.1	98	0.00
11 tC C28	22.706	24.023 E3	-5.8	98	0.00
12 tC C30	23.597	25.015 E3	-6.0	98	0.00
13 tC C32	22.427	24.009 E3	-7.1	98	0.00
14 tC C34	22.312	23.733 E3	-6.4	97	-0.01
15 tC C36	21.845	23.242 E3	-6.4	97	-0.02
16 tC C38	21.829	22.927 E3	-5.0	95	-0.02
17 tC C40	20.186	21.002 E3	-4.0	94	-0.04
18 tC c42	20.418	20.871 E3	-2.2	92	-0.06
19 TC Pristane	24.122	24.463 E3	-1.4	99	0.00
20 TC Phytane	22.810	23.884 E3	-4.7	98	0.00
21 sC o-terphenyl	26.240	28.075 E3	-7.0	100	0.00
22 tC TPHC - total	32.725	29.326 E3	10.4	99	0.00

000009

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA \1229\T009564.D
 Acq On : 31 Dec 1999 1:02 am
 Sample : Tstd050
 Misc : 50 ppm std
 IntFile : TPHCINT.E

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

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	22.235 E3	-9.1	106	-0.07
2 tC C10	20.990	23.028 E3	-9.7	101	-0.01
3 TC C12	21.131	22.702 E3	-7.4	99	0.00
4 tC C14	21.554	23.169 E3	-7.5	100	0.00
5 tC C16	21.847	23.365 E3	-6.9	99	0.00
6 tC C18	20.614	22.988 E3	-11.5	103	0.00
7 tC C20	21.656	23.110 E3	-6.7	97	0.00
8 tC C22	23.070	24.291 E3	-5.3	98	0.00
9 tC C24	23.098	24.201 E3	-4.8	98	0.00
10 tC C26	23.012	23.975 E3	-4.2	97	0.00
11 tC C28	22.706	23.772 E3	-4.7	97	0.00
12 tC C30	23.597	24.527 E3	-3.9	96	0.00
13 tC C32	22.427	23.590 E3	-5.2	96	0.00
14 tC C34	22.312	23.296 E3	-4.4	95	-0.01
15 tC C36	21.845	22.820 E3	-4.5	95	-0.02
16 tC C38	21.829	22.362 E3	-2.4	93	-0.03
17 tC C40	20.186	20.334 E3	-0.7	91	-0.04
18 tC C42	20.418	20.026 E3	1.9	88	-0.07
19 TC Pristane	24.122	24.557 E3	-1.8	99	0.00
20 TC Phytane	22.810	23.531 E3	-3.2	96	0.00
21 sC o-terphenyl	26.240	27.852 E3	-6.1	99	0.00
22 tC TPHC - total	32.725	28.679 E3	12.4	97	0.00

000040

Data File : C:\HPCHEM\1\A\991229\T009556.D

Acq On : 30 Dec 1999 8:27 pm

Sample : Tblk300

Misc : Tblk300 S 991230

IntFile : TPHCINT.E

Quant Time: Jan 3 8:16 2000 Quant Results File: TPH70.RES

. 1: 3

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	289819	11.045 mg/L
Spiked Amount	10.000	Range	8 - 13
		Recovery	= 110.45%#

Target Compounds

Data File : C:\HPCHEM\1\L \991229\T009556.D

V. 1: 3

Acq On : 30 Dec 1999 8:27 pm

Operator: Bhaskar

Sample : Tblk300

Inst : GC/MS Ins

Misc : Tblk300 S 991230

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: Jan 3 8:16 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

