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NWS EARLE
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# SITE INVESTIGATION REPORT SUMMARY OF FINDINGS FOR UNDERGROUND STORAGE TANK C-38 NWS EARLE NJ

8/16/1995

ENVIRO-TECH, INC.

Item # (16)
Box 1

Closure Report for:
UST C-38

000000383

# SITE INVESTIGATION REPORT
# SUMMARY OF FINDINGS FOR UST C-38

UNITED STATES NAVAL WEAPONS STATION - EARLE
Colts Neck, Monmouth County, New Jersey

**August 16, 1995**

Prepared for:

Tom Dunn
ROICC
NWS Earle
Colts Neck, New Jersey

Prepared by:

Enviro-Tech, Inc.
364 Broad Street
Keyport, New Jersey

Item # (16)
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Closure Report for:
UST C-38

EARLE FILES
BOX #
C-18

**SITE INVESTIGATION REPORT**
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364 Broad Street
Keyport, New Jersey

UST-014
2/91

FOR STATE USE ONLY

UST # _____
Date Rec'd _____
TMS # _____
Staff _____

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0028
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
*Commissioner*

Karl J. Delaney
*Director*

# UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

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

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

*INSTRUCTIONS:*

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

Date of Submission _____

0151003
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

UNITED STATES NAVAL WEAPONS STATION - EARLE
COLTS NECK
County MONMOUTH
Telephone No. 908-866-2048

OWNER'S NAME AND ADDRESS, if different from above

_____
_____
_____

Telephone No. _____

## II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? X Yes ___ No If Yes, Case No._____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) #2 HEATING OIL

C. Have any vapor hazards been mitigated? ___ Yes ___ No X N/A

## III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. NOT ISSUED

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

## IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

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

B. Scaled Site Diagrams

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

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

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? X Yes ___ No ___ N/A

2. Were soil borings taken at the tank system closure site as prescribed? ___ Yes ___ No X N/A

3. Attach the analytical results in tabular form and include the following information about each sample:
   a. Customer sample number (keyed to the site map)
   b. The depth of the soil sample
   c. Soil boring logs
   d. Method detection limit of the method used
   e. QA/QC Information as required

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed NONE

2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:

   a. Site diagram number for each well installed
   b. Depth of ground water surface
   c. Depth of screened interval
   d. Method detection limit of the method used
   e. Well logs
   f. Well permit numbers
   g. QA/QC Information as required

V. SOIL CONTAMINATION

A. Was soil contamination found? X Yes ___ No
If "Yes", please answer Question B-E
If "No", please answer Question B

B. The highest soil contamination still remaining in the ground has been determined to be:
1. 891 ppb total BTEX, 8,021 ppb total non-targeted VOC
2. N/A ppb total B/N, N/A ppb total non-targeted B/N
3. 4800 ppm TPHC
4. 440 ppb ACETONE (for non-petroleum substance)

C. Remediation of free product contaminated soils

1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface X Yes ___ No
2. Free product contaminated soils are suspected to exist below the water table ___ Yes X No
3. Free product contaminated soils are suspected to exist off the property boundaries. ___ Yes X No

D. Was the vertical and horizontal extent of contamination determined? X Yes ___ No ___ N/A

E. Does soil contamination intersect ground water? ___ Yes X No ___ N/A

VI. GROUND WATER CONTAMINATION NOT APPLICABLE

A. Was ground water contamination found? ___ Yes ___ No
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.

B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:

1. ___ ppb total BTEX, ___ ppb total non-targeted VOC
2. ___ ppb total B/N, ___ ppb total non-targeted B/N
3. ___ ppb total MTBE, ___ ppb total TBA
4. ___ ppb ___ (for non-petroleum substance)
5. greatest thickness of separate phase product found ___
6. separate phase product has been delineated ___ Yes ___ No ___ N/A

C. Result(s) of well search

1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. ___ Yes ___ No ___ N/A

2. The number of these wells identified is ___.

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is _____ feet from the source and its screening begins at a depth of _____ feet.

2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is _____ feet below grade. This well is located _____ feet from the source.

3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. ___ Yes ___ No ___ N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well. ___ Yes ___ No ___ N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ___ Yes ___ No

2. The plume is suspected to continue off the property at concentrations greater than MCLs. ___ Yes ___ No

3. Off property access (circle one): is being sought has been approved has been denied

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) &9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number.

*"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."*

NAME (Print or Type) A. LEE FANKHAUSER SIGNATURE [signature]

COMPANY NAME ENVIRO-TECH, INC. DATE 8/16/95
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION STATE OF NEW JERSEY CERTIFICATION NUMBER 0010953

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

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

NAME (Print or Type) Steven Pinizzi SIGNATURE [signature]

COMPANY NAME Central Pump & Tank DATE 9/28/95
(Performer of Tank Decommissioning)

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

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UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

## 1.0 INTRODUCTION

United States Naval Weapons Station Earle (Earle) is a United States Navy ammunition depot located in Monmouth County, New Jersey. Figure 1 is an annotated United States Geological Survey 7.5 minute series (Marlboro and Long Branch Quadrangles) map showing site location, local topography, drainage, and other features. Figure 2 is a site plan showing site layout, building location, underground storage tank (UST) location, UST designation and other site features.

In light of the New Jersey Department of Environmental Protection's (NJDEP's) deadlines regarding UST upgrades, Earle decided to close a single 5,000 gallon #2 heating oil UST (designated C-38) at their facility (UST Registration #0151003).

In April, 1995, Enviro-Tech, Inc. (ETI) of Keyport, New Jersey (NJDEP Closure/Subsurface Evaluation Certification #1300239) was retained by Central Pump & Tank (CP&T) of Freehold, New Jersey (a subcontractor of Tri-State Construction, Inc. of Fort Washington, Pennsylvania), the UST removal contractors retained by Earle, to complete the NJDEP's site investigation requirements for the closure of UST C-38. ETI's activities at Earle included the preparation and submission of the UST Closure Plan Approval Application to the NJDEP, the completion of a Site Investigation in accordance with N.J.A.C. 7:26E-3.0, and the preparation and submission of a Site Investigation Report (SIR) to the NJDEP which would satisfy the requirements of the NJDEP's *Technical Requirements for Site Remediation*.

On April 7, 1995, ETI submitted the UST Closure Approval Application to Earle for their review and submission to the NJDEP. Earle was subsequently issued a UST Closure Approval for the closure of UST C-38. A copy of the UST Closure Approval is included in Appendix I.

## 2.0. SITE INVESTIGATIONS

### 2.1 UST Decommissioning Activities

UST decommissioning and removal activities were conducted on July 24, 1995 by CP&T. UST decommissioning activities included pumping the UST free of residual product, excavating overlying soils to expose the top of the UST, cutting off the top of the UST to allow access to the tank's interior, and cleaning the interior of the UST with a biodegradable degreaser. A total of approximately 100 gallons of residual product and bottom sludge was removed from the single 5,000 gallon UST present at the facility by L&L Oil Company of Old Bridge, New Jersey as New Jersey hazardous waste X722 "Waste oil and bottom sludge generated from tank cleanouts from residential/ commercial fuel oil tanks". The manifest for the residual product and bottom sludge disposal is included in Appendix II.

During inspection of the UST, no corrosion holes or pitting were observed within the UST by ETI and CP&T personnel. Following removal, the UST was trucked from the facility to Mazza & Sons, Inc. metal recyclers located in Tinton Falls, New Jersey. A copy of the manifest received by CP&T for the disposal of the single steel UST is included in Appendix III.

## 2.2 Soil Investigation

On July 24, 1995, ETI personnel (A. Lee Fankhauser-NJDEP License No.0010953) was on-site to locate and collect post-excavation soil samples from below the UST in accordance with current NJDEP requirements.

During the removal/closure of the UST at the Earle facility, soils removed from above and from the sides of the UST were scanned for "free product contamination" in the field using a Heath Consultants, Inc. *Detecto-Pack III* flame ionization detector (FID) and/or one or more of the following methods:

Method 1 - Soil/Water Agitation

A clear jar was partially filled with the soil/fill sample. Sufficient water was added to saturate the soil and bring the water level to about 1 cm above the soil surface. The jar was sealed, and the sample was agitated by shaking. The jar was then opened to check for the presence of a sheen on the water surface. If a sheen was present, the soils were contaminated by free product. If no sheen was present, the soils were either contaminated with dissolved product or were free of contamination. The presence of a sheen was checked under various lighting conditions and backgrounds since these factors affect the visibility of the sheen.

Method 2 - Field Sorption Method

This method was used to sorb free product from contaminated soils. A sample of the soil/fill was pressed against a brown paper bag for about 10 seconds. Soils contaminated by free product resulted in a "greasy" staining of the bag. The stain is more pronounced with fuel oils than for gasoline.

The FID was calibrated prior to use with 100 parts per million (ppm) methane gas.

During the removal of soil from the excavation for the removal of UST C-38, no potentially contaminated soils were identified by ETI personnel. Soil removed from the UST excavation was used as backfill following the completion of site investigation activities. Soils underlying the surface in the vicinity of UST C-38 consisted of the following:

0.0′ - 6.0′ Tan-brown medium to fine silty SAND;
6.0′ - 8.0′ Black clayey SILT.

Following the removal of UST C-38, a total of seven (7) post-excavation soil samples (C38-1 through C38-7) were collected from the base of the excavation, from a depth of approximately eight (8) feet below grade.

Post-excavation soil samples collected from UST C-38's excavation were submitted to Veritech Environmental and Analytical Services (Veritech), NJDEP Certification #14622, for analysis of total petroleum hydrocarbons (TPH), volatile organic compounds plus ten (10) unknown peaks (VO+10) and total xylene. The TPH analyses were to be completed by the laboratory first. If the TPH results indicated a TPH concentration greater than 1,000 ppm in any of the post-excavation soil samples collected from the single UST excavation, 25% of those samples would be analyzed for the additional parameters VO+10 and total xylene. If the results showed no TPH concentration greater than 1,000 ppm, no additional analyses were to be required.

Quality assurance quality control samples for this sampling event included a field blank sample. The field blank was prepared in the field, on the day of the post-excavation soil sampling event, by pouring laboratory de-ionized water over pre-cleaned soil sampling tools and into laboratory supplied sample collection bottles. The field blank sample then accompanied the post-excavation soil samples to the laboratory for analysis.

A chain of custody accompanied post-excavation soil samples from the time of collection to the time they were received by the appointed lab for analyses.

The locations and designations of post-excavation soil samples collected from the excavation created for the removal of UST C-38 are included in Figure 3. FID measurements collected prior to the collection of post-excavation soil samples are included in Table 1.

Following the collection of post-excavation soil samples from the base of UST C-38's excavation, the excavation was backfilled to grade using certified clean fill material. A letter certifying the clean fill is included in Appendix IV.

## 3.0 RESULTS

### 3.1 Chemical Analysis of Soil

A total of seven (7) post-excavation soil samples were collected from the base of the UST excavation (post-excavation soil sample locations C38-1 through C38-7) from a depth of approximately eight (8) feet below grade and from locations that corresponded with the former USTs centerline and sides. Locations and designations of representative

soil samples collected below UST C-38 are shown in Figure 3.

The analytical results of the post-excavation soil samples collected from these sample locations indicated that post-excavation soil sample C38-1 contained a TPH concentration of 980 ppm, post-excavation soil sample C38-2 resulted in a TPH concentration of 1,800 ppm, post-excavation soil sample C38-3 resulted in a TPH concentration of 34 ppm, post-excavation soil sample C38-4 resulted in a TPH concentration of 66 ppm, post-excavation soil sample C38-5 resulted in a TPH concentration of 29 ppm, post-excavation soil sample C38-6 resulted in a TPH concentration of 28 ppm, and post-excavation soil sample C38-7 resulted in a TPH concentration of 29 ppm. The results of the TPH analyses on the soil samples are included in Table 1.

As post-excavation soil sample C38-2 resulted in a TPH concentration greater than 1,000 ppm, this sample was run for the additional parameters VO+10 and total xylene.

The results of the additional analyses completed on sample C38-2 indicated detectable concentrations of methylene chloride (48 parts per billion [ppb]), acetone (440 ppb), benzene (8 ppb), toluene (13 ppb), ethylbenzene (120 ppb), and total xylene (750 ppb). No additional target VO compounds were reported for this sample. VO tentatively identified compounds (TICs) were reported at a total concentration of 8,021 ppb.

The field blank sample that accompanied the soil samples to the laboratory resulted in a detectable concentration of the target VO compounds methylene chloride (10 ppb), and carbon disulfide (3 ppb). No other target VO compounds were reported for this sample. VO TICs were reported as non-detectable.

Results of the VO analysis on soil sample C38-2 are included in Table 2. The laboratory package for the Site Investigation is included in Appendix V.

**4.0 CONCLUSIONS**

After reviewing the data collected during Earle's Site Investigation, the following conclusions may be made:

- A single formerly existing heating oil UST at the Earle facility designated as UST C-38 was removed/closed on July 24, 1995;
- No indications of a discharge were observed in the soils overlying and to the sides of the UST;
- As the soil removed from the excavation showed no indication of contamination, the excavated soil was used as backfill within the UST;
- No ground water was observed within the soils underlying the UST;
- None of the seven (7) post-excavation soil samples collected

from below the base of the former UST resulted in a concentration of TPH or VO compounds that exceeded the limits set for impact to ground water within the NJDEP's February 3, 1994 *Soil Cleanup Criteria*.

## 5.0 RECOMMENDATIONS

As the results of the VO analysis on post-excavation soil sample C38-2 indicated that no target VO compound contained a concentration in excess of the NJDEP's guideline concentrations for Impact to Ground Water soils, it is ETI's recommendation that no additional investigations be required for the closure of UST E-13/2.

The Underground Storage Tank Site Assessment Summary is attached with this report.

# FIGURES

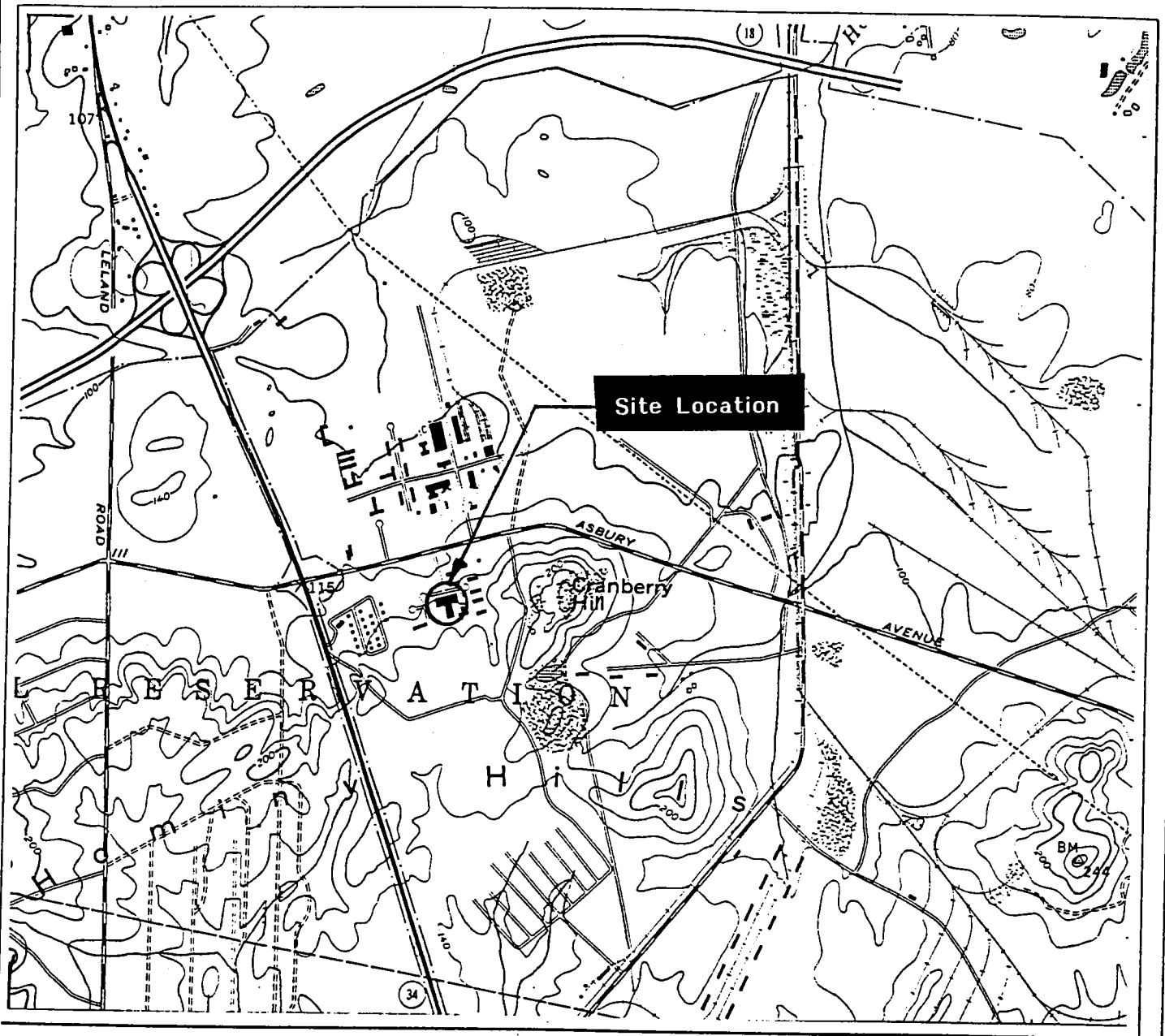


Figure 1

**SITE LOCATION PLOT**

**United States Naval Weapons Station Earle**

**Colts Neck, New Jersey**

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

MN GN

12° 213 MILS

0°27' 8 MILS

Enviro-Tech Inc.
364 Broad Street
Keyport, NJ 07735-1619

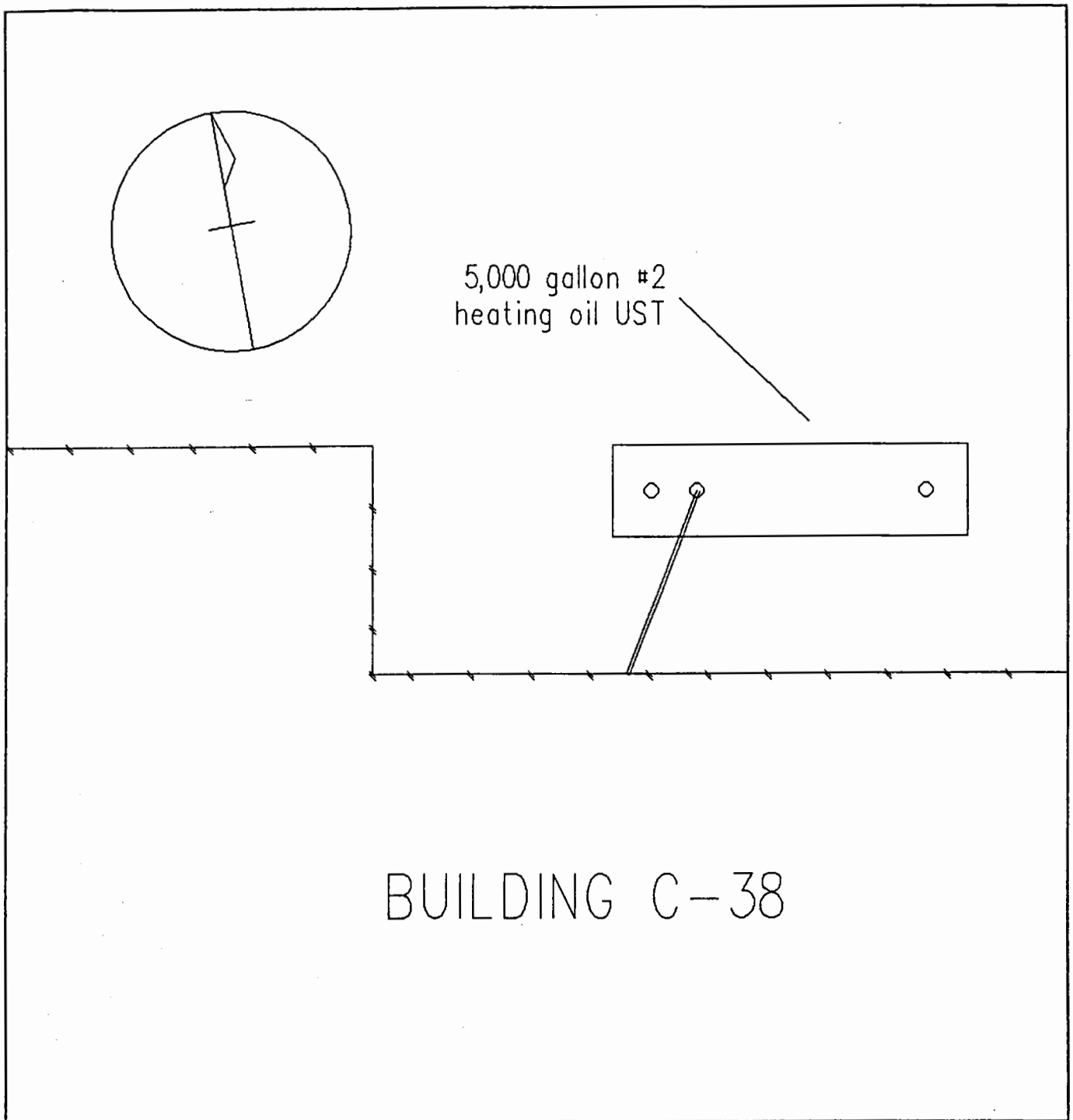


Figure 2

SITE PLAN

United States Naval Weapons Station - Earle

UST C-38

Colts Neck, Monmouth County, New Jersey

Scale: 1" = 10'

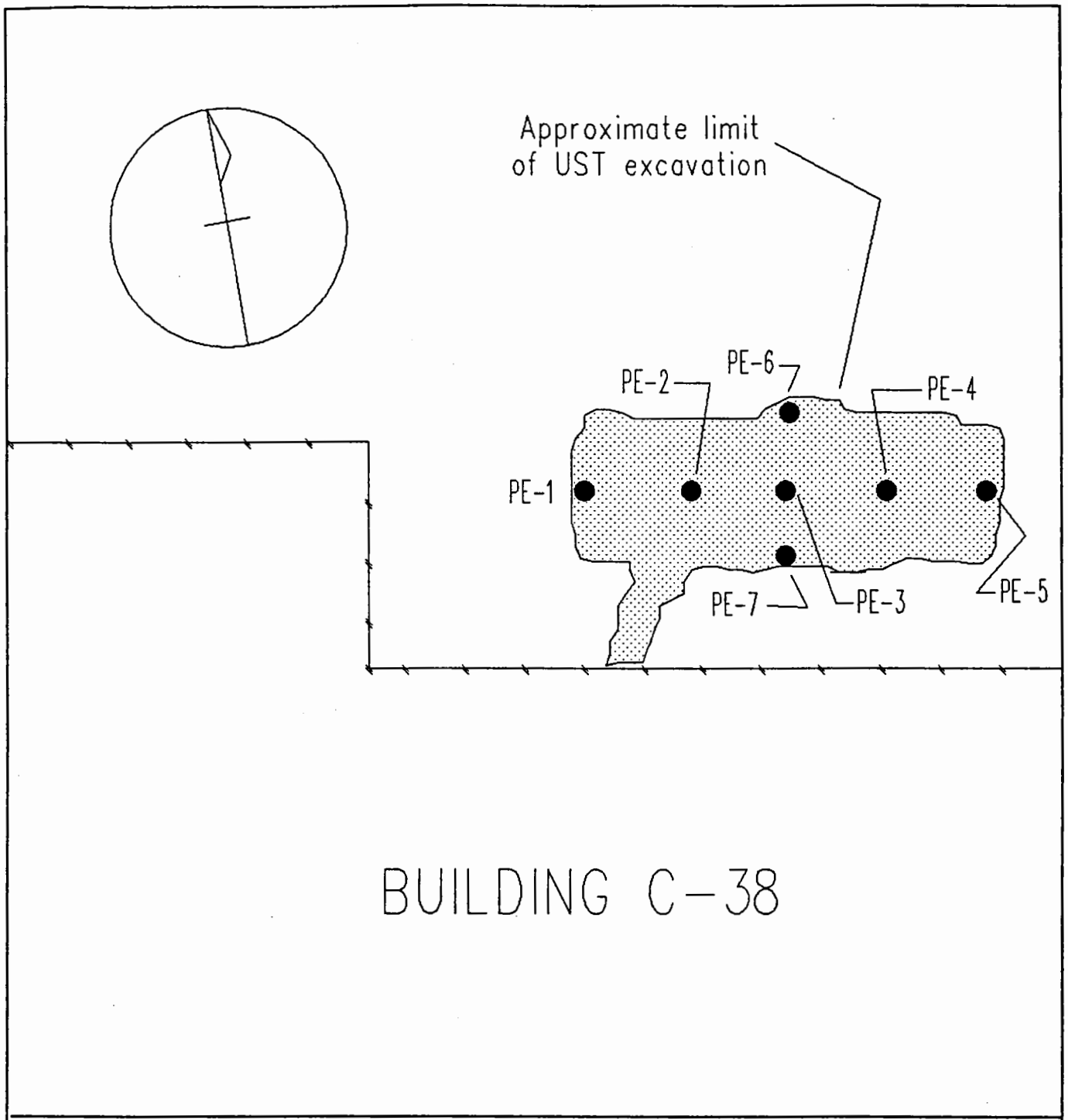


Figure 3

Post-excavation Soil Sample Location Plot

United States Naval Weapons Station - Earle

UST C-38

Colts Neck, Monmouth County, New Jersey

Scale: 1" = 10'

# TABLES

**Table 1**

**SUMMARY OF TPH ANALYTICAL RESULTS FOR #2 HEATING OIL UST POST-EXCAVATION SOIL SAMPLES**

United States Naval Weapons Station Earle
Monmouth County, New Jersey

Underground Storage Tanks C-38

**(July 24, 1995)**

| SAMPLE # | TPH RESULT (ppm) |
|---|---|
| C38-1 | 980 |
| C38-2 | 1,800 |
| C38-3 | 34 |
| C38-4 | 66 |
| C38-5 | 29 |
| C38-6 | 28 |
| C38-7 | 29 |

Notes: ND = Compound was not detected.

