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ADDITIONAL SOIL EXCAVATION REPORT

**New Grange Properties - Warwick, NY
April 2002**

Prepared for:

New Grange Properties, Inc.
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ADDITIONAL SOIL EXCAVATION REPORT New Grange Properties, Inc. - Warwick, NY

EXECUTIVE SUMMARY

The New Grange Properties site is located at 26 Railroad Avenue in Warwick, NY. The building was previously used as a school in the 1920s, a hotel kitchen/laundry service facility up to the 1940's, the Town of Warwick Village offices from 1928 until 1942 and among others as an automobile parts supply store in the 1960s. On January 6, 1998 the property was acquired by New Grange Properties. During the renovation of the building's foundation, three underground storage tanks (USTs) were discovered in the courtyard area on Railroad Ave. During the further investigation of the courtyard a small holding tank was also identified and removed.

The three heating-oil USTs were excavated and removed by ABOVE Environmental Services in October 1998. Stained soils were identified by ABOVE and impacted material was stockpiled then transported off-site for disposal. The identification of a release from at least one of these USTs required that the release be reported to the New York State Department of Environmental Conservation (NYSDEC), and the NYSDEC assigned spill number 98-09242 to the site. Post excavation soil sampling indicated that additional soil was present in the courtyard at concentrations above the NYSDEC soil clean-up standards. A Workplan for a subsurface investigation was proposed to the NYSDEC by Geovation Consultants, Inc. to identify the additional impacted soil and evaluate ground water quality beneath the courtyard. The Workplan was approved by the NYSDEC in December 1999. Geovation completed the subsurface investigation, and a report on the results of this investigation was submitted to the NYSDEC in July 2000. Based on the results of this investigation, soil and ground water in the courtyard had been impacted by petroleum hydrocarbons and the chlorinated solvent, PCE, above the NYSDEC standards.

As part of the investigation performed by Geovation, a small holding tank was identified in the courtyard. The holding tank was removed by ABOVE Environmental Services in October 2000. Obviously impacted soil was stockpiled and transported off-site for disposal. Based on the review of the *July 2000 Subsurface Investigation Report*, in October 2000, the NYSDEC required the remediation of specified soils in the courtyard.

Based on the NYSDEC's requirements and the post excavation sampling performed at the time of the holding tank removal, New Grange Properties and Geovation made preparations to remove additional impacted soil from the courtyard. The removal of the additional soil was performed in November 2000. Impacted materials were excavated and transported off-site for disposal. Post excavation soil sampling indicated that one sample (SS-55) of material remaining in the courtyard exceeded the soil clean-up objectives for two parameters, benzo(a)pyrene and benzo(a)anthracene. Subsequently during renovation of the courtyard area additional soil was encountered which exhibited a petroleum odor. This soil was also stockpiled, sampled and transported off-site for disposal.

Three separate soil excavation events have resulted in more than 242 tons of soil being removed and replaced in the courtyard area. Based on the volume of soil already removed from the site and the results of the post excavation sampling, Geovation proposes natural attenuation to remediate the limited volume of soil in the courtyard which currently exceeds the NYSDEC soil clean-up criteria. Ground water sampling performed after the soil excavation was completed show that site groundwater quality does not currently meet the NYSDEC drinking water criteria and ground water remediation may be required.

ADDITIONAL SOIL EXCAVATION REPORT
New Grange Properties, Inc. - Warwick, NY

INTRODUCTION

Geovation Consultants, Inc. (Geovation) was retained by New Grange Properties, Inc. (New Grange) to coordinate; (i) the investigation of a Ground Penetrating Radar target identified at the site, (ii) the sampling of soil excavation limits as required by the New York State Department of Environmental Conservation (NYSDEC) and (iii) perform post excavation ground water sampling. The soils identified by the NYSDEC were those previously reported to be impacted by petroleum hydrocarbons and/or chlorinated solvents in *Geovation's July 2000, Subsurface Investigation Report*.

The New Grange site is located at 26 Railroad Avenue in Warwick, NY (Figure 1). The building was constructed circa 1860. Review of historic Sanborn Fire Insurance Maps indicate that this site was previously used as a hotel kitchen/laundry service facility up to the 1940's and an automobile parts supply store in the 1960s. In addition, historical information indicates that the site was also utilized as a school in the 1920s and the Town of Warwick village offices from 1928 until 1942. On January 6, 1998 New Grange acquired the above referenced site. During the renovation of the building's foundation three underground storage tanks (USTs) were discovered in the courtyard area on Railroad Ave. The former locations of the UST are shown on Figure 2.

Subsequently New Grange contracted ABOVE Environmental Services to remove the USTs. One 550 gallon UST and one 1,000 gallon UST were removed on 23 October 1998. The third 550 gallon UST was removed on 5 August 1999. Contaminated soils were excavated from the perimeter of the first 550 gallon UST locations and disposed of off-site (see 3 August 1999 ABOVE Environmental Report). The tanks were reported to contained heating oil for on-site consumption. The identification of a release from at least one of these tanks required that the release be reported to the NYSDEC. The NYSDEC assigned spill number 98-09242 to the site and required that an investigation be performed to evaluate the extent of the release.

Geovation prepared a Workplan for the investigation of the site, which was approved by the NYSDEC in December 1999. A GPR survey of the court yard was performed by Geovation on 9 January 2000 to select locations for the installation of soil borings and ground water monitoring wells. Based on the GPR survey and site configuration, Geovation designed a soil and ground water investigation. Soil Sampling and well installation was performed on 1 and 2 February 2000. Thirteen boring were advanced in the area of the courtyard to the approximate depth of the water table. Three of the borings were completed as ground water monitoring wells. A fourth well was installed at an upgradient location.

The results of the analysis of the soil samples indicated that soil did not meet NYSDEC soil clean-up criteria in the area down gradient, from where the previous excavation had occurred,. In addition, the chlorinated hydrocarbon tetrachloroethene (PCE) was identified in soil and ground water in the area. Based on the findings of this report, in October 2000, the NYSDEC required the remediation of soil in the vicinity of MW-2 and MW-3.

FIELD ACTIVITIES

Ground-Penetrating Radar

The data collected during the 9 January 2000 GPR survey was re-evaluated for indications of additional USTs present in the courtyard area. The data was reprocessed and a low quality GPR target was identified in the northwestern portion of the courtyard. The location of the low-grade GPR target is shown on Figure 3. To resolve the nature of this target, excavation activities were performed.

GPR Target Investigation

GPR target investigation activities were performed on 6 October 2000 by ABOVE Environmental Services. Excavation activities performed at the location shown on figure 3 revealed the presence of a vertically oriented cylindrical object approximately 3 feet in diameter and 4 feet tall. The cylinder was severely corroded, constructed of riveted steel and it contained canvas and wooden partitions which were apparently oriented in both horizontal and vertical planes. For the purposes of this report the cylindrical object has been termed a holding tank, as no intentional means of drainage was observed in the object.

A vertical pipe which terminated about 1.5 ft below the ground surface was connected to the top of the cylinder and a pair of pipes were traced from this object back to the building. Photo-documentation of the object is provided in Appendix A. Although the pipes were traced to the building they were not connected to anything within the building and were not observed to penetrate the interior walls of the structure. The building is currently heated by natural gas.

The soil located in the vicinity of the cylinder exhibited a weathered petroleum odor and this soil was stockpiled to the south of the excavation. Obviously impacted soil was removed and the excavation was enlarged to the south, east and west until the soils no longer appeared impacted. To the north the excavation was enlarged until it intersected Railroad Avenue. On 7 October, the piping runs leading back to the building were also investigated. The pipes were removed and the soils underlying the piping runs was not obviously stained and the did not exhibit petroleum or other odors.

During the removal of the GPR target approximately 625 gallons of liquid were removed from the cylinder and the excavation for transportation off-site and proper disposal. A waste disposal manifest for the disposal of this liquid is provided in Appendix B.

Prior to backfilling the excavation the edges were lined with plastic to demarcate the extent of the excavation. Clean bank-run backfill material was utilized to fill in the excavation up to grade. Excavated material was stockpiled within the courtyard and subsequently transported off-site for disposal/recycling. A certificate of material disposal for 94.79 tons of soil is provided in Appendix B.

Prior to backfilling the excavation, post excavation soil sampling was performed at the locations shown on Figure 4. The results of the laboratory analysis of these samples is summarized on Table 1. Soil sample # 2 was collected on the edge of excavation where it intersected the pipes

which lead toward the building. Soil samples were collected from the excavation sidewalls by Geovation personnel using dedicated nitrile gloves. The samples were immediately transferred into laboratory provided glassware and labeled. The samples were then placed into a cooler with ice and subsequently transported under chain-of-custody to Integrated Analytical Laboratories, Inc. (NYSDOH Certification No. 11402) for analysis of VOCs via EPA Method 8260 and semi-volatile organic compounds via EPA Method 8270 base neutral fraction (BNs).

Based on the results of this post-excavation sampling and soil boring program previously completed at the site (Geovation's July 2000, Subsurface Investigation Report), New Grange Properties and Geovation coordinated additional soil excavation and disposal activities.

November 2000 Addition Soil Excavation and Removal

Based on the soil sampling described above and telephone discussions with the NYSDEC case manager, the soils in the area in between where USTs were originally excavated, the GPR target investigation and Railroad Ave. did not meet the NYSDEC soil cleanup objectives and therefore additional soil excavation and removal was performed. The area of the November 2000 additional soil excavation is shown on figure 4. The extent of the excavation was limited in the eastern direction due to the presence of an active buried 440V electric service cable (Figure 4).

On 20 November 2000, this area was excavated down to approximately 5 feet below the ground surface. The excavated soil was directly loaded into trucks provided by Mount Hope Recycling Center for transportation to their treatment facility in Mount Hope, New Jersey. Approximately 135 tons of additional material was excavated and remediated off-site. A certificate of soil remediation for this material is provided in Appendix B. Post excavation soil samples were collected at the locations shown on Figure 4 and the results of the laboratory analysis of these samples are summarized on Table 2.

Soil samples were collected from the excavation sidewalls by Geovation personnel using dedicated nitrile gloves and transferred into laboratory provided glassware. The samples were then placed into a cooler with ice and transported, under chain-of-custody, to Integrated Analytical Laboratories, Inc. (NYSDOH Certification No. 11402) for analysis of VOCs via EPA Method 8260 and semi-volatile organic compounds via EPA Method 8270 base neutral fraction (BNs).

Courtyard Renovation Soil Removal

During the renovation of the court-yard area, soil was encountered which exhibited a petroleum odor. This soil was stockpiled in the southern portion of the court-yard and sampled for waste characterization and disposal. Subsequently this 11.94 tons of material was transported off-site for disposal at Mt. Hope Rock Products, Inc. facility in Mt. Hope NJ. An acceptance certificate for this material is provided in Appendix B.

Renovation of the courtyard area to-date has consisted of regrading to control run-off, installation of a cement surface over approximately 80% of the court-yard and the establishment of landscape vegetation, flowerbeds and a water fountain. This courtyard area within the Village of Warwick is now a pleasant approach, off the sidewalk, to four small storefronts and a restaurant. The covering (capping) and landscaping of the courtyard area makes additional soil removal

efforts costly considering the volume of soil already removed from the courtyard and limited degree to which the remaining impacted soil exceeds NYSDEC TOGs 4046 soil cleanup guidelines.

Ground Water Sampling

On 01 May 2001, approximately five months after the removal of impacted soils from the site, ground water samples were collected from monitor wells MW-1, MW-2, MW-3 and MW-4. The wells were sampled using a dedicated Waterra™ samplers and low-flow sampling techniques. Prior to sampling, each well was purged of at least one half of a well volume of ground water as the purge water was monitored until three consistent readings of specific conductivity were obtained. The ground water samples were collected directly into laboratory-supplied containers and placed into a cooler with ice. The samples were submitted to Integrated Analytical Laboratories, Inc. (NYSDOH Certification No. 11402) for analysis for VOCs via EPA Method 624 with a library search.

RESULTS

GPR Target Investigation.

As indicated on Table 1, only one soil sample collected during the GPR target investigation exceeded New York State Department of Environmental Conservation (NYSDEC) Technical Administrative Guidance Memorandum (TAGM) soil clean-up objectives. This sample (#6) was collected from the bottom of the excavation near Railroad Ave (see Figure 4) and only exceeds the soil clean-up objectives for one parameter, benzo(a)pyrene, by a small amount. The concentration of VOCs and SVOCs reported in each of the post excavation sidewall samples are below the New York State Department of Environmental Conservation (NYSDEC) Technical Administrative Guidance Memorandum (TAGM) soil clean-up objectives.

November 2000 Additional Soil Excavation.

The results of the November 2000 additional soil excavation are provided on table 2. As indicated on Table 2, only one soil sample collected during the additional soil excavation exceeded NYSDEC TAGM 4046 soil clean-up objectives. This sample (SS-55) was collected from the excavation sidewall in the south west portion of the excavation (see Figure 4) and only exceeds the soil clean-up objectives for two parameters, benzo(a)pyrene and benzo(a)anthracene. The concentrations of these parameters are not significantly above the soil clean-up objectives.

Courtyard Renovation Soil Removal.

The results of the waste classification sampling performed on additional soils removed during courtyard renovation activities are provided in Appendix -C. The stockpiled soil was reported to contain total xylenes at 39.1 ug/kg, lead at a concentration of 0.679 mg/l (TCLP protocol), and total petroleum hydrocarbons of 26,000 mg/kg. Comparison of these results with the NYSDEC TAGM 4046 soil clean-up objectives for volatile organic compounds indicates that additional soil remediation is not required in this area.

Ground Water Sampling Results

The analytical results from the ground water samples obtained from monitor well MW-1, MW-2, MW-3, and MW-4 are summarized in Table 3 and copies of the laboratory's analytical results are provided as Appendix E.

Review of Table 3 indicates that site ground water has been impacted above the NYSDEC TOGS ground water standards by volatile organic compounds (VOCs). Monitor well MW-1 was only reported to contain one VOC compound above NYSDEC regulatory standards and up-gradient monitor well MW-4 did not exhibit the presence of BNs or VOCs. The inferred extent of ground water which has been impacted above the NYSDEC regulatory standards by BN and VOC compounds is illustrated in Figure 5.

SENSITIVE RECEPTOR SURVEY

Private/Municipal Wells

Geovation contacted the Orange County Department of Health and the Town of Warwick Department of Public Works. In addition, municipal and domestic well information was provided by Environmental Data Resources, Inc. (EDR). Based on this information, municipal or domestic wells are not located within ½ mile of the site. The Town of Warwick Public Water Supply Facility was indicated by EDR to be located within 1/8 mile of the site; however, discussion with the Town DPW indicated that the town wells were located within Memorial Park approximately ½ mile to the east of the site.

The database record search performed by the Orange County Department of Health indicated that the Warwick Town wells located within Memorial Park were the only public water supply wells located within one mile of the site. Conversations with the Town of Warwick DPW indicated that in addition to the Town Wells #1 and #2 located within Memorial Park, the town also operates another well (Well #3) located approximately 1.25 miles to the east of the site.

In addition to the Town of Warwick Public Supply Wells #1, #2 and #3, the EDR report indicated an additional 7 wells are located between ½ and one mile from the site. The EDR report included two domestic wells located to the east, two water supply wells for the Chateau Hathorn Restaurant/Inn located approximately one mile to the south west, and one well each located to the southeast, east southeast and northeast respectively. Information on these wells could not be supported by the Orange County Department of Health or the Town of Warwick DPW.

Waterways

Waywayanda Creek is located down gradient of the New Grange site, approximately 1/8 mile to the north. Its flow is west-south west towards New Milford, NJ along a topographic low. Wawayanda Creek is mainly fed by two small bodies of water; Wickham Lake, and Warwick Reservoir. Each of these lakes are drained by an unnamed stream which join together

approximately 1/4 mile east-north east of the site, near the border of Memorial Park. Another intermittent stream also feeds into the Wawayanda creek from the north within a 1/2 to 1 mile radius of the site also on the border of Memorial Park. Wawayanda Creek can be classified as a potential receptor because it is located down gradient of the site within the 1/4 to 1/2 mile radius search requested by the NYSDEC. Streams typically serve as dividing lines of water table ground water flow. In this respect Waywayanda creek is also the likely limit of down gradient ground water flow from the site.

Building/Building Foundations

The New Grange Property is located near the center of the Village of Warwick, and the surrounding area largely encompasses historic buildings with basements about 8 to 10 feet below the ground surface (bgs). However, only two buildings are located down gradient of the site, between it and Waywayanda Creek. Each of these building were observed to be built on slab construction and did not appear to have a basement.

In addition, given the site history, observations made at the time of the UST's removal from the site, and weathered chemical make-up of the subsurface impacts, the release from the UST system appears to be very old. Given that the USTs have been removed, source area soils have been removed, the limited extent of ground water impacts, the historic nature of the release, and the absence of existing complaints of hydrocarbon odors in Village basements, building foundations and basements are not currently considered potential receptors.

Strom Sewer/Sanitary Sewer Systems

The Village of Warwick has a separate storm/sanitary sewer system. It consists of two main trunk lines, one for the sanitary which ties into each building with laterals, and the second main which ties into the separate catch basins. The sanitary sewer lines discharge into a treatment facility which then discharges into the Wawayanda Creek upgradient of the site. The storm sewer system empties right from the catch basins directly into the Wawayanda Creek. The Village of Warwick has a separate sewer system which is sealed to inhibit the infiltration of ground water seeps, and the absence of existing complaints regarding impacts from the site to these systems indicates that these systems are not potential sensitive receptors.

Potential Sensitive Receptor Summary

Private or Municipal wells are not located within 1/2 mile of the site. Buildings with basements are not located in the down gradient area between the site and Waywayanda Creek. Given the historic nature of the release, limited ground water impacts, and historical conformity with storm-water and sewerage services, these services are not considered potential sensitive receptors. Waywayada Creek is located down gradient of the site in relative close proximity. Geovation recommends performing surface water

sampling of the Creek down gradient of the site be considered and discussed with the NYSDEC case manager. Such sampling is likely to be inconclusive as in this area the creek is traversing through a settled area (village of Warwick) and also is the depository of the village storm water collection system.

DISCUSSION

Soil

As a result of soil excavation activities performed at the time of the tank pull, during the investigation of the GPR target, as a result of the November 2000 additional soil excavation, and during the subsequent renovation of the court-yard, four separate soil excavation and removal efforts have been performed by New Grange properties at this location. These four events have resulted in more than 242 tons of soil being removed and replaced in the courtyard area. Based on the volume of soil already removed from the site, the results of the post excavation sampling, and nearly completed renovation of the courtyard, Geovation proposes that natural attenuation be utilized to bring the limited amount of soil within the court-yard which currently exceeds the NYSDEC TOGs soil clean-up criteria into compliance with the NYSDEC regulation and no further remedial action beyond that already performed.

Ground Water

Site ground water has been impacted above NYSDEC standards with Base-Neutral (BN) and Volatile organic compounds (VOCs). Based on the *July 2000 Subsurface Investigation Report*, The approximate extent of ground water impacted with BN compounds is provided on Figure 6. Based on the May 2001 ground water sampling the approximate extent of ground water impacted by VOCs above NYSDEC regulations is provided on Figure 5. As indicated on Figure 5 and on Table 3, the concentration of PCE decreased from 220 ug/l at MW-2 to 46 ug/l at MW-3. This is a 79% reduction in PCE concentration within approximately 20 ft. and suggests that extent of ground water impacted by PCE above NYSDEC standards is limited to within site boundaries.

CONCLUSIONS

- More than 242 tons of soil have been excavated and properly disposed off-site.
- Thirteen post excavation soil samples were collected after additional soil was excavated from the court-yard as a result of the investigation of the GPR target and the November 2000 additional soil excavation. Only two of these sample were reported to have concentrations of one or two compounds (benzo(a)pyrene and benzo(a)anthracene) above the New York State (NYSDEC) Technical Administrative Guidance Memorandum (TAGM 4046) soil clean-up objectives.
- Soil sampling performed during property renovation indicated compliance with the NYSDEC TAGM 4046 soil cleanup objectives.
- Natural Attenuation is proposed as the remedial technology for the limited volume of soil remaining at the site, which has been impacted above the NYSDEC TAGM 4046 soil clean-up criteria.
- The presence of the Volatile Organic Compound PCE was confirmed in site ground water. PCE was reported at a moderate concentration (220 ug/l) and site data suggests that the extent of ground water impacted by PCE is limited.
- Site ground water has been impacted by Base Neutral compounds and Volatile organic compounds above the NYSDEC ground water standards. Ground water sampling should be continued and remedial alternatives should be evaluated.

RECOMMENDATIONS

As indicated above, Natural Attenuation is recommended as the remedial technology for the site soil impacted above the NYSDEC TAGM soil clean-up criteria. Ground water quality should continue to be monitored to evaluate the potential positive benefits of the soil remediation performed. While this is being performed Geovation recommends that ground water remediation alternatives also be evaluated.

The impacts to ground water at this location appear to be limited in extent. Based on the presence of PCE in site ground water, Geovation recommends that a ground water remediation pilot project be considered to evaluate the application of co-substrate bioremediation technology to this site. Such a pilot project could be performed while other remedial alternatives are considered. A conceptual plot project of 12 months duration is proposed to evaluate the potential of co-substrate bioremediation, at the conclusion of which a detailed report will be prepared which discusses the applicability of this technology to the site. The basic design parameters of a conceptual co-substrate bioremediation pilot project are provided below. A pilot application of this technology is recommended for consideration as a presumptive remedy at this site based on the relatively limited extent of the PCE in ground water and the relative costs typically associated with other physical remediation technologies.

Co-Substrate Bioremediation Pilot Project.

The metabolism of halogenated organic solvents, such as PCE, using co-substrate bioremediation technology has been well established (Lee, M.D. et al. 1999, Reid, J.J. and Balcer, D. 1999, Norris, R.D. et al., 1994). Geovation's proprietary Substrate Release Composition (SRC™) which creates subsurface conditions favorable to the biodegradation of organic solvents will be introduced into the monitoring well MW-2 and bioremediation biogeochemical parameters will be monitored in wells MW-1, MW-2 and MW-3. Ground water samples for analysis of VOC compounds will be collected quarterly, while field parameters selected to monitor the subsurface conditions will be collected monthly. SRC™ will be added to the amendment well on as needed basis to create and maintain the target subsurface conditions of a reducing environment. A schedule for site monitoring and sampling is provided below.

Table 4 - Co-Substrate Bioremediation Pilot Program
Ground Water Monitoring and Sampling Schedule for 12 Month Pilot
New Grange Properties, Warwick, NY

Points to be Sampled	Frequency	Parameter
MW-1, MW-2, MW-3, MW-4	Quarterly	VOCs & BNs
MW-2, & MW-3	Monthly	D.O., Redox, Temp, Conductivity, pH,
MW-2, & MW-3	Quarterly	Bacterial Counts, nitrate, nitrite, phosphate, and ammonium, iron manganese, alkalinity and hardness. Trace gasses (ethane, ethene, methane) and sulfide may also be monitored in a select well

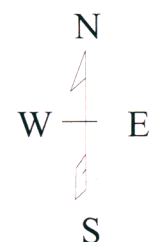
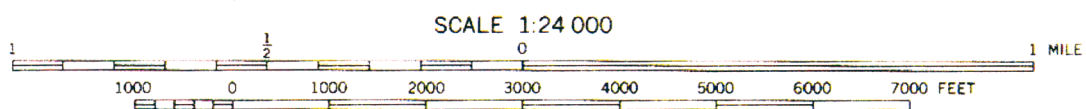
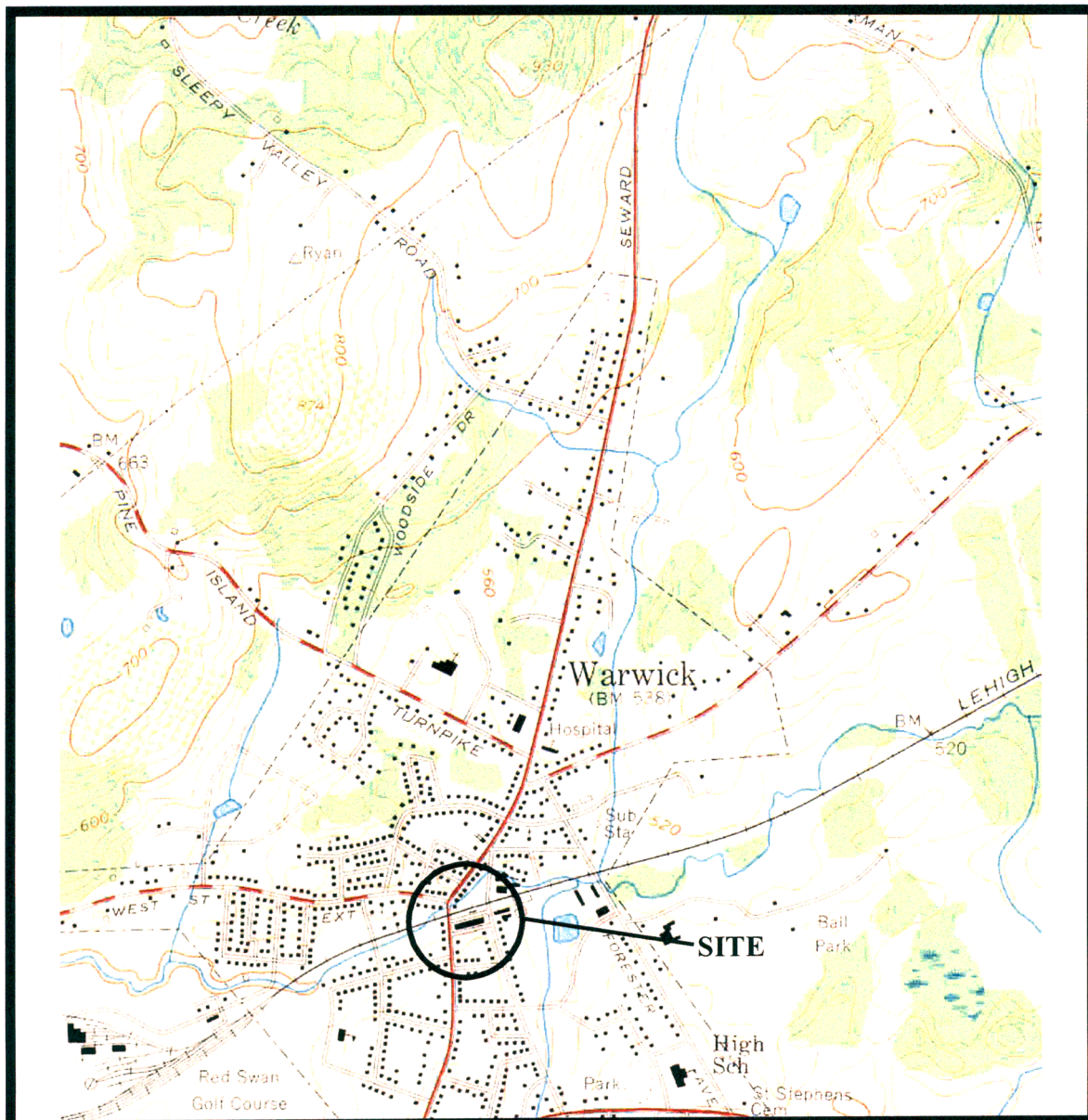
SRC™ is a proprietary blend of food-grade sugars and other organic substrates. This product has been specifically developed for the anaerobic bioremediation of halogenated organic solvents (e.g. PCE). SRC™ establishes and maintains environmental conditions conducive to the degradation of halogenated organic solvents (e.g. low levels of dissolved oxygen and strongly negative redox values). SRC™ is a granular solid product which is allowed to slowly breakdown in the application well.

At six month intervals and at the conclusion of the pilot program a report will be prepared summarizing the application of SRC™ and the results achieved. At the conclusion of the program recommendations will be provided for application of this or other ground water remediation technologies to the site.

REFERENCES

- Lee, M.D., Biehle, A.A., and Ellis, D.E. 1999, Anaerobic Bioremediation of DNAPL Tetrachloroethene in Sludge Microcosm Studies, in *Engineered Approaches for In-Situ Bioremediation of Chlorinated Solvent Contamination*, Editors Leeson, A. and Alleman, B.C. Battelle Press 1999
- Reid, J.J. and Balcer, D. 1999. Pilot Study for Enhanced Biodegradation of Chlorinated VOCs in *Engineered Approaches for In-Situ Bioremediation of Chlorinated Solvent Contamination*, Editors Leeson, A. and Alleman, B.C. Battelle Press 1999.
- Norris, R.D., Hincsee, Brown, McCarty, Semprini, Wilson, Kampbell, Reinhard, Bouwer, Borden, Vogel, Thomas and Ward. Handbook of Bioremediation. CRC Press 1994
et al., 1994

FIGURES



Source: USGS 7.5 Minute
Series Topographic Map
Warwick, NY 1957

GEOVATION
GEOVATION CONSULTANTS, Inc.
Innovative Solutions to Environmental Problems
FLORIDA, NEW YORK

Site Location Map
New Grange Properties, Inc.
Railroad Avenue Site, Warwick, NY

FIGURE
1



Railroad Avenue

Parking Meter

Sidewalk

Telephone Pole

Village Auto

Parking Area

Previous location of 1,000 gallon UST - No Impacted Soil Observed

MW-3

MW-2

Approximate Scale
0 10 20ft.

LEGEND

MW-2 Monitor well locations and designations

(---) Previously Excavated Soils

— Property boundary

Local Motion

Red Door

Blue Door

Black Door

Green Door

Red Door

Previous location of (2) 550 gallon USTs

New Grange Properties

Gilsenan Kitchen's Entrance

Sidewalk

Utility Pole

MW-4

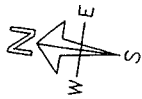
First Street

Figure

2

Site Map
New Grange Properties
Railroad Avenue, Warwick, NY

GEO VATION
GEO VATION CONSULTANTS, INC.
Innovative Solutions to Environmental Problems
FLORIDA, NEW YORK



Railroad Avenue

Parking Meter

Sidewalk

Telephone Pole

Village Auto

Parking Area

MW-3

Local Motion

Previous location of 1,000 gallon UST

MW-2

Previous location of (2) 550 gallon USTs

New Grange Properties

Gilsenan Kitchen's Entrance

Sidewalk

Utility Pole

MW-4

First Street

Approximate Scale
0 10 20ft.

LEGEND

MW-2 Monitor well locations and designations



Approximate Location of GPR Target

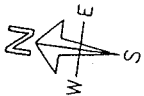
Property boundary

GEOSCIENCE CONSULTANTS, INC.
Investigative Solutions to Environmental Problems
FLORIDA NEW YORK

Location of Low-Grade GPR Target
New Grange Properties
Railroad Avenue, Warwick, NY

Figure

3



Railroad Avenue

Parking Meter

Sidewalk

Telephone Pole

Building

Village Auto

Approximate Area
of Removal of
11.94 Tons of Soil
During Site
Renovation

Active 440 V
Underground
Electric Service

Sidewalk

Approximate Scale
0 10 20ft.

LEGEND

MW-2 Monitor well locations and designations

5 GPR Target Excavation Post-Excavation Soil Sampling Location and designations

SS-52 November 2000 Addition, Soil Excavation Post-Excavation Soil Sampling Location and designation

Sidewalk

Utility Pole

First Street

MW-4

Gilsenan
Kitchens
Entrance

Red Door

Blue Door

Black Door

Green Door

Red Door

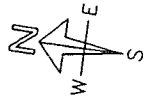
Figure

4

Post Excavation Soil Sampling Locations

New Grange Properties
Railroad Avenue, Warwick, NY

GEOVATION
GEOVATION CONSULTANTS, Inc.
Innovative Solutions in Environmental Remediation
FLORIDA, NEW YORK



Railroad Avenue

Parking Meter

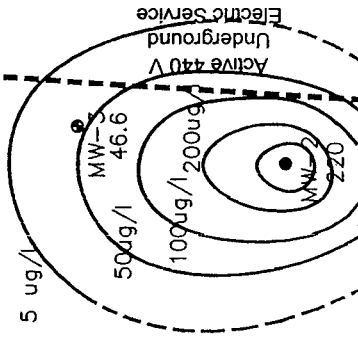
Sidewalk

Telephone Pole

MW-1
ND

Village Auto

Building



Sidewalk

Red Door
Green Door
Black Door
Blue Door
Red Door

LEGEND

MW-2 Monitor well locations and designations

5 GPR Target Excavation Post-Excavation Soil Sampling Location and designations

SS-52 November 2000 Addition Soil Excavation Post-Excavation Soil Sampling Location and designation

Sidewalk

Utility Pole

MW-4
ND

First Street

Gilsenan Kitchens Entrance

New Grange Properties

Distribution of PCE in Ground Water

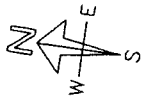
May 2001

New Grange Properties
Railroad Avenue, Warwick, NY

Figure

5

GEOSCIENCE CONSULTANTS, INC.
Innovative Solutions to Environmental Problems
FLORIDA, NEW YORK



Railroad Avenue

Parking Meter

Sidewalk

Telephone Pole

Village Auto

B-3

MW-1

B-6

B-2

B-4

B-7

B-5

B-10

B-8

B-9

Local Motion

MW-3
69.1

MW-2
34.5

Approximate Scale
0 10 20 ft.

LEGEND

MW-2 Monitor well locations and designations

B-5 Soil boring locations and designations and Chlorinated Solvent Concentrations (ug/L)

Approximate area of groundwater impacted by semivolatile organic compounds above regulatory limits

Inferred boundary of contamination

INNOVATION
GEOVATION CONSULTANTS, INC.
Innovative Solutions to Environmental Problems
FLORIDA, NEW YORK

New Grange Properties

Gilsenan Kitchens Entrance

Red Door

Green Door

Black Door

Blue Door

Red Door

Sidewalk

Utility Pole

MW-4

First Street

Semivolatile Organic Compounds (BNs) in

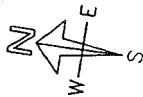
Ground Water; (2/28/00)

New Grange Properties

Railroad Avenue Site, Warwick, NY

Figure

6



Railroad Avenue

Parking Meter

Telephone Pole

Sidewalk

86.80
MW-1

86.90
MW-3

Village Auto

Local Motion

86.97
MW-2

86.90

Approximate Scale
0 10 20 ft.

Red Door

Blue Door

Black Door

Green Door

Red Door

New Grange Properties

Gilsenan
Kitchens
Entrance

Sidewalk

Utility Pole

First Street

87.26
MW-4

LEGEND

MW-2 Monitor well locations and designations; ground water elevation

Ground water contour and direction of flow

Ground Water Contour Diagram (2/28/00)
New Grange Properties
Railroad Avenue Site, Warwick, NY

GEO VATION
GEO VATION CONSULTANTS, Inc.
Innovative Solutions to Environmental Problems
FLORIDA, NEW YORK

Figure

7

TABLES

TABLE 1
SUMMARY OF SOIL SAMPLING DATA
New Grange Properties - Railroad Avenue Site
Prepared by: Geovation Consultants, Inc.

NYSDEC
Soil Cleanup Objectives

Parameter Detected	Analytical Results of Soil Samples							
Geovation Sample ID	1	2	3	4	5	6	7	
Sample Date	06-Oct-00	06-Oct-00	06-Oct-00	06-Oct-00	06-Oct-00	06-Oct-00	06-Oct-00	
Sample Depth	excavation	excavation	excavation	excavation	excavation	excavation	excavation	
Method 8260 (ug/kg)								
Benzene	ND	ND	ND	ND	ND	ND	ND	60
Toluene	ND	ND	ND	ND	ND	ND	ND	1,500
Ethylbenzene	ND	ND	ND	11	ND	ND	ND	5,500
Total Xylenes	ND	ND	ND	34	ND	29	2	1,200
Isopropylbenzene	ND	ND	ND	119	ND	ND	5	4,740
n-Propylbenzene	ND	ND	ND	161	ND	ND	6	14,000
1,3,5-Trimethylbenzene	ND	ND	118	793	23	23	27	3,310
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	NGV
1,2,4-Trimethylbenzene	ND	ND	ND	950	27	28	32	NGV
sec-Butylbenzene	ND	ND	ND	626	19	ND	27	24,910
4-Isopropyltoluene	ND	ND	ND	589	33	ND	36	10,570
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	17,620
Napthalene	ND	ND	ND	1,560	ND	ND	33	13,000
Method 8270 (ug/kg)								
Napthalene	ND	ND	109	2,340	310	ND	658	13,000
2-Methylnapthalene	ND	ND	1,040	9,730	2,790	ND	3,610	36,400
Acenaphthene	ND	ND	613	1,010	784	ND	994	41,000
Dibenzofuran	ND	ND	ND	1,010	551	ND	403	50,000
Fluorene	ND	ND	573	1,240	839	ND	1,010	6,200
Phenanthrene	ND	ND	1,660	2,440	1,550	220	2,190	50,000
Anthracene	ND	ND	574	786	792	ND	456	50,000
Flouranthene	ND	ND	66	ND	ND	234	154	50,000
Pyrene	ND	ND	126	116	70	143	199	50,000
Benzo(a)anthracene	ND	ND	ND	ND	ND	106	ND	224.00
Chrysene	ND	ND	ND	ND	ND	84	ND	400.00
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	100	ND	1,100.00
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	1,100.00
Benzo(a)pyrene	ND	ND	ND	ND	ND	68	ND	61.00
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	3,200
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	14
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	50,000.00
Total VOCs	0	0	118	4,844	101	80	166	
Total SVOCs (BNs)	0	0	4,761	18,672	7,686	955	9,674	

Notes:

- 33.4 Data shown in *italic font and bold outline* exceed the NYSDEC Subsurface Soil Cleanup Criteria shown in the far right column.
- ND Analyzed for but Not Detected at the MDL. See laboratory data reports from Integrated Analytical Laboratories for MDLs for each analyte.
- J Estimated concentration below the method detection limit (MDL) and/or calibration range of GC/MS instrumentation.
- B The compound was detected in the blank and the sample
- NGV No Guidance Value

No single SVOC>50,000

TABLE 2
SUMMARY OF SOIL SAMPLING DATA
New Grange Properties - Railroad Avenue Site
Prepared by: Geovation Consultants, Inc.

Parameter Detected	Analytical Results of Soil Samples						NYSDEC
	Soil Cleanup Objectives						
Geovation Sample ID	SS-50	SS-51	SS-52	SS-53	SS-54	SS-55	
Sample Date	20-Nov-00	20-Nov-00	20-Nov-00	20-Nov-00	20-Nov-00	20-Nov-00	
Sample Depth	excavation	excavation	excavation	excavation	excavation	excavation	
Method 8260 (ug/kg)							
Benzene	ND	ND	ND	ND	ND	ND	60
Toluene	ND	ND	ND	ND	ND	ND	1,500
Ethylbenzene	ND	ND	ND	ND	ND	ND	5,500
Total Xylenes	ND	ND	ND	ND	ND	ND	1,200
Isopropylbenzene	ND	ND	ND	ND	ND	ND	4,740
n-Propylbenzene	335	ND	ND	ND	ND	ND	14,000
1,3,5-Trimethylbenzene	690	ND	ND	ND	ND	ND	3,310
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	NGV
1,2,4-Trimethylbenzene	1,040	ND	ND	ND	ND	ND	NGV
sec-Butylbenzene	977	ND	ND	ND	ND	ND	24,910
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	10,570
n-Butylbenzene	ND	ND	ND	ND	ND	ND	17,620
Napthalene	ND	ND	ND	ND	ND	ND	13,000
Method 8270 (ug/kg)							
Napthalene	ND	ND	ND	ND	ND	ND	13,000
2-Methylnapthalene	ND	ND	ND	ND	ND	ND	36,400
Acenaphthene	268	2,220	ND	229	ND	ND	41,000
Dibenzofuran	ND	ND	ND	ND	ND	ND	50,000
Fluorene	646	2,370	ND	221	ND	ND	6,200
Phenanthrene	1,840	3,950	ND	377	ND	453	50,000
Anthracene	305	1,820	ND	ND	ND	ND	50,000
Flouranthene	ND	ND	ND	ND	ND	636	50,000
Pyrene	299	878	ND	ND	ND	717	50,000
Benzo(a)anthracene	ND	ND	ND	ND	ND	324	224
Chrysene	ND	ND	ND	ND	ND	277	400
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	360	1,100
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	141	1,100
Benzo(a)pyrene	ND	ND	ND	ND	ND	260	61
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	190	3,200
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	14
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	222	50,000
Total VOCs	3,042	0	0	0	0	0	
Total SVOCs (BNs)	3,358	11,238	0	827	0	3,580	

Notes:

- 33.4 Data shown in *italic font and bold outline* exceed the NYSDEC Subsurface Soil Cleanup Criteria shown in the far right column.
- ND Analyzed for but Not Detected at the MDL. See laboratory data reports from Integrated Analytical Laboratories for MDLs for each analyte.
- J Estimated concentration below the method detection limit (MDL) and/or calibration range of GC/MS instrumentation.
- B The compound was detected in the blank and the sample
- NGV No Guidance Value

No single SVOC>50,000

TABLE 3
SUMMARY OF GROUND WATER SAMPLING DATA
New Grange Properties - Railroad Avenue Site
Prepared by: Geovation Consultants, Inc.
May 15, 2001

Parameter 624 (ug/L)					NYSDEC TOGS
Sample Date	MW-1	MW-2	MW-3	MW-4	Standards*
Chloromethane	3.27	ND	ND	ND	NGV
Benzene	ND	ND	ND	ND	1
Trichloroethene	ND	<i>15.8</i>	<i>9.46</i>	ND	5
Tetrachloroethene	ND	<i>220</i>	<i>46.6</i>	ND	5
Ethylbenzene	ND	<i>2.75</i>	ND	ND	5
Total Xylenes	ND	ND	ND	ND	5
Naphthalene	ND	ND	ND	ND	10
Total VOCs	3.27	238.55	56.06	ND	NGV
Total TICs (VOCs)	ND	200.50	2260.00	ND	NGV

Notes:

ND	Parameter not detected above minimum detection level
<i>260</i>	Data shown in italic font and bold outline exceed the applicable NYSDEC standards or guidance values shown
NGV	No guidance value

* NYSDEC/NYSDOH TOGS 1.1.1 Class Ga Ground-Water Standards

APPENDIX A



Excavation of Holding Tank. Note amount of wood and cloth contained within tank's interior.



Excavation of piping from Holding Tank to building foundation. Pipes were not connected to anything within the building and were not observed to penetrate foundation walls.



Excavation of Cylindrical Object (Holding Tank). Note wood from tank's interior and vertical pipe in right hand portion of Photograph



Excavation of Cylindrical Object (Holding Tank). Note wood from tank's interior. Tank contents pumped out and transported off-site for disposal (Bill-of-Lading appendix B)

Mt. Hope Recycling**A Division of MT. Hope Rock Products Corp.**

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

0011039

Ticket # 15082

Customer:
New Grange Properties

Date: 10/17/2001

Time: 13:27

Generator:
New Grange Properties
11 First Street
Warwick, NY 10990Spill Location:
New Grange Properties
Railroad Ave. Court Yard
Back of 11 First Street
Warwick, NY 10990
Fuel Type: 2 Fuel OilWaste Type: ID-27
Leaking Under Ground Storage
Contamination Method:Trucking Company:
Mt. Hope Recycling Co., Inc.
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: 1100

Lic. Plate:
AF175L

Tel # (973) 366-7741

Cal
Contact:

Driver's Name: NICOLAY, W.

License # 9110 18881 482846

Operator's ID:

Operator's Name:

Scale House

Gross Weight: 25.68

Tare Weight: 13.74

Net Weight: 11.94

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied within the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: 



MT. HOPE ROCK PRODUCTS, INC.

625 MT. HOPE ROAD • WHARTON, NEW JERSEY 07885 • PHONE 973-366-7741

December 13, 2001

Mr. Robert Zimmer
Geovation Consultants Inc.
P.O. Box 293
Florida, NY 10921

RE: Certification of Soil Remediation

This is to certify that Mt. Hope Recycling, during the weeks of December 9th through December 18, 2001 remediated approximately 94.79 tons of non-hazardous petroleum contaminated soil generated by New Grange Properties, Railroad Avenue, Warwick, NY as per our Facility Class B Recycling Permit Number 1439001167.

Very truly yours,

A handwritten signature in black ink, appearing to read "George Farrand", written over a large, stylized circular mark.

George Farrand

GF/cjp

ACCOUNTING FAX: 973-366-1026 • SALES FAX: 973-442-9077 • ENGINEERING FAX: 973-366-8501
RECYCLING FAX: 973-328-8490 • PURCHASING FAX: 973-366-0914

An Equal Opportunity Employer

TOTAL P.01

MT. HOPE ROCK PRODUCTS, INC.

625 MT. HOPE ROAD • WHARTON, NEW JERSEY 07885 • PHONE 973-366-7741

January 23, 2001

New Grange Properties
11 First Street
Warwick, New York 10990

Attn: Rosita Gilsenan

RE: Certification of Soil Remediation

This is to certify that Mt. Hope Recycling, during the week of January 8th, 2001, remediated approximately 135.44 tons of non-hazardous petroleum contaminated soil, generated by the New Grange Properties, Railroad Avenue Court Yard, Warwick, New York, as per our Facility Class B Recycling Permit Number 1439001167.

Very truly yours,


Judith Sweitzer
Project Manager

JFS/js

ACCOUNTING FAX: 973-366-1026 • SALES FAX: 973-442-9077 • ENGINEERING FAX: 973-366-8501
RECYCLING FAX: 973-328-8490 • PURCHASING FAX: 973-366-0914

An Equal Opportunity Employer

TOTAL P.01



LORCO
PETROLEUM SERVICES

STANDARD
COLLECTION
ORDER FORM

LORCO REPRESENTATIVE

CUSTOMER

SUSSEX COUNTY MUNICIPAL UTILITIES AUTHORITY

34 SOUTH RT. 94, LAFAYETTE, NJ 07848

Administrative Office
(973) 579-6998
Fax: (973) 579-7819Solid Waste Facility
(973) 579-6998
Fax: (973) 579-7819

FACILITY I.D. NO. 1913C

RECEIPT DOCUMENT NUMBER

96299854

CASH0002MR
RESIDENTIAL CASH CUSTOMERCASH0002MR
RESIDENTIAL CASH CUSTOMER

DATE	ENTRY TIME	OPER	EXIT TIME	OPER	GROSS WEIGHT	TARE WEIGHT	NET WEIGHT
07/06/2000	11:42		11:54		(12560 LB) Scale 02	(9920 LB) Scale 03	(2640 LB)
0531960	Scale 02		Scale 03		(6.28 T)	(4.96 T)	(1.32 T)
VEHICLE NUMBER	VEHICLE TYPE	PLATE NUMBER	TRANSACTION TYPE				
163	Pickup	1	Tendered: 112.20 Check 4540	Change: 0.00 Normal			
QUANTITY	WC	DESCRIPTION/CBISN	UNITS	UNIT PRICE	AMOUNT		
1.3200	13	BULKY WASTE SUSSEX COUNTY VERNON TWP	TONS	85.00	112.20		
			00.00%				

hereby certify that the information provided on this form is true to the best of my knowledge.

DRIVER NAME

PRINT _____ SIGNATURE _____

DOCUMENT
TOTAL

\$112.20

APPENDIX C

ANALYTICAL DATA REPORT

for
 Geovation Consultants Inc.
 468 Route 17A
 P.O. Box 293
 Florida, NY 10921

Project Name: NEW GRANGE

Lab Case Number: E01-6807

MDL = METHOD DETECTION LIMIT

Volatiles - Mt. Hope

Lab ID: 6807-001

Client ID: 10-2-SOIL

Matrix-Units: Soil-µg/Kg

Percent Moisture: 6

Date Sampled: 10/2/01

Time Sampled: 15:30

Date Analyzed: 10/4/01

Compound	Conc	Q	MDL
Chloromethane	ND		10.7
Vinyl Chloride	ND		10.7
Bromomethane	ND		10.7
Chloroethane	ND		10.7
Trichlorofluoromethane	ND		10.7
1,1-Dichloroethene	ND		10.7
Acetone	ND		21.3
Carbon Disulfide	ND		10.7
Vinyl Acetate	ND		21.3
Methylene Chloride	ND		10.7
trans-1,2-Dichloroethene	ND		10.7
1,1-Dichloroethane	ND		10.7
cis-1,2-Dichloroethene	ND		10.7
2-Butanone(MEK)	ND		21.3
Chloroform	ND		10.7
1,1,1-Trichloroethane	ND		10.7
Carbon Tetrachloride	ND		10.7
1,2-Dichloroethane(EDC)	ND		10.7
Benzene	ND		10.7
Trichloroethene	ND		10.7
1,2-Dichloropropane	ND		10.7
Bromodichloromethane	ND		10.7
2-Chloroethylvinyl Ether	ND		10.7
cis-1,3-Dichloropropene	ND		10.7
4-Methyl-2-pentanone(MIBK)	ND		21.3
Toluene	ND		10.7
trans-1,3-Dichloropropene	ND		10.7

ND = Analyzed for but Not Detected at the MDL.

Continued on next page

IAL is a NELAC Certified Lab # 14751 and maintains certification in Connecticut # PH-0699, New York # 11402 and Florida # E87670.

ANALYTICAL DATA REPORT

for
Geovation Consultants Inc.
 468 Route 17A
 P.O. Box 293
 Florida, NY 10921

Project Name: NEW GRANGE

Lab Case Number: E01-6807

MDL = METHOD-DETECTION LIMIT

Volatiles - Mt. Hope

Lab ID: 6807-001
 Client ID: 10-2-SOIL
 Matrix-Units: Soil- μ g/Kg
 Percent Moisture: 6

Date Sampled: 10/2/01
 Time Sampled: 15:30
 Date Analyzed: 10/4/01

Compound	Conc	Q	MDL
1,1,2-Trichloroethane	ND		10.7
Tetrachloroethene	ND		10.7
2-Hexanone	ND		21.3
Dibromochloromethane	ND		10.7
Chlorobenzene	ND		10.7
Ethylbenzene	ND		10.7
Total Xylenes	39.1		10.7
Styrene	ND		10.7
Bromoform	ND		10.7
1,1,2,2-Tetrachloroethane	ND		10.7
1,3-Dichlorobenzene	ND		10.7
1,4-Dichlorobenzene	ND		10.7
1,2-Dichlorobenzene	ND		10.7
TOTAL VO's:	39.1		

PCB's

Lab ID: 6807-001
 Client ID: 10-2-SOIL
 Matrix-Units: Soil- μ g/Kg
 Percent Moisture: 6

Date Sampled: 10/2/01
 Time Sampled: 15:30
 Date Analyzed: 10/4/01

Compound	Conc	Q	MDL
Aroclor-1016	ND		15.8
Aroclor-1221	ND		15.8
Aroclor-1232	ND		15.8
Aroclor-1242	ND		15.8
Aroclor-1248	ND		15.8
Aroclor-1254	ND		15.8
Aroclor-1260	ND		15.8

ND = Analyzed for but Not Detected at the MDL

IAL is a NELAC Certified Lab. # 14751, and maintains certification in Connecticut # PH-0699, New York # 11402 and Florida # E87670.

ANALYTICAL DATA REPORT

for
Geovation Consultants Inc.
 468 Route 17A
 P.O. Box 293
 Florida, NY 10921

Project Name: NEW GRANGE
Lab Case Number: E01-6807

MDL = METHOD DETECTION LIMIT

TCLP Metals

(Including Nickel)

Lab ID: 6807-001
 Client ID: 10-2-SOIL..
 Matrix-Units: Aqueous Leachate-mg/L
 Percent Moisture: 100

Date Sampled: 10/2/01
 Time Sampled: 15:30
 Date Analyzed: 10/8/01

Parameter	Result	Q	MDL
Arsenic	ND		0.200
Barium	ND		2.00
Cadmium	ND		0.050
Chromium	ND		0.400
Lead	0.679		0.100
Mercury	ND		0.0005
Nickel	ND		0.200
Selenium	ND		0.400
Silver	ND		0.100

ND = Analyzed for but Not Detected at the MDL

ANALYTICAL DATA REPORT

for
Geovation Consultants Inc.
468 Route 17A
P.O. Box 293
Florida, NY 10921

Project Name: NEW GRANGE
Lab Case Number: E01-6807

MDL = METHOD DETECTION LIMIT

General Analytical

Lab ID: 6807-001
Client ID: 10-2-SOIL
Percent Moisture: 6

Date Sampled: 10/2/01
Time Sampled: 15:30

Parameter	Result	MDL	Matrix-Units	Date Analyzed
Sulfide, Reactive	ND	17.0	Soil-mg/Kg	10/8/01
Cyanide, Reactive	ND	10.6	Soil-mg/Kg	10/8/01
Total Petroleum Hydrocarbons	26000	851	Soil-mg/Kg	10/5/01
Ignitability @ 142°F	NO	NA	Soil-Yes/No	10/4/01
Corrosivity as pH	8.44	NA	Soil-S.U.	10/4/01
% Solids	94.0	NA	Soil-%	10/4/01

ND = Analyzed for but Not Detected at the MDL

All required protocols were followed during analyses. These data have been reviewed and accepted by:


Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.



APPENDIX D



Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for

Geovation Consultants Inc.
468 Route 17A
P.O. Box 293
Florida, NY 10921

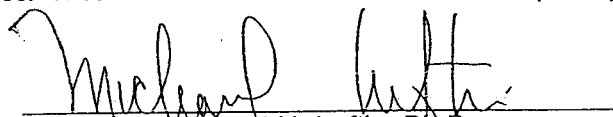
Project: WARWICK

Lab Case Number: E00-6295

Date Report Prepared: October 23, 2000

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
#1	6295-001
#2	6295-002
#3	6295-003
#4	6295-004
#5	6295-005
#6	6295-006
#7	6295-007

All required protocols were followed during analyses. These data have been reviewed and accepted by


Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

- A - Indicates the sample is an Aqueous matrix.
- O - Indicates the sample is an Oil matrix.
- S - Indicates the sample is a Soil, Sludge or Sediment matrix.
- X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

- B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.
- C - Common Laboratory Contaminant.
- D - The compound was reported from the Diluted analysis.
- D.F. - Dilution Factor.
- E - Estimated concentration, reported results are outside the calibrated range of the instrument.
- J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.
- MDL - Method Detection Limit.
- MI - Indicates compound concentration could not be determined due to Matrix Interferences.
- NA - Not Applicable.
- ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received seven (7) soil sample(s) from Geovation Consultants Inc. (Project: WARWICK) on October 6, 2000 for the analysis of:

- (7) Volatiles
- (7) Volatiles - Stars list 8021
- (7) Semivolatiles - BN
- (7) Semivolatiles - Stars list 8270 BN

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

U. Blazewicz
Reviewed by

10/24/00
Date

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E00-6295

	Check If Complete
1. Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	<u>✓</u>
2. Table of Contents.	<u>✓</u>
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds.	<u>✓</u>
4. Summary Table cross-referencing Field ID's vs. Lab ID's.	<u>✓</u>
5. Document bound, paginated and legible.	<u>✓</u>
6. Chain of Custody.	<u>✓</u>
7. Methodology Summary.	<u>✓</u>
8. Laboratory Chronicle and Holding Time Check.	<u>✓</u>
9. Results submitted on a dry weight basis (if applicable).	<u>✓</u>
10. Method Detection Limits.	<u>✓</u>
11. Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	<u>✓</u>
12. NonConformance Summary.	<u>✓</u>

MB Jones
QC Reviewed by

10/24/00
Date

Lab Case Number: E00 - 6295

Yes

13. Comments:

Date _____

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E00 - 6295

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		☒
2. GC/MS Tuning Specifications:		☒
a. DFTPP Passed		☒
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		☒
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		☒
5. GC/MS Calibration Requirements:		☒
a. Calibration Check Compounds		☒
b. System Performance Check Compounds		☒
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	☒	☒
a. B/N Fraction		
b. Acid Fraction		
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		☒
a. B/N Fraction		
b. Acid Fraction		
If not met, were the calculations checked and the results qualified as "estimated"?		☒
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		☒
a. B/N Fraction		
b. Acid Fraction		
9. Internal Standard Area/Retention Time Shift meet criteria		☒
10. Extraction Holding Time Met		☒
If not met, list number of days exceeded for each sample:		
11. Analysis Holding Time Met		☒
If not met, list number of days exceeded for each sample:		
12. Sample Dilution Performed		
High Target Compounds		
High Nontarget Compounds		
Matrix Interference		
Other		

13. Comments:

Organics Manager

Date _____

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: WARWICK

Lab Case No.: E00-6295

Lab ID:	6295-001	6295-002	6295-003	6295-004	6295-005
Client ID:	#1	#2	#3	#4	#5
Matrix:	Soil	Soil	Soil	Soil	Soil
Sampled Date:	10/6/2000	10/6/2000	10/6/2000	10/6/2000	10/6/2000
PARAMETER(Units)					
Volatiles (ppb)					
Ethylbenzene	ND	ND	ND	11.4 J	ND
Total Xylenes	ND	ND	ND	34.3 J	ND
TOTAL VO's:	ND	ND	ND	45.7 J	ND
Volatiles - Stars list (ppb)					
Benzene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	11.4 J	ND
Total Xylenes	ND	ND	ND	34.3 J	ND
Isopropylbenzene	ND	ND	ND	119	ND
n-Propylbenzene	ND	ND	ND	161	ND
1,3,5-Trimethylbenzene	ND	ND	118 J	793	22.7
tert-Butylbenzene	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	950	27
sec-Butylbenzene	ND	ND	ND	626	18.5
4-Isopropyltoluene	ND	ND	ND	589	32.9
n-Butylbenzene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	1560	ND
Semivolatiles - BN (ppb)					
Naphthalene	ND	ND	109	2340	310
2-Methylnaphthalene	ND	ND	1040	9730	2790
Acenaphthylene	ND	ND	150	213	241
Acenaphthene	ND	ND	613	1010	784
Dibenzofuran	ND	ND	ND	1010	551
Fluorene	ND	ND	573	1240	839
Phenanthrene	ND	ND	1660	2440	1550
Anthracene	ND	ND	574	786	792
Fluoranthene	ND	ND	66.3 J	ND	ND
Pyrene	ND	ND	126	116	70.2 J
TOTAL BN'S:	ND	ND	4911.3 J	18885	7927.2 J

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: WARWICK

Lab Case No.: E00-6295

	Lab ID: 6295-001	6295-002	6295-003	6295-004	6295-005
Client ID:	#1	#2	#3	#4	#5
Matrix:	Soil	Soil	Soil	Soil	Soil
Sampled Date:	10/6/2000	10/6/2000	10/6/2000	10/6/2000	10/6/2000
PARAMETER(Units)					
Semivolatiles - Stars list (ppb)					
Acenaphthene	ND	ND	613	1010	784
Fluorene	ND	ND	573	1240	839
Phenanthrene	ND	ND	1660	2440	1550
Anthracene	ND	ND	561	786	792
Fluoranthene	ND	ND	66.3	J	ND
Pyrene	ND	ND	126	116	70.2
Benzo[a]anthracene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	ND	ND	ND	ND	ND
Benzo[a]pyrene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: WARWICK

Lab Case No.: E00-6295

Lab ID:	6295-006	6295-007
Client ID:	#6	#7
Matrix:	Soil	Soil
Sampled Date:	10/6/2000	10/6/2000

PARAMETER(Units)**Volatiles (ppb)**

Total Xylenes	28.8	J	2.06	J

TOTAL VO's:	28.8	J	2.06	J

Volatiles - Stars list (ppb)

Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	28.8	J 2.06 J
Isopropylbenzene	ND	4.87 J
n-Propylbenzene	ND	5.54 J
1,3,5-Trimethylbenzene	22.9	J 26.8
tert-Butylbenzene	ND	ND
1,2,4-Trimethylbenzene	28.2	J 32.3
sec-Butylbenzene	ND	26.6
4-Isopropyltoluene	ND	35.7
n-Butylbenzene	ND	ND
Naphthalene	ND	32.5

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Volatiles are carried down through summation.

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: WARWICK

Lab Case No.: E00-6295

Lab ID:	6295-006	6295-007
Client ID:	#6	#7
Matrix:	Soil	Soil
Sampled Date:	10/6/2000	10/6/2000

PARAMETER(Units)

Semivolatiles - BN (ppb)

Naphthalene	ND	658	
2-Methylnaphthalene	ND	3610	
Acenaphthylene	ND	288	
Acenaphthene	ND	994	
Dibenzofuran	ND	403	
Fluorene	ND	1010	
Phenanthrene	220	2190	
Anthracene	ND	456	
Fluoranthene	234	154	J
Pyrene	143	199	
Benzo[a]anthracene	106	J	ND
Chrysene	83.9	J	ND
Benzo[b]fluoranthene	99.7	J	ND
Benzo[a]pyrene	68.1	J	ND
TOTAL BN'S:	954.7	J	9962 J

Semivolatiles - Stars list (ppb)

Acenaphthene	ND	994	
Fluorene	ND	1010	
Phenanthrene	220	2190	
Anthracene	ND	456	
Fluoranthene	234	154	J
Pyrene	143	199	
Benzo[a]anthracene	106	J	ND
Chrysene	83.9	J	ND
Benzo[b]fluoranthene	99.7	J	ND
Benzo[k]fluoranthene	ND	ND	
Benzo[a]pyrene	68.1	J	ND
Indeno[1,2,3-cd]pyrene	ND	ND	
Dibenz[a,h]anthracene	ND	ND	
Benzo[g,h,i]perylene	ND	ND	

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Semivolatiles are carried down through summation.