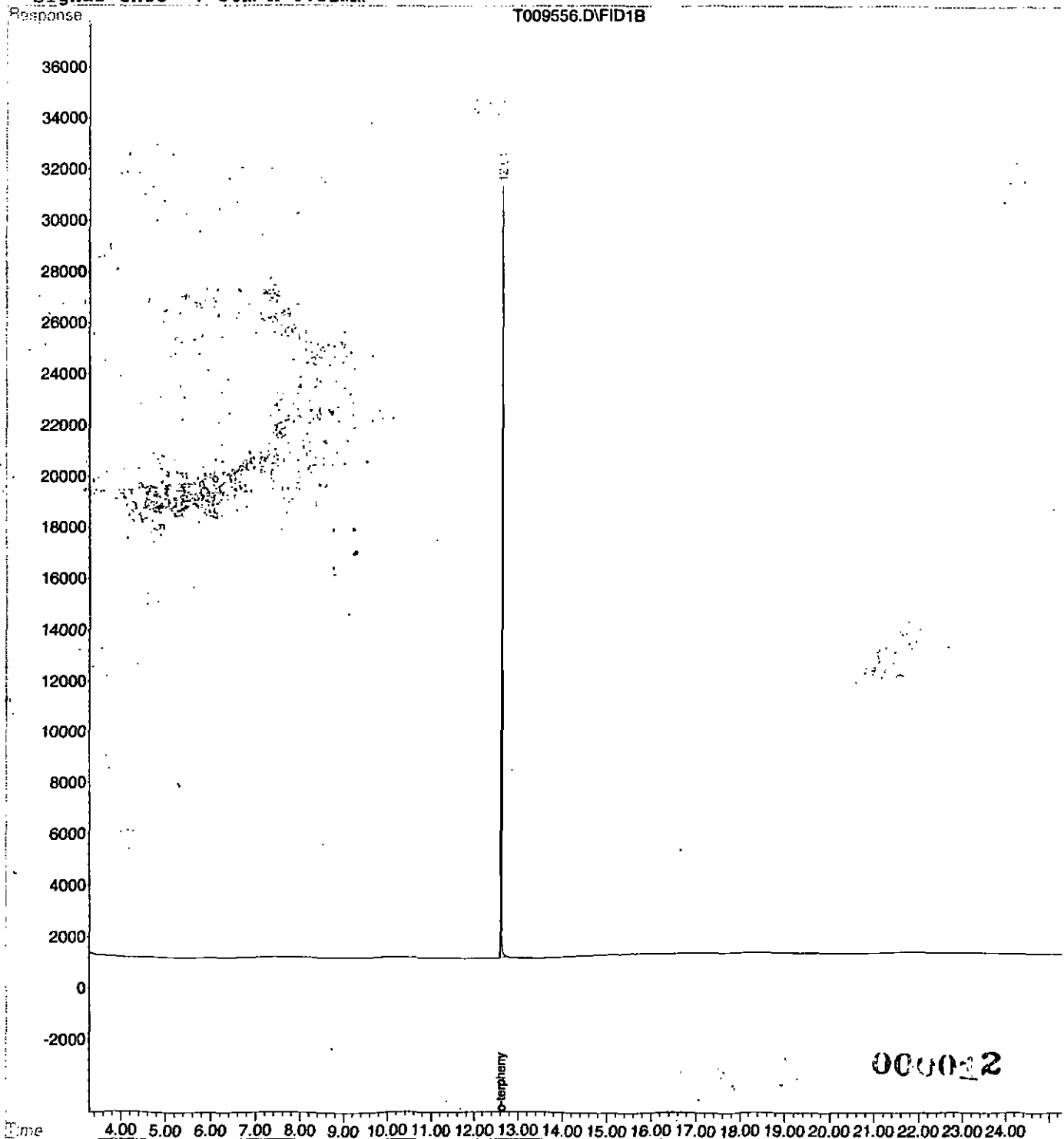
Response via : Multiple Level Calibration

DataAcq Meth : TPH70.M

Volume Inj. : 1 ul

Signal Phase : HP-5

Signal Info : 30m x 0.32mm



Data File : C:\HPCHEM\1\ A\991229\T009557.D .1: 4
 Acq On : 30 Dec 1999 9:02 pm Operator: Bhaskar
 Sample : Tblk300BS Inst : GC/MS Ins
 Misc : Tblk300BS S 991230 Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: Jan 3 8:16 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	270825	10.321 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	103.21%#
Target Compounds			
2) tC C10	7.29	163565	7.793 mg/L
3) TC C12	8.97	432443	20.465 mg/L
4) tC C14	10.16	435891	20.223 mg/L
5) tC C16	11.17	367909	16.840 mg/L
6) tC C18	11.63	242067	11.743 mg/L
7) tC C20	12.07	240503	11.106 mg/L
8) tC C22	12.88	130528	5.658 mg/L
9) tC C24	13.63	59383	2.571 mg/L
19) TC Pristane	11.66	78058	3.236 mg/L
20) TC Phytane	12.11	103635	4.543 mg/L
22) tC TPHC - total	10.16	28446656	869.269 mg/L m