Table 2

**SUMMARY OF VO ANALYTICAL RESULTS FOR #2 HEATING OIL UST**
**POST-EXCAVATION SOIL SAMPLE C38-2**
United States Naval Weapons Station Earle
Monmouth County, New Jersey

Underground Storage Tank C-38

**(July 24, 1995)**

| Soil Sample #'s | | C38-2 | FB |
|---|---|---|---|
| VO Compounds (ug/kg) | | | |
| Chloromethane | - | ND | ND |
| Bromomethane | - | ND | ND |
| Vinyl Chloride | - | ND | ND |
| Chloroethane | - | ND | ND |
| Methylene Chloride | - | 48J | 10 |
| Acetone | - | 440 | ND |
| Carbon Disulfide | - | ND | 3J |
| Trichlorofluoromethane | - | ND | ND |
| 1,1-Dichloroethene | - | ND | ND |
| 1,1-Dichloroethane | - | ND | ND |
| trans-1,2-Dichloroethane | - | ND | ND |
| Chloroform | - | ND | ND |
| 1,2-Dichloroethane | - | ND | ND |
| 1,1,1-Trichloroethane | - | ND | ND |
| Carbon Tetrachloride | - | ND | ND |
| Bromodichloromethane | - | ND | ND |
| 1,2-Dichloropropane | - | ND | ND |
| Trichloroethene | - | ND | ND |
| Dibromochloromethane | - | ND | ND |
| 1,1,2-Trichloroethane | - | ND | ND |
| Benzene | - | 8 | ND |
| trans-1,3-Dichloropropene | - | ND | ND |
| 2-Chloroethylvinyl ether | - | ND | ND |
| Bromoform | - | ND | ND |
| Tetrachloroethene | - | 6 | ND |
| 1,1,2,2-Tetrachloroethane | - | ND | ND |
| Toluene | - | 13J | ND |
| Chlorobenzene | - | ND | ND |
| Ethylbenzene | - | 120 | ND |
| o-Xylene | - | 240 | ND |
| m/p-Xylenes | - | 510 | ND |
| 1,3-Dichlorobenzene | - | ND | ND |
| 1,2-Dichlorobenzene | - | ND | ND |
| 1,4-Dichlorobenzene | - | ND | ND |
| Total VO Compounds * | - | 1,318 | 13 |
| Total VO TICs * | - | 8,021 | ND |
| Methyl-tert-butyl ether | - | ND | ND |
| Tert-butyl alcohol | - | ND | ND |

Notes: ND = Compound was not detected.
* = "Totals" should be considered estimated values.
J = Compound was detected below the laboratory's PQL.

# APPENDIX I

## UST CLOSURE APPROVAL FOR UST C-38

# UNDERGROUND STORAGE TANK SYSTEM
# CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF ** CASE MANAGEMENT
CN-028, TRENTON, NJ 08625-0028

UST # 0151003

Naval Weapons Station Earle
Monmouth County
New Jersey

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C.7:14B-1 ET SEQ.:

REMOVAL OF: One (1) 5,000 gallon, #2 heating oil Underground Storage Tank (UST), designated C-38. One (1) 1,500 gallon #2 heating oil UST, designated R-1. One (1) 2,000 gallon, #2 heating oil UST, designated R-12 and one (1) 3,000 gallon #2 heating oil UST, designated C-53. Removal shall include all associated piping and appurtenances.

SITE ASSESSMENT: Samples shall be collected every five (5) feet along the centerline of each tank and one (1) every 15 feet along the appurtenant piping. Two (2) additional samples shall be taken per tank and shall be biased to the areas of highest field screened readings. Samples will be analyzed for TPHC. Analyze 25% of the samples over 1,000 ppm TPHC for VO+10. Analysis shall be biased towards the samples with the highest THPC concentrations.

ON-SITE MANAGER:
A. Lee Fankhauser

TELEPHONE:
(908)-566-2277

EFFECTIVE DATE: 5/27/95

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTIONS AT ALL TIMES.

ROMAN S. LUZECKY, SECTION CHIEF,
BUREAU OF FEDERAL CASE MANAGEMENT

OPTIONAL FORM 99 (7-90)
FAX TRANSMITTAL
# of pages ▶ 1

| | |
|---|---|
| To LEE F. | From T.E. DUNN |
| Dept./Agency ENVIRO-TECH | Phone # 866 2048 |
| Fax # ~~566-2585~~ | Fax # |

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

888 9293

# APPENDIX II

## RESIDUAL PRODUCT AND BOTTOM SLUDGE DISPOSAL MANIFEST

LORCO PETROLEUM SERVICES
RD1 Box 5A
Old Bridge, N.J. 08857
(908) 721-0900
Fax (908) 721-0231

STANDARD COLLECTION ORDER FORM

102397

OFFICE USE ONLY

**GENERATOR/LOCATION**

NAME: Earle
INFORMATION/ATTENTION LINE: RT 34 Bld 38-C
DELIVERY ADDRESS:
CITY: COLTS NECK
STATE: NJ
ZIP:
PHONE NUMBER:
PURCHASE ORDER NUMBER:
USA EPA ID NO. (IF APPLICABLE):
STATE ID NO.:
ACCOUNT APPROVAL CODE:

**BILL TO** (IF DIFFERENT FROM LOCATION)

NAME: Central PAT
INFORMATION/ATTENTION LINE:
DELIVERY ADDRESS:
CITY:
STATE:
ZIP:
PHONE NUMBER:
PURCHASE ORDER NUMBER:
ACCOUNT APPROVAL CODE:

MANIFEST NUMBER 21789

**SHIPPING INFORMATION**

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

**SERVICE SECTION**

| SALES CODE | DESCRIPTION | WASTE CODE | QUANTITY | UNIT OF MEASURE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | X722 | 100 | Gallons | | | |
| 40501 | OIL WATER DISPOSAL | | | | | | |
| 40502 | SLUDGE DISPOSAL | | | | | | |
| 41000 | NON HAZARDOUS DISPOSAL | | | | | | |
| 41001 | RCRA WASTE DISPOSAL | | | | | | |
| 41500 | VAC TRUCK & OPERATOR | → | 10:45 AM | 12:00 PM | | | |
| 501 | DRUM DISPOSAL | | | | | | |
| 41502 | SEPARATOR CLEANING | | | | | | |
| 41503 | QAQC ANALYTICAL TESTING | | | | | | |
| 41504 | TANK CLEANING | | | | | | |
| 41505 | CONFINED SPACE ENTRY | | | | | | |
| 42000 | MANIFEST PROCESSING FEE | | | | | | |
| 42001 | DEXSIL TEST KIT | | | | | | |
| | | | | | | | |

TOTAL

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. $

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261. GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is X722.
In accordance the N.J.A.C. 7:26-12.1 et seq. LORCO has the required permits to accept the above described waste.

Print Name: Title:
Signature:
Date:
GENERATOR/CUSTOMER

**SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms (approximately 220 pounds or 30 gallons) of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

GENERATOR'S SIGNATURE

**LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS N/A PPM

**PAYMENT RECEIVED SECTION**

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

**PAYMENT MADE SECTION**

| PAYMENT METHOD | PAYMENT AMOUNT |
|---|---|
| CASH ☐ CHECK ☐ | |

RECEIVED BY

CUSTOMER'S SIGNATURE

In accordance with 40 CFR 266 § 43(5) LORCO has notified the US EPA of its location and used oil management activities.

Print Name: James P Murtha
Signature:
Date:

# APPENDIX III

# UST DISPOSAL MANIFEST

**MAZZA & SONS, INC.**
**Metal Recyclers**
**Auto and Truck**
**3230 Shafto Rd.**
**Tinton Falls, NJ**
**(908) 922-9292**

NO. _____

DATE 26 July 95

Customer's Name Coast Paving

Address

C-38 - 5000 gallon TANK

Make of Autos

Tires

Tank

Price:

23780 LB G

18200 LB G

5580

| | Weight | Price |
|---|---|---|
| Cast Iron | | |
| Steel | 162 90 | |
| Lt. Iron | | |
| Copper #1 | | |
| Copper #2 | | |
| Lt. Copper | | |
| Brass | | |
| Alum Clean | | |
| Lead | | |
| Stainless | | |
| Radiators | | |
| Battery | | |
| TOTAL AMOUNT: | | |

PAID JUL 26 1995

Weigher _____ Customer D. Palmer

# APPENDIX IV

# CLEAN FILL CERTIFICATION

CENTRAL PUMP & TANK
SERVICE CORP.

August 8, 1995

Clean Fill Certification
For: Earle Naval Weapons Station
Highway 34
Colts Neck, NJ
Building C-38

To Whom It May Concern,

In regards to the fill material that was used at the above referenced location the fill was purchased from Millington Quarry and to the best of our knowledge is clean material.

Sincerely,

Tom Bullard

Central Pump & Tank

360 Fairfield Road • Freehold, New Jersey 07728 • (908) 780-5113 • FAX: (908) 780-5277

# APPENDIX V

# LABORATORY ANALYTICAL PACKAGE

veritech
Division of Hampton-Clarke, Inc.
environmental and analytical services

# ENVIRO-TECH, INC.
## NJDEP REDUCED PKG

# PROJECT: EARLE NAVAL WEAPONS

# LAB # AA32117 - AA32124

**NJDEP Cert. #14622, CT Cert. # PH0671**
**PADER Cert. #68-463, MA Cert. #NJ386**
**NYDOH Cert. # 11408**

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

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# SAMPLE KEY

| Enviro-Tech No. | VERITECH No. |
|---|---|
| C38-1 | AA32117 |
| C38-2 | AA32118 |
| C38-3 | AA32119 |
| C38-4 | AA32120 |
| C38-5 | AA32121 |
| C38-6 | AA32122 |
| C38-7 | AA32123 |
| FIELD BLANK | AA32124 |

ENVIRO-TECH INC.

Page ___ of ___

# CHAIN-OF-CUSTODY RECORD

07251039

SAMPLER: (Signature) [signature]

Phone 908-888-1300

Date Shipped _____ Carrier _____

Airbill No. _____ Cooler No. _____

**SHIP TO:**

ATTENTION: _____

**SEND RESULTS TO:**

Client Name _____

Company ENVIRO-TECH, INC.

Address 364 BROAD ST.
KEYPORT, NJ

Phone 908-888-1300

**PROJECT NAME** EARLE NAVAL WEAPONS **PROJECT NO.** _____ **P.O. NO.** _____

| Relinquished by: (Signature) | Received by: (Signature) | Date | Military Time |
|---|---|---|---|
| [signature] | [signature] Express Delivery | 7/25/95 | 0900 |
| Relinquished by: (Signature) | Received by: (Signature) | Date | Military Time |
| [signature] Express Delivery | A. Shami | 7/25/95 | 1015 |
| Relinquished by: (Signature) | Received at lab by: (Signature) | Date | Military Time |
| | | | |
| Relinquished from lab by: (Signature) | Received by: (Signature) | Date | Military Time |
| | | | |

## ANALYSIS REQUEST

| Sample ID Number | Sample Description | Date/Time Sampled | | Analysis Requested | Sample Condition Upon Receipt | |
|---|---|---|---|---|---|---|
| 2 C38-1 | SOIL | 7/24/95 | 14:25 | TPH*, VOTIO, TOTAL XYLENE | Cool | AA32117 |
| C38-2 | ↓ | | 14:15 | ↓ | ↓ | 32118 |
| C38-3 | ↓ | | 13:25 | ↓ | ↓ | 32119 |
| C38-4 | ↓ | | 13:35 | ↓ | ↓ | 32120 |
| C38-5 | ↓ | | 13:45 | ↓ | ↓ | 32121 |
| C38-6 | ↓ | | 13:55 | ↓ | ↓ | 32122 |
| C38-7 | ↓ | | 14:05 | ↓ | ↓ | 32123 |
| FIELD BLANK | AQUEOUS | | 13:20 | ↓ | ↓ | 32124 |
| | | | | | | |
| | 24 HOUR ID on TPH please. | | | | | |

Special Instructions/Comments:

* Please analyze samples for TPH first. If results show a concentration of TPH > 1,000 ppm – please contact ETI's office for authorization of additional analyses.

**NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

**Expected Analytical T.A.T.'s:** _____ Immediate Attention (200% surcharge) _____ RUSH (50-100% surcharge) _____ Standard

002

Sample Custodians Chain of Custody

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

CONDITION UPON RECEIPT FORM

Date Received 7/25/95 Filed By A.S

Client ENVIRO Lab Sample No(s) _____

CONDITION (Check Applicable Items)

_____ (1) Not enough sample sent for analysis

_____ (2) Sample(s) received broken (Specify) _____
Sample(s) received leaking (Specify) _____

_____ (3) Illegible sample number(s) or label(s) missing from bottle(s) (Specify) _____

_____ (4) Numbers on sample(s) do not correspond to information on the chain of custody record

_____ (5) No chain of custody record submitted with the samples

_____ (6) Samples received without a cooler

_____ (7) Custody seals missing or broken (circle one)

_____ (8) Holding time(s) exceeded upon receipt (List parameters _____)

_____ (9) Samples received without proper refrigeration when deemed necessary

_____ (10) Samples received without proper preservation (see Preservation Form for actual pH readings)

✓ (11) Cooler Temperature Upon Receipt (Specify) 1°C

_____ (12) Other (Specify) _____

00

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

# VERITECH INTERNAL CHAIN OF CUSTODY RECORD
## REFRIGERATOR # 2

| PARAMETER | RFRG FROM | RFRG TO | SAMPLE NUMBER(S) | DATE OUT | TIME OUT | DATE IN* | TIME IN | SIGNATURE |
|---|---|---|---|---|---|---|---|---|
| GC/MS | 2 | | 32124, 32127 | 7/26 | 5:19 | | | |
| " | 2 | | 32112, 32128 ~32131, 32138 | " | 5:49 | | | |
| " | 2 | 2 | 32101, 32128 | " | 6:40 | 7/26 | 6:51 | |
| | | | | 7/27 | 13:[illegible] | | | |
| GC/MS | 2 | 2 | 32118, 3992 | " | 14:55 | 7/27 | 15:00 | |
| " | 2 | 2 | 32118, 32110, 32126, 32121, 32132 | " | 17:11 | " | 17:30 | |
| " | 2 | 2 | 32110, 32101, 32129 | " | 18:19 | " | 18:39 | |
| GC/MS | 2 | | 32033, 32034, 32107, 32108 | 7/28 | 5:11 | | | |
| " | 2 | | 32108 ~32131, 32138 | " | 5:44 | | | |
| " | 2 | | 32104 ~32106 | " | 6:28 | | | |
| " | 2 | 2 | 32197 ~32201 | 7/31 | 3:30 | 7/31 | 3:49 | |
| " | 2 | | 32034, 32107 (new table) | " | 4:02 | | | |
| " | 2 | | 32045, 32046 | " | 4:55 | | | |
| " | 2 | | 32101, 32118 | " | 5:02 | | | |
| " | 2 | | 32202 ~32208 | " | 5:19 | 7/31 | 5:31 | |
| " | 2 | | 32174, 32211 ~32214 | " | 5:44 | | | |
| " | 2 | 2 | 32198, 32200 | " | 6:08 | 7/31 | 6:15 | |
| " | 2 | | 32144 ~32147 | " | 6:33 | | | |
| " | 2 | | 32174 | 8/01 | 12:57 | | | |
| " | 2 | | 32031, 32174 (2) ~~[illegible]~~ (new table) | 08/01 | 13:33 | | | |
| " | 2 | 2 | 32166, 32168 | 08/01 | 13:37 | 08/01 | 13:55 | |
| " | 2 | | 32037 | " | 17:44 | | | |
| " | 2 | | 32046 | " | 18:19 | | | |
| " | 2 | 2 | 32038 ~32041 | " | 18:31 | 08/02 | 18:27 | |
| " | 2 | 2 | 32043 ~32044, 32039, 32108 | " | 18:46 | " | 19:09 | |
| " | 2 | 2 | 32039, 32041 | 08/02 | 13:55 | 08/03 | 14:02 | |
| | 2 | | 32039, 32217, 32219 | " | ~~13:[illegible]~~ | | | |
| | 2 | 2 | 32039, 32127, 32129, 32241 | " | 15:58 | 08/03 | 16:19 | |
| " | 2 | | 32230, 32231 | " | 16:37 | | | |
| " | 2 | | 32158 ~32161 | " | 18:40 | | | |
| " | 2 | 2 | 32142 ~32147, 32108 | " | 18:59 | 08/03 | ~~18:19~~ 18:19 | |
| " | 2 | 2 | 32241 | 08/03 | 19:31 | 08/03 | 19:34 | |
| " | 2 | 2 | 32217 | 08/04 | 10:09 | 08/04 | 10:40 | |
| " | 2 | 2 | 32219, 32135, 32143, 32147 | " | 15:26 | " | 15:42 | |
| " | 2 | 2 | 32134, 32135, 32144 | | 18:03 | " | 18:11 | |
| " | 2 | 2 | 32129, 32141, 32116 | 08/07 | 15:40 | 08/07 | 15:51 | |
| " | 2 | | 32117, 32146, | " | 16:10 | | | |
| " | 2 | 2 | 32244, 32216, 32399, 32403 | " | 16:49 | 08/07 | 17:01 | |
| " | 2 | 2 | 32412, ~~32244~~ [illegible], 32715, 32244, 32235 | " | 17:41 | " | 17:59 | |
| " | 2 | | 32397, 32398, 32401, 32409 | " | 18:15 | | | |
| " | 2 | | 32400, 32404 ~32408 | " | 18:55 | | | |
| " | 30 | Workab | 32226 | 8/8 | 10:10 | 8/8 | 10:10 | |
| GC/MS | 8 | | 32405, 32402, 32400 | " | 10:47 | | | |
| " | 8 | | 32404 | " | 13:11 | | | |
| " | 8 | | 32437 ~32441 | " | 18:03 | 8/08 | 18:20 | |
| " | 8 | | 32437, 32441 ~32444, 32442 | " | 19:41 | " | 20:01 | |

COMMENTS: *-Aqueous volatile samples are not logged back into the refrigerator
Switch to New Refrigerator Log Book & Rfg #

Veritech

# INTERNAL CHAIN OF CUSTODY RECORD

| | | REMOVED FROM: | | | | RETURNED TO: | | | |
|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | SAMPLE No. | COLDBOX No. | DATE | TIME (A/P) | SIGNATURE | COLDBOX No. | DATE | TIME (A/P) | SIGNATURE |
| % solid | 32092, 91, 90, 89 | 3 | 7/24 | 930 | [signature] | 3 | 7/24 | 800 | [signature] |
| TPH | 32024 — 30189 — 92 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Reactive | 32092, 13232 | 3 | 7/24 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Herb | 32010-32011, 31996 | Bk Room | 7/24 | 932 | [signature] | Bk Room | 7/24 | 942 | [signature] |
| PEST | 32010-32011, 31996 | Bk Room | 7/24 | 1100 | [signature] | Bk Room | 7/24 | 1112 | [signature] |
| Hg | 31960-62, 32001, 02 | 3 | 7/24 | 14:55 | T. Crane | 3 | 7/24 | 15:10 | T Crane |
| TCLP | 32092, 32031, 32035, 32034 | 3 | 7/24 | 15:00 | S. Paramanthan | 3 | 7/24/95 | 15:20 | S. Paramanthan |
| PEST | 31913 - 31914 | Metals Table | 7/24 | 15:05 | [signature] | Depleted | 7/24/95 | 15:25 | [signature] |
| BN, BNA | 31996, 32021, 32032, 32033 | 3 | 7/25 | 08:35 | [signature] | DEPL. 1 JAR | 7/25/95 | 08:40 | [signature] |
| Hg | 32017-19, 32031, 31964-66 | 3 | 7/25 | 8:50 | T. Crane | 3 | 7/25 | 9:35 | T. Crane |
| O+G | 32022, 32023 | 3 | 7/25 | 945 | [signature] | Depleted | 7/25 | 1600 | [signature] |
| % solid | 32096 | ↓ | ↓ | ↓ | ↓ | 3 | ↓ | ↓ | ↓ |
| Solid TPH | 32093 — 32100 | 3 | 7/25 | 1130 | [signature] | ↓ | | | |
| PCB | 32100, 32101 | 3 | 7/25 | 12:36 | [signature] | 3 | 7/25 | 12:38 | [signature] |
| (*) TPH % solid | 32117 — 32123 | 3 | 7/25 | 1400 | [signature] | 3 | 7/25 | 1600 | [signature] |
| % Solid | 32101, 32109, 32110 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Reactive Sulfide | 32100, 32101, 32108, 32112 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| TD-WI | 32008, 32009 | 3 | 7.25.95 | 15:58 | [signature] | 3 | 7.25.95 | 15:45 | [signature] |
| ↓ | 32001, 32002 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| | 32102 — 107 | | | | | | | | |
| | 32111 | | | | | | | | |
| Metals | 31276 31278, 77, 86 | metals table | 7/25 | 14:25 | [signature] | metals table | 7/25/95 | 16:01 | [signature] |
| ↓ | 31563 | 3 | ↓ | ↓ | ↓ | 3 | ↓ | ↓ | ↓ |
| TCLP | 32100, 32101 | 3 | 7/25 | 16:15 | [signature] | 3 | 7/25/95 | 17:02 | [signature] |
| Pt Filterable | 32031 | 3 | 7/25 | 1710 | [signature] | Depleted | 7/25/95 | 1900 | [signature] |
| TOX | 32100, 32101, 32109 | 3 | 7/26 | 850 | [signature] | 3 | 7/26 | 1500 | [signature] |
| TPH | 32109 | 3 | 7/26 | 9:00 | [signature] | 3 | 7/26/95 | 930 | [signature] |
| BN | 32112 | 3 | 7/26 | 09:01 | [signature] | DEPLETED 1 JAR | 7/26 | 09:02 | [signature] |
| BNA | 32137 | 3 | 7/26 | 09:40 | [signature] | 3 | 7/26 | 09:41 | [signature] |

A:\ICOCREC.DOC

005

# SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:08

**Sample I.D. AA32117**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-1 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | Anl |
|---|---|---|---|---|
| %SOLIDS | 78 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 980 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32117

# SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:08

**Sample I.D. AA32118**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-2 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | An |
|---|---|---|---|---|
| %SOLIDS | 73 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 1800 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |
| VOLATILES + 10 | Completed | ATTACHED | 07/27/95 | YS |

End of progress report on sample: AA32118

# SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:08

**Sample I.D. AA32119**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-3 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | Anl |
|---|---|---|---|---|
| %SOLIDS | 73 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 34 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32119

# SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:09

**Sample I.D. AA32120**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-4 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | An |
|---|---|---|---|---|
| %SOLIDS | 69 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 66 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32120

## SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:09

**Sample I.D. AA32121**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-5 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | An |
|---|---|---|---|---|
| %SOLIDS | 73 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 29 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32121

# SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:09

**Sample I.D. AA32122**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-6 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | Anl |
|---|---|---|---|---|
| %SOLIDS | 76 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 28 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32122

## SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:10

**Sample I.D. AA32123**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: C38-7 SOIL

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | Anl |
|---|---|---|---|---|
| %SOLIDS | 78 | PERCENT | 07/25/95 | JK |
| TPH-SOIL | 29 | mg/kg dry wt | 07/25/95 | JK |
| TPH EXTRACTION | Completed | | 07/25/95 | JK |

End of progress report on sample: AA32123

## SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-12-1995 Time: 08:16:10

**Sample I.D. AA32124**
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/24/95
Date submitted: 07/25/95
Due date: 08/07/95
Specification checking: off
Descript: FIELD BLANK

COL.DATE: 7/24/95

| Analysis | Result | Unit | Finished | Anl |
|---|---|---|---|---|
| pH (VOA VIALS) | <2 | UNITS | 08/02/95 | AS |
| VOLATILES + 10 | Completed | ATTACHED | 07/26/95 | YS |

End of progress report on sample: AA32124

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

CLIENT: ENVIRO PROJECT: EARLE
ANALYSIS: VOLATILES

| | NO | YES |
|---|---|---|
| 1. GC/MS Tune Specifications | | |
| a. BFB passed | ___ | _X_ |
| b. DFTPP passed | ___ | ___ |
| 2. GC/MS Tuning Frequency - performed every 12 hours | ___ | _X_ |
| 3. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hours before sample analysis. | ___ | _X_ |
| 4. GC/MS Calibration Requirements | | |
| a. Calibration Check Compounds | ___ | _X_ |
| b. System Performance Check Compounds | ___ | _X_ |
| 5. Blank Contamination - List compounds for each fraction | | |
| a. VOA Fraction See Form1. ___ | | |
| b. B/N Fraction ___ | | |
| c. Acid Fraction ___ | | |
| 6. Surrogate Recoveries Meet Criteria (If not met; list those compounds and their recoveries which fall outside the acceptable range) | ___ | _X_ |
| a. VOA Fraction ___ | | |
| b. B/N Fraction ___ | | |
| c. Acid Fraction ___ | | |
| 7. Extraction Holding Time Met | ___ | _X_ |
| Comments: ___ | | |
| 8. Analysis Holding Time Met | ___ | _X_ |
| Comments: ___ | | |

Additional Comments: ___

Organics Director ___ Date: 08/01/95___

## WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

| | | No | Yes |
|---|---|---|---|
| 1. | Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank: | _X_ | ___ |
| 2. | Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range) | ___ | _X_ |
| 3. | IR Spectra submitted for all standards, blanks, & samples | ___ | _X_ |
| 4. | Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted | ___ | ___ |
| 5. | Extraction Holding Time Met | ___ | _X_ |
| | If not met, list number of days exceeded for each sample: | | |
| 6. | Analysis Holding Time Met | ___ | _X_ |
| | If not met, list number of days exceeded for each sample: | | |

Additional Comments: _____

Wetlab Supervisor: _____ Date: ___8/08/95_____

## METHOD REFERENCES

**Volatile Organics (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 8240.

**Volatile Organics (Waters):** *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 624.

**TCLP Volatile Organics:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8240.

**Volatile Organics (Drinking Waters):** *Methods for the Determination of Organic Compounds in Drinking Water*, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

**Semivolatile Organics (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8270.

**Semivolatile Organics (Waters):** *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 625.

**TCLP Semivolatile Organics:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8270.

**Pesticides (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

**Pesticides (Waters):** *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 608.

**TCLP Pesticides:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8080.

**TCLP Herbicides (Waters):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8150.

**PCB's (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

**PCB's (Waters):** *Federal Register*, 40 CFR, Part 136, October 26, 1984, Method 608.

**PCB's (Oils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3580 and 8080.

**Total Metals (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

**TCLP Metals:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion, Methods 6010 and 7470 for analysis.

**ICP Metals (Waters):** *Methods for the Determination of Metals in Environmental Samples*, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

**GFAA Metals & Mercury (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are

analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using Method 245.1.