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-001

Client ID: #1

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4396.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 8.8

Compound	Concentration	Q	MDL
Chloromethane	ND		5.5
Vinyl Chloride	ND		5.5
Bromomethane	ND		5.5
Chloroethane	ND		5.5
Trichlorofluoromethane	ND		5.5
Acrolein	ND		11
1,1-Dichloroethene	ND		5.5
Methylene Chloride	ND		5.5
Acrylonitrile	ND		11
trans-1,2-Dichloroethene	ND		5.5
1,1-Dichloroethane	ND		5.5
Chloroform	ND		5.5
1,1,1-Trichloroethane	ND		5.5
Carbon Tetrachloride	ND		5.5
1,2-Dichloroethane(EDC)	ND		5.5
Benzene	ND		5.5
Trichloroethene	ND		5.5
1,2-Dichloropropane	ND		5.5
Bromodichloromethane	ND		5.5
2-Chloroethylvinyl Ether	ND		5.5
cis-1,3-Dichloropropene	ND		5.5
Toluene	ND		5.5
trans-1,3-Dichloropropene	ND		5.5
1,1,2-Trichloroethane	ND		5.5
Tetrachloroethene	ND		5.5
Dibromochloromethane	ND		5.5
Chlorobenzene	ND		5.5
Ethylbenzene	ND		5.5
Total Xylenes	ND		5.5
Bromoform	ND		5.5
1,1,2,2-Tetrachloroethane	ND		5.5
1,3-Dichlorobenzene	ND		5.5
1,4-Dichlorobenzene	ND		5.5
1,2-Dichlorobenzene	ND		5.5

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-001

Client ID: #1

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4396.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 8.8

Compound	Concentration	Q	MDL
Benzene	ND		5.5
Toluene	ND		5.5
Ethylbenzene	ND		5.5
Total Xylenes	ND		5.5
Isopropylbenzene	ND		5.5
n-Propylbenzene	ND		5.5
1,3,5-Trimethylbenzene	ND		5.5
tert-Butylbenzene	ND		5.5
1,2,4-Trimethylbenzene	ND		5.5
sec-Butylbenzene	ND		5.5
4-Isopropyltoluene	ND		5.5
n-Butylbenzene	ND		5.5
Naphthalene	ND		5.5

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-002

Client ID: #2

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4397.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10

Compound	Concentration	Q	MDL
Chloromethane	ND		5.55
Vinyl Chloride	ND		5.55
Bromomethane	ND		5.55
Chloroethane	ND		5.55
Trichlorofluoromethane	ND		5.55
Acrolein	ND		11.1
1,1-Dichloroethene	ND		5.55
Methylene Chloride	ND		5.55
Acrylonitrile	ND		11.1
trans-1,2-Dichloroethene	ND		5.55
1,1-Dichloroethane	ND		5.55
Chloroform	ND		5.55
1,1,1-Trichloroethane	ND		5.55
Carbon Tetrachloride	ND		5.55
1,2-Dichloroethane(EDC)	ND		5.55
Benzene	ND		5.55
Trichloroethene	ND		5.55
1,2-Dichloropropane	ND		5.55
Bromodichloromethane	ND		5.55
2-Chloroethylvinyl Ether	ND		5.55
cis-1,3-Dichloropropene	ND		5.55
Toluene	ND		5.55
trans-1,3-Dichloropropene	ND		5.55
1,1,2-Trichloroethane	ND		5.55
Tetrachloroethene	ND		5.55
Dibromochloromethane	ND		5.55
Chlorobenzene	ND		5.55
Ethylbenzene	ND		5.55
Total Xylenes	ND		5.55
Bromoform	ND		5.55
1,1,2,2-Tetrachloroethane	ND		5.55
1,3-Dichlorobenzene	ND		5.55
1,4-Dichlorobenzene	ND		5.55
1,2-Dichlorobenzene	ND		5.55

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-002

Client ID: #2

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4397.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10

Compound	Concentration	Q	MDL
Benzene	ND		5.55
Toluene	ND		5.55
Ethylbenzene	ND		5.55
Total Xylenes	ND		5.55
Isopropylbenzene	ND		5.55
n-Propylbenzene	ND		5.55
1,3,5-Trimethylbenzene	ND		5.55
tert-Butylbenzene	ND		5.55
1,2,4-Trimethylbenzene	ND		5.55
sec-Butylbenzene	ND		5.55
4-Isopropyltoluene	ND		5.55
n-Butylbenzene	ND		5.55
Naphthalene	ND		5.55

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-003

Client ID: #3

Date Received: 10/06/2000

Date Analyzed: 10/10/2000

Data file: J4419.D

GC/MS Column: DB-624

Sample wt/vol: 0.05g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 100

% Moisture: 10

Compound	Concentration	Q	MDL
Chloromethane	ND		556
Vinyl Chloride	ND		556
Bromomethane	ND		556
Chloroethane	ND		556
Trichlorofluoromethane	ND		556
Acrolein	ND		1110
1,1-Dichloroethene	ND		556
Methylene Chloride	ND		556
Acrylonitrile	ND		1110
trans-1,2-Dichloroethene	ND		556
1,1-Dichloroethane	ND		556
Chloroform	ND		556
1,1,1-Trichloroethane	ND		556
Carbon Tetrachloride	ND		556
1,2-Dichloroethane(EDC)	ND		556
Benzene	ND		556
Trichloroethene	ND		556
1,2-Dichloropropane	ND		556
Bromodichloromethane	ND		556
2-Chloroethylvinyl Ether	ND		556
cis-1,3-Dichloropropene	ND		556
Toluene	ND		556
trans-1,3-Dichloropropene	ND		556
1,1,2-Trichloroethane	ND		556
Tetrachloroethene	ND		556
Dibromochloromethane	ND		556
Chlorobenzene	ND		556
Ethylbenzene	ND		556
Total Xylenes	ND		556
Bromoform	ND		556
1,1,2,2-Tetrachloroethane	ND		556
1,3-Dichlorobenzene	ND		556
1,4-Dichlorobenzene	ND		556
1,2-Dichlorobenzene	ND		556

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-003

Client ID: #3

Date Received: 10/06/2000

Date Analyzed: 10/10/2000

Data file: J4419.D

GC/MS Column: DB-624

Sample wt/vol: 0.05g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 100

% Moisture: 10

Compound	Concentration	Q	MDL
Benzene	ND		556
Toluene	ND		556
Ethylbenzene	ND		556
Total Xylenes	ND		556
Isopropylbenzene	ND		556
n-Propylbenzene	ND		556
1,3,5-Trimethylbenzene	118	J	556
tert-Butylbenzene	ND		556
1,2,4-Trimethylbenzene	ND		556
sec-Butylbenzene	ND		556
4-Isopropyltoluene	ND		556
n-Butylbenzene	ND		556
Naphthalene	ND		556
Total Target Compounds:	118	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-004

Client ID: #4

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4399.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 10

% Moisture: 10.7

Compound	Concentration	Q	MDL
Chloromethane	ND		56
Vinyl Chloride	ND		56
Bromomethane	ND		56
Chloroethane	ND		56
Trichlorofluoromethane	ND		56
Acrolein	ND		112
1,1-Dichloroethene	ND		56
Methylene Chloride	ND		56
Acrylonitrile	ND		112
trans-1,2-Dichloroethene	ND		56
1,1-Dichloroethane	ND		56
Chloroform	ND		56
1,1,1-Trichloroethane	ND		56
Carbon Tetrachloride	ND		56
1,2-Dichloroethane(EDC)	ND		56
Benzene	ND		56
Trichloroethene	ND		56
1,2-Dichloropropane	ND		56
Bromodichloromethane	ND		56
2-Chloroethylvinyl Ether	ND		56
cis-1,3-Dichloropropene	ND		56
Toluene	ND		56
trans-1,3-Dichloropropene	ND		56
1,1,2-Trichloroethane	ND		56
Tetrachloroethene	ND		56
Dibromochloromethane	ND		56
Chlorobenzene	ND		56
Ethylbenzene	11.4	J	56
Total Xylenes	34.3	J	56
Bromoform	ND		56
1,1,2,2-Tetrachloroethane	ND		56
1,3-Dichlorobenzene	ND		56
1,4-Dichlorobenzene	ND		56
1,2-Dichlorobenzene	ND		56

Total Target Compounds: 45.7 J

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-004

Client ID: #4

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4399.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 10

% Moisture: 10.7

Compound	Concentration	Q	MDL
Benzene	ND		56
Toluene	ND		56
Ethylbenzene	11.4	J	56
Total Xylenes	34.3	J	56
Isopropylbenzene	119		56
n-Propylbenzene	161		56
1,3,5-Trimethylbenzene	793		56
tert-Butylbenzene	ND		56
1,2,4-Trimethylbenzene	950		56
sec-Butylbenzene	626		56
4-Isopropyltoluene	589		56
n-Butylbenzene	ND		56
Naphthalene	1560		56
Total Target Compounds:	4843.7	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-005

Client ID: #5

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4400.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.3

Compound	Concentration	Q	MDL
Chloromethane	ND		5.7
Vinyl Chloride	ND		5.7
Bromomethane	ND		5.7
Chloroethane	ND		5.7
Trichlorofluoromethane	ND		5.7
Acrolein	ND		11.4
1,1-Dichloroethene	ND		5.7
Methylene Chloride	ND		5.7
Acrylonitrile	ND		11.4
trans-1,2-Dichloroethene	ND		5.7
1,1-Dichloroethane	ND		5.7
Chloroform	ND		5.7
1,1,1-Trichloroethane	ND		5.7
Carbon Tetrachloride	ND		5.7
1,2-Dichloroethane(EDC)	ND		5.7
Benzene	ND		5.7
Trichloroethene	ND		5.7
1,2-Dichloropropane	ND		5.7
Bromodichloromethane	ND		5.7
2-Chloroethylvinyl Ether	ND		5.7
cis-1,3-Dichloropropene	ND		5.7
Toluene	ND		5.7
trans-1,3-Dichloropropene	ND		5.7
1,1,2-Trichloroethane	ND		5.7
Tetrachloroethene	ND		5.7
Dibromochloromethane	ND		5.7
Chlorobenzene	ND		5.7
Ethylbenzene	ND		5.7
Total Xylenes	ND		5.7
Bromoform	ND		5.7
1,1,2,2-Tetrachloroethane	ND		5.7
1,3-Dichlorobenzene	ND		5.7
1,4-Dichlorobenzene	ND		5.7
1,2-Dichlorobenzene	ND		5.7

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-005

Client ID: #5

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4400.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.3

Compound	Concentration	Q	MDL
Benzene	ND		5.7
Toluene	ND		5.7
Ethylbenzene	ND		5.7
Total Xylenes	ND		5.7
Isopropylbenzene	ND		5.7
n-Propylbenzene	ND		5.7
1,3,5-Trimethylbenzene	22.7		5.7
tert-Butylbenzene	ND		5.7
1,2,4-Trimethylbenzene	27		5.7
sec-Butylbenzene	18.5		5.7
4-Isopropyltoluene	32.9		5.7
n-Butylbenzene	ND		5.7
Naphthalene	ND		5.7

Total Target Compounds: 101.1

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-006

Client ID: #6

Date Received: 10/06/2000

Date Analyzed: 10/11/2000

Data file: I4429.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 10

% Moisture: 14.4

Compound	Concentration	Q	MDL
Chloromethane	ND		58.4
Vinyl Chloride	ND		58.4
Bromomethane	ND		58.4
Chloroethane	ND		58.4
Trichlorofluoromethane	ND		58.4
Acrolein	ND		117
1,1-Dichloroethene	ND		58.4
Methylene Chloride	ND		58.4
Acrylonitrile	ND		117
trans-1,2-Dichloroethene	ND		58.4
1,1-Dichloroethane	ND		58.4
Chloroform	ND		58.4
1,1,1-Trichloroethane	ND		58.4
Carbon Tetrachloride	ND		58.4
1,2-Dichloroethane(EDC)	ND		58.4
Benzene	ND		58.4
Trichloroethene	ND		58.4
1,2-Dichloropropane	ND		58.4
Bromodichloromethane	ND		58.4
2-Chloroethylvinyl Ether	ND		58.4
cis-1,3-Dichloropropene	ND		58.4
Toluene	ND		58.4
trans-1,3-Dichloropropene	ND		58.4
1,1,2-Trichloroethane	ND		58.4
Tetrachloroethene	ND		58.4
Dibromochloromethane	ND		58.4
Chlorobenzene	ND		58.4
Ethylbenzene	ND		58.4
Total Xylenes	28.8	J	58.4
Bromoform	ND		58.4
1,1,2,2-Tetrachloroethane	ND		58.4
1,3-Dichlorobenzene	ND		58.4
1,4-Dichlorobenzene	ND		58.4
1,2-Dichlorobenzene	ND		58.4
Total Target Compounds:	28.8	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-006

Client ID: #6

Date Received: 10/06/2000

Date Analyzed: 10/11/2000

Data file: I4429.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 10

% Moisture: 14.4

Compound	Concentration	Q	MDL
Benzene	ND		58.4
Toluene	ND		58.4
Ethylbenzene	ND		58.4
Total Xylenes	28.8	J	58.4
Isopropylbenzene	ND		58.4
n-Propylbenzene	ND		58.4
1,3,5-Trimethylbenzene	22.9	J	58.4
tert-Butylbenzene	ND		58.4
1,2,4-Trimethylbenzene	28.2	J	58.4
sec-Butylbenzene	ND		58.4
4-Isopropyltoluene	ND		58.4
n-Butylbenzene	ND		58.4
Naphthalene	ND		58.4
Total Target Compounds:	79.9	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-007

Client ID: #7

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4402.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.8

Compound	Concentration	Q	MDL
Chloromethane	ND		5.75
Vinyl Chloride	ND		5.75
Bromomethane	ND		5.75
Chloroethane	ND		5.75
Trichlorofluoromethane	ND		5.75
Acrolein	ND		11.5
1,1-Dichloroethene	ND		5.75
Methylene Chloride	ND		5.75
Acrylonitrile	ND		11.5
trans-1,2-Dichloroethene	ND		5.75
1,1-Dichloroethane	ND		5.75
Chloroform	ND		5.75
1,1,1-Trichloroethane	ND		5.75
Carbon Tetrachloride	ND		5.75
1,2-Dichloroethane(EDC)	ND		5.75
Benzene	ND		5.75
Trichloroethene	ND		5.75
1,2-Dichloropropane	ND		5.75
Bromodichloromethane	ND		5.75
2-Chloroethylvinyl Ether	ND		5.75
cis-1,3-Dichloropropene	ND		5.75
Toluene	ND		5.75
trans-1,3-Dichloropropene	ND		5.75
1,1,2-Trichloroethane	ND		5.75
Tetrachloroethene	ND		5.75
Dibromochloromethane	ND		5.75
Chlorobenzene	ND		5.75
Ethylbenzene	ND		5.75
Total Xylenes	2.06	J	5.75
Bromoform	ND		5.75
1,1,2,2-Tetrachloroethane	ND		5.75
1,3-Dichlorobenzene	ND		5.75
1,4-Dichlorobenzene	ND		5.75
1,2-Dichlorobenzene	ND		5.75

Total Target Compounds: 2.06 J

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-007

Client ID: #7

Date Received: 10/06/2000

Date Analyzed: 10/09/2000

Data file: I4402.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.8

Compound	Concentration	Q	MDL
Benzene	ND		5.75
Toluene	ND		5.75
Ethylbenzene	ND		5.75
Total Xylenes	2.06	J	5.75
Isopropylbenzene	4.87	J	5.75
n-Propylbenzene	5.54	J	5.75
1,3,5-Trimethylbenzene	26.8		5.75
tert-Butylbenzene	ND		5.75
1,2,4-Trimethylbenzene	32.3		5.75
sec-Butylbenzene	26.6		5.75
4-Isopropyltoluene	35.7		5.75
n-Butylbenzene	ND		5.75
Naphthalene	32.5		5.75
Total Target Compounds:	166.37	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-001

Client ID: #1

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3546.D

GC/MS Column: DB-5

Sample wt/vol: 15.90g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 8.80

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		138
Aniline	ND		69
bis(2-Chloroethyl)ether	ND		69
1,3-Dichlorobenzene	ND		69
1,4-Dichlorobenzene	ND		69
Benzyl alcohol	ND		69
1,2-Dichlorobenzene	ND		69
bis(2-chloroisopropyl)ether	ND		69
N-Nitroso-di-n-propylamine	ND		69
Hexachloroethane	ND		69
Nitrobenzene	ND		69
Isophorone	ND		69
bis(2-Chloroethoxy)methane	ND		69
1,2,4-Trichlorobenzene	ND		69
Naphthalene	ND		69
4-Chloroaniline	ND		69
Hexachlorobutadiene	ND		69
2-Methylnaphthalene	ND		69
Hexachlorocyclopentadiene	ND		69
2-Chloronaphthalene	ND		69
2-Nitroaniline	ND		69
Dimethylphthalate	ND		69
2,6-Dinitrotoluene	ND		69
Acenaphthylene	ND		69

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-001

Client ID: #1

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3546.D

GC/MS Column: DB-5

Sample wt/vol: 15.90g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 8.80

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		69
Acenaphthene	ND		69
2,4-Dinitrotoluene	ND		69
Dibenzofuran	ND		69
Diethylphthalate	ND		69
Fluorene	ND		69
4-Chlorophenyl-phenylether	ND		69
4-Nitroaniline	ND		69
N-Nitrosodiphenylamine	ND		69
1,2-Diphenylhydrazine/Azobenzene	ND		69
4-Bromophenyl-phenylether	ND		69
Hexachlorobenzene	ND		69
Phenanthrene	ND		69
Anthracene	ND		69
Carbazole	ND		69
Di-n-butylphthalate	ND		69
Fluoranthene	ND		69
Benzidine	ND		69
Pyrene	ND		69
3,3'-Dimethylbenzidine	ND		69
Butylbenzylphthalate	ND		69
3,3'-Dichlorobenzidine	ND		69
Benzo[a]anthracene	ND		69
Chrysene	ND		69
bis(2-Ethylhexyl)phthalate	ND		69
Di-n-octylphthalate	ND		69
Benzo[b]fluoranthene	ND		69
Benzo[k]fluoranthene	ND		69
Benzo[a]pyrene	ND		69
Indeno[1,2,3-cd]pyrene	ND		69
Dibenz[a,h]anthracene	ND		69
Benzo[g,h,i]perylene	ND		69

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-001

Client ID: #1

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3546.D

GC/MS Column: DB-5

Sample wt/vol: 15.90g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 8.80

Compound	Concentration	Q	MDL
Acenaphthene	ND		69
Fluorene	ND		69
Phenanthrene	ND		69
Anthracene	ND		69
Fluoranthene	ND		69
Pyrene	ND		69
Benzo[a]anthracene	ND		69
Chrysene	ND		69
Benzo[b]fluoranthene	ND		69
Benzo[k]fluoranthene	ND		69
Benzo[a]pyrene	ND		69
Indeno[1,2,3-cd]pyrene	ND		69
Dibenz[a,h]anthracene	ND		69
Benzo[g,h,i]perylene	ND		69

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-002

Client ID: #2

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3547.D

GC/MS Column: DB-5

Sample wt/vol: 10.78g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		103
Acenaphthene	ND		103
2,4-Dinitrotoluene	ND		103
Dibenzofuran	ND		103
Diethylphthalate	ND		103
Fluorene	ND		103
4-Chlorophenyl-phenylether	ND		103
4-Nitroaniline	ND		103
N-Nitrosodiphenylamine	ND		103
1,2-Diphenylhydrazine/Azobenzene	ND		103
4-Bromophenyl-phenylether	ND		103
Hexachlorobenzene	ND		103
Phenanthrene	ND		103
Anthracene	ND		103
Carbazole	ND		103
Di-n-butylphthalate	ND		103
Fluoranthene	ND		103
Benzidine	ND		103
Pyrene	ND		103
3,3'-Dimethylbenzidine	ND		103
Butylbenzylphthalate	ND		103
3,3'-Dichlorobenzidine	ND		103
Benzo[a]anthracene	ND		103
Chrysene	ND		103
bis(2-Ethylhexyl)phthalate	ND		103
Di-n-octylphthalate	ND		103
Benzo[b]fluoranthene	ND		103
Benzo[k]fluoranthene	ND		103
Benzo[a]pyrene	ND		103
Indeno[1,2,3-cd]pyrene	ND		103
Dibenz[a,h]anthracene	ND		103
Benzo[g,h,i]perylene	ND		103

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-002

Client ID: #2

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3547.D

GC/MS Column: DB-5

Sample wt/vol: 10.78g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		206
Aniline	ND		103
bis(2-Chloroethyl)ether	ND		103
1,3-Dichlorobenzene	ND		103
1,4-Dichlorobenzene	ND		103
Benzyl alcohol	ND		103
1,2-Dichlorobenzene	ND		103
bis(2-chloroisopropyl)ether	ND		103
N-Nitroso-di-n-propylamine	ND		103
Hexachloroethane	ND		103
Nitrobenzene	ND		103
Isophorone	ND		103
bis(2-Chloroethoxy)methane	ND		103
1,2,4-Trichlorobenzene	ND		103
Naphthalene	ND		103
4-Chloroaniline	ND		103
Hexachlorobutadiene	ND		103
2-Methylnaphthalene	ND		103
Hexachlorocyclopentadiene	ND		103
2-Chloronaphthalene	ND		103
2-Nitroaniline	ND		103
Dimethylphthalate	ND		103
2,6-Dinitrotoluene	ND		103
Acenaphthylene	ND		103

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-002

Client ID: #2

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3547.D

GC/MS Column: DB-5

Sample wt/vol: 10.78g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
Acenaphthene	ND		103
Fluorene	ND		103
Phenanthrene	ND		103
Anthracene	ND		103
Fluoranthene	ND		103
Pyrene	ND		103
Benzo[a]anthracene	ND		103
Chrysene	ND		103
Benzo[b]fluoranthene	ND		103
Benzo[k]fluoranthene	ND		103
Benzo[a]pyrene	ND		103
Indeno[1,2,3-cd]pyrene	ND		103
Dibenz[a,h]anthracene	ND		103
Benzo[g,h,i]perylene	ND		103

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-003

Client ID: #3

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3548.D

GC/MS Column: DB-5

Sample wt/vol: 10.17g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		219
Aniline	ND		109
bis(2-Chloroethyl)ether	ND		109
1,3-Dichlorobenzene	ND		109
1,4-Dichlorobenzene	ND		109
Benzyl alcohol	ND		109
1,2-Dichlorobenzene	ND		109
bis(2-chloroisopropyl)ether	ND		109
N-Nitroso-di-n-propylamine	ND		109
Hexachloroethane	ND		109
Nitrobenzene	ND		109
Isophorone	ND		109
bis(2-Chloroethoxy)methane	ND		109
1,2,4-Trichlorobenzene	ND		109
Naphthalene	109		109
4-Chloroaniline	ND		109
Hexachlorobutadiene	ND		109
2-Methylnaphthalene	1040		109
Hexachlorocyclopentadiene	ND		109
2-Chloronaphthalene	ND		109
2-Nitroaniline	ND		109
Dimethylphthalate	ND		109
2,6-Dinitrotoluene	ND		109
Acenaphthylene	150		109

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-003

Client ID: #3

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3548.D

GC/MS Column: DB-5

Sample wt/vol: 10.17g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		109
Acenaphthene	613		109
2,4-Dinitrotoluene	ND		109
Dibenzofuran	ND		109
Diethylphthalate	ND		109
Fluorene	573		109
4-Chlorophenyl-phenylether	ND		109
4-Nitroaniline	ND		109
N-Nitrosodiphenylamine	ND		109
1,2-Diphenylhydrazine/Azobenzene	ND		109
4-Bromophenyl-phenylether	ND		109
Hexachlorobenzene	ND		109
Phenanthrene	1660		109
Anthracene	574		109
Carbazole	ND		109
Di-n-butylphthalate	ND		109
Fluoranthene	66.3	J	109
Benzidine	ND		109
Pyrene	126		109
3,3'-Dimethylbenzidine	ND		109
Butylbenzylphthalate	ND		109
3,3'-Dichlorobenzidine	ND		109
Benzo[a]anthracene	ND		109
Chrysene	ND		109
bis(2-Ethylhexyl)phthalate	ND		109
Di-n-octylphthalate	ND		109
Benzo[b]fluoranthene	ND		109
Benzo[k]fluoranthene	ND		109
Benzo[a]pyrene	ND		109
Indeno[1,2,3-cd]pyrene	ND		109
Dibenz[a,h]anthracene	ND		109
Benzo[g,h,i]perylene	ND		109

Total Target Compounds: 4911.3 J

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-003

Client ID: #3

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3548.D

GC/MS Column: DB-5

Sample wt/vol: 10.17g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.0

Compound	Concentration	Q	MDL
Acenaphthene	613		109
Fluorene	573		109
Phenanthrene	1660		109
Anthracene	561		109
Fluoranthene	66.3	J	109
Pyrene	126		109
Benzo[a]anthracene	ND		109
Chrysene	ND		109
Benzo[b]fluoranthene	ND		109
Benzo[k]fluoranthene	ND		109
Benzo[a]pyrene	ND		109
Indeno[1,2,3-cd]pyrene	ND		109
Dibenz[a,h]anthracene	ND		109
Benzo[g,h,i]perylene	ND		109
Total Target Compounds:	3599.3	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-004

Client ID: #4

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3549.D

GC/MS Column: DB-5

Sample wt/vol: 10.64g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.7

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		211
Aniline	ND		105
bis(2-Chloroethyl)ether	ND		105
1,3-Dichlorobenzene	ND		105
1,4-Dichlorobenzene	ND		105
Benzyl alcohol	ND		105
1,2-Dichlorobenzene	ND		105
bis(2-chloroisopropyl)ether	ND		105
N-Nitroso-di-n-propylamine	ND		105
Hexachloroethane	ND		105
Nitrobenzene	ND		105
Isophorone	ND		105
bis(2-Chloroethoxy)methane	ND		105
1,2,4-Trichlorobenzene	ND		105
Naphthalene	2340		105
4-Chloroaniline	ND		105
Hexachlorobutadiene	ND		105
2-Methylnaphthalene	9730		105
Hexachlorocyclopentadiene	ND		105
2-Chloronaphthalene	ND		105
2-Nitroaniline	ND		105
Dimethylphthalate	ND		105
2,6-Dinitrotoluene	ND		105
Acenaphthylene	213		105

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-004

Client ID: #4

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3549.D

GC/MS Column: DB-5

Sample wt/vol: 10.64g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.7

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		105
Acenaphthene	1010		105
2,4-Dinitrotoluene	ND		105
Dibenzofuran	1010		105
Diethylphthalate	ND		105
Fluorene	1240		105
4-Chlorophenyl-phenylether	ND		105
4-Nitroaniline	ND		105
N-Nitrosodiphenylamine	ND		105
1,2-Diphenylhydrazine/Azobenzene	ND		105
4-Bromophenyl-phenylether	ND		105
Hexachlorobenzene	ND		105
Phenanthrene	2440		105
Anthracene	786		105
Carbazole	ND		105
Di-n-butylphthalate	ND		105
Fluoranthene	ND		105
Benzidine	ND		105
Pyrene	116		105
3,3'-Dimethylbenzidine	ND		105
Butylbenzylphthalate	ND		105
3,3'-Dichlorobenzidine	ND		105
Benzo[a]anthracene	ND		105
Chrysene	ND		105
bis(2-Ethylhexyl)phthalate	ND		105
Di-n-octylphthalate	ND		105
Benzo[b]fluoranthene	ND		105
Benzo[k]fluoranthene	ND		105
Benzo[a]pyrene	ND		105
Indeno[1,2,3-cd]pyrene	ND		105
Dibenz[a,h]anthracene	ND		105
Benzo[g,h,i]perylene	ND		105

Total Target Compounds: 18885

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-004

Client ID: #4

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3549.D

GC/MS Column: DB-5

Sample wt/vol: 10.64g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.7

Compound	Concentration	Q	MDL
Acenaphthene	1010		105
Fluorene	1240		105
Phenanthrene	2440		105
Anthracene	786		105
Fluoranthene	ND		105
Pyrene	116		105
Benzo[a]anthracene	ND		105
Chrysene	ND		105
Benzo[b]fluoranthene	ND		105
Benzo[k]fluoranthene	ND		105
Benzo[a]pyrene	ND		105
Indeno[1,2,3-cd]pyrene	ND		105
Dibenz[a,h]anthracene	ND		105
Benzo[g,h,i]perylene	ND		105

Total Target Compounds: 5592

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-005

Client ID: #5

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3550.D

GC/MS Column: DB-5

Sample wt/vol: 10.65g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.3

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		214
Aniline	ND		107
bis(2-Chloroethyl)ether	ND		107
1,3-Dichlorobenzene	ND		107
1,4-Dichlorobenzene	ND		107
Benzyl alcohol	ND		107
1,2-Dichlorobenzene	ND		107
bis(2-chloroisopropyl)ether	ND		107
N-Nitroso-di-n-propylamine	ND		107
Hexachloroethane	ND		107
Nitrobenzene	ND		107
Isophorone	ND		107
bis(2-Chloroethoxy)methane	ND		107
1,2,4-Trichlorobenzene	ND		107
Naphthalene	310		107
4-Chloroaniline	ND		107
Hexachlorobutadiene	ND		107
2-Methylnaphthalene	2790		107
Hexachlorocyclopentadiene	ND		107
2-Chloronaphthalene	ND		107
2-Nitroaniline	ND		107
Dimethylphthalate	ND		107
2,6-Dinitrotoluene	ND		107
Acenaphthylene	241		107

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-005

Client ID: #5

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3550.D

GC/MS Column: DB-5

Sample wt/vol: 10.65g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.3

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		107
Acenaphthene	784		107
2,4-Dinitrotoluene	ND		107
Dibenzofuran	551		107
Diethylphthalate	ND		107
Fluorene	839		107
4-Chlorophenyl-phenylether	ND		107
4-Nitroaniline	ND		107
N-Nitrosodiphenylamine	ND		107
1,2-Diphenylhydrazine/Azobenzene	ND		107
4-Bromophenyl-phenylether	ND		107
Hexachlorobenzene	ND		107
Phenanthrene	1550		107
Anthracene	792		107
Carbazole	ND		107
Di-n-butylphthalate	ND		107
Fluoranthene	ND		107
Benzidine	ND		107
Pyrene	70.2	J	107
3,3'-Dimethylbenzidine	ND		107
Butylbenzylphthalate	ND		107
3,3'-Dichlorobenzidine	ND		107
Benzo[a]anthracene	ND		107
Chrysene	ND		107
bis(2-Ethylhexyl)phthalate	ND		107
Di-n-octylphthalate	ND		107
Benzo[b]fluoranthene	ND		107
Benzo[k]fluoranthene	ND		107
Benzo[a]pyrene	ND		107
Indeno[1,2,3-cd]pyrene	ND		107
Dibenz[a,h]anthracene	ND		107
Benzo[g,h,i]perylene	ND		107

Total Target Compounds: 7927.2 J

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-005

Client ID: #5

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3550.D

GC/MS Column: DB-5

Sample wt/vol: 10.65g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.3

Compound	Concentration	Q	MDL
Acenaphthene	784		107
Fluorene	839		107
Phenanthrene	1550		107
Anthracene	792		107
Fluoranthene	ND		107
Pyrene	70.2	J	107
Benzo[a]anthracene	ND		107
Chrysene	ND		107
Benzo[b]fluoranthene	ND		107
Benzo[k]fluoranthene	ND		107
Benzo[a]pyrene	ND		107
Indeno[1,2,3-cd]pyrene	ND		107
Dibenz[a,h]anthracene	ND		107
Benzo[g,h,i]perylene	ND		107
Total Target Compounds:	4035.2	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-006

Client ID: #6

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3551.D

GC/MS Column: DB-5

Sample wt/vol: 10.69g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 14.4

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		219
Aniline	ND		109
bis(2-Chloroethyl)ether	ND		109
1,3-Dichlorobenzene	ND		109
1,4-Dichlorobenzene	ND		109
Benzyl alcohol	ND		109
1,2-Dichlorobenzene	ND		109
bis(2-chloroisopropyl)ether	ND		109
N-Nitroso-di-n-propylamine	ND		109
Hexachloroethane	ND		109
Nitrobenzene	ND		109
Isophorone	ND		109
bis(2-Chloroethoxy)methane	ND		109
1,2,4-Trichlorobenzene	ND		109
Naphthalene	ND		109
4-Chloroaniline	ND		109
Hexachlorobutadiene	ND		109
2-Methylnaphthalene	ND		109
Hexachlorocyclopentadiene	ND		109
2-Chloronaphthalene	ND		109
2-Nitroaniline	ND		109
Dimethylphthalate	ND		109
2,6-Dinitrotoluene	ND		109
Acenaphthylene	ND		109

INTEGRATED ANALYTICAL LABORATORIES
SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-006
Client ID: #6
Date Received: 10/06/2000
Date Extracted: 10/09/2000
Date Analyzed: 10/11/2000
Data file: A3551.D

GC/MS Column: DB-5
Sample wt/vol: 10.69g
Matrix-Units: Soil- μ g/Kg (ppb)
Dilution Factor: 1
% Moisture: 14.4

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		109
Acenaphthene	ND		109
2,4-Dinitrotoluene	ND		109
Dibenzofuran	ND		109
Diethylphthalate	ND		109
Fluorene	ND		109
4-Chlorophenyl-phenylether	ND		109
4-Nitroaniline	ND		109
N-Nitrosodiphenylamine	ND		109
1,2-Diphenylhydrazine/Azobenzene	ND		109
4-Bromophenyl-phenylether	ND		109
Hexachlorobenzene	ND		109
Phenanthrene	220		109
Anthracene	ND		109
Carbazole	ND		109
Di-n-butylphthalate	ND		109
Fluoranthene	234		109
Benzydine	ND		109
Pyrene	143		109
3,3'-Dimethylbenzidine	ND		109
Butylbenzylphthalate	ND		109
3,3'-Dichlorobenzidine	ND		109
Benzo[a]anthracene	106	J	109
Chrysene	83.9	J	109
bis(2-Ethylhexyl)phthalate	ND		109
Di-n-octylphthalate	ND		109
Benzo[b]fluoranthene	99.7	J	109
Benzo[k]fluoranthene	ND		109
Benzo[a]pyrene	68.1	J	109
Indeno[1,2,3-cd]pyrene	ND		109
Dibenz[a,h]anthracene	ND		109
Benzo[g,h,i]perylene	ND		109
Total Target Compounds:	954.7	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-006

Client ID: #6

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3551.D

GC/MS Column: DB-5

Sample wt/vol: 10.69g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 14.4

Compound	Concentration	Q	MDL
Acenaphthene	ND		109
Fluorene	ND		109
Phenanthrene	220		109
Anthracene	ND		109
Fluoranthene	234		109
Pyrene	143		109
Benzo[a]anthracene	106	J	109
Chrysene	83.9	J	109
Benzo[b]fluoranthene	99.7	J	109
Benzo[k]fluoranthene	ND		109
Benzo[a]pyrene	68.1	J	109
Indeno[1,2,3-cd]pyrene	ND		109
Dibenz[a,h]anthracene	ND		109
Benzo[g,h,i]perylene	ND		109
Total Target Compounds:	954.7	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-007

Client ID: #7

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3552.D

GC/MS Column: DB-5

Sample wt/vol: 5.82g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.8

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		394
Aniline	ND		197
bis(2-Chloroethyl)ether	ND		197
1,3-Dichlorobenzene	ND		197
1,4-Dichlorobenzene	ND		197
Benzyl alcohol	ND		197
1,2-Dichlorobenzene	ND		197
bis(2-chloroisopropyl)ether	ND		197
N-Nitroso-di-n-propylamine	ND		197
Hexachloroethane	ND		197
Nitrobenzene	ND		197
Isophorone	ND		197
bis(2-Chloroethoxy)methane	ND		197
1,2,4-Trichlorobenzene	ND		197
Naphthalene	658		197
4-Chloroaniline	ND		197
Hexachlorobutadiene	ND		197
2-Methylnaphthalene	3610		197
Hexachlorocyclopentadiene	ND		197
2-Chloronaphthalene	ND		197
2-Nitroaniline	ND		197
Dimethylphthalate	ND		197
2,6-Dinitrotoluene	ND		197
Acenaphthylene	288		197

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-007

Client ID: #7

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3552.D

GC/MS Column: DB-5

Sample wt/vol: 5.82g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.8

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		197
Acenaphthene	994		197
2,4-Dinitrotoluene	ND		197
Dibenzofuran	403		197
Diethylphthalate	ND		197
Fluorene	1010		197
4-Chlorophenyl-phenylether	ND		197
4-Nitroaniline	ND		197
N-Nitrosodiphenylamine	ND		197
1,2-Diphenylhydrazine/Azobenzene	ND		197
4-Bromophenyl-phenylether	ND		197
Hexachlorobenzene	ND		197
Phenanthrene	2190		197
Anthracene	456		197
Carbazole	ND		197
Di-n-butylphthalate	ND		197
Fluoranthene	154	J	197
Benzidine	ND		197
Pyrene	199		197
3,3'-Dimethylbenzidine	ND		197
Butylbenzylphthalate	ND		197
3,3'-Dichlorobenzidine	ND		197
Benzo[a]anthracene	ND		197
Chrysene	ND		197
bis(2-Ethylhexyl)phthalate	ND		197
Di-n-octylphthalate	ND		197
Benzo[b]fluoranthene	ND		197
Benzo[k]fluoranthene	ND		197
Benzo[a]pyrene	ND		197
Indeno[1,2,3-cd]pyrene	ND		197
Dibenz[a,h]anthracene	ND		197
Benzo[g,h,i]perylene	ND		197

Total Target Compounds: 9962 J

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 6295-007

Client ID: #7

Date Received: 10/06/2000

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3552.D

GC/MS Column: DB-5

Sample wt/vol: 5.82g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.8

Compound	Concentration	Q	MDL
Acenaphthene	994		197
Fluorene	1010		197
Phenanthrene	2190		197
Anthracene	456		197
Fluoranthene	154	J	197
Pyrene	199		197
Benzo[a]anthracene	ND		197
Chrysene	ND		197
Benzo[b]fluoranthene	ND		197
Benzo[k]fluoranthene	ND		197
Benzo[a]pyrene	ND		197
Indeno[1,2,3-cd]pyrene	ND		197
Dibenz[a,h]anthracene	ND		197
Benzo[g,h,i]perylene	ND		197
Total Target Compounds:	5003	J	

METHODOLOGY SUMMARY

<u>Analytical Parameter</u>	Aqueous Samples	Soil/Other Samples
	<u>Method #</u>	<u>Method #</u>
Volatiles	NA	EPA 8260B
Volatiles - Stars list 8021	NA	EPA 8260B
Semivolatiles - BN	NA	EPA 8270C
Semivolatiles - Stars list 8270 BN	NA	EPA 8270C

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: I4239.D

BFB Injection Date: 10/02/2000

Inst ID: MSD I

BFB Injection Time: 10:23

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	30.7
75	30.0 - 60.0% of mass 95	59.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7 (1.1)1
174	Great than 50.0% of mass 95	60.3
175	5.0 - 9.0% of mass 174	5.4 (8.9)1
176	95.0 - 101.0% of mass 174	59.6 (98.9)1
177	5.0 - 9.0% of mass 176	4.4 (7.4)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPBB_STD	I4240.D	10/02/2000	10:58
200	200_PPBB_STD	I4241.D	10/02/2000	11:33
150	150_PPBB_STD	I4242.D	10/02/2000	12:08
50	50_PPBB_STD	I4243.D	10/02/2000	12:43
20	20_PPBB_STD	I4244.D	10/02/2000	13:18
N/A	METHOD_BLK	I4246.D	10/02/2000	14:30
P/S-CARB	6017-001	I4247.D	10/02/2000	15:16
SB-E19-DB2_COM5958-019		I4248.D	10/02/2000	15:50
SPL-1	5877-001	I4249.D	10/02/2000	16:25
MS	6017-001MS	I4250.D	10/02/2000	17:00
MSD	6017-001MSD	I4251.D	10/02/2000	17:35
HMW-60_12	6036-001	I4252.D	10/02/2000	18:10
HMW-60_16	6036-002	I4253.D	10/02/2000	18:45
HMW-60_43	6036-003	I4254.D	10/02/2000	19:20
HMW-61_34	6036-004	I4255.D	10/02/2000	19:55
HMW-62_13	6036-005	I4256.D	10/02/2000	20:30
HMW-62_31	6036-006	I4257.D	10/02/2000	21:05
HMW-63_19	6036-007	I4258.D	10/02/2000	21:40
HMW-63_32	6036-008	I4259.D	10/02/2000	22:15

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: I4384.D

BFB Injection Date: 10/09/2000

Inst ID: MSD I

BFB Injection Time: 10:31

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	31.8
75	30.0 - 60.0% of mass 95	59.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	63.7
175	5.0 - 9.0% of mass 174	5.6 (8.8)1
176	95.0 - 101.0% of mass 174	64.2 (100.8)1
177	5.0 - 9.0% of mass 176 -	4.4 (6.8)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPb_STD	I4385.D	10/09/2000	10:55
N/A	METHOD_BLK	I4388.D	10/09/2000	12:51
SB-E3-DB12/13-2	6156-023	I4389.D	10/09/2000	13:26
MS	6295-001MS	I4390.D	10/09/2000	14:01
MSD	6295-001MSD	I4391.D	10/09/2000	14:36
#1	6295-001	I4396.D	10/09/2000	17:31
#2	6295-002	I4397.D	10/09/2000	18:06
#4	6295-004	I4399.D	10/09/2000	19:16
#5	6295-005	I4400.D	10/09/2000	19:51
#7	6295-007	I4402.D	10/09/2000	21:01

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: I4422.D

BFB Injection Date: 10/11/2000

Inst ID: MSD I

BFB Injection Time: 11:14

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	33.0
75	30.0 - 60.0% of mass 95	61.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.7
173	Less than 2.0% of mass 174	1.2 (1.8)1
174	Great than 50.0% of mass 95	64.3
175	5.0 - 9.0% of mass 174	5.0 (7.7)1
176	95.0 - 101.0% of mass 174	63.1 (98.1)1
177	5.0 - 9.0% of mass 176	4.0 (6.3)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPb_STD	I4424.D	10/11/2000	12:06
N/A	METHOD_BLK	I4427.D	10/11/2000	13:53
#6	6295-006	I4429.D	10/11/2000	15:03
SB-E2-BD33-38-3	6257-033	I4433.D	10/11/2000	17:24

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J4266.D

BFB Injection Date: 10/03/2000

Inst ID: MSD J

BFB Injection Time: 16:13

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	23.9
75	30.0 - 60.0% of mass 95	54.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	Great than 50.0% of mass 95	54.3
175	5.0 - 9.0% of mass 174	4.1 (7.6)1
176	95.0 - 101.0% of mass 174	53.4 (98.4)1
177	5.0 - 9.0% of mass 176	3.6 (6.8)2
1-Value is % mass 174		2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100PPB	STD-100PPB	J4268.D	10/03/2000	17:16
50PPB	STD-50PPB	J4269.D	10/03/2000	17:42
20PPB	STD-20PPB	J4270.D	10/03/2000	18:07
150PPB	STD-150PPB	J4271.D	10/03/2000	18:33
200PPB	STD-200PPB	J4272.D	10/03/2000	18:59
N/A	METHOD-BLK	J4273.D	10/03/2000	19:24

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J4397.D

BFB Injection Date: 10/10/2000

Inst ID: MSD J

BFB Injection Time: 11:30

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	21.3
75	30.0 - 60.0% of mass 95	58.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	58.4
175	5.0 - 9.0% of mass 174	4.4 (7.6)1
176	95.0 - 101.0% of mass 174	55.8 (95.5)1
177	5.0 - 9.0% of mass 176	3.6 (6.5)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100PPB	STD-100PPB	J4398.D	10/10/2000	11:55
N/A	METHOD-BLK	J4399.D	10/10/2000	12:21
TRIP_BLANK	6297-003	J4401.D	10/10/2000	13:22
SED1	6297-001	J4402.D	10/10/2000	13:48
SED2	6297-002	J4403.D	10/10/2000	14:13
SEPTIC-01	6300-005	J4404.D	10/10/2000	14:39
WO_#3	6251-003	J4405.D	10/10/2000	15:05
TRIP_BLANK	6251-004	J4406.D	10/10/2000	15:30
SB-E3-DB9-DB11-6307-028		J4407.D	10/10/2000	15:56
SB-E3-DB9-DB11-6307-029		J4408.D	10/10/2000	16:22
SB-E3-DB9-DB11-6307-030		J4409.D	10/10/2000	16:47
SB-E3-DB9-DB11-6307-031		J4410.D	10/10/2000	17:13
SB-E3-DB9-DB11-6307-032		J4411.D	10/10/2000	17:39
MS	6251-003MS	J4412.D	10/10/2000	18:04
MSD	6251-003MSD	J4413.D	10/10/2000	18:30
1000300-TB	6179-007	J4414.D	10/10/2000	18:56
MPE-1	6179-001	J4415.D	10/10/2000	19:22
MT_HOPE_W.C.	6317-001	J4418.D	10/10/2000	20:39
#3	6295-003	J4419.D	10/10/2000	21:04

VOLATILE METHOD BLANK SUMMARY

Lab File ID: I4388.D *✓399.D*
4388.D

Instrument ID: MSD I

Date Analyzed: 10/09/2000

Time Analyzed: 12:51

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

mtc 10/20/00

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SB-E3-DB12/13-2	6156-023	10/09/2000	13:26
MS	6295-001MS	10/09/2000	14:01
MSD	6295-001MSD	10/09/2000	14:36
#1	6295-001	10/09/2000	17:31
#2	6295-002	10/09/2000	18:06
#4	6295-004	10/09/2000	19:16
#5	6295-005	10/09/2000	19:51
#7	6295-007	10/09/2000	21:01

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 10/09/2000

Data file: I4388.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		5
Vinyl Chloride	ND		5
Bromomethane	ND		5
Chloroethane	ND		5
Trichlorofluoromethane	ND		5
Acrolein	ND		10
1,1-Dichloroethene	ND		5
Methylene Chloride	ND		5
Acrylonitrile	ND		10
trans-1,2-Dichloroethene	ND		5
1,1-Dichloroethane	ND		5
Chloroform	ND		5
1,1,1-Trichloroethane	ND		5
Carbon Tetrachloride	ND		5
1,2-Dichloroethane(EDC)	ND		5
Benzene	ND		5
Trichloroethene	ND		5
1,2-Dichloropropane	ND		5
Bromodichloromethane	ND		5
2-Chloroethylvinyl Ether	ND		5
cis-1,3-Dichloropropene	ND		5
Toluene	ND		5
trans-1,3-Dichloropropene	ND		5
1,1,2-Trichloroethane	ND		5
Tetrachloroethene	ND		5
Dibromochloromethane	ND		5
Chlorobenzene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Bromoform	ND		5
1,1,2,2-Tetrachloroethane	ND		5
1,3-Dichlorobenzene	ND		5
1,4-Dichlorobenzene	ND		5
1,2-Dichlorobenzene	ND		5

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 10/09/2000

Data file: I4388.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Benzene	ND		5
Toluene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Isopropylbenzene	ND		5
n-Propylbenzene	ND		5
1,3,5-Trimethylbenzene	ND		5
tert-Butylbenzene	ND		5
1,2,4-Trimethylbenzene	ND		5
sec-Butylbenzene	ND		5
4-Isopropyltoluene	ND		5
n-Butylbenzene	ND		5
Naphthalene	ND		5

Total Target Compounds: 0

VOLATILE METHOD BLANK SUMMARY

Lab File ID: I4427.D

Instrument ID: MSD I

Date Analyzed: 10/11/2000

Time Analyzed: 13:53

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
#6	6295-006	10/11/2000	15:03
SB-E2-BD33-38-3	6257-033	10/11/2000	17:24

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 10/11/2000

Data file: I4427.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		5
Vinyl Chloride	ND		5
Bromomethane	ND		5
Chloroethane	ND		5
Trichlorofluoromethane	ND		5
Acrolein	ND		10
1,1-Dichloroethene	ND		5
Methylene Chloride	ND		5
Acrylonitrile	ND		10
trans-1,2-Dichloroethene	ND		5
1,1-Dichloroethane	ND		5
Chloroform	ND		5
1,1,1-Trichloroethane	ND		5
Carbon Tetrachloride	ND		5
1,2-Dichloroethane(EDC)	ND		5
Benzene	ND		5
Trichloroethene	ND		5
1,2-Dichloropropane	ND		5
Bromodichloromethane	ND		5
2-Chloroethylvinyl Ether	ND		5
cis-1,3-Dichloropropene	ND		5
Toluene	ND		5
trans-1,3-Dichloropropene	ND		5
1,1,2-Trichloroethane	ND		5
Tetrachloroethene	ND		5
Dibromochloromethane	ND		5
Chlorobenzene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Bromoform	ND		5
1,1,2,2-Tetrachloroethane	ND		5
1,3-Dichlorobenzene	ND		5
1,4-Dichlorobenzene	ND		5
1,2-Dichlorobenzene	ND		5

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 10/11/2000

Data file: I4427.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Benzene	ND		5
Toluene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Isopropylbenzene	ND		5
n-Propylbenzene	ND		5
1,3,5-Trimethylbenzene	ND		5
tert-Butylbenzene	ND		5
1,2,4-Trimethylbenzene	ND		5
sec-Butylbenzene	ND		5
4-Isopropyltoluene	ND		5
n-Butylbenzene	ND		5
Naphthalene	ND		5

Total Target Compounds: 0

VOLATILE METHOD BLANK SUMMARY

Lab File ID: J4399.D

Instrument ID: MSD J

Date Analyzed: 10/10/2000

Time Analyzed: 12:21

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
TRIP_BLANK	6297-003	10/10/2000	13:22
SED1	6297-001	10/10/2000	13:48
SED2	6297-002	10/10/2000	14:13
SEPTIC-01	6300-005	10/10/2000	14:39
WO_#3	6251-003	10/10/2000	15:05
TRIP_BLANK	6251-004	10/10/2000	15:30
SB-E3-DB9-DB11-1	6307-028	10/10/2000	15:56
SB-E3-DB9-DB11-2	6307-029	10/10/2000	16:22
SB-E3-DB9-DB11-3	6307-030	10/10/2000	16:47
SB-E3-DB9-DB11-4	6307-031	10/10/2000	17:13
SB-E3-DB9-DB11-5	6307-032	10/10/2000	17:39
MS	6251-003MS	10/10/2000	18:04
MSD	6251-003MSD	10/10/2000	18:30
1000300-TB	6179-007	10/10/2000	18:56
MPE-1	6179-001	10/10/2000	19:22
MT_HOPE_W.C.	6317-001	10/10/2000	20:39
#3	6295-003	10/10/2000	21:04

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project:

Lab ID: METHOD-BLK

Client ID: N/A

Date Received:

Date Analyzed: 10/10/2000

Data file: J4399.D

GC/MS Column: DB-624

Sample wt/vol: 0.1g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 50

% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 02 14:49:39 2000
 Response via : Initial Calibration

Calibration Files

20 =I4244.D 50 =I4243.D 100 =I4240.D
 150 =I4242.D 200 =I4241.D

Compound		20	50	100	150	200	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----						
2) T	Dichlorodifluorometha	0.703	0.661	0.653	0.634	0.666	0.663	3.78
3) P	Chloromethane	0.328	0.312	0.315	0.318	0.322	0.319	1.95
4) C	Vinyl Chloride	0.332	0.344	0.338	0.345	0.356	0.343	2.61
5) T	Bromomethane	0.366	0.334	0.303	0.278	0.294	0.315	11.14
6) T	Chloroethane	0.232	0.217	0.171	0.138	0.123	0.176	27.16
7) T	Trichlorofluoromethan	1.432	1.230	1.217	0.788	0.825	1.098	25.49
8) T	Acrolein	0.013	0.013	0.013	0.012	0.012	0.012	3.22
9) MC	1,1-Dichloroethene	0.479	0.436	0.410	0.405	0.422	0.430	6.86
10) T	Acetone	0.169	0.134	0.139	0.119	0.116	0.136	15.82
11) T	Carbon Disulfide	2.013	1.189	1.023	1.046	1.100	1.274	32.80
12) T	Vinyl Acetate	0.720	0.738	0.723	0.813	0.680	0.735	6.65
13) T	Methylene Chloride	0.423	0.420	0.412	0.403	0.398	0.411	2.57
14) T	Acrylonitrile	0.083	0.070	0.084	0.079	0.081	0.079	7.22
15) T	t-Butyl Alcohol (TBA)	0.063	0.076	0.061	0.053	0.043	0.059	20.96
16) T	trans-1,2-Dichloroeth	0.499	0.476	0.444	0.462	0.468	0.470	4.33
17) T	Methyl-t-Butyl Ether(	0.989	0.969	0.940	0.944	0.956	0.960	2.08
18) P	1,1-Dichloroethane	1.032	0.993	0.943	0.956	0.983	0.981	3.54
19) T	Diisopropyl Ether (DIP	1.860	1.758	1.692	1.783	1.716	1.762	3.71
20) T	cis-1,2-Dichloroethen	0.470	0.436	0.419	0.423	0.414	0.432	5.24
21) T	2,2-Dichloropropane	1.089	1.051	1.044	1.038	1.040	1.052	1.98
22) T	2-Butanone (MEK)	0.207	0.176	0.179	0.175	0.176	0.182	7.42
23) T	Bromochloromethane	0.301	0.282	0.277	0.279	0.280	0.284	3.52
25) C	Chloroform	1.287	1.213	1.220	1.213	1.234	1.233	2.54
26) T	1,1,1-Trichloroethane	1.339	1.273	1.236	1.283	1.298	1.286	2.91
27) T	Carbon Tetrachloride	1.230	1.191	1.197	1.207	1.200	1.205	1.27
28) T	1,1-Dichloropropene	0.951	0.878	0.857	0.871	0.857	0.882	4.43
29) T	1,2-Dichloroethane (ED	0.884	0.838	0.831	0.831	0.868	0.850	2.84
30) S	1,2-Dichloroethane-d4	0.659	0.667	0.747	0.748	0.808	0.726	8.65
31) I	1,4-Difluorobenzene	-----ISTD-----						
32) M	Benzene	1.053	1.019	0.956	1.007	0.994	1.006	3.53
33) M	Trichloroethene	0.664	0.610	0.567	0.591	0.582	0.603	6.29
34) C	1,2-Dichloropropane	0.498	0.488	0.446	0.461	0.449	0.468	5.02
35) T	Dibromomethane	0.462	0.445	0.432	0.435	0.418	0.438	3.72
37) T	Bromodichloromethane	0.981	0.972	0.915	0.980	0.946	0.959	2.94
38) T	2-Chloroethylvinyl Et	0.129	0.146	0.138	0.155	0.147	0.143	6.94
39) T	cis-1,3-Dichloroprope	0.616	0.640	0.586	0.616	0.582	0.608	3.95
40) T	4-Methyl-2-pentanone(	0.384	0.406	0.384	0.410	0.372	0.391	4.09
1) S	Toluene-d8	0.975	1.029	0.978	1.044	0.953	0.996	3.90
2) MC	Toluene	0.744	0.713	0.633	0.685	0.622	0.679	7.65
43) T	trans-1,3-Dichloropro	0.616	0.640	0.586	0.616	0.582	0.608	3.95
44) T	1,1,2-Trichloroethane	0.319	0.318	0.296	0.304	0.295	0.306	3.86
45) T	Tetrachloroethene	0.625	0.586	0.502	0.533	0.486	0.546	10.67
46) T	1,3-Dichloropropane	0.577	0.597	0.539	0.562	0.525	0.560	5.21
47) T	2-Hexanone	0.251	0.285	0.273	0.290	0.273	0.274	5.53
48) T	Dibromochloromethane	0.563	0.627	0.600	0.621	0.607	0.604	4.17
49) T	1,2-Dibromoethane (EDB	0.480	0.500	0.468	0.483	0.467	0.480	2.79

51)	MP	Chlorobenzene	1.437	1.296	1.284	1.257	1.268	1.308	5.62
52)	T	1,1,1,2-Tetrachloroet	0.806	0.740	0.761	0.737	0.737	0.756	3.92
53)	C	Ethylbenzene	2.664	2.359	2.318	2.206	2.228	2.355	7.81
54)	T	m,p-Xylene	0.855	0.770	0.770	0.750	0.732	0.775	6.08
55)	T	o-Xylene	0.816	0.719	0.741	0.730	0.698	0.741	6.07
56)	T	Styrene	1.183	1.142	1.162	1.105	1.111	1.141	2.92
7)	P	Bromoform	0.633	0.619	0.669	0.631	0.650	0.640	3.01
8)	T	Isopropylbenzene	2.710	2.395	2.362	2.262	2.360	2.418	7.06
59)	S	Bromofluorobenzene	0.961	0.933	1.025	0.964	1.036	0.984	4.55
60)	P	1,1,2,2-Tetrachloroet	0.852	0.798	0.822	0.804	0.782	0.811	3.28
61)	T	Bromobenzene	0.684	0.634	0.643	0.599	0.606	0.633	5.30
62)	T	1,2,3-Trichloropropan	0.819	0.737	0.760	0.700	0.705	0.744	6.50
63)	T	n-Propylbenzene	3.406	2.989	3.038	2.951	2.917	3.060	6.48
64)	T	2-Chlorotoluene	2.161	1.983	1.886	1.813	1.853	1.939	7.16
65)	T	1,3,5-Trimethylbenzen	2.206	2.010	1.956	1.830	1.847	1.970	7.69
66)	T	4-Chlorotoluene	2.465	2.203	2.252	2.033	2.123	2.215	7.34
67)	T	tert-Butylbenzene	2.254	2.020	1.971	1.923	1.897	2.013	7.09
68)	T	1,2,4-Trimethylbenzen	2.196	2.034	1.892	1.825	1.859	1.961	7.81
69)	T	sec-Butylbenzene	3.151	2.793	2.623	2.607	2.548	2.744	8.93
70)	T	1,3-Dichlorobenzene	1.214	1.104	1.105	1.011	1.083	1.104	6.57
71)	T	4-Isopropyltoluene	2.464	2.104	2.031	1.920	1.944	2.093	10.52
72)	T	1,4-Dichlorobenzene	1.235	1.119	1.158	1.119	1.096	1.145	4.78
73)	T	n-Butylbenzene	2.777	2.509	2.448	2.337	2.311	2.477	7.52
74)	T	1,2-Dichlorobenzene	1.096	0.990	0.986	0.939	0.937	0.990	6.52
75)	T	1,2-Dibromo-3-chlorop	0.245	0.241	0.259	0.244	0.257	0.249	-3.34
76)	T	1,2,4-Trichlorobenzen	0.655	0.596	0.661	0.557	0.581	0.610	7.58
77)	T	Hexachlorobutadiene	0.374	0.315	0.317	0.294	0.312	0.322	9.34
78)	T	Naphthalene	1.236	1.137	1.161	1.047	1.070	1.130	6.67
79)	T	1,2,3-Trichlorobenzen	0.598	0.538	0.560	0.504	0.488	0.538	8.21
80)	T	1,1,2-Trichloro-1,2,2	1.788	1.562	1.560	1.534	1.579	1.605	6.47
81)	T	Methyl Acetate	0.502	0.359	0.424	0.391	0.402	0.415	12.89
82)	T	Cyclohexane	0.927	0.796	0.812	0.819	0.822	0.835	6.28
	T	Methylcyclohexane	1.176	1.068	1.010	1.027	1.047	1.065	6.15
	T	Acetonitrile	0.022	0.024	0.029	0.028	0.026	0.026	11.23

(#) = Out of Range

ISO1002.M

Mon Oct 02 14:49:45 2000

MSD_I

Instrument ID: MSD_I
Method ID: ISO1002.M
Date: 10/02/2000

Average %RSD = 6.70

Refer to SW846 Method 8000B Section 7.5.1.

Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Wed Oct 04 09:46:57 2000
 Response via : Initial Calibration

Calibration Files

20 =J4270.D 100 =J4268.D 50 =J4269.D
 150 =J4271.D 200 =J4272.D

Compound	20	100	50	150	200	Avg	%RSD

1) I	Pentafluorobenzene	-----ISTD-----					
2) T	Dichlorodifluoromet	0.426	0.525	0.451	0.439	0.470	8.40
3) P	Chloromethane	0.504	0.481	0.492	0.485	0.495	1.82
4) C	Vinyl Chloride	0.513	0.508	0.506	0.491	0.510	1.70
5) T	Bromomethane	0.364	0.387	0.355	0.379	0.353	4.08
6) T	Chloroethane	0.319	0.326	0.319	0.344	0.353	4.67
7) T	Trichlorofluorometh	0.734	0.866	0.791	0.734	0.758	7.11
8) T	Acrolein	0.034	0.032	0.031	0.033	0.033	3.87
9) MC	1,1-Dichloroethene	0.373	0.380	0.364	0.366	0.382	2.17
10) T	Acetone	0.180	0.157	0.157	0.158	0.145	7.91
11) T	Carbon Disulfide	1.581	1.588	1.549	1.575	1.645	2.23
12) T	Vinyl Acetate	0.734	0.789	0.723	0.731	0.747	3.56
13) T	Methylene Chloride	0.480	0.449	0.462	0.455	0.454	2.64
14) T	Acrylonitrile	0.149	0.142	0.138	0.151	0.149	3.74
15) T	t-Butyl Alcohol (TBA	0.050	0.044	0.041	0.047	0.045	7.27
16) T	trans-1,2-Dichloroe	0.407	0.383	0.382	0.388	0.397	2.69
17) T	Methyl-t-Butyl Ethe	1.516	1.408	1.414	1.437	1.407	3.22
18) P	1,1-Dichloroethane	0.921	0.871	0.886	0.882	0.883	2.11
19) T	Diisopropyl Ether (D	1.509	1.408	1.433	1.452	1.463	2.58
20) T	cis-1,2-Dichloroeth	0.443	0.412	0.419	0.419	0.422	2.75
21) T	2,2-Dichloropropane	0.967	1.024	0.969	0.952	0.940	3.33
22) T	2-Butanone (MEK)	0.209	0.179	0.179	0.187	0.177	7.01
23) T	Bromochloromethane	0.165	0.154	0.155	0.155	0.157	2.96
24) C	Chloroform	1.019	0.986	0.994	0.973	0.968	2.04
25) T	1,1,1-Trichloroetha	0.939	0.983	0.933	0.929	0.937	2.35
26) T	Carbon Tetrachlorid	0.662	0.740	0.684	0.673	0.686	4.32
27) T	1,1-Dichloropropene	0.663	0.676	0.658	0.644	0.663	1.75
28) T	1,2-Dichloroethane (	1.137	1.086	1.080	1.052	1.017	4.14
29) S	1,2-Dichloroethane-	1.085	1.100	1.073	1.059	1.029	2.54
30) I	1,4-Difluorobenzene	-----ISTD-----					
31) M	Benzene	1.249	1.193	1.195	1.201	1.194	1.99
32) M	Trichloroethene	0.349	0.341	0.336	0.336	0.332	1.96
33) C	1,2-Dichloropropane	0.320	0.300	0.304	0.304	0.300	2.76
34) T	Dibromomethane	0.206	0.196	0.198	0.194	0.189	3.18
35) T	Bromodichloromethan	0.600	0.587	0.573	0.576	0.555	2.90
36) T	2-Chloroethylvinyl	0.213	0.204	0.200	0.207	0.202	2.37
37) T	cis-1,3-Dichloropro	0.675	0.645	0.645	0.646	0.631	2.46
38) T	4-Methyl-2-pentanone	0.275	0.259	0.255	0.266	0.250	3.76
39) S	Toluene-d8	1.227	1.225	1.206	1.236	1.211	1.00
40) MC	Toluene	0.767	0.746	0.724	0.745	0.732	2.24
41) T	trans-1,3-Dichlorop	0.712	0.710	0.683	0.682	0.665	2.88
42) T	1,1,2-Trichloroetha	0.211	0.203	0.201	0.203	0.198	2.36
43) T	Tetrachloroethene	0.258	0.261	0.250	0.244	0.244	3.10
44) T	1,3-Dichloropropane	0.549	0.521	0.523	0.524	0.512	2.62
45) T	2-Hexanone	0.209	0.199	0.195	0.209	0.194	3.59
46) T	Dibromochloromethan	0.281	0.288	0.278	0.282	0.276	1.71
47) T	1,2-Dibromoethane (E	0.273	0.253	0.253	0.256	0.250	3.55

51)	MP	Chlorobenzene	0.978	0.933	0.959	0.915	0.910	0.939	3.10
52)	T	1,1,1,2-Tetrachloro	0.383	0.373	0.374	0.365	0.357	0.371	2.60
53)	C	Ethylbenzene	2.128	2.039	2.048	2.015	2.022	2.050	2.21
54)	T	m,p-Xylene	0.679	0.654	0.659	0.649	0.653	0.659	1.75
55)	T	o-Xylene	0.704	0.658	0.663	0.658	0.652	0.667	3.14
56)	T	Styrene	1.211	1.126	1.150	1.140	1.135	1.152	2.95
57)	P	Bromoform	0.220	0.235	0.226	0.234	0.231	0.229	2.71
58)	T	Isopropylbenzene	1.863	1.825	1.818	1.789	1.804	1.820	1.51
59)	S	Bromofluorobenzene	0.803	0.803	0.798	0.783	0.785	0.794	1.23
60)	P	1,1,2,2-Tetrachloro	0.393	0.367	0.363	0.373	0.367	0.373	3.18
61)	T	Bromobenzene	0.396	0.379	0.390	0.374	0.370	0.382	2.83
62)	T	1,2,3-Trichloroprop	0.539	0.505	0.511	0.492	0.470	0.503	4.97
63)	T	n-Propylbenzene	2.344	2.314	2.296	2.283	2.287	2.305	1.08
64)	T	2-Chlorotoluene	1.617	1.567	1.573	1.547	1.522	1.565	2.25
65)	T	1,3,5-Trimethylbenz	1.757	1.722	1.705	1.686	1.681	1.710	1.82
66)	T	4-Chlorotoluene	2.030	1.921	1.953	1.881	1.862	1.930	3.43
67)	T	tert-Butylbenzene	1.261	1.274	1.248	1.233	1.238	1.251	1.34
68)	T	1,2,4-Trimethylbenz	1.865	1.798	1.799	1.782	1.742	1.797	2.46
69)	T	sec-Butylbenzene	1.737	1.768	1.710	1.704	1.736	1.731	1.46
70)	T	1,3-Dichlorobenzene	0.769	0.730	0.737	0.719	0.706	0.732	3.21
71)	T	4-Isopropyltoluene	1.499	1.501	1.483	1.449	1.468	1.480	1.47
72)	T	1,4-Dichlorobenzene	0.790	0.745	0.750	0.732	0.730	0.749	3.20
73)	T	n-Butylbenzene	0.851	0.869	0.842	0.834	0.864	0.852	1.69
74)	T	1,2-Dichlorobenzene	0.752	0.701	0.713	0.690	0.679	0.707	4.02
75)	T	1,2-Dibromo-3-chlor	0.123	0.123	0.119	0.122	0.118	0.121	2.01
76)	T	1,2,4-Trichlorobenz	0.585	0.550	0.551	0.556	0.553	0.559	2.64
77)	T	Hexachlorobutadiene	0.248	0.264	0.239	0.243	0.244	0.247	3.85
78)	T	Naphthalene	1.087	1.038	1.028	1.065	1.065	1.057	2.24
79)	T	1,2,3-Trichlorobenz	0.496	0.469	0.459	0.472	0.472	0.474	2.85
80)	T	1,1,2-Trichloro-1,2	0.372	0.418	0.404	0.355	0.373	0.384	6.76
81)	T	Methyl acetate	0.324	0.295	0.312	0.308	0.300	0.308	3.64
82)	T	Cyclohexane	0.633	0.620	0.625	0.550	0.581	0.602	5.84
83)	T	Methyl cyclohexane	0.470	0.530	0.512	0.458	0.486	0.491	6.01

(#) = Out of Range

JME1003.M

Wed Oct 04 09:47:36 2000

MSD_J

Data File : C:\HPCHEM\1\DATA\10-09-00\I4385.D

Acq On : 9 Oct 2000 10:55

Sample : 100,100_PPb_STD,S,5.0g,0

Misc : N/A,N/A,N/A

MS Integration Params: rteint.p

Vial: 1

Operator: SANGEETA

Inst : 5970 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Oct 09 11:27:44 2000

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	95	0.03
2 T	Dichlorodifluoromethane	0.663	0.547	17.5	80	0.03
3 P	Chloromethane	0.319	0.286	10.3	86	0.02
4 C	Vinyl Chloride	0.343	0.298	13.1	84	0.02
5 T	Bromomethane	0.315	0.267	15.2	84	0.00
6 T	Chloroethane	0.176	0.186	-5.7	103	-0.02
7 T	Trichlorofluoromethane	1.098	1.126	-2.6	88	0.00
8 T	Acrolein	0.012	0.007	41.7	54	0.04
9 MC	1,1-Dichloroethene	0.430	0.374	13.0	87	0.00
10 T	Acetone	0.136	0.133	2.2	91	0.04
11 T	Carbon Disulfide	1.274	1.134	11.0	105	0.03
12 T	Vinyl Acetate	0.735	0.741	-0.8	97	0.03
13 T	Methylene Chloride	0.411	0.353	14.1	81	0.03
14 T	Acrylonitrile	0.079	0.066	16.5	75	0.03
15 T	t-Butyl Alcohol (TBA)	0.059	0.048	18.6	76	0.07
16 T	trans-1,2-Dichloroethene	0.470	0.409	13.0	88	0.04
17 T	Methyl-t-Butyl Ether (MTBE)	0.960	0.731	23.9	74	0.03
18 P	1,1-Dichloroethane	0.981	0.852	13.1	86	0.03
19 T	Diisopropyl Ether (DIPE)	1.762	1.430	18.8	80	0.02
20 T	cis-1,2-Dichloroethene	0.432	0.391	9.5	89	0.03
21 T	2,2-Dichloropropane	1.052	0.971	7.7	88	0.03
22 T	2-Butanone (MEK)	0.182	0.187	-2.7	99	0.03
23 T	Bromochloromethane	0.284	0.241	15.1	83	0.05
25 C	Chloroform	1.233	1.055	14.4	82	0.03
26 T	1,1,1-Trichloroethane	1.286	1.129	12.2	87	0.03
27 T	Carbon Tetrachloride	1.205	1.065	11.6	85	0.03
28 T	1,1-Dichloropropene	0.882	0.746	15.4	83	0.03
29 T	1,2-Dichloroethane (EDC)	0.850	0.758	10.8	87	0.03
30 S	1,2-Dichloroethane-d4	0.726	0.700	3.6	89	0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	91	0.03
32 M	Benzene	1.006	0.918	8.7	88	0.01
33 M	Trichloroethene	0.603	0.535	11.3	86	0.01
34 C	1,2-Dichloropropane	0.468	0.418	10.7	86	0.03
35 T	Dibromomethane	0.438	0.412	5.9	87	0.03
37 T	Bromodichloromethane	0.959	0.895	6.7	89	0.03
38 T	2-Chloroethylvinyl Ether	0.143	0.134	6.3	88	0.03
39 T	cis-1,3-Dichloropropene	0.608	0.596	2.0	93	0.03
40 T	4-Methyl-2-pentanone (MIBK)	0.391	0.336	14.1	80	0.03
41 S	Toluene-d8	0.996	0.924	7.2	86	0.03
MC	Toluene	0.679	0.634	6.6	91	0.03
T	trans-1,3-Dichloropropene	0.608	0.596	2.0	93	0.03
44 T	1,1,2-Trichloroethane	0.306	0.289	5.6	89	0.04
45 T	Tetrachloroethene	0.546	0.509	6.8	93	0.04
46 T	1,3-Dichloropropane	0.560	0.535	4.5	91	0.03

47	T	2-Hexanone	0.274	0.283	0.2	92	0.04
48	T	Dibromochloromethane	0.604	0.603	0.2	92	0.04
49	T	1,2-Dibromoethane (EDB)	0.480	0.473	1.5	92	0.04
50	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.04
51	MP	Chlorobenzene	1.308	1.179	9.9	91	0.02
52	T	1,1,1,2-Tetrachloroethane	0.756	0.705	6.7	91	0.02
53	C	Ethylbenzene	2.355	2.072	12.0	88	0.04
54	T	m,p-Xylene	0.775	0.678	12.5	87	0.02
55	T	o-Xylene	0.741	0.657	11.3	88	0.04
56	T	Styrene	1.141	1.006	11.8	85	0.04
57	P	Bromoform	0.640	0.633	1.1	93	0.04
58	T	Isopropylbenzene	2.418	2.016	16.6	84	0.02
59	S	Bromofluorobenzene	0.984	0.931	5.4	90	0.02
60	P	1,1,2,2-Tetrachloroethane	0.811	0.728	10.2	87	0.02
61	T	Bromobenzene	0.633	0.586	7.4	90	0.02
62	T	1,2,3-Trichloropropane	0.744	0.667	10.3	87	0.02
63	T	n-Propylbenzene	3.060	2.545	16.8	83	0.02
64	T	2-Chlorotoluene	1.939	1.689	12.9	88	0.02
65	T	1,3,5-Trimethylbenzene	1.970	1.691	14.2	85	0.02
66	T	4-Chlorotoluene	2.215	1.965	11.3	86	0.02
67	T	tert-Butylbenzene	2.013	1.678	16.6	84	0.04
68	T	1,2,4-Trimethylbenzene	1.961	1.624	17.2	85	0.02
69	T	sec-Butylbenzene	2.744	2.246	18.1	85	0.02
70	T	1,3-Dichlorobenzene	1.104	0.975	11.7	87	0.02
71	T	4-Isopropyltoluene	2.093	1.741	16.8	85	0.02
72	T	1,4-Dichlorobenzene	1.145	0.973	15.0	83	0.02
73	T	n-Butylbenzene	2.477	2.041	17.6	82	0.02
74	T	1,2-Dichlorobenzene	0.990	0.856	13.5	86	0.02
75	T	1,2-Dibromo-3-chloropropane	0.249	0.220	11.6	84	0.02
76	T	1,2,4-Trichlorobenzene	0.610	0.528	13.4	79	0.03
77	T	Hexachlorobutadiene	0.322	0.255	20.8	79	0.03
78	T	Naphthalene	1.130	0.937	17.1	80	0.03
79	T	1,2,3-Trichlorobenzene	0.538	0.479	11.0	84	0.04
80	T	1,1,2-Trichloro-1,2,2-trifl	1.605	1.300	19.0	82	0.00
81	T	Methyl Acetate	0.415	0.314	24.3	73	0.03
82	T	Cyclohexane	0.835	0.686	17.8	83	0.04
83	T	Methylcyclohexane	1.065	0.892	16.2	87	0.03

(#) = Out of Range

I4240.D ISO1002.M

SPCC's out = 0 CCC's out = 0

Mon Oct 09 13:13:54 2000 MSD_I

Data File : C:\HPCHEM\1\DATA\10-11-00\I4424.D

Vial: 1

Acq On : 11 Oct 2000 12:06

Operator: SANGEETA

Sample : 100,100_PPb_STD,S,5.0g,0

Inst : 5970 - In

Misc : N/A,N/A,N/A

Multiplr: 1.00

S Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Wed Oct 11 11:51:26 2000

Response via : Multiple Level Calibration

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

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	141	-0.03
2 T	Dichlorodifluoromethane	0.663	0.736	-11.0	159	0.00
3 P	Chloromethane	0.319	0.311	2.5	139	0.00
4 C	Vinyl Chloride	0.343	0.309	9.9	129	0.00
5 T	Bromomethane	0.315	0.286	9.2	133	-0.03
6 T	Chloroethane	0.176	0.163	7.4	135	-0.06
7 T	Trichlorofluoromethane	1.098	0.936	14.8	109	-0.03
8 T	Acrolein	0.012	0.007	41.7	79	0.00
9 MC	1,1-Dichloroethene	0.430	0.350	18.6	120	-0.03
10 T	Acetone	0.136	0.131	3.7	132	-0.02
11 T	Carbon Disulfide	1.274	1.087	14.7	150	-0.02
12 T	Vinyl Acetate	0.735	0.790	-7.5	154	-0.01
13 T	Methylene Chloride	0.411	0.315	23.4	108	-0.01
14 T	Acrylonitrile	0.079	0.069	12.7	116	-0.03
15 T	t-Butyl Alcohol (TBA)	0.059	0.071	-20.3	165	0.02
16 T	trans-1,2-Dichloroethene	0.470	0.393	16.4	125	-0.01
17 T	Methyl-t-Butyl Ether (MTBE)	0.960	0.743	22.6	112	-0.01
18 P	1,1-Dichloroethane	0.981	0.781	20.4	117	-0.03
19 T	Diisopropyl Ether (DIPE)	1.762	1.356	23.0	113	-0.03
20 T	cis-1,2-Dichloroethene	0.432	0.371	14.1	125	-0.03
21 T	2,2-Dichloropropane	1.052	0.901	14.4	122	-0.03
22 T	2-Butanone (MEK)	0.182	0.158	13.2	125	-0.03
23 T	Bromochloromethane	0.284	0.225	20.8	115	-0.02
25 C	Chloroform	1.233	0.995	19.3	115	-0.03
26 T	1,1,1-Trichloroethane	1.286	1.032	19.8	118	-0.03
27 T	Carbon Tetrachloride	1.205	0.941	21.9	111	-0.03
28 T	1,1-Dichloropropene	0.882	0.699	20.7	115	-0.03
29 T	1,2-Dichloroethane (EDC)	0.850	0.694	18.4	118	-0.03
30 S	1,2-Dichloroethane-d4	0.726	0.667	8.1	126	-0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	133	-0.02
32 M	Benzene	1.006	0.864	14.1	120	-0.03
33 M	Trichloroethene	0.603	0.503	16.6	118	-0.03
34 C	1,2-Dichloropropane	0.468	0.400	14.5	119	0.00
35 T	Dibromomethane	0.438	0.375	14.4	115	-0.02
37 T	Bromodichloromethane	0.959	0.835	12.9	121	-0.02
38 T	2-Chloroethylvinyl Ether	0.143	0.139	2.8	134	-0.03
39 T	cis-1,3-Dichloropropene	0.608	0.548	9.9	124	-0.03
40 T	4-Methyl-2-pentanone (MIBK)	0.391	0.307	21.5	106	-0.02
41 S	Toluene-d8	0.996	0.905	9.1	123	-0.02
42 MC	Toluene	0.679	0.611	10.0	128	-0.03
43 T	trans-1,3-Dichloropropene	0.608	0.548	9.9	124	-0.03
44 T	1,1,2-Trichloroethane	0.306	0.266	13.1	120	-0.02
45 T	Tetrachloroethene	0.546	0.445	18.5	118	-0.02
46 T	1,3-Dichloropropane	0.560	0.478	14.6	118	-0.02