000043

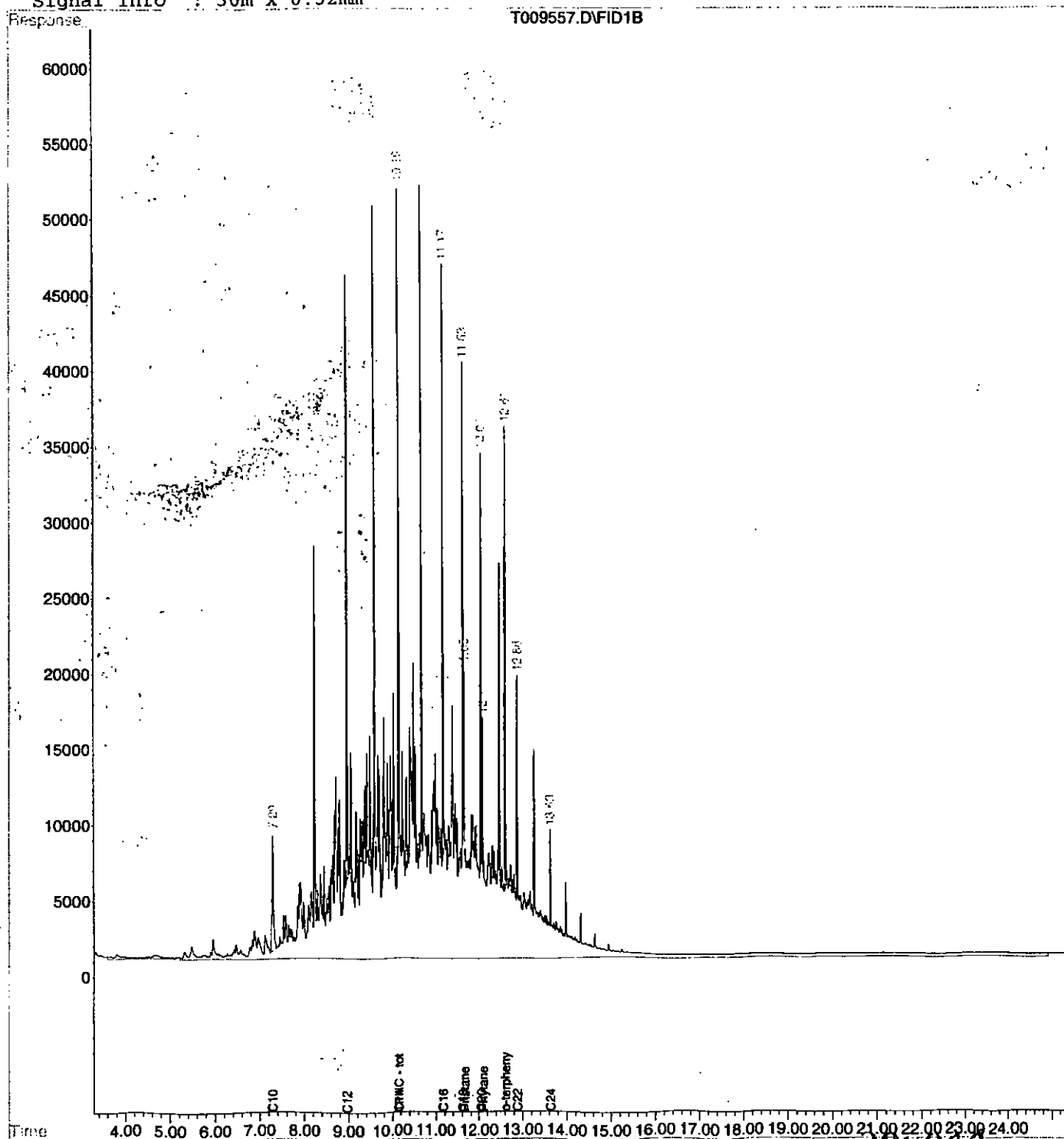
Quantitation Report

Data File : C:\HPCHEM\1\L 991229\T009557.D
 Acq On : 30 Dec 1999 9:02 pm
 Sample : Tblk300BS
 Misc : Tblk300BS S 991230
 IntFile : TPHCINT.E
 Quant Time: Jan 3 8:16 2000 Quant Results File: TPH70.RES

View: 4
 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



Data File : C:\HPCHEM\1\ A\991229\T009558.D Vol: 5
Acq On : 30 Dec 1999 9:36 pm Operator: Bhaskar
Sample : 5052.01s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 3 8:16 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	280543	10.692 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	106.92%#
Target Compounds			