**Cyanide (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9010.

**Cyanide (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 335.2.

**Cyanide (Free):** *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 4500-CN-I.

**Phenols (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9065.

**Phenols (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method
420.1.

**TPH (Soils & Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

TPH Extractables: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 3510 or 3550 and Modified Method 8015.

**Hexavalent Chromium (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Second and Third Editions, Methods 3060 and 7196A.

**Hexavalent Chromium (Waters):** *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 3500-Cr D.

**pH (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9040.

**pH (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 150.1.

**Reactive Cyanide:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

**Reactive Sulfide:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

**Ignitability:** *Test Methods for Evaluating Solid Waste*, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

**Flashpoint:** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1010.

**Conductance (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 120.1.

**Residue, Filterable (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.1.

**Residue, Non-Filterable (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.2.

**Residue, Total (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.3.

**Chloride (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 325.3.

**Chloride (Soils):** *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9252.

**Sulfide (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 376.1.

**Chemical Oxygen Demand (Waters):** *Hach Chemical Company*, Method 8000.

**Oil & Grease (Waters):** *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 413.1.

**TOX (Waters & Soils):** *American Society for Testing & Materials (ASTM)*, D2361-91, June 1991.

**2,3,7,8 - TCDD/TCDF:** *Modified Contract Laboratory Program Statement of Work*, November 1992.

# VERITECH

47 CAREY AVE., BUTLER, NJ 07405

## REPORT OF ANALYSIS

CT. NO: PH-0671
MADEP NO: NJ386
PADER NO: 68-463
NJDEPE NO: 14622
NYDOH NO: 11408

TO: ENVIRO-TECH, INC.
364 BROAD STREET
KEYPORT, N.J. 07735
(908) 888-1300

Date Collected: 07/24/95
Date Submitted: 07/25/95
Date Reported: 08/12/95
Project: EARLE

| Sample I.D. | | AA32117 | | AA32118 | |
|---|---|---|---|---|---|
| Sample Description | | C38-1 SOIL | | C38-2 SOIL | |
| **Analyte** | **Units** | **MDL** | **Result** | **MDL** | **Result** |
| %SOLIDS | PERCENT | 1.0 | 78 | 1.0 | 73 |
| TPH-SOIL | mg/kg dry wt | 26 | 980 | 27 | 1800 |
| VOLATILES + 10 | ATTACHED | | | | Completed |

| Sample I.D. | | AA32119 | | AA32120 | |
|---|---|---|---|---|---|
| Sample Description | | C38-3 SOIL | | C38-4 SOIL | |
| **Analyte** | **Units** | **MDL** | **Result** | **MDL** | **Result** |
| %SOLIDS | PERCENT | 1.0 | 73 | 1.0 | 69 |
| TPH-SOIL | mg/kg dry wt | 27 | 34 | 29 | 66 |
| VOLATILES + 10 | | | | | |

| Sample I.D. | | AA32121 | | AA32122 | |
|---|---|---|---|---|---|
| Sample Description | | C38-5 SOIL | | C38-6 SOIL | |
| **Analyte** | **Units** | **MDL** | **Result** | **MDL** | **Result** |
| %SOLIDS | PERCENT | 1.0 | 73 | 1.0 | 76 |
| TPH-SOIL | mg/kg dry wt | 27 | 29 | 26 | 28 |
| VOLATILES + 10 | | | | | |

| Sample I.D. | | AA32123 | | AA32124 | |
|---|---|---|---|---|---|
| Sample Description | | C38-7 SOIL | | FIELD BLANK | |
| **Analyte** | **Units** | **MDL** | **Result** | **MDL** | **Result** |
| %SOLIDS | PERCENT | 1.0 | 78 | | |
| TPH-SOIL | mg/kg dry wt | 26 | 29 | | |
| VOLATILES + 10 | ATTACHED | | | | Completed |

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Chris Heltzel

Chris Heltzel - Laboratory Manager

**Or**

Stanley Gilewicz - Laboratory Director

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID :
Date Rcvd/Extd:
Sample Matrix : Water
Percent Solid : 0
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : DAILY BL
Lab File ID : )E5462
Date Analyzed : 07/26/95
Dilution Factor: 1
Sample Wt/Vol : 5.0ml

CONCENTRATION UNITS: UG/L (PPB)

| CAS No. | COMPOUND | PQL | CONC | CAS NO. | COMPOUND | PQL | CONC |
|---|---|---|---|---|---|---|---|
| 74873 | Chloromethane | 10 | U | 124481 | Dibromochloromethane | 5 | U |
| 74839 | Bromomethane | 10 | U | 79005 | 1,1,2-Trichloroethane | 3 | U |
| 75014 | Vinyl Chloride | 5 | U | 71432 | Benzene | 1 | U |
| 75003 | Chloroethane | 10 | U | 10061026 | Trans-1,3-Dichloropropene | 5 | U |
| 75092 | Methylene Chloride | 10 | U | 110758 | 2-Chloroethylvinylether | 10 | U |
| 67641 | Acetone | 20 | U | 75252 | Bromoform | 4 | U |
| 75150 | Carbon Disulfide | 5 | U | 108101 | 4-Methyl-2-Pentanone | 25 | U |
| 75694 | Trichlorofluoromethane | 5 | U | 591786 | 2-Hexanone | 20 | U |
| 75354 | 1,1-Dichloroethene | 2 | U | 127184 | Tetrachloroethene | 1 | U |
| 75343 | 1,1-Dichloroethane | 5 | U | 79345 | 1,1,2,2-Tetrachloroethane | 2 | U |
| 156605 | Trans-1,2-Dichloroethene | 5 | U | 108883 | Toluene | 5 | U |
| 67663 | Chloroform | 5 | U | 108907 | Chlorobenzene | 4 | U |
| 107062 | 1,2-Dichloroethane | 2 | U | 100414 | Ethylbenzene | 5 | U |
| 78933 | 2-Butanone | 25 | U | 100425 | Styrene | 5 | U |
| 71556 | 1,1,1-Trichloroethane | 5 | U | 108383 | m&p-Xylenes | 5 | U |
| 56235 | Carbon Tetrachloride | 2 | U | 95476 | o-Xylene | 5 | U |
| 108054 | Vinyl Acetate | 10 | U | 541731 | 1,3-Dichlorobenzene | 5 | U |
| 75274 | Bromodichloromethane | 1 | U | 95501 | 1,2-Dichlorobenzene | 5 | U |
| 78875 | 1,2-Dichloropropane | 1 | U | 106467 | 1,4-Dichlorobenzene | 5 | U |
| 10061015 | cis-1,3-Dichloropropene | 5 | U | 1634044 | Methyl-t-butyl ether | 5 | U |
| 79016 | Trichloroethene | 1 | U | 108203 | Di-isopropyl-ether | 5 | U |
| | | | | 75650 | t-Butyl Alcohol | 100 | U |

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.:

DAILY BLK(A

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: WATER Client ID:

Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >E5462

Level: (low/med) LOW Date Recvd/Ext:

% Solid: 0 Date Analyzed: 07/26/95

Column: CAP Dilution Factor: 1

Number of TICs found: 0 CONCENTRATION UNITS: ug/L

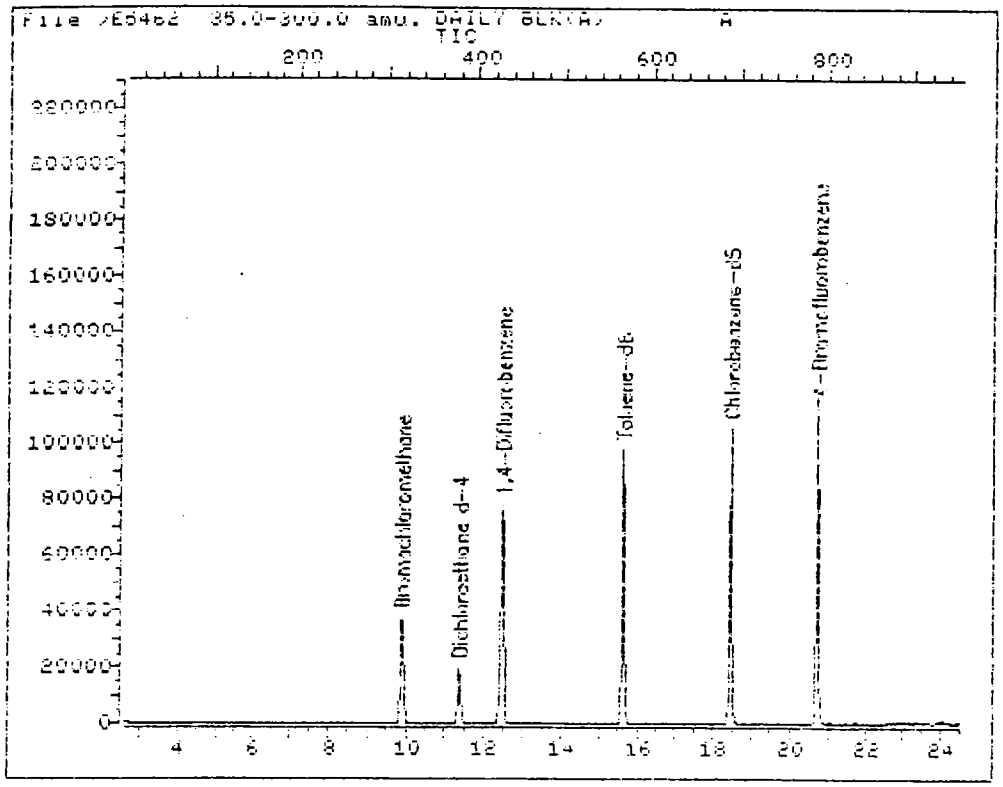
| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

Tentative Compound Summary: 0

DATA REPORTING QUALIFIERS

A - Indicates an aldol condensate
J - Indicates an estimated value
B - Indicates compound was found in the blank as well as in the sample

TOTAL ION CHROMATOGRAM




Data File: >E5462::D1
Name: DAILY BLK(A)
Misc: A

Quant Output File: ^E5462::A2
Instrument ID: MSD_1

Id File: IDWU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qual Time: 950726 12:50

Operator ID: LIN
Quant Time : 950726 17:48
Injected at: 950726 17:22

QUANT REPORT



Operator ID: LIN
Output File: ^E5462::A2
Data File: >E5462::D1
Name: DAILY BLK(A)
Misc: A

Quant Rev: 7
Quant Time: 950726 17:48
Injected at: 950726 17:22
Dilution Factor: 1.00000
Instrument ID: MSD_1

ID File: IDWU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qcal Time: 950726 12:50

| | Compound | R.T. | Scan# | Area | Conc | Units | q |
|---|---|---|---|---|---|---|---|
| 1) | *Bromochloromethane | 9.88 | 317 | 31974 | 50.00 | ug/L | 99 |
| 19) | 1,2-Dichloroethane-d4 | 11.37 | 382 | 9230 | 50.54 | ug/L | 95 |
| 28) | *1,4-Difluorobenzene | 12.47 | 430 | 172235 | 50.00 | ug/L | 97 |
| 39) | *Chlorobenzene-d5 | 18.44 | 690 | 147159 | 50.00 | ug/L | 96 |
| 46) | Toluene d-8 | 15.62 | 567 | 162896 | 49.18 | ug/L | 96 |
| 53) | Bromofluorobenzene | 20.72 | 799 | 112457 | 49.98 | ug/L | 93 |

* Compound is ISTD



Yu 08/23/95

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID :
Date Rcvd/Extd:
Sample Matrix : Soil
Percent Solid : 100
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : DAILY BL
Lab File ID : >E5470
Date Analyzed : 07/27/95
Dilution Factor: 1
Sample Wt/Vol : 5.0g

CONCENTRATION UNITS: UG/KG(PPB)

| CAS No. | COMPOUND | PQL | CONC |
|---|---|---|---|
| 74873 | Chloromethane | 10 | U |
| 74839 | Bromomethane | 10 | U |
| 75014 | Vinyl Chloride | 5 | U |
| 75003 | Chloroethane | 10 | U |
| 75092 | Methylene Chloride | 10 | U |
| 67641 | Acetone | 20 | U |
| 75150 | Carbon Disulfide | 5 | U |
| 75694 | Trichlorofluoromethane | 5 | U |
| 75354 | 1,1-Dichloroethene | 2 | U |
| 75343 | 1,1-Dichloroethane | 5 | U |
| 156605 | Trans-1,2-Dichloroethene | 5 | U |
| 67663 | Chloroform | 5 | U |
| 107062 | 1,2-Dichloroethane | 2 | U |
| 78933 | 2-Butanone | 25 | U |
| 71556 | 1,1,1-Trichloroethane | 5 | U |
| 56235 | Carbon Tetrachloride | 2 | U |
| 108054 | Vinyl Acetate | 10 | U |
| 75274 | Bromodichloromethane | 1 | U |
| 78875 | 1,2-Dichloropropane | 1 | U |
| 10061015 | cis-1,3-Dichloropropene | 5 | U |
| 79016 | Trichloroethene | 1 | U |

| CAS NO. | COMPOUND | PQL | CONC |
|---|---|---|---|
| 124481 | Dibromochloromethane | 5 | U |
| 79005 | 1,1,2-Trichloroethane | 3 | U |
| 71432 | Benzene | 1 | U |
| 10061026 | Trans-1,3-Dichloropropene | 5 | U |
| 110758 | 2-Chloroethylvinylether | 10 | U |
| 75252 | Bromoform | 4 | U |
| 108101 | 4-Methyl-2-Pentanone | 25 | U |
| 591786 | 2-Hexanone | 20 | U |
| 127184 | Tetrachloroethene | 1 | U |
| 79345 | 1,1,2,2-Tetrachloroethane | 2 | U |
| 108883 | Toluene | 5 | U |
| 108907 | Chlorobenzene | 4 | U |
| 100414 | Ethylbenzene | 5 | U |
| 100425 | Styrene | 5 | U |
| 108383 | m&p-Xylenes | 5 | U |
| 95476 | o-Xylene | 5 | U |
| 541731 | 1,3-Dichlorobenzene | 5 | U |
| 95501 | 1,2-Dichlorobenzene | 5 | U |
| 106467 | 1,4-Dichlorobenzene | 5 | U |
| 1634044 | Methyl-t-butyl ether | 5 | U |
| 108203 | Di-isopropyl-ether | 5 | U |
| 75650 | t-Butyl Alcohol | 100 | U |

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.:

DAILY BLK(S)

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Client ID:

Sample wt/vol: 5.0(g/ml) g Lab File ID: >E5470

Level: (low/med) LOW Date Recvd/Ext:

% Solid: 100 Date Analyzed: 07/27/95

Column: CAP Dilution Factor: 1

Number of TICs found: 0 CONCENTRATION UNITS: ug/Kg

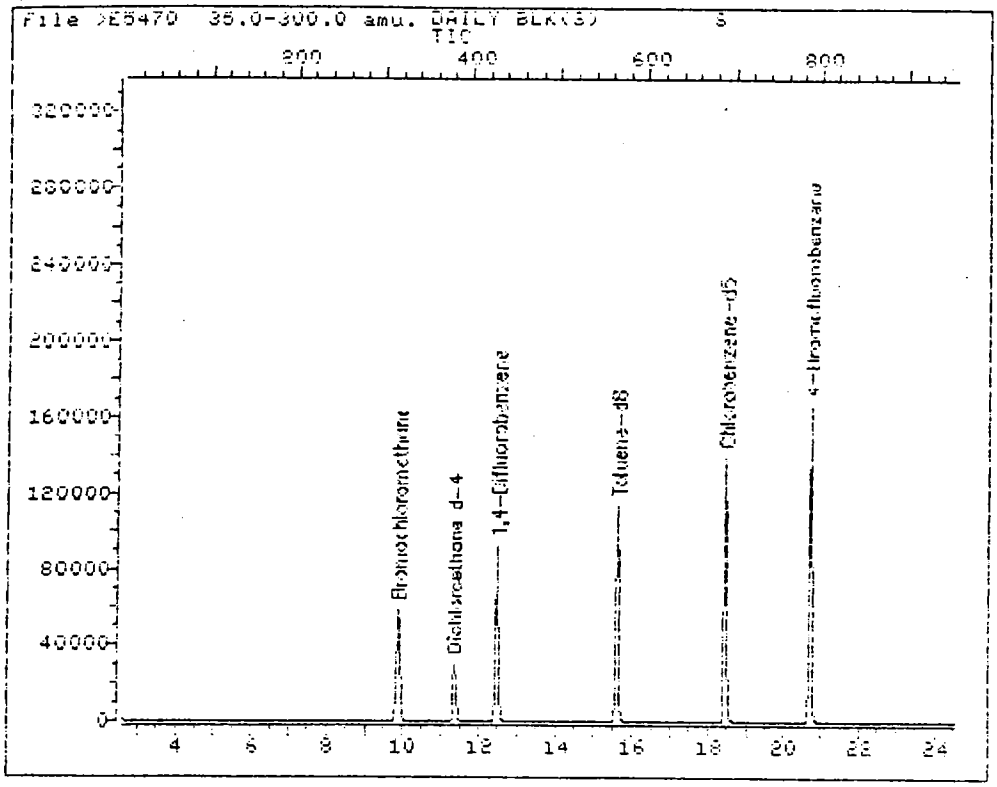
| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

Tentative Compound Summary: 0

DATA REPORTING QUALIFIERS

A - Indicates an aldol condensate
J - Indicates an estimated value
B - Indicates compound was found in the blank as well as in the sample

TOTAL ION CHROMATOGRAM




Data File: >E5470::D1
Name: DAILY BLK(S)
Misc: S

Quant Output File: ^E5470::A4
Instrument ID: MSD_1

Id File: IDSU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qual Time: 950727 14:49

Operator ID: LIN
Quant Time : 950727 16:22
Injected at: 950727 15:57

QUANT REPORT



Operator ID: LIN
Output File: ^E5470::A4
Data File: >E5470::D1
Name: DAILY BLK(S)
Misc: S

Quant Rev: 2
Quant Time: 950727 16:22
Injected at: 950727 15:57
Dilution Factor: 1.00000
Instrument ID: MSD_1

ID File: IDSU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qual Time: 950727 14:49

| | Compound | R.T. | Scan# | Area | Conc | Units | q |
|---|---|---|---|---|---|---|---|
| 1) | *Bromochloromethane | 9.99 | 317 | 48314 | 50.00 | ug/L | 97 |
| 19) | 1,2-Dichloroethane-d4 | 11.36 | 391 | 14279 | 49.47 | ug/L | 96 |
| 29) | *1,4-Difluorobenzene | 12.48 | 430 | 208401 | 50.00 | ug/L | 97 |
| 39) | *Chlorobenzene-d5 | 18.45 | 690 | 184245 | 50.00 | ug/L | 96 |
| 46) | Toluene d-8 | 15.63 | 567 | 198716 | 49.11 | ug/L | 97 |
| 53) | Bromofluorobenzene | 20.71 | 788 | 144240 | 49.08 | ug/L | 93 |

* Compound is ISTD



Yu 08/23/95

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : C38-2 SOIL
Date Rcvd/Extd: 07/26/95-N/A
Sample Matrix : Soil
Percent Solid : 73
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : AA32118
Lab File ID : NE5473
Date Analyzed : 07/27/95
Dilution Factor: 5
Sample Wt/Vol : 1.0g

CONCENTRATION UNITS: UG/KG(PPB)

| CAS No. | COMPOUND | PQL | CONC |
|---|---|---|---|
| 74873 | Chloromethane | 68 | U |
| 74839 | Bromomethane | 68 | U |
| 75014 | Vinyl Chloride | 34 | U |
| 75003 | Chloroethane | 68 | U |
| 75092 | Methylene Chloride | 68 | 483 |
| 67641 | Acetone | 140 | 440 |
| 75150 | Carbon Disulfide | 34 | U |
| 75694 | Trichlorofluoromethane | 34 | U |
| 75354 | 1,1-Dichloroethene | 14 | U |
| 75343 | 1,1-Dichloroethane | 34 | U |
| 156605 | Trans-1,2-Dichloroethene | 34 | U |
| 67663 | Chloroform | 34 | U |
| 107062 | 1,2-Dichloroethane | 14 | U |
| 78933 | 2-Butanone | 170 | U |
| 71556 | 1,1,1-Trichloroethane | 34 | U |
| 56235 | Carbon Tetrachloride | 14 | U |
| 108054 | Vinyl Acetate | 68 | U |
| 75274 | Bromodichloromethane | 7 | U |
| 78875 | 1,2-Dichloropropane | 7 | U |
| 10061015 | cis-1,3-Dichloropropene | 34 | U |
| 79016 | Trichloroethene | 7 | U |

| CAS NO. | COMPOUND | PQL | CONC |
|---|---|---|---|
| 124481 | Dibromochloromethane | 34 | U |
| 79005 | 1,1,2-Trichloroethane | 21 | U |
| 71432 | Benzene | 7 | 8 |
| 10061026 | Trans-1,3-Dichloropropene | 34 | U |
| 110758 | 2-Chloroethylvinylether | 68 | U |
| 75252 | Bromoform | 27 | U |
| 108101 | 4-Methyl-2-Pentanone | 170 | U |
| 591786 | 2-Hexanone | 140 | U |
| 127184 | Tetrachloroethene | 7 | U |
| 79345 | 1,1,2,2-Tetrachloroethane | 14 | U |
| 108883 | Toluene | 34 | 133 |
| 108907 | Chlorobenzene | 27 | U |
| 100414 | Ethylbenzene | 34 | 120 |
| 100425 | Styrene | 34 | U |
| 108383 | m&p-Xylenes | 34 | 510 |
| 95476 | o-Xylene | 34 | 240 |
| 541731 | 1,3-Dichlorobenzene | 34 | U |
| 95501 | 1,2-Dichlorobenzene | 34 | U |
| 106467 | 1,4-Dichlorobenzene | 34 | U |
| 1634044 | Methyl-t-butyl ether | 34 | U |
| 108203 | Di-isopropyl-ether | 34 | U |
| 75650 | t-Butyl Alcohol | 680 | U |