47	T	2-Hexanone	0.274	0.258	5.8	126	-0.04
48	T	Dibromochloromethane	0.604	0.540	10.6	120	-0.02
49	T	1,2-Dibromoethane (EDB)	0.480	0.420	12.5	119	-0.02
50	I	Chlorobenzene-d5	1.000	1.000	0.0	140	-0.02
51	MP	Chlorobenzene	1.308	1.085	17.0	118	-0.04
52	T	1,1,1,2-Tetrachloroethane	0.756	0.647	14.4	119	-0.04
53	C	Ethylbenzene	2.355	1.902	19.2	115	-0.02
54	T	m,p-Xylene	0.775	0.650	16.1	118	-0.04
55	T	o-Xylene	0.741	0.643	13.2	121	-0.02
56	T	Styrene	1.141	0.960	15.9	116	-0.02
57	P	Bromoform	0.640	0.535	16.4	112	-0.02
58	T	Isopropylbenzene	2.418	1.912	20.9	113	-0.04
59	S	Bromofluorobenzene	0.984	0.979	0.5	134	-0.02
60	P	1,1,2,2-Tetrachloroethane	0.811	0.649	20.0	110	-0.02
61	T	Bromobenzene	0.633	0.550	13.1	120	-0.02
62	T	1,2,3-Trichloropropane	0.744	0.653	12.2	120	-0.02
63	T	n-Propylbenzene	3.060	2.460	19.6	113	-0.02
64	T	2-Chlorotoluene	1.939	1.610	17.0	119	-0.02
65	T	1,3,5-Trimethylbenzene	1.970	1.681	14.7	120	-0.02
66	T	4-Chlorotoluene	2.215	1.859	16.1	115	-0.02
67	T	tert-Butylbenzene	2.013	1.626	19.2	115	0.00
68	T	1,2,4-Trimethylbenzene	1.961	1.734	11.6	128	-0.02
69	T	sec-Butylbenzene	2.744	2.093	23.7	112	-0.02
70	T	1,3-Dichlorobenzene	1.104	1.003	9.1	127	-0.02
71	T	4-Isopropyltoluene	2.093	1.732	17.2	119	-0.02
72	T	1,4-Dichlorobenzene	1.145	0.971	15.2	117	-0.02
73	T	n-Butylbenzene	2.477	1.931	22.0	110	-0.02
74	T	1,2-Dichlorobenzene	0.990	0.873	11.8	124	-0.03
75	T	1,2-Dibromo-3-chloropropane	0.249	0.212	14.9	115	-0.02
76	T	1,2,4-Trichlorobenzene	0.610	0.594	2.6	126	-0.02
77	T	Hexachlorobutadiene	0.322	0.290	9.9	128	-0.02
78	T	Naphthalene	1.130	1.023	9.5	123	-0.02
79	T	1,2,3-Trichlorobenzene	0.538	0.510	5.2	127	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	1.605	1.294	19.4	116	-0.03
81	T	Methyl Acetate	0.415	0.304	26.7	100	-0.01
82	T	Cyclohexane	0.835	0.695	16.8	120	-0.03
83	T	Methylcyclohexane	1.065	0.837	21.4	116	-0.02

(#) = Out of Range

I4240.D ISO1002.M

SPCC's out = 0 CCC's out = 0

Wed Oct 11 13:58:10 2000 MSD_I

Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Oct 10 13:27:14 2000
 Response via : ~~Initial Calibration~~ *multiple level Calibration*

Continuing Calibration File: J4398.D

Min. RRF : 0.000 Min. Rel. Area : 50%
 Max. RRF Dev : 30% Max. Rel. Area : 150%

see 10/20/00

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Pentafluorobenzene	1.000	1.000	0.0	84
2 T	Dichlorodifluoromethane	0.462	0.506	-9.6	81
3 P	Chloromethane	0.491	0.548	-11.6	96
4 C	Vinyl Chloride	0.506	0.573	-13.2	95
5 T	Bromomethane	0.368	0.347	5.6	75
6 T	Chloroethane	0.332	0.341	-2.7	88
7 T	Trichlorofluoromethane	0.777	0.752	3.2	73
8 T	Acrolein	0.032	0.028	13.2	74
9 MC	1,1-Dichloroethene	0.373	0.404	-8.4	89
10 T	Acetone	0.159	0.147	7.4	79
11 T	Carbon Disulfide	1.588	1.717	-8.2	91
12 T	Vinyl Acetate	0.745	0.825	-10.8	88
13 T	Methylene Chloride	0.460	0.476	-3.4	89
14 T	Acrylonitrile	0.146	0.169	-15.6	100
15 T	t-Butyl Alcohol (TBA)	0.046	0.049	-7.5	92
16 T	trans-1,2-Dichloroethene	0.392	0.445	-13.6	97
17 T	Methyl-t-Butyl Ether (MTBE)	1.436	1.451	-1.0	86
18 P	1,1-Dichloroethane	0.888	0.938	-5.6	90
19 T	Diisopropyl Ether (DIPE)	1.453	1.600	-10.1	95
20 T	cis-1,2-Dichloroethene	0.423	0.477	-12.6	97
21 T	2,2-Dichloropropane	0.970	0.962	0.9	79
22 T	2-Butanone (MEK)	0.186	0.199	-6.8	93
23 T	Bromochloromethane	0.157	0.174	-10.8	95
25 C	Chloroform	0.988	0.970	1.8	83
26 T	1,1,1-Trichloroethane	0.944	0.883	6.5	75
27 T	Carbon Tetrachloride	0.689	0.632	8.3	72
28 T	1,1-Dichloropropene	0.661	0.700	-6.0	87
29 T	1,2-Dichloroethane (EDC)	1.075	0.953	11.4	74
30 S	1,2-Dichloroethane-d4	1.069	0.908	15.1	69
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	93
32 M	Benzene	1.206	1.284	-6.5	100
33 M	Trichloroethene	0.339	0.339	0.0	92
34 C	1,2-Dichloropropane	0.305	0.322	-5.3	99
35 T	Dibromomethane	0.196	0.186	5.4	88
36 T	Bromodichloromethane	0.578	0.502	13.2	79
37 T	2-Chloroethylvinyl Ether	0.205	0.212	-3.5	96
38 T	cis-1,3-Dichloropropene	0.648	0.624	3.8	89
39 T	4-Methyl-2-pentanone (MIBK)	0.261	0.264	-1.0	94
40 S	Toluene-d8	1.221	1.212	0.7	92
41 MC	Toluene	0.743	0.793	-6.7	98
42 T	trans-1,3-Dichloropropene	0.690	0.631	8.6	82
43 T	1,1,2-Trichloroethane	0.203	0.211	-3.9	96
44 T	Tetrachloroethene	0.251	0.242	3.7	86
45 F	1,3-Dichloropropene	0.526	0.520	1.2	92
46 T	2-Hexanone	0.201	0.199	1.1	92
47 T	Dibromochloromethane	0.281	0.242	13.9	78
48 T	1,2-Dibromoethane (EDB)	0.257	0.249	3.3	91

51	MP	Chlorobenzene	1.000	1.000	0.0	94
52	T	1,1,1,2-Tetrachloroethane	0.939	0.934	0.5	94
53	C	Ethylbenzene	0.371	0.325	12.2	82
54	T	m,p-Xylene	2.050	1.957	4.5	90
55	T	o-Xylene	0.659	0.638	3.2	92
56	T	Styrene	0.667	0.645	3.3	92
	P	Bromoform	1.152	1.123	2.5	94
58	T	Isopropylbenzene	0.229	0.192	16.2	77
59	S	Bromofluorobenzene	1.820	1.685	7.4	87
60	P	1,1,2,2-Tetrachloroethane	0.794	0.734	7.7	86
61	T	Bromobenzene	0.373	0.373	-0.1	95
62	T	1,2,3-Trichloropropane	0.382	0.355	7.0	88
63	T	n-Propylbenzene	0.503	0.459	8.8	85
64	T	2-Chlorotoluene	2.305	2.156	6.5	88
65	T	1,3,5-Trimethylbenzene	1.565	1.453	7.1	87
66	T	4-Chlorotoluene	1.710	1.537	10.1	84
67	T	tert-Butylbenzene	1.930	1.723	10.7	84
68	T	1,2,4-Trimethylbenzene	1.251	1.099	12.1	81
69	T	sec-Butylbenzene	1.797	1.614	10.2	84
70	T	1,3-Dichlorobenzene	1.731	1.596	7.8	85
71	T	4-Isopropyltoluene	0.732	0.674	7.9	87
72	T	1,4-Dichlorobenzene	1.480	1.297	12.4	81
73	T	n-Butylbenzene	0.749	0.696	7.1	88
74	T	1,2-Dichlorobenzene	0.852	0.755	11.4	82
75	T	1,2-Dibromo-3-chloropropane	0.707	0.653	7.7	87
76	T	1,2,4-Trichlorobenzene	0.121	0.098	19.3	75
77	T	Hexachlorobutadiene	0.559	0.453	18.9	77
78	T	Naphthalene	0.247	0.179	27.8	64
79	T	1,2,3-Trichlorobenzene	1.057	0.959	9.2	87
80	T	1,1,2-Trichloro-1,2,2-trifluoro	0.474	0.371	21.6	74
81	T	Methyl acetate	0.384	0.362	5.9	81
	T	Cyclohexane	0.308	0.287	6.9	91
	T	Methyl cyclohexane	0.602	0.638	-6.1	97
			0.491	0.477	2.8	85

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

J4398.D

JME1003.M

Tue Oct 10 13:27:19 2000 MSD_J

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/09/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	I4388.D	92	93	92
6156-023	SOIL	I4389.D	81	93	99
6295-001MS	SOIL	I4390.D	89	94	94
6295-001MSD	SOIL	I4391.D	87	91	94
6295-001	SOIL	I4396.D	90	96	97
6295-002	SOIL	I4397.D	93	95	97
6295-004	SOIL	I4399.D	83	95	89
6295-005	SOIL	I4400.D	84	93	93
6295-007	SOIL	I4402.D	81	94	89

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	17-160	79-113
SMC2 = Toluene-d8	50 ppb	36-131	90-111
SMC3 = Bromofluorobenzene	50 ppb	21-124	81-112

Column to be used to flag recovery values —

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/11/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	I4427.D	87	94	95
6295-006	SOIL	I4429.D	84	109	109
6257-033	SOIL	I4433.D	81	93	86

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	17-160	79-113
SMC2 = Toluene-d8	50 ppb	36-131	90-111
SMC3 = Bromofluorobenzene	50 ppb	21-124	81-112

Column to be used to flag recovery values —

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/10/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	SOIL	J4399.D	83	97	92
6297-003	MEOH	J4401.D	79	79	75
6297-001	MEOH	J4402.D	81	81	78
6297-002	MEOH	J4403.D	78	80	76
6300-005	MEOH	J4404.D	71	75	69
6251-003	MEOH	J4405.D	76	76	72
6251-004	MEOH	J4406.D	86	90	85
6307-028	SOIL	J4407.D	80	97	90
6307-029	SOIL	J4408.D	77	97	91
6307-030	SOIL	J4409.D	75	97	90
6307-031	SOIL	J4410.D	78	101	94
6307-032	SOIL	J4411.D	77	101	92
6251-003MS	MEOH	J4412.D	77	98	91
6251-003MSD	MEOH	J4413.D	77	96	91
6179-007	MEOH	J4414.D	80	86	81
6179-001	MEOH	J4415.D	70	70	70
6317-001	SOIL	J4418.D	75	99	91
6295-003	SOIL	J4419.D	77	99	91

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	59-114	43-133
SMC2 = Toluene-d8	50 ppb	58-108	39-137
SMC3 = Bromofluorobenzene	50 ppb	49-112	23-145

Column to be used to flag recovery values

SOIL VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6295-001

Batch No.: QS1285

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	41.6	83	57 - 103
Benzene	50.0	0.0	50.3	101	71 - 106
Trichloroethene	50.0	0.0	47.1	94	61 - 102
Toluene	50.0	0.0	45.2	90	74 - 101
Chlorobenzene	50.0	0.0	43.5	87	77 - 107

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	0.0	41.0	82	1	8	57 - 103
Benzene	0.0	48.7	97	4	6	71 - 106
Trichloroethene	0.0	46.6	93	1	7	61 - 102
Toluene	0.0	45.8	92	2	5	74 - 101
Chlorobenzene	0.0	43.4	87	0	5	77 - 107

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SOIL VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6251-003

Batch No.: QS1284

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	43.8	88	63 - 117
Benzene	50.0	0.0	48.9	98	79 - 115
Trichloroethene	50.0	0.0	42.5	85	72 - 103
Toluene	50.0	0.0	47.9	96	76 - 108
Chlorobenzene	50.0	0.0	45.8	92	84 - 115

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	0.0	43.8	88	0	9	63 - 117
Benzene	0.0	49.6	99	1	6	79 - 115
Trichloroethene	0.0	42.3	85	0	5	72 - 103
Toluene	0.0	47.9	96	0	5	76 - 108
Chlorobenzene	0.0	47.4	95	3	5	84 - 115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): I4240.D

Date Analyzed: 10/02/2000

Instrument ID: MSD_I

Time Analyzed: 10:58

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		1879996	9.54	2234425	10.78	1419747	15.83
UPPER LIMIT		3759992	10.04	4468850	11.28	2839494	16.33
LOWER LIMIT		939998	9.04	1117212.5	10.28	709873.5	15.33
LAB SAMPLE ID							
01	200_PPb_STD	1854857	9.54	2247121	10.77	1437257	15.80
02	150_PPb_STD	1951183	9.54	2302123	10.78	1543659	15.81
03	50_PPb_STD	2093846	9.54	2418227	10.80	1676978	15.82
04	20_PPb_STD	2099680	9.54	2489982	10.79	1559496	15.81
05	METHOD_BLK	1835768	9.56	2105743	10.81	1348286	15.82
06	6017-001	2071958	9.56	2281919	10.79	1297251	15.82
07	5958-019	2033557	9.55	2367897	10.80	1584470	15.82
08	5877-001	2141074	9.53	2559138	10.78	1745819	15.81
09	6017-001MS	1991500	9.56	2333268	10.79	1547176	15.83
10	6017-001MSD	1862503	9.55	2208170	10.80	1485358	15.82
11	6036-001	1975194	9.54	2333093	10.77	1626423	15.81
12	6036-002	2071358	9.53	2448053	10.78	1632438	15.81
13	6036-003	1860346	9.51	2321807	10.76	1538135	15.79
14	6036-004	1952272	9.53	2351696	10.76	1483910	15.80
15	6036-005	1867148	9.53	2215183	10.77	1490795	15.80
16	6036-006	1839331	9.54	2251381	10.77	1461213	15.79
17	6036-007	1817213	9.51	2175662	10.77	1456773	15.79
18	6036-008	1812274	9.50	2176504	10.75	1381407	15.78
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IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): I4385.D
 Instrument ID: MSD_I

Date Analyzed: 10/09/2000
 Time Analyzed: 10:55

50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	1787733	9.57	2037394	10.81	1402271	15.85
UPPER LIMIT	3575466	10.07	4074788	11.31	2804542	16.35
LOWER LIMIT	893866.5	9.07	1018697	10.31	701135.5	15.35
LAB SAMPLE ID						
01 METHOD_BLK	2110998	9.55	2162473	10.78	1500756	15.82
02 6156-023	2121375	9.54	2221292	10.79	1461056	15.82
03 6295-001MS	1718893	9.54	1828151	10.78	1260974	15.80
04 6295-001MSD	1798046	9.52	1857555	10.75	1207542	15.80
05 6295-001	1868005	9.51	1881633	10.76	1276308	15.80
06 6295-002	1672816	9.53	1818461	10.77	1205659	15.81
07 6295-004	2291140	9.54	2370816	10.79	1580370	15.81
08 6295-005	2468497	9.55	2525717	10.80	1616472	15.82
09 6295-007	2698997	9.56	2601444	10.80	1750569	15.84
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IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): I4424.D
Instrument ID: MSD_I

Date Analyzed: 10/11/2000
Time Analyzed: 12:06

50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	2654674	9.51	2970462	10.77	1986311	15.79
UPPER LIMIT	5309348	10.01	5940924	11.27	3972622	16.29
LOWER LIMIT	1327337	9.01	1485231	10.27	993155.5	15.29
LAB SAMPLE ID						
01 METHOD_BLK	2529632	9.52	2657625	10.76	1797084	15.80
02 6295-006	2143112	9.54	2258417	10.78	1655667	15.82
03 6257-033	2580841	9.49	2727265	10.73	1814639	15.77
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IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): J4268.D

Date Analyzed: 10/03/2000

Instrument ID: MSD_J

Time Analyzed: 17:16

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		298165	6.28	398990	7.11	317887	10.46
UPPER LIMIT		596330	6.78	797980	7.61	635774	10.96
LOWER LIMIT		149082.5	5.78	199495	6.61	158943.5	9.96
LAB SAMPLE ID							
01	STD-50PPB	315820	6.29	426058	7.11	329599	10.46
02	STD-20PPB	323304	6.29	434916	7.11	339821	10.46
03	STD-150PPB	326613	6.29	444581	7.11	354363	10.46
04	STD-200PPB	344788	6.29	479650	7.11	378249	10.46
05	METHOD-BLK	367093	6.29	490702	7.11	378513	10.46
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IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): J4398.D

Date Analyzed: 10/10/2000

Instrument ID: MSD_J

Time Analyzed: 11:55

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		250307	6.28	369229	7.11	298620	10.46
UPPER LIMIT		500614	6.78	738458	7.61	597240	10.96
LOWER LIMIT		125153.5	5.78	184614.5	6.61	149310	9.96
LAB SAMPLE ID							
01	METHOD-BLK	267127	6.29	386050	7.11	303982	10.45
02	6297-003	233430	6.28	385588	7.11	289290	10.45
03	6297-001	234866	6.28	389899	7.11	290527	10.45
04	6297-002	233625	6.28	384160	7.11	290905	10.45
05	6300-005	235885	6.28	387451	7.11	296466	10.45
06	6251-003	237765	6.28	387658	7.11	296356	10.45
07	6251-004	237269	6.28	391201	7.11	295384	10.45
08	6307-028	269470	6.28	383448	7.11	302018	10.45
09	6307-029	279032	6.28	403946	7.11	315932	10.45
10	6307-030	284743	6.28	406860	7.11	320720	10.45
11	6307-031	285697	6.28	413721	7.11	324593	10.45
12	6307-032	293894	6.28	419702	7.11	336194	10.45
13	6251-003MS	291754	6.29	423473	7.11	335195	10.45
14	6251-003MSD	285007	6.29	416813	7.11	325773	10.45
15	6179-007	254093	6.28	423350	7.11	316659	10.45
16	6179-001	249681	6.29	418897	7.11	317135	10.46
17	6317-001	293430	6.28	421634	7.11	334851	10.45
18	6295-003	290928	6.28	422337	7.11	334651	10.46
19							
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21							
22							

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

Data File : C:\HPCHEM\1\DATA\10-09-00\I4396.D

Acq On : 9 Oct 2000 17:31

Sample : #1,6295-001,S,5.0g,

Misc : GEOVATION/WARWICK,10/6/00,10/6/00

MS Integration Params: rteint.p

Quant Time: Oct 10 15:40 2000

Vial: 12

Operator: SANGEETA

Inst : 5970 - In

Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Oct 02 14:49:39 2000

Response via : Initial Calibration

DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.51	168	1868005	50.00	UG	-0.03
31) 1,4-Difluorobenzene	10.76	114	1881633	50.00	UG	-0.02
50) Chlorobenzene-d5	15.80	117	1276308	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.02	65	1219236	44.96	UG	-0.01
Spiked Amount	50.000	Range	36 - 115	Recovery	=	89.92%
41) Toluene-d8	13.29	98	1790371	47.78	UG	0.00
Spiked Amount	50.000	Range	35 - 117	Recovery	=	95.56%
59) Bromofluorobenzene	17.90	95	1218151	48.50	UG	-0.02
Spiked Amount	50.000	Range	47 - 115	Recovery	=	97.00%

Target Compounds

Qvalue

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

I4396.D ISO1002.M

Tue Oct 10 15:44:24 2000

MSD_I

Page 1

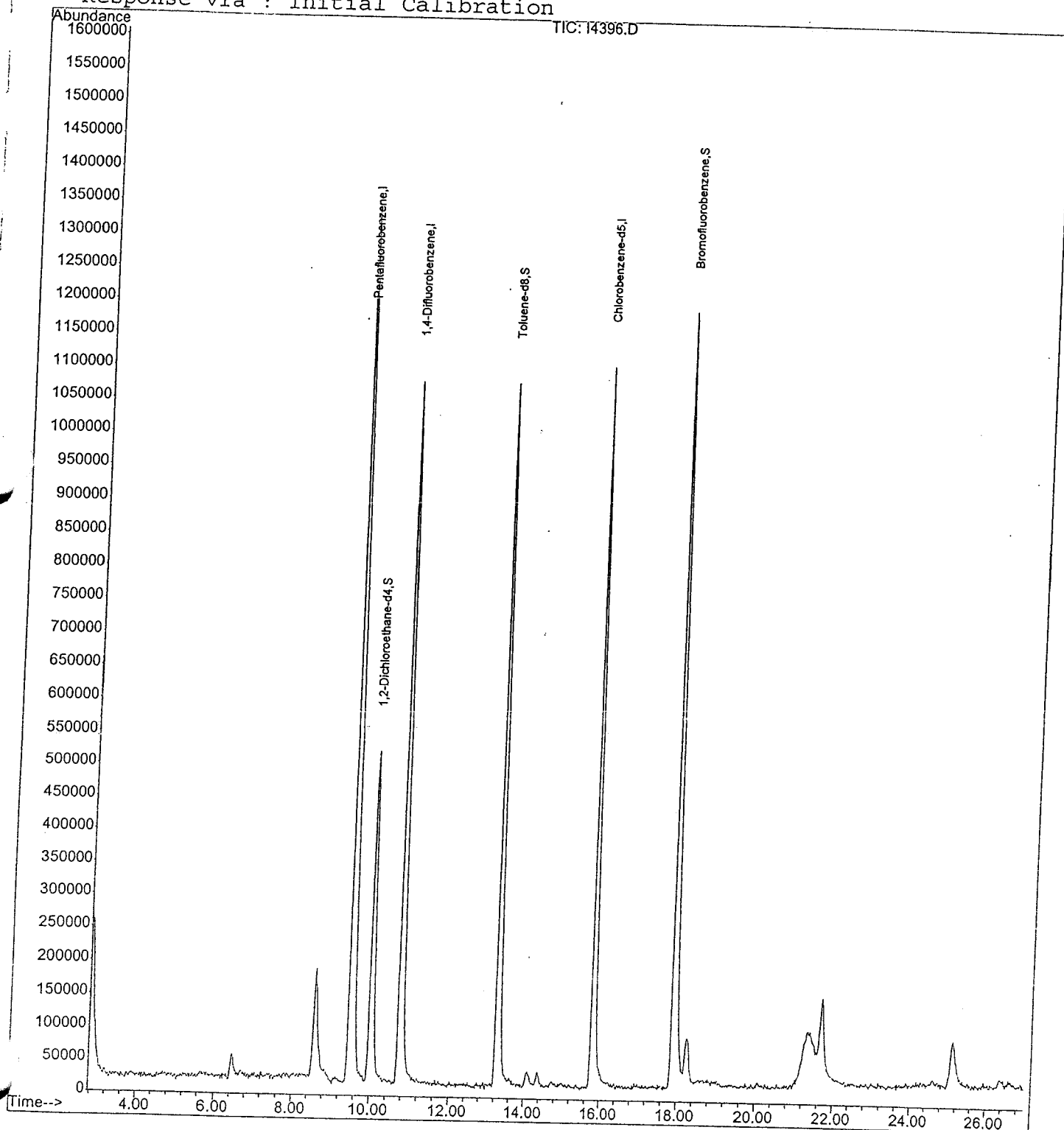
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4396.D
 Acq On : 9 Oct 2000 17:31
 Sample : #1,6295-001,S,5.0g,
 Misc : GEOVATION/WARWICK,10/6/00,10/6/00
 MS Integration Params: rteint.p
 Quant Time: Oct 10 15:40 2000

Vial: 12
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 02 14:49:39 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-09-00\I4397.D
Acq On : 9 Oct 2000 18:06
Sample : #2,6295-002,S,5.0g,
Misc : GEOVATION/WARWICK,10/6/00,10/6/00
MS Integration Params: rteint.p
Quant Time: Oct 10 15:41 2000

Vial: 13
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 02 14:49:39 2000
Response via : Initial Calibration
DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.53	168	1672816	50.00	UG	-0.01
31) 1,4-Difluorobenzene	10.77	114	1818461	50.00	UG	-0.02
50) Chlorobenzene-d5	15.81	117	1205659	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.03	65	1131706	46.61	UG	0.00
Spiked Amount	50.000	Range	36 - 115	Recovery	=	93.22%
41) Toluene-d8	13.28	98	1712705	47.30	UG	-0.01
Spiked Amount	50.000	Range	35 - 117	Recovery	=	94.60%
59) Bromofluorobenzene	17.91	95	1151982	48.55	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	97.10%

Target Compounds

Qvalue

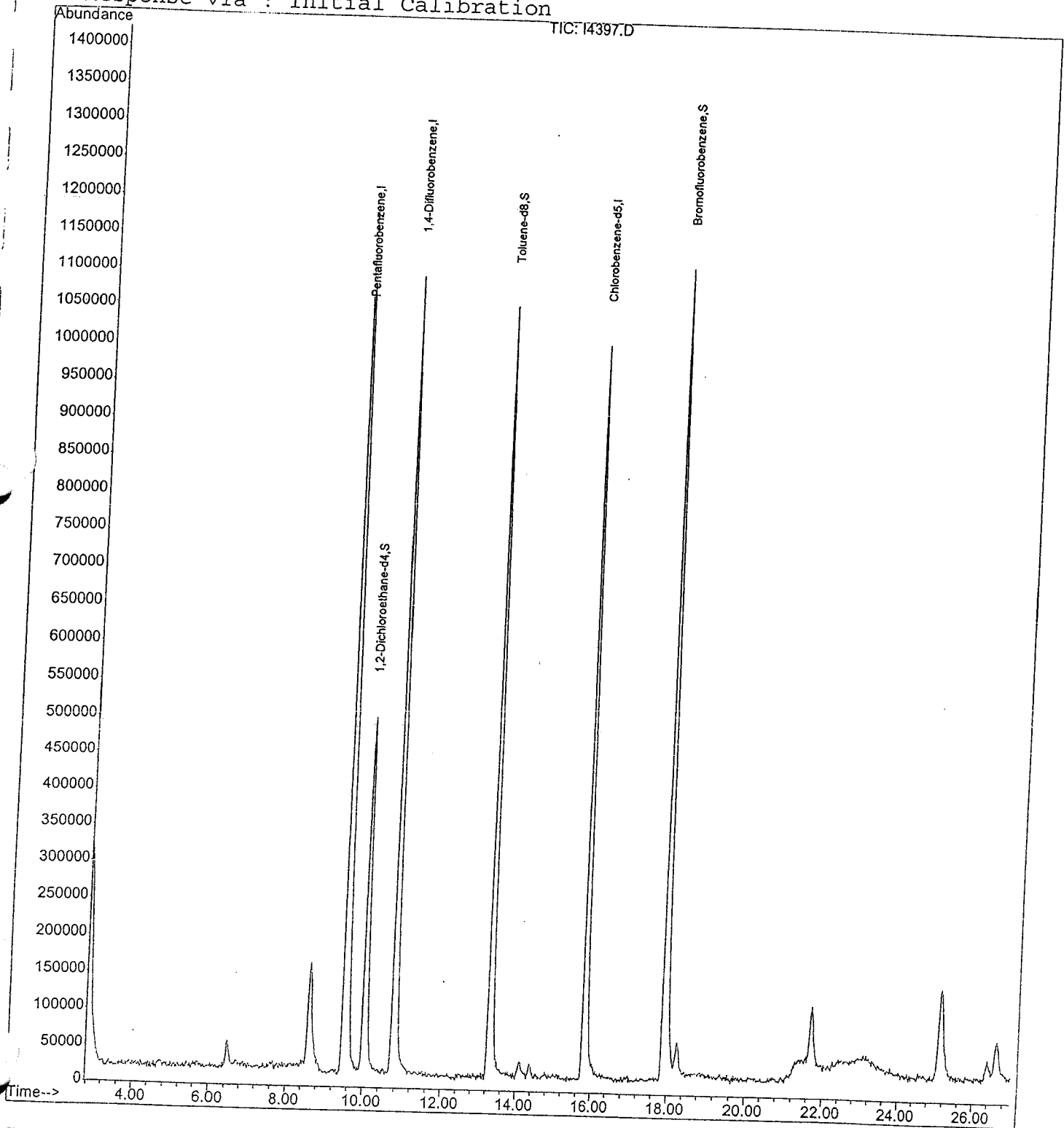
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4397.D
 Acq On : 9 Oct 2000 18:06
 Sample : #2,6295-002,S,5.0g,
 Misc : GEOVATION/WARWICK,10/6/00,10/6/00
 MS Integration Params: rteint.p
 Quant Time: Oct 10 15:41 2000

Vial: 13
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 02 14:49:39 2000
 Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\10-10-00\J4419.D

Acq On : 10 Oct 2000 21:04

Sample : #3,6295-003,S,0.05g,10

Misc : GEOVATION/WARWICK,10/6/00,10/6/00

IS Integration Params: LSCINT.P

Quant Time: Oct 10 21:23:40 2000

Vial: 23

Operator: XINGFANG WANG

Inst : MSD_J

Multiplr: 1.00

Quant Results File: JME1003.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Wed Oct 04 09:46:57 2000

Response via : Initial Calibration

DataAcq Meth : JME1003

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.28	168	290928	50.00	UG	-0.01
31) 1,4-Difluorobenzene	7.11	114	422337	50.00	UG	0.00
50) Chlorobenzene-d5	10.46	117	334651	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.62	65	238952	38.41	UG	0.00
Spiked Amount	50.000	Range	43 - 133	Recovery	=	76.82%
41) Toluene-d8	8.78	98	512269	49.67	UG	0.00
Spiked Amount	50.000	Range	39 - 137	Recovery	=	99.34%
59) Bromofluorobenzene	11.86	95	241841	45.48	UG	0.00
Spiked Amount	50.000	Range	23 - 145	Recovery	=	90.96%

Target Compounds

65) 1,3,5-Trimethylbenzene	12.39	105	12163	1.06	UG	Qvalue # 72

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

J4419.D JME1003.M

Wed Oct 11 08:30:59 2000

MSD_J

Page 1

Data File : C:\MSDCHEM\1\DATA\10-10-00\J4419.D

Acq On : 10 Oct 2000 21:04

Sample : #3,6295-003,S,0.05g,10

Misc : GEOVATION/WARWICK,10/6/00,10/6/00

MS Integration Params: LSCINT.P

Quant Time: Oct 11 8:30 2000

Vial: 23

Operator: XINGFANG WAN

Inst : MSD_J

Multiplr: 1.00

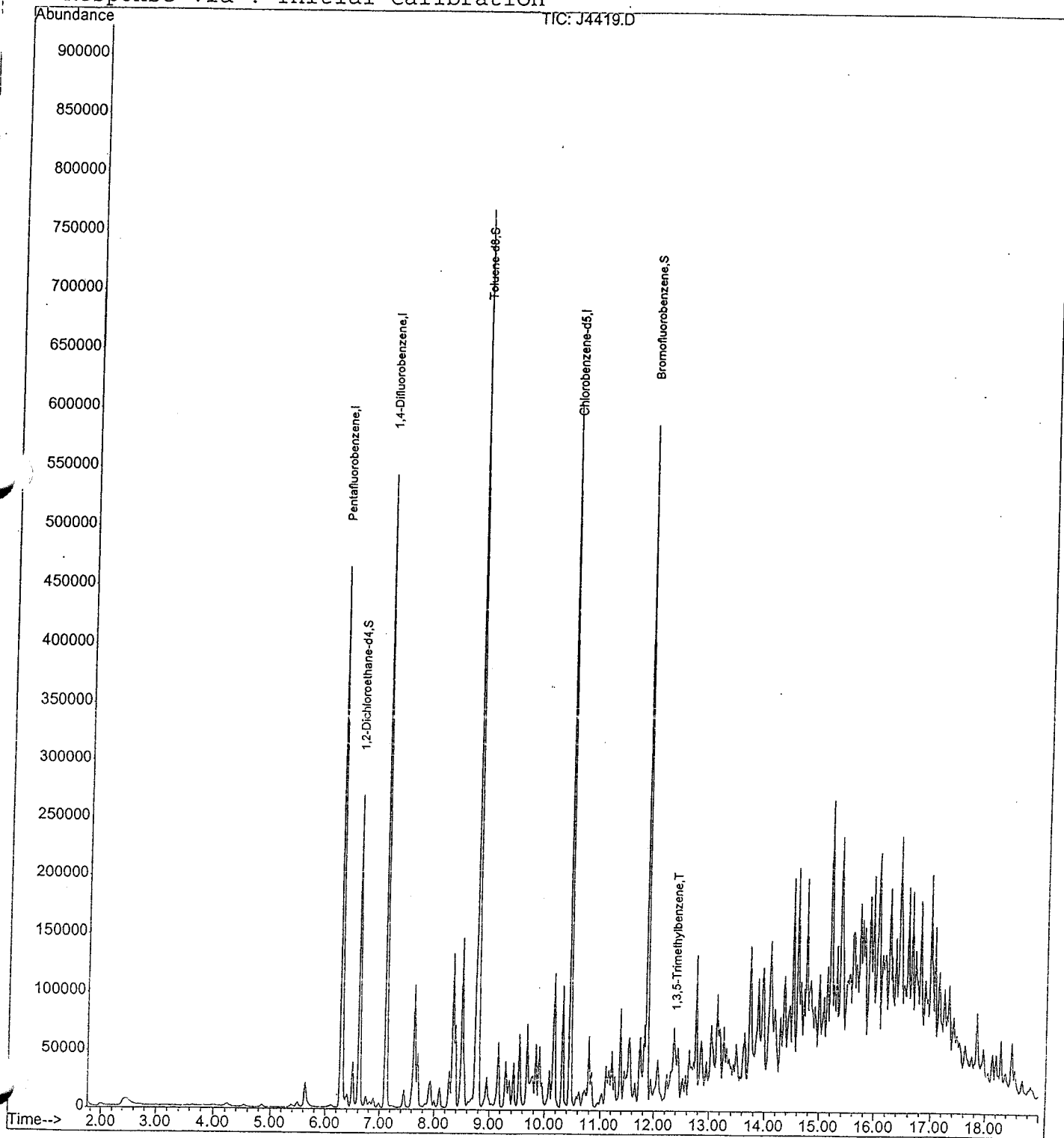
Quant Results File: JME1003.RES

Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Tue Oct 10 13:27:14 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-09-00\I4399.D
 Acq On : 9 Oct 2000 19:16
 Sample : #4,6295-004,S,0.5g,
 Misc : GEOVATION/WARWICK,10/6/00,10/6/00
 1S Integration Params: rteint.p
 Quant Time: Oct 23 11:05 2000

Vial: 15
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 16 09:53:21 2000
 Response via : Initial Calibration
 DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.54	168	2291140	50.00	UG	0.00
31) 1,4-Difluorobenzene	10.79	114	2370816	50.00	UG	0.00
50) Chlorobenzene-d5	15.81	117	1580370	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.04	65	1385605	41.66	UG	0.00
Spiked Amount	50.000	Range	36 - 115	Recovery	=	83.32%
41) Toluene-d8	13.31	98	2254230	47.75	UG	0.01
Spiked Amount	50.000	Range	35 - 117	Recovery	=	95.50%
59) Bromofluorobenzene	17.92	95	1382499	44.45	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	88.90%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
53) Ethylbenzene	16.05	91	75459	1.01	UG	99
54) m,p-Xylene	16.28	106	48024	1.96	UG	# 1
55) o-Xylene	16.97	106	25919	1.11	UG	# 1
58) Isopropylbenzene	17.65	105	809564	10.59	UG	99
63) n-Propylbenzene	18.40	91	1386315	14.33	UG	99
65) 1,3,5-Trimethylbenzene	18.73	105	4407433	70.79	UG	98
68) 1,2,4-Trimethylbenzene	19.42	105	5257721	84.81	UG	# 94
69) sec-Butylbenzene	19.73	105	4847562	55.88	UG	99
71) 4-Isopropyltoluene	19.90	119	3477968	52.58	UG	# 98
78) Naphthalene	24.26	128	4968294	139.07	UG	# 95

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

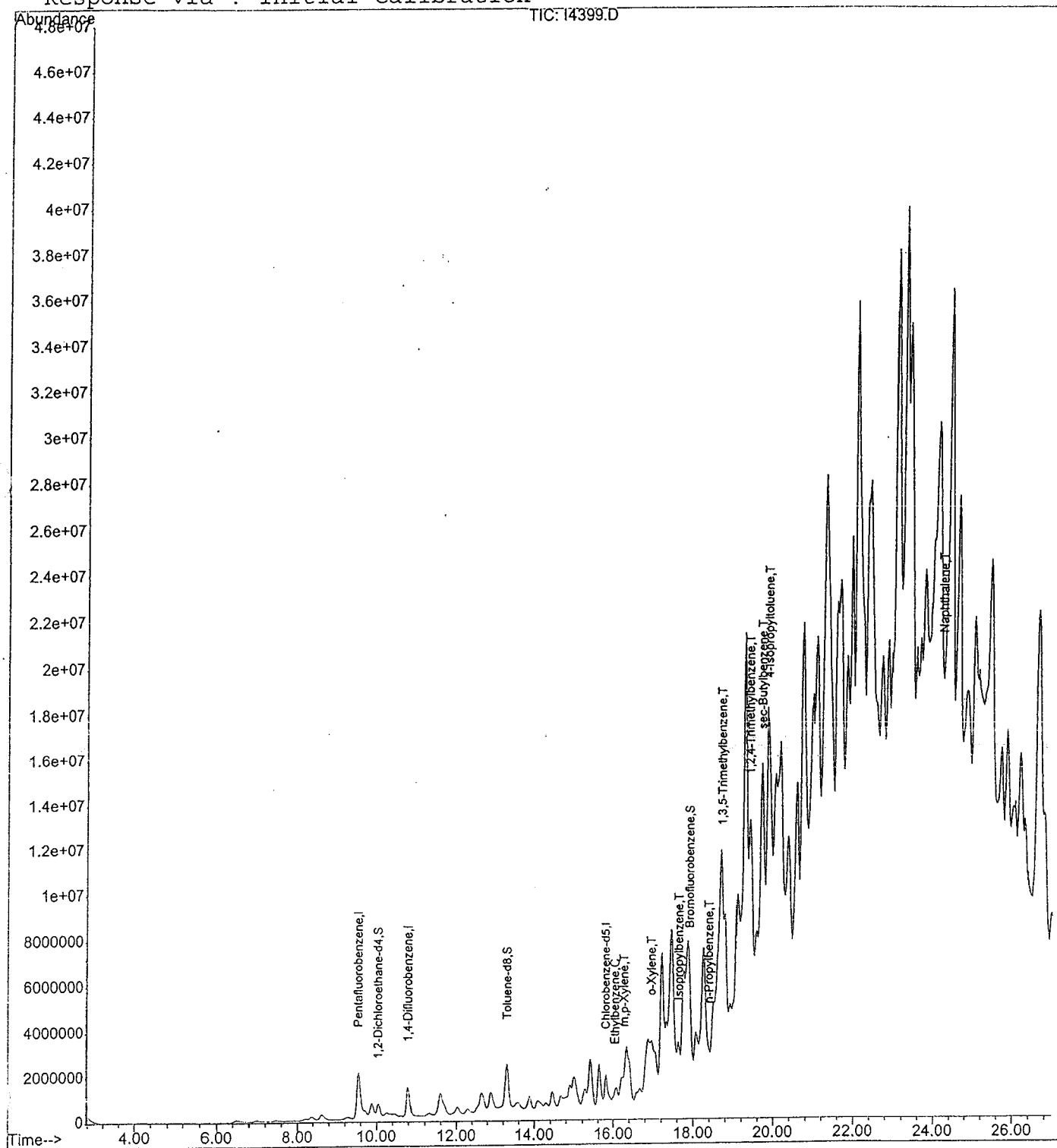
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4399.D
Acq On : 9 Oct 2000 19:16
Sample : #4,6295-004,S,0.5g,
Misc : GEOVATION/WARWICK,10/6/00,10/6/00
MS Integration Params: rteint.p
Quant Time: Oct 23 11:05 2000

Vial: 15
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 16 09:53:21 2000
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-09-00\I4400.D
Acq On : 9 Oct 2000 19:51
Sample : #5,6295-005,S,5.0g,
Misc : GEOVATION/WARWICK,10/6/00,10/6/00
MS Integration Params: rteint.p
Quant Time: Oct 23 11:07 2000

Vial: 16
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 16 09:53:21 2000
Response via : Initial Calibration
DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.55	168	2468497	50.00	UG	0.00
31) 1,4-Difluorobenzene	10.80	114	2525717	50.00	UG	0.01
50) Chlorobenzene-d5	15.82	117	1616472	50.00	UG	0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.05	65	1512362	42.21	UG	0.01
Spiked Amount	50.000	Range	36 - 115	Recovery	=	84.42%
41) Toluene-d8	13.30	98	2333727	46.40	UG	0.00
Spiked Amount	50.000	Range	35 - 117	Recovery	=	92.80%
59) Bromofluorobenzene	17.93	95	1481287	46.57	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	93.14%

Target Compounds

						Qvalue
65) 1,3,5-Trimethylbenzene	18.72	105	1267663	19.91	UG	97
68) 1,2,4-Trimethylbenzene	19.41	105	1500646	23.67	UG	# 93
69) sec-Butylbenzene	19.73	105	1443154	16.27	UG	# 93
71) 4-Isopropyltoluene	19.91	119	1949605	28.82	UG	# 99

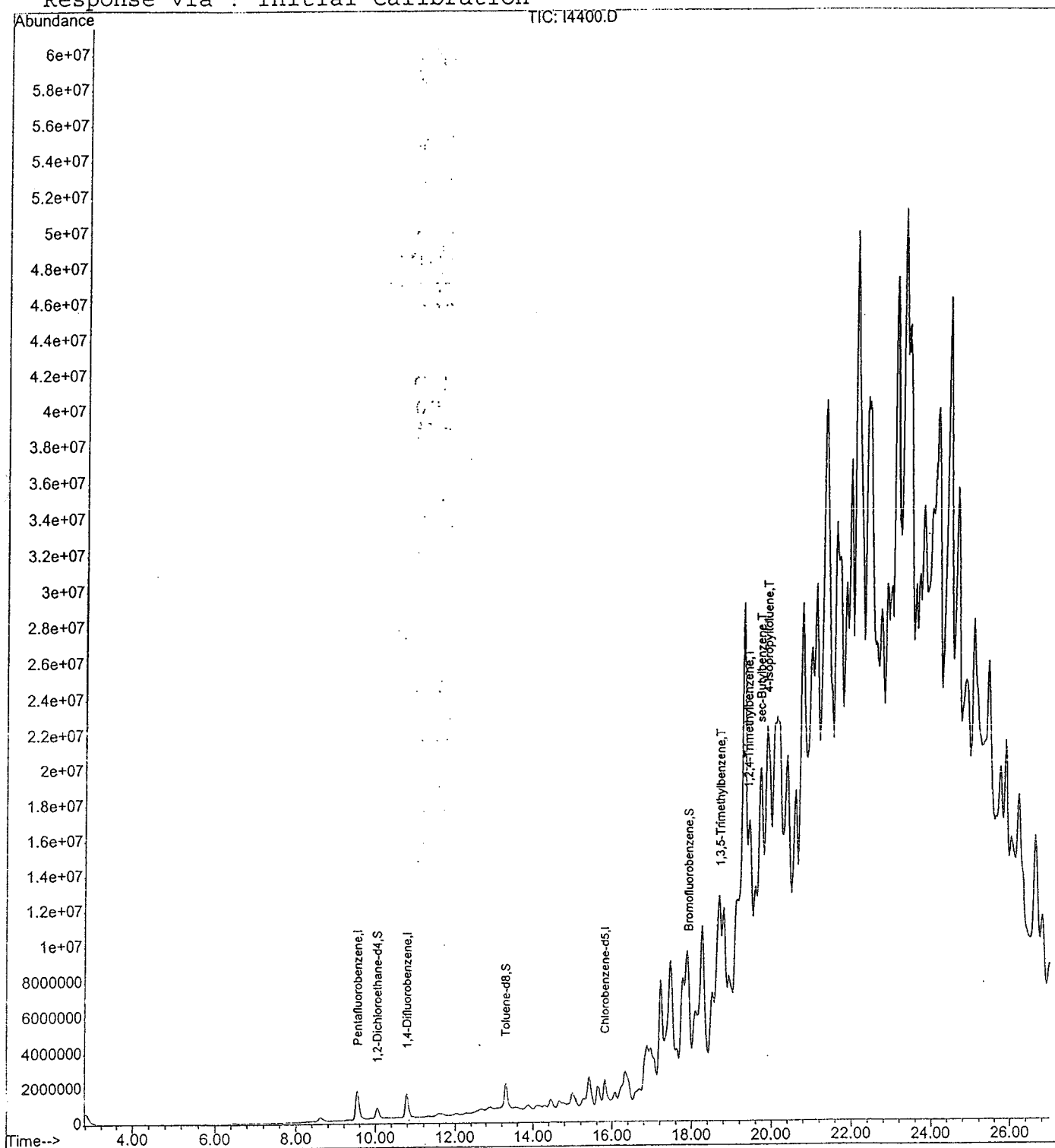
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4400.D
 Acq On : 9 Oct 2000 19:51
 Sample : #5,6295-005,S,5.0g,
 Misc : GEOVATION/WARWICK,10/6/00,10/6/00
 MS Integration Params: rteint.p
 Quant Time: Oct 23 11:07 2000

Vial: 16
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 16 09:53:21 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\I4429.D
Acq On : 11 Oct 2000 15:03
Sample : #6,6295-006,S,0.5g
Misc : GEOVATION/WARWICK,10/06/00,10/06/00
MS Integration Params: rteint.p
Quant Time: Oct 23 11:10 2000

Vial: 6
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 16 09:53:21 2000
Response via : Initial Calibration
DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.54	168	2143112	50.00	UG	0.00
31) 1,4-Difluorobenzene	10.78	114	2258417	50.00	UG	0.00
50) Chlorobenzene-d5	15.82	117	1655667	50.00	UG	0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.03	65	1302029	41.85	UG	0.00
Spiked Amount	50.000	Range	36 - 115	Recovery	=	83.70%
41) Toluene-d8	13.29	98	2669939	59.37	UG	0.00
Spiked Amount	50.000	Range	35 - 117	Recovery	=	118.74%#
59) Bromofluorobenzene	17.92	95	1777436	54.55	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	109.10%

Target Compounds

						Qvalue
54) m,p-Xylene	16.27	106	63337	2.47	UG	92
65) 1,3,5-Trimethylbenzene	18.71	105	127638	1.96	UG	98
68) 1,2,4-Trimethylbenzene	19.41	105	156738	2.41	UG	95

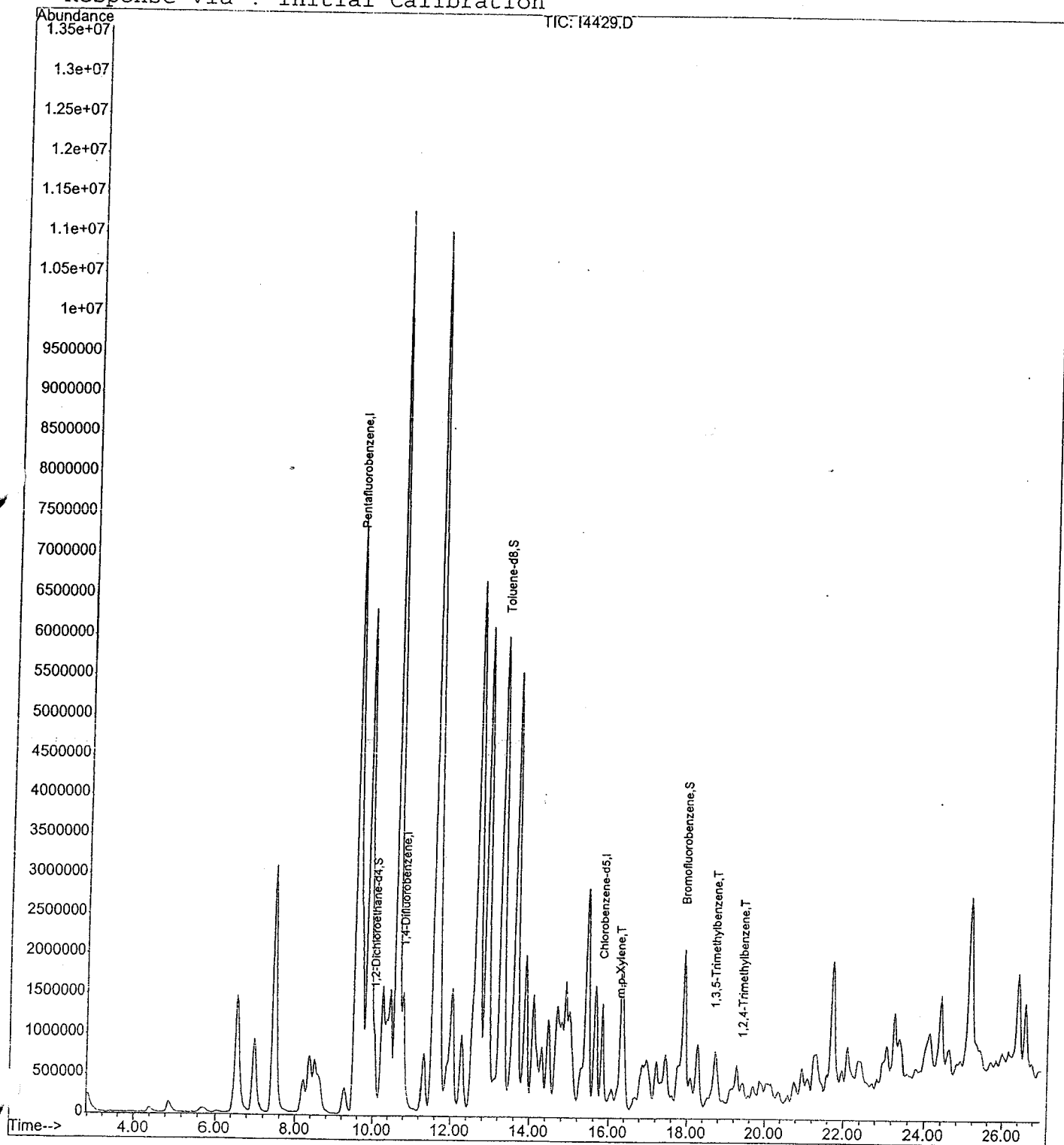
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\I4429.D
Acq On : 11 Oct 2000 15:03
Sample : #6,6295-006,S,0.5g
Misc : GEOVATION/WARWICK,10/06/00,10/06/00
MS Integration Params: rteint.p
Quant Time: Oct 23 11:10 2000

Vial: 6
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 16 09:53:21 2000
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-09-00\I4402.D
Acq On : 9 Oct 2000 21:01
Sample : #7,6295-007,S,5.0g,
Misc : GEOVATION/WARWICK,10/6/00,10/6/00
IS Integration Params: rteint.p
Quant Time: Oct 23 11:12 2000

Vial: 18
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 16 09:53:21 2000
Response via : Initial Calibration
DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.56	168	2698997	50.00	UG	0.01
31) 1,4-Difluorobenzene	10.80	114	2601444	50.00	UG	0.01
50) Chlorobenzene-d5	15.84	117	1750569	50.00	UG	0.03

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.05	65	1526985	38.97	UG	0.01
Spiked Amount	50.000	Range	36 - 115	Recovery	=	77.94%
41) Toluene-d8	13.32	98	2425620	46.82	UG	0.02
Spiked Amount	50.000	Range	35 - 117	Recovery	=	93.64%
59) Bromofluorobenzene	17.93	95	1531864	44.47	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	88.94%

Target Compounds

						Qvalue
54) m,p-Xylene	16.28	106	48748	1.80	UG	# 1
58) Isopropylbenzene	17.66	105	358554	4.24	UG	98
63) n-Propylbenzene	18.41	91	516140	4.82	UG	100
65) 1,3,5-Trimethylbenzene	18.72	105	1607003	23.30	UG	98
68) 1,2,4-Trimethylbenzene	19.43	105	1926355	28.05	UG	# 93
69) sec-Butylbenzene	19.73	105	2223582	23.14	UG	# 98
71) 4-Isopropyltoluene	19.91	119	2272550	31.02	UG	# 99
78) Naphthalene	23.97	128	1116861	28.22	UG	99

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

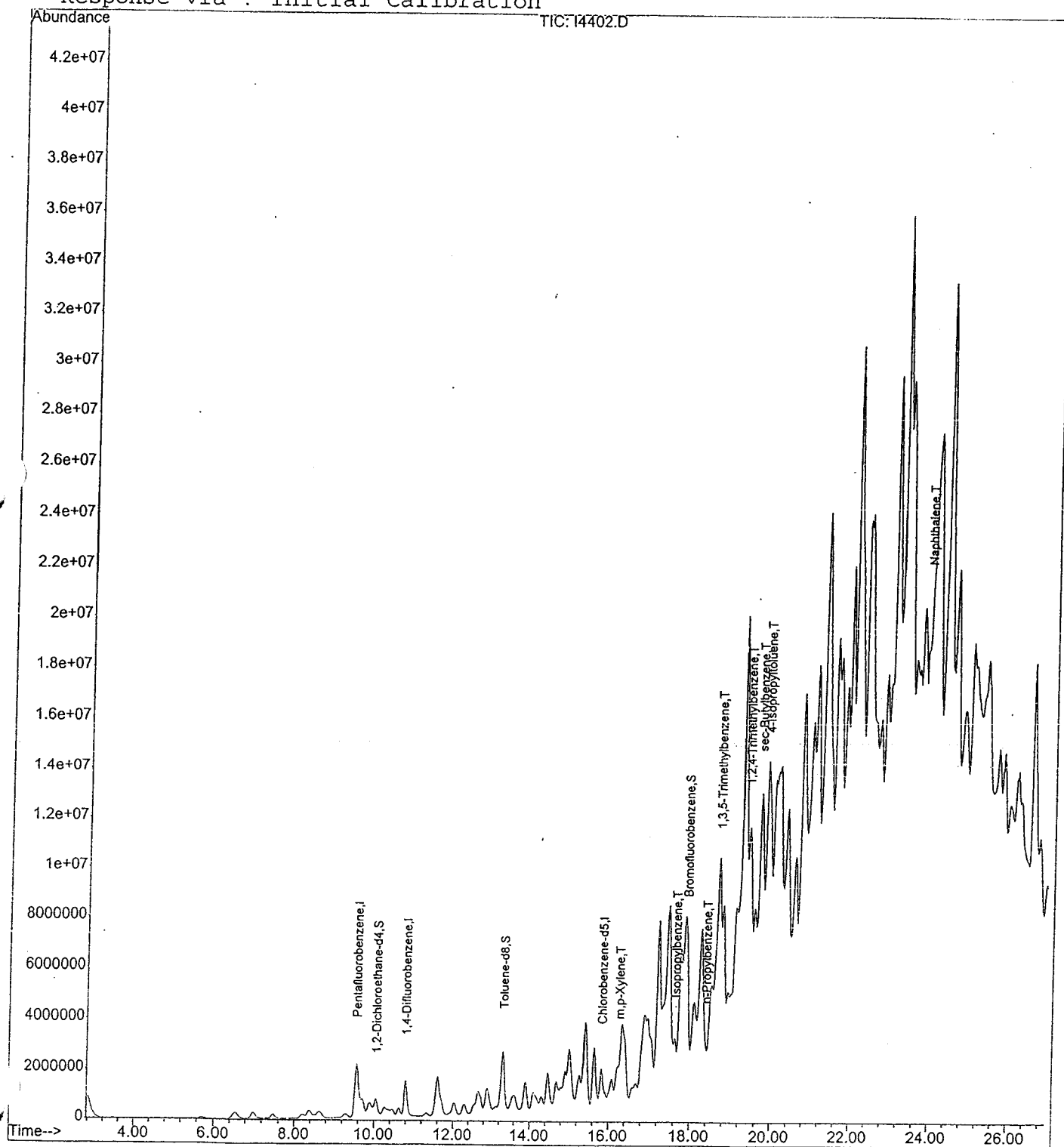
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4402.D
 Acq On : 9 Oct 2000 21:01
 Sample : #7,6295-007,S,5.0g,
 Misc : GEOVATION/WARWICK,10/6/00,10/6/00
 MS Integration Params: rteint.p
 Quant Time: Oct 23 11:12 2000

Vial: 18
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 16 09:53:21 2000
 Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\10-10-00\J4399.D

Vial: 3

Acq On : 10 Oct 2000 12:21

Operator: XINGFANG WANG

Sample : N/A, METHOD-BLK, S, 0.1g, 0

Inst : MSD_J

Misc :

Multiplr: 1.00

MS Integration Params: LSCINT.P

Quant Time: Oct 10 12:40:50 2000

Quant Results File: JME1003.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Wed Oct 04 09:46:57 2000

Response via : Initial Calibration

DataAcq Meth : JME1003

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.29	168	267127	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.11	114	386050	50.00	UG	0.00
50) Chlorobenzene-d5	10.45	117	303982	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.62	65	237473	41.57	UG	0.00
Spiked Amount	50.000	Range	43 - 133	Recovery	=	83.14%
41) Toluene-d8	8.78	98	459588	48.75	UG	0.00
Spiked Amount	50.000	Range	39 - 137	Recovery	=	97.50%
59) Bromofluorobenzene	11.86	95	221230	45.80	UG	0.00
Spiked Amount	50.000	Range	23 - 145	Recovery	=	91.60%

Target Compounds

Qvalue

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

J4399.D JME1003.M

Tue Oct 10 13:28:25 2000

MSD_J

Page 1

Data File : C:\MSDCHEM\1\DATA\10-10-00\J4399.D

Acq On : 10 Oct 2000 12:21

Sample : N/A, METHOD-BLK, S, 0.1g, 0

Misc :

MS Integration Params: LSCINT.P

Quant Time: Oct 10 13:28 2000

Vial: 3

Operator: XINGFANG WAN

Inst : MSD_J

Multiplr: 1.00

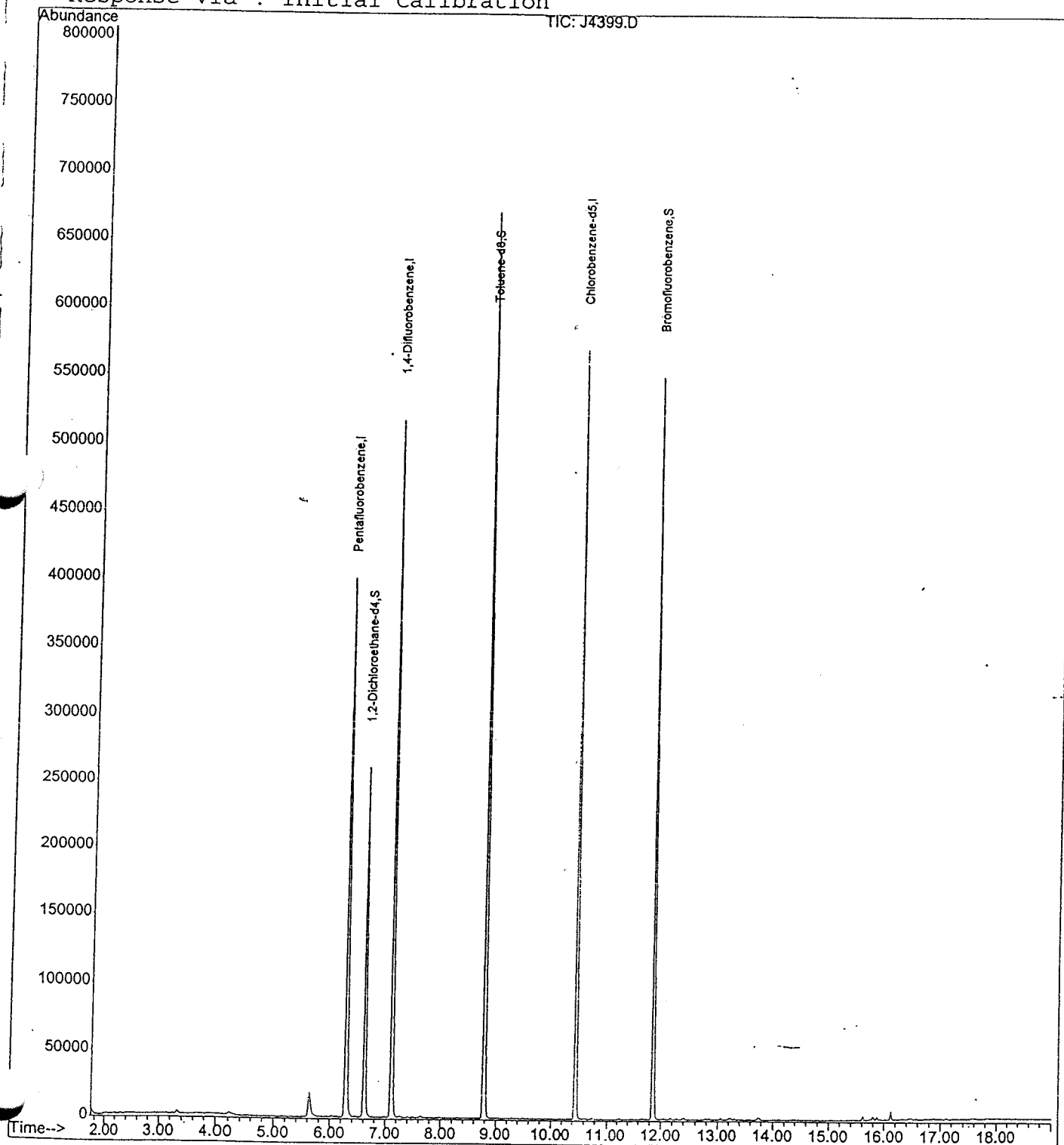
Quant Results File: JME1003.RES

Method : C:\MSDCHEM\1\METHODS\JME1003.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Tue Oct 10 13:27:14 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-09-00\I4388.D

Acq On : 9 Oct 2000 12:51

Sample : N/A, METHOD_BLK, S, 5.0g, 0

Misc : N/A, N/A, N/A

Vial: 4

Operator: SANGEETA

Inst : 5970 - In

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Oct 9 13:21 2000

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Oct 09 11:27:44 2000

Response via : Initial Calibration

DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.55	168	2110998m	50.00	UG	0.00
31) 1,4-Difluorobenzene	10.78	114	2162473m	50.00	UG	0.00
50) Chlorobenzene-d5	15.82	117	1500756	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.03	65	1412442	46.09	UG	0.00
Spiked Amount	50.000	Range	36 - 115	Recovery	=	92.18%
41) Toluene-d8	13.29	98	1992528	46.27	UG	0.00
Spiked Amount	50.000	Range	35 - 117	Recovery	=	92.54%
59) Bromofluorobenzene	17.92	95	1353835	45.84	UG	0.00
Spiked Amount	50.000	Range	47 - 115	Recovery	=	91.68%

Target Compounds

Qvalue

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

I4388.D ISO1002.M

Tue Oct 10 15:44:05 2000

MSD_I

Page 1

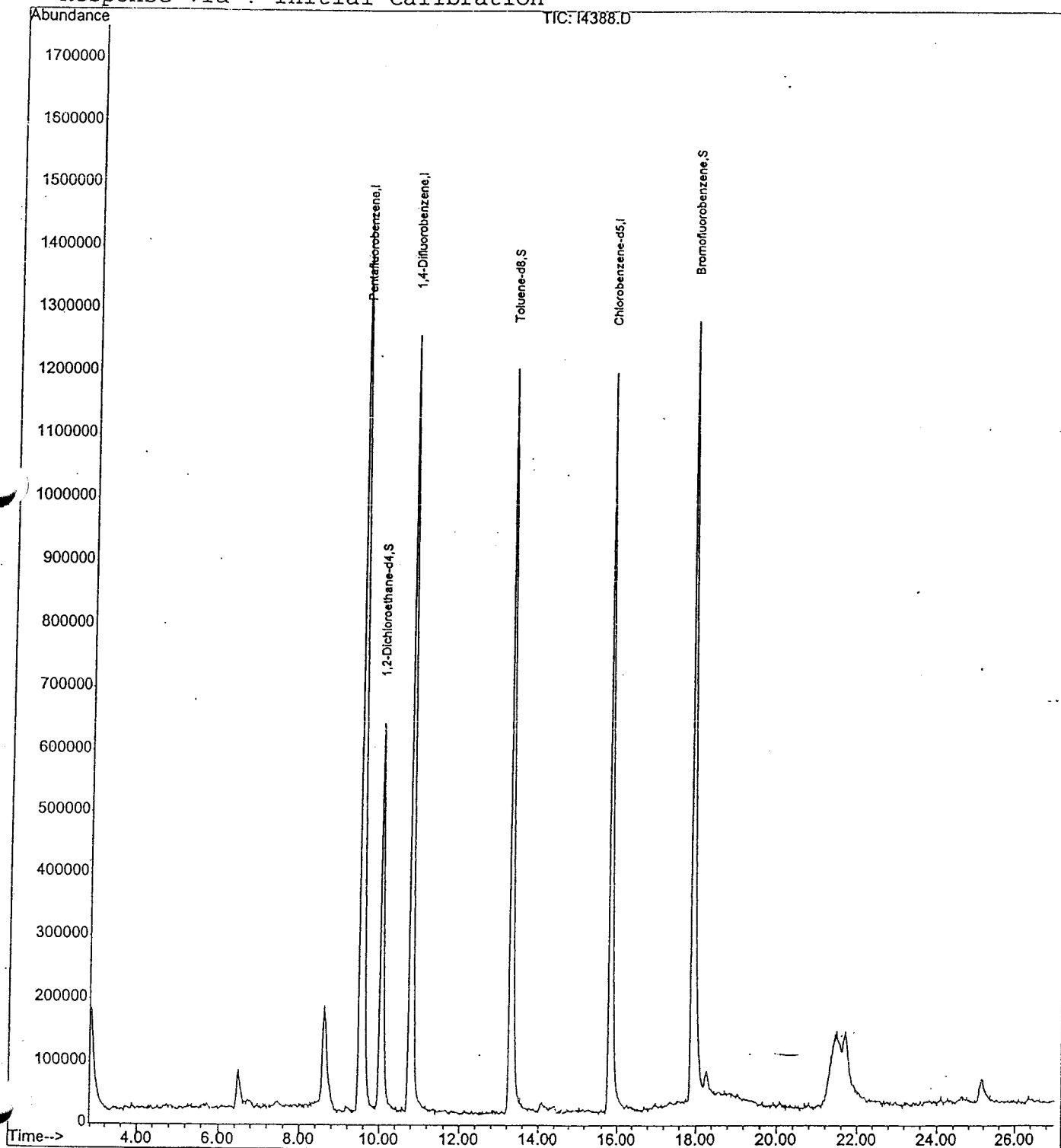
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-09-00\I4388.D
 Acq On : 9 Oct 2000 12:51
 Sample : N/A, METHOD BLK, S, 5.0g, 0.
 Misc : N/A, N/A, N/A
 MS Integration Params: rteint.p
 Quant Time: Oct 9 13:21 2000

Vial: 4
 Operator: SANGEETA
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Mon Oct 02 14:49:39 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\I4427.D

Vial: 4

Acq On : 11 Oct 2000 13:53

Operator: SANGEETA

Sample : N/A,METHOD BLK,S,5.0g,0

Inst : 5970 - In

Misc : N/A,N/A,N/A

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Oct 12 9:52 2000

Quant Results File: ISO1002.RES

Quant Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Oct 02 14:49:39 2000

Response via : Initial Calibration

DataAcq Meth : VOAI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.52	168	2529632	50.00	UG	-0.03
31) 1,4-Difluorobenzene	10.76	114	2657625	50.00	UG	-0.02
50) Chlorobenzene-d5	15.80	117	1797084	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	10.01	65	1590622	43.32	UG	-0.03
Spiked Amount	50.000	Range	36 - 115	Recovery	=	86.64%
41) Toluene-d8	13.28	98	2491624	47.08	UG	-0.01
Spiked Amount	50.000	Range	35 - 117	Recovery	=	94.16%
59) Bromofluorobenzene	17.91	95	1686232	47.68	UG	-0.01
Spiked Amount	50.000	Range	47 - 115	Recovery	=	95.36%

Target Compounds

Qvalue

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

I4427.D ISO1002.M

Thu Oct 12 09:53:31 2000

MSD_I

Page 1

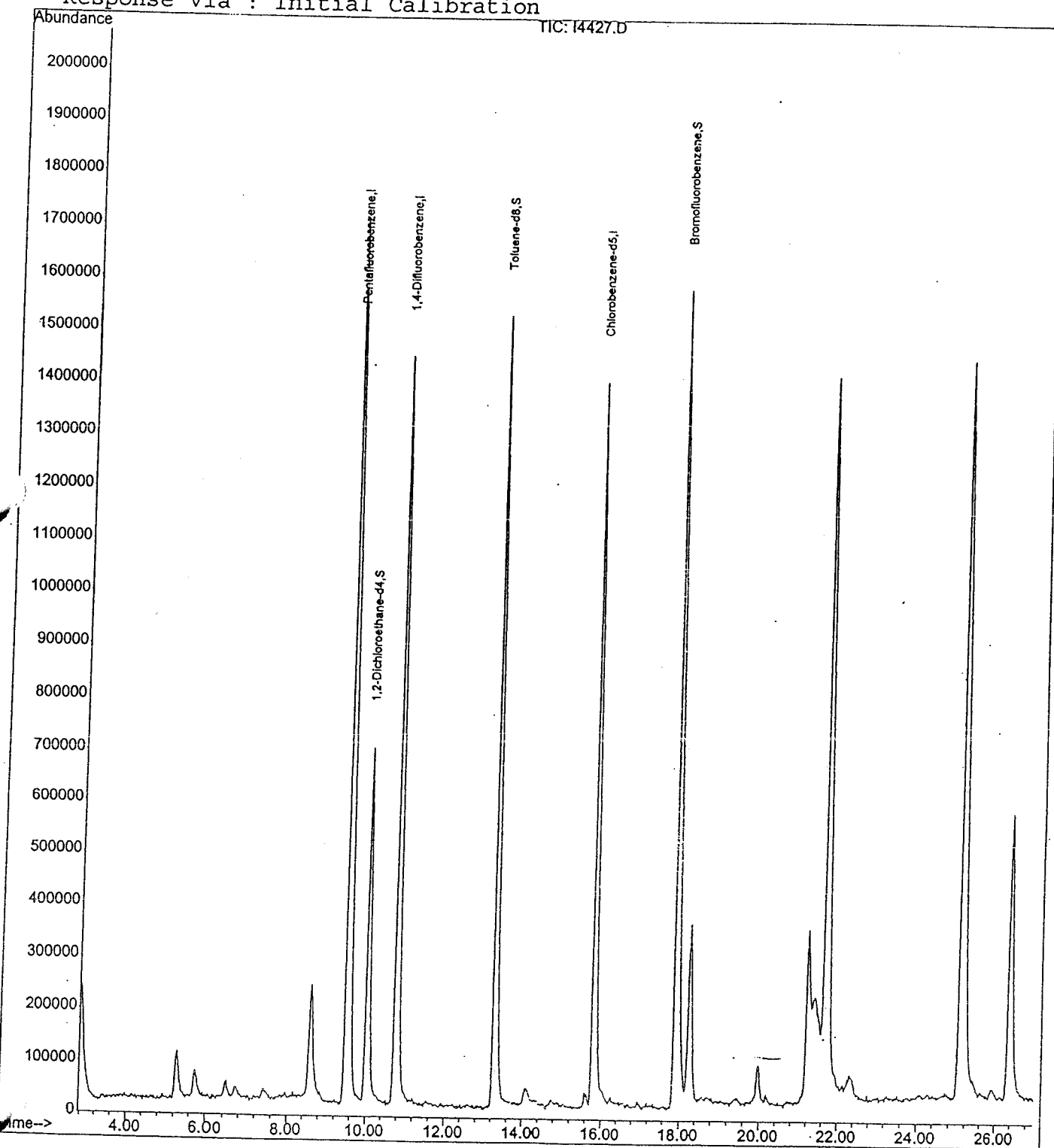
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\I4427.D
Acq On : 11 Oct 2000 13:53
Sample : N/A,METHOD BLK,S,5.0g,0
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p
Quant Time: Oct 12 9:52 2000