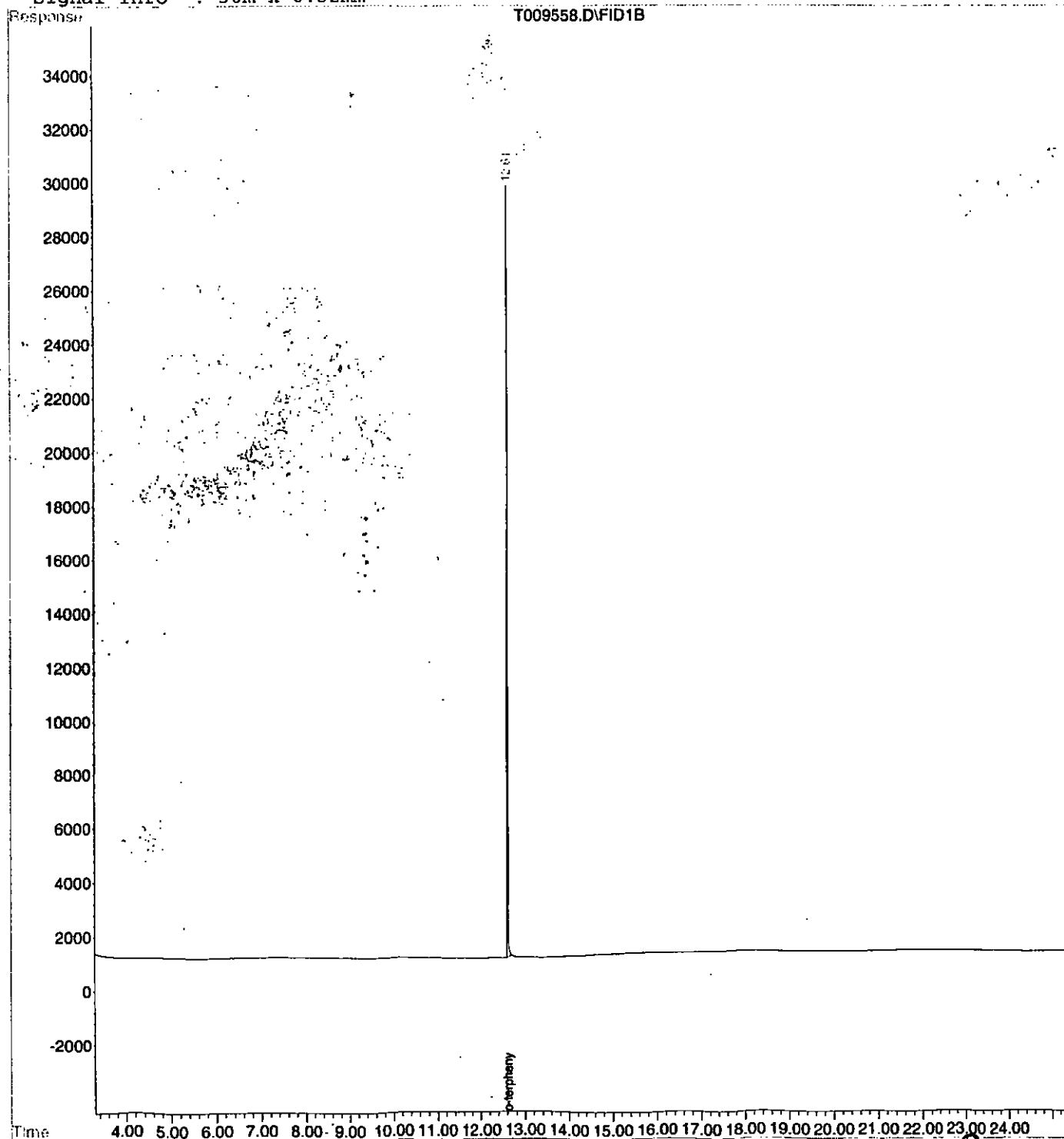
Quantitation Report

Data File : C:\HPCHEM\1\D. 991229\T009558.D
 Acq On : 30 Dec 1999 9:36 pm
 Sample : 5052.01s
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jan 3 8:16 2000 Quant Results File: TPH70.RES

V. 5
 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



Data File : C:\HPCHEM\1\A\991229\T009559.D Al: 6
Acq On : 30 Dec 1999 10:11 pm Operator: Bhaskar
Sample : 5052.02s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jan 3 8:17 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	278585	10.617 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	106.17%#

Target Compounds

Quantitation Report

Data File : C:\HPCHEM\1\L A\991229\T009559.D

Acq On : 30 Dec 1999 10:11 pm

Sample : 5052.02s

Misc :

IntFile : TPHCINT.E

Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

V : 6

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

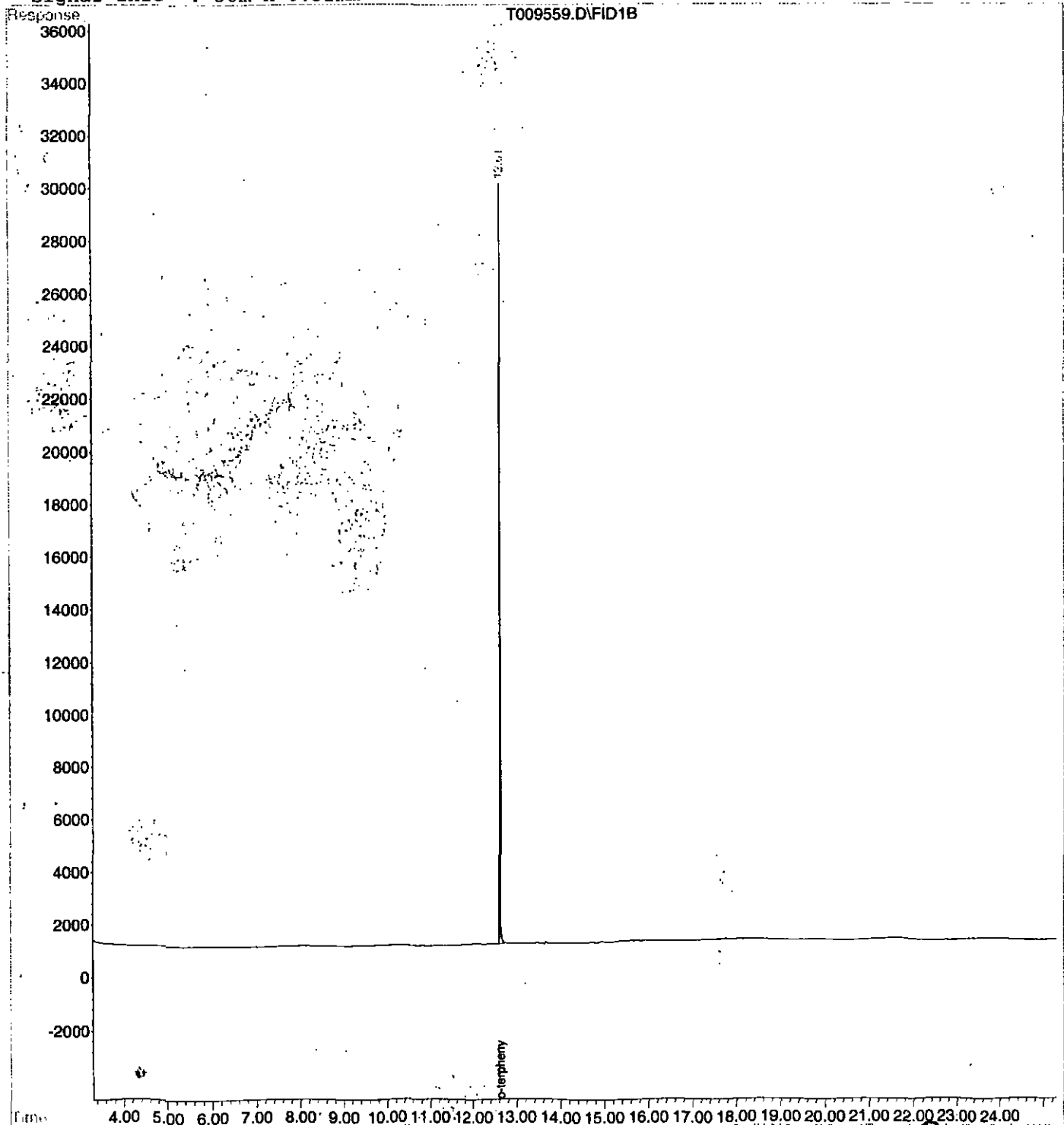
Response via : Multiple Level Calibration