TARGET COMPOUND SUMMARY: 1318

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: AA32118

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Client ID: C38-2 SOIL

Sample wt/vol: 1.0(g/ml) g Lab File ID: >E5473

Level: (low/med) LOW Date Recvd/Ext: 07/26/95-N/A

% Solid: 73 Date Analyzed: 07/27/95

Column: CAP Dilution Factor: 5

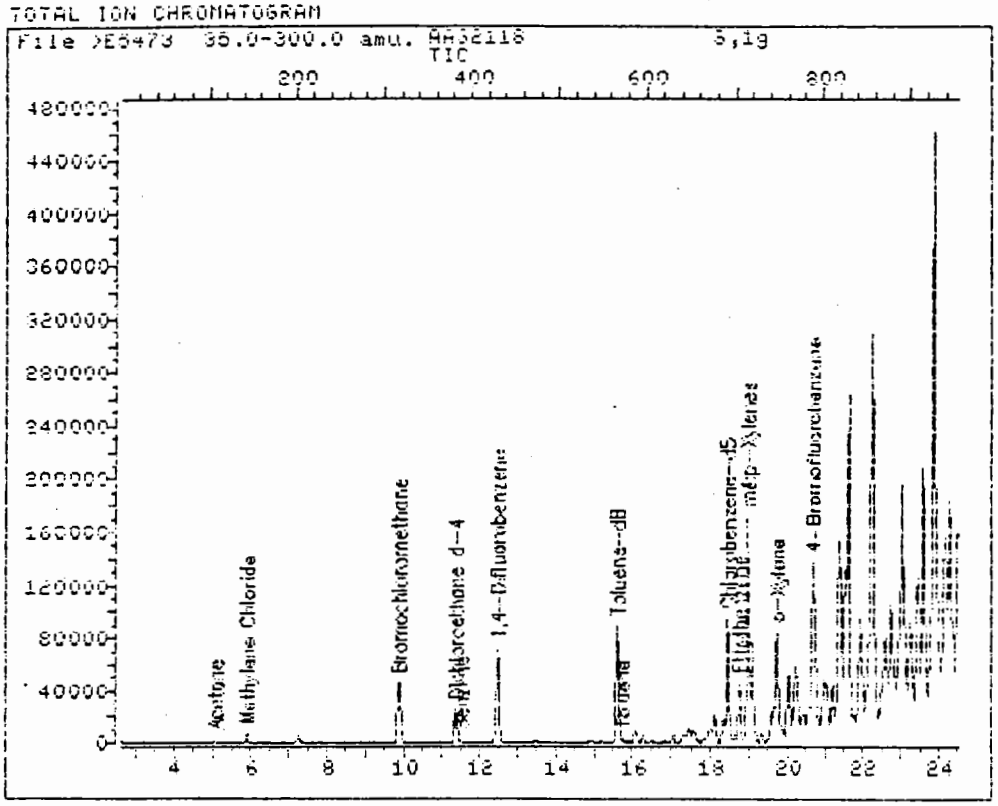
Number of TICs found: 10 CONCENTRATION UNITS: ug/Kg

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1 | 611143 | Benzene, 1-ethyl-2-methyl- | 21.39 | 562 | J |
| 2 | 124185 | Decane | 21.64 | 1164 | J |
| 3 | 95636 | Benzene, 1,2,4-trimethyl- | 22.26 | 1301 | J |
| 4 | | Unknown | 22.61 | 377 | J |
| 5 | 620144 | Benzene, 1-ethyl-3-methyl- | 23.05 | 753 | J |
| 6 | 1074437 | Benzene, 1-methyl-3-propyl- | 23.48 | 466 | J |
| 7 | 1758889 | Benzene, 2-ethyl-1,4-dimethyl | 23.60 | 603 | J |
| 8 | 1120214 | Undecane | 23.89 | 1781 | J |
| 9 | 25155151 | Benzene, methyl(1-methylethyl | 24.17 | 486 | J |
| 10 | 535773 | Benzene, 1-methyl-3-(1-methyl | 24.29 | 527 | J |

Tentative Compound Summary: 8021

DATA REPORTING QUALIFIERS
A - Indicates an aldol condensate
J - Indicates an estimated value
B - Indicates compound was found in the blank as well as in the sample

TOTAL ION CHROMATOGRAM




Data File: >E5473::D1 Quant Output File: ^E5473::A4
Name: AA32118 Instrument ID: MSD_1
Misc: S,1g

Id File: IDSV01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30 Last Qual Time: 950727 14:49

Operator ID: LIN
Quant Time : 950727 18:10
Injected at: 950727 17:40

QUANT REPORT



Operator ID: LIN
Output File: ^E5473::A4
Data File: >E5473::D1
Name: AA32118
Misc: S,1g

Quant Rev: 2
Quant Time: 950727 18:10
Injected at: 950727 17:40
Dilution Factor: 1.00000
Instrument ID: MSD_1

ID File: IDSU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qual Time: 950727 14:49

| | Compound | R.T. | Scan# | Area | Conc | Units | q |
|---|---|---|---|---|---|---|---|
| 1) | *Bromochloromethane | 9.88 | 317 | 39339 | 50.00 | ug/L | 92 |
| 9) | Methylene Chloride | 5.90 | 144 | 6192 | 6.98 | ug/L | 92 |
| 10) | Acetone | 5.08 | 108 | 4686 | 64.50 | ug/L | 88 |
| 19) | 1,2-Dichloroethane-d4 | 11.37 | 392 | 11772 | 50.09 | ug/L | 95 |
| 29) | *1,4-Difluorobenzene | 12.47 | 430 | 158310 | 50.00 | ug/L | 97 |
| 35) | Benzene | 11.51 | 388 | 3398 | 1.14 | ug/L | 94 |
| 39) | *Chlorobenzene-d5 | 18.44 | 490 | 127244 | 50.00 | ug/L | 94 |
| 45) | Toluene | 15.76 | 573 | 3590 | 1.90 | ug/L | 97 |
| 46) | Toluene d-8 | 15.62 | 567 | 144399 | 51.48 | ug/L | 96 |
| 48) | Ethylbenzene | 18.74 | 703 | 70275 | 17.64 | ug/L | 96 |
| 50) | m&p-Xylenes | 18.97 | 713 | 104337 | 74.16 | ug/L | 94 |
| 51) | o-Xylene | 19.73 | 746 | 114197 | 35.68 | ug/L | 97 |
| 53) | Bromofluorobenzene | 20.70 | 788 | 94138 | 46.38 | ug/L | 89 |

* Compound is ISTD

8/04/95

032

Yu
08/04/95

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : FIELD BLANK
Date Rcvd/Extd: 07/26/95-N/A
Sample Matrix : Water
Percent Solid : 0
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : AA32124
Lab File ID : VE5463
Date Analyzed : 07/26/95
Dilution Factor: 1
Sample Wt/Vol : 5.0ml

CONCENTRATION UNITS: UG/L (PPB)

| CAS No. | COMPOUND | PQL | CONC | CAS NO. | COMPOUND | PQL | CONC |
|---|---|---|---|---|---|---|---|
| 74873 | Chloromethane | 10 | U | 124481 | Dibromochloromethane | 5 | U |
| 74839 | Bromomethane | 10 | U | 79005 | 1,1,2-Trichloroethane | 3 | U |
| 75014 | Vinyl Chloride | 5 | U | 71432 | Benzene | 1 | U |
| 75003 | Chloroethane | 10 | U | 10061026 | Trans-1,3-Dichloropropene | 5 | U |
| 75092 | Methylene Chloride | 10 | 10 | 110758 | 2-Chloroethylvinylether | 10 | U |
| 67641 | Acetone | 20 | U | 75252 | Bromoform | 4 | U |
| 75150 | Carbon Disulfide | 5 | 3J | 108101 | 4-Methyl-2-Pentanone | 25 | U |
| 75694 | Trichlorofluoromethane | 5 | U | 591786 | 2-Hexanone | 20 | U |
| 75354 | 1,1-Dichloroethene | 2 | U | 127184 | Tetrachloroethene | 1 | U |
| 75343 | 1,1-Dichloroethane | 5 | U | 79345 | 1,1,2,2-Tetrachloroethane | 2 | U |
| 156605 | Trans-1,2-Dichloroethene | 5 | U | 108883 | Toluene | 5 | U |
| 67663 | Chloroform | 5 | U | 108907 | Chlorobenzene | 4 | U |
| 107062 | 1,2-Dichloroethane | 2 | U | 100414 | Ethylbenzene | 5 | U |
| 78933 | 2-Butanone | 25 | U | 100425 | Styrene | 5 | U |
| 71556 | 1,1,1-Trichloroethane | 5 | U | 108383 | m&p-Xylenes | 5 | U |
| 56235 | Carbon Tetrachloride | 2 | U | 95476 | o-Xylene | 5 | U |
| 108054 | Vinyl Acetate | 10 | U | 541731 | 1,3-Dichlorobenzene | 5 | U |
| 75274 | Bromodichloromethane | 1 | U | 95501 | 1,2-Dichlorobenzene | 5 | U |
| 78875 | 1,2-Dichloropropane | 1 | U | 106467 | 1,4-Dichlorobenzene | 5 | U |
| 10061015 | cis-1,3-Dichloropropene | 5 | U | 1634044 | Methyl-t-butyl ether | 5 | U |
| 79016 | Trichloroethene | 1 | U | 108203 | Di-isopropyl-ether | 5 | U |
| | | | | 75650 | t-Butyl Alcohol | 100 | U |

TARGET COMPOUND SUMMARY: 10

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.:
AA32124

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: WATER Client ID: FIELD BLANK

Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >55463

Level: (low/med) LOW Date Recvd/Ext: 07/26/95-N/A

% Solid: 0 Date Analyzed: 07/24/95

Column: CAP Dilution Factor: 1

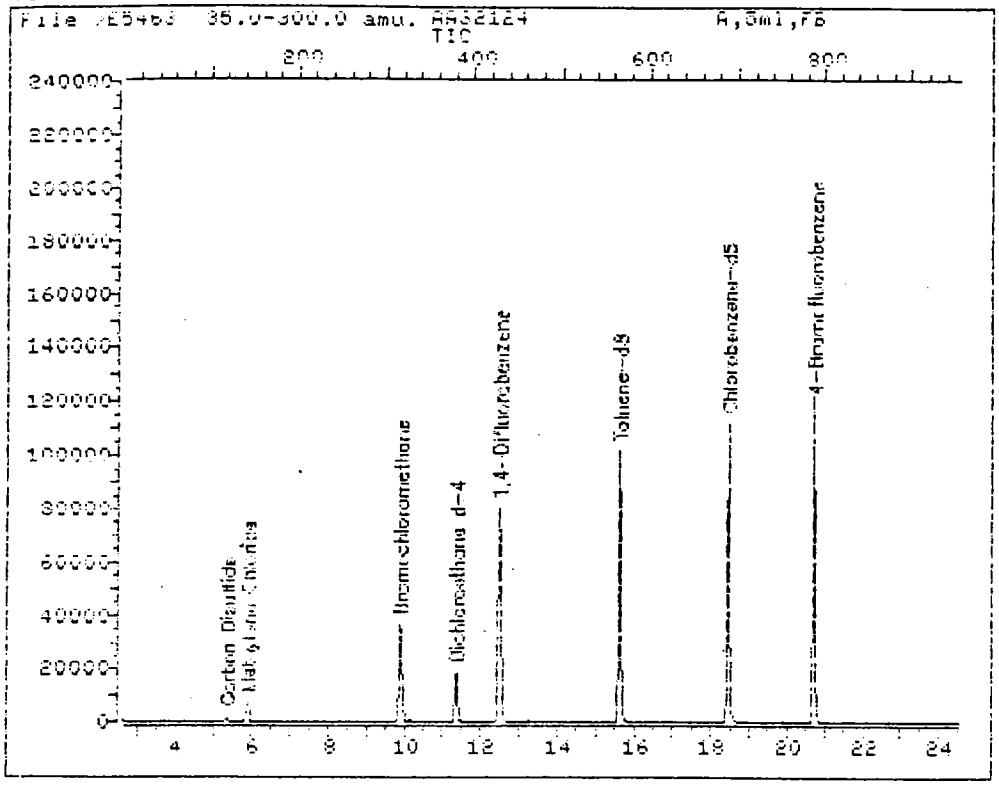
Number of TICs found: 0 CONCENTRATION UNITS: ug/L

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

Tentative Compound Summary: 0

DATA REPORTING QUALIFIERS
A - Indicates an aldol condensate
J - Indicates an estimated value
B - Indicates compound was found in the blank as well as in the sample

TOTAL ION CHROMATOGRAM




Data File: >E5463::D1
Name: AA32124
Misc: A,5ml,F8

Quant Output File: ^E5463::A4
Instrument ID: MSD_1

Id File: IDWU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qual Time: 950726 12:50

Operator ID: LIN
Quant Time : 950726 18:55
Injected at: 950726 17:54

QUANT REPORT



Operator ID: LIN
Output File: ^E5463::A4
Data File: >E5463::D1
Name: AA32124
Misc: A,5ml,FB

Quant Rev: 7
Quant Time: 950726 18:55
Injected at: 950726 17:54
Dilution Factor: 1.00000
Instrument ID: MSD_1

ID File: IDWUD1::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950721 23:30
Last Qcal Time: 950726 12:50

| | Compound | R.T. | Scan# | Area | Conc | Units | Q |
|---|---|---|---|---|---|---|---|
| 1) | *Bromochloromethane | 9.98 | 317 | 30727 | 50.00 | ug/L | 97 |
| 9) | Methylene Chloride | 5.91 | 144 | 8089 | 10.49 | ug/L | 97 |
| 13) | Carbon Disulfide | 5.38 | 121 | 6527 | 2.97 | ug/L | 97 |
| 19) | 1,2-Dichloroethane-d4 | 11.37 | 392 | 9012 | 51.35 | ug/L | 96 |
| 28) | *1,4-Difluorobenzene | 12.48 | 430 | 176312 | 50.00 | ug/L | 97 |
| 39) | *Chlorobenzene-d5 | 18.45 | 690 | 185319 | 50.00 | ug/L | 96 |
| 46) | Toluene d-8 | 15.42 | 567 | 170012 | 48.43 | ug/L | 97 |
| 53) | Bromofluorobenzene | 20.72 | 789 | 115372 | 48.58 | ug/L | 92 |

* Compound is ISTD

8/04/95



Yu 8/23/95

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32117
Sample Matrix: SOIL
% Solids: 78

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-1 soil | 980 | 1.0 | 26 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32118
Sample Matrix: SOIL
% Solids: 73

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-2 soil | 1800 | 1.0 | 27 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32119
Sample Matrix: SOIL
% Solids: 73

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-3 soil | 34 | 1.0 | 27 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32120
Sample Matrix: SOIL
% Solids: 69

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-4 soil | 66 | 1.0 | 29 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32121
Sample Matrix: SOIL
% Solids: 73

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-5 soil | 29 | 1.0 | 27 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32122
Sample Matrix: SOIL
% Solids: 76

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-6 soil | 28 | 1.0 | 26 | 7/25/95 |

## INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA32123
Sample Matrix: SOIL
% Solids: 78

Date Received: 7/25/95
Date Extracted: 7/25/95

| PARAMETER | FIELD SAMPLE NO. | SAMPLE CONCEN. (mg/kg) | DILUTION FACTOR | MDL (mg/kg) | DATE ANALYZED |
|---|---|---|---|---|---|
| TPH | c38-7 soil | 29 | 1.0 | 26 | 7/25/95 |

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT.# 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 07/26/95

| LAB SAMP NO. | ($) | S1 (DCE)# | S2 (TOL)# | S3 (BFB)# | FILE | TOT OUT |
|---|---|---|---|---|---|---|
| DAILY BLK( | W | 100 | 103 | 97 | ^E5456 | 0 |
| DAILY BLK( | S | 100 | 99 | 98 | ^E5457 | 0 |
| AA32092 | S | 102 | 102 | 89 | ^E5458 | 0 |
| AA32101 | W | 103 | 98 | 98 | ^E5459 | 0 |
| AA32100 | S | 103 | 97 | 96 | ^E5460 | 0 |
| AA32100 | S | 106 | 95 | 95 | ^E5461 | 0 |
| DAILY BLK( | W | 101 | 98 | 100 | ^E5462 | 0 |
| AA32124 | W | 103 | 97 | 97 | ^E5463 | 0 |
| AA32127 | W | 105 | 95 | 99 | ^E5464 | 0 |
| AA32109 | S | 102 | 96 | 91 | ^E5465 | 0 |

| QC Limits For: | Soil | Water | Sur Conc(ug/L) Water | Sur Conc(ug/L) Soil |
|---|---|---|---|---|
| S1 (DCE) = 1,2-Dichloroethane-d4 | 70-121 | 76-114 | 50 | 50 |
| S2 (TOL) = Toluene d-8 | 81-117 | 88-110 | 50 | 50 |
| S3 (BFB) = Bromofluorobenzene | 74-121 | 86-115 | 50 | 50 |

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of method/lab limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT.# 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 07/27/95

| LAB SAMP NO. | ($) | S1 (DCE)# | S2 (TOL)# | S3 (BFB)# | FILE | TOT OUT |
|---|---|---|---|---|---|---|
| DAILY BLK( | W | 93 | 101 | 97 | ^E5469 | 0 |
| DAILY BLK( | S | 99 | 98 | 98 | ^E5470 | 0 |
| AA32118 | W | 94 | 101 | 98 | ^E5471 | 0 |
| AA31992 | S | 100 | 97 | 99 | ^E5472 | 0 |
| AA32118 | S | 100 | 103 | 93 | ^E5473 | 0 |
| AA32110 | S | 102 | 102 | 89 | ^E5474 | 0 |
| AA32125 | S | 97 | 99 | 91 | ^E5475 | 0 |
| AA32126 | S | 102 | 101 | 91 | ^E5476 | 0 |
| AA32132 | S | 101 | 99 | 94 | ^E5477 | 0 |
| AA32110 | S | 102 | 105 | 85 | ^E5478 | 0 |
| AA32101 | S | 101 | 105 | 91 | ^E5479 | 0 |
| AA32109MS | S | 104 | 105 | 90 | ^E5480 | 0 |
| AA32109MSD | S | 101 | 105 | 89 | ^E5481 | 0 |
| SMB-SPK | S | 100 | 100 | 100 | ^E5482 | 0 |

| QC Limits For: | Soil | Water | Sur Conc(ug/L) Water | Soil |
|---|---|---|---|---|
| S1 (DCE) = 1,2-Dichloroethane-d4 | 70-121 | 76-114 | 50 | 50 |
| S2 (TOL) = Toluene d-8 | 81-117 | 88-110 | 50 | 50 |
| S3 (BFB) = Bromofluorobenzene | 74-121 | 86-115 | 50 | 50 |

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of method/lab limits

FORM 3

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Matrix Spike - Lab sample No.: AA32109

Non spiked file: ^E5465 Spiked file: ^E5480 Spike dup file: ^E5481

| Compound | Spike Added (ug/Kg) | Sample Conc (ug/Kg) | MS Conc (ug/Kg) | MSD Conc (ug/Kg) | MS % Rec# | MSD % Rec# | % Rpd# | QC Limits Rpd | QC Limits Rec |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 50 | 0 | 41 | 40 | 82 | 80 | 2 | 22 | 59-172 |
| Trichloroethene | 50 | 0 | 40 | 42 | 80 | 84 | 5 | 24 | 62-137 |
| Benzene | 50 | 0 | 45 | 46 | 90 | 92 | 2 | 21 | 66-142 |
| Toluene | 50 | 0 | 45 | 47 | 90 | 94 | 4 | 21 | 59-139 |
| Chlorobenzene | 50 | 0 | 44 | 46 | 88 | 92 | 4 | 21 | 60-133 |

# Column to be used to flag recovery and RPD values with an asterisk.
* Values outside of QC limits.

RPD: 0 out of 5 outside limits
Spike Recovery: 0 of 10 outside of limits

Comments:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622.

Lab file ID: >E5462 Lab Sample ID: DAILY BLK(A

Date Analyzed: 07/26/95 Time Analyzed: 17:22

Matrix: Water

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

| LAB FILE NO. | LAB SAMPLE ID | DATE ANALYZED |
|---|---|---|
| >E5463 | AA32124 | 17:54 |
| >E5464 | AA32127 | 19:12 |

Comments:

4A

# VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622.

Lab file ID: >E5470 Lab Sample ID: DAILY BLK(S

Date Analyzed: 07/27/95 Time Analyzed: 15:57

Matrix: Soil

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

| LAB FILE NO. | LAB SAMPLE ID | DATE ANALYZED |
|---|---|---|
| >E5472 | AA31992 | 17:04 |
| >E5473 | AA32118 | 17:40 |
| >E5474 | AA32110 | 18:27 |
| >E5475 | AA32125 | 19:04 |
| >E5476 | AA32126 | 19:41 |
| >E5477 | AA32132 | 20:18 |
| >E5478 | AA32110 | 20:55 |
| >E5479 | AA32101 | 21:31 |
| >E5480 | AA32109MS | 22:08 |
| >E5481 | AA32109MSD | 22:44 |
| >E5482 | SMB-SPK | 23:20 |

Comments: _____

_____

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH  Contract: -----

Lab File ID: >E5422  BFB Injection date: 7/21/95

Instrument ID: MSD_1  BFB Injection time: 17:11

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15-40% of mass 95 | 20.3 |
| 75 | 30-60% of mass 95 | 44.6 |
| 95 | Base peak, 100% relative abundance | 100. |
| 96 | 5.0 - 9.0% of mass 95 | 7.1 |
| 173 | Less than 2.0% of mass 174 | 0.0( 0.0 )1 |
| 174 | Greater than 50.0% of mass 95 | 86.1 |
| 175 | 5.0 - 9.0% of mass 174 | 6.0( 7.0 )1 |
| 176 | Greater than 95.0%, but less than 101.0% of mass 174 | 85.8( 99.7)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.8( 6.8 )2 |

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

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

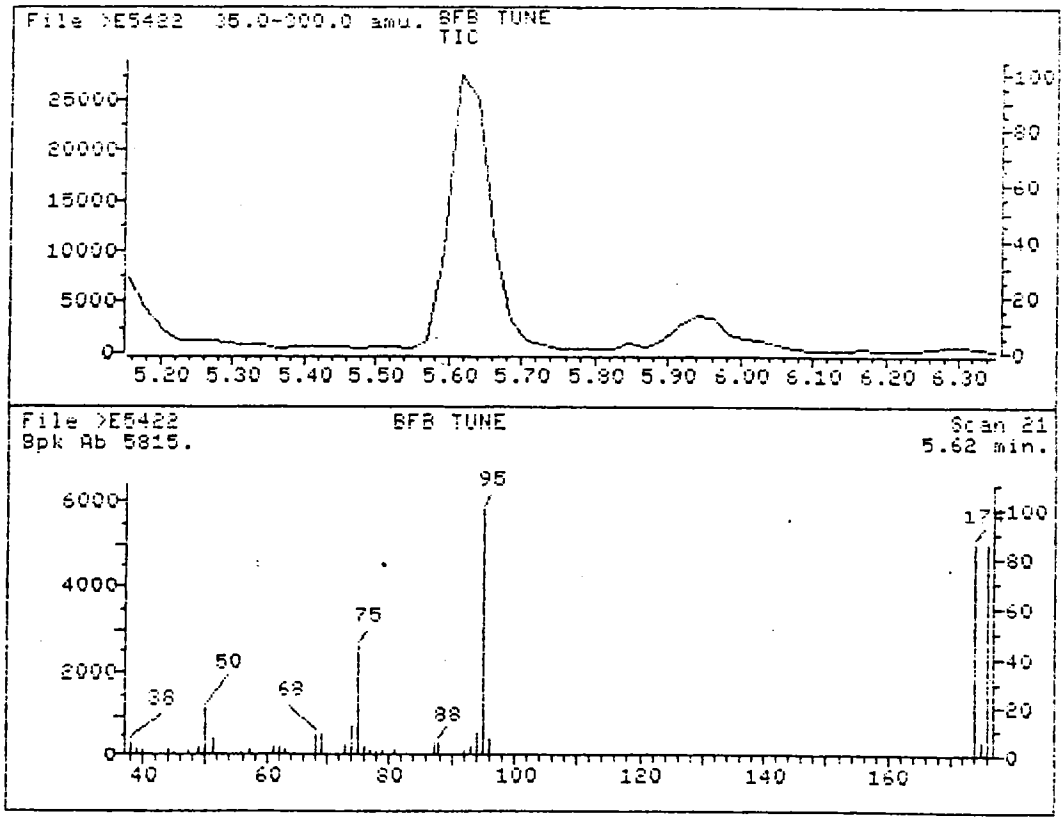
| | EPA SAMPLE NO | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1 | ---------- | 10PPB STD | >E5423 | 7/21/95 | 17:59 |
| 2 | ---------- | 20PPB STD | >E5424 | 7/21/95 | 18:29 |
| 3 | ---------- | DAILY CAL(A) | >E5425 | 7/21/95 | 19:00 |
| 4 | ---------- | 100PPB STD | >E5426 | 7/21/95 | 19:30 |
| 5 | ---------- | 200PPB STD | >E5427 | 7/21/95 | 20:01 |
| 6 | ---------- | 10PPB STD | >E5428 | 7/21/95 | 20:31 |
| 7 | ---------- | 20PPB STD | >E5429 | 7/21/95 | 21:01 |
| 8 | ---------- | DAILY CAL(S) | >E5430 | 7/21/95 | 21:31 |
| 9 | ---------- | 100PPB STD | >E5431 | 7/21/95 | 22:01 |
| 10 | ---------- | 200PPB STD | >E5432 | 7/21/95 | 22:31 |
| 11 | ---------- | BLANK | >E5433 | 7/21/95 | 23:01 |
| 12 | ---------- | DAILY BLK(S) | >E5434 | 7/21/95 | 23:37 |
| 13 | ---------- | AA31976MS | >E5435 | 7/22/95 | 0:13 |
| 14 | ---------- | AA31976MSD | >E5436 | 7/22/95 | 0:48 |
| 15 | ---------- | SMB-SPK | >E5437 | 7/22/95 | 1:24 |