Vial: 4
Operator: SANGEETA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: ISO1002.RES

Method : C:\HPCHEM\1\METHODS\ISO1002.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Mon Oct 02 14:49:39 2000
Response via : Initial Calibration



SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A3516.D

DFTPP Injection Date : 10/09/2000

Inst ID: MSDA

DFTPP Injection Time: 06:22

m/z	Ion Abundance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	45.3		
68	Less than 2.0% of mass 69	0.0	(0.0)	1
69	Mass 69 relative abundance	60.0		
70	Less than 2.0% of mass 69	0.0	(0.0)	1
127	40.0 - 60.0% of mass 198	43.7		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.8		
275	10.0 - 30.0% of mass 198	21.7		
365	Greater than 1.0% of mass 198	2.5		
441	Present, but less than mass 443	12.65	(86.0)	3
442	40.0 - 100.0% of mass 198	79.5		
443	17.0 - 23.0% of mass 442	14.7	(18.5)	2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	50ppb-STD-FOR-	A3517.D	10/09/2000	06:33
.	160ppb-STD-FO	A3518.D	10/09/2000	07:04
.	120ppb-STD-FO	A3519.D	10/09/2000	07:34
.	80ppb-STD-FOR-	A3520.D	10/09/2000	08:05
.	20ppb-STD-FOR-	A3521.D	10/09/2000	08:36
.	Method-Blk	A3522.D	10/09/2000	09:07
6-DB8-6.5-7	6156-002	A3523.D	10/09/2000	09:38
6-DB10-6.5-7	6156-006	A3524.D	10/09/2000	10:07
6-DB13-1.5-2	6156-008	A3525.D	10/09/2000	10:38
6-DB7-16.5-17	6156-001	A3526.D	10/09/2000	11:06
6-DB13-6.5-7	6156-009	A3527.D	10/09/2000	11:34
RB100200	6156-010	A3528.D	10/09/2000	12:02
.	Blank-MS	A3529.D	10/09/2000	12:33
.	Blank-MSD	A3530.D	10/09/2000	01:04
6-DB6-5.5-6	6156-004	A3531.D	10/09/2000	01:35
6-DB8-16.5-17	6156-003	A3532.D	10/09/2000	02:06
6-DB9-16.5-17	6156-005	A3533.D	10/09/2000	02:37
6-DB10-16.5-17	6156-007	A3534.D	10/09/2000	03:08
-E3-DB12/13-1	6156-022	A3535.D	10/09/2000	03:39
-E3-DB12/13-2	6156-023	A3536.D	10/09/2000	04:10
-E3-DB12/13-3	6156-024	A3537.D	10/09/2000	04:41
-E3-DB12/13-4	6156-025	A3538.D	10/09/2000	05:12
-E3-DB12/13-5	6156-026	A3539.D	10/09/2000	05:42

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A3516.D

DFTPP Injection Date : 10/09/2000

Inst ID: MSDA

DFTPP Injection Time: 06:22

m/z	Ion Abundance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	45.3		
68	Less than 2.0% of mass 69	0.0	(0.0)	1
69	Mass 69 relative abundance	60.0		
70	Less than 2.0% of mass 69	0.0	(0.0)	1
127	40.0 - 60.0% of mass 198	43.7		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.8		
275	10.0 - 30.0% of mass 198	21.7		
365	Greater than 1.0% of mass 198	2.5		
441	Present, but less than mass 443	12.6	(86.0)	3
442	40.0 - 100.0% of mass 198	79.5		
443	17.0 - 23.0% of mass 442	14.7	(18.5)	2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
6-DB9-16.5-17	6156-005	A3540.D	10/09/2000	06:13

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A3541.D

DFTPP Injection Date : 10/11/2000

Inst ID: MSDA

DFTPP Injection Time: 06:58

m/z	Ion Abundance Criteria	%Relative Abundance
51	30.0 - 60.0% of mass 198	35.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	42.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.0% of mass 198	2.5
441	Present, but less than mass 443	10.47 (83.3)3
442	40.0 - 100.0% of mass 198	64.1
443	17.0 - 23.0% of mass 442	12.6 (19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	50ppb-STD-FOR-	A3542.D	10/11/2000	07:08
6-DB6-5.5-6	6156-004	A3543.D	10/11/2000	07:37
.	Method-Blk	A3545.D	10/11/2000	08:33
#1	6295-001	A3546.D	10/11/2000	09:00
#2	6295-002	A3547.D	10/11/2000	09:27
#3	6295-003	A3548.D	10/11/2000	09:54
#4	6295-004	A3549.D	10/11/2000	10:22
#5	6295-005	A3550.D	10/11/2000	10:49
#6	6295-006	A3551.D	10/11/2000	11:16
#7	6295-007	A3552.D	10/11/2000	11:43
SED1	6297-001	A3553.D	10/11/2000	12:11
SED2	6297-002	A3554.D	10/11/2000	12:38
#1	6295-001-MS	A3555.D	10/11/2000	01:06
#1	6295-001-MSD	A3556.D	10/11/2000	01:35
EX1-1	6306-001	A3557.D	10/11/2000	02:06
EX1-2	6306-002	A3558.D	10/11/2000	02:37
EX1-3	6306-003	A3559.D	10/11/2000	03:09
EX1-4	6306-004	A3560.D	10/11/2000	03:40
EX1-5	6306-005	A3561.D	10/11/2000	04:11
WC-1	6306-006	A3562.D	10/11/2000	04:42
WC-2	6306-007	A3563.D	10/11/2000	05:13
6-DB8-16.5-17	6156-003	A3564.D	10/11/2000	05:44
SL-1	6306-009	A3565.D	10/11/2000	06:15

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A3541.D

DFTPP Injection Date : 10/11/2000

Inst ID: MSDA

DFTPP Injection Time: 06:58

m/z	Ion Abundance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	35.9		
68	Less than 2.0% of mass 69	0.0	(0.0)	1
69	Mass 69 relative abundance	51.6		
70	Less than 2.0% of mass 69	0.0	(0.0)	1
127	40.0 - 60.0% of mass 198	42.7		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.9		
275	10.0 - 30.0% of mass 198	22.4		
365	Greater than 1.0% of mass 198	2.5		
441	Present, but less than mass 443	10.5	(83.3)	3
442	40.0 - 100.0% of mass 198	64.1		
443	17.0 - 23.0% of mass 442	12.6	(19.6)	2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
SEPTIC-01	6300-005	A3566.D	10/11/2000	06:46

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A3545.D

Instrument ID: MSDA

Date Extracted: 10/09/00

Matrix: SOIL

Date Analyzed: 10/11/2000

Time Analyzed: 08:33

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
#1	6295-001	10/11/2000	09:00
#2	6295-002	10/11/2000	09:27
#3	6295-003	10/11/2000	09:54
#4	6295-004	10/11/2000	10:22
#5	6295-005	10/11/2000	10:49
#6	6295-006	10/11/2000	11:16
#7	6295-007	10/11/2000	11:43
SED1	6297-001	10/11/2000	12:11
SED2	6297-002	10/11/2000	12:38
#1	6295-001-MS	10/11/2000	01:06
#1	6295-001-MSD	10/11/2000	01:35
EX1-1	6306-001	10/11/2000	02:06
EX1-2	6306-002	10/11/2000	02:37
EX1-3	6306-003	10/11/2000	03:09
EX1-4	6306-004	10/11/2000	03:40
EX1-5	6306-005	10/11/2000	04:11
WC-1	6306-006	10/11/2000	04:42
WC-2	6306-007	10/11/2000	05:13
SL-1	6306-009	10/11/2000	06:15
SEPTIC-01	6300-005	10/11/2000	06:46
SL-1	6306-009	10/12/2000	06:50

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3545.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		66.7
Phenol	ND		33.3
Aniline	ND		33.3
bis(2-Chloroethyl)ether	ND		33.3
2-Chlorophenol	ND		33.3
1,3-Dichlorobenzene	ND		33.3
1,4-Dichlorobenzene	ND		33.3
Benzyl alcohol	ND		33.3
1,2-Dichlorobenzene	ND		33.3
2-Methylphenol	ND		33.3
bis(2-chloroisopropyl)ether	ND		33.3
4-Methylphenol	ND		33.3
N-Nitroso-di-n-propylamine	ND		33.3
Hexachloroethane	ND		33.3
Nitrobenzene	ND		33.3
Isophorone	ND		33.3
2-Nitrophenol	ND		33.3
2,4-Dimethylphenol	ND		33.3
bis(2-Chloroethoxy)methane	ND		33.3
Benzoic acid	ND		33.3
2,4-Dichlorophenol	ND		33.3
1,2,4-Trichlorobenzene	ND		33.3
Naphthalene	ND		33.3
4-Chloroaniline	ND		33.3
Hexachlorobutadiene	ND		33.3
4-Chloro-3-methylphenol	ND		33.3
2-Methylnaphthalene	ND		33.3
Hexachlorocyclopentadiene	ND		33.3
2,4,6-Trichlorophenol	ND		33.3
2,4,5-Trichlorophenol	ND		33.3
2-Chloronaphthalene	ND		33.3
2-Nitroaniline	ND		33.3
Dimethylphthalate	ND		33.3
2,6-Dinitrotoluene	ND		33.3
Acenaphthylene	ND		33.3

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Data file: A3545.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		33.3
Acenaphthene	ND		33.3
2,4-Dinitrophenol	ND		33.3
4-Nitrophenol	ND		33.3
2,4-Dinitrotoluene	ND		33.3
Dibenzofuran	ND		33.3
Diethylphthalate	ND		33.3
Fluorene	ND		33.3
4-Chlorophenyl-phenylether	ND		33.3
4-Nitroaniline	ND		33.3
4,6-Dinitro-2-methylphenol	ND		33.3
N-Nitrosodiphenylamine	ND		33.3
1,2-Diphenylhydrazine/Azobenzene	ND		33.3
4-Bromophenyl-phenylether	ND		33.3
Hexachlorobenzene	ND		33.3
Pentachlorophenol	ND		33.3
Phenanthrene	ND		33.3
Anthracene	ND		33.3
Carbazole	ND		33.3
Di-n-butylphthalate	ND		33.3
Fluoranthene	ND		33.3
Benzidine	ND		33.3
Pyrene	ND		33.3
3,3'-Dimethylbenzidine	ND		33.3
Butylbenzylphthalate	ND		33.3
3,3'-Dichlorobenzidine	ND		33.3
Benzo[a]anthracene	ND		33.3
Chrysene	ND		33.3
bis(2-Ethylhexyl)phthalate	ND		33.3
Di-n-octylphthalate	ND		33.3
Benzo[b]fluoranthene	ND		33.3
Benzo[k]fluoranthene	ND		33.3
Benzo[a]pyrene	ND		33.3
Indeno[1,2,3-cd]pyrene	ND		33.3
Dibenz[a,h]anthracene	ND		33.3
Benzo[g,h,i]perylene	ND		33.3

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 10/09/2000

Date Analyzed: 10/11/2000

Date File: A3545.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

Response Factor Report MSD-A

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 00 09:02:37 2000
 Response via : Initial Calibration

Calibration Files

20 =A3521.D 50 =A3517.D 120 =A3519.D
 80 =A3520.D 160 =A3518.D

Compound	20	50	120	80	160	Avg	%RSD

1) I	1,4-Dichlorobenzene-d	-----ISTD-----					
2) T	N-Nitrosodimethylamin	0.693	0.879	0.831	0.697	0.861	0.792 11.39
3) S	2-Fluorophenol	0.591	0.618	0.667	0.627	0.648	0.630 4.61
4) S	Phenol-d5	1.511	1.512	1.639	1.597	1.596	1.571 3.62
5) MC	Phenol	1.579	1.494	1.498	1.323	1.423	1.463 6.56
6) T	Aniline	1.840	1.923	1.912	1.692	1.832	1.840 5.01
7) T	bis(2-Chloroethyl)eth	1.196	1.215	1.206	1.067	1.171	1.171 5.15
8) M	2-Chlorophenol	1.294	1.214	1.247	1.091	1.203	1.210 6.21
9) T	1,3-Dichlorobenzene	1.477	1.383	1.344	1.216	1.283	1.341 7.40
10) MC	1,4-Dichlorobenzene	1.568	1.518	1.351	1.281	1.354	1.414 8.64
11) T	Benzyl alcohol	0.683	0.755	0.743	0.648	0.720	0.710 6.24
12) T	1,2-Dichlorobenzene	1.410	1.380	1.284	1.168	1.243	1.297 7.66
13) T	2-Methylphenol	1.045	1.071	1.049	0.905	1.036	1.021 6.50
14) T	bis(2-chloroisopropyl	1.572	1.594	1.354	1.240	1.275	1.407 11.82
15) T	4-Methylphenol	1.094	1.118	0.915	0.877	0.866	0.974 12.54
16) MP	N-Nitroso-di-n-propyl	0.831	0.821	0.738	0.663	0.690	0.749 10.08
17) T	2-Aminotoluene +4-Ami	3.186	2.789	2.400	2.243	2.349	2.594 15.05
18) T	Hexachloroethane	0.571	0.567	0.543	0.494	0.523	0.539 5.95
19) I	Naphthalene-d8	-----ISTD-----					
20) S	Nitrobenzene-d5	0.363	0.345	0.362	0.368	0.382	0.364 3.64
21) T	Nitrobenzene	0.373	0.363	0.355	0.315	0.349	0.351 6.26
22) T	Isophorone	0.758	0.747	0.673	0.616	0.691	0.697 8.31
23) TC	2-Nitrophenol	0.196	0.204	0.213	0.185	0.207	0.201 5.48
24) T	2,4-Dimethylphenol	0.345	0.349	0.340	0.308	0.345	0.337 4.98
25) T	bis(2-Chloroethoxy)me	0.444	0.430	0.391	0.341	0.390	0.399 10.08
26) T	Benzoic acid	0.049	0.116	0.102	0.071	0.122	0.092 33.76
27) T	2,4-Dimethylaniline	0.557	0.508	0.471	0.421	0.454	0.482 10.89
28) TC	2,4-Dichlorophenol	0.334	0.313	0.311	0.279	0.299	0.307 6.58
29) M	1,2,4-Trichlorobenzen	0.385	0.372	0.349	0.311	0.345	0.353 8.04
30) T	Naphthalene	1.015	0.961	0.844	0.752	0.818	0.878 12.24
31) T	4-Chloroaniline	0.405	0.410	0.396	0.354	0.384	0.390 5.77
32) TC	Hexachlorobutadiene	0.239	0.240	0.244	0.209	0.256	0.237 7.19
33) MC	4-Chloro-3-methylphen	0.293	0.295	0.289	0.254	0.284	0.283 5.88
34) T	2-Methylnaphthalene	0.701	0.661	0.630	0.558	0.628	0.636 8.24
35) I	Acenaphthene-d10	-----ISTD-----					
36) TP	Hexachlorocyclopentad	0.296	0.381	0.436	0.341	0.465	0.384 17.94
37) TC	2,4,6-Trichlorophenol	0.397	0.403	0.410	0.352	0.409	0.394 6.06
38) T	2,4,5-Trichlorophenol	0.431	0.444	0.453	0.375	0.436	0.428 7.18
39) S	2-Fluorobiphenyl	1.256	1.220	1.179	1.210	1.271	1.227 2.99
40) T	2-Chloronaphthalene	1.137	1.041	0.951	0.846	0.937	0.982 11.25
41) T	2-Nitroaniline	0.293	0.294	0.300	0.251	0.295	0.287 6.94
42) T	Dimethylphthalate	1.392	1.241	1.174	1.032	1.171	1.202 10.87
43) T	2,6-Dinitrotoluene	0.341	0.288	0.296	0.247	0.285	0.291 11.55
44) T	Acenaphthylene	1.826	1.717	1.562	1.383	1.561	1.610 10.49
45) T	3-Nitroaniline	0.311	0.302	0.301	0.263	0.289	0.293 6.36
46) MC	Acenaphthene	1.115	0.989	0.920	0.800	0.912	0.947 12.21
47) TP	2,4-Dinitrophenol	0.085	0.125	0.142	0.109	0.145	0.121 20.24

48)	MP	4-Nitrophenol	0.171	0.213	0.223	0.176	0.230	0.202	13.41
49)	M	2,4-Dinitrotoluene	0.392	0.366	0.393	0.335	0.386	0.375	6.58
50)	T	Dibenzofuran	1.644	1.562	1.430	1.230	1.431	1.459	10.79
51)	T	Diethylphthalate	1.429	1.282	1.235	1.055	1.211	1.242	10.85
52)	T	Fluorene	1.364	1.237	1.131	0.955	1.141	1.166	12.92
53)	T	4-Chlorophenyl-phenyl	0.718	0.647	0.631	0.528	0.648	0.634	10.76
54)	T	4-Nitroaniline	0.306	0.313	0.309	0.260	0.308	0.299	7.31
55)	I	Phenanthrene-d10	-----ISTD-----						
56)	T	4,6-Dinitro-2-methylp	0.074	0.099	0.128	0.103	0.125	0.106	20.69
57)	TC	N-Nitrosodiphenylamin	0.459	0.416	0.408	0.359	0.408	0.410	8.64
58)	T	1,2-Diphenylhydrazine	0.689	0.657	0.601	0.535	0.584	0.613	9.96
59)	S	2,4,6-Tribromophenol	0.190	0.188	0.198	0.188	0.187	0.190	2.32
60)	T	4-Bromophenyl-phenyle	0.236	0.221	0.239	0.197	0.248	0.228	8.76
61)	T	Hexachlorobenzene	0.309	0.300	0.331	0.273	0.325	0.308	7.45
62)	MC	Pentachlorophenol	0.083	0.139	0.165	0.119	0.174	0.136	26.89
63)	T	Phenanthrene	0.955	0.873	0.852	0.737	0.855	0.854	9.12
64)	T	Anthracene	1.013	0.900	0.884	0.773	0.865	0.887	9.68
65)	T	Carbazole	0.879	0.808	0.767	0.673	0.741	0.774	9.90
66)	T	Di-n-butylphthalate	1.205	1.065	0.998	0.892	1.005	1.033	11.10
67)	TC	Fluoranthene	1.124	0.976	1.043	0.851	0.987	0.996	10.06
68)	T	Benzidine	0.311	0.290	0.263	0.228	0.263	0.271	11.68
69)	I	Chrysene-d12	-----ISTD-----						
70)	M	Pyrene	1.263	1.173	1.161	1.028	1.168	1.159	7.23
71)	S	Terphenyl-d14	1.082	0.967	0.959	1.034	1.008	1.010	5.01
72)	T	3,3'-Dimethylbenzidin	0.259	0.227	0.166	0.151	0.174	0.195	23.28
73)	T	Butylbenzylphthalate	0.565	0.513	0.501	0.442	0.501	0.505	8.71
74)	T	3,3'-Dichlorobenzidin	0.391	0.324	0.316	0.264	0.314	0.322	14.07
75)	T	Benzo[a]anthracene	1.078	0.992	1.031	0.872	1.034	1.001	7.84
76)	T	Chrysene	0.979	0.940	0.974	0.829	1.000	0.944	7.21
77)	T	bis(2-Ethylhexyl)phth	0.766	0.705	0.672	0.582	0.685	0.682	9.74
78)	I	Perylene-d12	-----ISTD-----						
79)	TC	Di-n-octylphthalate	1.493	1.505	1.643	1.323	1.639	1.521	8.63
80)	T	Benzo[b]fluoranthene	1.351	1.293	1.429	1.189	1.452	1.343	7.93
81)	T	Benzo[k]fluoranthene	1.280	1.260	1.386	1.102	1.307	1.267	8.19
82)	TC	Benzo[a]pyrene	1.190	1.166	1.259	1.056	1.263	1.187	7.13
83)	T	Indeno[1,2,3-cd]pyren	1.191	1.084	1.290	1.050	1.292	1.182	9.55
84)	T	Dibenz[a,h]anthracene	0.885	0.883	1.023	0.812	1.030	0.927	10.33
85)	T	Benzo[g,h,i]perylene	0.992	0.904	1.086	0.874	1.073	0.986	9.76

(#) = Out of Range

SVS1900.M

Mon Oct 09 09:03:43 2000

MSD-A

Instrument ID: MSD_A
Method ID: SVS1900.M
Date: 10/09/2000

Average %RSD = 10.10

Refer to SW846 Method 8000B Section 7.5.1.

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3542.D

Acq On : 11 Oct 2000 7:08 am

Sample : ., 50ppb-STD-FOR-10/11/00

Misc : N/A,N/A,N/A,1

MS Integration Params: rteint.p

Vial: 2

Operator: JC

Inst : MSD-A

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Mon Oct 09 09:03:22 2000

Response via : Multiple Level Calibration

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	129	0.01
2 T	N-Nitrosodimethylamine	0.792	0.873	-10.9	129	0.07
3 S	2-Fluorophenol	0.630	0.609	3.3	127	0.03
4 S	Phenol-d5	1.571	1.554	1.1	132	0.03
5 MC	Phenol	1.463	1.601	-9.4	138	0.03
6 T	Aniline	1.840	1.989	-8.1	133	0.02
7 T	bis(2-Chloroethyl) ether	1.171	1.329	-13.5	141	0.02
8 M	2-Chlorophenol	1.210	1.312	-8.4	139	0.02
9 T	1,3-Dichlorobenzene	1.341	1.401	-4.5	130	0.01
10 MC	1,4-Dichlorobenzene	1.414	1.534	-8.5	130	0.01
11 T	Benzyl alcohol	0.710	0.758	-6.8	129	0.02
12 T	1,2-Dichlorobenzene	1.297	1.403	-8.2	131	0.01
13 T	2-Methylphenol	1.021	1.123	-10.0	135	0.02
14 T	bis(2-chloroisopropyl) ether	1.407	1.602	-13.9	129	0.02
15 T	4-Methylphenol	0.974	1.113	-14.3	128	0.03
MP	N-Nitroso-di-n-propylamine	0.749	0.862	-15.1	135	0.03
T	2-Aminotoluene +4-Aminotolu	2.594	2.833	-9.2	131	0.02
18 T	Hexachloroethane	0.539	0.561	-4.1	127	0.01
19 I	Naphthalene-d8	1.000	1.000	0.0	134	0.01
20 S	Nitrobenzene-d5	0.364	0.367	-0.8	143	0.01
21 T	Nitrobenzene	0.351	0.386	-10.0	143	0.02
22 T	Isophorone	0.697	0.728	-4.4	131	0.03
23 TC	2-Nitrophenol	0.201	0.217	-8.0	142	0.01
24 T	2,4-Dimethylphenol	0.337	0.347	-3.0	133	0.02
25 T	bis(2-Chloroethoxy) methane	0.399	0.426	-6.8	133	0.02
26 T	Benzoic acid	0.092	0.077	16.3	89	-0.09
27 T	2,4-Dimethylaniline	0.482	0.493	-2.3	130	0.02
28 TC	2,4-Dichlorophenol	0.307	0.313	-2.0	134	0.02
29 M	1,2,4-Trichlorobenzene	0.353	0.353	0.0	127	0.01
30 T	Naphthalene	0.878	0.888	-1.1	124	0.01
31 T	4-Chloroaniline	0.390	0.408	-4.6	133	0.01
32 TC	Hexachlorobutadiene	0.237	0.218	8.0	122	0.01
33 MC	4-Chloro-3-methylphenol	0.283	0.291	-2.8	132	0.02
34 T	2-Methylnaphthalene	0.636	0.649	-2.0	132	0.01
35 I	Acenaphthene-d10	1.000	1.000	0.0	134	0.01
36 TP	Hexachlorocyclopentadiene	0.384	0.283	26.3	100	0.00
37 TC	2,4,6-Trichlorophenol	0.394	0.408	-3.6	136	0.01
38 T	2,4,5-Trichlorophenol	0.428	0.439	-2.6	133	0.01
39 S	2-Fluorobiphenyl	1.227	1.163	5.2	128	0.01
T	2-Chloronaphthalene	0.982	1.010	-2.9	130	0.01
T	2-Nitroaniline	0.287	0.326	-13.6	149	0.01
42 T	Dimethylphthalate	1.202	1.258	-4.7	136	0.01
43 T	2,6-Dinitrotoluene	0.291	0.324	-11.3	151	0.01
44 T	Acenaphthylene	1.610	1.677	-4.2	131	0.01
45 T	3-Nitroaniline	0.293	0.316	-7.8	141	0.02

46	MC	Acenaphthene	0.947	0.969	-2.3	132	0.02
47	TP	2,4-Dinitrophenol	0.121	0.131	-8.3	140	0.02
48	MP	4-Nitrophenol	0.202	0.232	-14.9	146	0.02
49	M	2,4-Dinitrotoluene	0.375	0.444	-18.4	163	0.02
50	T	Dibenzofuran	1.459	1.474	-1.0	127	0.01
51	T	Diethylphthalate	1.242	1.269	-2.2	133	0.02
52	T	Fluorene	1.166	1.157	0.8	126	0.01
53	T	4-Chlorophenyl-phenylether	0.634	0.594	6.3	123	0.00
54	T	4-Nitroaniline	0.299	0.331	-10.7	142	0.03
55	I	Phenanthrene-d10	1.000	1.000	0.0	130	0.01
56	T	4,6-Dinitro-2-methylphenol	0.106	0.128	-20.8	169	0.02
57	TC	N-Nitrosodiphenylamine	0.410	0.414	-1.0	130	0.01
58	T	1,2-Diphenylhydrazine/Azobe	0.613	0.650	-6.0	129	0.01
59	S	2,4,6-Tribromophenol	0.190	0.161	15.3	111	0.01
60	T	4-Bromophenyl-phenylether	0.228	0.207	9.2	122	0.01
61	T	Hexachlorobenzene	0.308	0.286	7.1	124	0.01
62	MC	Pentachlorophenol	0.136	0.146	-7.4	136	0.01
63	T	Phenanthrene	0.854	0.861	-0.8	128	0.01
64	T	Anthracene	0.887	0.938	-5.7	136	0.01
65	T	Carbazole	0.774	0.827	-6.8	133	0.01
66	T	Di-n-butylphthalate	1.033	1.103	-6.8	135	0.00
67	TC	Fluoranthene	0.996	1.051	-5.5	140	0.01
68	T	Benzidine	0.271	0.231	14.8	104	0.01
69	I	Chrysene-d12	1.000	1.000	0.0	156	0.02
70	M	Pyrene	1.159	1.060	8.5	141	0.01
71	S	Terphenyl-d14	1.010	0.823	18.5	133	0.00
72	T	3,3'-Dimethylbenzidine	0.195	0.214	-9.7	147	0.00
73	T	Butylbenzylphthalate	0.505	0.494	2.2	151	0.01
74	T	3,3'-Dichlorobenzidine	0.322	0.309	4.0	149	0.02
75	T	Benzo[a]anthracene	1.001	0.971	3.0	153	0.02
76	T	Chrysene	0.944	0.938	0.6	156	0.02
77	T	bis(2-Ethylhexyl)phthalate	0.682	0.706	-3.5	157	0.00
78	I	Perylene-d12	1.000	1.000	0.0	154	0.03
79	TC	Di-n-octylphthalate	1.521	1.627	-7.0	167	0.01
80	T	Benzo[b]fluoranthene	1.343	1.274	5.1	152	0.02
81	T	Benzo[k]fluoranthene	1.267	1.303	-2.8	159	0.03
82	TC	Benzo[a]pyrene	1.187	1.161	2.2	153	0.03
83	T	Indeno[1,2,3-cd]pyrene	1.182	1.084	8.3	154	0.05
84	T	Dibenz[a,h]anthracene	0.927	0.846	8.7	148	0.06
85	T	Benzo[g,h,i]perylene	0.986	0.861	12.7	147	0.07

(#) = Out of Range

A3517.D SVS1900.M

SPCC's out = 0 CCC's out = 0
Wed Oct 11 08:45:57 2000 MSD-A

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARYDate Analyzed: 10/11/2000

Lab Sample ID	Matrix	File	S1	S2	S3	S4	S5	S6
		ID						
6156-004	SOIL	A3543.	73	78	60	64	101	76
Method-Blk	SOIL	A3545.	71	76	83	87	95	97
6295-001	SOIL	A3546.	N/A	N/A	72	77	N/A	86
6295-002	SOIL	A3547.	N/A	N/A	71	77	N/A	91
6295-003	SOIL	A3548.	N/A	N/A	99	89	N/A	89
6295-004	SOIL	A3549.	N/A	N/A	99	87	N/A	86
6295-005	SOIL	A3550.	N/A	N/A	88	87	N/A	81
6295-006	SOIL	A3551.	N/A	N/A	77	82	N/A	81
6295-007	SOIL	A3552.	N/A	N/A	85	90	N/A	81
6297-001	SOIL	A3553.	58	67	76	83	99	92
6297-002	SOIL	A3554.	65	74	78	86	103	91
6295-001-MS	SOIL	A3555.	61	69	70	76	107	86
6295-001-MSD	SOIL	A3556.	62	71	73	80	112	94
6306-001	SOIL	A3557.	61	69	74	82	103	86
6306-002	SOIL	A3558.	63	69	84	86	112	98
6306-003	SOIL	A3559.	63	72	77	83	103	95
6306-004	SOIL	A3560.	60	69	78	80	105	92
6306-005	SOIL	A3561.	63	72	74	78	101	94
6306-006	SOIL	A3562.	61	69	76	82	110	94
6306-007	SOIL	A3563.	66	72	86	85	107	95
6156-003	SOIL	A3564.	59	63	61	67	116	81
6300-005	SOIL	A3566.	54	63	72	83	120	92

EPA CLP QC LIMITS FOR:

	<u>Soil</u>	<u>Aqueous</u>
S1 (2FP) = 2-Fluorophenol	36-105	37-96
S2 (PHL) = Phenol-d5	39-112	56-111
S3 (NBZ) = Nitrobenzene-d5	42-106	61-121
S4 (FBP) = 2-Fluorobiphenyl	46-120	63-124
S5 (TBP) = 2,4,6-Tribromophenol	51-141	52-153
S6 (TPH) = Terphenyl-d14	55-141	46-140

* Column to be used to flag recovery values

SOIL SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID:

6295-001

Batch No.:

100900S

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	100.0	0.0	57.9	58	26 - 108
2-Chlorophenol	100.0	0.0	63.4	63	25 - 102
1,4-Dichlorobenzene	50.0	0.0	33.6	67	28 - 104
N-Nitroso-di-n-propylamine	50.0	0.0	47.6	95	41 - 126
1,2,4-Trichlorobenzene	50.0	0.0	34.2	68	38 - 107
4-Chloro-3-methylphenol	100.0	0.0	69.0	69	26 - 103
Acenaphthene	50.0	0.0	39.2	78	31 - 137
4-Nitrophenol	100.0	0.0	76.0	76	11 - 114
2,4-Dinitrotoluene	50.0	0.0	44.4	89	28 - 89
Pentachlorophenol	100.0	0.0	91.3	91	17 - 109
Pyrene	50.0	0.0	40.7	81	35 - 142

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	0.0	60.9	61	5	42	26 - 108
2-Chlorophenol	0.0	66.0	66	5	40	25 - 102
1,4-Dichlorobenzene	0.0	32.6	65	3	28	28 - 104
N-Nitroso-di-n-propylamine	0.0	48.7	97	2	38	41 - 126
1,2,4-Trichlorobenzene	0.0	33.9	68	0	28	38 - 107
4-Chloro-3-methylphenol	0.0	72.1	72	4	42	26 - 103
Acenaphthene	0.0	41.5	83	6	31	31 - 137
4-Nitrophenol	0.0	84.4	84	10	50	11 - 114
2,4-Dinitrotoluene	0.0	43.7	87	2	38	28 - 89
Pentachlorophenol	0.0	94.3	94	3	50	17 - 109
Pyrene	0.0	42.9	86	6	31	35 - 142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3517.D

Date Analyzed: 10/09/2000

Instrument ID: MSDA

Time Analyzed: 06:33

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	39573	8.41	134841	10.34	82374	12.69
	UPPER LIMIT	79146	8.91	269682	10.84	164748	13.19
	LOWER LIMIT	19787	7.91	67421	9.84	41187	12.19
	LAB SAMPLE ID						
01	160ppb-STD-FOR-10	36789	8.42	123103	10.34	75949	12.69
02	120ppb-STD-FOR-10	36271	8.41	123800	10.34	76255	12.70
03	80ppb-STD-FOR-10/	36862	8.41	127502	10.34	79967	12.69
04	20ppb-STD-FOR-10/	35455	8.41	121344	10.33	73766	12.69
05	Method-Blk	38257	8.41	137169	10.33	85811	12.68
06	6156-002	37993	8.41	135473	10.33	77660	12.68
07	6156-006	46808	8.41	165836	10.33	87556	12.68
08	6156-008	40652	8.41	142972	10.33	75579	12.69
09	6156-001	47527	8.41	180053	10.33	102621	12.68
10	6156-009	46708	8.41	176892	10.33	101857	12.68
11	6156-010	43659	8.41	170839	10.33	97768	12.68
12	Blank-MS	40238	8.41	154874	10.34	94665	12.69
13	Blank-MSD	42844	8.41	166556	10.33	97433	12.68
14	6156-004	39613	8.41	150654	10.33	88608	12.68
15	6156-003	41729	8.41	162444	10.33	91988	12.68
16	6156-005	42773	8.41	165982	10.34	89121	12.69
17	6156-007	40497	8.41	158822	10.33	87559	12.69
18	6156-022	41257	8.42	157516	10.34	86537	12.69
19	6156-023	42861	8.42	168115	10.34	93395	12.69
20	6156-024	44205	8.42	172456	10.34	90661	12.69
21	6156-025	42937	8.42	160592	10.34	85273	12.70
22	6156-026	41302	8.41	152191	10.33	83870	12.69

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3517.D

Date Analyzed: 10/09/2000

Instrument ID: MSDA

Time Analyzed: 06:33

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	39573	8.41	134841	10.34	82374	12.69
	UPPER LIMIT	79146	8.91	269682	10.84	164748	13.19
	LOWER LIMIT	19787	7.91	67421	9.84	41187	12.19
	LAB SAMPLE ID						
01	6156-005	40670	8.41	158635	10.34	91220	12.69
02							
03							
04							
05							
06							
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19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3517.D

Date Analyzed: 10/09/2000

Instrument ID: MSDA

Time Analyzed: 06:33

40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	169188	14.60	144053	17.92	108578	20.14
UPPER LIMIT	338376	15.10	288106	18.42	217156	20.64
LOWER LIMIT	84594	14.10	72027	17.42	54289	19.64
LAB SAMPLE ID						
01 160ppb-STD-FOR-10	150438	14.60	131624	17.93	88752	20.14
02 120ppb-STD-FOR-10	148795	14.60	131453	17.92	90140	20.14
03 80ppb-STD-FOR-10/	156825	14.59	132575	17.91	99607	20.13
04 20ppb-STD-FOR-10/	153406	14.59	135219	17.91	111719	20.13
05 Method-Blk	173771	14.59	177771	17.91	135737	20.13
06 6156-002	144534	14.59	122816	17.92	92249	20.14
07 6156-006	160389	14.59	134045	17.92	84567	20.14
08 6156-008	148561	14.59	154560	17.91	106705	20.14
09 6156-001	193840	14.59	160910	17.91	111991	20.14
10 6156-009	187214	14.59	161559	17.91	110534	20.13
11 6156-010	191097	14.59	177646	17.91	122328	20.13
12 Blank-MS	178883	14.59	163458	17.90	108724	20.12
13 Blank-MSD	143244	14.59	166172	17.91	116087	20.13
14 6156-004	127798	14.59	140821	17.91	102726	20.13
15 6156-003	159650	14.59	132763	17.92	100618	20.14
16 6156-005	157056	14.59	120186	17.93	89529	20.15
17 6156-007	154279	14.59	125235	17.91	83505	20.14
18 6156-022	150661	14.59	117228	17.91	80967	20.13
19 6156-023	156611	14.59	118373	17.91	81322	20.13
20 6156-024	156207	14.59	120825	17.92	83919	20.13
21 6156-025	150547	14.59	117362	17.91	83192	20.13
22 6156-026	145627	14.59	114744	17.91	82389	20.14

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3517.D

Date Analyzed: 10/09/2000

Instrument ID: MSDA

Time Analyzed: 06:33

50UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	169188	14.60	144053	17.92	108578	20.14
UPPER LIMIT	338376	15.10	288106	18.42	217156	20.64
LOWER LIMIT	84594	14.10	72027	17.42	54289	19.64
LAB SAMPLE ID						
01 6156-005	157373	14.59	120058	17.91	86993	20.14
02						
03						
04						
05						
06						
07						
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22						

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3542.D

Date Analyzed: 10/11/2000

Instrument ID: MSDA

Time Analyzed: 07:08

40UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		50889	8.42	180963	10.35	110608	12.70
UPPER LIMIT		101778	8.92	361926	10.85	221216	13.20
LOWER LIMIT		25445	7.92	90482	9.85	55304	12.20
LAB SAMPLE ID							
01	6156-004	58984	8.43	220023	10.34	129636	12.69
02	Method-Blk	45860	8.42	168655	10.34	102889	12.69
03	6295-001	45153	8.42	161789	10.34	99094	12.69
04	6295-002	45129	8.42	160674	10.34	95768	12.69
05	6295-003	36029	8.42	113838	10.35	69689	12.71
06	6295-004	37540	8.42	114956	10.34	69950	12.70
07	6295-005	43640	8.42	141670	10.34	77891	12.69
08	6295-006	46681	8.42	164365	10.34	100982	12.69
09	6295-007	42003	8.42	141721	10.34	79717	12.69
10	6297-001	43003	8.42	159493	10.33	99050	12.69
11	6297-002	42373	8.42	168371	10.34	98971	12.69
12	6295-001-MS	44901	8.42	172794	10.34	107194	12.69
13	6295-001-MSD	42079	8.42	165527	10.34	101407	12.69
14	6306-001	44134	8.42	165971	10.34	97735	12.69
15	6306-002	46473	8.42	166453	10.34	100786	12.69
16	6306-003	46292	8.42	172710	10.34	97186	12.69
17	6306-004	45391	8.42	171605	10.33	107839	12.70
18	6306-005	43278	8.42	170705	10.34	105160	12.69
19	6306-006	41578	8.42	158188	10.33	94222	12.70
20	6306-007	42850	8.42	158842	10.34	96536	12.69
21	6156-003	62002	8.42	238125	10.34	144331	12.69
22	6306-009	37106	8.44	132961	10.36	94851	12.69

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3542.D

Date Analyzed: 10/11/2000

Instrument ID: MSDA

Time Analyzed: 07:08

40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	50889	8.42	180963	10.35	110608	12.70
UPPER LIMIT	101778	8.92	361926	10.85	221216	13.20
LOWER LIMIT	25445	7.92	90482	9.85	55304	12.20
LAB SAMPLE ID						
01 6300-005	40217	8.42	160053	10.34	95687	12.69
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3542.D

Date Analyzed: 10/11/2000

Instrument ID: MSDA

Time Analyzed: 07:08

40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	220116	14.60	225294	17.93	167357	20.16
UPPER LIMIT	440232	15.10	450588	18.43	334714	20.66
LOWER LIMIT	110058	14.10	112647	17.43	83679	19.66
LAB SAMPLE ID						
01 6156-004	243170	14.59	247697	17.93	175239	20.16
02 Method-Blk	198148	14.59	183933	17.91	119383	20.14
03 6295-001	196245	14.59	201050	17.92	133031	20.14
04 6295-002	191514	14.59	201290	17.91	130976	20.14
05 6295-003	127548	14.61	148544	17.91	109399	20.14
06 6295-004	131588	14.60	171904	17.92	121971	20.14
07 6295-005	153887	14.60	184870	17.92	135231	20.14
08 6295-006	196043	14.58	223486	17.91	159950	20.14
09 6295-007	157092	14.60	190321	17.92	136712	20.14
10 6297-001	199694	14.59	226278	17.91	162341	20.14
11 6297-002	202535	14.59	215602	17.91	157536	20.14
12 6295-001-MS	208098	14.60	231054	17.92	159817	20.14
13 6295-001-MSD	201638	14.59	214545	17.91	152156	20.14
14 6306-001	199423	14.60	198918	17.92	132358	20.15
15 6306-002	202669	14.59	182165	17.92	120448	20.15
16 6306-003	194689	14.59	175906	17.91	116716	20.15
17 6306-004	210605	14.59	192711	17.91	131491	20.14
18 6306-005	214579	14.59	207803	17.91	147946	20.14
19 6306-006	192866	14.59	187385	17.91	125148	20.14
20 6306-007	197034	14.59	181916	17.93	104027	20.16
21 6156-003	277644	14.60	274967	17.94	154904	20.17
22 6306-009	186727	14.60	164515	17.94	63697*	20.18

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A3542.D

Date Analyzed: 10/11/2000

Instrument ID: MSDA

Time Analyzed: 07:08

	50UG/L	IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220116	14.60	225294	17.93	167357	20.16
	UPPER LIMIT	440232	15.10	450588	18.43	334714	20.66
	LOWER LIMIT	110058	14.10	112647	17.43	83679	19.66
	LAB SAMPLE ID						
01	6300-005	184611	14.59	184714	17.93	111155	20.14
02							
03							
04							
05							
06							
07							
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13							
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15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

Data File : C:\HPCHEM\1\DATA\10-11-00\A3546.D
Acq On : 11 Oct 2000 9:00 am
Sample : #1,6295-001,S,15.90g,8.80,10/09/00
Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
MS Integration Params: rteint.p
Quant Time: Oct 11 9:28 2000

Vial: 4
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Oct 09 09:03:22 2000
Response via : Initial Calibration
DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	45153	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	161789	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	99094	40.00	UG	0.00
55) Phenanthrene-d10	14.59	188	196245	40.00	UG	0.00
69) Chrysene-d12	17.92	240	201050	40.00	UG	0.00
78) Perylene-d12	20.14	264	133031	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.29	82	53286	36.19	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	72.38%
39) 2-Fluorobiphenyl	11.79	172	117283	38.58	UG	0.00
Spiked Amount	50.000	Range	46 - 120	Recovery	=	77.16%
59) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	217815	42.91	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	85.82%

Target Compounds

Qvalue

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

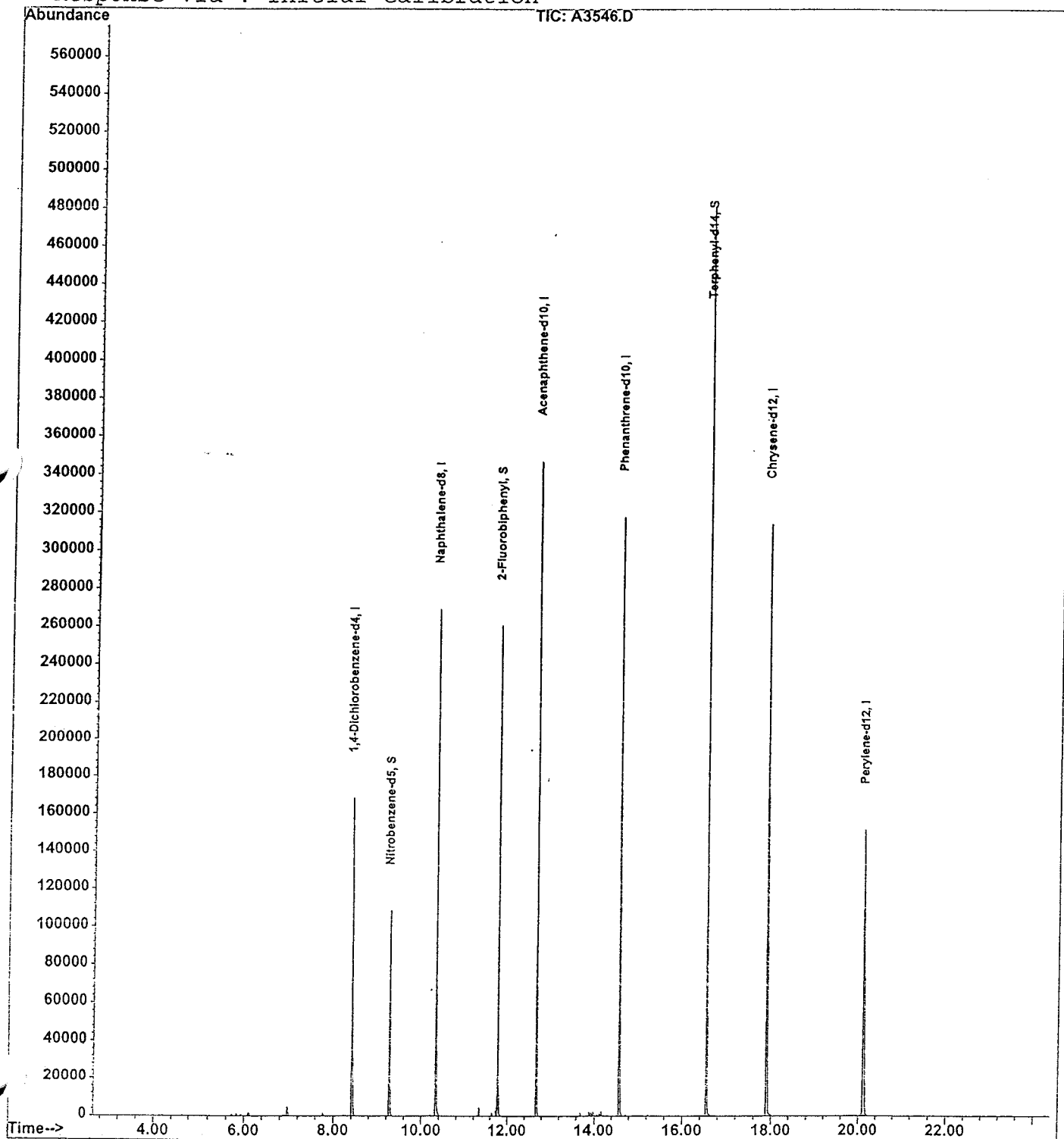
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3546.D
 Acq On : 11 Oct 2000 9:00 am
 Sample : #1,6295-001,S,15.90g,8.80,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:28 2000

Vial: 4
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3547.D
Acq On : 11 Oct 2000 9:27 am
Sample : #2,6295-002,S,10.78g,10.0,10/09/00
Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
MS Integration Params: rteint.p
Quant Time: Oct 11 9:53 2000

Vial: 5
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Oct 09 09:03:22 2000
Response via : Initial Calibration
DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	45129	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	160674	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	95768	40.00	UG	0.00
55) Phenanthrene-d10	14.59	188	191514	40.00	UG	0.00
69) Chrysene-d12	17.91	240	201290	40.00	UG	0.00
78) Perylene-d12	20.14	264	130976	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.28	82	51608	35.29	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	70.58%
39) 2-Fluorobiphenyl	11.79	172	113103	38.49	UG	0.00
Spiked Amount	50.000	Range	46 - 120	Recovery	=	76.98%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	232343	45.72	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	91.44%

Target Compounds

Qvalue

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

A3547.D SVS1900.M

Fri Oct 20 12:23:34 2000

MSD-A

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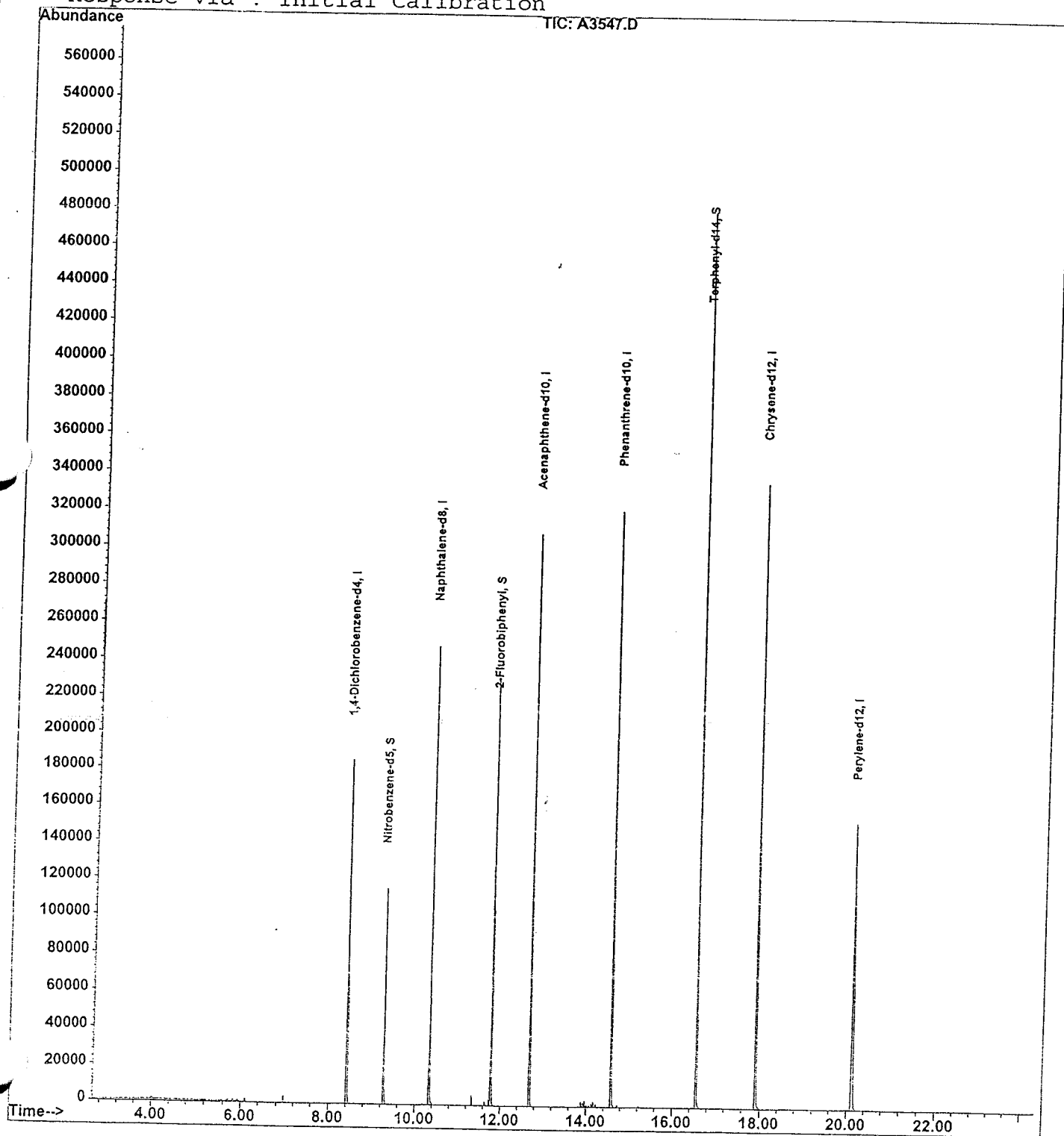
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3547.D
 Acq On : 11 Oct 2000 9:27 am
 Sample : #2,6295-002,S,10.78g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:53 2000

Vial: 5
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3548.D
 Acq On : 11 Oct 2000 9:54 am
 Sample : #3,6295-003,S,10.17g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:22 2000

Vial: 6
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	36029	40.00	UG	0.01
19) Naphthalene-d8	10.35	136	113838	40.00	UG	0.01
35) Acenaphthene-d10	12.71	164	69689	40.00	UG	0.02
55) Phenanthrene-d10	14.61	188	127548	40.00	UG	0.02
69) Chrysene-d12	17.91	240	148544	40.00	UG	0.00
78) Perylene-d12	20.14	264	109399	40.00	UG	0.01

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	7.58	99	499	0.35	UG	-0.17
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.35%#
20) Nitrobenzene-d5	9.28	82	51470	49.68	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	99.36%
39) 2-Fluorobiphenyl	11.80	172	94856	44.37	UG	0.01
Spiked Amount	50.000	Range	46 - 120	Recovery	=	88.74%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	166695	44.45	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	88.90%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
30) Naphthalene	10.37	128	2502	1.00	UG	# 47
34) 2-Methylnaphthalene	11.33	142	17272	9.55	UG	# 82
44) Acenaphthylene	12.52	152	3840	1.37	UG	# 1
46) Acenaphthene	12.75	153	9254	5.61	UG	# 78
52) Fluorene	13.40	166	10646	5.24	UG	# 56
63) Phenanthrene	14.64	178	41284	15.15	UG	# 80
64) Anthracene	14.73	178	14866m	5.26	UG	
67) Fluoranthene	16.12	202	1927	0.61	UG	# 84
70) Pyrene	16.42	202	4958	1.15	UG	# 75

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

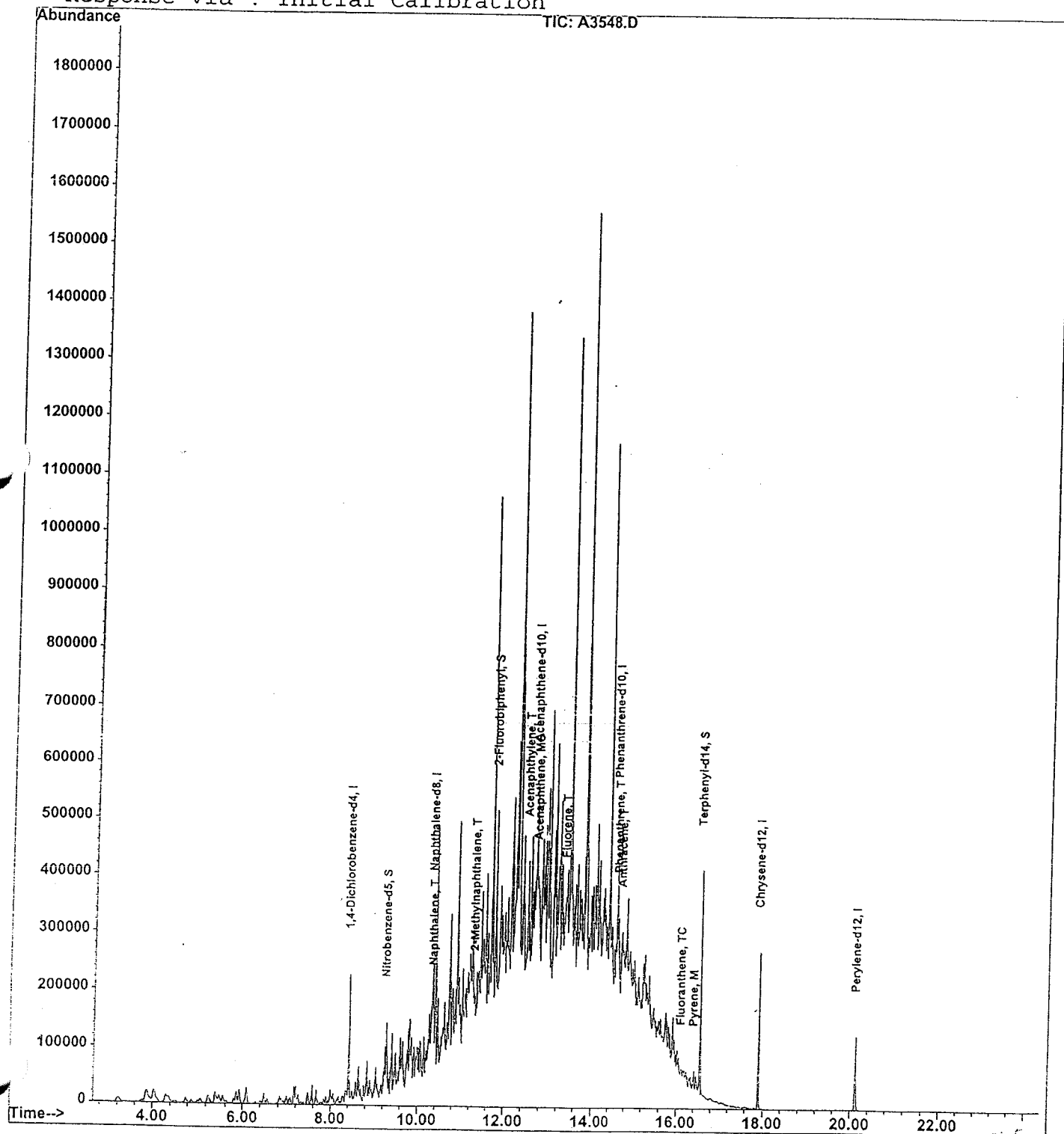
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3548.D
 Acq On : 11 Oct 2000 9:54 am
 Sample : #3,6295-003,S,10.17g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:22 2000

Vial: 6
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3549.D
 Acq On : 11 Oct 2000 10:22 am
 Sample : #4,6295-004,S,10.64g,10.7,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:20 2000

Vial: 7
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	37540	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	114956	40.00	UG	0.00
35) Acenaphthene-d10	12.70	164	69950	40.00	UG	0.02
55) Phenanthrene-d10	14.60	188	131588	40.00	UG	0.02
69) Chrysene-d12	17.92	240	171904	40.00	UG	0.00
78) Perylene-d12	20.14	264	121971	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.29	82	51903	49.61	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	99.22%
39) 2-Fluorobiphenyl	11.80	172	93816	43.72	UG	0.02
Spiked Amount	50.000	Range	46 - 120	Recovery	=	87.44%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	187168	43.13	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	86.26%

Target Compounds

						Qvalue
30) Naphthalene	10.37	128	56035	22.21	UG	# 89
34) 2-Methylnaphthalene	11.33	142	168937	92.48	UG	# 96
44) Acenaphthylene	12.52	152	5699	2.02	UG	# 1
46) Acenaphthene	12.74	153	15963	9.64	UG	# 72
50) Dibenzofuran	12.97	168	24388	9.56	UG	# 93
52) Fluorene	13.41	166	23927	11.74	UG	# 76
63) Phenanthrene	14.64	178	65220	23.20	UG	# 86
64) Anthracene	14.73	178	21791m	7.47	UG	#
70) Pyrene	16.41	202	5465	1.10	UG	# 74

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

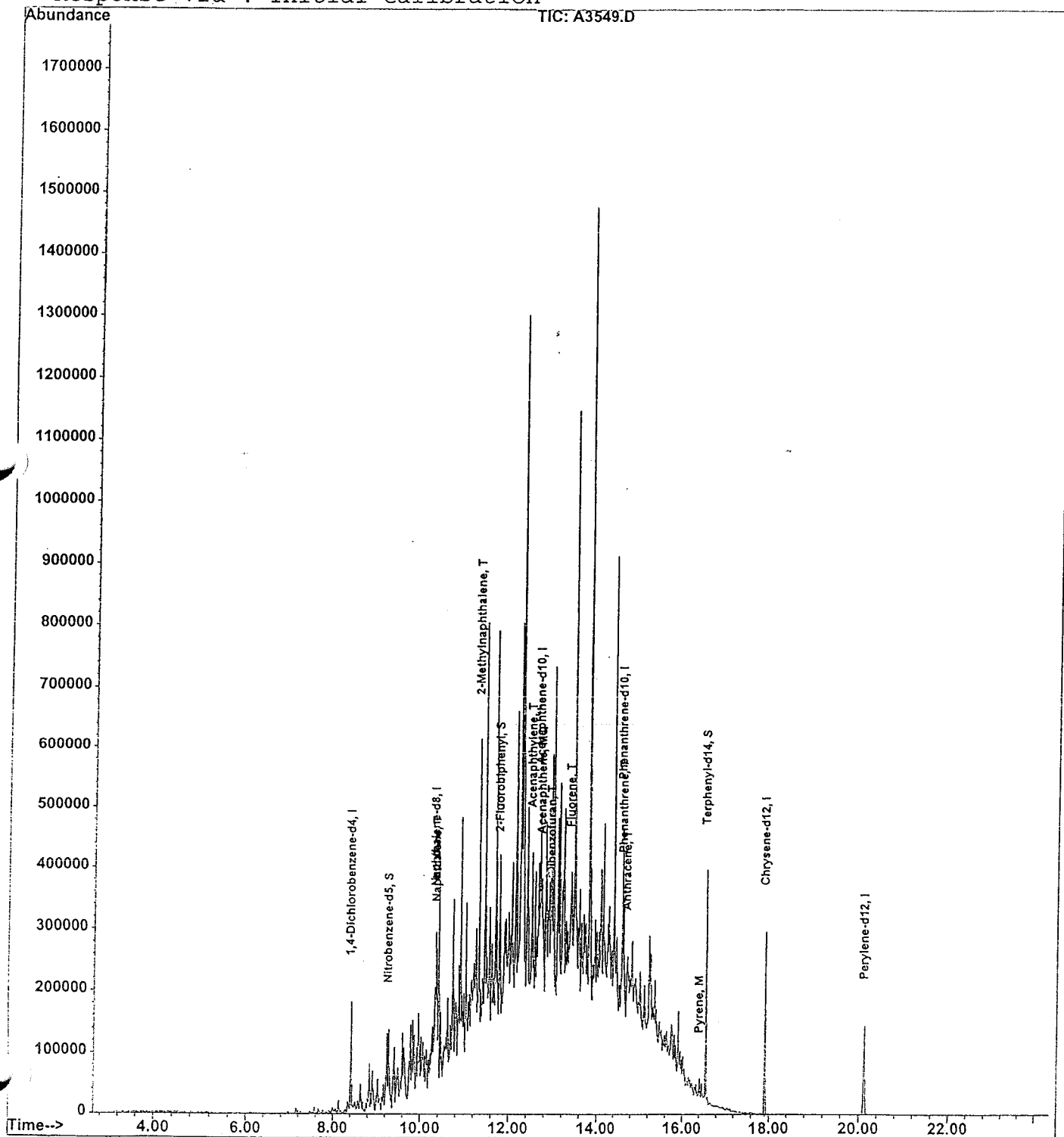
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3549.D
 Acq On : 11 Oct 2000 10:22 am
 Sample : #4,6295-004,S,10.64g,10.7,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:20 2000

Vial: 7
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3550.D
 Acq On : 11 Oct 2000 10:49 am
 Sample : #5,6295-005,S,10.65g,12.3,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:18 2000

Vial: 8
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	43640	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	141670	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	77891	40.00	UG	0.00
55) Phenanthrene-d10	14.60	188	153887	40.00	UG	0.00
69) Chrysene-d12	17.92	240	184870	40.00	UG	0.00
78) Perylene-d12	20.14	264	135231	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range 36 - 105	Recovery =	0.00	%#	
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range 39 - 112	Recovery =	0.00	%#	
20) Nitrobenzene-d5	9.28	82	56780	44.04	UG	0.00
Spiked Amount	50.000	Range 42 - 106	Recovery =	88.08	%	
39) 2-Fluorobiphenyl	11.79	172	104084	43.56	UG	0.00
Spiked Amount	50.000	Range 46 - 120	Recovery =	87.12	%	
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range 51 - 141	Recovery =	0.00	%#	
71) Terphenyl-d14	16.56	244	189051	40.51	UG	0.00
Spiked Amount	50.000	Range 55 - 141	Recovery =	81.02	%	

Target Compounds

						Qvalue
30) Naphthalene	10.37	128	9008	2.90	UG	# 88
34) 2-Methylnaphthalene	11.32	142	58559	26.01	UG	# 97
44) Acenaphthylene	12.51	152	7058	2.25	UG	# 1
46) Acenaphthene	12.73	153	13514	7.33	UG	# 64
50) Dibenzofuran	12.96	168	14617	5.14	UG	# 98
52) Fluorene	13.40	166	17794	7.84	UG	# 81
63) Phenanthrene	14.63	178	47579	14.47	UG	# 86
64) Anthracene	14.72	178	25246	7.40	UG	# 31
70) Pyrene	16.42	202	3510	0.66	UG	# 84

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

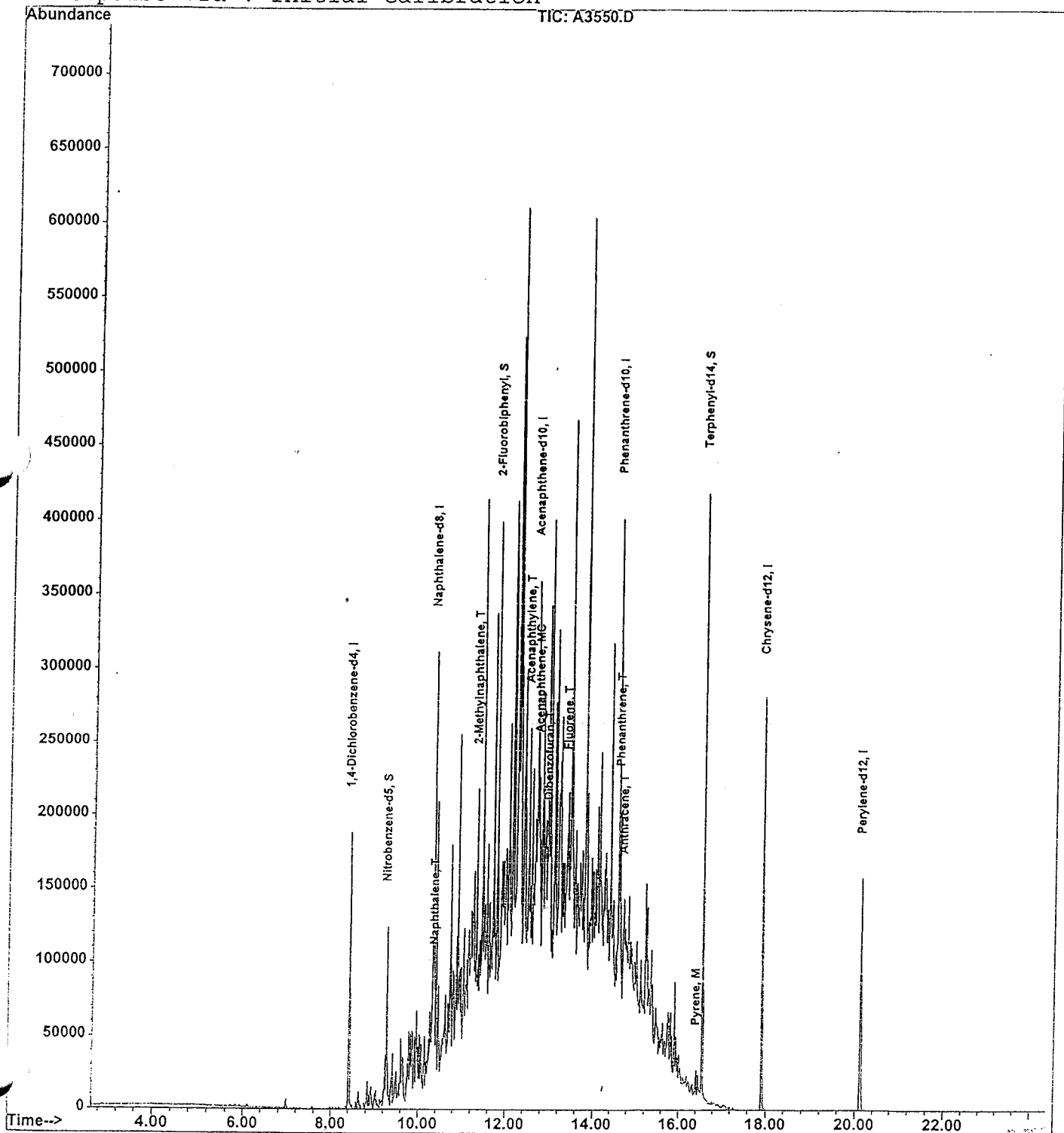
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3550.D
 Acq On : 11 Oct 2000 10:49 am
 Sample : #5,6295-005,S,10.65g,12.3,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:18 2000

Vial: 8
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3551.D
 Acq On : 11 Oct 2000 11:16 am
 Sample : #6,6295-006,S,10.69g,14.4,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 11:44 2000

Vial: 9
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	46681	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	164365	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	100982	40.00	UG	0.00
55) Phenanthrene-d10	14.58	188	196043	40.00	UG	0.00
69) Chrysene-d12	17.91	240	223486	40.00	UG	0.00
78) Perylene-d12	20.14	264	159950	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.28	82	57321	38.32	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	76.64%
39) 2-Fluorobiphenyl	11.79	172	127052	41.01	UG	0.00
Spiked Amount	50.000	Range	46 - 120	Recovery	=	82.02%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	227661	40.35	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	80.70%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
63) Phenanthrene	14.61	178	8442	2.02	UG	# 89
67) Fluoranthene	16.12	202	10457	2.14	UG	# 86
70) Pyrene	16.40	202	8473	1.31	UG	# 95
75) Benzo[a]anthracene	17.90	228	5432	0.97	UG	# 83
76) Chrysene	17.94	228	4053	0.77	UG	# 77
80) Benzo[b]fluoranthene	19.44	252	4897m	0.91	UG	
82) Benzo[a]pyrene	20.02	252	2960	0.62	UG	# 60