DataAcq Meth : TPH70.M

Volume Inj. : 1 ul

Signal Phase : HP-5

Signal Info : 30m x 0.32mm



Data File : C:\HPCHEM\1\A\991229\T009560.D

Acq On : 30 Dec 1999 10:45 pm

Sample : 5052.03s

Misc :

IntFile : TPHCINT.E

Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

.1: 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	274035	10.444 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	104.44%

Target Compounds

Quantitation Report

Data File : C:\HPCHEM\1\DATA\991229\T009560.D

Vol: 7

Acq On : 30 Dec 1999 10:45 pm

Operator: Bhaskar

Sample : 5052.03s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: Jan 3 8:17 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

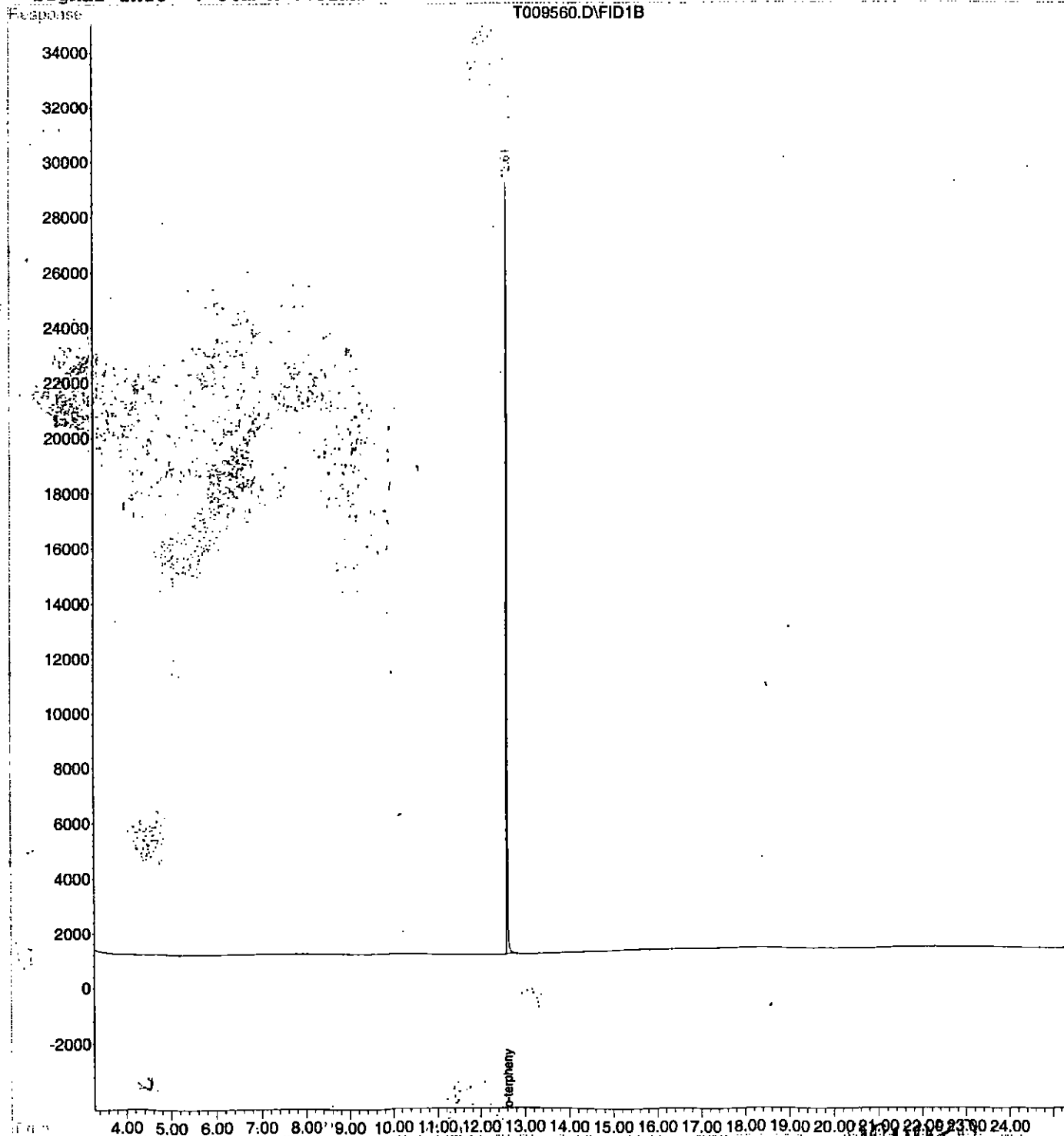
Response via : Multiple Level Calibration