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

| m/z | Ion Abundance Criteria | % Relative Abundance Base Peak | % Relative Abundance Appropriate Peak | Status |
|---|---|---|---|---|
| 50 | 15-40% of mass 95 | 20.26 | 20.26 | Ok |
| 75 | 30-60% of mass 95 | 44.63 | 44.63 | Ok |
| 95 | Base peak, 100% relative abundance | 100.00 | 100.00 | Ok |
| 96 | 5-9% of mass 95 | 7.14 | 7.14 | Ok |
| 173 | Less than 2% of mass 174 | 0.00 | 0.00 | Ok |
| 174 | Greater than 50% of mass 95 | 86.10 | 86.10 | Ok |
| 175 | 5-9% of mass 174 | 6.02 | 6.99 | Ok |
| 176 | 95-101% of mass 174 | 85.83 | 99.68 | Ok |
| 177 | 5-9% of mass 176 | 5.83 | 6.79 | Ok |

Injection Date: 07/21/95
Injection Time: 17:11
Data File: >E5422
Scan: 21



>E5422 BFB TUNE
21

File: >E5422 Scan #: 21 Retn. time: 5.62

| m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. |
|---|---|---|---|---|---|---|---|---|---|
| 37.10 | 323.00 | 50.05 | 1178.00 | 68.05 | 514.00 | 78.05 | 81.00 | 94.05 | 570.00 |
| 38.00 | 328.00 | 51.05 | 394.00 | 69.05 | 514.00 | 78.95 | 115.00 | 95.05 | 5815.00 |
| 39.00 | 149.00 | 55.95 | 82.00 | 73.05 | 260.00 | 80.95 | 130.00 | 96.05 | 415.00 |
| 40.00 | 104.00 | 57.05 | 148.00 | 74.05 | 724.00 | 87.05 | 294.00 | 174.00 | 5007.00 |
| 44.00 | 162.00 | 61.05 | 221.00 | 75.05 | 2595.00 | 87.95 | 309.00 | 175.00 | 350.00 |
| 45.00 | 67.00 | 62.05 | 212.00 | 76.05 | 229.00 | 92.05 | 126.00 | 176.00 | 4991.00 |
| 47.10 | 134.00 | 63.05 | 154.00 | 77.05 | 113.00 | 93.05 | 188.00 | 177.00 | 339.00 |
| 49.05 | 228.00 | | | | | | | | |

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH  Contract: -----

Lab File ID: >E5453  BFB Injection date: 7/26/95

Instrument ID: MSD_1  BFB Injection time: 11:36

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15-40% of mass 95 | 20.3 |
| 75 | 30-60% of mass 95 | 44.6 |
| 95 | Base peak, 100% relative abundance | 100. |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.0( 0.0 )1 |
| 174 | Greater than 50.0% of mass 95 | 77.4 |
| 175 | 5.0 - 9.0% of mass 174 | 6.0( 7.7 )1 |
| 176 | Greater than 95.0%, but less than 101.0% of mass 174 | 77.2( 99.7)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.0( 6.5 )2 |

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

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

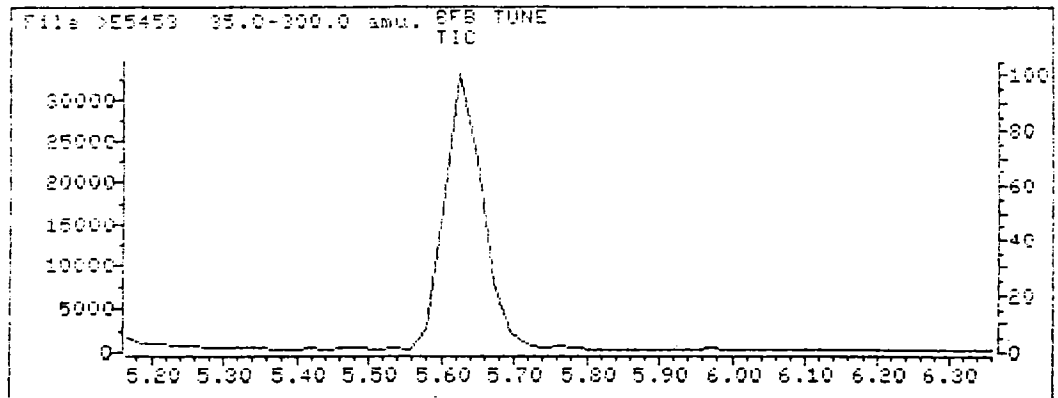
| | EPA SAMPLE NO | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1 | ---------- | DAILY CAL(A) | >E5454 | 7/26/95 | 12:50 |
| 2 | ---------- | DAILY CAL(S) | >E5455 | 7/26/95 | 13:20 |
| 3 | ---------- | DAILY BLK(M) | >E5456 | 7/26/95 | 13:55 |
| 4 | ---------- | DAILY BLK(S) | >E5457 | 7/26/95 | 14:26 |
| 5 | ---------- | AA32092 | >E5458 | 7/26/95 | 14:57 |
| 6 | ---------- | AA32101 | >E5459 | 7/26/95 | 15:33 |
| 7 | ---------- | AA32100 | >E5460 | 7/26/95 | 16:09 |
| 8 | ---------- | AA32100 | >E5461 | 7/26/95 | 16:46 |
| 9 | ---------- | DAILY BLK(A) | >E5462 | 7/26/95 | 17:22 |
| 10 | ---------- | AA32124 | >E5463 | 7/26/95 | 17:54 |
| 11 | ---------- | AA32127 | >E5464 | 7/26/95 | 19:12 |
| 12 | ---------- | AA32109 | >E5465 | 7/26/95 | 19:43 |

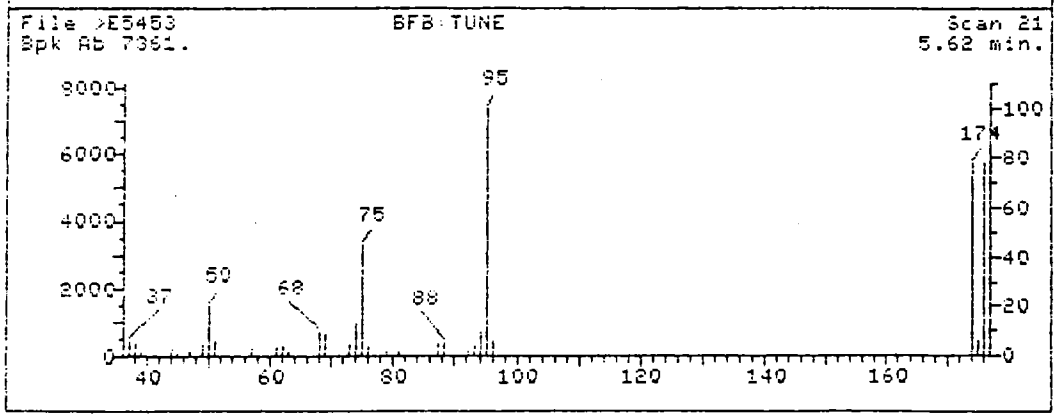
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

| m/z | Ion Abundance Criteria | % Relative Abundance Base Peak | % Relative Abundance Appropriate Peak | Status |
|---|---|---|---|---|
| 50 | 15-40% of mass 95 | 20.30 | 20.30 | Ok |
| 75 | 30-60% of mass 95 | 44.56 | 44.56 | Ok |
| 95 | Base peak, 100% relative abundance | 100.00 | 100.00 | Ok |
| 96 | 5-9% of mass 95 | 6.49 | 6.49 | Ok |
| 173 | Less than 2% of mass 174 | 0.00 | 0.00 | Ok |
| 174 | Greater than 50% of mass 95 | 77.41 | 77.41 | Ok |
| 175 | 5-9% of mass 174 | 5.96 | 7.70 | Ok |
| 176 | 95-101% of mass 174 | 77.18 | 99.70 | Ok |
| 177 | 5-9% of mass 176 | 4.99 | 6.46 | Ok |

Injection Date: 07/26/95
Injection Time: 11:36
Data File: >E5453
Scan: 21






Yu 08/30/95

>E5453 BFB TUNE
21

File: >E5453 Scan #: 21 Retn. time: 5.62

| m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. |
|---|---|---|---|---|---|---|---|---|---|
| 36.10 | 84.00 | 49.05 | 309.00 | 68.05 | 678.00 | 80.95 | 148.00 | 95.05 | 7361.00 |
| 37.10 | 422.00 | 50.05 | 1494.00 | 69.05 | 658.00 | 87.05 | 358.00 | 96.05 | 478.00 |
| 38.10 | 400.00 | 51.05 | 464.00 | 73.05 | 322.00 | 88.05 | 372.00 | 174.00 | 5698.00 |
| 39.10 | 176.00 | 57.05 | 191.00 | 74.05 | 954.00 | 92.05 | 163.00 | 175.00 | 439.00 |
| 44.10 | 171.00 | 61.05 | 281.00 | 75.05 | 3280.00 | 93.05 | 244.00 | 176.00 | 5681.00 |
| 45.10 | 83.00 | 62.05 | 279.00 | 76.05 | 274.00 | 94.05 | 714.00 | 177.00 | 367.00 |
| 47.10 | 157.00 | 63.05 | 169.00 | 78.95 | 149.00 | | | | |

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH  Contract: -----

Lab File ID: >E5466  BFB Injection date: 7/27/95

Instrument ID: MSD_1  BFB Injection time: 13:47

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15-40% of mass 95 | 19.5 |
| 75 | 30-60% of mass 95 | 43.9 |
| 95 | Base peak, 100% relative abundance | 100. |
| 96 | 5.0 - 9.0% of mass 95 | 6.3 |
| 173 | Less than 2.0% of mass 174 | 0.0( 0.0 )1 |
| 174 | Greater than 50.0% of mass 95 | 78.2 |
| 175 | 5.0 - 9.0% of mass 174 | 5.6( 7.1 )1 |
| 176 | Greater than 95.0%, but less than 101.0% of mass 174 | 76.2( 97.4)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1( 6.7 )2 |

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

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

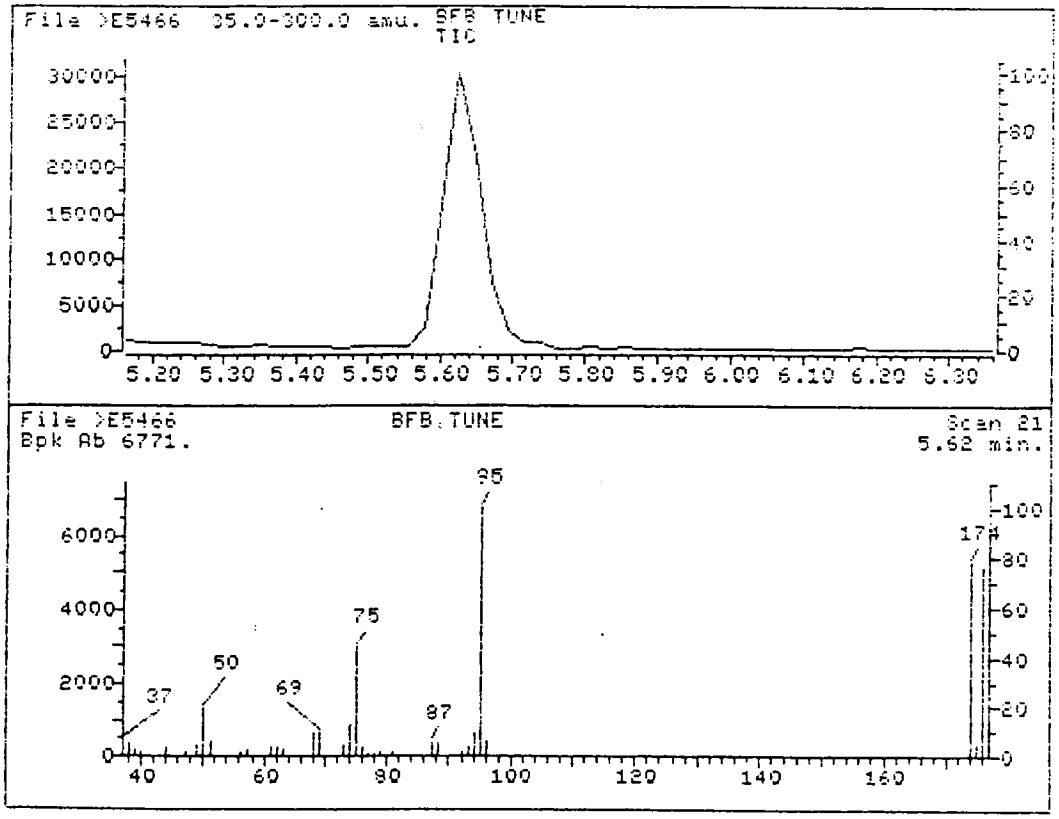
| | EPA SAMPLE NO | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1 | ---------- | DAILY CAL(A) | >E5467 | 7/27/95 | 14:18 |
| 2 | ---------- | DAILY CAL(S) | >E5468 | 7/27/95 | 14:49 |
| 3 | ---------- | DAILY BLK(M) | >E5469 | 7/27/95 | 15:25 |
| 4 | ---------- | DAILY BLK(S) | >E5470 | 7/27/95 | 15:57 |
| 5 | ---------- | AA32118 | >E5471 | 7/27/95 | 16:28 |
| 6 | ---------- | AA31992 | >E5472 | 7/27/95 | 17:04 |
| 7 | ---------- | AA32118 | >E5473 | 7/27/95 | 17:40 |
| 8 | ---------- | AA32110 | >E5474 | 7/27/95 | 18:27 |
| 9 | ---------- | AA32125 | >E5475 | 7/27/95 | 19:04 |
| 10 | ---------- | AA32126 | >E5476 | 7/27/95 | 19:41 |
| 11 | ---------- | AA32132 | >E5477 | 7/27/95 | 20:18 |
| 12 | ---------- | AA32110 | >E5478 | 7/27/95 | 20:55 |
| 13 | ---------- | AA32101 | >E5479 | 7/27/95 | 21:31 |
| 14 | ---------- | AA32109MS | >E5480 | 7/27/95 | 22:08 |
| 15 | ---------- | AA32109MSD | >E5481 | 7/27/95 | 22:44 |
| 16 | ---------- | SMB-SPK | >E5482 | 7/27/95 | 23:20 |

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

| m/z | Ion Abundance Criteria | % Relative Abundance Base Peak | % Relative Abundance Appropriate Peak | Status |
|---|---|---|---|---|
| 50 | 15-40% of mass 95 | 19.51 | 19.51 | Ok |
| 75 | 30-60% of mass 95 | 43.86 | 43.86 | Ok |
| 95 | Base peak, 100% relative abundance | 100.00 | 100.00 | Ok |
| 96 | 5-9% of mass 95 | 6.34 | 6.34 | Ok |
| 173 | Less than 2% of mass 174 | 0.00 | 0.00 | Ok |
| 174 | Greater than 50% of mass 95 | 78.17 | 78.17 | Ok |
| 175 | 5-9% of mass 174 | 5.57 | 7.12 | Ok |
| 176 | 95-101% of mass 174 | 76.16 | 97.43 | Ok |
| 177 | 5-9% of mass 176 | 5.12 | 6.73 | Ok |

Injection Date: 07/27/95
Injection Time: 13:47
Data File: >E5466
Scan: 21



>E5466 BFB TUNE
21

File: >E5466 Scan #: 21 Retn. time: 5.62

| m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. | m/z | Int. |
|---|---|---|---|---|---|---|---|---|---|
| 37.10 | 405.00 | 50.05 | 1321.00 | 68.05 | 611.00 | 78.05 | 88.00 | 94.05 | 624.00 |
| 38.10 | 340.00 | 51.05 | 404.00 | 69.05 | 616.00 | 78.95 | 129.00 | 95.05 | 6771.00 |
| 39.10 | 164.00 | 56.05 | 104.00 | 73.05 | 273.00 | 80.95 | 135.00 | 96.15 | 429.00 |
| 40.00 | 122.00 | 57.05 | 166.00 | 74.05 | 851.00 | 87.05 | 372.00 | 174.00 | 5293.00 |
| 44.00 | 213.00 | 61.05 | 257.00 | 75.05 | 2970.00 | 88.05 | 329.00 | 175.00 | 377.00 |
| 47.10 | 122.00 | 62.05 | 266.00 | 76.05 | 256.00 | 92.05 | 134.00 | 176.00 | 5157.00 |
| 49.05 | 286.00 | 63.05 | 179.00 | 77.05 | 77.00 | 93.05 | 222.00 | 177.10 | 347.00 |

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR WATER

Instrument ID: MSD_1
Calibration Date: 07/21/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

| Laboratory ID: | >E5423 | >E5424 | >E5425 | >E5426 | >E5427 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RF | RF | RF | RF | RF | | | | | |
| Compound | 10.0 | 20.0 | 50.0 | 100.0 | 200.0 | $RT | $RF | $RSD | */** | Optional Cal Curve |
| Chloromethane | 1.972 | 1.617 | 1.542 | 1.519 | 1.460 | 3.013 | 1.622 | 12.571 | ** | |
| Bromomethane | .7394 | .7496 | .7942 | .7909 | .8024 | 3.619 | .7753 | 3.697 | | |
| Vinyl Chloride | 1.943 | 1.601 | 1.603 | 1.609 | 1.545 | 3.142 | 1.660 | 9.642 | * | |
| Chloroethane | .6563 | .6155 | .6368 | .6418 | .6263 | 3.656 | .6353 | 2.433 | | |
| Trichlorofluoromethane | 2.543 | 2.558 | 2.579 | 2.590 | 2.470 | 4.070 | 2.548 | 1.860 | | |
| t-Butyl Alcohol | .0392 | .0374 | .0402 | .0392 | .0370 | 6.344 | .0386 | 3.529 | | (50.0,100.,250.,500.,1000) |
| Methyl-t-butyl ether | 1.705 | 1.603 | 1.637 | 1.622 | 1.578 | 6.643 | 1.629 | 2.932 | | |
| Methylene Chloride | 1.571 | 1.306 | 1.212 | 1.166 | 1.113 | 5.912 | 1.273 | 14.191 | | |
| Acrolein | .0404 | .0308 | .0359 | .0395 | .0353 | 4.786 | .0364 | 10.495 | | (50.0,100.,250.,500.,1000) |
| Acrylonitrile | .1188 | .1241 | .1292 | .1300 | .1249 | 6.473 | .1254 | 3.597 | | (50.0,100.,250.,500.,1000) |
| Acetone | .1114 | .0755 | .0838 | .0835 | .0790 | 5.090 | .0866 | 16.440 | | (50.0,100.,250.,500.,1000) |
| Carbon Disulfide | 3.970 | 3.863 | 4.003 | 3.899 | 3.823 | 5.370 | 3.912 | 1.903 | | |
| 1,1-Dichloroethene | 1.173 | 1.113 | 1.148 | 1.119 | 1.074 | 4.961 | 1.125 | 3.313 | * | |
| Di-isopropyl-ether | 5.265 | 5.104 | 5.212 | 5.218 | 5.116 | 7.993 | 5.183 | 1.353 | | |
| 1,1-Dichloroethane | 3.038 | 3.087 | 3.190 | 3.116 | 3.053 | 7.612 | 3.097 | 1.943 | ** | |
| Trans-1,2-Dichloroethene | 1.789 | 1.751 | 1.802 | 1.733 | 1.660 | 6.551 | 1.747 | 3.208 | | |
| Chloroform | 3.126 | 3.179 | 3.276 | 3.243 | 3.178 | 10.19 | 3.200 | 1.849 | * | |
| 1,2-Dichloroethane-d4 | .2929 | .2784 | .2924 | .2871 | .2902 | 11.37 | .2882 | 2.069 | | (50.0,50.0,50.0,50.0,50.0) |
| 1,2-Dichloroethane | 1.207 | 1.265 | 1.348 | 1.349 | 1.305 | 11.58 | 1.295 | 4.646 | | |
| 2-Butanone | .1103 | .1627 | .2090 | .2105 | .2211 | 9.422 | .1827 | 25.356 | | |
| 1,1,1-Trichloroethane | 2.788 | 2.884 | 3.013 | 2.942 | 2.866 | 10.62 | 2.899 | 2.905 | | |
| Carbon Tetrachloride | 2.729 | 2.911 | 3.081 | 3.029 | 2.947 | 11.05 | 2.940 | 4.596 | | |
| Vinyl Acetate | 3.409 | 3.279 | 3.479 | 3.631 | 3.411 | 7.970 | 3.442 | 3.727 | | |
| Bromodichloromethane | 2.968 | 3.001 | 3.163 | 3.210 | 3.137 | 14.13 | 3.096 | 3.417 | | |
| 1,2-Dichloropropane | .3799 | .3807 | .3932 | .3853 | .3799 | 13.52 | .3833 | 1.486 | * | |
| Trans-1,3-Dichloropropene | .2729 | .2775 | .3026 | .3119 | .3168 | 16.23 | .2963 | 6.761 | | |
| Trichloroethene | .4829 | .4719 | .4865 | .4663 | .4463 | 13.05 | .4708 | 3.381 | | |
| Dibromochloromethane | .3526 | .3540 | .3703 | .3689 | .3647 | 17.33 | .3621 | 2.298 | | |
| 1,1,2-Trichloroethane | .2197 | .2045 | .2162 | .2143 | .2099 | 16.57 | .2129 | 2.764 | | |
| Benzene | .9012 | .8838 | .8913 | .8574 | .8399 | 11.54 | .8747 | 2.900 | | |
| cis-1,3-Dichloropropene | .4068 | .4230 | .4476 | .4545 | .4557 | 15.09 | .4375 | 4.948 | | |
| 2-Chloroethylvinylether | .0902 | .0930 | .1073 | .1118 | .1156 | 14.83 | .1036 | 10.952 | | |
| Bromoform | .3450 | .3433 | .3630 | .3625 | .3586 | 20.07 | .3545 | 2.711 | ** | |
| 2-Hexanone | .0569 | .0811 | .0938 | .1017 | .1027 | 17.13 | .0873 | 21.834 | | |
| 4-Methyl-2-Pentanone | .1413 | .1487 | .1604 | .1609 | .1636 | 15.45 | .1550 | 6.167 | | |
| Tetrachloroethene | .6560 | .6085 | .6055 | .5621 | .5239 | 16.86 | .5912 | 8.486 | | |
| 1,1,2,2-Tetrachloroethane | .4026 | .3859 | .3946 | .3824 | .3814 | 20.99 | .3894 | 2.317 | ** | |
| Toluene | .7182 | .7168 | .7172 | .6928 | .6777 | 15.76 | .7045 | 2.611 | * | |
| Toluene d-8 | 1.145 | 1.146 | 1.161 | 1.162 | 1.180 | 15.63 | 1.159 | 1.221 | | (50.0,50.0,50.0,50.0,50.0) |
| Chlorobenzene | .9849 | .9453 | .9517 | .9166 | .9044 | 18.52 | .9406 | 3.359 | ** | |

* - Indicates CCC Compound
** - Indicates SPCC Compound
Units in ug/L
$RT - Avg Retention Times
$RF - Avg Response Factor
$RSD- Relative Standard Deviation

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR WATER

Instrument ID: MSD_1
Calibration Date: 07/21/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

| Laboratory ID: | >E5423 | >E5424 | >E5425 | >E5426 | >E5427 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RF | RF | RF | RF | RF | | | | | |
| Compound | 10.0 | 20.0 | 50.0 | 100.0 | 200.0 | $RT | $RF | $RSD | */** | Optional Cal Curve |
| Ethylbenzene | 1.537 | 1.498 | 1.534 | 1.472 | 1.461 | 18.76 | 1.501 | 2.312 | * | |
| Styrene | .8248 | .8203 | .8452 | .7922 | .7417 | 19.76 | .8048 | 4.974 | | |
| m&p-Xylenes | .5661 | .5421 | .5403 | .4946 | .4542 | 18.99 | .5195 | 8.611 | | (20.0,40.0,100.,200.,400.) |
| o-Xylene | 1.232 | 1.198 | 1.201 | 1.119 | 1.062 | 19.74 | 1.162 | 6.011 | | |
| Bromofluorobenzene | .7594 | .7635 | .7774 | .7819 | .7867 | 20.72 | .7738 | 1.524 | | (50.0,50.0,50.0,50.0,50.0) |
| 1,3-Dichlorobenzene | 1.034 | .9679 | .9747 | .9076 | .8677 | 22.77 | .9505 | 6.782 | | |
| 1,4-Dichlorobenzene | 1.061 | 1.013 | .9893 | .9300 | .8738 | 22.94 | .9735 | 7.509 | | |
| 1,2-Dichlorobenzene | .8297 | .8075 | .8136 | .7660 | .7349 | 23.63 | .7903 | 4.919 | | |