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

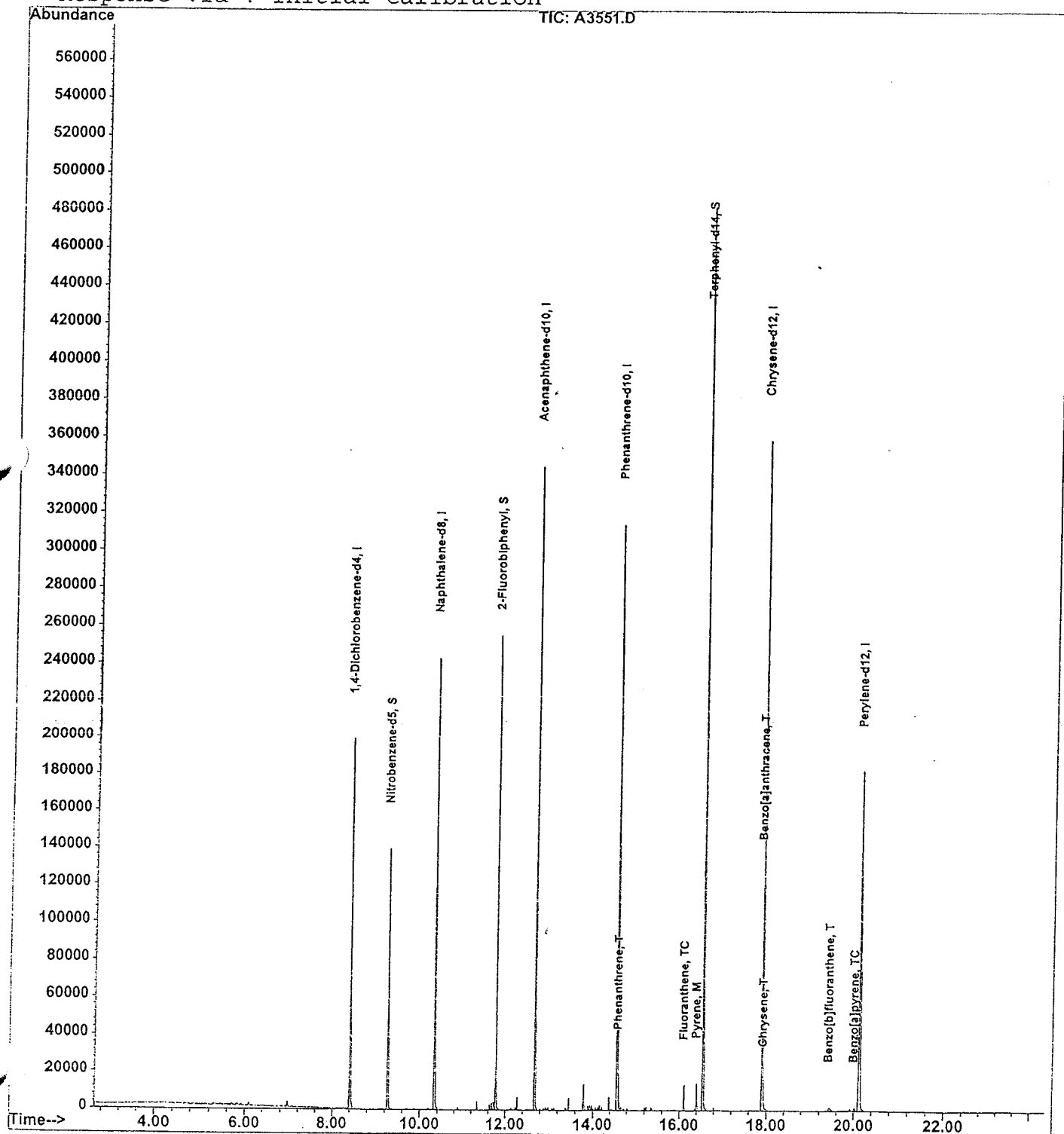
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3551.D
 Acq On : 11 Oct 2000 11:16 am
 Sample : #6,6295-006,S,10.69g,14.4,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 11:44 2000

Vial: 9
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3552.D
 Acq On : 11 Oct 2000 11:43 am
 Sample : #7,6295-007,S,5.82g,12.8,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:17 2000

Vial: 10
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	42003	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	141721	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	79717	40.00	UG	0.00
55) Phenanthrene-d10	14.60	188	157092	40.00	UG	0.00
69) Chrysene-d12	17.92	240	190321	40.00	UG	0.00
78) Perylene-d12	20.14	264	136712	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	38 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.28	82	54615	42.34	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	84.68%
39) 2-Fluorobiphenyl	11.79	172	110443	45.16	UG	0.00
Spiked Amount	50.000	Range	46 - 120	Recovery	=	90.32%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	193681	40.31	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	80.62%

Target Compounds

						Qvalue
30) Naphthalene	10.36	128	10394	3.34	UG	# 89
34) 2-Methylnaphthalene	11.31	142	41300	18.34	UG	# 97
44) Acenaphthylene	12.51	152	4688	1.46	UG	# 1
46) Acenaphthene	12.73	153	9521	5.04	UG	# 60
50) Dibenzofuran	12.72	168	5956	2.05	UG	# 87
52) Fluorene	13.40	166	11883	5.12	UG	# 64
63) Phenanthrene	14.63	178	37351	11.13	UG	# 86
64) Anthracene	14.72	178	8052	2.31	UG	# 1
67) Fluoranthene	16.12	202	3061	0.78	UG	# 84
70) Pyrene	16.40	202	5558	1.01	UG	# 77

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

A3552.D SVS1900.M

Fri Oct 20 12:24:44 2000

MSD-A

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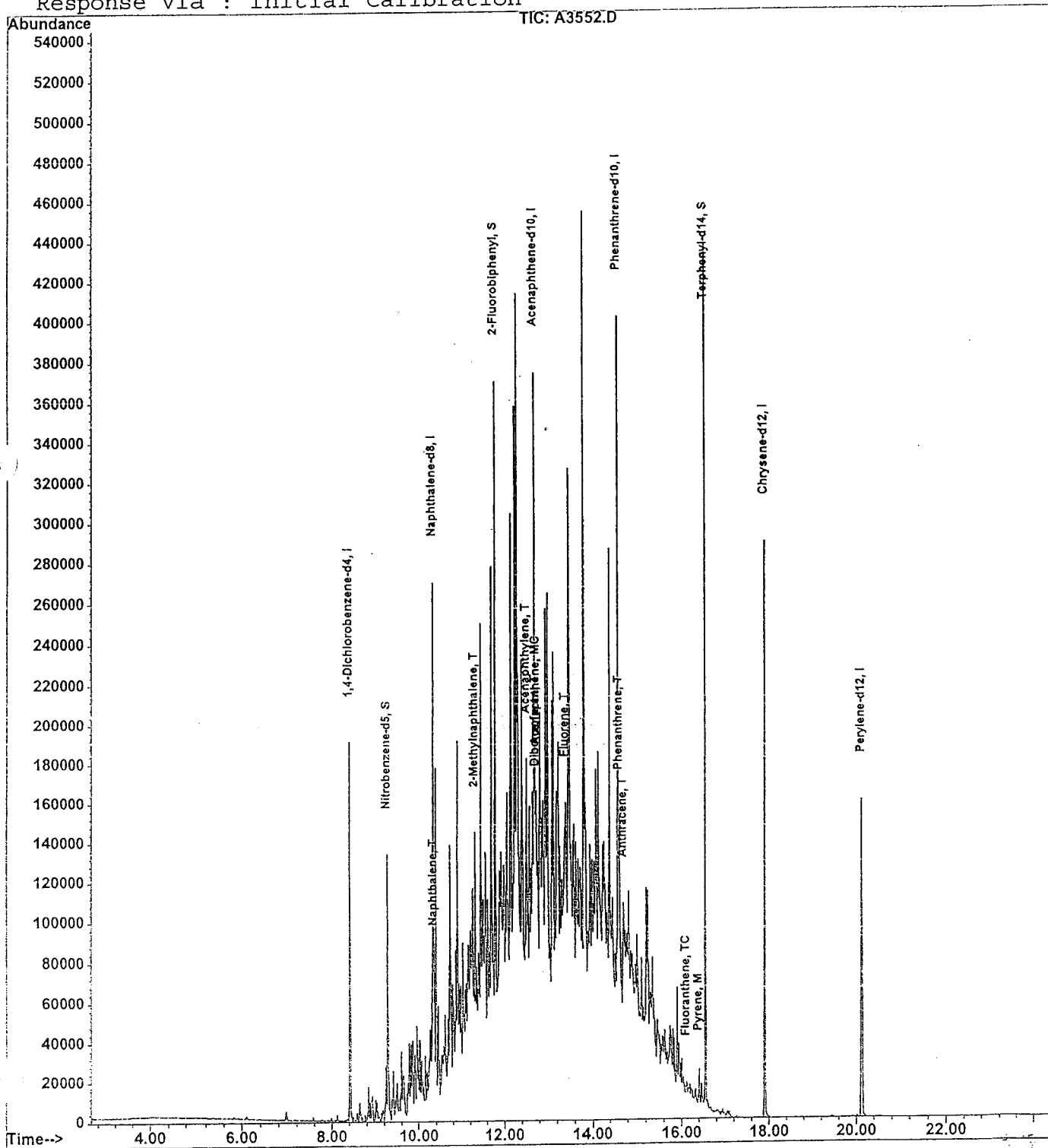
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3552.D
 Acq On : 11 Oct 2000 11:43 am
 Sample : #7,6295-007,S,5.82g,12.8,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 20 12:17 2000

Vial: 10
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3546.D
 Acq On : 11 Oct 2000 9:00 am
 Sample : #1,6295-001,S,15.90g,8.80,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:28 2000

Vial: 4
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	45153	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	161789	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	99094	40.00	UG	0.00
55) Phenanthrene-d10	14.59	188	196245	40.00	UG	0.00
69) Chrysene-d12	17.92	240	201050	40.00	UG	0.00
78) Perylene-d12	20.14	264	133031	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range 36 - 105	Recovery	=	0.00%#	
4) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount	100.000	Range 39 - 112	Recovery	=	0.00%#	
20) Nitrobenzene-d5	9.29	82	53286	36.19	UG	0.00
Spiked Amount	50.000	Range 42 - 106	Recovery	=	72.38%	
39) 2-Fluorobiphenyl	11.79	172	117283	38.58	UG	0.00
Spiked Amount	50.000	Range 46 - 120	Recovery	=	77.16%	
59) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount	100.000	Range 51 - 141	Recovery	=	0.00%#	
71) Terphenyl-d14	16.56	244	217815	42.91	UG	0.00
Spiked Amount	50.000	Range 55 - 141	Recovery	=	85.82%	

Target Compounds

Qvalue

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

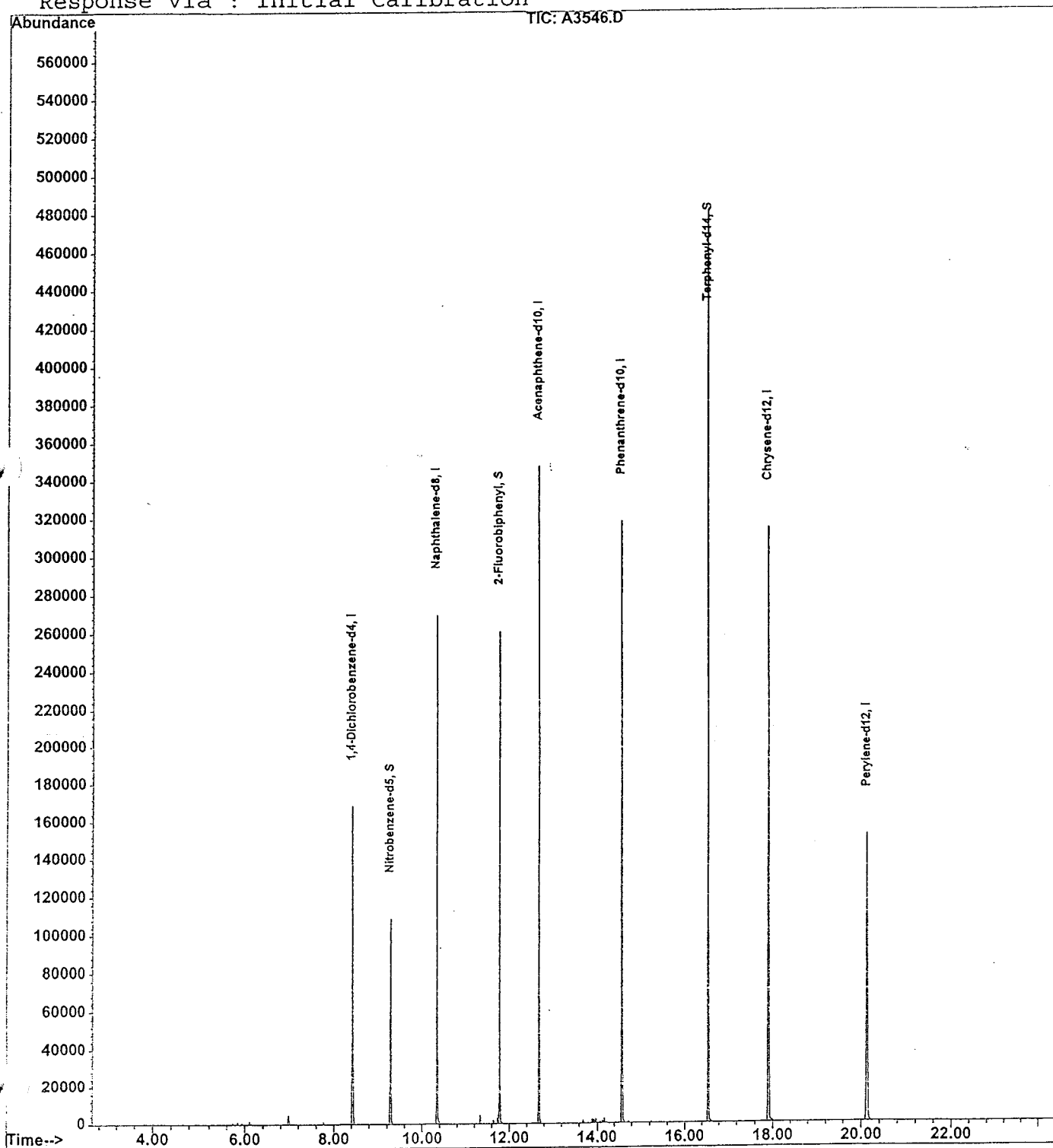
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3546.D
 Acq On : 11 Oct 2000 9:00 am
 Sample : #1,6295-001,S,15.90g,8.80,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:28 2000

Vial: 4
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3547.D
Acq On : 11 Oct 2000 9:27 am
Sample : #2,6295-002,S,10.78g,10.0,10/09/00
Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
MS Integration Params: rteint.p
Quant Time: Oct 11 9:53 2000

Vial: 5
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Oct 09 09:03:22 2000
Response via : Initial Calibration
DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	45129	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	160674	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	95768	40.00	UG	0.00
55) Phenanthrene-d10	14.59	188	191514	40.00	UG	0.00
69) Chrysene-d12	17.91	240	201290	40.00	UG	0.00
78) Perylene-d12	20.14	264	130976	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	36 - 105	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	39 - 112	Recovery	=	0.00%#
20) Nitrobenzene-d5	9.28	82	51608	35.29	UG	0.00
Spiked Amount	50.000	Range	42 - 106	Recovery	=	70.58%
39) 2-Fluorobiphenyl	11.79	172	113103	38.49	UG	0.00
Spiked Amount	50.000	Range	46 - 120	Recovery	=	76.98%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	51 - 141	Recovery	=	0.00%#
71) Terphenyl-d14	16.56	244	232343	45.72	UG	0.00
Spiked Amount	50.000	Range	55 - 141	Recovery	=	91.44%

Target Compounds

Qvalue

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

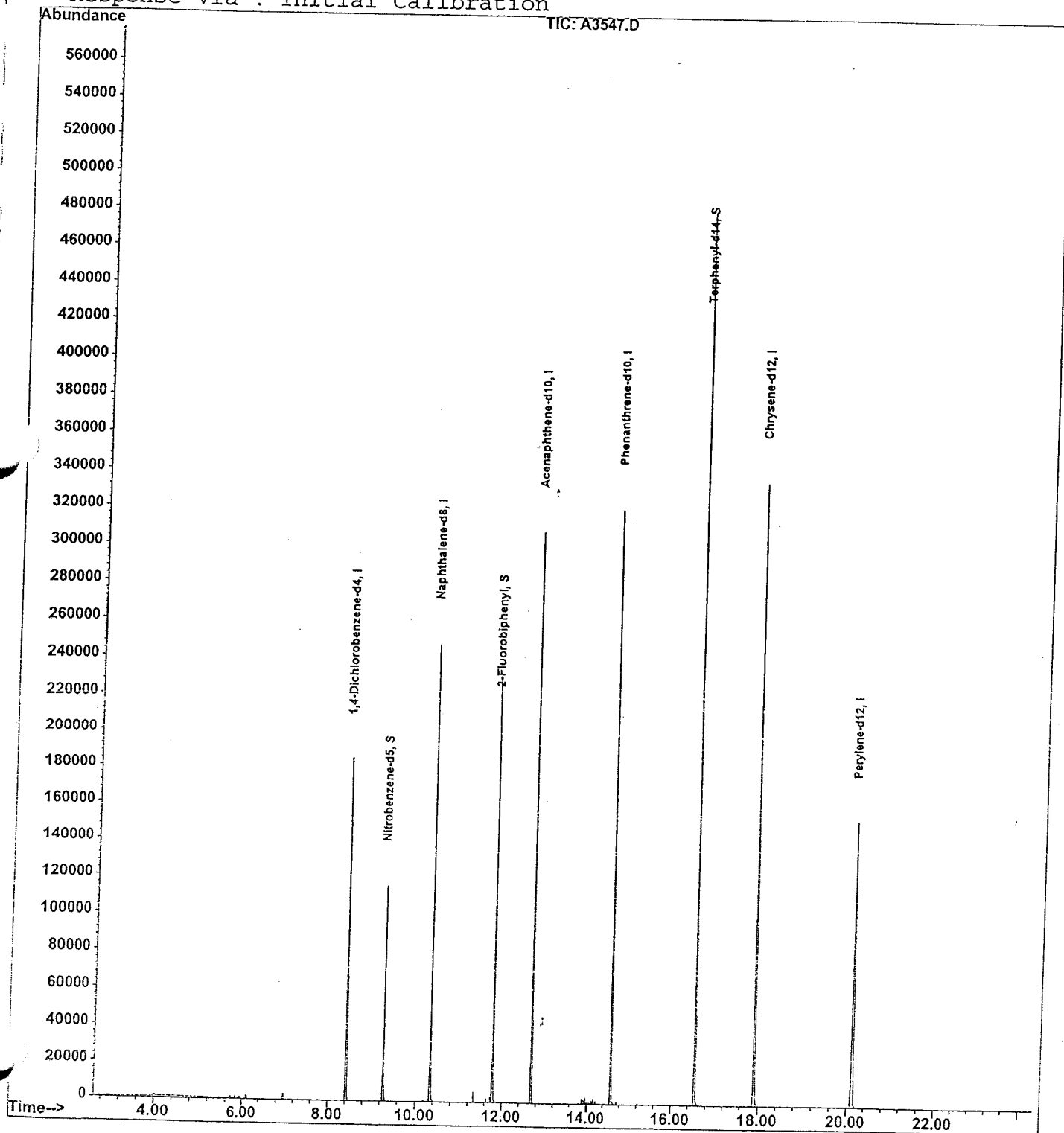
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3547.D
 Acq On : 11 Oct 2000 9:27 am
 Sample : #2,6295-002,S,10.78g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:53 2000

Vial: 5
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3548.D
 Acq On : 11 Oct 2000 9:54 am
 Sample : #3,6295-003,S,10.17g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 12:25 2000

Vial: 6
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration
 DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	36029	40.00	UG	0.01
19) Naphthalene-d8	10.35	136	113838	40.00	UG	0.01
35) Acenaphthene-d10	12.71	164	69689	40.00	UG	0.02
55) Phenanthrene-d10	14.61	188	127548	40.00	UG	0.02
69) Chrysene-d12	17.91	240	148544	40.00	UG	0.00
78) Perylene-d12	20.14	264	109399	40.00	UG	0.01

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 36 - 105		Recovery =	0.00%		
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 100.000	Range 39 - 112		Recovery =	0.00%		
20) Nitrobenzene-d5	9.28	82	51470	49.68	UG	0.00
Spiked Amount 50.000	Range 42 - 106		Recovery =	99.36%		
39) 2-Fluorobiphenyl	11.80	172	94856	44.37	UG	0.01
Spiked Amount 50.000	Range 46 - 120		Recovery =	88.74%		
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 51 - 141		Recovery =	0.00%		
71) Terphenyl-d14	16.56	244	166695	44.45	UG	0.00
Spiked Amount 50.000	Range 55 - 141		Recovery =	88.90%		

Target Compounds

						Qvalue
46) Acenaphthene	12.75	153	9254	5.61	UG	# 78
52) Fluorene	13.40	166	10646	5.24	UG	# 56
63) Phenanthrene	14.64	178	41284	15.15	UG	# 80
64) Anthracene	14.73	178	14509m	5.13	UG	
67) Fluoranthene	16.12	202	1927	0.61	UG	# 84
70) Pyrene	16.42	202	4958	1.15	UG	# 75

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

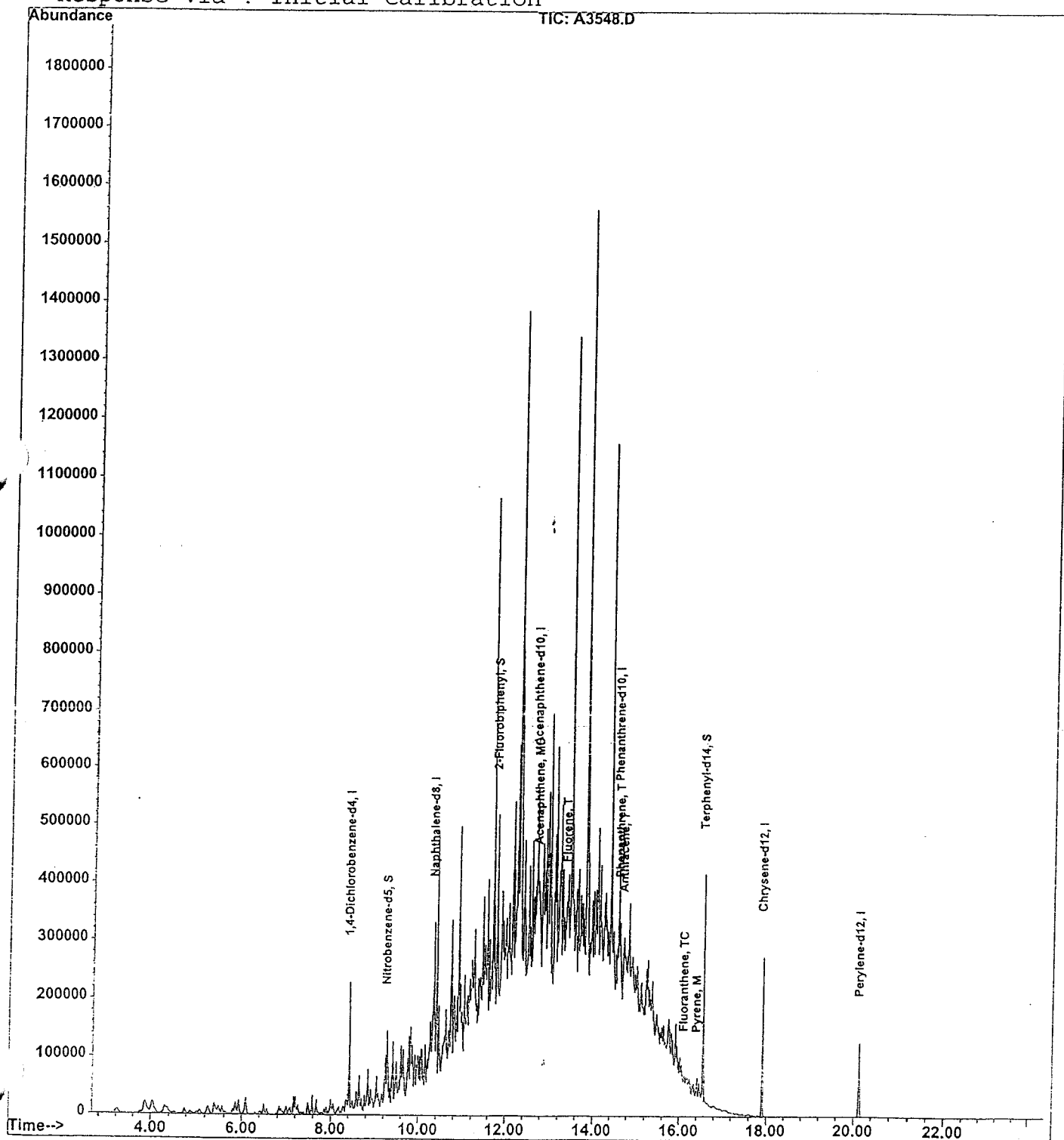
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3548.D
 Acq On : 11 Oct 2000 9:54 am
 Sample : #3,6295-003,S,10.17g,10.0,10/09/00
 Misc : GEOVATION/WARWICK,10/06/00,10/06/00,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 12:25 2000

Vial: 6
 Operator: JC
 Inst : MSD-A
 Multiplr: 1.00

Quant Results File: SVS1900.RES

Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\10-11-00\A3545.D
Acq On : 11 Oct 2000 8:33 am
Sample : .,Method-Blk,S,30.0g,0.0,10/09/00
Misc : N/A,N/A,N/A,1
MS Integration Params: rteint.p
Quant Time: Oct 11 9:15 2000

Vial: 3
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: SVS1900.RES

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Oct 09 09:03:22 2000
Response via : Initial Calibration
DataAcq Meth : SVS1900

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.42	152	45860	40.00	UG	0.00
19) Naphthalene-d8	10.34	136	168655	40.00	UG	0.00
35) Acenaphthene-d10	12.69	164	102889	40.00	UG	0.00
55) Phenanthrene-d10	14.59	188	198148	40.00	UG	0.00
69) Chrysene-d12	17.91	240	183933	40.00	UG	0.00
78) Perylene-d12	20.14	264	119383	40.00	UG	0.00

System Monitoring Compounds

3) 2-Fluorophenol	6.10	112	51612	71.44	UG	0.03
Spiked Amount 100.000	Range 36 - 105		Recovery =	71.44%		
4) Phenol-d5	7.78	99	137257	76.21	UG	0.02
Spiked Amount 100.000	Range 39 - 112		Recovery =	76.21%		
20) Nitrobenzene-d5	9.28	82	63576	41.42	UG	0.00
Spiked Amount 50.000	Range 42 - 106		Recovery =	82.84%		
39) 2-Fluorobiphenyl	11.79	172	137479	43.55	UG	0.00
Spiked Amount 50.000	Range 46 - 120		Recovery =	87.10%		
59) 2,4,6-Tribromophenol	13.70	330	89806	95.42	UG	0.00
Spiked Amount 100.000	Range 51 - 141		Recovery =	95.42%		
71) Terphenyl-d14	16.56	244	226296	48.73	UG	0.00
Spiked Amount 50.000	Range 55 - 141		Recovery =	97.46%		

Target Compounds

Qvalue

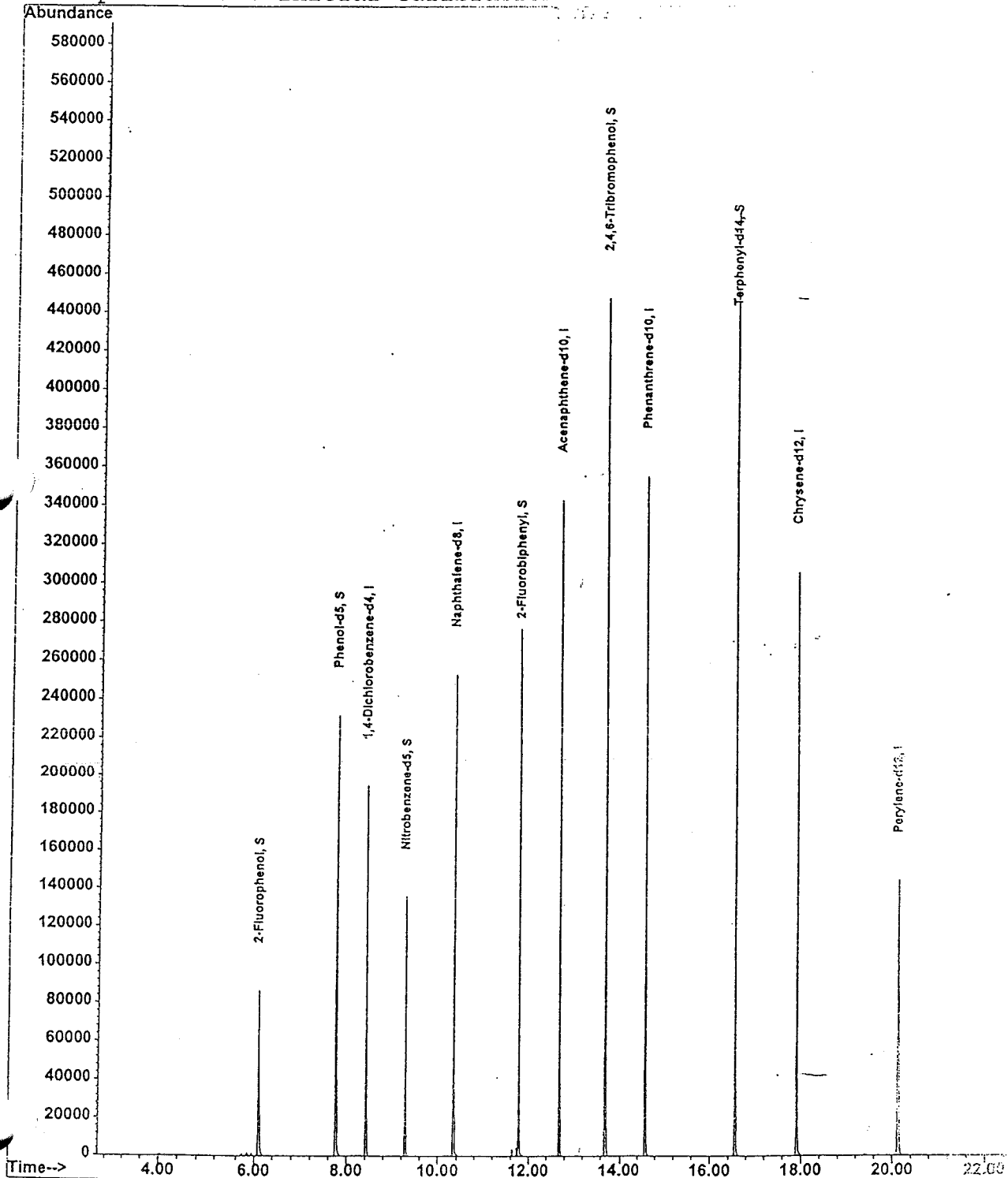
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3545.D
 Acq On : 11 Oct 2000 8:33 am
 Sample : .,Method-Blk,S,30.0g,0.0,10/09/00
 Misc : N/A,N/A,N/A,1
 MS Integration Params: rteint.p
 Quant Time: Oct 11 9:15 2000

Vial: 3
 Operator: JG
 Inlet: 100.0
 Temp: 1.00

Quant Time: Oct 11 9:15 2000

Method : C:\HPCHEM\1\METHODS\SVS1900.M
 Title : BNA CALIBRATION METHOD
 Last Update : Mon Oct 09 09:03:22 2000
 Response via : Initial Calibration



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-11-00\A3545.D
Acq On : 11 Oct 2000 8:33 am
Sample : .,Method-Blk,S,30.0g,0.0,10/09/00
Misc : N/A,N/A,N/A,1

Vial: 3
Operator: JC
Inst : MSD-A
Multiplr: 1.00

S Integration Params: LSCINT.P

Quant Method : C:\HPCHEM\1\METHODS\SVS1900.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

A3545.D SVS1900.M Wed Oct 11 12:20:49 2000 MSD-A

CLIENT & PROJECT

Customer: GEOVATION CONSULTANTS, INC	Send Report To:
Address: 468 ROUTE 17A	Address: SAME
FLORIDA, NY 10921	Address: SAME
Telephone: (845) 651-4141	Send Invoice To: SAME
FAX: (845) 651-0840	Address: SAME
Project Name: Warwick	Address: SAME
Project Manager: B. ZIMMER	Address: SAME
Reference ID#	PO#:

MAILING & BILLING

[illegible]

SAMPLE INFORMATION

SAMPLE INFORMATION										Sample Matrix			Lab Case #	
Sample ID	Sample Description	Date	Sampling		Matrix	# of Containers	Lab ID	A - Aqueous	W - Waste	S - Soil	X - Other	SL - Sludge	O - Oil	
			Time	am pm										
#1	WARWICK	10/6/00	1:10	X	S	2	01							
#2			1:15				2							
#3			1:25				3							
#4			1:35				3							
#5			1:40				5							
#6			1:50				6							
#7			2:02				7							

CUSTODY LOG

Sign	Date	Time	am	pm	Organization	Reason
<i>Mark [Signature]</i>	10-6-00	4:04		✓		
<i>[Signature]</i>	10-6-00	4:00		✓		
<i>[Signature]</i>	10-6-00	6:00		✓		
<i>Paul Cornuta</i>	10-6-00	6:00		✓	AC	ANALYSIS

LAB COPIES - WHITE & YELLOW; CLIENT COPY - RED

ANALYTICAL REQUESTS / PRESERVATIVES

1. HCL		3. HNO		Preservatives	
1.23	1.23	1.23	1.23	1.23	1.23
4.56	4.56	4.56	4.56	4.56	4.56

5. Other		6. Other	
None			

COOLER TEMP.	
4.2	

Comments	
8021 STARS 8270 STARS	

Comments

Concentrations Expected	Known Hazard: yes no
LOW MED HIGH	Describe:

Comments:

PAGE: 1 OF 1

5295

CHAIN OF CUSTODY

Case No.: E00-6295

P.O. #: _____

Project : WARWICK

Client/Project: GEOVATION/WARWICK

Client Address:

Billing Address:

Geovation Consultants Inc.

Geovation Consultants Inc.

468 Route 17A

468 Route 17A

P.O. Box 293

P.O. Box 293

Florida, NY 10921

Florida, NY 10921

Date Received: 10/06/2000

Verbal Due: Oct 20

Time Received: 18:00

Report Due: Oct 27

Report Format: Reduced

# of Containers	2	2	2	2	2	2
IAL ID #	6295-001	6295-002	6295-003	6295-004	6295-005	6295-006
Client ID #	#1	#2	#3	#4	#5	#6
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Sample Date	10/06/2000	10/06/2000	10/06/2000	10/06/2000	10/06/2000	10/06/2000
Sample Time	13:10	13:15	13:25	13:35	13:40	13:50
VO, PP LIST	✓	✓	✓	✓	✓	✓
STARS 8021 VO	✓	✓	✓	✓	✓	✓
Base Neutrals	✓	✓	✓	✓	✓	✓
STARS 8270 BN	✓	✓	✓	✓	✓	✓
% Solids	✓	✓	✓	✓	✓	✓

Comments: REV 01: PER MATT A., PLEASE REPORT FULL PP VO & BN LIST ON
ALL SAMPLES 10/20/00. dgk

CHAIN OF CUSTODY

Case No.: E00-6295

P.O. #: _____

Project : WARWICK

Client/Project: GEOVATION/WARWICK

Client Address:

Geovation Consultants Inc.

468 Route 17A

P.O. Box 293

Florida, NY 10921

Date Received: 10/06/2000

Time Received: 18:00

Report Format: Reduced

Billing Address:

Geovation Consultants Inc.

468 Route 17A

P.O. Box 293

Florida, NY 10921

Verbal Due: Oct 20

Report Due: Oct 27

# of Containers	2
IAL ID #	6295-007
Client ID #	#7
Matrix	Soil
Sample Date	10/06/2000
Sample Time	14:02
VO, PP LIST	✓
STARS 8021 VO	✓
Base Neutrals	✓
STARS 8270 BN	✓
% Solids	✓

Comments: REV 01: PER MATT A., PLEASE REPORT FULL PP VO & BN LIST ON
ALL SAMPLES 10/20/00. dgk

INTEGRATED ANALYTICAL LABORATORIES, LLC
SAMPLE RECEIPT VERIFICATION

CASE NO:

Nº 6295

CLIENT:

Geovectum

COOLER TEMPERATURE: 2° - 6°C: ☒ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE

Comments: _____

Sample Bottles Intact:

☒

Comments: _____

Sample Labels Intact/ Correct:

☒

Sufficient Sample Volume:

☒

Correct bottles/ preservative:

☒

Samples received in

holding time/ prep time:

☒

Headspace/ bubbles in voa samples:

☒

Samples to be subcontracted:

☒

Preserved Sample pH checked:

☒

(Excluding voa samples)

KEY

☒ = YES

☒ = NO

☒ = N/A

ADDITIONAL COMMENTS: _____

SAMPLE(S) VERIFIED BY:

INITIAL

cdc

DATE

10-6-00

CORRECTIVE ACTION REQUIRED:

YES

☐

NO

☒

CLIENT NOTIFIED:

YES

☐

Date/ Time: _____

NO

☐

PROJECT CONTACT: _____

SUBCONTRACTED LAB: _____

DATE SHIPPED: _____

CORRECTIVE ACTION BY CLIENT: _____

CORRECTIVE ACTION TAKEN: _____

CONCLUSION: _____

Corrective Action taken by:

INITIAL _____

DATE _____

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E00-6295
 Client : Geovation Consultants Inc.
 Project : WARWICK

	GC/MS V		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
STARS 8021 VO	6295-001	S	/	/	/	10/9	9 ⁴⁰	dp
PP VO	6295-002	S						
	6295-003	S						
	6295-004	S						
	6295-005	S						
	6295-006	S						
	6295-007	S						

	GC/MS X							
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
STARS 8270 BN	6295-001	S	10/9	7 ⁰⁰ -3 ⁰⁰	DL	10/9		Je
PP BN	6295-002	S						
	6295-003	S						
	6295-004	S						
	6295-005	S						
	6295-006	S						
	6295-007	S						

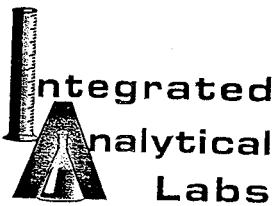
	WETCHEM					
% Solids	6295-001	S	10/9	1145	KC	
	6295-002	S	↓			
	6295-003	S				
	6295-004	S				
	6295-005	S				
	6295-006	S				
	6295-007	S				

REVIEW & APPROVAL: U. Colinas
 REMARKS :

2

2

2



Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

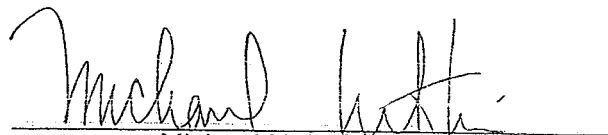
for

Geovation Consultants Inc.
468 Route 17A
P.O. Box 293
Florida, NY 10921

Project: NEW GRANGE
Lab Case Number: E00-7452
Date Report Prepared: December 5, 2000

<u>CLIENT SAMPLE ID</u>	<u>LABORATORY SAMPLE ID</u>
SS-50	7452-001
SS-51	7452-002
SS-52	7452-003
SS-53	7452-004
SS-54	7452-005
SS-55	7452-006

All required protocols were followed during analyses. These data have been reviewed and accepted by



Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

- A - Indicates the sample is an Aqueous matrix.
- O - Indicates the sample is an Oil matrix.
- S - Indicates the sample is a Soil, Sludge or Sediment matrix.
- X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

- B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.
- C - Common Laboratory Contaminant.
- D - The compound was reported from the Diluted analysis.
- D.F. - Dilution Factor.
- E - Estimated concentration, reported results are outside the calibrated range of the instrument.
- J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.
- MDL - Method Detection Limit.
- MI - Indicates compound concentration could not be determined due to Matrix Interferences.
- NA - Not Applicable.
- ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

000001

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received six (6) soil sample(s) from Geovation Consultants Inc. (Project: NEW GRANGE) on November 21, 2000 for the analysis of:

- (6) Volatiles
- (6) Volatiles - Stars list 8021
- (6) Semivolatiles - BN
- (6) Semivolatiles - Stars list 8270 BN

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

M. G. [Signature]
Reviewed by

12/10/00
Date

000002

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E00-7452

	Check If Complete
1. Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	<u>✓</u>
2. Table of Contents.	<u>✓</u>
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds.	<u>✓</u>
4. Summary Table cross-referencing Field ID's vs. Lab ID's.	<u>✓</u>
5. Document bound, paginated and legible.	<u>✓</u>
6. Chain of Custody.	<u>✓</u>
7. Methodology Summary.	<u>✓</u>
8. Laboratory Chronicle and Holding Time Check.	<u>✓</u>
9. Results submitted on a dry weight basis (if applicable).	<u>✓</u>
10. Method Detection Limits.	<u>✓</u>
11. Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	<u>✓</u>
12. NonConformance Summary.	<u>✓</u>

MC
QC Reviewed by

12/6/00
Date

000003

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E00 - 7452

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).	☐	☒
2. GC/MS Tuning Specifications:		
a. BFB Passed	☐	☒
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.	☐	☒
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series	☐	☒
5. GC/MS Calibration Requirements:		
a. Calibration Check Compounds	☐	☒
b. System Performance Check Compounds	☐	☒
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	☒	☐
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	☐	☒
If not met, were the calculations checked and the results qualified as "estimated"?	☐	☒ na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)	☐	☒
9. Internal Standard Area/Retention Time Shift meet criteria	☐	☒
10. Extraction Holding Time Met	☐	☒ NA
If not met, list number of days exceeded for each sample:		
11. Analysis Holding Time Met	☐	☒
If not met, list number of days exceeded for each sample:		
12. Sample Dilution Performed		☒
High Target Compounds	High Nontarget Compounds	Matrix Interference
	/	
		Other

13. Comments:

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E00 - 7452

	No	Yes	
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).	☐	☒	
2. GC/MS Tuning Specifications: a. DFTPP Passed	☐	☒	
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.	☐	☒	
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.	☐	☒	
5. GC/MS Calibration Requirements: a. Calibration Check Compounds	☐	☒	
b. System Performance Check Compounds	☐	☒	
6. Blank Contamination - If yes, list compounds and concentrations in each blank: a. B/N Fraction	☒	☐	
b. Acid Fraction	☐	☒	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) a. B/N Fraction	☐	☒	
b. Acid Fraction	☐	☒	
If not met, were the calculations checked and the results qualified as "estimated"?	☐	☒	
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) a. B/N Fraction	☐	☒	
b. Acid Fraction	☐	☒	
9. Internal Standard Area/Retention Time Shift meet criteria	☐	☒	
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:	☐	☒	
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:	☐	☒	
12. Sample Dilution Performed	☐	☒	
High Target Compounds ☒	High Nontarget Compounds ☒	Matrix Interference ☒	Other ☐

13. Comments:

Organics Manager

11/30/00
Date

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

	Lab ID: 7452-001	7452-002	7452-003	7452-004	7452-005
	Client ID: SS-50	SS-51	SS-52	SS-53	SS-54
	Matrix: Soil	Soil	Soil	Soil	Soil
	Sampled Date: 11/20/2000	11/20/2000	11/20/2000	11/20/2000	11/20/2000
PARAMETER(Units)					
Volatiles (ppb)					
Chloromethane	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND
Acrolein	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND
1,2-Dichloroethane(EDC)	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	205 J	ND
Dibromochloromethane	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND
TOTAL VO's:	ND	ND	ND	205 J	ND

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Volatiles are carried down through summation.

000006

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-001	7452-002	7452-003	7452-004	7452-005
Client ID:	SS-50	SS-51	SS-52	SS-53	SS-54
Matrix:	Soil	Soil	Soil	Soil	Soil
Sampled Date:	11/20/2000	11/20/2000	11/20/2000	11/20/2000	11/20/2000

PARAMETER(Units)

Volatiles - Stars list (ppb)

Methyl-t-Butyl Ether(MTBE)	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND	ND
n-Propylbenzene	335	J	ND	ND	ND
1,3,5-Trimethylbenzene	690	J	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	1040	J	ND	ND	ND
sec-Butylbenzene	977	J	ND	ND	ND
4-Isopropyltoluene	ND	ND	ND	ND	ND
n-Butylbenzene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND

Semivolatiles - BN (ppb)

N-Nitrosodimethylamine	ND	ND	ND	ND	ND
Aniline	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND
Benzyl alcohol	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)ether	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND
Naphthalene	89.2	J	ND	ND	ND
4-Chloroaniline	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND
2-Methylnaphthalene	1400	3310	ND	ND	ND

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Semivolatiles are carried down through summation.

Continued on next page.

000007

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

	Lab ID: 7452-001	7452-002	7452-003	7452-004	7452-005
	Client ID: SS-50	SS-51	SS-52	SS-53	SS-54
	Matrix: Soil	Soil	Soil	Soil	Soil
	Sampled Date: 11/20/2000	11/20/2000	11/20/2000	11/20/2000	11/20/2000
PARAMETER(Units)					
Semivolatiles - BN (ppb)					
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	ND	ND	ND
Dimethylphthalate	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND
Acenaphthylene	205	ND	ND	ND	ND
3-Nitroaniline	ND	ND	ND	ND	ND
Acenaphthene	268	2220	ND	229 J	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND
Dibenzofuran	2820	1000	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND
Fluorene	649	2370	ND	221 J	ND
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND
4-Nitroaniline	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine/Azobenzene	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND
Phenanthrene	1840	3950	ND	377	ND
Anthracene	305	1820	ND	ND	ND
Carbazole	ND	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Benzidine	ND	ND	ND	ND	ND
Pyrene	299	878	ND	ND	ND
3,3'-Dimethylbenzidine	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND
Benzo[a]anthracene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND
Di-n-octylphthalate	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	ND	ND	ND	ND	ND

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Semivolatiles are carried down through summation.

Continued on next page.

000008

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-001	7452-002	7452-003	7452-004	7452-005
Client ID:	SS-50	SS-51	SS-52	SS-53	SS-54
Matrix:	Soil	Soil	Soil	Soil	Soil
Sampled Date:	11/20/2000	11/20/2000	11/20/2000	11/20/2000	11/20/2000
PARAMETER(Units)					
Semivolatiles - BN (ppb)					
Benzo[a]pyrene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND
TOTAL BN'S:	7875.2 J	15548	ND	827 J	ND
Semivolatiles - Stars list (ppb)					
Acenaphthene	268	2220	ND	229 J	ND
Fluorene	649	2370	ND	221 J	ND
Phenanthrene	1840	3950	ND	377	ND
Anthracene	305	1820	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Pyrene	299	878	ND	ND	ND
Benzo[a]anthracene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	ND	ND	ND	ND	ND
Benzo[a]pyrene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL

All qualifiers on individual Semivolatiles are carried down through summation.

000009

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-006
Client ID:	SS-55
Matrix:	Soil
Sampled Date:	11/20/2000
PARAMETER(Units)	
Volatiles (ppb)	
Chloromethane	ND
Vinyl Chloride	ND
Bromomethane	ND
Chloroethane	ND
Trichlorofluoromethane	ND
Acrolein	ND
1,1-Dichloroethene	ND
Methylene Chloride	ND
Acrylonitrile	ND
trans-1,2-Dichloroethene	ND
1,1-Dichloroethane	ND
Chloroform	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	ND
1,2-Dichloroethane(EDC)	ND
Benzene	ND
Trichloroethene	ND
1,2-Dichloropropane	ND
Bromodichloromethane	ND
2-Chloroethylvinyl Ether	ND
cis-1,3-Dichloropropene	ND
Toluene	ND
trans-1,3-Dichloropropene	ND
1,1,2-Trichloroethane	ND
Tetrachloroethene	ND
Dibromochloromethane	ND
Chlorobenzene	ND
Ethylbenzene	ND
Total Xylenes	ND
Bromoform	ND
1,1,2,2-Tetrachloroethane	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,2-Dichlorobenzene	ND
TOTAL VO's:	ND

ND = Analyzed for but Not Detected at the MDL

000010

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-006
Client ID:	SS-55
Matrix:	Soil
Sampled Date:	11/20/2000

PARAMETER(Units)**Volatiles - Stars list (ppb)**

Methyl-t-Butyl Ether(MTBE)	ND
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Isopropylbenzene	ND
n-Propylbenzene	ND
1,3,5-Trimethylbenzene	ND
tert-Butylbenzene	ND
1,2,4-Trimethylbenzene	ND
sec-Butylbenzene	ND
4-Isopropyltoluene	ND
n-Butylbenzene	ND
Naphthalene	ND

Semivolatiles - BN (ppb)

N-Nitrosodimethylamine	ND
Aniline	ND
bis(2-Chloroethyl)ether	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Benzyl alcohol	ND
1,2-Dichlorobenzene	ND
bis(2-chloroisopropyl)ether	ND
N-Nitroso-di-n-propylamine	ND
Hexachloroethane	ND
Nitrobenzene	ND
Isophorone	ND
bis(2-Chloroethoxy)methane	ND
1,2,4-Trichlorobenzene	ND
Naphthalene	ND
4-Chloroaniline	ND
Hexachlorobutadiene	ND
2-Methylnaphthalene	ND

ND = Analyzed for but Not Detected at the MDL

Continued on next page.

000011

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-006
Client ID:	SS-55
Matrix:	Soil
Sampled Date:	11/20/2000

PARAMETER(Units)**Semivolatiles - BN (ppb)**

Hexachlorocyclopentadiene	ND
2-Chloronaphthalene	ND
2-Nitroaniline	ND
Dimethylphthalate	ND
2,6-Dinitrotoluene	ND
Acenaphthylene	ND
3-Nitroaniline	ND
Acenaphthene	ND
2,4-Dinitrotoluene	ND
Dibenzofuran	ND
Diethylphthalate	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
4-Nitroaniline	ND
N-Nitrosodiphenylamine	ND
1,2-Diphenylhydrazine/Azobenzene	ND
4-Bromophenyl-phenylether	ND
Hexachlorobenzene	ND
Phenanthrene	453
Anthracene	ND
Carbazole	ND
Di-n-butylphthalate	ND
Fluoranthene	636
Benzidine	ND
Pyrene	717
3,3'-Dimethylbenzidine	ND
Butylbenzylphthalate	ND
3,3'-Dichlorobenzidine	ND
Benzo[a]anthracene	324
Chrysene	277
bis(2-Ethylhexyl)phthalate	ND
Di-n-octylphthalate	ND
Benzo[b]fluoranthene	360
Benzo[k]fluoranthene	141

ND = Analyzed for but Not Detected at the MDL

Continued on next page.

000012

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: NEW GRANGE

Lab Case No.: E00-7452

Lab ID:	7452-006
Client ID:	SS-55
Matrix:	Soil
Sampled Date:	11/20/2000

PARAMETER(Units)**Semivolatiles - BN (ppb)**

Benzo[a]pyrene	260
Indeno[1,2,3-cd]pyrene	190
Dibenz[a,h]anthracene	ND
Benzo[g,h,i]perylene	222

TOTAL BN'S:	3580

Semivolatiles - Stars list (ppb)

Acenaphthene	ND
Fluorene	ND
Phenanthrene	453
Anthracene	ND
Fluoranthene	636
Pyrene	717
Benzo[a]anthracene	324
Chrysene	277
Benzo[b]fluoranthene	360
Benzo[k]fluoranthene	141
Benzo[a]pyrene	260
Indeno[1,2,3-cd]pyrene	190
Dibenz[a,h]anthracene	ND
Benzo[g,h,i]perylene	222

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-001

Client ID: SS-50

Date Received: 11/21/2000

Date Analyzed: 11/22/2000

Data file: J5686.D

GC/MS Column: DB-624

Sample wt/vol: 0.025g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 200

% Moisture: 10.9

Compound	Concentration	Q	MDL
Chloromethane	ND		1120
Vinyl Chloride	ND		1120
Bromomethane	ND		1120
Chloroethane	ND		1120
Trichlorofluoromethane	ND		1120
Acrolein	ND		2240
1,1-Dichloroethene	ND		1120
Methylene Chloride	ND		1120
Acrylonitrile	ND		2240
trans-1,2-Dichloroethene	ND		1120
1,1-Dichloroethane	ND		1120
Chloroform	ND		1120
1,1,1-Trichloroethane	ND		1120
Carbon Tetrachloride	ND		1120
1,2-Dichloroethane(EDC)	ND		1120
Benzene	ND		1120
Trichloroethene	ND		1120
1,2-Dichloropropane	ND		1120
Bromodichloromethane	ND		1120
2-Chloroethylvinyl Ether	ND		1120
cis-1,3-Dichloropropene	ND		1120
Toluene	ND		1120
trans-1,3-Dichloropropene	ND		1120
1,1,2-Trichloroethane	ND		1120
Tetrachloroethene	ND		1120
Dibromochloromethane	ND		1120
Chlorobenzene	ND		1120
Ethylbenzene	ND		1120
Total Xylenes	ND		1120
Bromoform	ND		1120
1,1,2,2-Tetrachloroethane	ND		1120
1,3-Dichlorobenzene	ND		1120
1,4-Dichlorobenzene	ND		1120
1,2-Dichlorobenzene	ND		1120

Total Target Compounds: 0

000014

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-002

Client ID: SS-51

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6529.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 10

% Moisture: 12.4

Compound	Concentration	Q	MDL
Chloromethane	ND		57.1
Vinyl Chloride	ND		57.1
Bromomethane	ND		57.1
Chloroethane	ND		57.1
Trichlorofluoromethane	ND		57.1
Acrolein	ND		114
1,1-Dichloroethene	ND		57.1
Methylene Chloride	ND		57.1
Acrylonitrile	ND		114
trans-1,2-Dichloroethene	ND		57.1
1,1-Dichloroethane	ND		57.1
Chloroform	ND		57.1
1,1,1-Trichloroethane	ND		57.1
Carbon Tetrachloride	ND		57.1
1,2-Dichloroethane(EDC)	ND		57.1
Benzene	ND		57.1
Trichloroethene	ND		57.1
1,2-Dichloropropane	ND		57.1
Bromodichloromethane	ND		57.1
2-Chloroethylvinyl Ether	ND		57.1
cis-1,3-Dichloropropene	ND		57.1
Toluene	ND		57.1
trans-1,3-Dichloropropene	ND		57.1
1,1,2-Trichloroethane	ND		57.1
Tetrachloroethene	ND		57.1
Dibromochloromethane	ND		57.1
Chlorobenzene	ND		57.1
Ethylbenzene	ND		57.1
Total Xylenes	ND		57.1
Bromoform	ND		57.1
1,1,2,2-Tetrachloroethane	ND		57.1
1,3-Dichlorobenzene	ND		57.1
1,4-Dichlorobenzene	ND		57.1
1,2-Dichlorobenzene	ND		57.1

Total Target Compounds: 0

000015

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-003

Client ID: SS-52

Date Received: 11/21/2000

Date Analyzed: 11/28/2000

Data file: F6526.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 17.7

Compound	Concentration	Q	MDL
Chloromethane	ND		6.1
Vinyl Chloride	ND		6.1
Bromomethane	ND		6.1
Chloroethane	ND		6.1
Trichlorofluoromethane	ND		6.1
Acrolein	ND		12.2
1,1-Dichloroethene	ND		6.1
Methylene Chloride	ND		6.1
Acrylonitrile	ND		12.2
trans-1,2-Dichloroethene	ND		6.1
1,1-Dichloroethane	ND		6.1
Chloroform	ND		6.1
1,1,1-Trichloroethane	ND		6.1
Carbon Tetrachloride	ND		6.1
1,2-Dichloroethane(EDC)	ND		6.1
Benzene	ND		6.1
Trichloroethene	ND		6.1
1,2-Dichloropropane	ND		6.1
Bromodichloromethane	ND		6.1
2-Chloroethylvinyl Ether	ND		6.1
cis-1,3-Dichloropropene	ND		6.1
Toluene	ND		6.1
trans-1,3-Dichloropropene	ND		6.1
1,1,2-Trichloroethane	ND		6.1
Tetrachloroethene	ND		6.1
Dibromochloromethane	ND		6.1
Chlorobenzene	ND		6.1
Ethylbenzene	ND		6.1
Total Xylenes	ND		6.1
Bromoform	ND		6.1
1,1,2,2-Tetrachloroethane	ND		6.1
1,3-Dichlorobenzene	ND		6.1
1,4-Dichlorobenzene	ND		6.1
1,2-Dichlorobenzene	ND		6.1

Total Target Compounds: 0

000016

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-004

Client ID: SS-53

Date Received: 11/21/2000

Date Analyzed: 11/22/2000

Data file: J5685.D

GC/MS Column: DB-624

Sample wt/vol: 0.05g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 100

% Moisture: 9.8

Compound	Concentration	Q	MDL
Chloromethane	ND		554
Vinyl Chloride	ND		554
Bromomethane	ND		554
Chloroethane	ND		554
Trichlorofluoromethane	ND		554
Acrolein	ND		1110
1,1-Dichloroethene	ND		554
Methylene Chloride	ND		554
Acrylonitrile	ND		1110
trans-1,2-Dichloroethene	ND		554
1,1-Dichloroethane	ND		554
Chloroform	ND		554
1,1,1-Trichloroethane	ND		554
Carbon Tetrachloride	ND		554
1,2-Dichloroethane(EDC)	ND		554
Benzene	ND		554
Trichloroethene	ND		554
1,2-Dichloropropane	ND		554
Bromodichloromethane	ND		554
2-Chloroethylvinyl Ether	ND		554
cis-1,3-Dichloropropene	ND		554
Toluene	ND		554
trans-1,3-Dichloropropene	ND		554
1,1,2-Trichloroethane	ND		554
Tetrachloroethene	205	J	554
Dibromochloromethane	ND		554
Chlorobenzene	ND		554
Ethylbenzene	ND		554
Total Xylenes	ND		554
Bromoform	ND		554
1,1,2,2-Tetrachloroethane	ND		554
1,3-Dichlorobenzene	ND		554
1,4-Dichlorobenzene	ND		554
1,2-Dichlorobenzene	ND		554

Total Target Compounds:

205

J

000017

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-005

Client ID: SS-54

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6527.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 6.8

Compound	Concentration	Q	MDL
Chloromethane	ND		5.35
Vinyl Chloride	ND		5.35
Bromomethane	ND		5.35
Chloroethane	ND		5.35
Trichlorofluoromethane	ND		5.35
Acrolein	ND		10.7
1,1-Dichloroethene	ND		5.35
Methylene Chloride	ND		5.35
Acrylonitrile	ND		10.7
trans-1,2-Dichloroethene	ND		5.35
1,1-Dichloroethane	ND		5.35
Chloroform	ND		5.35
1,1,1-Trichloroethane	ND		5.35
Carbon Tetrachloride	ND		5.35
1,2-Dichloroethane(EDC)	ND		5.35
Benzene	ND		5.35
Trichloroethene	ND		5.35
1,2-Dichloropropane	ND		5.35
Bromodichloromethane	ND		5.35
2-Chloroethylvinyl Ether	ND		5.35
cis-1,3-Dichloropropene	ND		5.35
Toluene	ND		5.35
trans-1,3-Dichloropropene	ND		5.35
1,1,2-Trichloroethane	ND		5.35
Tetrachloroethene	ND		5.35
Dibromochloromethane	ND		5.35
Chlorobenzene	ND		5.35
Ethylbenzene	ND		5.35
Total Xylenes	ND		5.35
Bromoform	ND		5.35
1,1,2,2-Tetrachloroethane	ND		5.35
1,3-Dichlorobenzene	ND		5.35
1,4-Dichlorobenzene	ND		5.35
1,2-Dichlorobenzene	ND		5.35

Total Target Compounds: 0

000018

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-006

Client ID: SS-55

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6532.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.6

Compound	Concentration	Q	MDL
Chloromethane	ND		5.7
Vinyl Chloride	ND		5.7
Bromomethane	ND		5.7
Chloroethane	ND		5.7
Trichlorofluoromethane	ND		5.7
Acrolein	ND		11.4
1,1-Dichloroethene	ND		5.7
Methylene Chloride	ND		5.7
Acrylonitrile	ND		11.4
trans-1,2-Dichloroethene	ND		5.7
1,1-Dichloroethane	ND		5.7
Chloroform	ND		5.7
1,1,1-Trichloroethane	ND		5.7
Carbon Tetrachloride	ND		5.7
1,2-Dichloroethane(EDC)	ND		5.7
Benzene	ND		5.7
Trichloroethene	ND		5.7
1,2-Dichloropropane	ND		5.7
Bromodichloromethane	ND		5.7
2-Chloroethylvinyl Ether	ND		5.7
cis-1,3-Dichloropropene	ND		5.7
Toluene	ND		5.7
trans-1,3-Dichloropropene	ND		5.7
1,1,2-Trichloroethane	ND		5.7
Tetrachloroethene	ND		5.7
Dibromochloromethane	ND		5.7
Chlorobenzene	ND		5.7
Ethylbenzene	ND		5.7
Total Xylenes	ND		5.7
Bromoform	ND		5.7
1,1,2,2-Tetrachloroethane	ND		5.7
1,3-Dichlorobenzene	ND		5.7
1,4-Dichlorobenzene	ND		5.7
1,2-Dichlorobenzene	ND		5.7

Total Target Compounds: 0

000019

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-001

Client ID: SS-50

Date Received: 11/21/2000

Date Analyzed: 11/22/2000

Data file: J5686.D

GC/MS Column: DB-624

Sample wt/vol: 0.025g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 200

% Moisture: 10.9

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		1120
Benzene	ND		1120
Toluene	ND		1120
Ethylbenzene	ND		1120
Total Xylenes	ND		1120
Isopropylbenzene	ND		1120
n-Propylbenzene	335	J	1120
1,3,5-Trimethylbenzene	690	J	1120
tert-Butylbenzene	ND		1120
1,2,4-Trimethylbenzene	1040	J	1120
sec-Butylbenzene	977	J	1120
4-Isopropyltoluene	ND		1120
n-Butylbenzene	ND		1120
Naphthalene	ND		1120
Total Target Compounds:	3042	J	

000020

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-002

Client ID: SS-51

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6529.D

GC/MS Column: DB-624

Sample wt/vol: 0.5g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 10

% Moisture: 12.4

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		57.1
Benzene	ND		57.1
Toluene	ND		57.1
Ethylbenzene	ND		57.1
Total Xylenes	ND		57.1
Isopropylbenzene	ND		57.1
n-Propylbenzene	ND		57.1
1,3,5-Trimethylbenzene	ND		57.1
tert-Butylbenzene	ND		57.1
1,2,4-Trimethylbenzene	ND		57.1
sec-Butylbenzene	ND		57.1
4-Isopropyltoluene	ND		57.1
n-Butylbenzene	ND		57.1
Naphthalene	ND		57.1

Total Target Compounds: 0

000021.