DataAcq Meth : TPH70.M

Volume Inj. : 1 ul

Signal Phase : HP-5

Signal Info : 30m x 0.32mm



Data File : C:\HPCHEM\1\1_A\991229\T009561.D
Acq On : 30 Dec 1999 11:19 pm
Sample : 5052.04s
Misc :
IntFile : TPHCINT.E
Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

V : 8
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	267763	10.205 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 102.05%#

Target Compounds

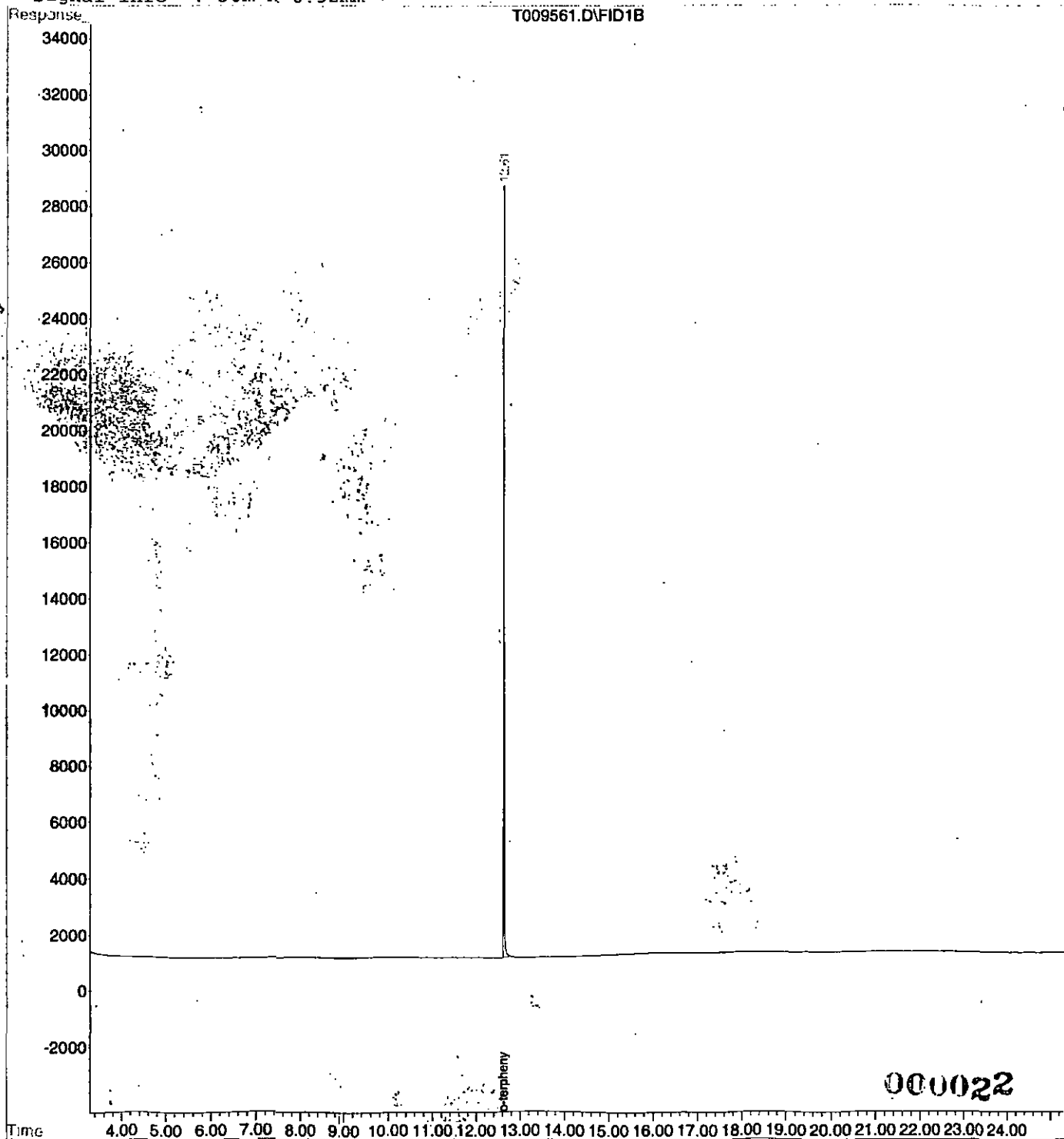
Quantitation Report

Data File : C:\HPCHEM\1\LA\991229\T009561.D
 Acq On : 30 Dec 1999 11:19 pm
 Sample : 5052.04s
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

Vol: 8
 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\DATA\991229\T009562.D

Acq On : 30 Dec 1999 11:54 pm

Sample : 5052.04MS

Misc :

IntFile : TPHCINT.E

Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

Vol: 9

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	277146	10.562 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	105.62%#
Target Compounds			
2) tC C10	7.29	166188	7.918 mg/L
3) TC C12	8.97	445193	21.069 mg/L
4) tC C14	10.16	448170	20.793 mg/L
5) tC C16	11.17	379777	17.383 mg/L
6) tC C18	11.63	253778	12.311 mg/L
7) tC C20	12.07	245746	11.348 mg/L
8) tC C22	12.88	135178	5.860 mg/L
9) tC C24	13.63	60601	2.624 mg/L
19) TC Pristane	11.66	81305	3.371 mg/L
20) TC Phytane	12.11	107098	4.695 mg/L
22) tC TPHC total	10.68	29157507	890.992 mg/L m