* - Indicates CCC Compound
** - Indicates SPCC Compound
Units in ug/L
$RT - Avg Retention Times
$RF - Avg Response Factor
$RSD- Relative Standard Deviation

FORM6 (Page 2 of 2)

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR SOIL

Instrument ID: MSD_1
Calibration Date: 07/21/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

| Laboratory ID: | >E5428 | >E5429 | >E5430 | >E5431 | >E5432 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RF | RF | RF | RF | RF | | | | | |
| Compound | 10.0 | 20.0 | 50.0 | 100.0 | 200.0 | $RT | $RF | $RSD | */** | Optional Cal Curve |
| Chloromethane | 1.237 | 1.223 | 1.190 | 1.083 | 1.088 | 3.011 | 1.164 | 6.339 | ** | |
| Bromomethane | .2645 | .3107 | .3146 | .3153 | .3294 | 3.535 | .3069 | 8.066 | | |
| Vinyl Chloride | 1.285 | 1.276 | 1.241 | 1.173 | 1.185 | 3.140 | 1.232 | 4.176 | * | |
| Chloroethane | .0989 | .1338 | .1376 | .1337 | .1447 | 3.632 | .1297 | 13.709 | | |
| Trichlorofluoromethane | 1.594 | 1.692 | 1.635 | 1.624 | 1.639 | 4.036 | 1.637 | 2.170 | | |
| t-Butyl Alcohol | .1340 | .1050 | .0961 | .0916 | .1009 | 6.384 | .1055 | 15.820 | | (50.0,100.,250.,500.,1000) |
| Methyl-t-butyl ether | 2.519 | 2.065 | 1.954 | 1.890 | 1.997 | 6.650 | 2.085 | 12.020 | | |
| Methylene Chloride | 1.493 | 1.106 | 1.074 | 1.127 | 1.158 | 5.901 | 1.192 | 14.387 | | |
| Acrolein | .0507 | .0298 | .0438 | .0463 | .0398 | 4.785 | .0421 | 18.881 | | (50.0,100.,250.,500.,1000) |
| Acrylonitrile | .2529 | .1896 | .1816 | .1770 | .1840 | 6.476 | .1970 | 16.013 | | (50.0,100.,250.,500.,1000) |
| Acetone | .2010 | .1419 | .1292 | .1247 | .1277 | 5.097 | .1449 | 22.120 | | (50.0,100.,250.,500.,1000) |
| Carbon Disulfide | 2.798 | 2.754 | 2.651 | 2.749 | 2.802 | 5.350 | 2.751 | 2.217 | | |
| 1,1-Dichloroethane | .8550 | .8265 | .7791 | .7884 | .7908 | 4.941 | .8080 | 3.949 | * | |
| Di-isopropyl-ether | 5.803 | 4.756 | 4.531 | 4.570 | 4.861 | 7.992 | 4.904 | 10.608 | | |
| 1,1-Dichloroethane | 2.704 | 2.434 | 2.335 | 2.362 | 2.426 | 7.606 | 2.452 | 6.000 | ** | |
| Trans-1,2-Dichloroethene | 1.410 | 1.344 | 1.273 | 1.272 | 1.276 | 6.535 | 1.315 | 4.642 | | |
| Chloroform | 3.054 | 2.703 | 2.571 | 2.597 | 2.665 | 10.17 | 2.718 | 7.172 | * | |
| 1,2-Dichloroethane-d4 | .2948 | .2950 | .3014 | .2955 | .2913 | 11.38 | .2956 | 1.234 | | (50.0,50.0,50.0,50.0,50.0) |
| 1,2-Dichloroethane | 1.696 | 1.385 | 1.311 | 1.289 | 1.306 | 11.58 | 1.397 | 12.255 | | |
| 2-Butanone | .4645 | .3571 | .4003 | .3786 | .3881 | 9.421 | .3977 | 10.196 | | |
| 1,1,1-Trichloroethane | 2.371 | 2.245 | 2.137 | 2.175 | 2.212 | 10.62 | 2.228 | 4.010 | | |
| Carbon Tetrachloride | 2.284 | 2.234 | 2.165 | 2.244 | 2.307 | 11.04 | 2.247 | 2.421 | | |
| Vinyl Acetate | 3.852 | 2.881 | 3.197 | 3.144 | 3.056 | 7.992 | 3.226 | 11.463 | | |
| Bromodichloromethane | 3.626 | 2.848 | 2.794 | 2.820 | 2.932 | 14.13 | 3.004 | 11.707 | | |
| 1,2-Dichloropropane | .5245 | .4401 | .4155 | .4076 | .4261 | 13.51 | .4428 | 10.686 | * | |
| Trans-1,3-Dichloropropene | .4821 | .4012 | .4018 | .4021 | .4277 | 16.22 | .4230 | 8.254 | | |
| Trichloroethene | .5283 | .4924 | .4676 | .4630 | .4758 | 13.05 | .4854 | 5.444 | | |
| Dibromochloromethane | .7136 | .5150 | .4988 | .4863 | .5035 | 17.32 | .5435 | 17.603 | | |
| 1,1,2-Trichloroethane | .4561 | .3209 | .3096 | .2923 | .3024 | 16.57 | .3363 | 20.156 | | |
| Benzene | .9814 | .8994 | .8444 | .8355 | .8655 | 11.53 | .8852 | 6.680 | | |
| cis-1,3-Dichloropropene | .6209 | .5311 | .5177 | .5222 | .5449 | 15.09 | .5474 | 7.748 | | |
| 2-Chloroethylvinylether | .2056 | .1742 | .1769 | .1739 | .1868 | 14.83 | .1835 | 7.321 | | |
| Bromoform | .8331 | .5903 | .5618 | .5546 | .5785 | 20.07 | .6237 | 18.906 | ** | |
| 2-Hexanone | .3018 | .2112 | .2108 | .2158 | .2350 | 17.12 | .2349 | 16.465 | | |
| 4-Methyl-2-Pentanone | .4408 | .3254 | .3265 | .3153 | .3415 | 15.45 | .3499 | 14.772 | | |
| Tetrachloroethene | .6219 | .5571 | .5275 | .5112 | .5009 | 16.86 | .5437 | 8.938 | | |
| 1,1,2,2-Tetrachloroethane | .9374 | .6533 | .6058 | .5921 | .6151 | 20.99 | .6807 | 21.338 | ** | |
| Toluene | .7669 | .6608 | .6399 | .6354 | .6535 | 15.76 | .6713 | 8.106 | * | |
| Toluene d-8 | 1.056 | 1.070 | 1.095 | 1.100 | 1.105 | 15.63 | 1.085 | 1.948 | | (50.0,50.0,50.0,50.0,50.0) |
| Chlorobenzene | 1.233 | .9614 | .9058 | .9027 | .9296 | 18.52 | .9864 | 14.158 | ** | |

* - Indicates CCC Compound  ** - Indicates SPCC Compound  Units in ug/L
$RT - Avg Retention Times  $RF - Avg Response Factor  $RSD- Relative Standard Deviation

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR SOIL

Instrument ID: MSD_1
Calibration Date: 07/21/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

| Laboratory ID: | >E5428 | >E5429 | >E5430 | >E5431 | >E5432 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RF | RF | RF | RF | RF | | | | | |
| Compound | 10.0 | 20.0 | 50.0 | 100.0 | 200.0 | $RT | $RF | $RSD | */** | Optional Cal Curve |
| Ethylbenzene | 1.655 | 1.429 | 1.345 | 1.359 | 1.352 | 18.76 | 1.428 | 9.189 | * | |
| Styrene | 1.139 | .8760 | .8086 | .7893 | .7708 | 19.76 | .8767 | 17.316 | | |
| m&p-Xylenes | .6121 | .5180 | .4714 | .4595 | .4404 | 18.99 | .5002 | 13.739 | | (20.0,40.0,100.,200.,400.) |
| o-Xylene | 1.457 | 1.172 | 1.086 | 1.055 | 1.040 | 19.74 | 1.162 | 14.861 | | |
| Bromofluorobenzene | .8006 | .7988 | .8076 | .8120 | .8313 | 20.72 | .8101 | 1.610 | | (50.0,50.0,50.0,50.0,50.0) |
| 1,3-Dichlorobenzene | 1.415 | 1.055 | .9617 | .9405 | .9357 | 22.77 | 1.062 | 19.173 | | |
| 1,4-Dichlorobenzene | 1.600 | 1.113 | 1.016 | .9772 | .9791 | 22.94 | 1.137 | 23.261 | | |
| 1,2-Dichlorobenzene | 1.403 | .9654 | .8830 | .8509 | .8800 | 23.63 | .9965 | 23.213 | | |

* - Indicates CCC Compound
** - Indicates SPCC Compound
Units in ug/L
$RT - Avg Retention Times
$RF - Avg Response Factor
$RSD- Relative Standard Deviation

FORM6 (Page 2 of 2)

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR WATER
File name: ^E5454

Instrument ID : MSD_1
Calibration Date: 07/26/95
Injection Time : 1250

Minimum RF for SPCC is: .300  Maximum % Diff for CCC is: 25

| Compound | $RF | RF | RT | $DIF | */** | |
|---|---|---|---|---|---|---|
| Chloromethane | 1.622 | 1.499 | 2.989 | 7.57 | ** | |
| Bromomethane | .7753 | .7916 | 3.632 | 2.10 | | |
| Vinyl Chloride | 1.660 | 1.569 | 3.127 | 5.52 | * | |
| Chloroethane | .6353 | .6855 | 3.655 | 7.89 | | |
| Trichlorofluoromethane | 2.548 | 2.454 | 4.068 | 3.69 | | |
| t-Butyl Alcohol | .0386 | .0396 | 6.319 | 2.64 | | (Conc=250) |
| Methyl-t-butyl ether | 1.629 | 1.593 | 6.641 | 2.21 | | |
| Methylene Chloride | 1.273 | 1.255 | 5.906 | 1.48 | | |
| Acrolein | .0364 | .0360 | 4.780 | 1.12 | | (Conc=250) |
| Acrylonitrile | .1254 | .1310 | 6.457 | 4.47 | | (Conc=250) |
| Acetone | .0866 | .0847 | 5.079 | 2.22 | | (Conc=250) |
| Carbon Disulfide | 3.912 | 3.700 | 5.355 | 5.42 | | |
| 1,1-Dichloroethene | 1.125 | 1.095 | 4.964 | 2.70 | * | |
| Di-isopropyl-ether | 5.183 | 4.958 | 7.974 | 4.35 | | |
| 1,1-Dichloroethane | 3.097 | 3.052 | 7.606 | 1.43 | ** | |
| Trans-1,2-Dichloroethene | 1.747 | 1.746 | 6.549 | .03 | | |
| Chloroform | 3.200 | 3.134 | 10.16 | 2.08 | * | |
| 1,2-Dichloroethane-d4 | .2882 | .2956 | 11.37 | .90 | | |
| 1,2-Dichloroethane | 1.295 | 1.249 | 11.56 | 3.55 | | |
| 2-Butanone | .1827 | .1873 | 9.398 | 2.50 | | |
| 1,1,1-Trichloroethane | 2.899 | 2.805 | 10.62 | 3.21 | | |
| Carbon Tetrachloride | 2.940 | 2.876 | 11.03 | 2.16 | | |
| Vinyl Acetate | 3.442 | 3.353 | 7.974 | 2.60 | | |
| Bromodichloromethane | 3.096 | 3.009 | 14.13 | 2.81 | | |
| 1,2-Dichloropropane | .3838 | .3717 | 13.51 | 3.15 | * | |
| Trans-1,3-Dichloropropene | .2963 | .2968 | 16.22 | .16 | | |
| Trichloroethene | .4708 | .4840 | 13.05 | 2.81 | | |
| Dibromochloromethane | .3621 | .3670 | 17.32 | 1.35 | | |
| 1,1,2-Trichloroethane | .2129 | .2142 | 16.57 | .61 | | |
| Benzene | .8747 | .8711 | 11.53 | .42 | | |
| cis-1,3-Dichloropropene | .4375 | .4386 | 15.07 | .24 | | |
| 2-Chloroethylvinylether | .1036 | .1041 | 14.82 | .52 | | |
| Bromoform | .3545 | .3681 | 20.06 | 3.86 | ** | |
| 2-Hexanone | .0873 | .0888 | 17.12 | 1.75 | | |
| 4-Methyl-2-Pentanone | .1550 | .1519 | 15.44 | 2.00 | | |
| Tetrachloroethene | .5912 | .6024 | 16.86 | 1.89 | | |
| 1,1,2,2-Tetrachloroethane | .3894 | .3819 | 21.00 | 1.92 | ** | |
| Toluene | .7045 | .6962 | 15.76 | 1.18 | * | |
| Toluene d-8 | 1.159 | 1.125 | 15.62 | 2.87 | | |
| Chlorobenzene | .9406 | .9362 | 18.52 | .46 | ** | |

* - Indicates CCC compound  ** - Indicates SPCC compound
RT - Cont Cal Retention Times  RF - Response Factor from daily cal @ 50.00 ug/L
$DIFF- %Difference from average RF  $RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR WATER
File name: ^E5454

Instrument ID : MSD_1
Calibration Date: 07/26/95
Injection Time : 1250

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

| Compound | $RF | RF | RT | $DIF | */** | |
|---|---|---|---|---|---|---|
| Ethylbenzene | 1.501 | 1.489 | 18.75 | .78 | * | |
| Styrene | .8048 | .8193 | 19.76 | 1.80 | | |
| m&p-Xylenes | .5195 | .5307 | 18.98 | 2.17 | | (Conc=100) |
| o-Xylene | 1.162 | 1.136 | 19.74 | 2.23 | | |
| Bromofluorobenzene | .7738 | .7645 | 20.72 | 1.20 | | |
| 1,3-Dichlorobenzene | .9505 | .9554 | 22.77 | .52 | | |
| 1,4-Dichlorobenzene | .9735 | .9999 | 22.93 | 2.71 | | |
| 1,2-Dichlorobenzene | .7903 | .7996 | 23.64 | 1.17 | | |

* - Indicates CCC compound
** - Indicates SPCC compound
RT - Cont Cal Retention Times
RF - Response Factor from daily cal @ 50.00 ug/L
$DIFF- %Difference from average RF
$RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

FORM7 (Page 2 of 2)

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR SOIL
File name: ^E5468

Instrument ID : MSD_1
Calibration Date: 07/27/95
Injection Time : 1449

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

| Compound | $RF | RF | RT | $DIF | */** | |
|---|---|---|---|---|---|---|
| Chloromethane | 1.164 | .8650 | 3.006 | 25.69 | ** | |
| Bromomethane | .3069 | .3698 | 3.534 | 20.49 | | |
| Vinyl Chloride | 1.232 | 1.054 | 3.144 | 14.47 | * | |
| Chloroethane | .1297 | .2217 | 3.626 | 70.85 | | |
| Trichlorofluoromethane | 1.637 | 1.845 | 4.039 | 12.69 | | |
| t-Butyl Alcohol | .1055 | .1056 | 6.359 | .03 | | (Conc=250) |
| Methyl-t-butyl ether | 2.085 | 2.224 | 6.635 | 6.66 | | |
| Methylene Chloride | 1.192 | 1.128 | 5.900 | 5.37 | | |
| Acrolein | .0421 | .0479 | 4.774 | 13.78 | | (Conc=250) |
| Acrylonitrile | .1970 | .1881 | 6.451 | 4.52 | | (Conc=250) |
| Acetone | .1449 | .1318 | 5.096 | 9.07 | | (Conc=250) |
| Carbon Disulfide | 2.751 | 3.039 | 5.349 | 10.47 | | |
| 1,1-Dichloroethene | .8080 | .9365 | 4.935 | 15.90 | * | |
| Di-isopropyl-ether | 4.904 | 5.502 | 7.968 | 12.20 | | |
| 1,1-Dichloroethane | 2.452 | 2.833 | 7.577 | 15.53 | ** | |
| Trans-1,2-Dichloroethene | 1.315 | 1.532 | 6.520 | 16.50 | | |
| Chloroform | 2.718 | 3.069 | 10.15 | 12.91 | * | |
| 1,2-Dichloroethane-d4 | .2956 | .2987 | 11.37 | 1.04 | | |
| 1,2-Dichloroethane | 1.397 | 1.504 | 11.55 | 7.66 | | |
| 2-Butanone | .3977 | .3601 | 9.392 | 9.45 | | |
| 1,1,1-Trichloroethane | 2.229 | 2.634 | 10.59 | 18.20 | | |
| Carbon Tetrachloride | 2.247 | 2.629 | 11.02 | 17.03 | | |
| Vinyl Acetate | 3.226 | 3.736 | 7.968 | 15.80 | | |
| Bromodichloromethane | 3.004 | 3.256 | 14.12 | 8.40 | | |
| 1,2-Dichloropropane | .4428 | .4557 | 13.50 | 2.93 | * | |
| Trans-1,3-Dichloropropene | .4230 | .4184 | 16.22 | 1.09 | | |
| Trichloroethene | .4854 | .5288 | 13.04 | 8.94 | | |
| Dibromochloromethane | .5435 | .5098 | 17.32 | 6.20 | | |
| 1,1,2-Trichloroethane | .3363 | .3197 | 16.56 | 4.93 | | |
| Benzene | .8852 | .9396 | 11.51 | 6.14 | | |
| cis-1,3-Dichloropropene | .5474 | .5578 | 15.07 | 1.90 | | |
| 2-Chloroethylvinylether | .1835 | .1760 | 14.81 | 4.06 | | |
| Bromoform | .6237 | .5685 | 20.05 | 8.85 | ** | |
| 2-Hexanone | .2349 | .2150 | 17.11 | 8.49 | | |
| 4-Methyl-2-Pentanone | .3499 | .3262 | 15.43 | 6.78 | | |
| Tetrachloroethene | .5437 | .5915 | 16.86 | 8.79 | | |
| 1,1,2,2-Tetrachloroethane | .6807 | .6119 | 20.97 | 10.11 | ** | |
| Toluene | .6713 | .7390 | 15.76 | 10.09 | * | |
| Toluene d-8 | 1.085 | 1.098 | 15.62 | 1.18 | | |
| Chlorobenzene | .9864 | 1.008 | 18.51 | 2.14 | ** | |

* - Indicates CCC compound
** - Indicates SPCC compound
RT - Cont Cal Retention Times
RF - Response Factor from daily cal @ 50.00 ug/L
$DIFF- %Difference from average RF
$RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR SOIL
File name: ^E5468

Instrument ID : MSD_1
Calibration Date: 07/27/95
Injection Time : 1449

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

| Compound | $RF | RF | RT | $DIF | */** | |
|---|---|---|---|---|---|---|
| Ethylbenzene | 1.428 | 1.565 | 18.74 | 9.62 | * | |
| Styrene | .8767 | .9279 | 19.75 | 5.84 | | |
| m&p-Xylenes | .5002 | .5528 | 18.97 | 10.51 | | (Conc=100) |
| o-Xylene | 1.162 | 1.258 | 19.73 | 8.27 | | |
| Bromofluorobenzene | .8101 | .7976 | 20.72 | 1.54 | | |
| 1,3-Dichlorobenzene | 1.062 | 1.055 | 22.76 | .59 | | |
| 1,4-Dichlorobenzene | 1.137 | 1.106 | 22.92 | 2.72 | | |
| 1,2-Dichlorobenzene | .9965 | .9528 | 23.61 | 4.38 | | |

* - Indicates CCC compound
** - Indicates SPCC compound
RT - Cont Cal Retention Times
RF - Response Factor from daily cal @ 50.00 ug/L
$DIFF- %Difference from average RF
$RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

FORM7 (Page 2 of 2)

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E5425 Lab Sample ID: DAILY CAL(A

Date Analyzed: 07/21/95 Time Analyzed: 19:00

| | IS1(BCM) AREA # | RT | IS2(DFB) AREA # | RT | IS3(CBZ) AREA # | RT |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 33071 | 9.90 | 172701 | 12.50 | 142753 | 18.45 |
| UPPER LIMIT | 66142 | | 345402 | | 285506 | |
| LOWER LIMIT | 16536 | | 86350 | | 71376 | |
| LAB SAMPLE # | | | | | | |
| 10PPB STD | 29836 | 9.90 | 152352 | 12.49 | 126576 | 18.47 |
| 20PPB STD | 31974 | 9.90 | 163528 | 12.50 | 136377 | 18.45 |
| DAILY CAL( | 33071 | 9.90 | 172701 | 12.50 | 142753 | 18.45 |
| 100PPB STD | 34974 | 9.91 | 184244 | 12.49 | 153492 | 18.46 |
| 200PPB STD | 38206 | 9.91 | 199534 | 12.50 | 165058 | 18.46 |

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal from previous daily cal.

# Column used to flag internal standard are values with an asterisk

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E5430 Lab Sample ID: DAILY CAL(S

Date Analyzed: 07/21/95 Time Analyzed: 21:31

| | IS1(BCM) AREA # | RT | IS2(DFB) AREA # | RT | IS3(CBZ) AREA # | RT |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 57622 | 9.90 | 234442 | 12.49 | 207183 | 18.47 |
| UPPER LIMIT | 115244 | | 468884 | | 414366 | |
| LOWER LIMIT | 28811 | | 117221 | | 103591 | |
| LAB SAMPLE # | | | | | | |
| 10PPB STD | 51291 | 9.90 | 209048 | 12.48 | 191597 | 18.45 |
| 20PPB STD | 54335 | 9.91 | 218954 | 12.48 | 196575 | 18.46 |
| DAILY CAL( | 57622 | 9.90 | 234442 | 12.49 | 207183 | 18.47 |
| 100PPB STD | 61230 | 9.90 | 255081 | 12.50 | 225306 | 18.47 |
| 200PPB STD | 58226 | 9.90 | 237345 | 12.50 | 209105 | 18.47 |
| BLANK | 0* | 0.00 | 0* | 0.00 | 2370* | 18.49 |
| DAILY BLK( | 54125 | 9.92 | 223953 | 12.49 | 203021 | 18.46 |
| AA31976MS | 44788 | 9.92 | 180275 | 12.49 | 147407 | 18.47 |
| AA31976MSD | 48500 | 9.92 | 194668 | 12.49 | 156091 | 18.47 |
| SMB-SPK | 47039 | 9.92 | 193668 | 12.49 | 175462 | 18.47 |

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal from previous daily cal.

# Column used to flag internal standard are values with an asterisk

8A

# VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E5439 Lab Sample ID: DAILY CAL(A

Date Analyzed: ~~07/24/95~~ 07/26/95 Time Analyzed: 15:53

SA 08/04/95.

| | IS1(BCM) AREA # | RT | IS2(DFB) AREA # | RT | IS3(CBZ) AREA # | RT |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 33016 | 9.89 | 167726 | 12.47 | 141146 | 18.46 |
| UPPER LIMIT | 66032 | | 335452 | | 282292 | |
| LOWER LIMIT | 16508 | | 83863 | | 70573 | |
| LAB SAMPLE # | | | | | | |
| DAILY CAL( | 31722 | 9.90 | 161532 | 12.48 | 136473 | 18.45 |
| DAILY BLK( | 34293 | 9.90 | 188957 | 12.49 | 153073 | 18.46 |
| AA32101 | 37598 | 9.90 | 190987 | 12.47 | 162354 | 18.47 |
| DAILY BLK( | 31974 | 9.88 | 172235 | 12.47 | 147159 | 18.44 |
| AA32124 | 30727 | 9.88 | 176312 | 12.48 | 155319 | 18.45 |
| AA32127 | 35630 | 9.90 | 194721 | 12.48 | 172639 | 18.45 |

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal from previous daily cal.

# Column used to flag internal standard are values with an asterisk

068

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E5455 Lab Sample ID: DAILY CAL(S

Date Analyzed: ~~07/26/95~~ 07/27/95 Time Analyzed: 13:20

SA 8/4/95

| | IS1(BCM) AREA # | RT | IS2(DFB) AREA # | RT | IS3(CBZ) AREA # | RT |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 52234 | 9.90 | 214390 | 12.49 | 193148 | 18.47 |
| UPPER LIMIT | 104468 | | 428780 | | 386296 | |
| LOWER LIMIT | 26117 | | 107195 | | 96574 | |
| LAB SAMPLE # | | | | | | |
| DAILY CAL( | 42366 | 9.87 | 187705 | 12.47 | 164303 | 18.44 |
| DAILY BLK( | 48314 | 9.89 | 208401 | 12.48 | 184245 | 18.45 |
| AA31992 | 41722 | 9.87 | 167097 | 12.47 | 146900 | 18.44 |
| AA32118 | 39339 | 9.88 | 158310 | 12.47 | 127246 | 18.44 |
| AA32110 | 40791 | 9.87 | 154649 | 12.47 | 120723 | 18.44 |
| AA32125 | 36118 | 9.88 | 139790 | 12.48 | 117399 | 18.45 |
| AA32126 | 43911 | 9.89 | 166235 | 12.46 | 136898 | 18.46 |
| AA32132 | 47006 | 9.90 | 188467 | 12.47 | 160577 | 18.44 |
| AA32110 | 41079 | 9.90 | 145185 | 12.47 | 104367 | 18.46 |
| AA32101 | 40796 | 9.90 | 159803 | 12.49 | 117107 | 18.46 |
| AA32109MS | 37710 | 9.90 | 149276 | 12.47 | 112873 | 18.47 |
| AA32109MSD | 38681 | 9.90 | 149469 | 12.49 | 112790 | 18.47 |
| SMB-SPK | 41246 | 9.90 | 177646 | 12.49 | 156243 | 18.47 |

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal from previous daily cal.