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-003

Client ID: SS-52

Date Received: 11/21/2000

Date Analyzed: 11/28/2000

Data file: F6526.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 17.7

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		6.1
Benzene	ND		6.1
Toluene	ND		6.1
Ethylbenzene	ND		6.1
Total Xylenes	ND		6.1
Isopropylbenzene	ND		6.1
n-Propylbenzene	ND		6.1
1,3,5-Trimethylbenzene	ND		6.1
tert-Butylbenzene	ND		6.1
1,2,4-Trimethylbenzene	ND		6.1
sec-Butylbenzene	ND		6.1
4-Isopropyltoluene	ND		6.1
n-Butylbenzene	ND		6.1
Naphthalene	ND		6.1
Total Target Compounds:	0		

000022

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-004

Client ID: SS-53

Date Received: 11/21/2000

Date Analyzed: 11/22/2000

Data file: J5685.D

GC/MS Column: DB-624

Sample wt/vol: 0.05g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 100

% Moisture: 9.8

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		554
Benzene	ND		554
Toluene	ND		554
Ethylbenzene	ND		554
Total Xylenes	ND		554
Isopropylbenzene	ND		554
n-Propylbenzene	ND		554
1,3,5-Trimethylbenzene	ND		554
tert-Butylbenzene	ND		554
1,2,4-Trimethylbenzene	ND		554
sec-Butylbenzene	ND		554
4-Isopropyltoluene	ND		554
n-Butylbenzene	ND		554
Naphthalene	ND		554

Total Target Compounds: 0

000023

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-005

Client ID: SS-54

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6527.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 6.8

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		5.35
Benzene	ND		5.35
Toluene	ND		5.35
Ethylbenzene	ND		5.35
Total Xylenes	ND		5.35
Isopropylbenzene	ND		5.35
n-Propylbenzene	ND		5.35
1,3,5-Trimethylbenzene	ND		5.35
tert-Butylbenzene	ND		5.35
1,2,4-Trimethylbenzene	ND		5.35
sec-Butylbenzene	ND		5.35
4-Isopropyltoluene	ND		5.35
n-Butylbenzene	ND		5.35
Naphthalene	ND		5.35

Total Target Compounds: 0

000024

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-006

Client ID: SS-55

Date Received: 11/21/2000

Date Analyzed: 11/29/2000

Data file: F6532.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.6

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		5.7
Benzene	ND		5.7
Toluene	ND		5.7
Ethylbenzene	ND		5.7
Total Xylenes	ND		5.7
Isopropylbenzene	ND		5.7
n-Propylbenzene	ND		5.7
1,3,5-Trimethylbenzene	ND		5.7
tert-Butylbenzene	ND		5.7
1,2,4-Trimethylbenzene	ND		5.7
sec-Butylbenzene	ND		5.7
4-Isopropyltoluene	ND		5.7
n-Butylbenzene	ND		5.7
Naphthalene	ND		5.7

Total Target Compounds: 0

000025

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-001

Client ID: SS-50

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6955.D

GC/MS Column: DB-5

Sample wt/vol: 10.05g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.9

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		112
Aniline	ND		112
bis(2-Chloroethyl)ether	ND		112
1,3-Dichlorobenzene	ND		112
1,4-Dichlorobenzene	ND		112
Benzyl alcohol	ND		112
1,2-Dichlorobenzene	ND		112
bis(2-chloroisopropyl)ether	ND		112
N-Nitroso-di-n-propylamine	ND		112
Hexachloroethane	ND		112
Nitrobenzene	ND		112
Isophorone	ND		112
bis(2-Chloroethoxy)methane	ND		112
1,2,4-Trichlorobenzene	ND		112
Naphthalene	89.2	J	112
4-Chloroaniline	ND		112
Hexachlorobutadiene	ND		112
2-Methylnaphthalene	1400		112
Hexachlorocyclopentadiene	ND		112
2-Chloronaphthalene	ND		112
2-Nitroaniline	ND		112
Dimethylphthalate	ND		112
2,6-Dinitrotoluene	ND		112
Acenaphthylene	205		112

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-001

Client ID: SS-50

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6955.D

GC/MS Column: DB-5

Sample wt/vol: 10.05g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 10.9

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		112
Acenaphthene	268		112
2,4-Dinitrotoluene	ND		112
Dibenzofuran	2820		112
Diethylphthalate	ND		112
Fluorene	649		112
4-Chlorophenyl-phenylether	ND		112
4-Nitroaniline	ND		112
N-Nitrosodiphenylamine	ND		112
1,2-Diphenylhydrazine/Azobenzene	ND		112
4-Bromophenyl-phenylether	ND		112
Hexachlorobenzene	ND		112
Phenanthrene	1840		112
Anthracene	305		112
Carbazole	ND		112
Di-n-butylphthalate	ND		112
Fluoranthene	ND		112
Benzidine	ND		112
Pyrene	299		112
3,3'-Dimethylbenzidine	ND		112
Butylbenzylphthalate	ND		112
3,3'-Dichlorobenzidine	ND		112
Benzo[a]anthracene	ND		112
Chrysene	ND		112
bis(2-Ethylhexyl)phthalate	ND		112
Di-n-octylphthalate	ND		112
Benzo[b]fluoranthene	ND		112
Benzo[k]fluoranthene	ND		112
Benzo[a]pyrene	ND		112
Indeno[1,2,3-cd]pyrene	ND		112
Dibenz[a,h]anthracene	ND		112
Benzo[g,h,i]perylene	ND		112

Total Target Compounds: 7875.2 J

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-002

Client ID: SS-51

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7006.D

GC/MS Column: DB-5

Sample wt/vol: 10.13g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 5

% Moisture: 12.4

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		563
Aniline	ND		563
bis(2-Chloroethyl)ether	ND		563
1,3-Dichlorobenzene	ND		563
1,4-Dichlorobenzene	ND		563
Benzyl alcohol	ND		563
1,2-Dichlorobenzene	ND		563
bis(2-chloroisopropyl)ether	ND		563
N-Nitroso-di-n-propylamine	ND		563
Hexachloroethane	ND		563
Nitrobenzene	ND		563
Isophorone	ND		563
bis(2-Chloroethoxy)methane	ND		563
1,2,4-Trichlorobenzene	ND		563
Naphthalene	ND		563
4-Chloroaniline	ND		563
Hexachlorobutadiene	ND		563
2-Methylnaphthalene	3310		563
Hexachlorocyclopentadiene	ND		563
2-Chloronaphthalene	ND		563
2-Nitroaniline	ND		563
Dimethylphthalate	ND		563
2,6-Dinitrotoluene	ND		563
Acenaphthylene	ND		563

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-002

Client ID: SS-51

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7006.D

GC/MS Column: DB-5

Sample wt/vol: 10.13g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 5

% Moisture: 12.4

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		563
Acenaphthene	2220		563
2,4-Dinitrotoluene	ND		563
Dibenzofuran	1000		563
Diethylphthalate	ND		563
Fluorene	2370		563
4-Chlorophenyl-phenylether	ND		563
4-Nitroaniline	ND		563
N-Nitrosodiphenylamine	ND		563
1,2-Diphenylhydrazine/Azobenzene	ND		563
4-Bromophenyl-phenylether	ND		563
Hexachlorobenzene	ND		563
Phenanthrene	3950		563
Anthracene	1820		563
Carbazole	ND		563
Di-n-butylphthalate	ND		563
Fluoranthene	ND		563
Benzidine	ND		563
Pyrene	878		563
3,3'-Dimethylbenzidine	ND		563
Butylbenzylphthalate	ND		563
3,3'-Dichlorobenzidine	ND		563
Benzo[a]anthracene	ND		563
Chrysene	ND		563
bis(2-Ethylhexyl)phthalate	ND		563
Di-n-octylphthalate	ND		563
Benzo[b]fluoranthene	ND		563
Benzo[k]fluoranthene	ND		563
Benzo[a]pyrene	ND		563
Indeno[1,2,3-cd]pyrene	ND		563
Dibenz[a,h]anthracene	ND		563
Benzo[g,h,i]perylene	ND		563

Total Target Compounds: 15548

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-003

Client ID: SS-52

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6957.D

GC/MS Column: DB-5

Sample wt/vol: 10.66g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 17.7

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		114
Aniline	ND		114
bis(2-Chloroethyl)ether	ND		114
1,3-Dichlorobenzene	ND		114
1,4-Dichlorobenzene	ND		114
Benzyl alcohol	ND		114
1,2-Dichlorobenzene	ND		114
bis(2-chloroisopropyl)ether	ND		114
N-Nitroso-di-n-propylamine	ND		114
Hexachloroethane	ND		114
Nitrobenzene	ND		114
Isophorone	ND		114
bis(2-Chloroethoxy)methane	ND		114
1,2,4-Trichlorobenzene	ND		114
Naphthalene	ND		114
4-Chloroaniline	ND		114
Hexachlorobutadiene	ND		114
2-Methylnaphthalene	ND		114
Hexachlorocyclopentadiene	ND		114
2-Chloronaphthalene	ND		114
2-Nitroaniline	ND		114
Dimethylphthalate	ND		114
2,6-Dinitrotoluene	ND		114
Acenaphthylene	ND		114

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-003

Client ID: SS-52

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6957.D

GC/MS Column: DB-5

Sample wt/vol: 10.66g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 17.7

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		114
Acenaphthene	ND		114
2,4-Dinitrotoluene	ND		114
Dibenzofuran	ND		114
Diethylphthalate	ND		114
Fluorene	ND		114
4-Chlorophenyl-phenylether	ND		114
4-Nitroaniline	ND		114
N-Nitrosodiphenylamine	ND		114
1,2-Diphenylhydrazine/Azobenzene	ND		114
4-Bromophenyl-phenylether	ND		114
Hexachlorobenzene	ND		114
Phenanthrene	ND		114
Anthracene	ND		114
Carbazole	ND		114
Di-n-butylphthalate	ND		114
Fluoranthene	ND		114
Benzydine	ND		114
Pyrene	ND		114
3,3'-Dimethylbenzidine	ND		114
Butylbenzylphthalate	ND		114
3,3'-Dichlorobenzidine	ND		114
Benzo[a]anthracene	ND		114
Chrysene	ND		114
bis(2-Ethylhexyl)phthalate	ND		114
Di-n-octylphthalate	ND		114
Benzo[b]fluoranthene	ND		114
Benzo[k]fluoranthene	ND		114
Benzo[a]pyrene	ND		114
Indeno[1,2,3-cd]pyrene	ND		114
Dibenz[a,h]anthracene	ND		114
Benzo[g,h,i]perylene	ND		114

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-004

Client ID: SS-53

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7007.D

GC/MS Column: DB-5

Sample wt/vol: 10.44g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 3

% Moisture: 9.8

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		319
Aniline	ND		319
bis(2-Chloroethyl)ether	ND		319
1,3-Dichlorobenzene	ND		319
1,4-Dichlorobenzene	ND		319
Benzyl alcohol	ND		319
1,2-Dichlorobenzene	ND		319
bis(2-chloroisopropyl)ether	ND		319
N-Nitroso-di-n-propylamine	ND		319
Hexachloroethane	ND		319
Nitrobenzene	ND		319
Isophorone	ND		319
bis(2-Chloroethoxy)methane	ND		319
1,2,4-Trichlorobenzene	ND		319
Naphthalene	ND		319
4-Chloroaniline	ND		319
Hexachlorobutadiene	ND		319
2-Methylnaphthalene	ND		319
Hexachlorocyclopentadiene	ND		319
2-Chloronaphthalene	ND		319
2-Nitroaniline	ND		319
Dimethylphthalate	ND		319
2,6-Dinitrotoluene	ND		319
Acenaphthylene	ND		319

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-004

Client ID: SS-53

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7007.D

GC/MS Column: DB-5

Sample wt/vol: 10.44g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 3

% Moisture: 9.8

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		319
Acenaphthene	229	J	319
2,4-Dinitrotoluene	ND		319
Dibenzofuran	ND		319
Diethylphthalate	ND		319
Fluorene	221	J	319
4-Chlorophenyl-phenylether	ND		319
4-Nitroaniline	ND		319
N-Nitrosodiphenylamine	ND		319
1,2-Diphenylhydrazine/Azobenzene	ND		319
4-Bromophenyl-phenylether	ND		319
Hexachlorobenzene	ND		319
Phenanthrene	377		319
Anthracene	ND		319
Carbazole	ND		319
Di-n-butylphthalate	ND		319
Fluoranthene	ND		319
Benzydine	ND		319
Pyrene	ND		319
3,3'-Dimethylbenzidine	ND		319
Butylbenzylphthalate	ND		319
3,3'-Dichlorobenzidine	ND		319
Benzo[a]anthracene	ND		319
Chrysene	ND		319
bis(2-Ethylhexyl)phthalate	ND		319
Di-n-octylphthalate	ND		319
Benzo[b]fluoranthene	ND		319
Benzo[k]fluoranthene	ND		319
Benzo[a]pyrene	ND		319
Indeno[1,2,3-cd]pyrene	ND		319
Dibenz[a,h]anthracene	ND		319
Benzo[g,h,i]perylene	ND		319

Total Target Compounds: 827 J

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-005

Client ID: SS-54

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7008.D

GC/MS Column: DB-5

Sample wt/vol: 10.53g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 6.8

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		102
Aniline	ND		102
bis(2-Chloroethyl)ether	ND		102
1,3-Dichlorobenzene	ND		102
1,4-Dichlorobenzene	ND		102
Benzyl alcohol	ND		102
1,2-Dichlorobenzene	ND		102
bis(2-chloroisopropyl)ether	ND		102
N-Nitroso-di-n-propylamine	ND		102
Hexachloroethane	ND		102
Nitrobenzene	ND		102
Isophorone	ND		102
bis(2-Chloroethoxy)methane	ND		102
1,2,4-Trichlorobenzene	ND		102
Naphthalene	ND		102
4-Chloroaniline	ND		102
Hexachlorobutadiene	ND		102
2-Methylnaphthalene	ND		102
Hexachlorocyclopentadiene	ND		102
2-Chloronaphthalene	ND		102
2-Nitroaniline	ND		102
Dimethylphthalate	ND		102
2,6-Dinitrotoluene	ND		102
Acenaphthylene	ND		102

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-005

Client ID: SS-54

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7008.D

GC/MS Column: DB-5

Sample wt/vol: 10.53g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 6.8

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		102
Acenaphthene	ND		102
2,4-Dinitrotoluene	ND		102
Dibenzofuran	ND		102
Diethylphthalate	ND		102
Fluorene	ND		102
4-Chlorophenyl-phenylether	ND		102
4-Nitroaniline	ND		102
N-Nitrosodiphenylamine	ND		102
1,2-Diphenylhydrazine/Azobenzene	ND		102
4-Bromophenyl-phenylether	ND		102
Hexachlorobenzene	ND		102
Phenanthrene	ND		102
Anthracene	ND		102
Carbazole	ND		102
Di-n-butylphthalate	ND		102
Fluoranthene	ND		102
Benzidine	ND		102
Pyrene	ND		102
3,3'-Dimethylbenzidine	ND		102
Butylbenzylphthalate	ND		102
3,3'-Dichlorobenzidine	ND		102
Benzo[a]anthracene	ND		102
Chrysene	ND		102
bis(2-Ethylhexyl)phthalate	ND		102
Di-n-octylphthalate	ND		102
Benzo[b]fluoranthene	ND		102
Benzo[k]fluoranthene	ND		102
Benzo[a]pyrene	ND		102
Indeno[1,2,3-cd]pyrene	ND		102
Dibenz[a,h]anthracene	ND		102
Benzo[g,h,i]perylene	ND		102

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-006

Client ID: SS-55

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7009.D

GC/MS Column: DB-5

Sample wt/vol: 10.18g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.6

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		112
Aniline	ND		112
bis(2-Chloroethyl)ether	ND		112
1,3-Dichlorobenzene	ND		112
1,4-Dichlorobenzene	ND		112
Benzyl alcohol	ND		112
1,2-Dichlorobenzene	ND		112
bis(2-chloroisopropyl)ether	ND		112
N-Nitroso-di-n-propylamine	ND		112
Hexachloroethane	ND		112
Nitrobenzene	ND		112
Isophorone	ND		112
bis(2-Chloroethoxy)methane	ND		112
1,2,4-Trichlorobenzene	ND		112
Naphthalene	ND		112
4-Chloroaniline	ND		112
Hexachlorobutadiene	ND		112
2-Methylnaphthalene	ND		112
Hexachlorocyclopentadiene	ND		112
2-Chloronaphthalene	ND		112
2-Nitroaniline	ND		112
Dimethylphthalate	ND		112
2,6-Dinitrotoluene	ND		112
Acenaphthylene	ND		112

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-006

Client ID: SS-55

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7009.D

GC/MS Column: DB-5

Sample wt/vol: 10.18g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.6

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		112
Acenaphthene	ND		112
2,4-Dinitrotoluene	ND		112
Dibenzofuran	ND		112
Diethylphthalate	ND		112
Fluorene	ND		112
4-Chlorophenyl-phenylether	ND		112
4-Nitroaniline	ND		112
N-Nitrosodiphenylamine	ND		112
1,2-Diphenylhydrazine/Azobenzene	ND		112
4-Bromophenyl-phenylether	ND		112
Hexachlorobenzene	ND		112
Phenanthrene	453		112
Anthracene	ND		112
Carbazole	ND		112
Di-n-butylphthalate	ND		112
Fluoranthene	636		112
Benzidine	ND		112
Pyrene	717		112
3,3'-Dimethylbenzidine	ND		112
Butylbenzylphthalate	ND		112
3,3'-Dichlorobenzidine	ND		112
Benzo[a]anthracene	324		112
Chrysene	277		112
bis(2-Ethylhexyl)phthalate	ND		112
Di-n-octylphthalate	ND		112
Benzo[b]fluoranthene	360		112
Benzo[k]fluoranthene	141		112
Benzo[a]pyrene	260		112
Indeno[1,2,3-cd]pyrene	190		112
Dibenz[a,h]anthracene	ND		112
Benzo[g,h,i]perylene	222		112

Total Target Compounds: 3580

INTEGRATED ANALYTICAL LABORATORIES
SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-001
Client ID: SS-50
Date Received: 11/21/2000
Date Extracted: 11/28/2000
Date Analyzed: 11/28/2000
Data file: C6955.D

GC/MS Column: DB-5
Sample wt/vol: 10.05g
Matrix-Units: Soil- μ g/Kg (ppb)
Dilution Factor: 1
% Moisture: 10.9

Compound	Concentration	Q	MDL
Acenaphthene	268		112
Fluorene	649		112
Phenanthrene	1840		112
Anthracene	305		112
Fluoranthene	ND		112
Pyrene	299		112
Benzo[a]anthracene	ND		112
Chrysene	ND		112
Benzo[b]fluoranthene	ND		112
Benzo[k]fluoranthene	ND		112
Benzo[a]pyrene	ND		112
Indeno[1,2,3-cd]pyrene	ND		112
Dibenz[a,h]anthracene	ND		112
Benzo[g,h,i]perylene	ND		112
Total Target Compounds:	3361		

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-002

Client ID: SS-51

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7006.D

GC/MS Column: DB-5

Sample wt/vol: 10.13g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 5

% Moisture: 12.4

Compound	Concentration	Q	MDL
Acenaphthene	2220		563
Fluorene	2370		563
Phenanthrene	3950		563
Anthracene	1820		563
Fluoranthene	ND		563
Pyrene	878		563
Benzo[a]anthracene	ND		563
Chrysene	ND		563
Benzo[b]fluoranthene	ND		563
Benzo[k]fluoranthene	ND		563
Benzo[a]pyrene	ND		563
Indeno[1,2,3-cd]pyrene	ND		563
Dibenz[a,h]anthracene	ND		563
Benzo[g,h,i]perylene	ND		563

Total Target Compounds: 11238

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-003

Client ID: SS-52

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6957.D

GC/MS Column: DB-5

Sample wt/vol: 10.66g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 17.7

Compound	Concentration	Q	MDL
Acenaphthene	ND		114
Fluorene	ND		114
Phenanthrene	ND		114
Anthracene	ND		114
Fluoranthene	ND		114
Pyrene	ND		114
Benzo[a]anthracene	ND		114
Chrysene	ND		114
Benzo[b]fluoranthene	ND		114
Benzo[k]fluoranthene	ND		114
Benzo[a]pyrene	ND		114
Indeno[1,2,3-cd]pyrene	ND		114
Dibenz[a,h]anthracene	ND		114
Benzo[g,h,i]perylene	ND		114
Total Target Compounds:		0	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-004

Client ID: SS-53

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7007.D

GC/MS Column: DB-5

Sample wt/vol: 10.44g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 3

% Moisture: 9.8

Compound	Concentration	Q	MDL
Acenaphthene	229	J	319
Fluorene	221	J	319
Phenanthrene	377		319
Anthracene	ND		319
Fluoranthene	ND		319
Pyrene	ND		319
Benzo[a]anthracene	ND		319
Chrysene	ND		319
Benzo[b]fluoranthene	ND		319
Benzo[k]fluoranthene	ND		319
Benzo[a]pyrene	ND		319
Indeno[1,2,3-cd]pyrene	ND		319
Dibenz[a,h]anthracene	ND		319
Benzo[g,h,i]perylene	ND		319
Total Target Compounds:	827	J	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-005

Client ID: SS-54

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7008.D

GC/MS Column: DB-5

Sample wt/vol: 10.53g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 6.8

Compound	Concentration	Q	MDL
Acenaphthene	ND		102
Fluorene	ND		102
Phenanthrene	ND		102
Anthracene	ND		102
Fluoranthene	ND		102
Pyrene	ND		102
Benzo[a]anthracene	ND		102
Chrysene	ND		102
Benzo[b]fluoranthene	ND		102
Benzo[k]fluoranthene	ND		102
Benzo[a]pyrene	ND		102
Indeno[1,2,3-cd]pyrene	ND		102
Dibenz[a,h]anthracene	ND		102
Benzo[g,h,i]perylene	ND		102

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: GEOVATION/NEW GRANGE

Lab ID: 7452-006

Client ID: SS-55

Date Received: 11/21/2000

Date Extracted: 11/28/2000

Date Analyzed: 11/29/2000

Data file: C7009.D

GC/MS Column: DB-5

Sample wt/vol: 10.18g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 12.6

Compound	Concentration	Q	MDL
Acenaphthene	ND		112
Fluorene	ND		112
Phenanthrene	453		112
Anthracene	ND		112
Fluoranthene	636		112
Pyrene	717		112
Benzo[a]anthracene	324		112
Chrysene	277		112
Benzo[b]fluoranthene	360		112
Benzo[k]fluoranthene	141		112
Benzo[a]pyrene	260		112
Indeno[1,2,3-cd]pyrene	190		112
Dibenz[a,h]anthracene	ND		112
Benzo[g,h,i]perylene	222		112

Total Target Compounds: 3580

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

<u>Analytical Parameter</u>	<u>Aqueous Samples</u> <u>Method #</u>	<u>Soil/Other Samples</u> <u>Method #</u>
Volatiles	NA	EPA 8260B
Semivolatiles - BN	NA	EPA 8270C

000044

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J5347.D

BFB Injection Date: 11/09/2000

Inst ID: MSD J

BFB Injection Time: 10:12

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	22.9
75	30.0 - 60.0% of mass 95	58.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Great than 50.0% of mass 95	60.6
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	58.5 (96.6)1
177	5.0 - 9.0% of mass 176	3.9 (6.7)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100PPB	STD-100PPB	J5348.D	11/09/2000	10:38
20PPB	STD-20PPB	J5349.D	11/09/2000	11:03
50PPB	STD-50PPB	J5350.D	11/09/2000	11:29
150PPB	STD-150PPB	J5351.D	11/09/2000	11:55
200PPB	STD-200PPB	J5352.D	11/09/2000	12:20
N/A	METHOD-BLK	J5354.D	11/09/2000	13:12
TB	7075-019	J5355.D	11/09/2000	13:37
SB-3B_7.5-8'	7075-003	J5356.D	11/09/2000	14:03
SB-4B_7.5-8'	7075-005	J5357.D	11/09/2000	14:28
SB-7B_6.5-7'	7075-007	J5358.D	11/09/2000	14:54
SB-8B_7-7.5'	7075-009	J5359.D	11/09/2000	15:20
SB-13B_7.5-8'	7075-014	J5361.D	11/09/2000	16:12
SB-14A_5.5-6'	7075-015	J5362.D	11/09/2000	16:37
SB-15A_5.5-6'	7075-016	J5363.D	11/09/2000	17:03
SB-17_7.5-8'	7075-018	J5364.D	11/09/2000	17:29
SB-1A_5.5-6'	7075-001	J5365.D	11/09/2000	17:55
SB-3A_5.75-6.25'	7075-002	J5366.D	11/09/2000	18:20
SB-4A_4.5-5'	7075-004	J5367.D	11/09/2000	18:46
SB-8A_6-6.5'	7075-008	J5369.D	11/09/2000	19:37
SB-9A_5-5.5'	7075-010	J5370.D	11/09/2000	20:03

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J5347.D

BFB Injection Date : 11/09/200

Inst ID: MSD J

BFB Injection Time: 10:12

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	22.9
75	30.0 - 60.0% of mass 95	58.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Great than 50.0% of mass 95	60.6
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	58.5 (96.6)1
177	5.0 - 9.0% of mass 176	3.9 (6.7)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
SB-13A__5.5-6'	7075-013	J5372.D	11/09/2000	20:54
SB-16B__7.5-8'	7075-017	J5373.D	11/09/2000	21:20
MS	7075-016MS	J5374.D	11/09/2000	21:46
MSD	7075-016MSD	J5375.D	11/09/2000	22:11

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J5664.D

BFB Injection Date: 11/22/2000

Inst ID: MSD J

BFB Injection Time: 9:27

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	58.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	77.7
175	5.0 - 9.0% of mass 174	5.4 (7.0)1
176	95.0 - 101.0% of mass 174	74.3 (95.6)1
177	5.0 - 9.0% of mass 176	4.4 (5.9)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100PPB	STD-100PPB	J5665.D	11/22/2000	9:53
N/A	METHOD-BLK	J5666.D	11/22/2000	10:19
N/A	METHOD-BLK	J5667.D	11/22/2000	10:45
TRIP_BLANK	7446-012	J5668.D	11/22/2000	11:11
TRIP_BLANK	7338-009	J5669.D	11/22/2000	11:37
7	7338-002	J5670.D	11/22/2000	12:02
MS	7338-002MS	J5671.D	11/22/2000	12:28
MSD	7338-002MSD	J5672.D	11/22/2000	12:54
SB-10A	7449-001	J5673.D	11/22/2000	13:20
MS	7446-012MS	J5677.D	11/22/2000	15:02
MSD	7446-012MSD	J5678.D	11/22/2000	15:28
TB	7363-003	J5680.D	11/22/2000	16:19
LEW-CON	7453-001	J5684.D	11/22/2000	18:03
SS-53	7452-004	J5685.D	11/22/2000	18:28
SS-50	7452-001	J5686.D	11/22/2000	18:54

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F6488.D

BFB Injection Date: 11/27/2000

Inst ID: MSD F

BFB Injection Time: 10:19

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	22.0
75	30.0 - 60.0% of mass 95	54.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	79.0
175	5.0 - 9.0% of mass 174	6.2 (7.9)1
176	95.0 - 101.0% of mass 174	79.4 (100.5)1
177	5.0 - 9.0% of mass 176	5.2 (6.6)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
200	200_PPB_STD	F6490.D	11/27/2000	14:33
150	150_PPB_STD	F6491.D	11/27/2000	15:05
50	50_PPB_STD	F6492.D	11/27/2000	15:38
20	20_PPB_STD	F6493.D	11/27/2000	16:10
100	100_PPB_STD	F6494.D	11/27/2000	16:43

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F6520.D

BFB Injection Date: 11/28/2000

Inst ID: MSD F

BFB Injection Time: 20:45

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	20.9
75	30.0 - 60.0% of mass 95	51.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	69.6
175	5.0 - 9.0% of mass 174	5.6 (8.0)1
176	95.0 - 101.0% of mass 174	68.1 (97.8)1
177	5.0 - 9.0% of mass 176	- 3.9 (5.7)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPB_STD	F6522.D	11/28/2000	21:49
N/A	METHOD_BLK	F6525.D	11/28/2000	23:26
SS-52	7452-003	F6526.D	11/28/2000	23:59
SS-54	7452-005	F6527.D	11/29/2000	0:31
SS-51	7452-002	F6529.D	11/29/2000	1:35
MS	7452-006MS	F6530.D	11/29/2000	2:07
MSD	7452-006MSD	F6531.D	11/29/2000	2:40
SS-55	7452-006	F6532.D	11/29/2000	3:12

VOLATILE METHOD BLANK SUMMARY

Lab File ID: J5666.D

Instrument ID: MSD J

Date Analyzed: 11/22/2000

Time Analyzed: 10:19

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
N/A	METHOD-BLK	11/22/2000	10:45
TRIP_BLANK	7446-012	11/22/2000	11:11
TRIP_BLANK	7338-009	11/22/2000	11:37
7	7338-002	11/22/2000	12:02
MS	7338-002MS	11/22/2000	12:28
MSD	7338-002MSD	11/22/2000	12:54
SB-10A	7449-001	11/22/2000	13:20
MS	7446-012MS	11/22/2000	15:02
MSD	7446-012MSD	11/22/2000	15:28
TB	7363-003	11/22/2000	16:19
LEW-CON	7453-001	11/22/2000	18:03
SS-53	7452-004	11/22/2000	18:28
SS-50	7452-001	11/22/2000	18:54

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project:

Lab ID: METHOD-BLK

Client ID: N/A

Date Received:

Date Analyzed: 11/22/2000

Data file: J5666.D

GC/MS Column: DB-624

Sample wt/vol: 0.1g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 50

% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project:

Lab ID: METHOD-BLK

Client ID: N/A

Date Received:

Date Analyzed: 11/22/2000

Data file: J5666.D

GC/MS Column: DB-624

Sample wt/vol: 0.1g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 50

% Moisture: 0

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		250
Benzene	ND		250
Toluene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Isopropylbenzene	ND		250
n-Propylbenzene	ND		250
1,3,5-Trimethylbenzene	ND		250
tert-Butylbenzene	ND		250
1,2,4-Trimethylbenzene	ND		250
sec-Butylbenzene	ND		250
4-Isopropyltoluene	ND		250
n-Butylbenzene	ND		250
Naphthalene	ND		250
Total Target Compounds:	0		

000052

VOLATILE METHOD BLANK SUMMARY

Lab File ID: F6525.D

Instrument ID: MSD F

Date Analyzed: 11/28/2000

Time Analyzed: 23:26

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SS-52	7452-003	11/28/2000	23:59
SS-54	7452-005	11/29/2000	0:31
SS-51	7452-002	11/29/2000	1:35
MS	7452-006MS	11/29/2000	2:07
MSD	7452-006MSD	11/29/2000	2:40
SS-55	7452-006	11/29/2000	3:12

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 11/28/2000

Data file: F6525.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		5
Vinyl Chloride	ND		5
Bromomethane	ND		5
Chloroethane	ND		5
Trichlorofluoromethane	ND		5
Acrolein	ND		10
1,1-Dichloroethene	ND		5
Methylene Chloride	ND		5
Acrylonitrile	ND		10
trans-1,2-Dichloroethene	ND		5
1,1-Dichloroethane	ND		5
Chloroform	ND		5
1,1,1-Trichloroethane	ND		5
Carbon Tetrachloride	ND		5
1,2-Dichloroethane(EDC)	ND		5
Benzene	ND		5
Trichloroethene	ND		5
1,2-Dichloropropane	ND		5
Bromodichloromethane	ND		5
2-Chloroethylvinyl Ether	ND		5
cis-1,3-Dichloropropene	ND		5
Toluene	ND		5
trans-1,3-Dichloropropene	ND		5
1,1,2-Trichloroethane	ND		5
Tetrachloroethene	ND		5
Dibromochloromethane	ND		5
Chlorobenzene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Bromoform	ND		5
1,1,2,2-Tetrachloroethane	ND		5
1,3-Dichlorobenzene	ND		5
1,4-Dichlorobenzene	ND		5
1,2-Dichlorobenzene	ND		5

Total Target Compounds: 0

000054

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK

Client ID: N/A

Date Received: N/A

Date Analyzed: 11/28/2000

Data file: F6525.D

GC/MS Column: DB-624

Sample wt/vol: 5.0g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 1

% Moisture: 0

Compound	Concentration	Q	MDL
Methyl-t-Butyl Ether(MTBE)	ND		5
Benzene	ND		5
Toluene	ND		5
Ethylbenzene	ND		5
Total Xylenes	ND		5
Isopropylbenzene	ND		5
n-Propylbenzene	ND		5
1,3,5-Trimethylbenzene	ND		5
tert-Butylbenzene	ND		5
1,2,4-Trimethylbenzene	ND		5
sec-Butylbenzene	ND		5
4-Isopropyltoluene	ND		5
n-Butylbenzene	ND		5
Naphthalene	ND		5

Total Target Compounds: 0

000055

Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Thu Nov 09 12:44:52 2000
 Response via : Initial Calibration

Calibration Files

20 =J5349.D 100 =J5348.D 50 =J5350.D
 150 =J5351.D 200 =J5352.D

Compound	20	100	50	150	200	Avg	%RSD

1) I	Pentafluorobenzene	-----ISTD-----					
2) T	Dichlorodifluoromet	0.476	0.503	0.464	0.492	0.474	0.482
3) P	Chloromethane	0.593	0.545	0.553	0.543	0.513	0.549
4) C	Vinyl Chloride	0.589	0.542	0.548	0.551	0.542	0.554
5) T	Bromomethane	0.423	0.362	0.374	0.363	0.354	0.375
6) T	Chloroethane	0.394	0.366	0.369	0.365	0.358	0.370
7) T	Trichlorofluorometh	0.767	0.887	0.766	0.826	0.794	0.808
8) T	Acrolein	0.043	0.044	0.043	0.042	0.042	0.043
9) MC	1,1-Dichloroethene	0.430	0.438	0.411	0.435	0.428	0.428
10) T	Acetone	0.222	0.192	0.191	0.185	0.193	0.197
11) T	Carbon Disulfide	1.879	1.885	1.785	1.857	1.819	1.845
12) T	Vinyl Acetate	0.748	0.788	0.696	0.641	0.617	0.698
13) T	Methylene Chloride	0.592	0.530	0.539	0.527	0.517	0.541
14) T	Acrylonitrile	0.154	0.162	0.150	0.153	0.156	0.155
15) T	t-Butyl Alcohol (TBA	0.045	0.040	0.040	0.039	0.040	0.041
16) T	trans-1,2-Dichloroe	0.460	0.431	0.433	0.431	0.423	0.435
17) T	Methyl-t-Butyl Ethe	1.425	1.324	1.308	1.286	1.278	1.324
18) P	1,1-Dichloroethane	0.907	0.835	0.835	0.841	0.833	0.850
T	Diisopropyl Ether (D	1.622	1.508	1.502	1.508	1.499	1.528
T	cis-1,2-Dichloroeth	0.485	0.434	0.443	0.439	0.428	0.446
1) T	2,2-Dichloropropane	0.784	0.822	0.759	0.786	0.772	0.785
22) T	2-Butanone (MEK)	0.224	0.205	0.208	0.197	0.193	0.205
3) T	Bromochloromethane	0.194	0.172	0.174	0.168	0.164	0.174
5) C	Chloroform	0.975	0.894	0.882	0.883	0.867	0.900
26) T	1,1,1-Trichloroetha	0.771	0.795	0.740	0.776	0.769	0.770
27) T	Carbon Tetrachlorid	0.519	0.567	0.508	0.556	0.552	0.540
8) T	1,1-Dichloropropene	0.602	0.620	0.579	0.602	0.597	0.600
9) T	1,2-Dichloroethane (	1.055	0.956	0.935	0.905	0.884	0.947
30) S	1,2-Dichloroethane-	0.936	0.956	0.919	0.906	0.885	0.920
1) I	1,4-Difluorobenzene	-----ISTD-----					
32) M	Benzene	1.329	1.173	1.203	1.166	1.160	1.206
3) M	Trichloroethene	0.335	0.306	0.308	0.308	0.304	0.312
4) C	1,2-Dichloropropane	0.330	0.294	0.300	0.289	0.287	0.300
35) T	Dibromomethane	0.207	0.186	0.187	0.179	0.174	0.187
37) T	Bromodichloromethan	0.536	0.489	0.485	0.480	0.477	0.493
8) T	2-Chloroethylvinyl	0.201	0.189	0.185	0.185	0.187	0.190
9) T	cis-1,3-Dichloropro	0.610	0.568	0.564	0.564	0.556	0.572
40) T	4-Methyl-2-pentanone	0.264	0.253	0.248	0.239	0.241	0.249
1) S	Toluene-d8	1.170	1.181	1.154	1.181	1.189	1.175
2) MC	Toluene	0.819	0.736	0.746	0.730	0.718	0.750
43) T	trans-1,3-Dichlorop	0.615	0.590	0.575	0.576	0.567	0.584
44) T	1,1,2-Trichloroetha	0.221	0.201	0.204	0.196	0.193	0.203
5) T	Tetrachloroethene	0.247	0.238	0.235	0.231	0.224	0.235
T	1,3-Dichloropropane	0.544	0.485	0.488	0.468	0.460	0.489
47) T	2-Hexanone	0.215	0.202	0.195	0.192	0.191	0.199
3) T	Dibromochloromethan	0.257	0.247	0.237	0.241	0.241	0.245
9) T	1,2-Dibromoethane (E	0.268	0.246	0.246	0.236	0.231	0.245

-----ISTD-----									
51)	MP	Chlorobenzene	1.037	0.919	0.942	0.916	0.887	0.940	6.08
52)	T	1,1,1,2-Tetrachloro	0.350	0.336	0.330	0.332	0.324	0.334	2.88
53)	C	Ethylbenzene	2.074	1.940	1.943	1.922	1.866	1.949	3.91
54)	T	m,p-Xylene	0.718	0.654	0.660	0.634	0.610	0.655	6.16
55)	T	o-Xylene	0.726	0.659	0.682	0.643	0.619	0.666	6.12
56)	T	Styrene	1.248	1.138	1.168	1.119	1.068	1.148	5.81
57)	P	Bromoform	0.201	0.204	0.197	0.203	0.202	0.202	1.32
58)	T	Isopropylbenzene	1.759	1.723	1.684	1.693	1.638	1.699	2.66
59)	S	Bromofluorobenzene	0.727	0.761	0.724	0.740	0.724	0.735	2.14
60)	P	1,1,2,2-Tetrachloro	0.423	0.384	0.386	0.351	0.342	0.377	8.46
61)	T	Bromobenzene	0.433	0.379	0.393	0.369	0.358	0.386	7.49
62)	T	1,2,3-Trichloroprop	0.531	0.474	0.478	0.446	0.435	0.472	7.89
63)	T	n-Propylbenzene	2.285	2.232	2.142	2.186	2.117	2.192	3.09
64)	T	2-Chlorotoluene	1.619	1.487	1.481	1.469	1.408	1.492	5.17
65)	T	1,3,5-Trimethylbenz	1.703	1.591	1.590	1.569	1.536	1.598	3.92
66)	T	4-Chlorotoluene	1.969	1.821	1.812	1.766	1.718	1.817	5.18
67)	T	tert-Butylbenzene	1.191	1.145	1.118	1.149	1.127	1.146	2.48
68)	T	1,2,4-Trimethylbenz	1.817	1.698	1.687	1.668	1.615	1.697	4.38
69)	T	sec-Butylbenzene	1.632	1.668	1.604	1.651	1.617	1.634	1.56
70)	T	1,3-Dichlorobenzene	0.816	0.733	0.751	0.719	0.686	0.741	6.49
71)	T	4-Isopropyltoluene	1.448	1.382	1.329	1.357	1.320	1.367	3.74
72)	T	1,4-Dichlorobenzene	0.858	0.761	0.776	0.744	0.710	0.770	7.15
73)	T	n-Butylbenzene	0.801	0.799	0.765	0.790	0.763	0.784	2.32
74)	T	1,2-Dichlorobenzene	0.804	0.706	0.731	0.679	0.654	0.715	8.05
75)	T	1,2-Dibromo-3-chlor	0.099	0.100	0.091	0.091	0.091	0.095	4.88
76)	T	1,2,4-Trichlorobenz	0.526	0.464	0.466	0.457	0.444	0.471	6.72
77)	T	Hexachlorobutadiene	0.194	0.192	0.184	0.191	0.187	0.190	2.15
78)	T	Naphthalene	0.964	0.901	0.882	0.845	0.825	0.883	6.10
79)	T	1,2,3-Trichlorobenz	0.429	0.357	0.370	0.345	0.339	0.368	9.87
80)	T	1,1,2-Trichloro-1,2	0.397	0.458	0.410	0.422	0.405	0.418	5.70
81)	T	Methyl acetate	0.407	0.349	0.366	0.348	0.348	0.364	7.00
82)	T	Cyclohexane	0.537	0.616	0.586	0.595	0.590	0.585	4.95
83)	T	Methyl cyclohexane	0.420	0.468	0.421	0.449	0.438	0.439	4.58

(#) = Out of Range

JME1109.M

Thu Nov 09 12:45:00 2000 MSD_J

00005

Response Factor Report 5970 - In

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Nov 28 08:24:22 2000
 Response via : Initial Calibration

Calibration Files

20 =F6493.D 50 =F6492.D 100 =F6494.D
 150 =F6491.D 200 =F6490.D

Compound		20	50	100	150	200	Avg	%RSD
-----ISTD-----								
1) I	Pentafluorobenzene							
2) T	Dichlorodifluorometha	0.534	0.507	0.455	0.549	0.350	0.479	16.84
3) P	Chloromethane	0.320	0.306	0.244	0.310	0.288	0.294	10.26
4) C	Vinyl Chloride	0.310	0.344	0.334	0.381	0.315	0.337	8.45
5) T	Bromomethane	0.294	0.328	0.318	0.336	0.283	0.312	7.29
6) T	Chloroethane	0.195	0.215	0.210	0.236	0.206	0.212	7.14
7) T	Trichlorofluoromethan	0.908	0.936	0.902	0.979	0.790	0.903	7.76
8) T	Acrolein	0.012	0.011	0.015	0.014	0.013	0.013	10.27
9) MC	1,1-Dichloroethene	0.392	0.398	0.409	0.418	0.387	0.401	3.18
10) T	Acetone	0.051	0.056	0.055	0.045	0.052	0.052	8.39
11) T	Carbon Disulfide	1.868	1.313	1.333	1.424	1.241	1.436	17.41
12) T	Vinyl Acetate	0.827	0.811	0.928	0.888	0.814	0.854	6.09
13) T	Methylene Chloride	0.301	0.279	0.310	0.301	0.288	0.296	4.15
14) T	Acrylonitrile	0.029	0.027	0.035	0.031	0.031	0.031	9.56
15) T	t-Butyl Alcohol (TBA)	0.006	0.011	0.016	0.014	0.013	0.012	31.33
16) T	trans-1,2-Dichloroeth	0.431	0.439	0.445	0.464	0.430	0.442	3.14
17) T	Methyl-t-Butyl Ether (	0.537	0.514	0.593	0.556	0.546	0.549	5.29
18) P	1,1-Dichloroethane	0.701	0.740	0.739	0.754	0.678	0.722	4.38
T	Diisopropyl Ether (DIP	1.095	1.159	1.183	1.150	1.092	1.136	3.55
20) T	cis-1,2-Dichloroethen	0.394	0.401	0.417	0.394	0.380	0.397	3.37
21) T	2,2-Dichloropropane	0.761	0.779	0.786	0.758	0.708	0.758	4.02
22) T	2-Butanone (MEK)	0.056	0.073	0.084	0.050	0.073	0.067	20.32
23) T	Bromochloromethane	0.182	0.194	0.208	0.197	0.191	0.195	4.90
25) C	Chloroform	0.758	0.762	0.774	0.755	0.698	0.749	3.94
26) T	1,1,1-Trichloroethane	0.833	0.862	0.819	0.817	0.752	0.817	4.97
27) T	Carbon Tetrachloride	0.697	0.716	0.700	0.718	0.655	0.697	3.66
28) T	1,1-Dichloropropene	0.698	0.700	0.673	0.674	0.619	0.673	4.83
29) T	1,2-Dichloroethane (ED	0.368	0.372	0.408	0.362	0.356	0.373	5.44
30) S	1,2-Dichloroethane-d4	0.229	0.234	0.255	0.244	0.268	0.246	6.38
-----ISTD-----								
31) I	1,4-Difluorobenzene							
32) M	Benzene	1.188	1.210	1.271	1.211	1.080	1.192	5.88
33) M	Trichloroethene	0.600	0.628	0.645	0.608	0.522	0.600	7.88
34) C	1,2-Dichloropropane	0.401	0.416	0.444	0.413	0.362	0.407	7.33
35) T	Dibromomethane	0.254	0.272	0.304	0.271	0.236	0.267	9.41
37) T	Bromodichloromethane	0.612	0.655	0.716	0.663	0.591	0.648	7.51
38) T	2-Chloroethylvinyl Et	0.064	0.084	0.105	0.097	0.094	0.089	17.62
39) T	cis-1,3-Dichloroprope	0.487	0.554	0.606	0.555	0.515	0.543	8.29
40) T	4-Methyl-2-pentanone (	0.149	0.186	0.201	0.177	0.169	0.177	10.85
41) S	Toluene-d8	0.897	0.940	0.925	0.894	0.824	0.896	4.99
42) MC	Toluene	0.874	0.906	0.919	0.896	0.775	0.874	6.63
43) T	trans-1,3-Dichloropro	0.333	0.381	0.438	0.422	0.394	0.393	10.33
44) T	1,1,2-Trichloroethane	0.220	0.237	0.266	0.240	0.210	0.235	9.08
45) T	Tetrachloroethene	0.759	0.779	0.776	0.765	0.639	0.744	7.97
T	1,3-Dichloropropane	0.400	0.445	0.491	0.434	0.393	0.433	9.07
47) T	2-Hexanone	0.071	0.113	0.151	0.125	0.136	0.119	25.38
48) T	Dibromochloromethane	0.344	0.411	0.458	0.424	0.393	0.406	10.35
49) T	1,2-Dibromoethane (EDB	0.301	0.312	0.359	0.345	0.292	0.322	8.99

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		-----ISTD-----						
50)	I Chlorobenzene-d5							
51)	MP Chlorobenzene	1.501	1.556	1.648	1.518	1.380	1.521	6.38
52)	T 1,1,1,2-Tetrachloroet	0.628	0.657	0.706	0.646	0.613	0.650	5.45
53)	C Ethylbenzene	2.776	2.843	2.872	2.794	2.425	2.742	6.61
54)	T m,p-Xylene	0.937	1.001	0.996	0.952	0.821	0.941	7.75
55)	T o-Xylene	0.825	0.881	0.893	0.904	0.769	0.854	6.64
56)	T Styrene	1.268	1.337	1.461	1.378	1.244	1.337	6.53
57)	P Bromoform	0.338	0.348	0.460	0.423	0.408	0.395	12.97
58)	T Isopropylbenzene	2.934	2.956	2.981	2.963	2.516	2.870	6.92
59)	S Bromofluorobenzene	0.819	0.828	0.880	0.849	0.773	0.830	4.73
60)	P 1,1,2,2-Tetrachloroet	0.526	0.543	0.644	0.570	0.501	0.557	9.82
61)	T Bromobenzene	0.615	0.670	0.747	0.673	0.624	0.666	7.90
62)	T 1,2,3-Trichloropropan	0.587	0.590	0.575	0.532	0.464	0.550	9.66
63)	T n-Propylbenzene	3.511	3.577	3.638	3.646	2.973	3.469	8.15
64)	T 2-Chlorotoluene	2.294	2.179	2.166	2.152	1.851	2.128	7.76
65)	T 1,3,5-Trimethylbenzen	2.356	2.414	2.407	2.370	2.000	2.309	7.57
66)	T 4-Chlorotoluene	2.234	2.293	2.485	2.323	2.024	2.272	7.34
67)	T tert-Butylbenzene	2.515	2.619	2.530	2.553	2.019	2.447	9.92
68)	T 1,2,4-Trimethylbenzen	2.115	2.247	2.282	2.202	1.873	2.144	7.64
69)	T sec-Butylbenzene	3.419	3.452	3.349	3.468	2.793	3.296	8.64
70)	T 1,3-Dichlorobenzene	1.005	1.120	1.207	1.179	1.017	1.106	8.33
71)	T 4-Isopropyltoluene	2.632	2.700	2.617	2.596	2.147	2.539	8.75
72)	T 1,4-Dichlorobenzene	1.195	1.234	1.355	1.242	1.076	1.221	8.22
73)	T n-Butylbenzene	2.597	2.691	2.715	2.809	2.390	2.640	6.03
74)	T 1,2-Dichlorobenzene	1.069	0.991	1.055	1.019	0.874	1.002	7.76
75)	T 1,2-Dibromo-3-chlorop	0.092	0.126	0.129	0.117	0.107	0.114	13.02
76)	T 1,2,4-Trichlorobenzen	0.657	0.760	0.784	0.727	0.679	0.722	7.41
77)	T Hexachlorobutadiene	0.957	0.931	0.890	0.944	0.756	0.896	9.15
78)	T Naphthalene	0.959	0.915	0.848	0.862	0.729	0.862	10.07
79)	T 1,2,3-Trichlorobenzen	0.597	0.637	0.655	0.646	0.535	0.614	8.01
80)	T 1,1,2-Trichloro-1,2,2	1.697	1.599	1.713	1.631	1.452	1.618	6.44
81)	T Methyl Acetate	0.176	0.170	0.226	0.190	0.184	0.189	11.50
82)	T Cyclohexane	0.689	0.688	0.715	0.633	0.586	0.662	7.86
83)	T Methylcyclohexane	1.288	1.259	1.268	1.173	1.049	1.208	8.18

(#) = Out of Range

FS01127.M

Tue Nov 28 08:36:21 2000

MSD_F

000059

Instrument ID: MSD_F
Method ID: FSO1127.M
Date: 11/28/2000

Average %RSD = 8.63

Refer to SW846 Method 8000B Section 7.5.1.

000060

Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Wed Nov 22 10:27:50 2000
 Response via : Initial Calibration

Continuing Calibration File: J5665.D

Min. RRF : 0.000 Min. Rel. Area : 50%
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Pentafluorobenzene	1.000	1.000	0.0	125
2 T	Dichlorodifluoromethane	0.482	0.496	-2.9	123
3 P	Chloromethane	0.549	0.608	-10.7	139
4 C	Vinyl Chloride	0.554	0.613	-10.5	141
5 T	Bromomethane	0.375	0.394	-5.0	136
6 T	Chloroethane	0.370	0.388	-4.6	132
7 T	Trichlorofluoromethane	0.808	0.822	-1.7	116
8 T	Acrolein	0.043	0.064	-49.0	182
9 MC	1,1-Dichloroethene	0.428	0.432	-0.7	123
10 T	Acetone	0.197	0.170	13.8	110
11 T	Carbon Disulfide	1.845	1.852	-0.4	123
12 T	Vinyl Acetate	0.698	0.858	-23.0	136
13 T	Methylene Chloride	0.541	0.535	1.1	126
14 T	Acrylonitrile	0.155	0.148	4.5	114
15 T	t-Butyl Alcohol (TBA)	0.041	0.045	-10.2	141
16 T	trans-1,2-Dichloroethene	0.435	0.439	-0.9	127
17 T	Methyl-t-Butyl Ether (MTBE)	1.324	1.406	-6.2	132
18 P	1,1-Dichloroethane	0.850	0.926	-8.9	138
19 T	Diisopropyl Ether (DIPE)	1.528	1.594	-4.3	132
20 T	cis-1,2-Dichloroethene	0.446	0.469	-5.2	135
21 T	2,2-Dichloropropane	0.785	0.929	-18.4	141
22 T	2-Butanone (MEK)	0.205	0.198	3.4	121
23 T	Bromochloromethane	0.174	0.166	4.9	120
25 C	Chloroform	0.900	0.976	-8.5	136
26 T	1,1,1-Trichloroethane	0.770	0.867	-12.6	136
27 T	Carbon Tetrachloride	0.540	0.613	-13.4	135
28 T	1,1-Dichloropropene	0.600	0.682	-13.7	137
29 T	1,2-Dichloroethane (EDC)	0.947	0.944	0.4	123
30 S	1,2-Dichloroethane-d4	0.920	0.924	-0.4	121
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	129
32 M	Benzene	1.206	1.256	-4.1	139
33 M	Trichloroethene	0.312	0.326	-4.3	138
34 C	1,2-Dichloropropane	0.300	0.319	-6.3	140
35 T	Dibromomethane	0.187	0.183	1.9	127
37 T	Bromodichloromethane	0.493	0.509	-3.2	135
38 T	2-Chloroethylvinyl Ether	0.190	0.197	-4.0	135
39 T	cis-1,3-Dichloropropene	0.572	0.617	-7.7	140
40 T	4-Methyl-2-pentanone (MIBK)	0.249	0.251	-0.8	128
41 S	Toluene-d8	1.175	1.203	-2.4	132
42 MC	Toluene	0.750	0.763	-1.7	134
43 T	trans-1,3-Dichloropropene	0.584	0.617	-5.6	135
44 T	1,1,2-Trichloroethane	0.203	0.204	-0.5	131
45 T	Tetrachloroethene	0.235	0.234	0.6	127
46 T	1,3-Dichloropropane	0.489	0.501	-2.5	134
47 T	2-Hexanone	0.199	0.201	-1.2	129
48 T	Dibromochloromethane	0.245	0.239	2.5	125
49 T	1,2-Dibromoethane (EDB)	0.245	0.239	2.5	126

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51	MP	Chlorobenzene	1.000	1.000	0.0	132
52	T	1,1,1,2-Tetrachloroethane	0.940	0.924	1.7	132
53	C	Ethylbenzene	0.334	0.330	1.4	129
54	T	m,p-Xylene	1.949	1.987	-1.9	135
55	T	o-Xylene	0.655	0.648	1.2	130
56	T	Styrene	0.666	0.654	1.7	131
57	P	Bromoform	1.148	1.128	1.7	131
58	T	Isopropylbenzene	0.202	0.194	4.0	125
59	S	Bromofluorobenzene	1.699	1.722	-1.3	132
60	P	1,1,2,2-Tetrachloroethane	0.735	0.752	-2.3	130
61	T	Bromobenzene	0.377	0.361	4.4	124
62	T	1,2,3-Trichloropropane	0.386	0.358	7.3	124
63	T	n-Propylbenzene	0.472	0.435	7.9	121
64	T	2-Chlorotoluene	2.192	2.198	-0.3	130
65	T	1,3,5-Trimethylbenzene	1.492	1.474	1.3	131
66	T	4-Chlorotoluene	1.598	1.572	1.6	130
67	T	tert-Butylbenzene	1.817	1.783	1.9	129
68	T	1,2,4-Trimethylbenzene	1.146	1.097	4.3	126
69	T	sec-Butylbenzene	1.697	1.646	3.0	128
70	T	1,3-Dichlorobenzene	1.634	1.574	3.7	124
71	T	4-Isopropyltoluene	0.741	0.688	7.2	123
72	T	1,4-Dichlorobenzene	1.367	1.306	4.5	124
73	T	n-Butylbenzene	0.770	0.700	9.1	121
74	T	1,2-Dichlorobenzene	0.784	0.766	2.3	126
75	T	1,2-Dibromo-3-chloropropane	0.715	0.647	9.5	121
76	T	1,2,4-Trichlorobenzene	0.095	0.083	12.1	109
77	T	Hexachlorobutadiene	0.471	0.406	13.9	115
78	T	Naphthalene	0.190	0.180	4.9	123
79	T	1,2,3-Trichlorobenzene	0.883	0.708	19.9	103
80	T	1,1,2-Trichloro-1,2,2-trifluoro	0.368	0.272	26.0	100
81	T	Methyl acetate	0.418	0.398	4.8	115
82	T	Cyclohexane	0.364	0.311	14.4	117
83	T	Methyl cyclohexane	0.585	0.625	-6.9	134
84			0.439	0.466	-6.1	131

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

J5665.D

JME1109.M

Wed Nov 22 10:27:54 2000 MSD_J

000062

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6522.D
 Acq On : 28 Nov 2000 21:49
 Sample : 100,100_PPBS STD,S,5.0g,0
 Misc : N/A,N/A,N/A
 S Integration Params: rteint.p

Vial: 23
 Operator: GREGG
 Inst : 5970 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FS01127.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Nov 28 08:24:22 2000
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	67	-0.06
2 T	Dichlorodifluoromethane	0.479	0.501	-4.6	74	-0.04
3 P	Chloromethane	0.294	0.313	-6.5	86	-0.04
4 C	Vinyl Chloride	0.337	0.367	-8.9	74	-0.02
5 T	Bromomethane	0.312	0.324	-3.8	68	-0.04
6 T	Chloroethane	0.212	0.232	-9.4	74	-0.03
7 T	Trichlorofluoromethane	0.903	0.934	-3.4	69	-0.05
8 T	Acrolein	0.013	0.012	7.7	53	-0.05
9 MC	1,1-Dichloroethene	0.401	0.434	-8.2	71	-0.05
10 T	Acetone	0.052	0.049	5.8	59	-0.10
11 T	Carbon Disulfide	1.436	1.495	-4.1	75	-0.05
12 T	Vinyl Acetate	0.854	0.832	2.6	60	-0.06
13 T	Methylene Chloride	0.296	0.330	-11.5	71	-0.05
14 T	Acrylonitrile	0.031	0.034	-9.7	65	-0.06
15 T	t-Butyl Alcohol (TBA)	0.012	0.010	16.7	41	-0.05
16 T	trans-1,2-Dichloroethene	0.442	0.481	-8.8	72	-0.05
17 T	Methyl-t-Butyl Ether (MTBE)	0.549	0.523	4.7	59	-0.06
18 P	1,1-Dichloroethane	0.722	0.764	-5.8	69	-0.08
19 T	Diisopropyl Ether (DIPE)	1.136	1.188	-4.6	67	-0.06
20 T	cis-1,2-Dichloroethene	0.397	0.400	-0.8	64	-0.05
21 T	2,2-Dichloropropane	0.758	0.760	-0.3	65	-0.06
22 T	2-Butanone (MEK)	0.067	0.067	0.0	54	-0.03
23 T	Bromochloromethane	0.195	0.182	6.7	59	-0.05
25 C	Chloroform	0.749	0.772	-3.1	67	-0.06
26 T	1,1,1-Trichloroethane	0.817	0.804	1.6	66	-0.06
27 T	Carbon Tetrachloride	0.697	0.671	3.7	64	-0.05
28 T	1,1-Dichloropropene	0.673	0.714	-6.1	71	-0.06
29 T	1,2-Dichloroethane (EDC)	0.373	0.356	4.6	59	-0.06
30 S	1,2-Dichloroethane-d4	0.246	0.264	-7.3	70	-0.06
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	76	-0.05
32 M	Benzene	1.192	1.169	1.9	69	-0.08
33 M	Trichloroethene	0.600	0.567	5.5	66	-0.06
34 C	1,2-Dichloropropane	0.407	0.387	4.9	66	-0.07
35 T	Dibromomethane	0.267	0.232	13.1	58	-0.07
37 T	Bromodichloromethane	0.648	0.579	10.6	61	-0.05
38 T	2-Chloroethylvinyl Ether	0.089	0.061	31.5	44	-0.07
39 T	cis-1,3-Dichloropropene	0.543	0.457	15.8	57	-0.05
40 T	4-Methyl-2-pentanone (MIBK)	0.177	0.141	20.3	53	-0.05
41 S	Toluene-d8	0.896	0.890	0.7	73	-0.07
42 MC	Toluene	0.874	0.795	9.0	65	-0.07
43 T	trans-1,3-Dichloropropene	0.393	0.308	21.6	53	-0.05
44 T	1,1,2-Trichloroethane	0.235	0.207	11.9	59	-0.07
45 T	Tetrachloroethene	0.744	0.636	14.5	62	-0.05
46 T	1,3-Dichloropropane	0.433	0.379	12.5	58	-0.05

000063

47	T	2-Hexanone	0.119	0.093	21.8	46	-0.07
48	T	Dibromochloromethane	0.406	0.326	19.7	54	-0.05
49	T	1,2-Dibromoethane (EDB)	0.322	0.263	18.3	55	-0.05
50	I	Chlorobenzene-d5	1.000	1.000	0.0	62	-0.07
	MP	Chlorobenzene	1.521	1.612	-6.0	61	-0.07
	T	1,1,1,2-Tetrachloroethane	0.650	0.663	-2.0	58	-0.05
53	C	Ethylbenzene	2.742	3.016	-10.0	65	-0.05
54	T	m,p-Xylene	0.941	1.075	-14.2	67	-0.05
55	T	o-Xylene	0.854	0.925	-8.3	64	-0.07
56	T	Styrene	1.337	1.408	-5.3	60	-0.06
57	P	Bromoform	0.395	0.353	10.6	48	-0.07
58	T	Isopropylbenzene	2.870	3.114	-8.5	65	-0.06
59	S	Bromofluorobenzene	0.830	0.858	-3.4	61	-0.06
60	P	1,1,2,2-Tetrachloroethane	0.557	0.575	-3.2	55	-0.04
61	T	Bromobenzene	0.666	0.663	0.5	55	-0.06
62	T	1,2,3-Trichloropropane	0.550	0.536	2.5	58	-0.06
63	T	n-Propylbenzene	3.469	3.808	-9.8	65	-0.06
64	T	2-Chlorotoluene	2.128	2.355	-10.7	68	-0.06
65	T	1,3,5-Trimethylbenzene	2.309	2.473	-7.1	64	-0.06
66	T	4-Chlorotoluene	2.272	2.366	-4.1	59	-0.04
67	T	tert-Butylbenzene	2.447	2.671	-9.2	66	-0.06
68	T	1,2,4-Trimethylbenzene	2.144	2.320	-8.2	63	-0.06
69	T	sec-Butylbenzene	3.296	3.624	-10.0	67	-0.06
70	T	1,3-Dichlorobenzene	1.106	1.105	0.1	57	-0.06
71	T	4-Isopropyltoluene	2.539	2.718	-7.1	65	-0.06
72	T	1,4-Dichlorobenzene	1.221	1.260	-3.2	58	-0.06
73	T	n-Butylbenzene	2.640	2.800	-6.1	64	-0.06
74	T	1,2-Dichlorobenzene	1.002	0.997	0.5	59	-0.06
75	T	1,2-Dibromo-3-chloropropane	0.114	0.094	17.5	45	-0.03
76	T	1,2,4-Trichlorobenzene	0.722	0.630	12.7	50	-0.06
	T	Hexachlorobutadiene	0.896	0.793	11.5	55	-0.08
	T	Naphthalene	0.862	0.621	28.0	45	-0.08
79	T	1,2,3-Trichlorobenzene	0.614	0.521	15.1	49	-0.06
80	T	1,1,2-Trichloro-1,2,2-trifl	1.618	2.053	-26.9	74	-0.05
81	T	Methyl Acetate	0.189	0.214	-13.2	59	-0.03
82	T	Cyclohexane	0.662	0.860	-29.9	75	-0.06
83	T	Methylcyclohexane	1.208	1.441	-19.3	71	-0.05

(#) = Out of Range

F3394.D FSO1127.M

SPCC's out = 0 CCC's out = 0
Wed Nov 29 09:15:18 2000 MSD_F

000064

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/22/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	SOIL	J5666.D	101	102	100
METHOD-BLK	AQUEOUS	J5667.D	100	102	100
7446-012	AQUEOUS	J5668.D	102	101	99
7338-009	MEOH	J5669.D	79	82	79
7338-002	MEOH	J5670.D	79	82	78
7338-002MS	MEOH	J5671.D	78	78	77
7338-002MSD	MEOH	J5672.D	78	78	77
7449-001	MEOH	J5673.D	73	76	69
7446-012MS	AQUEOUS	J5677.D	94	102	100
7446-012MSD	AQUEOUS	J5678.D	94	104	99
7363-003	MEOH	J5680.D	83	88	82
7453-001	SOIL	J5684.D	96	106	105
7452-004	SOIL	J5685.D	94	105	103
7452-001	SOIL	J5686.D	94	103	101

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	39-128	43-133
SMC2 = Toluene-d8	50 ppb	56-127	39-137
SMC3 = Bromofluorobenzene	50 ppb	49-125	23-145

Column to be used to flag recovery values.

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/28/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	F6525.D	82	99	91
7452-003	SOIL	F6526.D	89	101	101
7452-005	SOIL	F6527.D	89	104	88
7452-002	SOIL	F6529.D	100	101	103
7452-006MS	SOIL	F6530.D	99	103	94
7452-006MSD	SOIL	F6531.D	101	103	95
7452-006	SOIL	F6532.D	86	104	90

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	27-175	60-112
SMC2 = Toluene-d8	50 ppb	24-164	50-148
SMC3 = Bromofluorobenzene	50 ppb	24-150	69-113

Column to be used to flag recovery values —

MEOH VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 7338-002

Batch No.: QS1402

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	32.8	66	60 - 108
Benzene	50.0	0.0	41.5	83	76 - 111
Trichloroethene	50.0	0.0	39.7	79	72 - 106
Toluene	50.0	0.0	41.0	82	74 - 110
Chlorobenzene	50.0	0.0	44.5	89	80 - 113

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	0.0	31.6	63	5	8	60 - 108
Benzene	0.0	41.3	83	0	6	76 - 111
Trichloroethene	0.0	39.3	79	0	6	72 - 106
Toluene	0.0	41.2	82	0	6	74 - 110
Chlorobenzene	0.0	43.8	88	1	5	80 - 113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SOIL VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 7452-006

Batch No.: QS1406

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	52.1	104	11 - 111
Benzene	50.0	0.0	49.0	98	12 - 122
Trichloroethene	50.0	0.0	48.1	96	13 - 133
Toluene	50.0	0.0	48.7	97	14 - 144
Chlorobenzene	50.0	0.0	50.3	101	15 - 155

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	0.0	53.2	106	2	11	11 - 111
Benzene	0.0	50.0	100	2	21	12 - 122
Trichloroethene	0.0	48.9	98	2	31	13 - 133
Toluene	0.0	48.6	97	0	41	14 - 144
Chlorobenzene	0.0	50.6	101	0	51	15 - 155

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

000068

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): J5348.D

Instrument ID: MSD_J

Date Analyzed: 11/09/2000

Time Analyzed: 10:38

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		187030	6.28	264405	7.11	205329	10.45
UPPER LIMIT		374060	6.78	528810	7.61	410658	10.95
LOWER LIMIT		93515	5.78	132202.5	6.61	102664.5	9.95
LAB SAMPLE ID							
01	STD-20PPB						
02	STD-50PPB	198341	6.29	272430	7.11	211287	10.46
03	STD-150PPB	200749	6.29	279847	7.11	213750	10.46
04	STD-200PPB	207071	6.29	294193	7.11	227533	10.46
05	METHOD-BLK	221076	6.28	314065	7.11	244464	10.46
06	7075-019	212995	6.29	293397	7.11	220917	10.46
07	7075-003	219696	6.28	303073	7.11	224037	10.46
08	7075-005	223858	6.28	305167	7.11	227690	10.45
09	7075-007	232293	6.28	325092	7.11	241299	10.46
10	7075-009	244623	6.28	338243	7.11	251755	10.45
11	7075-014	258929	6.28	357632	7.11	268507	10.46
12	7075-015	266480	6.28	373872	7.11	279968	10.45
13	7075-016	272163	6.28	379500	7.11	283219	10.45
14	7075-018	274646	6.28	388294	7.11	290381	10.45
15	7075-001	274297	6.28	385239	7.11	286661	10.46
16	7075-002	267654	6.29	382041	7.11	287678	10.46
17	7075-004	263643	6.29	374375	7.11	283900	10.46
18	7075-008	262958	6.29	374220	7.11	285415	10.46
19	7075-010	264047	6.29	376587	7.11	289200	10.46
20	7075-013	268750	6.29	383206	7.11	293857	10.46
21	7075-017	266715	6.29	381863	7.11	289345	10.46
22	7075-016MS	272445	6.29	386228	7.11	294712	10.46
		272260	6.29	391159	7.11	300377	10.46

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): J5348.D
 Instrument ID: MSD_J

Date Analyzed: 11/09/2000
 Time Analyzed: 10:38

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD		187030	6.28	264405	7.11	205329	10.45
UPPER LIMIT		374060	6.78	528810	7.61	410658	10.95
LOWER LIMIT		93515	5.78	132202.5	6.61	102664.5	9.95
LAB SAMPLE ID							
23	7075-016MSD	275548	6.29	389491	7.11	298669	10.46
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44							

IS1 = PENTAFLUOROBENZENE
 IS2 = 1,4-DIFLUOROBENZENE
 IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): J5665.D

Instrument ID: MSD_J

Date Analyzed: 11/22/2000

Time Analyzed: 9:53

50UG/L		IS1	RT	IS2	RT	IS3	RT
		AREA #	#	AREA #	#	AREA #	#
12 HOUR STD		233398	6.28	341941	7.11	270358	10.45
UPPER LIMIT		466796	6.78	683882	7.61	540716	10.95
LOWER LIMIT		116699	5.78	170970.5	6.61	135179	9.95
LAB SAMPLE ID							
01	METHOD-BLK	235887	6.28	344418	7.11	272786	10.45
02	METHOD-BLK	237080	6.28	341006	7.11	270918	10.45
03	7446-012	230658	6.29	335405	7.11	265431	10.45
04	7338-009	235748	6.28	337373	7.11	264310	10.45
05	7338-002	247365	6.28	358091	7.11	278843	10.45
06	7338-002MS	249382	6.28	358122	7.11	281054	10.45
07	7338-002MSD	252659	6.28	361677	7.11	289257	10.45
08	7449-001	249400	6.28	360794	7.11	287989	10.45
09	7446-012MS	257277	6.28	369479	7.11	290727	10.45
10	7446-012MSD	255559	6.28	360814	7.11	288956	10.45
11	7363-003	249087	6.28	356516	7.11	281754	10.45
12	7453-001	252356	6.28	360707	7.11	279749	10.45
13	7452-004	258887	6.28	370542	7.10	290707	10.45
14	7452-001	258508	6.28	374428	7.11	292877	10.45
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F6490.D
 Instrument ID: MSD_F

Date Analyzed: 11/27/2000
 Time Analyzed: 14:33

30UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
24 HOUR STD		1395590	8.76	1321745	9.94	831763	14.81
UPPER LIMIT		2791180	9.26	2643490	10.44	1663526	15.31
LOWER LIMIT		697795	8.26	660872.5	9.44	415881.5	14.31
LAB SAMPLE ID							
01	150_PPb_STD	1263063	8.79	1126449	9.98	755754	14.85
02	50_PPb_STD	1404943	8.81	1288255	9.99	844114	14.86
03	20_PPb_STD	1490860	8.81	1396958	9.99	864550	14.87
04	100_PPb_STD	1341702	8.83	1164635	9.99	733917	14.86
05							
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21							
22							

IS1 = PENTAFLUOROBENZENE
 IS2 = 1,4-DIFLUOROBENZENE
 IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F6522.D
 Instrument ID: MSD_F

Date Analyzed: 11/28/2000
 Time Analyzed: 21:49

50UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD UPPER LIMIT LOWER LIMIT		899405	8.77	880241	9.94	456071	14.80
		1798810	9.27	1760482	10.44	912142	15.30
		449702.5	8.27	440120.5	9.44	228035.5	14.30
LAB SAMPLE ID							
01	METHOD_BLK	918348	8.78	803947	9.95	421062	14.81
02	7452-003	1070321	8.78	946136	9.95	496880	14.80
03	7452-005	1015865	8.78	950727	9.94	519132	14.80
04	7452-002	857197	8.76	835242	9.94	468621	14.80
05	7452-006MS	855408	8.76	848998	9.94	490137	14.80
06	7452-006MSD	833487	8.75	819222	9.92	468672	14.78
07	7452-006	847429	8.76	799319	9.92	438558	14.80
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
 IS2 = 1,4-DIFLUOROBENZENE
 IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

Data File : C:\MSDCHEM\1\DATA\11-22-00\J5686.D
 Acq On : 22 Nov 2000 18:54
 Sample : SS-50,7452-001,S,0.025g,10.9
 Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1
 S Integration Params: LSCINT.P
 Quant Time: Nov 22 19:13:22 2000

Vial: 23
 Operator: XINGFANG WANG
 Inst : MSD_J
 Multiplr: 1.00

Quant Results File: JME1109.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Thu Nov 09 12:44:52 2000
 Response via : Initial Calibration
 DataAcq Meth : JME1109

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.28	168	258508	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.11	114	374428	50.00	UG	0.00
50) Chlorobenzene-d5	10.45	117	292877	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.62	65	223164	46.89	UG	0.00
Spiked Amount 50.000	Range 43 - 133		Recovery =	93.78%		
41) Toluene-d8	8.78	98	454831	51.69	UG	0.00
Spiked Amount 50.000	Range 39 - 137		Recovery =	103.38%		
59) Bromofluorobenzene	11.86	95	216858	50.35	UG	0.00
Spiked Amount 50.000	Range 23 - 145		Recovery =	100.70%		

Target Compounds

63) n-Propylbenzene	12.18	91	19151	1.49	UG	Qvalue # 81
65) 1,3,5-Trimethylbenzene	12.39	105	28755	3.07	UG	# 73
68) 1,2,4-Trimethylbenzene	12.84	105	45919	4.62	UG	# 80
69) sec-Butylbenzene	13.06	105	41655	4.35	UG	# 87

Data File : C:\MSDCHEM\1\DATA\11-22-00\J5686.D

Acq On : 22 Nov 2000 18:54

Sample : SS-50,7452-001,S,0.025g,10.9

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1

MS Integration Params: LSCINT.P

Quant Time: Nov 27 9:19 2000

Vial: 23

Operator: XINGFANG WAN

Inst : MSD_J

Multiplr: 1.00

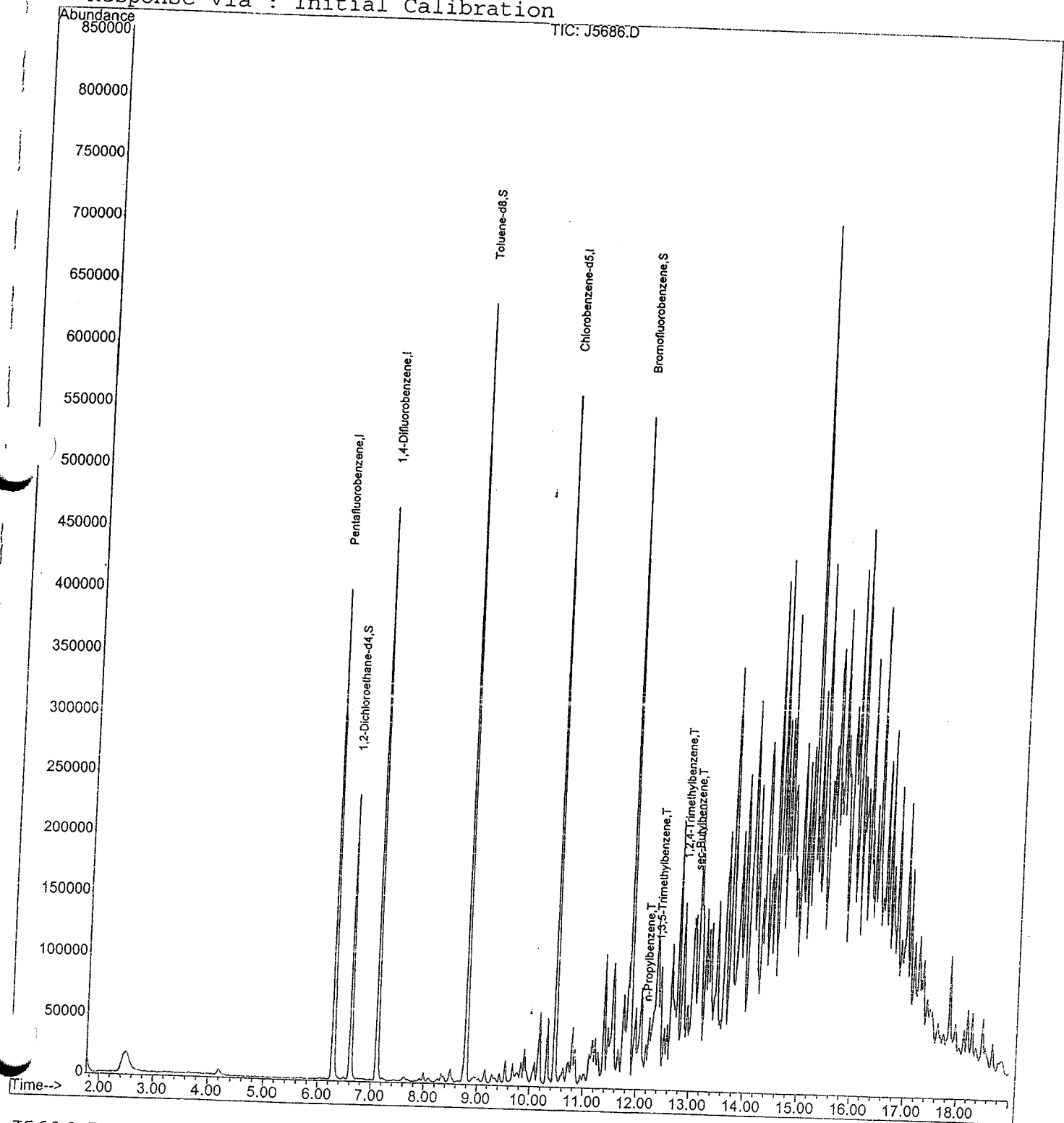
Quant Results File: JME1109.RES

Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Nov 27 09:12:36 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\F6529.D