000023

Quantitation Report

Data File : C:\HPCHEM\1\ A\991229\T009562.D

Acq On : 30 Dec 1999 11:54 pm

Sample : 5052.04MS

Misc :

IntFile : TPHCINT.E

Quant Time: Jan 3 8:17 2000 Quant Results File: TPH70.RES

ul: 9

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

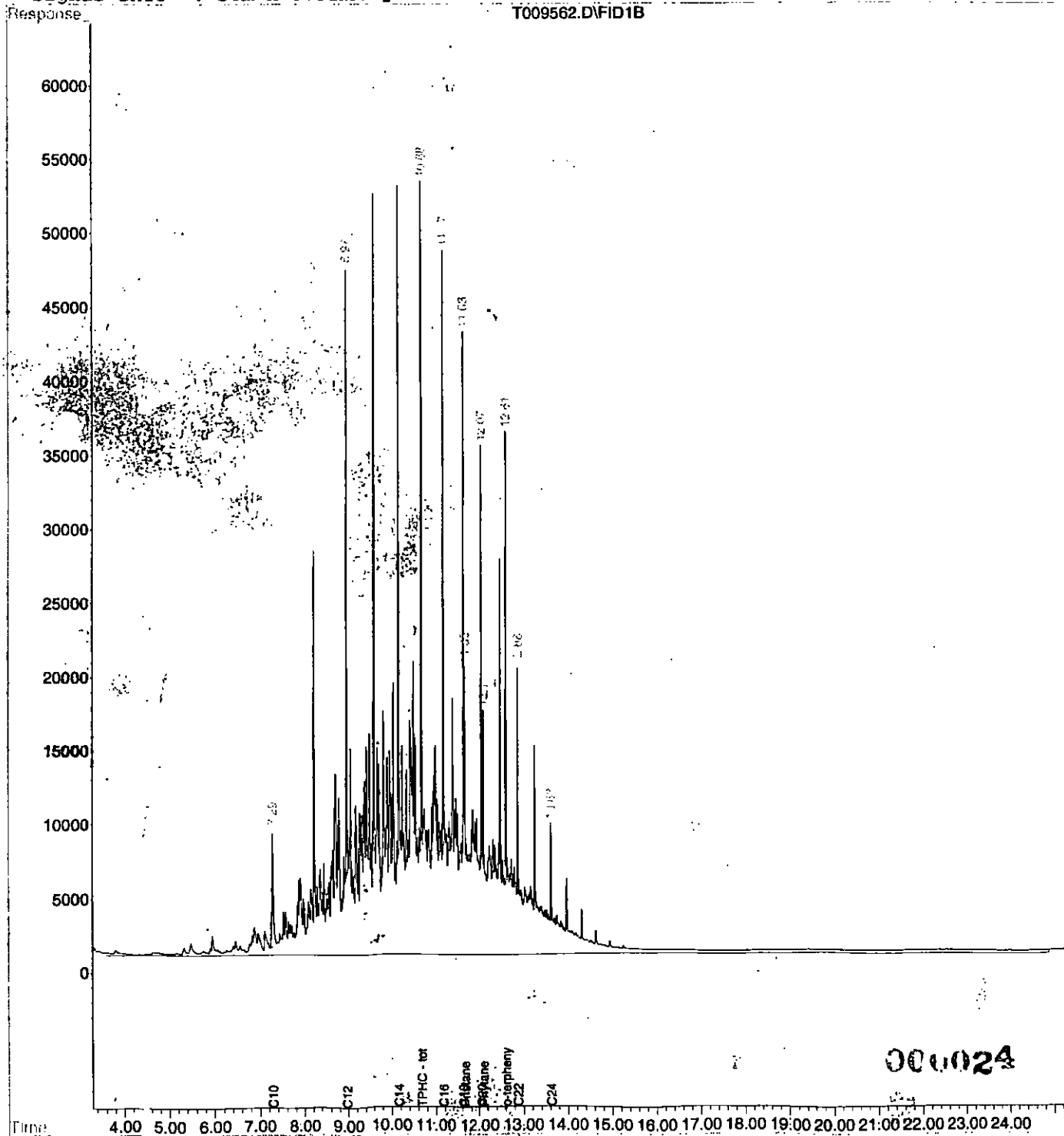
Response via : Multiple Level Calibration

DataAcq Meth : TPH70.M

Volume Inj. : 1 ul

Signal Phase : HP-5

Signal Info : 30m x 0.32mm



Data File : C:\HPCHEM\1\A\991229\T009563.D

Acq On : 31 Dec 1999 12:28 am

Sample : 5052.04MSD

Misc :