# Column used to flag internal standard are values with an asterisk

METHOD DETECTION LIMTS FOR METHOD 8240

RUN 01/20/95

RUN AT 10PPB

| FILE ==========> | ^E35021 | ^E35031 | ^E35041 | ^E35051 | ^E35061 | ^E35071 | ^E35081 | AVG | STDDEV | MDL |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | 6.15 | 6.14 | 6.18 | 5.21 | 5.18 | 5.46 | 4.96 | 5.61 | .53 | 1.67 |
| Bromomethane | 16.24 | 16.37 | 16.51 | 14.73 | 16.04 | 16.48 | 14.90 | 15.89 | .76 | 2.38 |
| Vinyl Chloride | 7.41 | 7.41 | 7.57 | 6.20 | 6.81 | 6.76 | 6.09 | 6.89 | .60 | 1.88 |
| Chloroethane | 11.93 | 12.49 | 12.20 | 10.72 | 11.69 | 11.46 | 10.96 | 11.64 | .64 | 2.01 |
| Trichlorofluoromethl | 10.71 | 10.79 | 10.87 | 10.09 | 10.12 | 11.07 | 10.60 | 10.61 | .37 | 1.18 |
| t-Butyl Alcohol | 53.71 | 40.30 | 48.65 | 46.62 | 46.34 | 32.20 | 41.75 | 44.22 | 6.90 | 21.70 |
| Methyl-t-butyl ethe | 11.37 | 10.53 | 11.17 | 10.87 | 10.71 | 10.31 | 10.57 | 10.79 | .37 | 1.18 |
| Methylene Chloride | 15.78 | 14.01 | 14.20 | 14.17 | 13.93 | 13.19 | 13.63 | 14.13 | .81 | 2.54 |
| Acetone | 21.65 | 18.19 | 25.59 | 13.45 | 12.47 | 10.63 | 10.63 | 16.09 | 5.85 | 18.38 |
| Carbon Disulfide | 8.48 | 8.48 | 8.69 | 7.69 | 8.00 | 8.41 | 7.81 | 8.22 | .38 | 1.20 |
| Di-isopropyl-ether | 9.49 | 9.43 | 9.62 | 9.41 | 9.46 | 9.43 | 9.32 | 9.45 | .09 | .29 |
| 1,1-Dichloroethene | 9.84 | 9.68 | 10.21 | 9.15 | 9.85 | 10.33 | 9.64 | 9.82 | .39 | 1.23 |
| 1,1-Dichloroethane | 9.59 | 9.69 | 9.99 | 9.57 | 9.59 | 10.03 | 9.79 | 9.75 | .20 | .61 |
| Trans-1,2-Dichloroe | 9.71 | 9.59 | 9.51 | 9.20 | 9.52 | 9.99 | 9.61 | 9.59 | .24 | .75 |
| Chloroform | 10.14 | 10.17 | 10.37 | 10.05 | 10.24 | 10.61 | 10.36 | 10.28 | .19 | .59 |
| 1,2-Dichloroethane | 10.57 | 11.02 | 11.19 | 10.83 | 10.85 | 10.86 | 10.55 | 10.84 | .23 | .71 |
| 2-Butanone | 10.16 | 9.58 | 10.85 | 9.47 | 9.88 | 8.51 | 8.68 | 9.59 | .82 | 2.57 |
| 1,1,1-Trichloroetha | 10.10 | 10.15 | 10.39 | 9.98 | 9.97 | 10.49 | 10.14 | 10.17 | .20 | .62 |
| Carbon Tetrachlorid | 9.66 | 9.67 | 9.81 | 9.51 | 9.39 | 9.95 | 9.80 | 9.68 | .19 | .60 |
| Vinyl Acetate | 9.14 | 8.85 | 8.95 | 8.84 | 8.84 | 8.12 | 8.28 | 8.72 | .37 | 1.17 |
| Bromodichloromethan | 9.87 | 10.09 | 10.29 | 9.87 | 9.87 | 10.06 | 9.87 | 9.99 | .16 | .52 |
| 1,2-Dichloropropane | 10.30 | 10.07 | 10.22 | 10.13 | 10.08 | 9.93 | 10.35 | 10.16 | .15 | .46 |
| cis-1,3-Dichloropro | 9.99 | 9.89 | 10.03 | 9.69 | 9.91 | 9.75 | 9.81 | 9.87 | .12 | .38 |
| Trichloroethene | 10.20 | 10.10 | 10.40 | 10.07 | 10.23 | 10.34 | 10.36 | 10.24 | .13 | .41 |
| Dibromochloromethan | 10.02 | 9.90 | 10.35 | 9.89 | 9.83 | 9.39 | 9.87 | 9.89 | .28 | .89 |
| 1,1,2-Trichloroetha | 11.29 | 11.02 | 11.24 | 10.99 | 11.02 | 10.65 | 10.69 | 10.99 | .24 | .77 |
| Benzene | 10.18 | 9.80 | 10.02 | 9.94 | 9.92 | 10.03 | 10.24 | 10.02 | .15 | .47 |
| Trans-1,3-Dichlorop | 10.19 | 9.78 | 9.96 | 9.86 | 9.94 | 9.51 | 9.66 | 9.85 | .22 | .69 |
| 2-Chloroethylvinyle | 10.25 | 9.84 | 10.28 | 9.76 | 9.84 | 9.10 | 9.74 | 9.83 | .39 | 1.24 |
| Bromoform | 9.69 | 9.32 | 9.82 | 9.46 | 9.51 | 8.83 | 9.17 | 9.40 | .33 | 1.04 |
| 2-Hexanone | 11.13 | 10.15 | 11.38 | 11.01 | 10.63 | 10.56 | 10.47 | 10.76 | .43 | 1.34 |
| 4-Methyl-2-Pentanon | 12.38 | 9.65 | 10.76 | 10.83 | 10.09 | 9.52 | 9.43 | 10.38 | 1.05 | 3.29 |
| Tetrachloroethene | 9.75 | 9.82 | 10.09 | 9.84 | 9.82 | 10.06 | 9.90 | 9.90 | .13 | .41 |
| 1,1,2,2-Tetrachloro | 11.05 | 11.12 | 12.01 | 12.46 | 12.47 | 10.17 | 11.65 | 11.56 | .84 | 2.64 |
| Toluene | 9.93 | 10.03 | 10.25 | 10.45 | 10.25 | 10.23 | 10.32 | 10.21 | .18 | .55 |
| Chlorobenzene | 10.01 | 10.11 | 10.28 | 10.11 | 9.98 | 10.28 | 10.19 | 10.14 | .12 | .38 |
| Ethylbenzene | 9.99 | 10.15 | 10.37 | 10.28 | 10.20 | 10.27 | 10.38 | 10.23 | .13 | .42 |
| Styrene | 10.46 | 10.39 | 10.41 | 10.34 | 10.50 | 10.45 | 10.63 | 10.45 | .10 | .30 |
| m&p-Xylenes | 20.61 | 20.59 | 20.97 | 20.95 | 20.70 | 21.16 | 21.15 | 20.88 | .24 | .76 |
| o-Xylene | 10.58 | 10.39 | 10.71 | 10.69 | 10.70 | 10.75 | 10.87 | 10.67 | .15 | .48 |
| 1,3-Dichlorobenzene | 10.01 | 9.91 | 9.95 | 10.04 | 10.14 | 9.63 | 9.81 | 9.93 | .17 | .53 |
| 1,4-Dichlorobenzene | 9.92 | 9.99 | 9.93 | 10.00 | 10.20 | 9.60 | 10.02 | 9.95 | .18 | .57 |
| 1,2-Dichlorobenzene | 9.88 | 9.96 | 9.98 | 9.89 | 10.12 | 9.57 | 9.78 | 9.88 | .17 | .55 |

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech
Lab Codex: 14622

Blank Matrix: Soil
Units: mg/kg

| Analyte | Practical Quant Limit | Batch Number | Method Blank Result |
|---|---|---|---|
| TPH | 20 | 395s | ND |

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA32092 MS

**Lab Name:** Veritech **Sample Matrix:** Soil

**Lab Code:** 14622

**% Solids for Sample:** 92

Concentration Units (mg/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| TPH-S | 75-125 | 937 | | 271 | | 725 | 92 | | C |
| Total CN | 75-125 | | | | | | | | |
| Phenols | 75-125 | | | | | | | | |
| Reac CN | 75-125 | | | | | | | | |
| Reac HS | 75-125 | | | | | | | | |
| Hex Cr | 75-125 | | | | | | | | |

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA32092 MSD

**Lab Name:** Veritech **Sample Matrix:** Soil

**Lab Code:** 14622

**% Solids for Sample:** 92

Concentration Units (mg/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| TPH-S | 75-125 | 891 | | 271 | | 725 | 86 | | C |
| Total CN | 75-125 | | | | | | | | |
| Phenols | 75-125 | | | | | | | | |
| Reac CN | 75-125 | | | | | | | | |
| Reac HS | 75-125 | | | | | | | | |
| Hex Cr | 75-125 | | | | | | | | |

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

AA32092 DUP

Lab Name: Veritech Sample Matrix: SOIL

Lab Code: 14622

% Solids for Sample: 92

Concentration Units (mg/L or mg/kg dry weight): mg/kg

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|
| TPH-S | +/-20% | 270 | | 260 | | 4.65 | | C |
| Total CN | +/-20% | | | | | | | |
| Phenols | +/-20% | | | | | | | |
| Reac CN | +/-20% | | | | | | | |
| Reac HS | +/-20% | | | | | | | |
| Hex Cr | +/-20% | | | | | | | |

FORM VI - IN ILM02.0

analysis TPH SOILS Q.C. DATA
BATCH 395
DATE: 27-Jul-95
ANALYST: JK

| | THEORETICAL VALUE PPM | RESULT PPM | % REC. |
|---|---|---|---|
| CK STD | 10 | 10.33 | 103% |
| MBS | 666.7 | 671.39 | 101% |
| MS #1 | 724.64 | 937.08 | 92% |
| MS #2 | 724.64 | 891.41 | 86% |
| SAMPLE | | 271.07 | RPD |
| SAMPLE DUP | | 258.76 | 4.65% |

| SAMPLE # | SOLIDS FACTOR | SAMPLE WEIGHT | MG CALC. FROM CURVE | DILUT. FACTOR | TPH (PPM) | MDL DRY WT. |
|---|---|---|---|---|---|---|
| 10mg 7-25 | 1.00 | 1000.0 | 10.3257 | 1.0 | 10.33 | |
| MBS | 1.00 | 15.0 | 10.0708 | 1.0 | 671.39 | 20.00 |
| DUP 32092 | 0.92 | 15.0 | 3.5709 | 1.0 | 258.76 | 21.74 |
| MS 32092 | 0.92 | 15.0 | 12.9317 | 1.0 | 937.08 | 21.74 |
| MSD 32092 | 0.92 | 15.0 | 12.3014 | 1.0 | 891.41 | 21.74 |
| MB 7-24 | 1.00 | 15.0 | 0.1729 | 1.0 | 11.53 | 20.00 |
| 32091 | 0.92 | 15.0 | 5.6946 | 1.0 | 412.65 | 21.74 |
| 32092 | 0.92 | 15.0 | 3.7408 | 1.0 | 271.07 | 21.74 |
| MB 7-25 | 1.00 | 15.0 | 0.2195 | 1.0 | 14.63 | 20.00 |
| 32093 | 0.94 | 15.0 | 0.3921 | 1.0 | 27.81 | 21.28 |
| 32094 | 0.94 | 15.0 | 1.3430 | 1.0 | 95.25 | 21.28 |
| 32095 | 0.94 | 15.0 | 1.4526 | 1.0 | 103.02 | 21.28 |
| 32096 | 0.92 | 15.0 | 0.4798 | 1.0 | 34.77 | 21.74 |
| 32097 | 0.93 | 15.0 | 2.5323 | 1.0 | 181.53 | 21.51 |
| 32098 | 0.93 | 15.0 | 1.2800 | 1.0 | 91.76 | 21.51 |
| 32099 | 0.94 | 15.0 | 0.4826 | 1.0 | 34.23 | 21.28 |
| 32100 | 0.88 | 15.0 | 2.3843 | 1.0 | 180.63 | 22.73 |
| 32101 | 0.90 | 15.0 | 16.9051 | 1.0 | 1252.23 | 22.22 |
| 32117 | 0.78 | 15.0 | 11.4821 | 1.0 | 981.37 | 25.64 |
| 32118 | 0.73 | 15.0 | 20.0537 | 1.0 | 1831.38 | 27.40 |
| 32119 | 0.73 | 15.0 | 0.3757 | 1.0 | 34.31 | 27.40 |
| 32120 | 0.69 | 15.0 | 0.6854 | 1.0 | 66.22 | 28.99 |
| 32121 | 0.73 | 15.0 | 0.3154 | 1.0 | 28.81 | 27.40 |
| 32122 | 0.76 | 15.0 | 0.3209 | 1.0 | 28.15 | 26.32 |
| 32123 | 0.78 | 15.0 | 0.3346 | 1.0 | 28.60 | 25.64 |
| MB 7-26 | 1.00 | 15.0 | 0.2935 | 1.0 | 19.57 | 20.00 |
| 10mg 7-26 | 1.00 | 1000.0 | 10.2435 | 1.0 | 10.24 | 20.00 |
| 32132 | 0.87 | 15.0 | 0.5456 | 1.0 | 41.81 | 22.99 |
| MB 7-27 | 1.00 | 15.0 | 0.2688 | 1.0 | 17.92 | 20.00 |
| 10mg 7-~~26~~ 27 | 1.00 | 1000.0 | 10.3613 | 1.0 | 10.36 | 20.00 |
| 32139 Sa 8/11/95 | 0.84 | 15.0 | 10.5695 | 5.0 | 4194.26 | 119.05 |

JDMA INAF 7/27/95 JS

JK 7/27/95

TPH LINEAR REGRESSION
TPH_1S

DATE 7-13-95
ANALYST JS

| STDS (MG) | ABS. |
|---|---|
| 0 | 0.0000 |
| 2.5 | 0.0944 |
| 5 | 0.1832 |
| 10 | 0.3628 |
| 15 | 0.5355 |
| 20 | 0.7387 |

Regression Output:

| | |
|---|---|
| Constant | -0.00021 |
| Std Err of Y Est | 0.007656 |
| R Squared | 0.999407 |
| No. of Observations | 6 |
| Degrees of Freedom | 4 |
| X Coefficient(s) | 0.036492 |
| Std Err of Coef. | 0.000444 |

Lot # W-95-TPH-1664

**********

| STDS (MG) | ABS. | PPM | DIFF |
|---|---|---|---|
| 0 | 0.0000 | 0.0058 | -0.0058 |
| 2.5 | 0.0944 | 2.5926 | -0.0926 |
| 5 | 0.1832 | 5.0260 | -0.0260 |
| 10 | 0.3628 | 9.9475 | 0.0525 |
| 15 | 0.5355 | 14.6800 | 0.3200 |
| 20 | 0.7387 | 20.2482 | -0.2482 |

**********

BATCH 395

| SAMPLE | ABS. | MG |
|---|---|---|
| 10mg 7-25 | 0.3766 | 10.3257 |
| MBS | 0.3673 | 10.0708 |
| DUP 32092 | 0.1301 | 3.5709 |
| MS 32092 | 0.4717 | 12.9317 |
| MSD 32092 | 0.4487 | 12.3014 |
| MB 7-24 | 0.0061 | 0.1729 |
| 32091 | 0.2076 | 5.6946 |
| 32092 | 0.1363 | 3.7408 |
| MB 7-25 | 0.0078 | 0.2195 |
| 32093 | 0.0141 | 0.3921 |
| 32094 | 0.0488 | 1.3430 |
| 32095 | 0.0528 | 1.4526 |
| 32096 | 0.0173 | 0.4798 |
| 32097 | 0.0922 | 2.5323 |
| 32098 | 0.0465 | 1.2800 |
| 32099 | 0.0174 | 0.4826 |
| 32100 | 0.0868 | 2.3843 |
| 32101 | 0.6167 | 16.9051 |
| 32117 | 0.4188 | 11.4821 |
| 32118 | 0.7316 | 20.0537 |
| 32119 | 0.0135 | 0.3757 |
| 32120 | 0.0248 | 0.6854 |
| 32121 | 0.0113 | 0.3154 |
| 32122 | 0.0115 | 0.3209 |
| 32123 | 0.0120 | 0.3346 |
| MB 7-26 | 0.0105 | 0.2935 |
| 10mg 7-26 | 0.3736 | 10.2435 |
| 32132 | 0.0197 | 0.5456 |

JK 7/27/95

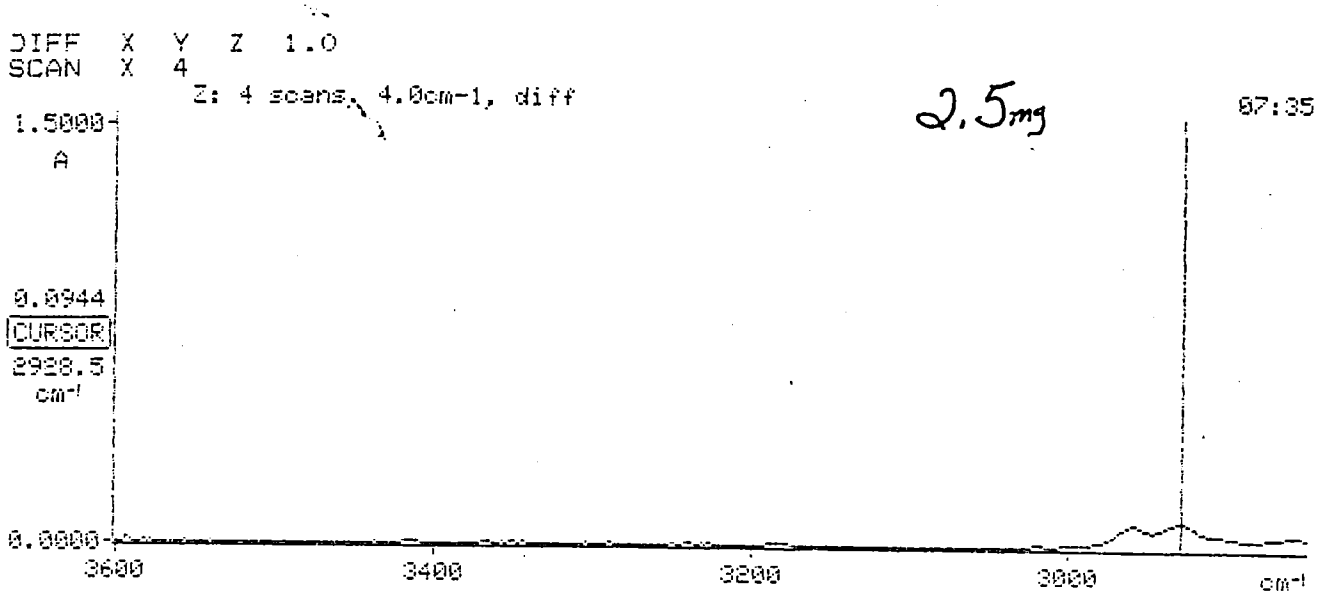
DATA INPUT 7/27/95 JZ

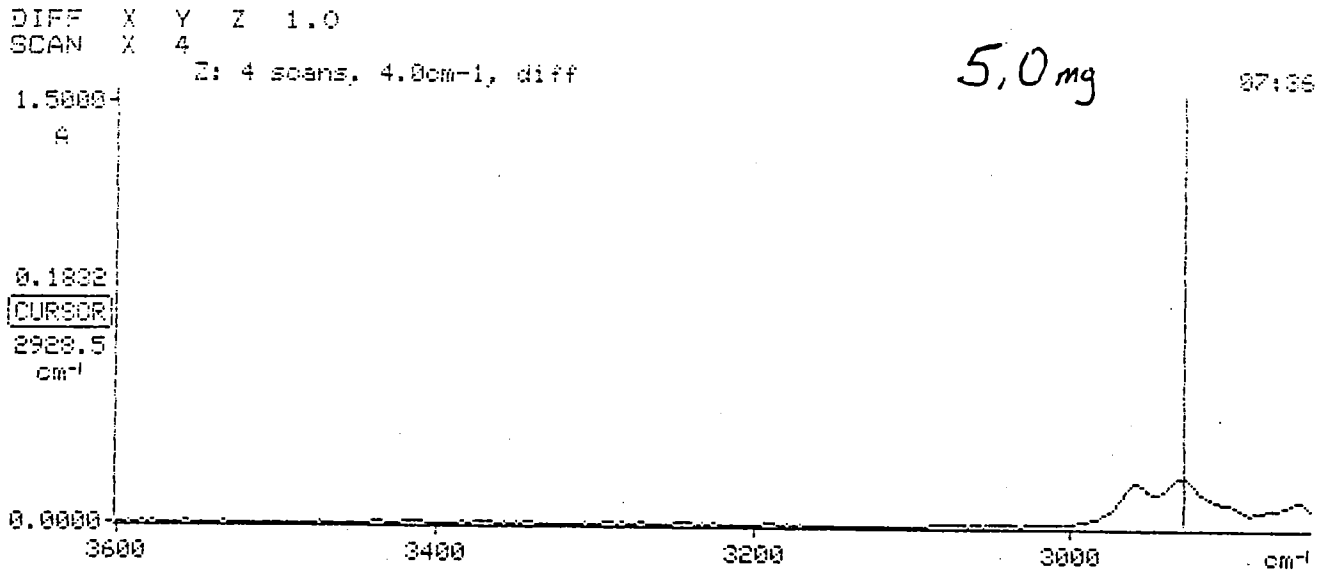
| | | |
|---|---|---|
| MB 7-27 | 0.0096 | 0.2688 |
| 10mg 7-26 27 SA slag | 0.3779 | 10.3613 |
| 32139 | 0.3855 | 10.5695 |