Acq On : 29 Nov 2000 1:35

Vial: 30

Sample : SS-51,7452-002,S,0.5g

Operator: GREGG

Misc : GEOVATION/NEW_GRANGE,11/20/00,11/21/00

Inst : 5970 - In

B Integration Params: rteint.p

Multiplr: 1.00

Quant Time: Nov 29 11:48 2000

Quant Results File: FSO1127.RES

Quant Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Tue Nov 28 08:24:22 2000

Response via : Initial Calibration

DataAcq Meth : VOAF

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.76	168	857197	50.00	UG	-0.07
31) 1,4-Difluorobenzene	9.94	114	835242	50.00	UG	-0.06
50) Chlorobenzene-d5	14.80	117	468621	50.00	UG	-0.07

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	9.25	65	210088	49.80	UG	-0.06
Spiked Amount	50.000	Range	27 - 176	Recovery	=	99.60%
41) Toluene-d8	12.35	98	757189	50.59	UG	-0.05
Spiked Amount	50.000	Range	20 - 158	Recovery	=	101.18%
59) Bromofluorobenzene	16.90	95	399305	51.34	UG	-0.04
Spiked Amount	50.000	Range	28 - 148	Recovery	=	102.68%

Target Compounds

Qvalue

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

F6529.D FSO1127.M

Wed Nov 29 11:48:48 2000

MSD_F

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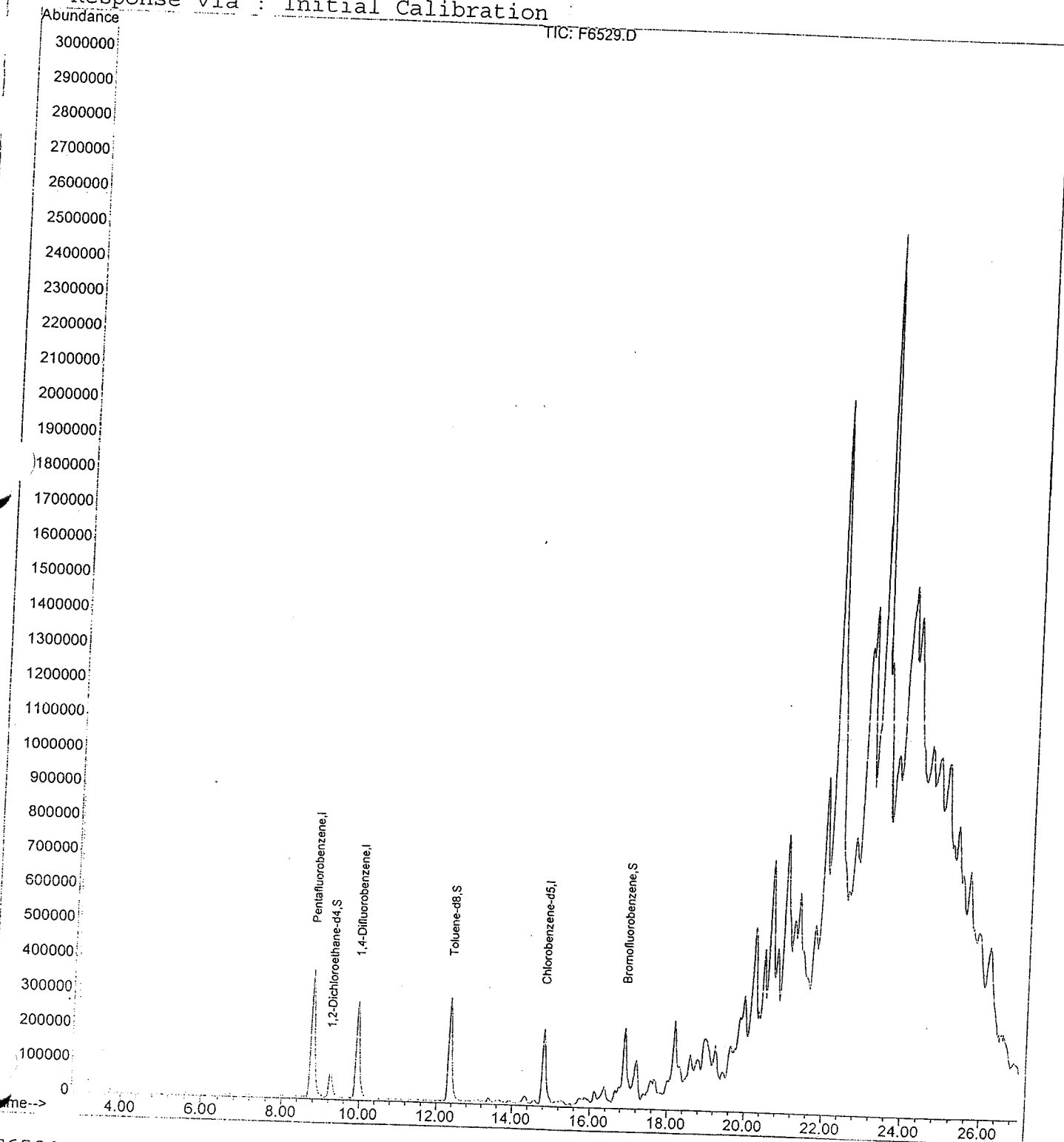
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6529.D
Acq On : 29 Nov 2000 1:35
Sample : SS-51,7452-002,S,0.5g
Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00
MS Integration Params: rteint.p
Quant Time: Nov 29 11:48 2000

Vial: 30
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FSO1127.RES

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Tue Nov 28 08:24:22 2000
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\F6526.D
Acq On : 28 Nov 2000 23:59
Sample : SS-52,7452-003,S,5.0g
Misc : GEOVATION/NEW_GRANGE,11/20/00,11/21/00
Integration Params: rteint.p
Quant Time: Nov 29 11:42 2000

Vial: 27
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FSO1127.RES

Quant Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Tue Nov 28 08:24:22 2000
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.78	168	1070321	50.00	UG	-0.05
31) 1,4-Difluorobenzene	9.95	114	946136	50.00	UG	-0.04
50) Chlorobenzene-d5	14.80	117	496880	50.00	UG	-0.06

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	9.26	65	233369	44.30	UG	-0.04
Spiked Amount	50.000	Range	27 - 176	Recovery	=	88.60%
41) Toluene-d8	12.35	98	856035	50.49	UG	-0.05
Spiked Amount	50.000	Range	20 - 158	Recovery	=	100.98%
59) Bromofluorobenzene	16.90	95	414453	50.26	UG	-0.04
Spiked Amount	50.000	Range	28 - 148	Recovery	=	100.52%

Target Compounds

Qvalue

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

F6526.D FSO1127.M

Wed Nov 29 11:46:12 2000

MSD_F

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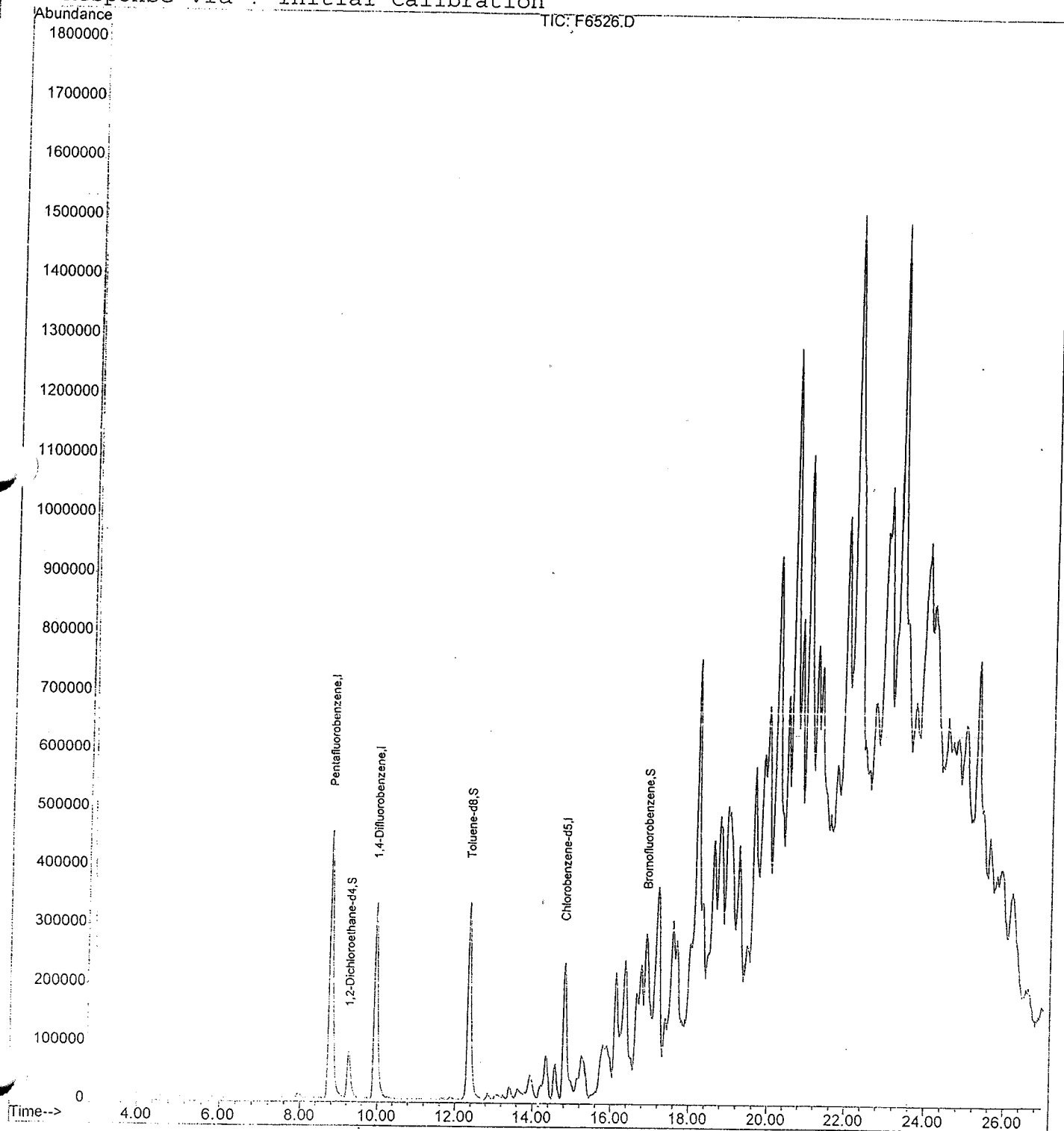
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6526.D
 Acq On : 28 Nov 2000 23:59
 Sample : SS-52,7452-003,S,5.0g
 Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00
 MS Integration Params: rteint.p
 Quant Time: Nov 29 11:42 2000

Vial: 27
 Operator: GREGG
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: FSO1127.RES

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Nov 28 08:24:22 2000
 Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\11-22-00\J5685.D

Vial: 22

Acq On : 22 Nov 2000 18:28

Operator: XINGFANG WANG

Sample : SS-53,7452-004,S,0.05g,9.8

Inst : MSD_J

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00

S Integration Params: LSCINT.P

Quant Time: Nov 22 18:47:50 2000

Quant Results File: JME1109.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Thu Nov 09 12:44:52 2000

Response via : Initial Calibration

DataAcq Meth : JME1109

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.28	168	258887	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.10	114	370542	50.00	UG	-0.01
50) Chlorobenzene-d5	10.45	117	290707	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.61	65	223802	46.96	UG	-0.01
Spiked Amount	50.000	Range	43 - 133	Recovery	=	93.92%
41) Toluene-d8	8.78	98	459321	52.75	UG	0.00
Spiked Amount	50.000	Range	39 - 137	Recovery	=	105.50%
59) Bromofluorobenzene	11.86	95	219457	51.33	UG	0.00
Spiked Amount	50.000	Range	23 - 145	Recovery	=	102.66%

Target Compounds

45) Tetrachloroethene	9.49	166	3222	1.85	UG	Qvalue # 63

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

J5685.D JME1109.M

Mon Nov 27 09:18:00 2000

MSD_J

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Data File : C:\MSDCHEM\1\DATA\11-22-00\J5685.D

Acq On : 22 Nov 2000 18:28

Sample : SS-53,7452-004,S,0.05g,9.8

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1

MS Integration Params: LSCINT.P

Quant Time: Nov 27 9:17 2000

Vial: 22

Operator: XINGFANG WAN

Inst : MSD_J

Multiplr: 1.00

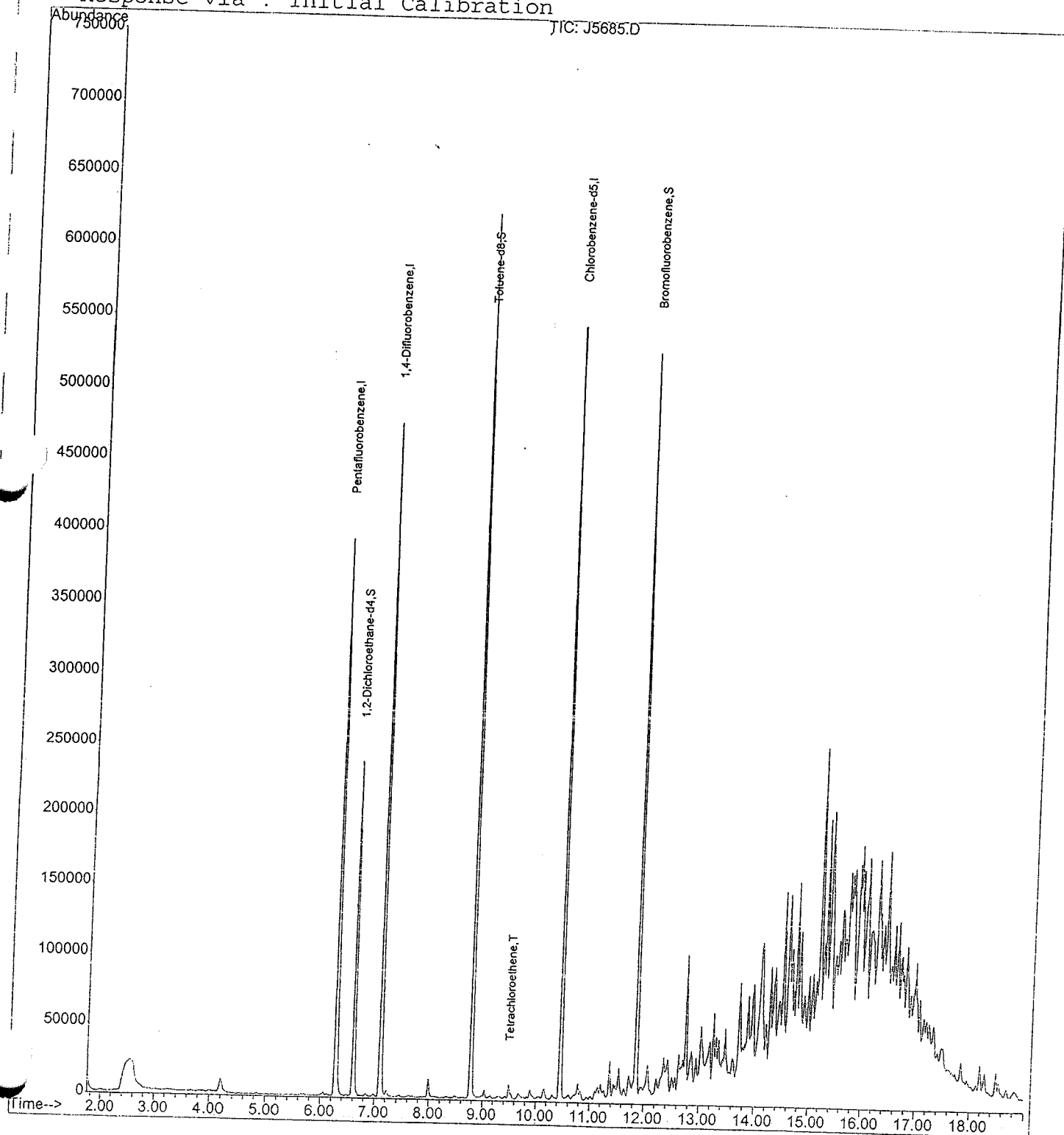
Quant Results File: JME1109.RES

Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Mon Nov 27 09:12:36 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\F6527.D
Acq On : 29 Nov 2000 00:31
Sample : SS-54,7452-005,S,5.0g
Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00
S Integration Params: rteint.p
Quant Time: Nov 29 11:46 2000

Vial: 28
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FSO1127.RES

Quant Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Tue Nov 28 08:24:22 2000
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.78	168	1015865	50.00	UG	-0.05
31) 1,4-Difluorobenzene	9.94	114	950727	50.00	UG	-0.06
50) Chlorobenzene-d5	14.80	117	519132	50.00	UG	-0.06

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	9.26	65	221360	44.28	UG	-0.04
Spiked Amount	50.000	Range	27 - 176	Recovery	=	88.56%
41) Toluene-d8	12.33	98	886713	52.04	UG	-0.06
Spiked Amount	50.000	Range	20 - 158	Recovery	=	104.08%
59) Bromofluorobenzene	16.89	95	377505	43.81	UG	-0.05
Spiked Amount	50.000	Range	28 - 148	Recovery	=	87.62%

Target Compounds

Qvalue

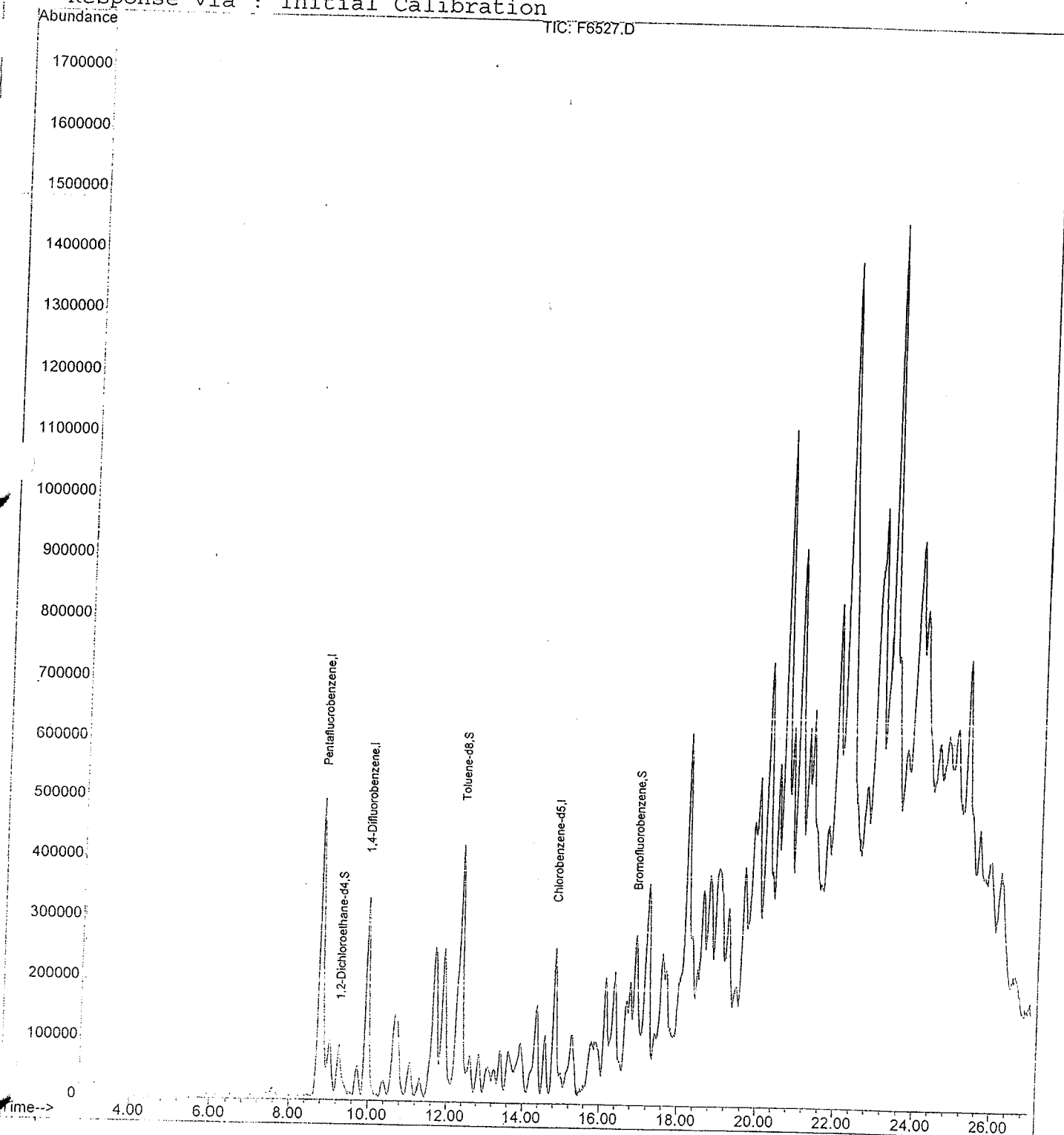
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6527.D
 Acq On : 29 Nov 2000 00:31
 Sample : SS-54,7452-005,S,5.0g
 Misc : GEOVATION/NEW_GRANGE,11/20/00,11/21/00
 MS Integration Params: rteint.p
 Quant Time: Nov 29 11:46 2000

Vial: 28
 Operator: GREGG
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: FSO1127.RES

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Nov 28 08:24:22 2000
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\F6532.D

Vial: 33

Acq On : 29 Nov 2000 3:12

Operator: GREGG

Sample : SS-55,7452-006,S,5.0g

Inst : 5970 - In

Misc : GEOVATION/NEW_GRANGE,11/20/00,11/21/00

Multiplr: 1.00

Integration Params: rteint.p

Quant Time: Nov 29 11:50 2000

Quant Results File: FSO1127.RES

Quant Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Tue Nov 28 08:24:22 2000

Response via : Initial Calibration

DataAcq Meth : VOAF

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.76	168	847429	50.00	UG	-0.07
31) 1,4-Difluorobenzene	9.92	114	799319	50.00	UG	-0.07
50) Chlorobenzene-d5	14.80	117	438558	50.00	UG	-0.07

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	9.25	65	178727	42.85	UG	-0.06
Spiked Amount	50.000	Range	27 - 176	Recovery	=	85.70%
41) Toluene-d8	12.32	98	747790	52.20	UG	-0.08
Spiked Amount	50.000	Range	20 - 158	Recovery	=	104.40%
59) Bromofluorobenzene	16.88	95	327089	44.94	UG	-0.06
Spiked Amount	50.000	Range	28 - 148	Recovery	=	89.88%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
F6532.D FSO1127.M Wed Nov 29 11:50:16 2000

MSD_F

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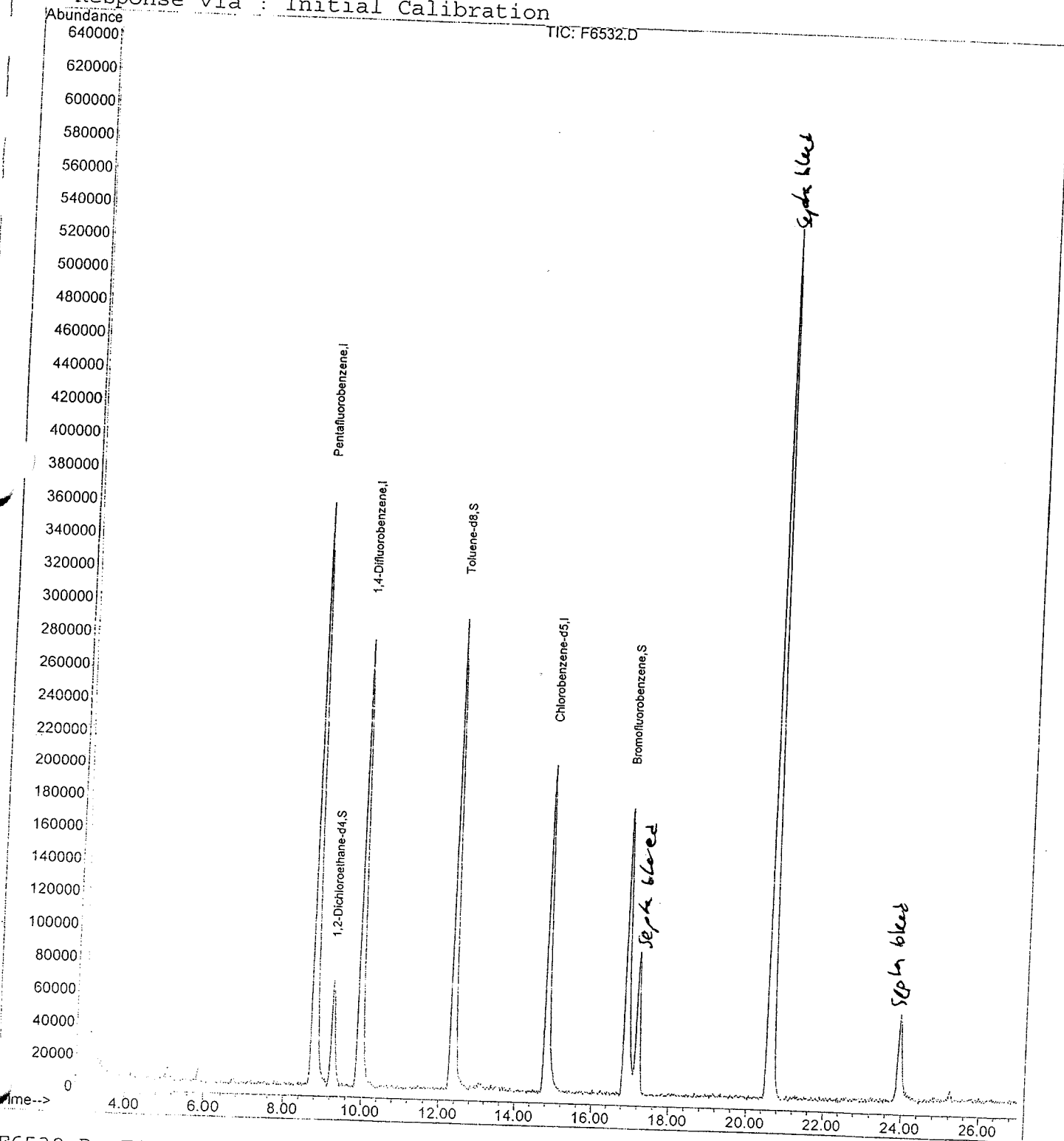
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6532.D
 Acq On : 29 Nov 2000 3:12
 Sample : SS-55,7452-006,S,5.0g
 Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00
 MS Integration Params: rteint.p
 Quant Time: Nov 29 11:50 2000

Vial: 33
 Operator: GREGG
 Inst : 5970 - In
 Multiplr: 1.00

Quant Results File: FSO1127.RES

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 8260B
 Last Update : Tue Nov 28 08:24:22 2000
 Response via : Initial Calibration



Quantitation Report

(QT Reviewed)

Data File : C:\HPCHEM\1\DATA\11-28-00\F6525.D
Acq On : 28 Nov 2000 23:26
Sample : N/A, METHOD BLK, S, 5.0g, 0
Misc : N/A, N/A, N/A
S Integration Params: rteint.p
Quant Time: Nov 29 10:16 2000

Vial: 26
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FSO1127.RES

Quant Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Tue Nov 28 08:24:22 2000
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.78	168	918348	50.00	UG	-0.05
31) 1,4-Difluorobenzene	9.95	114	803947	50.00	UG	-0.04
50) Chlorobenzene-d5	14.81	117	421062	50.00	UG	-0.05

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	9.25	65	184939	40.92	UG	-0.06
Spiked Amount	50.000	Range 27 - 176	Recovery	=	81.84%	
41) Toluene-d8	12.35	98	713836	49.55	UG	-0.05
Spiked Amount	50.000	Range 20 - 158	Recovery	=	99.10%	
59) Bromofluorobenzene	16.90	95	319494	45.72	UG	-0.04
Spiked Amount	50.000	Range 28 - 148	Recovery	=	91.44%	

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
F6525.D FSO1127.M Wed Nov 29 10:16:31 2000

MSD_F

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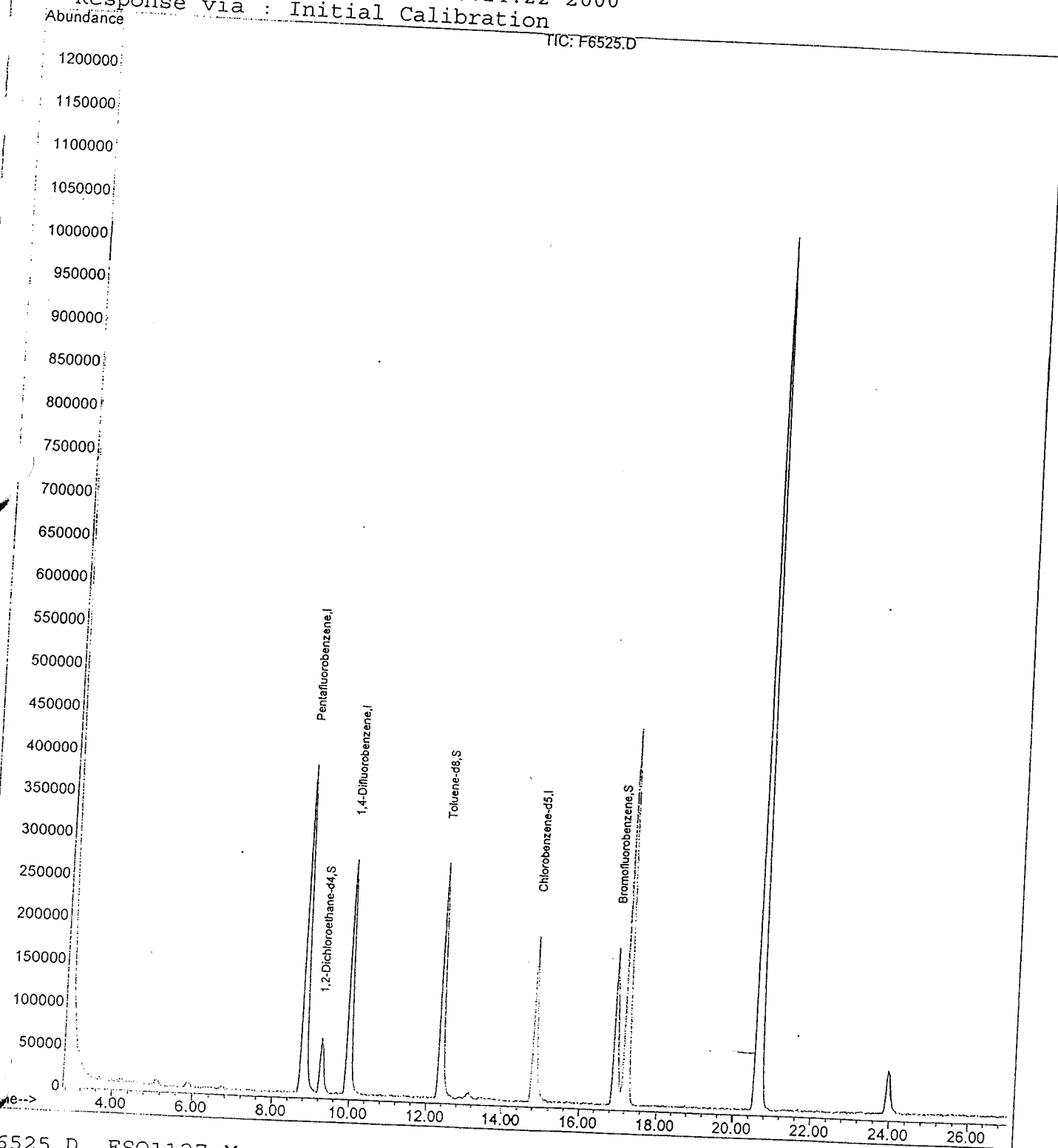
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\F6525.D
Acq On : 28 Nov 2000 23:26
Sample : N/A, METHOD_BLK, S, 5.0g, 0
Misc : N/A, N/A, N/A
MS Integration Params: rteint.p
Quant Time: Nov 29 10:16 2000

Vial: 26
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FSO1127.RES

Method : C:\HPCHEM\1\METHODS\FSO1127.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Tue Nov 28 08:24:22 2000
Response via : Initial Calibration



F6525.D FSO1127.M

Wed Nov 29 10:16:32 2000

MSD_F

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Data File : C:\MSDCHEM\1\DATA\11-22-00\J5666.D

Acq On : 22 Nov 2000 10:19

Sample : N/A,METHOD-BLK,S,0.1g,0

Misc :

Vial: 3

Operator: XINGFANG WANG

Inst : MSD_J

Multiplr: 1.00

S Integration Params: LSCINT.P

Quant Time: Nov 22 10:38:34 2000

Quant Results File: JME1109.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 8260B

Last Update : Thu Nov 09 12:44:52 2000

Response via : Initial Calibration

DataAcq Meth : JME1109

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.28	168	235887	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.11	114	344418	50.00	UG	0.00
50) Chlorobenzene-d5	10.45	117	272786	50.00	UG	-0.01

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.62	65	219090~	50.45	UG	0.00
Spiked Amount 50.000	Range 43 - 133		Recovery =	100.90%		
41) Toluene-d8	8.78	98	410869	50.76	UG	0.00
Spiked Amount 50.000	Range 39 - 137		Recovery =	101.52%		
59) Bromofluorobenzene	11.86	95	199636	49.76	UG	0.00
Spiked Amount 50.000	Range 23 - 145		Recovery =	99.52%		

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
J5666.D JME1109.M

Wed Nov 22 10:39:26 2000

MSD_J

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Quantitation Report

(QT Reviewed)

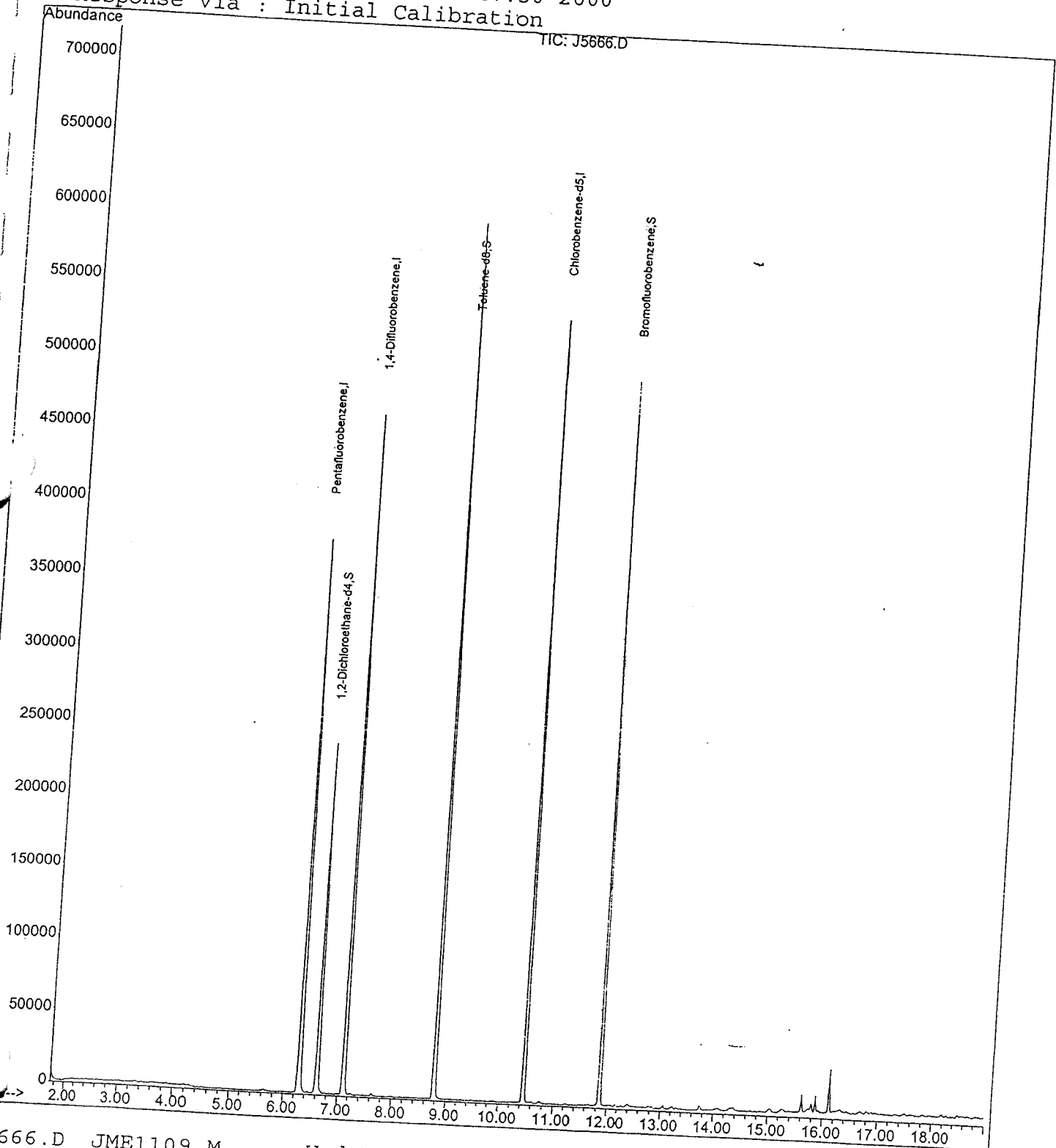
Data File : C:\MSDCHEM\1\DATA\11-22-00\J5666.D
Acq On : 22 Nov 2000 10:19
Sample : N/A, METHOD-BLK, S, 0.1g, 0
Misc :

MS Integration Params: LSCINT.P
Quant Time: Nov 22 10:38 2000

Vial: 3
Operator: XINGFANG WAN
Inst : MSD_J
Multiplr: 1.00

Quant Results File: JME1109.RES

Method : C:\MSDCHEM\1\METHODS\JME1109.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Wed Nov 22 10:27:50 2000
Response via : Initial Calibration



J5666.D JME1109.M

Wed Nov 22 10:39:26 2000

MSD_J

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6842.D

DFTPP Injection Date : 11/21/2000

Inst ID: MSDC

DFTPP Injection Time: 13:11

m/z	Ion Abundance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	40.5			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	48.4			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	58.7			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% of mass 198	7.1			
275	10.0 - 30.0% of mass 198	16.1			
365	Greater than 1.0% of mass 198	6.9			
441	Present, but less than mass 443	13.10	(	75.9	)3
442	40.0 - 100.0% of mass 198	85.9			
443	17.0 - 23.0% of mass 442	17.3	(	20.1	)2

1-Value is % mass 69

2-Value is % mass 442

3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
	50-PPB-INJ-FOR-	C6843.D	11/21/2000	13:23
	20-PPB-INJ-FOR-	C6844.D	11/21/2000	13:49
	120-PPB-INJ-FOR	C6846.D	11/21/2000	15:05
	80-PPB-INJ-FOR-	C6847.D	11/21/2000	15:31
	160-PPB-INJ-FOR	C6848.D	11/21/2000	16:47
SP-1	Mehod-Blank	C6849.D	11/21/2000	17:13
S-1	7416-001	C6850.D	11/21/2000	17:38
S-2	7417-001	C6852.D	11/21/2000	18:29
S-3	7417-002	C6853.D	11/21/2000	18:55
S-4	7417-003	C6854.D	11/21/2000	19:20
S-5	7417-004	C6855.D	11/21/2000	19:46
S-6	7417-005	C6856.D	11/21/2000	20:11
S-7	7417-006	C6857.D	11/21/2000	20:37
S-8	7417-007	C6858.D	11/21/2000	21:02
S-9	7417-008	C6859.D	11/21/2000	21:28
S-10	7417-009	C6860.D	11/21/2000	21:54
	7417-010	C6861.D	11/21/2000	22:19

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6937.D

DFTPP Injection Date : 11/28/2000

Inst ID: MSDC

DFTPP Injection Time: 10:36

m/z	Ion Abundance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	46.0			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	46.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	59.1			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% of mass 198	6.6			
275	10.0 - 30.0% of mass 198	29.9			
365	Greater than 1.0% of mass 198	7.8			
441	Present, but less than mass 443	13.81	(	77.3	)3
442	40.0 - 100.0% of mass 198	88.0			
443	17.0 - 23.0% of mass 442	17.9	(	20.3	)2

1-Value is % mass 69

2-Value is % mass 442

3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
	50-PPB-INJ-FOR-	C6944.D	11/28/2000	13:23
	Method-Blk	C6945.D	11/28/2000	13:48
RU-1	7528-001	C6946.D	11/28/2000	14:14
RU-2	7528-002	C6947.D	11/28/2000	14:39
RU-3	7528-003	C6948.D	11/28/2000	15:05
RU-4	7528-004	C6949.D	11/28/2000	15:30
RU-5	7528-005	C6950.D	11/28/2000	15:56
RU-1	7528-001	C6951.D	11/28/2000	16:21
RU-2	7528-002	C6952.D	11/28/2000	16:47
WP-1	7529-001	C6953.D	11/28/2000	17:13
WP-2	7529-002	C6954.D	11/28/2000	17:38
SS-50	7452-001	C6955.D	11/28/2000	18:03
SS-51	7452-002	C6956.D	11/28/2000	18:29
SS-52	7452-003	C6957.D	11/28/2000	18:54
SS-52	7452-003MS	C6958.D	11/28/2000	19:20
SS-52	7452-003MSD	C6959.D	11/28/2000	19:45
SS-53	7452-004	C6960.D	11/28/2000	20:11
SS-54	7452-005	C6961.D	11/28/2000	20:36
SS-55	7452-006	C6962.D	11/28/2000	21:01

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6994.D

DFTPP Injection Date : 11/29/2000

Inst ID: MSDC

DFTPP Injection Time: 10:22

m/z	Ion Abundance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	47.0		
68	Less than 2.0% of mass 69	0.0	(0.0)	1
69	Mass 69 relative abundance	47.6		
70	Less than 2.0% of mass 69	0.0	(0.0)	1
127	40.0 - 60.0% of mass 198	58.4		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	7.2		
275	10.0 - 30.0% of mass 198	29.8		
365	Greater than 1.0% of mass 198	7.2		
441	Present, but less than mass 443	11.88	(71.9)	3
442	40.0 - 100.0% of mass 198	79.8		
443	17.0 - 23.0% of mass 442	16.5	(20.7)	2
1-Value is % mass 69		2-Value is % mass 442		
		3-Value is % mass 443		

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
WP-1	50-PPB-INJ-FOR-	C7004.D	11/29/2000 ,	14:48
SS-51	7529-001	C7005.D	11/29/2000	15:14
SS-53	7452-002	C7006.D	11/29/2000	15:40
SS-54	7452-004	C7007.D	11/29/2000	16:31
SS-55	7452-005	C7008.D	11/29/2000	16:57
	7452-006	C7009.D	11/29/2000	17:23

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C6945.D

Instrument ID: MSDA

Date Extracted: 11/28/00

Matrix: SOIL

Date Analyzed: 11/28/2000

Time Analyzed: 13:48

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
RU-3	7528-003	11/28/2000	15:05
RU-4	7528-004	11/28/2000	15:30
RU-5	7528-005	11/28/2000	15:56
RU-1	7528-001	11/28/2000	16:21
RU-2	7528-002	11/28/2000	16:47
WP-2	7529-002	11/28/2000	17:38
SS-50	7452-001	11/28/2000	18:03
SS-52	7452-003	11/28/2000	18:54
SS-52	7452-003MS	11/28/2000	19:20
SS-52	7452-003MSD	11/28/2000	19:45
WP-1	7529-001	11/29/2000	15:14
SS-51	7452-002	11/29/2000	15:40
SS-53	7452-004	11/29/2000	16:31
SS-54	7452-005	11/29/2000	16:57
SS-55	7452-006	11/29/2000	17:23

INTEGRATED ANALYTICAL LABORATORIES
SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6945.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil-µg/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		33.3
Phenol	ND		33.3
Aniline	ND		33.3
bis(2-Chloroethyl)ether	ND		33.3
2-Chlorophenol	ND		33.3
1,3-Dichlorobenzene	ND		33.3
1,4-Dichlorobenzene	ND		33.3
Benzyl alcohol	ND		33.3
1,2-Dichlorobenzene	ND		33.3
2-Methylphenol	ND		33.3
bis(2-chloroisopropyl)ether	ND		33.3
4-Methylphenol	ND		33.3
N-Nitroso-di-n-propylamine	ND		33.3
Hexachloroethane	ND		33.3
Nitrobenzene	ND		33.3
Isophorone	ND		33.3
2-Nitrophenol	ND		33.3
2,4-Dimethylphenol	ND		33.3
bis(2-Chloroethoxy)methane	ND		33.3
Benzoic acid	ND		33.3
2,4-Dichlorophenol	ND		33.3
1,2,4-Trichlorobenzene	ND		33.3
Naphthalene	ND		33.3
4-Chloroaniline	ND		33.3
Hexachlorobutadiene	ND		33.3
4-Chloro-3-methylphenol	ND		33.3
2-Methylnaphthalene	ND		33.3
Hexachlorocyclopentadiene	ND		33.3
2,4,6-Trichlorophenol	ND		33.3
2,4,5-Trichlorophenol	ND		33.3
2-Chloronaphthalene	ND		33.3
2-Nitroaniline	ND		33.3
Dimethylphthalate	ND		33.3
2,6-Dinitrotoluene	ND		33.3
Acenaphthylene	ND		33.3

INTEGRATED ANALYTICAL LABORATORIES
SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6945.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		33.3
Acenaphthene	ND		33.3
2,4-Dinitrophenol	ND		33.3
4-Nitrophenol	ND		33.3
2,4-Dinitrotoluene	ND		33.3
Dibenzofuran	ND		33.3
Diethylphthalate	ND		33.3
Fluorene	ND		33.3
4-Chlorophenyl-phenylether	ND		33.3
4-Nitroaniline	ND		33.3
4,6-Dinitro-2-methylphenol	ND		33.3
N-Nitrosodiphenylamine	ND		33.3
1,2-Diphenylhydrazine/Azobenzene	ND		33.3
4-Bromophenyl-phenylether	ND		33.3
Hexachlorobenzene	ND		33.3
Pentachlorophenol	ND		33.3
Phenanthrene	ND		33.3
Anthracene	ND		33.3
Carbazole	ND		33.3
Di-n-butylphthalate	ND		33.3
Fluoranthene	ND		33.3
Benzidine	ND		33.3
Pyrene	ND		33.3
3,3'-Dimethylbenzidine	ND		33.3
Butylbenzylphthalate	ND		33.3
3,3'-Dichlorobenzidine	ND		33.3
Benzo[a]anthracene	ND		33.3
Chrysene	ND		33.3
bis(2-Ethylhexyl)phthalate	ND		33.3
Di-n-octylphthalate	ND		33.3
Benzo[b]fluoranthene	ND		33.3
Benzo[k]fluoranthene	ND		33.3
Benzo[a]pyrene	ND		33.3
Indeno[1,2,3-cd]pyrene	ND		33.3
Dibenz[a,h]anthracene	ND		33.3
Benzo[g,h,i]perylene	ND		33.3

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blk

Client ID: .

Date Received: N/A

Date Extracted: 11/28/2000

Date Analyzed: 11/28/2000

Data file: C6945.D

GC/MS Column: DB-5

Sample wt/vol: 30.0g

Matrix-Units: Soil- μ g/Kg (ppb)

Dilution Factor: 1

% Moisture: 0.0

CAS #	Compound	Estimated Concentration	Retention Time
No peaks detected			

Total TICs = 0

00009~

Response Factor Report MSD-C

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Wed Nov 22 09:12:59 2000
 Response via : Initial Calibration

Calibration Files

160 =C6848.D 20 =C6844.D 50 =C6843.D
 80 =C6847.D 120 =C6846.D

Compound

160 20 50 80 120 Avg %RSD

		160	20	50	80	120	Avg	%RSD
1) I 1,4-Dichlorobenzene-d		-----ISTD-----						
2) T	N-Nitrosodimethylamin	1.127	0.851	0.938	1.011	0.902	0.966	11.11
3) S	2-Fluorophenol	0.805	0.678	0.650	0.705	0.702	0.708	8.26
4) S	Phenol-d5	1.818	1.654	1.595	1.766	1.732	1.713	5.19
5) MC	Phenol	1.778	1.616	1.712	1.817	1.615	1.708	5.38
6) T	Aniline	2.012	1.740	1.857	2.090	1.884	1.917	7.14
7) T	bis(2-Chloroethyl)eth	1.351	1.242	1.344	1.431	1.220	1.318	6.57
8) M	2-Chlorophenol	1.494	1.234	1.376	1.488	1.350	1.388	7.76
9) T	1,3-Dichlorobenzene	1.821	1.432	1.609	1.774	1.598	1.647	9.43
10) MC	1,4-Dichlorobenzene	1.914	1.515	1.704	1.877	1.677	1.737	9.32
11) T	Benzyl alcohol	0.828	0.670	0.800	0.844	0.777	0.784	8.74
12) T	1,2-Dichlorobenzene	1.690	1.369	1.531	1.678	1.492	1.552	8.67
13) T	2-Methylphenol	1.217	1.073	1.191	1.258	1.143	1.177	6.06
14) T	bis(2-chloroisopropyl	1.973	2.143	2.124	2.226	1.894	2.072	6.51
15) T	4-Methylphenol	1.365	1.103	1.278	1.365	1.242	1.270	8.50
16) MP	N-Nitroso-di-n-propyl	1.036	0.968	1.050	1.117	0.954	1.025	6.46
17) T	2-Aminotoluene +4-Ami	3.426	3.092	2.992	3.592	2.974	3.215	8.66
18) T	Hexachloroethane	0.743	0.623	0.710	0.764	0.676	0.703	7.96
I Naphthalene-d8		-----ISTD-----						
20) S	Nitrobenzene-d5	0.413	0.386	0.378	0.361	0.376	0.383	4.96
21) T	Nitrobenzene	0.428	0.396	0.411	0.396	0.389	0.404	3.87
22) T	Isophorone	0.752	0.650	0.718	0.786	0.686	0.718	7.44
23) TC	2-Nitrophenol	0.220	0.165	0.198	0.216	0.197	0.199	10.90
24) T	2,4-Dimethylphenol	0.395	0.318	0.371	0.405	0.362	0.370	9.11
25) T	bis(2-Chloroethoxy)me	0.441	0.385	0.430	0.462	0.406	0.425	7.08
26) T	Benzoic acid	0.083	0.047	0.049	0.067	0.058	0.061	24.25
27) T	2,4-Dimethylaniline	0.655	0.485	0.532	0.665	0.557	0.579	13.59
28) TC	2,4-Dichlorophenol	0.357	0.256	0.298	0.336	0.308	0.311	12.43
29) M	1,2,4-Trichlorobenzen	0.434	0.293	0.359	0.401	0.372	0.372	14.20
30) T	Naphthalene	1.172	0.970	1.085	1.191	1.035	1.091	8.49
31) T	4-Chloroaniline	0.306	0.215	0.269	0.297	0.266	0.271	13.13
32) TC	Hexachlorobutadiene	0.324	0.193	0.250	0.289	0.272	0.266	18.38
33) MC	4-Chloro-3-methylphen	0.336	0.258	0.307	0.341	0.304	0.309	10.69
34) T	2-Methylnaphthalene	0.862	0.617	0.773	0.827	0.772	0.770	12.20
35) I Acenaphthene-d10		-----ISTD-----						
36) TP	Hexachlorocyclopentad	0.255	0.200	0.208	0.256	0.269	0.237	13.12
37) TC	2,4,6-Trichlorophenol	0.496	0.298	0.362	0.430	0.416	0.400	18.63
38) T	2,4,5-Trichlorophenol	0.465	0.312	0.356	0.405	0.403	0.388	14.77
39) S	2-Fluorobiphenyl	1.355	1.334	1.221	1.371	1.249	1.306	5.13
40) T	2-Chloronaphthalene	1.384	0.958	1.118	1.300	1.191	1.190	13.86
41) T	2-Nitroaniline	0.393	0.324	0.359	0.399	0.362	0.367	8.18
42) T	Dimethylphthalate	1.514	1.101	1.241	1.471	1.318	1.329	12.73
43) T	2,6-Dinitrotoluene	0.335	0.241	0.267	0.312	0.285	0.288	12.81
44) T	Acenaphthylene	2.172	1.631	1.855	2.131	1.874	1.933	11.49
5) T	3-Nitroaniline	0.336	0.249	0.281	0.323	0.296	0.297	11.58
6) MC	Acenaphthene	1.431	1.038	1.171	1.356	1.224	1.244	12.43
7) T	2,4-Dinitrophenol	0.236	0.102	0.172	0.209	0.193	0.182	27.62

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48)	MP	4-Nitrophenol	0.287	0.190	0.213	0.227	0.219	0.227	15.95
49)	M	2,4-Dinitrotoluene	0.443	0.298	0.343	0.406	0.374	0.373	14.97
50)	T	Dibenzofuran	1.840	1.323	1.559	1.750	1.652	1.625	12.26
51)	T	Diethylphthalate	1.625	1.175	1.351	1.555	1.391	1.419	12.50
52)	T	Fluorene	1.769	1.209	1.414	1.660	1.497	1.510	14.42
53)	T	4-Chlorophenyl-phenyl	0.938	0.504	0.630	0.764	0.746	0.717	22.61
54)	T	4-Nitroaniline	0.373	0.286	0.334	0.368	0.328	0.338	10.40
55)	I	Phenanthrene-d10	-----ISTD-----						
56)	T	4,6-Dinitro-2-methylp	0.116	0.063	0.084	0.109	0.107	0.096	23.03
57)	TC	N-Nitrosodiphenylamin	0.489	0.397	0.464	0.545	0.485	0.476	11.22
58)	T	1,2-Diphenylhydrazine	0.671	0.772	0.784	0.849	0.709	0.757	9.15
59)	S	2,4,6-Tribromophenol	0.160	0.166	0.163	0.170	0.166	0.165	2.37
60)	T	4-Bromophenyl-phenyle	0.322	0.174	0.227	0.288	0.287	0.260	22.67
61)	T	Hexachlorobenzene	0.398	0.215	0.286	0.359	0.354	0.322	22.51
62)	MC	Pentachlorophenol	0.173	0.111	0.112	0.137	0.140	0.135	18.91
63)	T	Phenanthrene	1.216	0.874	1.052	1.226	1.095	1.092	13.15
64)	T	Anthracene	1.207	0.867	1.057	1.237	1.097	1.093	13.41
65)	T	Carbazole	1.047	0.786	0.912	1.060	0.960	0.953	11.72
66)	T	Di-n-butylphthalate	1.289	1.064	1.266	1.390	1.223	1.246	9.56
67)	TC	Fluoranthene	1.526	0.983	1.235	1.463	1.320	1.305	16.37
68)	T	Benzidine	0.163	0.197	0.159	0.237	0.173	0.186	17.41
69)	I	Chrysene-d12	-----ISTD-----						
70)	M	Pyrene	0.942	0.879	0.938	1.030	0.876	0.933	6.69
71)	S	Terphenyl-d14	0.712	0.920	0.756	0.758	0.650	0.759	13.16
72)	T	3,3'-Dimethylbenzidin	0.070	0.156	0.088	0.139	0.093	0.109	33.51
73)	T	Butylbenzylphthalate	0.468	0.417	0.455	0.497	0.420	0.451	7.44
74)	T	3,3'-Dichlorobenzidin	0.220	0.289	0.270	0.294	0.266	0.268	10.86
75)	T	Benzo[a]anthracene	1.090	1.017	1.108	1.236	1.023	1.095	8.08
76)	T	Chrysene	0.862	0.780	0.905	1.020	0.873	0.888	9.78
77)	T	bis(2-Ethylhexyl)phth	0.706	0.625	0.701	0.742	0.631	0.681	7.49
79)	I	Perylene-d12	-----ISTD-----						
80)	TC	Di-n-octylphthalate	2.861	2.693	3.092	2.695	2.322	2.732	10.31
81)	T	Benzo[b]fluoranthene	1.717	1.357	2.192	2.317	1.935	1.904	20.15
82)	T	Benzo[k]fluoranthene	1.650	1.226	1.984	2.087	1.667	1.723	19.58
83)	TC	Benzo[a]pyrene	1.540	1.140	1.299	1.741	1.416	1.427	16.08
84)	T	Indeno[1,2,3-cd]pyren	0.350	0.571	0.300	0.286	0.302	0.362	32.99
85)	T	Dibenz[a,h]anthracene	0.271	0.477	0.258	0.232	0.260	0.299	33.40
		Benzo[g,h,i]perylene	0.284	0.325	0.206	0.214	0.238	0.253	19.85

(#) = Out of Range

SVSC1000.M

Wed Nov 22 09:15:56 2000

MSD-C

00005

45	I	3-Nitroaniline	0.297	0.298	-0.3	88	0.00
46	MC	Acenaphthene	1.244	1.111	10.7	78	-0.01
47	T	2,4-Dinitrophenol	0.182	0.165	9.3	79	-0.01
48	MP	4-Nitrophenol	0.227	0.209	7.9	81	-0.01
49	M	2,4-Dinitrotoluene	0.373	0.358	4.0	86	-0.01
50	T	Dibenzofuran	1.625	1.571	3.3	83	0.00
	T	Diethylphthalate	1.419	1.386	2.3	85	0.00
	T	Fluorene	1.510	1.374	9.0	80	-0.01
53	T	4-Chlorophenyl-phenylether	0.717	0.630	12.1	83	-0.01
54	T	4-Nitroaniline	0.338	0.341	-0.9	85	0.00
55	I	Phenanthrene-d10	1.000	1.000	0.0	86	-0.01
56	T	4,6-Dinitro-2-methylphenol	0.096	0.084	12.5	86	0.00
57	TC	N-Nitrosodiphenylamine	0.476	0.450	5.5	83	0.00
58	T	1,2-Diphenylhydrazine/Azobe	0.757	0.794	-4.9	87	-0.01
59	S	2,4,6-Tribromophenol	0.165	0.197	-19.4	104	0.00
60	T	4-Bromophenyl-phenylether	0.260	0.224	13.8	85	-0.01
61	T	Hexachlorobenzene	0.322	0.285	11.5	86	-0.01
62	MC	Pentachlorophenol	0.135	0.109	19.3#	84	-0.01
63	T	Phenanthrene	1.092	1.029	5.8	84	-0.01
64	T	Anthracene	1.093	1.019	6.8	83	0.00
65	T	Carbazole	0.953	0.909	4.6	85	-0.01
66	T	Di-n-butylphthalate	1.246	1.271	-2.0	86	-0.01
67	TC	Fluoranthene	1.305	1.211	7.2	84	-0.01
68	T	Benzidine	0.186	0.181	2.7	98	-0.02
69	I	Chrysene-d12	1.000	1.000	0.0	87	-0.02
70	M	Pyrene	0.933	0.914	2.0	84	-0.01
71	S	Terphenyl-d14	0.759	0.792	-4.3	91	-0.01
72	T	3,3'-Dimethylbenzidine	0.109	0.105	3.7	103	-0.02
73	T	Butylbenzylphthalate	0.451	0.443	1.8	84	-0.02
74	T	3,3'-Dichlorobenzidine	0.268	0.216	19.4	69	-0.02
75	I	Benzo[a]anthracene	1.095	1.019	6.9	80	-0.02
76	T	Chrysene	0.888	0.830	6.5	79	-0.02
77	T	bis(2-Ethylhexyl)phthalate	0.681	0.668	1.9	82	-0.02
78	I	Perylene-d12	1.000	1.000	0.0	95	-0.04
79	TC	Di-n-octylphthalate	2.732	2.637	3.5	81	-0.03
80	T	Benzo[b]fluoranthene	1.904	1.967	-3.3	85	-0.03
81	T	Benzo[k]fluoranthene	1.723	1.933	-12.2	92	-0.02
82	TC	Benzo[a]pyrene	1.427	1.359	4.8	99	-0.03
83	T	Indeno[1,2,3-cd]pyrene	0.362	0.328	9.4	104	-0.05
84	T	Dibenz[a,h]anthracene	0.299	0.282	5.7	103	-0.05
85	T	Benzo[g,h,i]perylene	0.253	0.210	17.0	97	-0.06

(#) = Out of Range

C6843.D SVSC1000.M

SPCC's out = 0 CCC's out = 0

Tue Nov 28 14:34:53 2000 MSD-C

000101

Data File : C:\HPCHEM\1\DATA\11-29-00\C7004.D

Acq On : 29 Nov 2000 14:48

Sample : ., 50-PPB-INJ-FOR-11/29/00

Misc : N/A,N/A,N/A,1

MS Integration Params: RTEINT.P

Vial: 11

Operator:

Inst : MSD-C

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Multiple Level Calibration

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00
2 T	N-Nitrosodimethylamine	0.966	0.966	0.0	99	0.00
3 S	2-Fluorophenol	0.708	0.656	7.3	97	0.00
4 S	Phenol-d5	1.713	1.663	2.9	100	0.00
5 MC	Phenol	1.708	1.766	-3.4	99	0.00
6 T	Aniline	1.917	1.893	1.3	98	0.00
7 T	bis(2-Chloroethyl) ether	1.318	1.357	-3.0	97	0.00
8 M	2-Chlorophenol	1.388	1.404	-1.2	98	0.00
9 T	1,3-Dichlorobenzene	1.647	1.611	2.2	96	0.00
10 MC	1,4-Dichlorobenzene	1.737	1.716	1.2	97	0.00
11 T	Benzyl alcohol	0.784	0.830	-5.9	100	0.00
12 T	1,2-Dichlorobenzene	1.552	1.550	0.1	98	0.00
13 T	2-Methylphenol	1.177	1.227	-4.2	99	0.00
14 T	bis(2-chloroisopropyl) ether	2.072	2.200	-6.2	100	0.00
15 T	4-Methylphenol	1.270	1.355	-6.7	102	0.01
16 MP	N-Nitroso-di-n-propylamine	1.025	1.153	-12.5	106	0.01
17 T	2-Aminotoluene +4-Aminotolu	3.215	3.136	2.5	101	0.00
18 T	Hexachloroethane	0.703	0.741	-5.4	101	0.00
19 I	Naphthalene-d8	1.000	1.000	0.0	101	0.00
20 S	Nitrobenzene-d5	0.383	0.383	0.0	103	0.00
21 T	Nitrobenzene	0.404	0.422	-4.5	104	0.00
22 T	Isophorone	0.718	0.756	-5.3	107	0.00
23 TC	2-Nitrophenol	0.199	0.195	2.0	100	0.00
24 T	2,4-Dimethylphenol	0.370	0.380	-2.7	104	0.00
25 T	bis(2-Chloroethoxy) methane	0.425	0.434	-2.1	102	0.00
26 T	Benzoic acid	0.061	0.056	8.2	115	0.00
27 T	2,4-Dimethylaniline	0.579	0.541	6.6	103	0.00
28 TC	2,4-Dichlorophenol	0.311	0.303	2.6	103	0.00
29 M	1,2,4-Trichlorobenzene	0.372	0.353	5.1	100	0.00
30 T	Naphthalene	1.091	1.085	0.5	101	0.00
31 T	4-Chloroaniline	0.271	0.291	-7.4	110	0.00
32 TC	Hexachlorobutadiene	0.266	0.250	6.0	101	0.00
33 MC	4-Chloro-3-methylphenol	0.309	0.330	-6.8	109	0.00
34 T	2-Methylnaphthalene	0.770	0.787	-2.2	103	0.00
35 I	Acenaphthene-d10	1.000	1.000	0.0	107	0.00
36 TP	Hexachlorocyclopentadiene	0.237	0.199	16.0	102	0.00
37 TC	2,4,6-Trichlorophenol	0.400	0.370	7.5	109	0.00
38 T	2,4,5-Trichlorophenol	0.388	0.365	5.9	109	0.00
39 S	2-Fluorobiphenyl	1.306	1.215	7.0	106	0.00
40	2-Chloronaphthalene	1.190	1.123	5.6	107	0.00
41	2-Nitroaniline	0.367	0.386	-5.2	115	0.00
42 T	Dimethylphthalate	1.329	1.307	1.7	112	0.00
43 T	2,6-Dinitrotoluene	0.288	0.279	3.1	111	0.00
44 T	Acenaphthylene	1.933	1.894	2.0	109	0.00

000102

45	I	3-Nitroaniline	0.297	0.296	0.3	112	0.00
46	MC	Acenaphthene	1.244	1.193	4.1	108	0.00
47	T	2,4-Dinitrophenol	0.182	0.183	-0.5	114	0.00
48	MP	4-Nitrophenol	0.227	0.220	3.1	110	0.00
49	M	2,4-Dinitrotoluene	0.373	0.363	2.7	113	0.00
50	T	Dibenzofuran	1.625	1.613	0.7	110	0.00
51	T	Diethylphthalate	1.419	1.462	-3.0	115	0.00
52	T	Fluorene	1.510	1.465	3.0	110	0.00
53	T	4-Chlorophenyl-phenylether	0.717	0.661	7.8	112	0.00
54	T	4-Nitroaniline	0.338	0.339	-0.3	108	0.01
55	I	Phenanthrene-d10	1.000	1.000	0.0	117	0.00
56	T	4,6-Dinitro-2-methylphenol	0.096	0.082	14.6	114	0.00
57	TC	N-Nitrosodiphenylamine	0.476	0.447	6.1	112	0.00
58	T	1,2-Diphenylhydrazine/Azobe	0.757	0.770	-1.7	115	0.00
59	S	2,4,6-Tribromophenol	0.165	0.181	-9.7	130	0.00
60	T	4-Bromophenyl-phenylether	0.260	0.231	11.2	119	0.00
61	T	Hexachlorobenzene	0.322	0.286	11.2	117	0.00
62	MC	Pentachlorophenol	0.135	0.109	19.3	114	0.00
63	T	Phenanthrene	1.092	1.043	4.5	116	0.00
64	T	Anthracene	1.093	1.036	5.2	114	0.00
65	T	Carbazole	0.953	0.905	5.0	116	0.00
66	T	Di-n-butylphthalate	1.246	1.255	-0.7	116	0.00
67	TC	Fluoranthene	1.305	1.231	5.7	116	0.00
68	T	Ben-zidine	0.186	0.155	16.7	113	-0.01
69	I	Chrysene-d12	1.000	1.000	0.0	109	0.00
70	M	Pyrene	0.933	1.023	-9.6	119	0.00
71	S	Terphenyl-d14	0.759	0.830	-9.4	120	0.00
72	T	3,3'-Dimethylbenzidine	0.109	0.095	12.8	118	0.00
73	T	Butylbenzylphthalate	0.451	0.479	-6.2	115	0.00
74	T	3,3'-Dichlorobenzidine	0.268	0.231	13.8	93	0.00
75	T	Benzo[a]anthracene	1.095	1.080	1.4	106	0.00
76	T	Chrysene	0.888	0.922	-3.8	111	0.00
77	T	bis(2-Ethylhexyl)phthalate	0.681	0.756	-11.0	118	0.00
78	I	Perylene-d12	1.000	1.000	0.0	88	-0.01
79	TC	Di-n-octylphthalate	2.732	3.025	-10.7	86	0.00
80	T	Benzo[b]fluoranthene	1.904	2.041	-7.2	82	0.00
81	T	Benzo[k]fluoranthene	1.723	2.026	-17.6	90	0.00
82	TC	Benzo[a]pyrene	1.427	1.214	14.9	82	0.00
83	T	Indeno[1,2,3-cd]pyrene	0.362	0.303	16.3	89	-0.02
84	T	Dibenz[a,h]anthracene	0.299	0.248	17.1	85	-0.02
85	T	Benzo[g,h,i]perylene	0.253	0.204	19.4	87	-0.02

(#) = Out of Range

C6843.D SVSC1000.M

SPCC's out = 0 CCC's out = 0
Wed Nov 29 15:35:52 2000 MSD-C

000103

SEMI-VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/28/2000

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
Method-Blk	SOIL	C6945.D	97	85	95	87	68	150
7528-003	SOIL	C6948.D	N/A	N/A	83	78	N/A	155
7528-004	SOIL	C6949.D	N/A	N/A	65	64	N/A	122
7528-005	SOIL	C6950.D	N/A	N/A	65	64	N/A	130
7528-001	SOIL	C6951.D	N/A	N/A	48	53	N/A	89
7528-002	SOIL	C6952.D	N/A	N/A	60	61	N/A	105
7529-001	SOIL	C6953.D	N/A	N/A	67	66	N/A	135
7529-002	SOIL	C6954.D	N/A	N/A	61	60	N/A	133
7452-001	SOIL	C6955.D	N/A	N/A	69	65	N/A	126
7452-003	SOIL	C6957.D	N/A	N/A	63	63	N/A	147
7452-003MS	SOIL	C6958.D	98	63	64	63	60	154
7452-003MSD	SOIL	C6959.D	98	63	63	64	60	156

EPA CLP QC LIMITS FOR:

	<u>Soil</u>	<u>Aqueous</u>
S1 (2FP) = 2-Fluorophenol	37-100	37-96
S2 (PHL) = Phenol-d5	37-104	56-111
S3 (NBZ) = Nitrobenzene-d5	48-104	61-121
S4 (FBP) = 2-Fluorobiphenyl	52-107	63-124
S5 (TBP) = 2,4,6-Tribromophenol	60-155	52-153
S6 (TPH) = Terphenyl-d14	58-157	46-140

* Column to be used to flag recovery values

FORM II SV

000104

SEMI-VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/29/2000

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
7529-001	SOIL	C7005.D	N/A	N/A	62	58	N/A	92
7452-002	SOIL	C7006.D	N/A	N/A	52	61	N/A	87
7452-004	SOIL	C7007.D	N/A	N/A	62	60	N/A	115
7452-005	SOIL	C7008.D	N/A	N/A	64	62	N/A	124
7452-006	SOIL	C7009.D	N/A	N/A	68	66	N/A	127

EPA CLP QC LIMITS FOR:

	<u>Soil</u>	<u>Aqueous</u>
S1 (2FP) = 2-Fluorophenol	37-100	42-83
S2 (PHL) = Phenol-d5	37-104	63-101
S3 (NBZ) = Nitrobenzene-d5	48-104	47-120
S4 (FBP) = 2-Fluorobiphenyl	52-97	55-112
S5 (TBP) = 2,4,6-Tribromophenol	60-155	52-151
S6 (TPH) = Terphenyl-d14	58-147	63-132