IntFile : TPHCINT.E

1: 10

Operator: Bhaskar

Inst : GC/MS Ins

Multiplr: 1.00

Quant Time: Jan 3 8:18 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	259347	9.884 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery =	98.84%#
Target Compounds			
2) tC C10	7.29	148633	7.081 mg/L
3) TC C12	8.97	394651	18.677 mg/L
4) tC C14	10.16	401651	18.634 mg/L
5) tC C16	11.17	340094	15.567 mg/L
6) tC C18	11.63	227321	11.028 mg/L
7) tC C20	12.07	221560	10.231 mg/L
8) tC C22	12.88	121696	5.275 mg/L
9) tC C24	13.63	53846	2.331 mg/L
19) TC Pristane	11.66	70940	2.941 mg/L
20) TC Phytane	12.11	96040	4.210 mg/L
22) tC TPHC Total	10.16	26416603	807.235 mg/L m

000025

Quantitation Report

Data File : C:\HPCHEM\1\A\991229\T009563.D

Acq On : 31 Dec 1999 12:28 am

Sample : 5052.04MSD

Misc :

IntFile : TPHCINT.E

Quant Time: Jan 3 8:18 2000 Quant Results File: TPH70.RES

i: 10

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

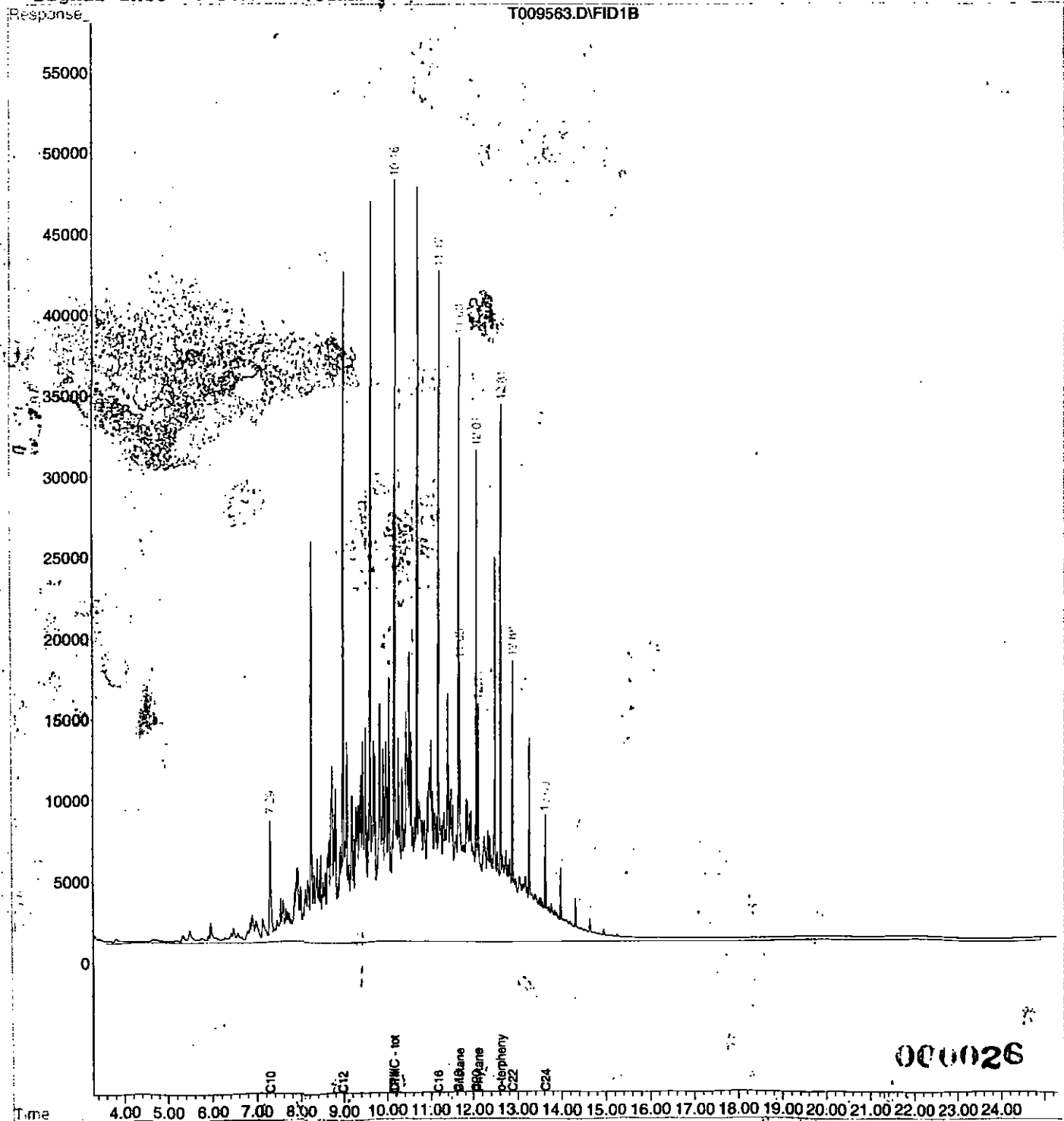
Response via : Multiple Level Calibration

DataAcq Meth : TPH70.M

Volume Inj. : 1 ul

Signal Phase : HP-5

Signal Info : 30m x 0.32mm



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 1/12/00

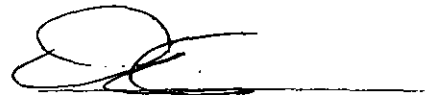
Laboratory Certification #13461

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

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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