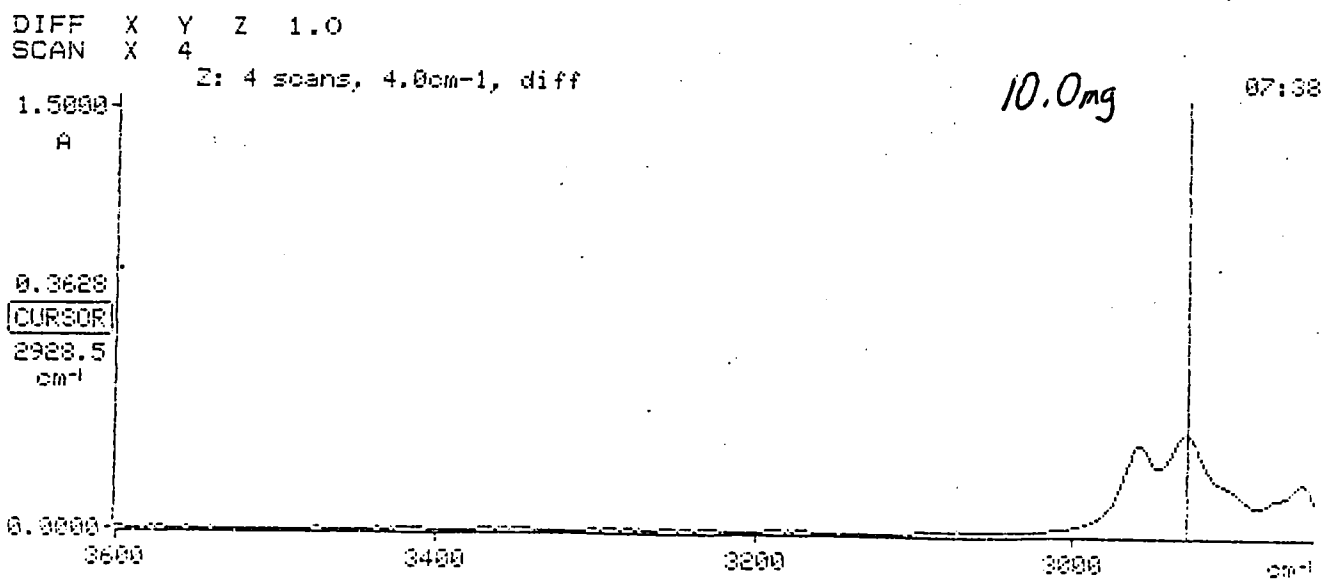
JK 7/27/95

JDMA INAT 7/27/95

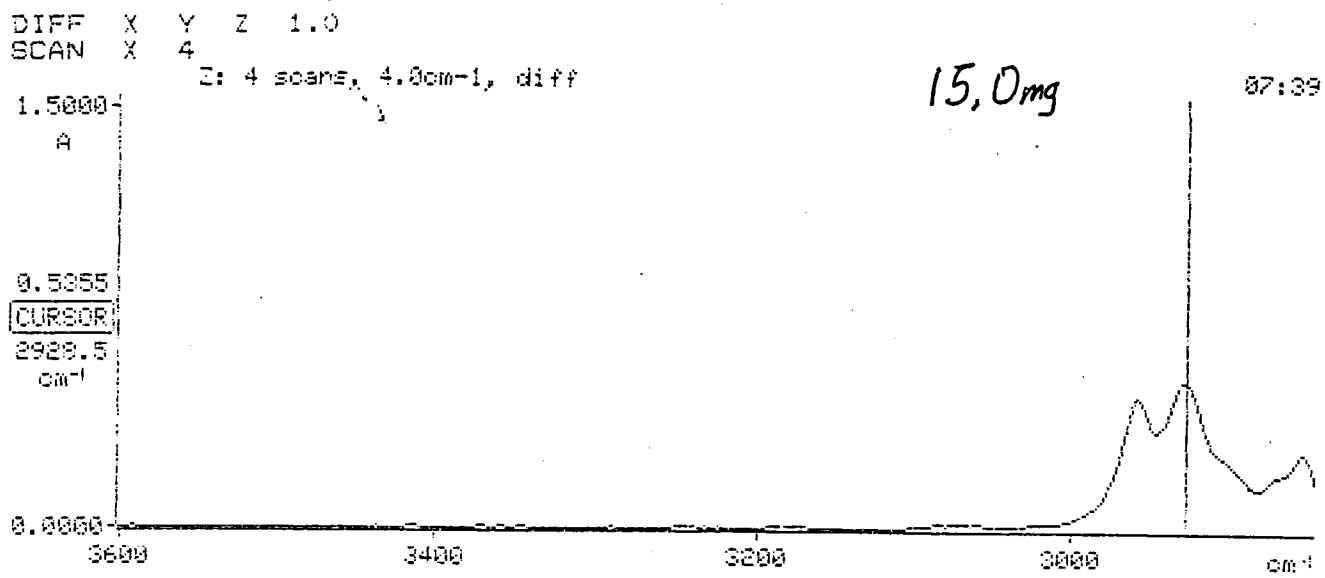
TPH Curve
7/13/95 JS

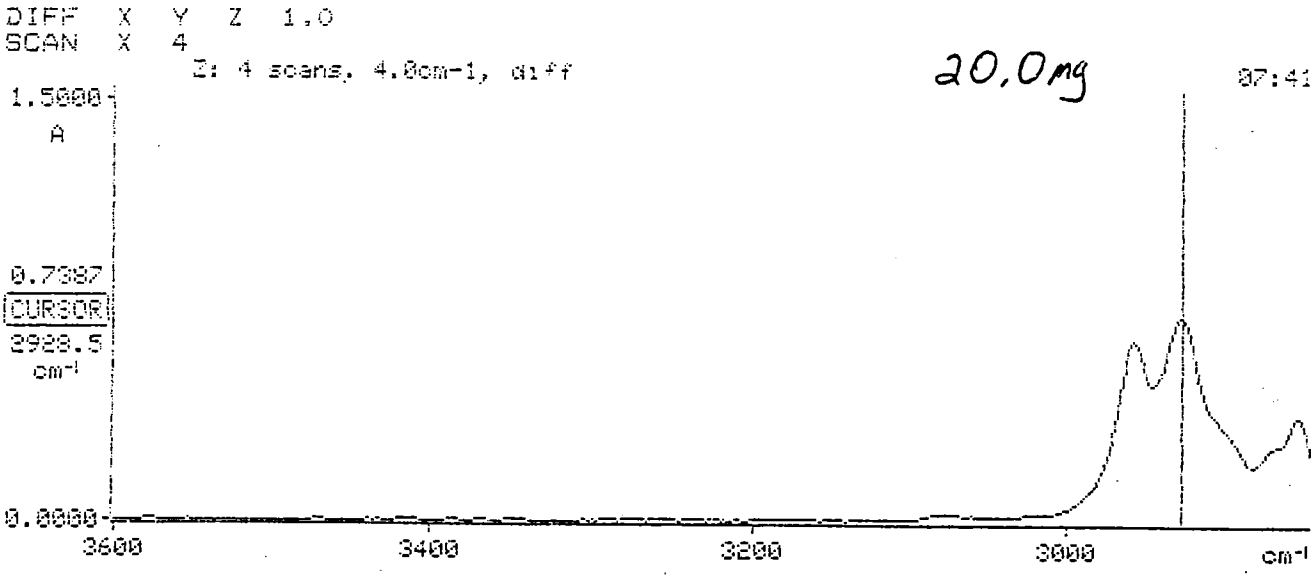


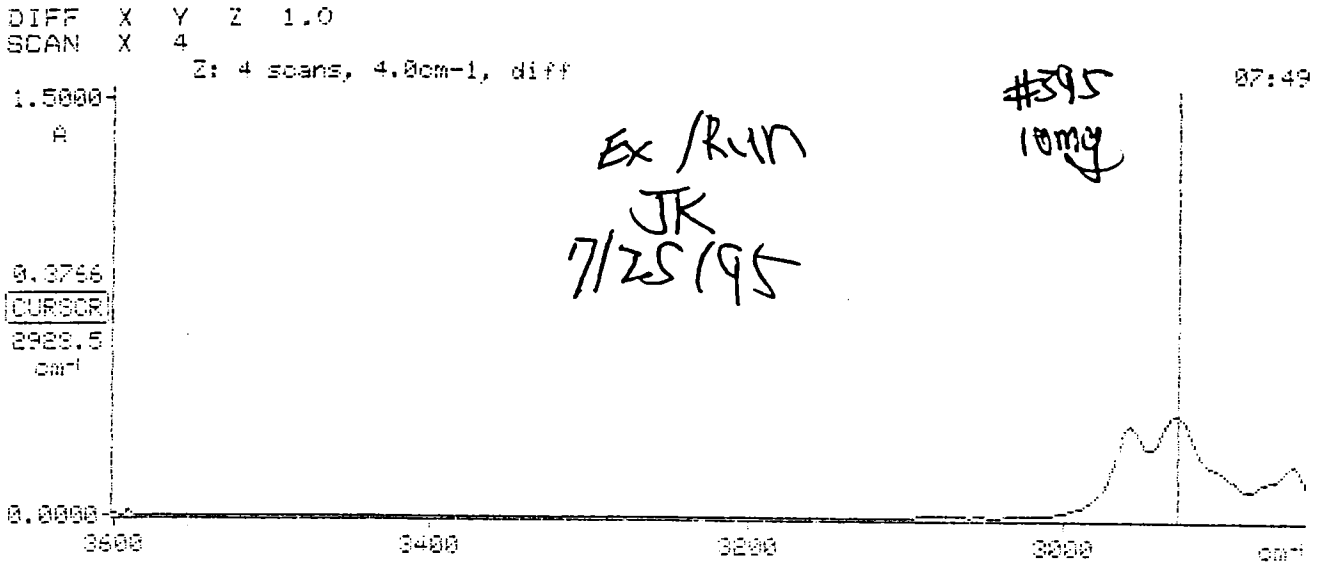



TPH Curve
7/13/95 JS

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A
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CURSOR
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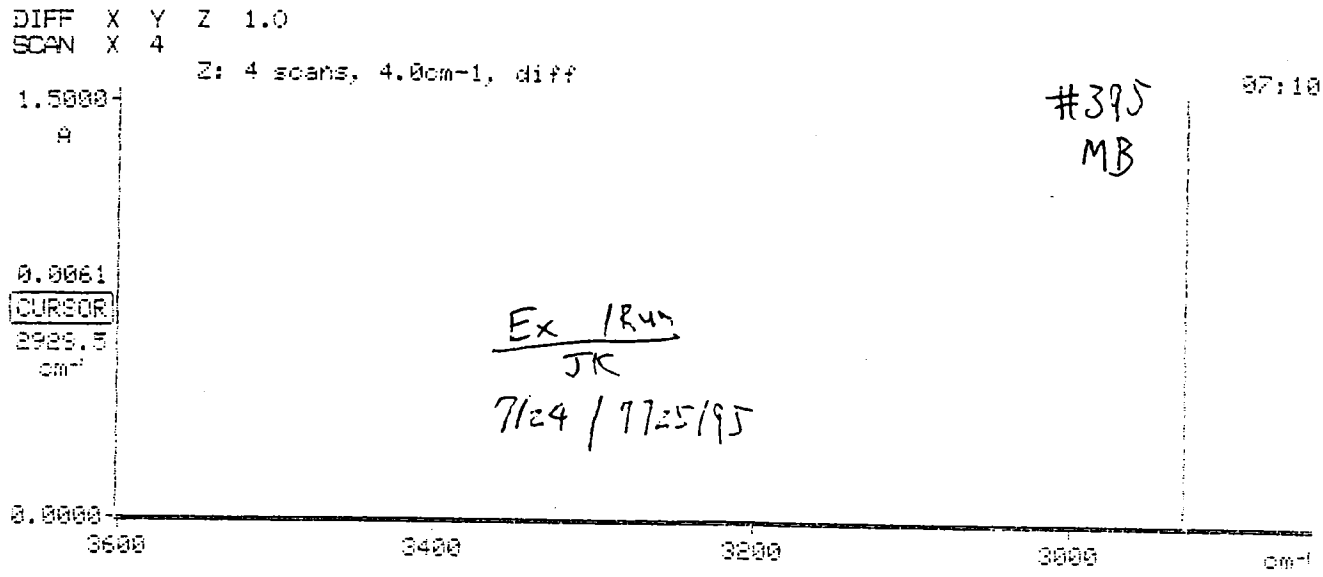
0.0000
3600
3400
3200
3000
cm-1
Ex /Run
JK
7/25/95
#395
10mg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SCAN X 4
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CURSOR
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cm-1
0.0000
3600
3400
3200
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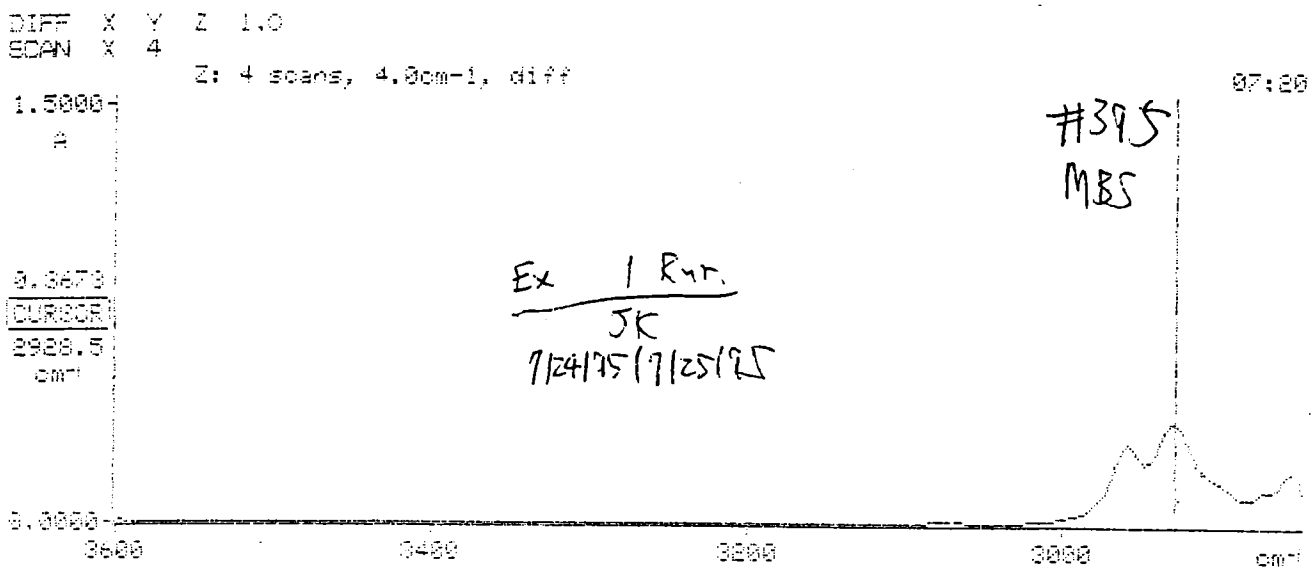
cm-1
#395
MB
Ex IRun
JK
7/24 / 7/25/95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CURSOR
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cm-1
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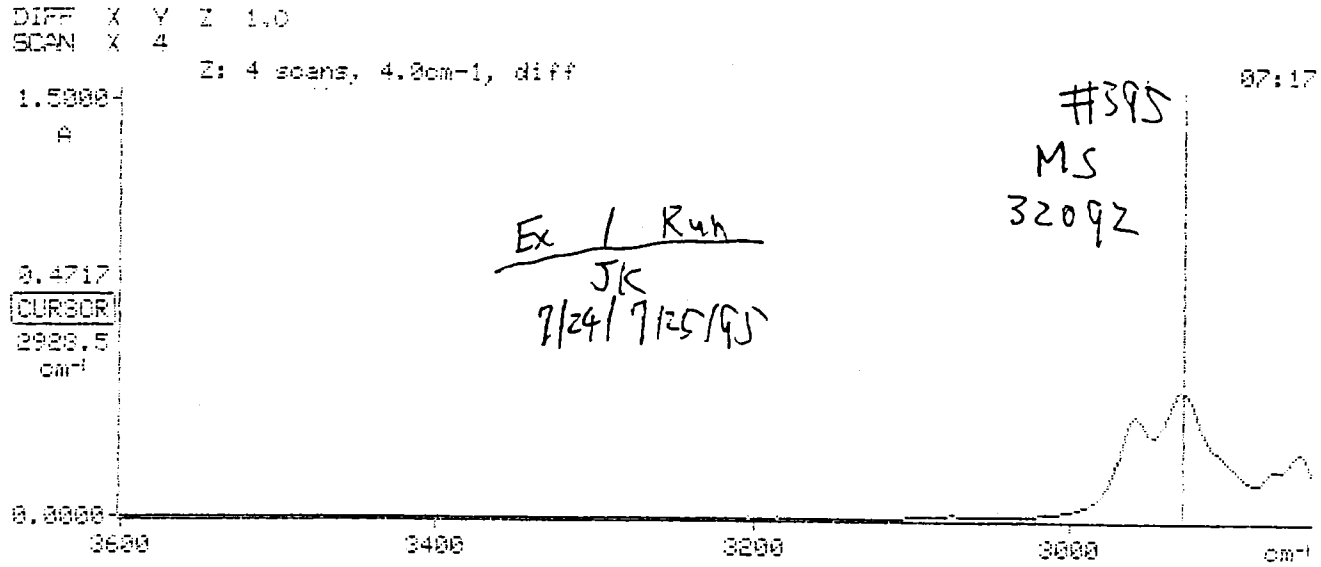
3600
3400
3200
3000
cm-1
#395
MBS
Ex 1 Run.
JK
7/24/95 7/25/95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SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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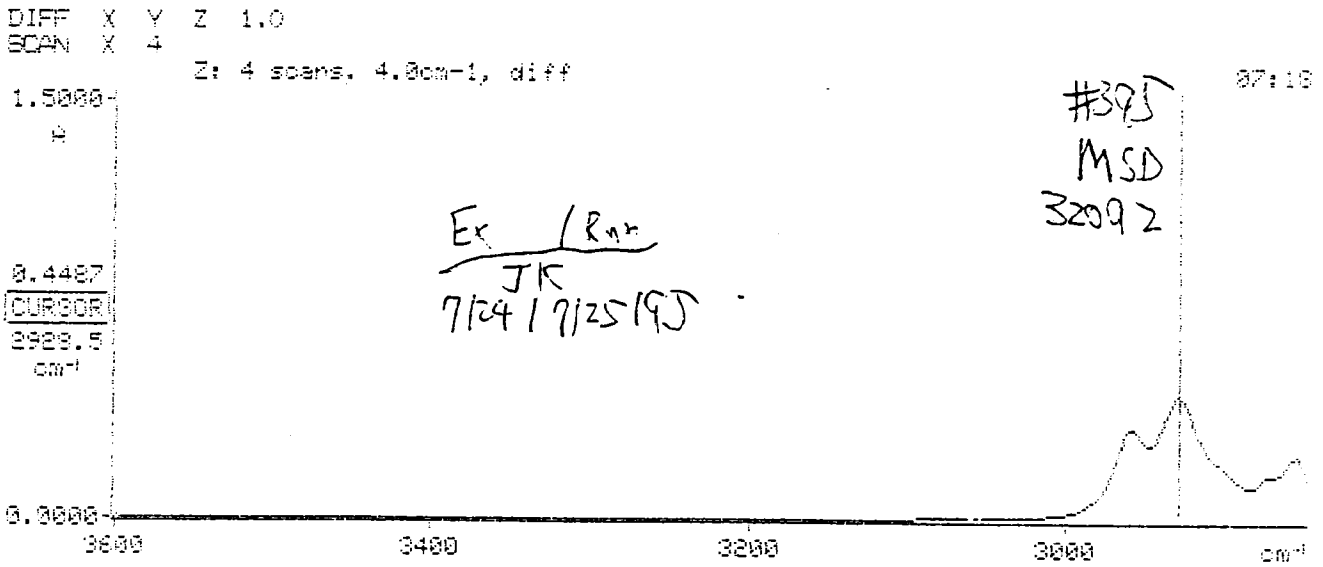
1.5000
A
0.4717
CURSOR
2923.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
#395
MS
32092
Ex / Run
JK
7/24/7/25/95


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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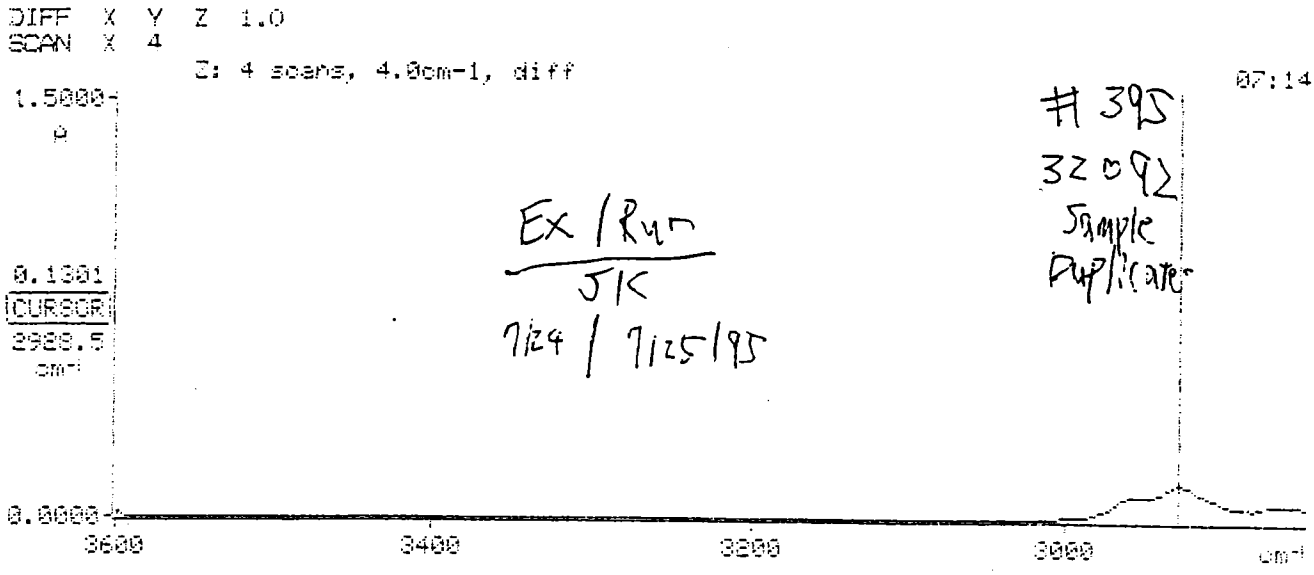
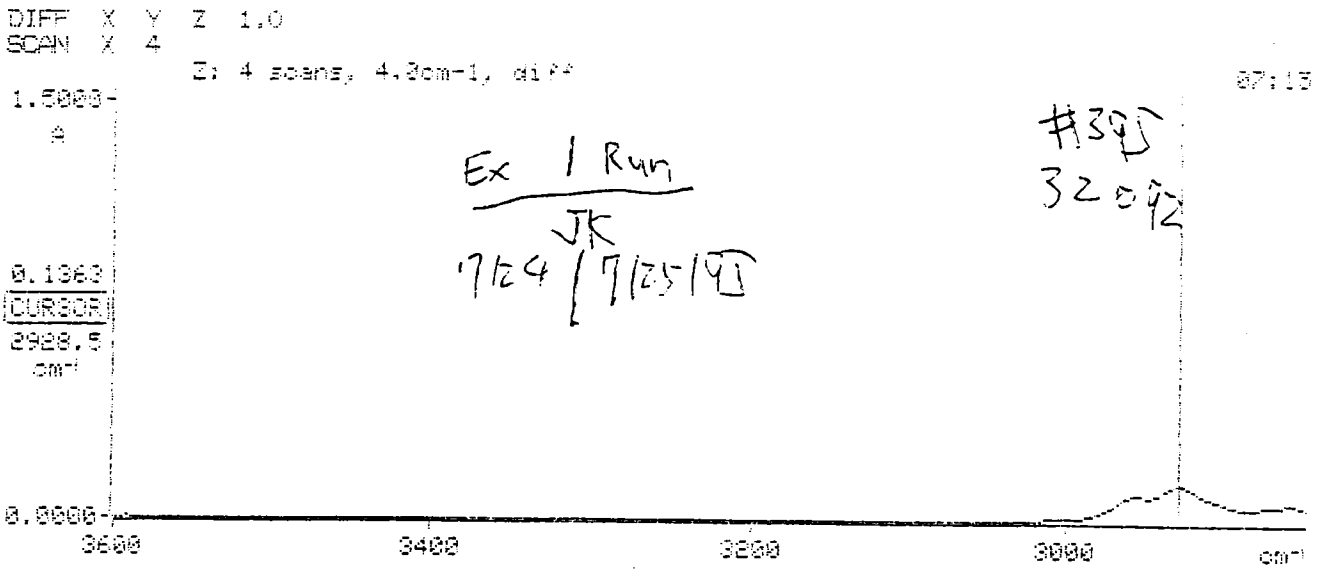
1.5000
A
0.4487
CURSOR
2923.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
#395
MSD
32092
Ex / Run
JK
7/24/7/25/95


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
07:14
1.5000
A
0.1301
CURSOR
2988.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
Ex 1 Run
JK
7/24 / 7/25/95
#395
32092
Sample
Duplicate


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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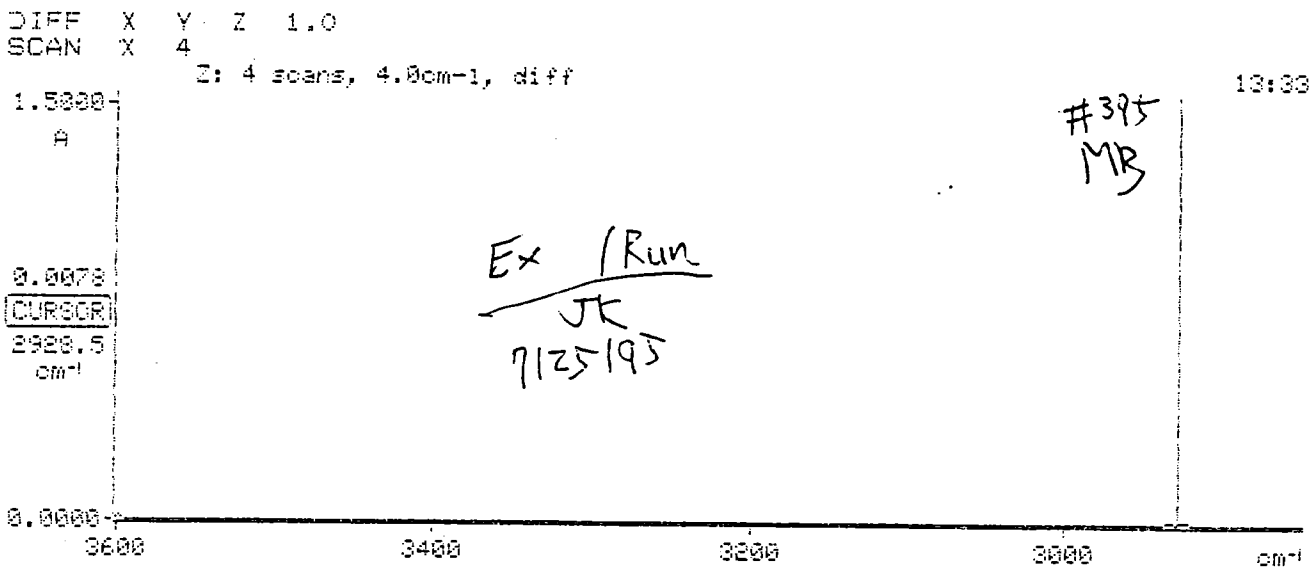
1.5000
A
0.1363
CURSOR
2988.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
Ex 1 Run
JK
7/24 / 7/25/95
#395
32092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SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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1.5000
A
0.0078
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
#395
MB
Ex 1 Run
JK
7/25/95