* Column to be used to flag recovery values

FORM II SV

000105

SOIL SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID:

7452-003

Batch No.:

112800S

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	100.0	0.0	55.8	56	26 - 108
2-Chlorophenol	100.0	0.0	53.6	54	25 - 102
1,4-Dichlorobenzene	50.0	0.0	24.6	49	28 - 104
N-Nitroso-di-n-propylamine	50.0	0.0	31.7	63	41 - 126
1,2,4-Trichlorobenzene	50.0	0.0	25.3	51	38 - 107
4-Chloro-3-methylphenol	100.0	0.0	66.6	67	26 - 103
Acenaphthene	50.0	0.0	28.9	58	31 - 137
4-Nitrophenol	100.0	0.0	52.4	52	11 - 114
2,4-Dinitrotoluene	50.0	0.0	20.0	40	28 - 89
Pentachlorophenol	100.0	0.0	42.3	42	17 - 109
Pyrene	50.0	0.0	57.3	115	35 - 142

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	0.0	54.9	55	2	42	26 - 108
2-Chlorophenol	0.0	53.0	53	2	40	25 - 102
1,4-Dichlorobenzene	0.0	23.9	48	2	28	28 - 104
N-Nitroso-di-n-propylamine	0.0	30.6	61	3	38	41 - 126
1,2,4-Trichlorobenzene	0.0	22.8	46	10	28	38 - 107
4-Chloro-3-methylphenol	0.0	65.1	65	3	42	26 - 103
Acenaphthene	0.0	27.9	56	4	31	31 - 137
4-Nitrophenol	0.0	51.4	51	2	50	11 - 114
2,4-Dinitrotoluene	0.0	19.9	40	0	38	28 - 89
Pentachlorophenol	0.0	40.5	41	2	50	17 - 109
Pyrene	0.0	55.3	111	4	31	35 - 142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

000106

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6843.D

Date Analyzed: 11/21/2000

Instrument ID: MSDC

Time Analyzed: 13:23

40UG/L		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD		119102	6.40	439890	8.02	256547	9.78
UPPER LIMIT		238204	6.90	879780	8.52	513094	10.28
LOWER LIMIT		59551	5.90	219945	7.52	128274	9.28
LAB SAMPLE ID							
01	20-PPB-INJ-FOR-11/2	111038	6.39	411550	8.02	229727	9.78
02	120-PPB-INJ-FOR-11	92908	6.40	342033	8.03	191491	9.78
03	80-PPB-INJ-FOR-11/2	89443	6.40	371788	8.02	208344	9.78
04	160-PPB-INJ-FOR-11	73195	6.40	269809	8.03	151972	9.78
05	Mehod-Blank	106452	6.40	378993	8.02	217099	9.78
06	7416-001	100069	6.39	358940	8.02	201479	9.78
07	7417-001	99410	6.40	356477	8.02	204295	9.77
08	7417-002	105835	6.39	383227	8.02	219200	9.78
09	7417-003	101223	6.39	383816	8.02	216171	9.78
10	7417-004	102822	6.39	368710	8.02	208771	9.78
11	7417-005	98695	6.39	347548	8.02	198559	9.78
12	7417-006	98335	6.39	358801	8.02	213202	9.77
13	7417-007	101729	6.40	373066	8.02	222924	9.77
14	7417-008	96359	6.39	346072	8.02	203659	9.78
15	7417-009	97316	6.39	352760	8.02	209244	9.77
16	7417-010	96968	6.39	351689	8.02	206043	9.77
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6843.D

Date Analyzed: 11/21/2000

Instrument ID: MSDC

Time Analyzed: 13:23

40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	471601	11.10	645058	13.45	241393	15.36
UPPER LIMIT	943202	11.60	1290116	13.95	482786	15.86
LOWER LIMIT	235801	10.60	322529	12.95	120697	14.86
LAB SAMPLE ID						
01 20-PPB-INJ-FOR-11/2	424615	11.09	502233	13.44	376665	15.36
02 120-PPB-INJ-FOR-11	361358	11.10	569412	13.44	167715	15.35
03 80-PPB-INJ-FOR-11/2	385972	11.10	564660	13.44	216134	15.35
04 160-PPB-INJ-FOR-11	343202	11.10	582832	13.44	213065	15.34
05 Mehod-Blank	390333	11.09	417106	13.43	173995	15.33
06 7416-001	369251	11.10	410460	13.42	237512	15.33
07 7417-001	370463	11.09	420951	13.42	251443	15.33
08 7417-002	398742	11.10	460630	13.42	274658	15.34
09 7417-003	389867	11.10	430093	13.42	257620	15.34
10 7417-004	380922	11.09	433199	13.42	270992	15.34
11 7417-005	365267	11.10	416104	13.42	263199	15.33
12 7417-006	413477	11.09	424479	13.42	145978	15.34
13 7417-007	411311	11.09	418338	13.42	149704	15.33
14 7417-008	384317	11.09	401935	13.42	157079	15.33
15 7417-009	395010	11.09	406544	13.42	151412	15.33
16 7417-010	395556	11.09	408363	13.42	153950	15.33
17						
18						
19						
20						
21						
22						

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6944.D

Date Analyzed: 11/28/2000

Instrument ID: MSDC

Time Analyzed: 13:23

40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	93341	6.38	351419	8.01	212158	9.76
UPPER LIMIT	186682	6.88	702838	8.51	424316	10.26
LOWER LIMIT	46671	5.88	175710	7.51	106079	9.26
LAB SAMPLE ID						
01 Method-Blk	86783	6.38	317929	8.01	190439	9.76
02 7528-001	79979	6.38	312449	8.00	187320	9.76
03 7528-002	82032	6.38	310366	8.00	188655	9.76
04 7528-003	85708	6.38	323742	8.01	195125	9.76
05 7528-004	101394	6.37	383087	8.00	235994	9.76
06 7528-005	105547	6.37	407016	8.00	253699	9.76
07 7528-001	100608	6.37	385943	8.00	238961	9.76
08 7528-002	95272	6.38	359947	8.00	222070	9.76
09 7529-001	104118	6.37	402705	8.00	248951	9.76
10 7529-002	108414	6.38	425828	8.00	261360	9.77
11 7452-001	106835	6.38	442820	8.01	373365	9.77
12 7452-002	112285	6.38	565573	8.01	567458*	9.79
13 7452-003	110489	6.38	411642	8.01	250488	9.76
14 7452-003MS	102542	6.38	385446	8.01	239007	9.76
15 7452-003MSD	99293	6.37	385415	8.00	234292	9.76
16 7452-004	103019	6.38	404310	8.01	266436	9.76
17 7452-005	106639	6.38	417276	8.01	258319	9.76
18 7452-006	110709	6.37	436684	8.00	265673	9.76
19						
20						
21						
22						

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6944.D

Date Analyzed: 11/28/2000

Instrument ID: MSDC

Time Analyzed: 13:23

40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	404602	11.08	558031	13.42	228537	15.32
UPPER LIMIT	809204	11.58	1116062	13.92	457074	15.82
LOWER LIMIT	202301	10.58	279016	12.92	114269	14.82
LAB SAMPLE ID						
01 Method-Blk	350198	11.08	397026	13.41	281105	15.32
02 7528-001	361398	11.08	383727	13.41	187957	15.31
03 7528-002	361737	11.08	375804	13.41	187698	15.32
04 7528-003	373522	11.08	393305	13.41	201563	15.32
05 7528-004	456323	11.08	478911	13.41	221792	15.32
06 7528-005	492014	11.08	491781	13.41	177457	15.31
07 7528-001	453097	11.08	468986	13.41	188774	15.31
08 7528-002	425569	11.08	440056	13.41	175750	15.31
09 7529-001	482013	11.08	463096	13.41	182587	15.31
10 7529-002	509158	11.08	488529	13.41	170232	15.31
11 7452-001	740029	11.09	611166	13.41	196929	15.31
12 7452-002	1157420*	11.11	597338	13.41	175750	15.31
13 7452-003	489944	11.08	442011	13.41	162119	15.31
14 7452-003MS	451420	11.08	410727	13.41	149300	15.31
15 7452-003MSD	446365	11.08	401152	13.41	146210	15.31
16 7452-004	530155	11.08	335234	13.41	91888*	15.31
17 7452-005	489239	11.08	359062	13.41	102119*	15.31
18 7452-006	523859	11.08	333039	13.41	84633*	15.31
19						
20						
21						
22						

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C7004.D

Date Analyzed: 11/29/2000

Instrument ID: MSDC

Time Analyzed: 14:48

40UG/L		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD		114740	6.39	446105	8.02	273257	9.77
UPPER LIMIT		229480	6.89	892210	8.52	546514	10.27
LOWER LIMIT		57370	5.89	223053	7.52	136629	9.27
LAB SAMPLE ID							
01	7529-001	100509	6.39	396048	8.01	237278	9.77
02	7452-002	103215	6.39	441450	8.01	330046	9.78
03	7452-004	97765	6.39	386541	8.01	247675	9.77
04	7452-005	105019	6.39	420299	8.01	258647	9.77
05	7452-006	107515	6.39	430261	8.01	268679	9.77
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C7004.D

Date Analyzed: 11/29/2000

Instrument ID: MSDC

Time Analyzed: 14:48

40UG/L		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD UPPER LIMIT LOWER LIMIT		550218	11.09	703411	13.44	212753	15.35
		1100436	11.59	1406822	13.94	425506	15.85
		275109	10.59	351706	12.94	106377	14.85
LAB SAMPLE ID							
01	7529-001	454849	11.09	520926	13.43	378383	15.35
02	7452-002	636107	11.10	589728	13.43	416571	15.34
03	7452-004	482281	11.09	420214	13.42	135867	15.33
04	7452-005	477487	11.09	526948	13.42	369038	15.33
05	7452-006	508536	11.09	548934	13.42	173702	15.32
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10

IS5 = Chrysene-d12

IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

Data File : C:\HPCHEM\1\DATA\11-28-00\C6955.D

Acq On : 28 Nov 2000 18:03

Vial: 17

Sample : SS-50,7452-001,S,10.05g,10.9,11/28/00

Operator:

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 6:33 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration

DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	106835	40.00	UG	-0.02
19) Naphthalene-d8	8.01	136	442820	40.00	UG	-0.01
35) Acenaphthene-d10	9.77	164	373365	40.00	UG	0.00
55) Phenanthrene-d10	11.09	188	740029m	40.00	UG	0.00
69) Chrysene-d12	13.41	240	611166m	40.00	UG	-0.03
78) Perylene-d12	15.31	264	196929m	40.00	UG	-0.05

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 100	Recovery	=	0.00%#
4) Phenol-d5	5.57	99	701	0.15	UG	-0.20
Spiked Amount	100.000	Range	37 - 104	Recovery	=	0.15%#
20) Nitrobenzene-d5	7.14	82	145948	34.45	UG	-0.02
Spiked Amount	50.000	Range	48 - 104	Recovery	=	68.90%
39) 2-Fluorobiphenyl	9.11	172	396531	32.53	UG	-0.01
Spiked Amount	50.000	Range	52 - 107	Recovery	=	65.06%
59) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount	100.000	Range	60 - 155	Recovery	=	0.00%#
71) Terphenyl-d14	12.40	244	729663m	62.90	UG	-0.02
Spiked Amount	50.000	Range	58 - 157	Recovery	=	125.80%

Target Compounds

30) Naphthalene	8.02	128	9638	0.80	UG	Qvalue
34) 2-Methylnaphthalene	8.87	142	107198	12.57	UG	# 3
44) Acenaphthylene	9.56	152	33073m	1.83	UG	98
46) Acenaphthene	9.64	153	27916m	2.40	UG	
50) Dibenzofuran	10.33	168	383559m	25.29	UG	
52) Fluorene	10.77	166	81910m	5.81	UG	
63) Phenanthrene	11.11	178	332796m	16.47	UG	
64) Anthracene	11.16	178	55252m	2.73	UG	
70) Pyrene	12.33	202	38154m	2.68	UG	

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

C6955.D SVSC1000.M

Wed Nov 29 07:22:29 2000

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Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\C6955.D

Vial: 17

Acq On : 28 Nov 2000 18:03

Operator:

Sample : SS-50,7452-001,S,10.05g,10.9,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 6:33 2000

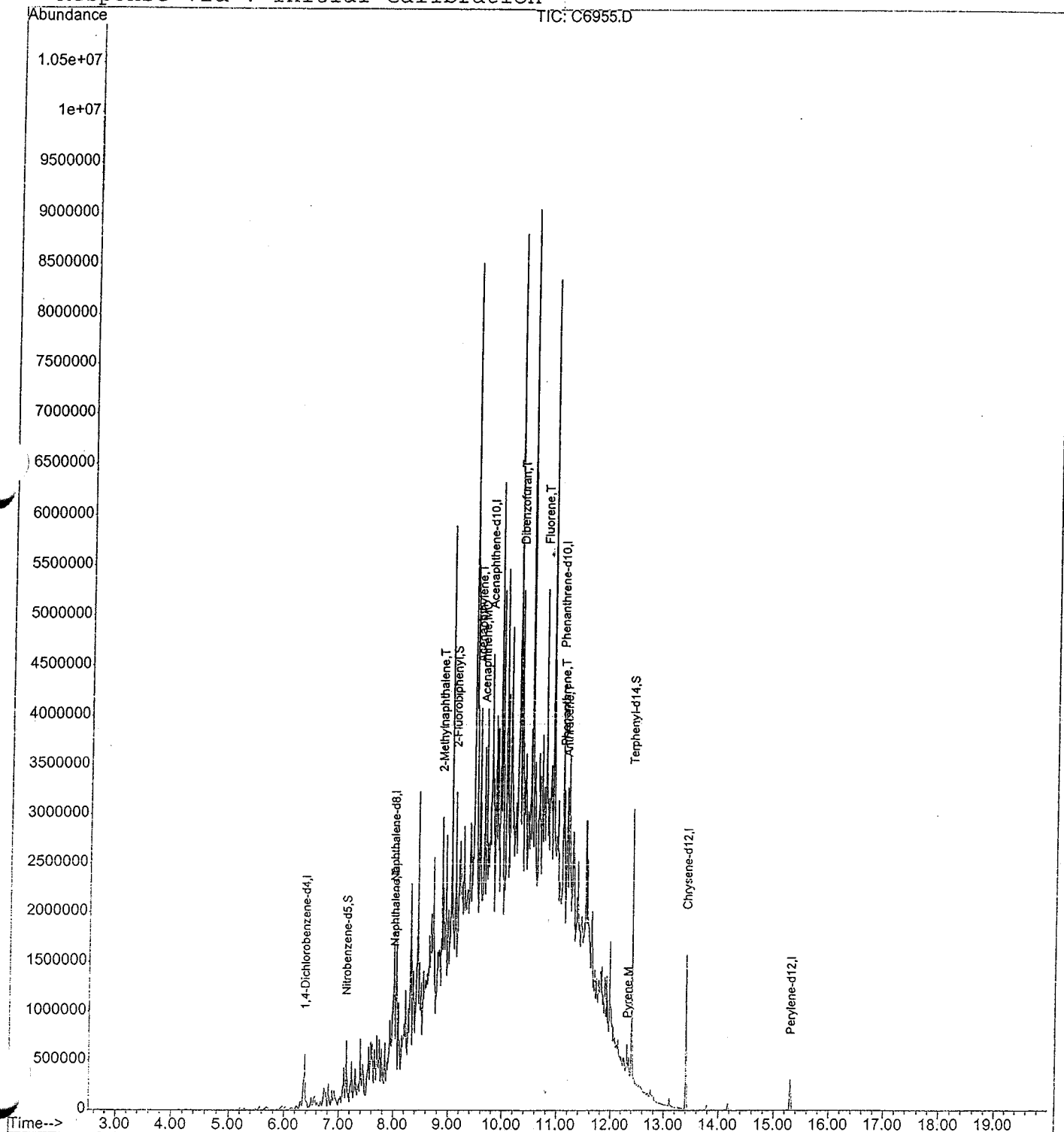
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-29-00\C7006.D Vial: 18
 Acq On : 29 Nov 2000 15:40 Operator:
 Sample : SS-51,7452-002,S,10.13g,12.4,11/28/00 Inst : MSD-C
 Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,5 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Nov 29 16:04 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Wed Nov 22 09:12:59 2000
 Response via : Initial Calibration
 DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	103215	40.00	UG	0.00
19) Naphthalene-d8	8.01	136	441450	40.00	UG	0.00
35) Acenaphthene-d10	9.78	164	330046	40.00	UG	0.00
55) Phenanthrene-d10	11.10	188	636107	40.00	UG	0.00
69) Chrysene-d12	13.43	240	589728	40.00	UG	-0.01
78) Perylene-d12	15.34	264	416571m	40.00	UG	-0.02

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 100	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 104	Recovery	=	0.00%#
20) Nitrobenzene-d5	7.15	82	22049	5.22	UG	0.00
Spiked Amount	50.000	Range	48 - 104	Recovery	=	10.44%#
39) 2-Fluorobiphenyl	9.12	172	65958	6.12	UG	0.00
Spiked Amount	50.000	Range	52 - 107	Recovery	=	12.24%#
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	60 - 155	Recovery	=	0.00%#
71) Terphenyl-d14	12.41	244	98253	8.78	UG	0.00
Spiked Amount	50.000	Range	58 - 157	Recovery	=	17.56%#

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
34) 2-Methylnaphthalene	8.87	142	49919	5.87	UG	96
46) Acenaphthene	9.80	153	40391	3.94	UG	# 60
50) Dibenzofuran	9.79	168	23888	1.78	UG	99
52) Fluorene	10.27	166	52328	4.20	UG	# 61
63) Phenanthrene	11.11	178	121917	7.02	UG	# 75
64) Anthracene	11.17	178	56074	3.23	UG	# 1
70) Pyrene	12.34	202	21443	1.56	UG	98

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-29-00\C7006.D

Vial: 18

Acq On : 29 Nov 2000 15:40

Operator:

Sample : SS-51,7452-002,S,10.13g,12.4,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,5 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 16:04 2000

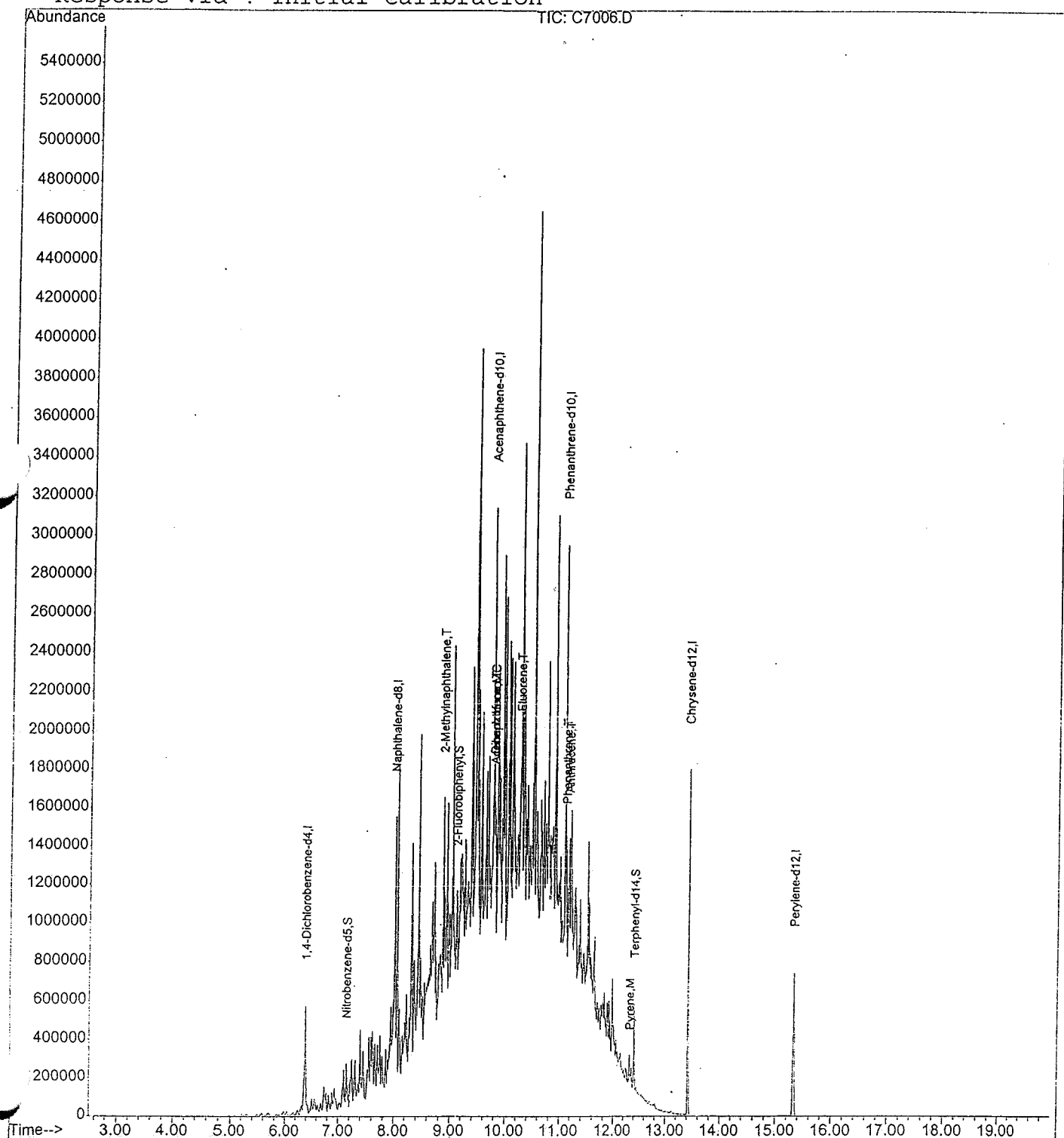
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\C6957.D Vial: 19
Acq On : 28 Nov 2000 18:54 Operator:
Sample : SS-52,7452-003,S,10.66g,17.7,11/28/00 Inst : MSD-C
Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 29 6:58 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Nov 22 09:12:59 2000
Response via : Initial Calibration
DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	110489	40.00	UG	-0.02
19) Naphthalene-d8	8.01	136	411642	40.00	UG	-0.01
35) Acenaphthene-d10	9.76	164	250488	40.00	UG	-0.01
55) Phenanthrene-d10	11.08	188	489944	40.00	UG	-0.01
69) Chrysene-d12	13.41	240	442011	40.00	UG	-0.03
78) Perylene-d12	15.31	264	162119	40.00	UG	-0.05

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 100	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 104	Recovery	=	0.00%#
20) Nitrobenzene-d5	7.14	82	124513	31.61	UG	-0.02
Spiked Amount	50.000	Range	48 - 104	Recovery	=	63.22%
39) 2-Fluorobiphenyl	9.11	172	256647	31.38	UG	-0.02
Spiked Amount	50.000	Range	52 - 107	Recovery	=	62.76%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	60 - 155	Recovery	=	0.00%#
71) Terphenyl-d14	12.40	244	618635	73.74	UG	-0.02
Spiked Amount	50.000	Range	58 - 157	Recovery	=	147.48%

Target Compounds

Qvalue

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

C6957.D SVSC1000.M

Wed Nov 29 07:22:36 2000

MSD-C

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Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\C6957.D

Vial: 19

Acq On : 28 Nov 2000 18:54

Operator:

Sample : SS-52,7452-003,S,10.66g,17.7,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 6:58 2000

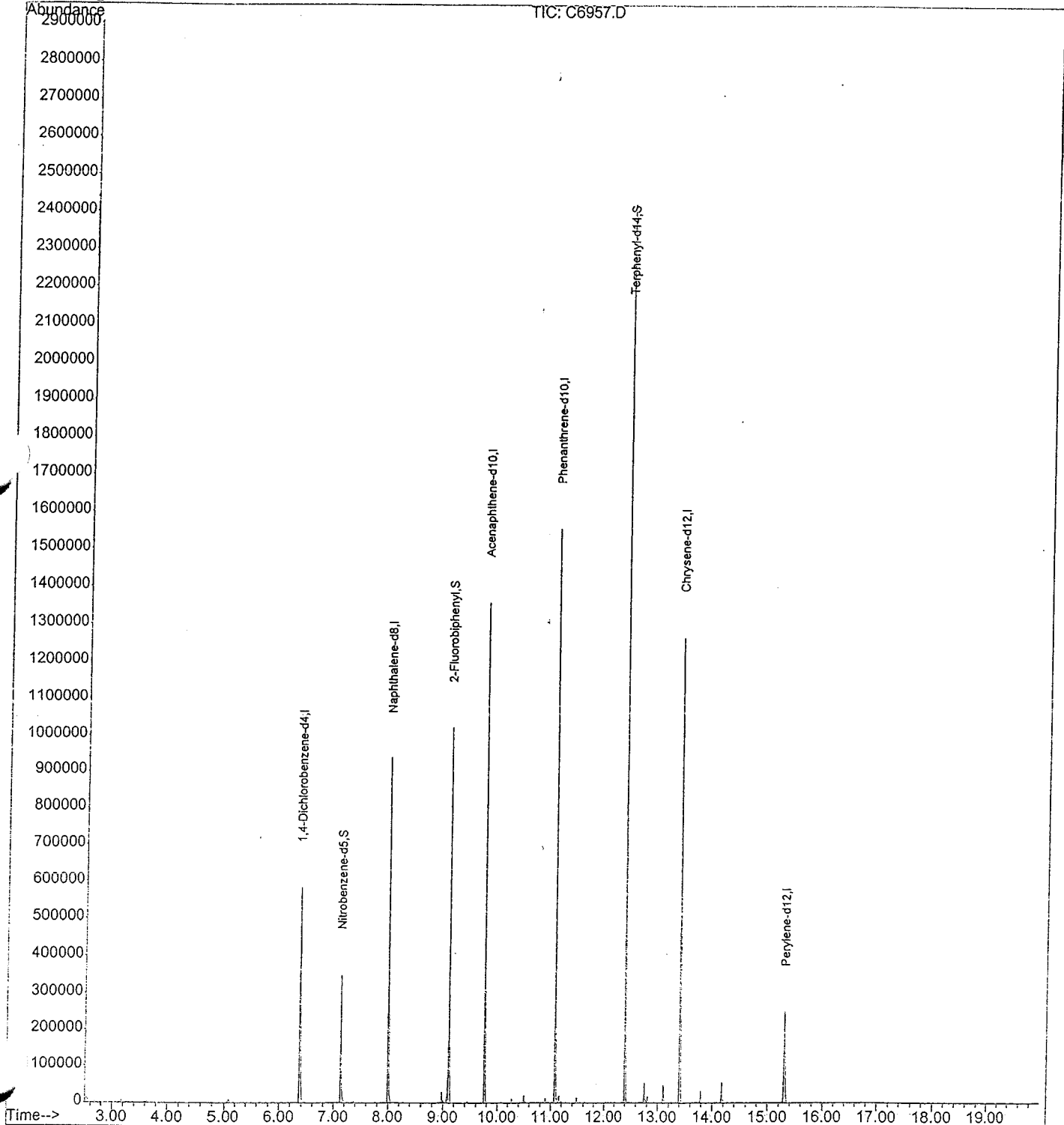
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-29-00\C7007.D

Vial: 22

Acq On : 29 Nov 2000 16:31

Operator:

Sample : SS-53,7452-004,S,10.44g,9.8,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,3 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 16:54 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration

DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	97765	40.00	UG	0.00
19) Naphthalene-d8	8.01	136	386541	40.00	UG	0.00
35) Acenaphthene-d10	9.77	164	247675	40.00	UG	0.00
55) Phenanthrene-d10	11.09	188	482281	40.00	UG	0.00
69) Chrysene-d12	13.42	240	420214	40.00	UG	-0.02
78) Perylene-d12	15.33	264	135867	40.00	UG	-0.03

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 37 - 100		Recovery =	0.00%	#	
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 100.000	Range 37 - 104		Recovery =	0.00%	#	
20) Nitrobenzene-d5	7.14	82	37994	10.27	UG	0.00
Spiked Amount 50.000	Range 48 - 104		Recovery =	20.54%	#	
39) 2-Fluorobiphenyl	9.12	172	81058	10.02	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery =	20.04%	#	
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 60 - 155		Recovery =	0.00%	#	
71) Terphenyl-d14	12.41	244	152584	19.13	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery =	38.26%	#	

Target Compounds

						Qvalue
46) Acenaphthene	9.80	153	5538	0.72	UG	# 50
52) Fluorene	10.26	166	6485	0.69	UG	# 81
63) Phenanthrene	11.11	178	15585	1.18	UG	# 79

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-29-00\C7007.D

Vial: 22

Acq On : 29 Nov 2000 16:31

Operator:

Sample : SS-53,7452-004,S,10.44g,9.8,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,3 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 16:54 2000

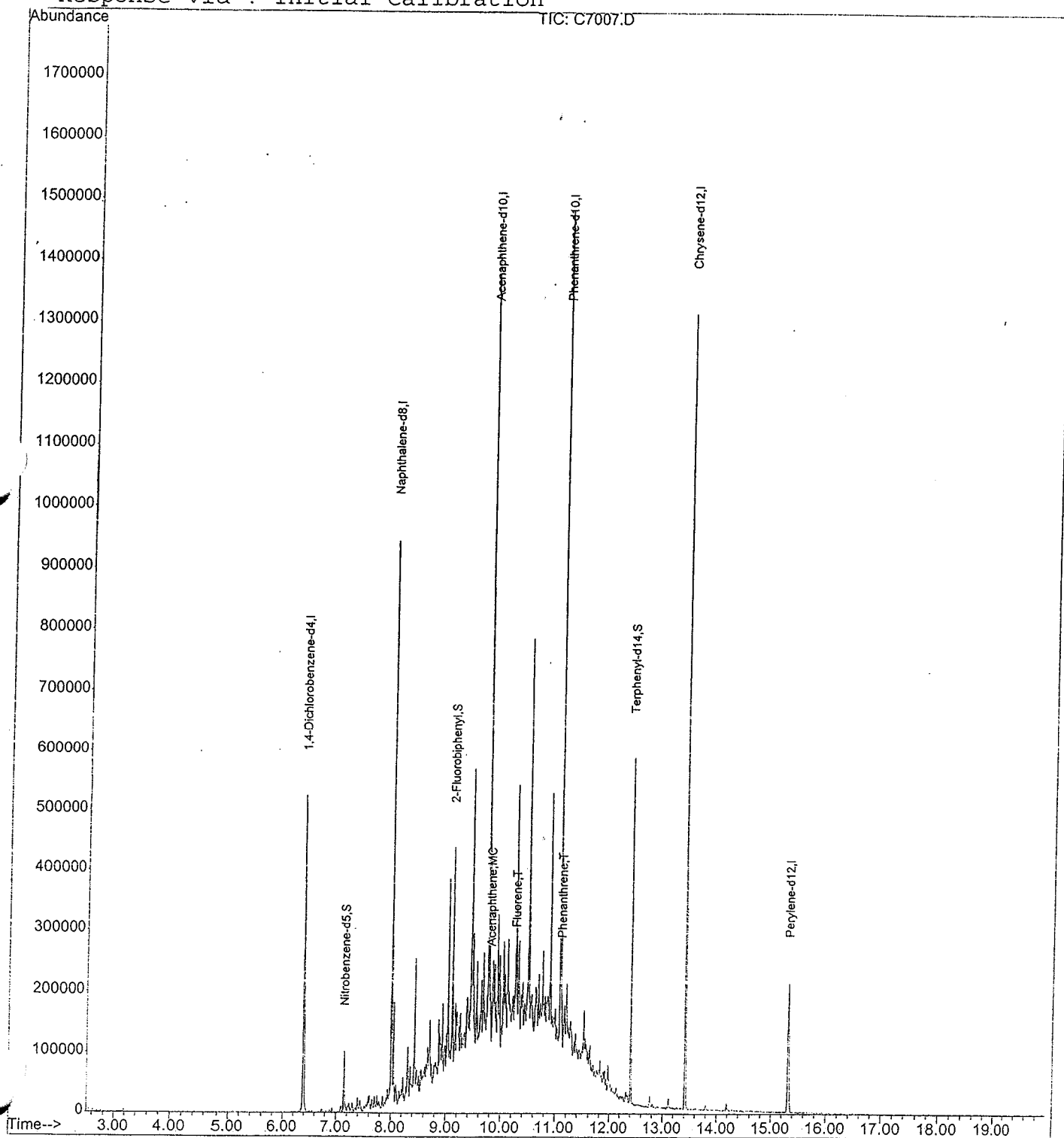
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-29-00\C7008.D Vial: 23
Acq On : 29 Nov 2000 16:57 Operator:
Sample : SS-54,7452-005,S,10.53g,6.8,11/28/00 Inst : MSD-C
Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:44 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Nov 22 09:12:59 2000
Response via : Initial Calibration
DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	105019	40.00	UG	0.00
19) Naphthalene-d8	8.01	136	420299	40.00	UG	0.00
35) Acenaphthene-d10	9.77	164	258647	40.00	UG	0.00
55) Phenanthrene-d10	11.09	188	477487	40.00	UG	0.00
69) Chrysene-d12	13.42	240	526948	40.00	UG	-0.02
78) Perylene-d12	15.33	264	369038	40.00	UG	-0.03

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range 37 - 100	Recovery	=	0.00%#	
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range 37 - 104	Recovery	=	0.00%#	
20) Nitrobenzene-d5	7.15	82	129155	32.12	UG	0.00
Spiked Amount	50.000	Range 48 - 104	Recovery	=	64.24%	
39) 2-Fluorobiphenyl	9.12	172	261666	30.99	UG	0.00
Spiked Amount	50.000	Range 52 - 107	Recovery	=	61.98%	
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range 60 - 155	Recovery	=	0.00%#	
71) Terphenyl-d14	12.41	244	617578	61.75	UG	-0.01
Spiked Amount	50.000	Range 58 - 157	Recovery	=	123.50%	

Target Compounds

Qvalue

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

C7008.D SVSC1000.M

Thu Nov 30 12:45:00 2000

MSD-C

Page 1

000121

Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-29-00\C7008.D

Vial: 23

Acq On : 29 Nov 2000 16:57

Operator:

Sample : SS-54,7452-005,S,10.53g,6.8,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 30 12:44 2000

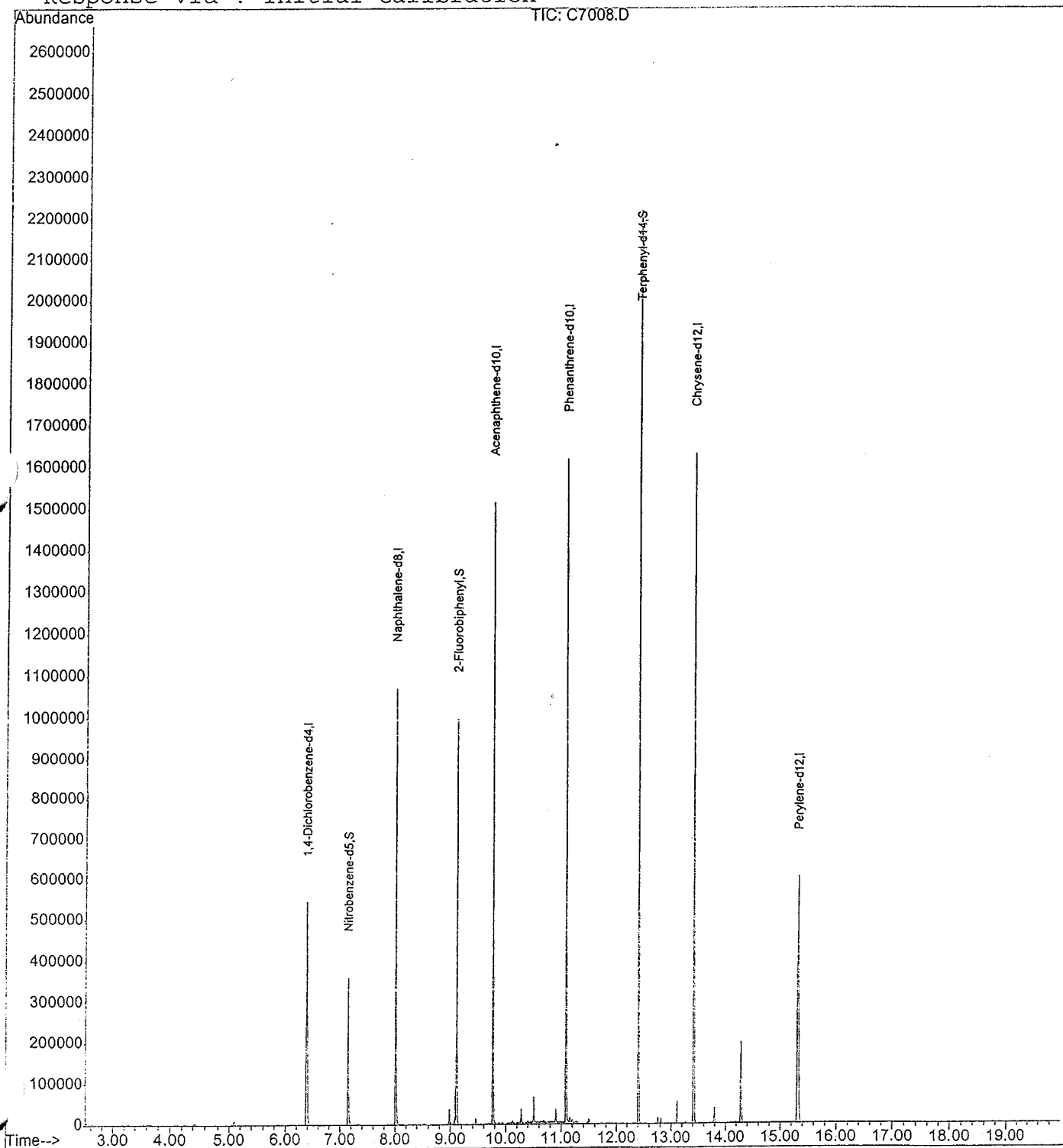
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-29-00\C7009.D Vial: 24
 Acq On : 29 Nov 2000 17:23 Operator:
 Sample : SS-55,7452-006,S,10.18g,12.6,11/28/00 Inst : MSD-C
 Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Nov 30 6:50 2000

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
 Title : BNA CALIBRATION METHOD
 Last Update : Wed Nov 22 09:12:59 2000
 Response via : Initial Calibration
 DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	107515	40.00	UG	0.00
19) Naphthalene-d8	8.01	136	430261	40.00	UG	0.00
35) Acenaphthene-d10	9.77	164	268679	40.00	UG	0.00
55) Phenanthrene-d10	11.09	188	508536	40.00	UG	0.00
69) Chrysene-d12	13.42	240	548934	40.00	UG	-0.02
78) Perylene-d12	15.32	264	173702	40.00	UG	-0.04

System Monitoring Compounds

3) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 100	Recovery	=	0.00%#
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount	100.000	Range	37 - 104	Recovery	=	0.00%#
20) Nitrobenzene-d5	7.15	82	140745	34.19	UG	0.00
Spiked Amount	50.000	Range	48 - 104	Recovery	=	68.38%
39) 2-Fluorobiphenyl	9.12	172	290656	33.14	UG	0.00
Spiked Amount	50.000	Range	52 - 107	Recovery	=	66.28%
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount	100.000	Range	60 - 155	Recovery	=	0.00%#
71) Terphenyl-d14	12.41	244	662624	63.60	UG	0.00
Spiked Amount	50.000	Range	58 - 157	Recovery	=	127.20%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
63) Phenanthrene	11.11	178	55952	4.03	UG	99
67) Fluoranthene	12.13	202	93970	5.66	UG	99
70) Pyrene	12.34	202	81718	6.38	UG	99
75) Benzo[a]anthracene	13.40	228	43346	2.88	UG	93
76) Chrysene	13.44	228	30060m	2.47	UG	
80) Benzo[b]fluoranthene	14.72	252	26508m	3.21	UG	
81) Benzo[k]fluoranthene	14.74	252	9374m	1.25	UG	
82) Benzo[a]pyrene	15.24	252	14318m	2.31	UG	
83) Indeno[1,2,3-cd]pyrene	17.44	276	2656	1.69	UG	# 48
85) Benzo[g,h,i]perylene	18.09	276	2177	1.98	UG	# 52

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-29-00\C7009.D

Vial: 24

Acq On : 29 Nov 2000 17:23

Operator:

Sample : SS-55,7452-006,S,10.18g,12.6,11/28/00

Inst : MSD-C

Misc : GEOVATION/NEW GRANGE,11/20/00,11/21/00,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 30 6:50 2000

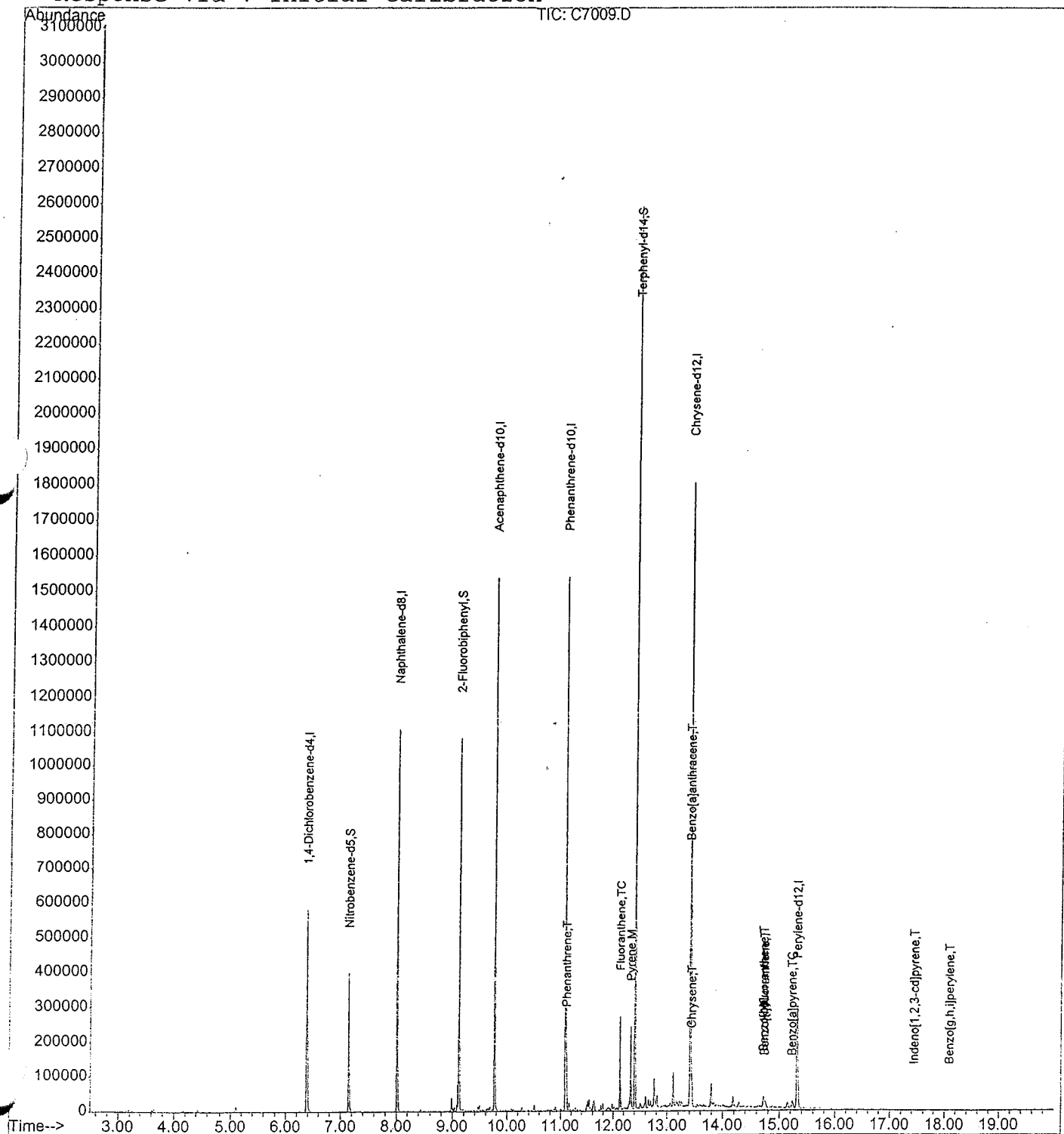
Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)

Title : BNA CALIBRATION METHOD

Last Update : Wed Nov 22 09:12:59 2000

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\11-28-00\C6945.D
Acq On : 28 Nov 2000 13:48
Sample : ., Method-Blk, S, 30.0g, 0.0, 11/28/00
Misc : N/A, N/A, N/A, 1
S Integration Params: RTEINT.P
Quant Time: Nov 28 14:41 2000

Vial: 9
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVSC1000.RES

Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Nov 22 09:12:59 2000
Response via : Initial Calibration
DataAcq Meth : SVSC1000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	86783	40.00	UG	-0.02
19) Naphthalene-d8	8.01	136	317929	40.00	UG	-0.01
35) Acenaphthene-d10	9.76	164	190439	40.00	UG	-0.01
55) Phenanthrene-d10	11.08	188	350198	40.00	UG	-0.01
69) Chrysene-d12	13.41	240	397026	40.00	UG	-0.03
78) Perylene-d12	15.32	264	281105	40.00	UG	-0.04

System Monitoring Compounds

3) 2-Fluorophenol	4.39	112	149732m	97.43	UG	-0.02
Spiked Amount	100.000	Range	37 - 100	Recovery	=	97.43%
4) Phenol-d5	5.74	99	315591	84.92	UG	-0.03
Spiked Amount	100.000	Range	37 - 104	Recovery	=	84.92%
20) Nitrobenzene-d5	7.14	82	144552	47.52	UG	-0.02
Spiked Amount	50.000	Range	48 - 104	Recovery	=	95.04%
39) 2-Fluorobiphenyl	9.11	172	271036	43.59	UG	-0.01
Spiked Amount	50.000	Range	52 - 107	Recovery	=	87.18%
59) 2,4,6-Tribromophenol	10.47	330	98236	67.96	UG	-0.01
Spiked Amount	100.000	Range	60 - 155	Recovery	=	67.96%
71) Terphenyl-d14	12.41	244	566047	75.12	UG	-0.01
Spiked Amount	50.000	Range	58 - 157	Recovery	=	150.24%

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
C6945.D SVSC1000.M Tue Nov 28 14:41:21 2000

MSD-C

Page 1

000125

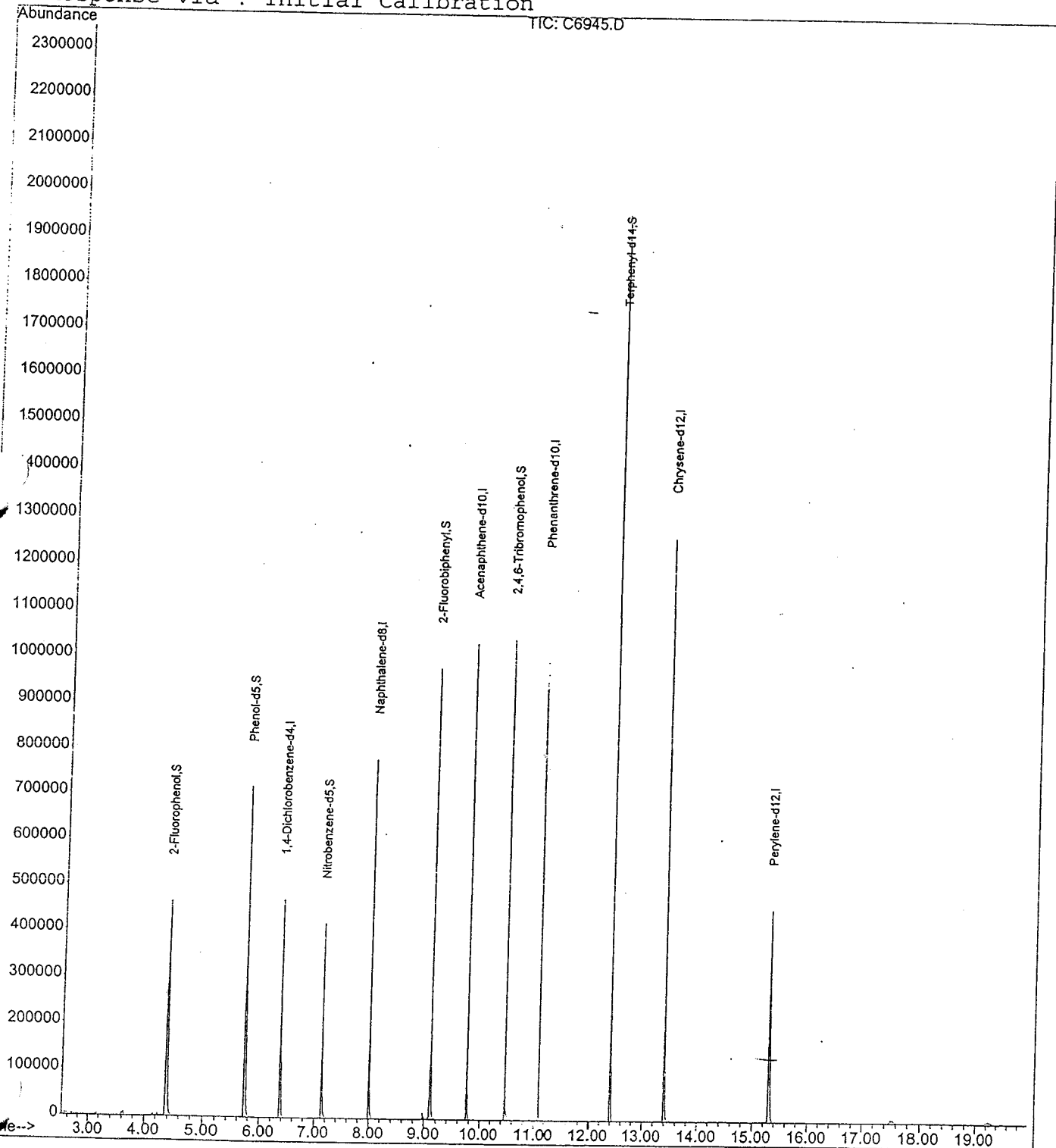
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-28-00\C6945.D
Acq On : 28 Nov 2000 13:48
Sample : .,Method-Blk,S,30.0g,0.0,11/28/00
Misc : N/A,N/A,N/A,1
MS Integration Params: RTEINT.P
Quant Time: Nov 28 14:41 2000

Vial: 9
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVSC1000.RES

Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Nov 22 09:12:59 2000
Response via : Initial Calibration



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\11-28-00\C6945.D
Acq On : 28 Nov 2000 13:48
Sample : ., Method-Blk, S, 30.0g, 0.0, 11/28/00
Misc : N/A, N/A, N/A, 1

Vial: 9
Operator:
Inst : MSD-C
Multiplr: 1.00

S Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\SVSC1000.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

C6945.D SVSC1000.M Tue Nov 28 14:41:27 2000 MSD-C

000127

INTEGRATED ANALYTICAL LABORATORIES

CHAIN OF CUSTODY

CLIENT & PROJECT

REPORTING

Company Name:	Geovation
Fax to:	Geovation
Fax #:	(914) 651-0040
Report to:	←
Address:	468 Route 17A Florida, NY 10921
Telephone #:	(845) 651-4141
Fax #:	(845) 651-0040
Project Name:	New Garage
Project Manager:	Robert Zimmer
Reference ID#:	PO#:

SAMPLE INFORMATION

W - Waste
O - Oil
GW - Groundwater

SL - Sludge
X - Other
SOL - Solid

A - Aqueous
S - Soil

Sample ID	Sample Description	Date	Sampling Time	Matrix	# of Containers	Lab ID
SS-50		11/24/00	10:20	S	2	01
SS-51			10:25	S	2	2
SS-52			10:10	S	2	3
SS-53			11:00	S	2	4
SS-54			11:15	S	2	5
SS-55			11:20	S	2	6

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

CUSTODY LOG

Signature	Date	Time	Signature
Relinquished by: Robert L. Zimmer	11/21/00	0830	Received by: Eric Hince
Relinquished by: Eric C. Hince	11/21/00	1400	Received by: Robert Zimmer
Relinquished by: Robert Zimmer	11/21/00	1430	Received by: Eric C. Hince
Relinquished by:			Received by:
Relinquished by:			Received by:

LAB COMES - WHITE & YELLOW; CLIENT COPY - PINK

Turnaround Time

Conditional / TPHC	24 hr	48 hr	72 hr	1 wk	NA	Other:
Verbal/Fax						
Hard Copy						
24 hr	48 hr	72 hr	1 wk	2 wk	Other:	
72 hr	1 wk	2 wk	3 wk	Other:		

*Prior to sample arrival, Lab notification is required.

ANALYTICAL PARAMETERS / PRESERVATIVES

** Circle format required											
PRESERVATIVES											
1. HCL		3. HNO ₃		2. NaOH		4. H ₂ SO ₄		5. MeOH		6. Other	
COOLER TEMP. °C											
Comments											

Concentrations Expected	LOW	MED	HIGH	Describe:
Known Hazard: yes no				

Comments: *Needs NYSDC "STARS" List
also full 8260/8270 reports

Lab Case #

7450

CHAIN OF CUSTODY

Case No.: E00-7452
Project : NEW GRANGE

P.O. #: _____

Client/Project: GEOVATION/NEW GRANGE

Client Address:

Geovation Consultants Inc.

468 Route 17A

P.O. Box 293

Florida, NY 10921

Date Received: 11/21/00

Time Received: 16:30

Report Format: Reduced

Billing Address:

Geovation Consultants Inc.

468 Route 17A

P.O. Box 293

Florida, NY 10921

Verbal Due: Dec 7

Report Due: Dec 14

# of Containers	2	2	2	2	2	2
IAL ID #	7452-001	7452-002	7452-003	7452-004	7452-005	7452-006
Client ID #	SS-50	SS-51	SS-52	SS-53	SS-54	SS-55
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Sample Date	11/20/00	11/20/00	11/20/00	11/20/00	11/20/00	11/20/00
Sample Time	10:00	10:05	10:10	11:00	11:15	11:20
VO, PP LIST	✓	✓	✓	✓	✓	✓
STARS 8021 VO	✓	✓	✓	✓	✓	✓
Base Neutrals	✓	✓	✓	✓	✓	✓
STARS 8270 BN	✓	✓	✓	✓	✓	✓
% Solids	✓	✓	✓	✓	✓	✓

Comments: NOTE 1: CLIENT NEEDS BOTH STARS & FULL PP LISTS REPORTED FOR BOTH VO & BN.

INTEGRATED ANALYTICAL LABORATORIES, LLC
SAMPLE RECEIPT VERIFICATION

CASE NO:

Nº 7452

CLIENT:

Gervais

COOLER TEMPERATURE: 2° - 6°C: ☒ (See Chain of Custody)

CHAIN OF CUSTODY:

COMPLETE / INCOMPLETE

Comments:

Sample Bottles Intact:

☒

Comments:

Sample Labels Intact/ Correct:

☒

Sufficient Sample Volume:

☒

Correct bottles/ preservative:

☒

Samples received in

holding time/ prep time:

☒

Headspace/ bubbles in voa samples:



Samples to be subcontracted:

Preserved Sample pH checked:
(Excluding voa samples)



KEY

☒ = YES

☒ = NO

☒ = N/A

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY:

INITIAL

edc

DATE

11-21-00

CORRECTIVE ACTION REQUIRED:

YES

☐

NO

☒

CLIENT NOTIFIED:

YES

☐

Date/ Time:

NO

☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

CORRECTIVE ACTION BY CLIENT:

CORRECTIVE ACTION TAKEN:

CONCLUSION:

Corrective Action taken by:

INITIAL

DATE

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E00-7452
 Client : Geovation Consultants Inc.
 Project : NEW GRANGE

VO, PP LIST	GC/MS V		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
	7452-001	S				11/27/02	7:00	DL
	7452-002	S						
	7452-003	S						
	7452-004	S						
	7452-005	S						
	7452-006	S						
STARS 8021 VO	7452-001	S						
	7452-002	S						
	7452-003	S						
	7452-004	S						
	7452-005	S						
	7452-006	S						

Base Neutrals	GC/MS X		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
	7452-001	S	11/28	7:00	DL	11/28		DL
	7452-002	S						
	7452-003	S						
	7452-004	S						
	7452-005	S						
	7452-006	S						
STARS 8270 BN	7452-001	S						
	7452-002	S						
	7452-003	S						
	7452-004	S						
	7452-005	S						
	7452-006	S						

% Solids	WETCHEM		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
	7452-001	S	11/25	10:55	LC			
	7452-002	S						
	7452-003	S						
	7452-004	S						
	7452-005	S						
	7452-006	S						

REVIEW & APPROVAL: MCB/2/05
 REMARKS :

APPENDIX E



Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for

Geovation Consultants Inc.
468 Route 17A
P.O. Box 293
Florida, NY 10921

Project: WARWICK
Lab Case Number: E01-2892
Date Report Prepared: May 15, 2001

<u>CLIENT SAMPLE ID</u>	<u>LABORATORY SAMPLE ID</u>
MW-1	2892-001
MW-2	2892-002
MW-3	2892-003
MW-4	2892-004

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

- A - Indicates the sample is an Aqueous matrix.
- O - Indicates the sample is an Oil matrix.
- S - Indicates the sample is a Soil, Sludge or Sediment matrix.
- X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

- B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.
- C - Common Laboratory Contaminant.
- D - The compound was reported from the Diluted analysis.
- D.F. - Dilution Factor.
- E - Estimated concentration, reported results are outside the calibrated range of the instrument.
- J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.
- MDL - Method Detection Limit.
- MI - Indicates compound concentration could not be determined due to Matrix Interferences.
- NA - Not Applicable.
- ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received four (4) aqueous sample(s) from Geovation Consultants Inc. (Project: WARWICK) on May 4, 2001 for the analysis of:

(4) Volatiles + 10

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Midyngrup
Reviewed by

5/17/01
Date

000002

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E01-2892

Check If
Complete

1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	<u>✓</u>
2.	Table of Contents.	<u>✓</u>
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	<u>✓</u>
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	<u>✓</u>
5.	Document bound, paginated and legible.	<u>✓</u>
6.	Chain of Custody.	<u>✓</u>
7.	Methodology Summary.	<u>✓</u>
8.	Laboratory Chronicle and Holding Time Check.	<u>✓</u>
9.	Results submitted on a dry weight basis (if applicable).	<u>✓</u>
10.	Method Detection Limits.	<u>✓</u>
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	<u>✓</u>
12.	NonConformance Summary.	<u>✓</u>

audimenez
QC Reviewed by

5/17/01
Date

000003

Lab Case Number: E01-2892

13. Comments:

Date _____

000001

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Geovation Consultants Inc.

Project: WARWICK

Lab Case No.: E01-2892

Lab ID: Client ID: Matrix: Sampled Date:	2892-001 MW-1 Aqueous 5/2/2001	2892-002 MW-2 Aqueous 5/2/2001	2892-003 MW-3 Aqueous 5/2/2001	2892-004 MW-4 Aqueous 5/2/2001
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Volatiles (ppb)				
Chloromethane	3.27 0.61	ND 3.05	ND 6.1	ND 0.61
Trichloroethene	ND 0.36	15.8 1.8	9.64 3.6	ND 0.36
Tetrachloroethene	ND 0.38	220 1.9	46.6 3.8	ND 0.38
Ethylbenzene	ND 0.3	2.75 1.5	ND 3	ND 0.3
TOTAL VO's:	3.27	238.55	56.24	ND
TOTAL TIC's:	ND	200.5	2260	ND
TOTAL VO's & TIC's:	3.27	439.05	2316.24	ND

ND = Analyzed for but Not Detected at the MDL

000005

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-001

Client ID: MW-1

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Data file: E9154.D

GC/MS Column: DB-624

Sample wt/vol: 5mL

Matrix-Units: Aqueous- $\mu\text{g/L}$ (ppb)

Dilution Factor: 1

% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	3.27		0.61
Vinyl Chloride	ND		0.33
Bromomethane	ND		0.47
Chloroethane	ND		0.65
Trichlorofluoromethane	ND		0.38
Acrolein	ND		5.94
1,1-Dichloroethene	ND		0.5
Methylene Chloride	ND		1.91
Acrylonitrile	ND		1.27
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.33
Chloroform	ND		0.31
1,1,1-Trichloroethane	ND		0.38
Carbon Tetrachloride	ND		0.39
1,2-Dichloroethane(EDC)	ND		0.35
Benzene	ND		0.3
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.25
2-Chloroethylvinyl Ether	ND		0.25
cis-1,3-Dichloropropene	ND		0.19
Toluene	ND		0.33
trans-1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.31
Tetrachloroethene	ND		0.38
Dibromochloromethane	ND		0.31
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.9
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.27
1,3-Dichlorobenzene	ND		0.22
1,4-Dichlorobenzene	ND		0.22
1,2-Dichlorobenzene	ND		0.19

Total Target Compounds: 3.27

C000006

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-001

Client ID: MW-1

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Data file: E9154.D

GC/MS Column: DB-624

Sample wt/vol: 5mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 1

% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

000007

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-002

Client ID: MW-2

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Data file: E9155.D

GC/MS Column: DB-624

Sample wt/vol: 1mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 5

% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		3.05
Vinyl Chloride	ND		1.65
Bromomethane	ND		2.35
Chloroethane	ND		3.25
Trichlorofluoromethane	ND		1.9
Acrolein	ND		29.7
1,1-Dichloroethene	ND		2.5
Methylene Chloride	ND		9.55
Acrylonitrile	ND		6.35
trans-1,2-Dichloroethene	ND		1.95
1,1-Dichloroethane	ND		1.65
Chloroform	ND		1.55
1,1,1-Trichloroethane	ND		1.9
Carbon Tetrachloride	ND		1.95
1,2-Dichloroethane(EDC)	ND		1.75
Benzene	ND		1.5
Trichloroethene	15.8		1.8
1,2-Dichloropropane	ND		1.25
Bromodichloromethane	ND		1.25
2-Chloroethylvinyl Ether	ND		1.25
cis-1,3-Dichloropropene	ND		0.95
Toluene	ND		1.65
trans-1,3-Dichloropropene	ND		1.35
1,1,2-Trichloroethane	ND		1.55
Tetrachloroethene	220		1.9
Dibromochloromethane	ND		1.55
Chlorobenzene	ND		1.4
Ethylbenzene	2.75		1.5
Total Xylenes	ND		4.5
Bromoform	ND		1.4
1,1,2,2-Tetrachloroethane	ND		1.35
1,3-Dichlorobenzene	ND		1.1
1,4-Dichlorobenzene	ND		1.1
1,2-Dichlorobenzene	ND		0.95

Total Target Compounds: 238.55

000008

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS Tentatively Identified Compounds

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-002

Client ID: MW-2

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Date File: E9155.D

GC/MS Column: DB-624

Sample wt/vol: 1mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 5

% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
000156-59-2	Ethene, 1,2-dichloro-, (cis)-	43	5.98
	Substituted benzene	20.5	12.92
	Unknown aromatic	32	13.91
	Unknown aromatic	32	14.60
	Unknown aromatic	54	15.46
	Unknown aromatic	19	15.96

Total TICs = 200.5

000009

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-003

Client ID: MW-3

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Data file: E9156.D

GC/MS Column: DB-624

Sample wt/vol: 0.5mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 10

% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		6.1
Vinyl Chloride	ND		3.3
Bromomethane	ND		4.7
Chloroethane	ND		6.5
Trichlorofluoromethane	ND		3.8
Acrolein	ND		59.4
1,1-Dichloroethene	ND		5
Methylene Chloride	ND		19.1
Acrylonitrile	ND		12.7
trans-1,2-Dichloroethene	ND		3.9
1,1-Dichloroethane	ND		3.3
Chloroform	ND		3.1
1,1,1-Trichloroethane	ND		3.8
Carbon Tetrachloride	ND		3.9
1,2-Dichloroethane(EDC)	ND		3.5
Benzene	ND		3
Trichloroethene	9.64		3.6
1,2-Dichloropropane	ND		2.5
Bromodichloromethane	ND		2.5
2-Chloroethylvinyl Ether	ND		2.5
cis-1,3-Dichloropropene	ND		1.9
Toluene	ND		3.3
trans-1,3-Dichloropropene	ND		2.7
1,1,2-Trichloroethane	ND		3.1
Tetrachloroethene	46.6		3.8
Dibromochloromethane	ND		3.1
Chlorobenzene	ND		2.8
Ethylbenzene	ND		3
Total Xylenes	ND		9
Bromoform	ND		2.8
1,1,2,2-Tetrachloroethane	ND		2.7
1,3-Dichlorobenzene	ND		2.2
1,4-Dichlorobenzene	ND		2.2
1,2-Dichlorobenzene	ND		1.9

Total Target Compounds: 56.24

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-003

Client ID: MW-3

Date Received: 05/04/2001

Date Analyzed: 05/10/2001

Date File: E9156.D

GC/MS Column: DB-624

Sample wt/vol: 0.5mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 10

% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	242	13.92
	Substituted benzene	154	14.46
	Unknown aromatic	264	14.61
	Substituted benzene	166	14.98
	Substituted benzene	495	15.45
	Unknown alkane	164	15.55
	Unknown aromatic	226	15.96
	Unknown alkane	218	16.16
	Unknown aromatic	171	16.31
	Unknown aromatic	160	16.69

Total TICs = 2260

000011

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: GEOVATION/WARWICK

Lab ID: 2892-004

Client ID: MW-4

Date Received: 05/04/2001

Date Analyzed: 05/11/2001

Data file: E9179.D

GC/MS Column: DB-624

Sample wt/vol: 5mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 1

% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.61
Vinyl Chloride	ND		0.33
Bromomethane	ND		0.47
Chloroethane	ND		0.65
Trichlorofluoromethane	ND		0.38
Acrolein	ND		5.94
1,1-Dichloroethene	ND		0.5
Methylene Chloride	ND		1.91
Acrylonitrile	ND		1.27
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.33
Chloroform	ND		0.31
1,1,1-Trichloroethane	ND		0.38
Carbon Tetrachloride	ND		0.39
1,2-Dichloroethane(EDC)	ND		0.35
Benzene	ND		0.3
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.25
2-Chloroethylvinyl Ether	ND		0.25
cis-1,3-Dichloropropene	ND		0.19
Toluene	ND		0.33
trans-1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.31
Tetrachloroethene	ND		0.38
Dibromochloromethane	ND		0.31
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.9
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.27
1,3-Dichlorobenzene	ND		0.22
1,4-Dichlorobenzene	ND		0.22
1,2-Dichlorobenzene	ND		0.19

Total Target Compounds: 0

000012

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: GEOVATION/WARWICK :

Lab ID: 2892-004

Client ID: MW-4

Date Received: 05/04/2001

Date Analyzed: 05/11/2001

Data file: E9179.D

GC/MS Column: DB-624

Sample wt/vol: 5mL

Matrix-Units: Aqueous- μ g/L (ppb)

Dilution Factor: 1

% Moisture: 100

<u>CAS #</u>	<u>Compound</u>	<u>Estimated Concentration</u>	<u>Retention Time</u>

No peaks detected

Total TICs = 0

000013

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

<u>Analytical Parameter</u>	<u>Aqueous Samples</u> <u>Method #</u>	<u>Soil/Other Samples</u> <u>Method #</u>
Volatiles + 10	EPA 624	NA

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E9084.D

BFB Injection Date: 05/09/2001

Inst ID: MSD E

BFB Injection Time: 10:51

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	18.9
75	30.0 - 60.0% of mass 95	47.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.9 (1.0)1
174	Great than 50.0% of mass 95	90.9
175	5.0 - 9.0% of mass 174	5.7 (6.3)1
176	95.0 - 101.0% of mass 174	88.4 (97.3)1
177	5.0 - 9.0% of mass 176	6.2 (7.0)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20-PPB-STD	20-PPB-STD	E9085.D	05/09/2001	11:33
5-PPB-STD	5-PPB-STD	E9086.D	05/09/2001	12:24
100-PPB-STD	100-PPB-STD	E9087.D	05/09/2001	12:52
METHOD-BLK	METHOD-BLK	E9089.D	05/09/2001	2:18
MW-10	2839-006DIL	E9090.D	05/09/2001	2:54
MW-15S	2839-015DIL	E9091.D	05/09/2001	3:22
MW-12D	2839-021DIL	E9092.D	05/09/2001	3:50
MW1-0501	2855-001	E9093.D	05/09/2001	4:18
LFB	LFB	E9094.D	05/09/2001	4:46
2855-003MS	2855-003MS	E9095.D	05/09/2001	5:14
2855-003MSD	2855-003MSD	E9096.D	05/09/2001	5:42
MW-6S	2839-016	E9098.D	05/09/2001	6:38
MW-6	2839-017	E9099.D	05/09/2001	7:05
MW-1	2839-018	E9100.D	05/09/2001	7:33
MW-8	2839-019	E9101.D	05/09/2001	8:01
MW-7	2839-020	E9102.D	05/09/2001	8:29
TCLP-BLK	TCLP-BLK	E9103.D	05/09/2001	8:57
OENJ-NC-5	2827-001	E9104.D	05/09/2001	9:25
OENJ-BAG-5	2828-004	E9105.D	05/09/2001	9:53
MW2-0501	2855-002	E9106.D	05/09/2001	10:21

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E9132.D

BFB Injection Date: 05/10/2001

Inst ID: MSD E

BFB Injection Time: 10:40

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	24.3
75	30.0 - 60.0% of mass 95	51.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Great than 50.0% of mass 95	61.1
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	61.3 (100.4)1
177	5.0 - 9.0% of mass 176	4.0 (6.6)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20-PPB-STD	20-PPB-STD	E9133.D	05/10/2001	11:18
METHOD-BLK	METHOD-BLK	E9135.D	05/10/2001	12:48
MW-1	2867-001DIL	E9136.D	05/10/2001	1:16
MW-5	2862-001	E9137.D	05/10/2001	1:44
LFB	LFB	E9138.D	05/10/2001	2:12
2898-005MS	2898-005MS	E9139.D	05/10/2001	2:40
2898-005MSD	2898-005MSD	E9140.D	05/10/2001	3:08
MW7	2898-005	E9142.D	05/10/2001	4:19
MW8	2898-006	E9143.D	05/10/2001	4:47
MW9	2898-007	E9144.D	05/10/2001	5:15
SUPPLY	2898-008	E9145.D	05/10/2001	5:43
WP-6	2868-005	E9147.D	05/10/2001	6:39
TRIP_BLANK	2868-007	E9148.D	05/10/2001	7:07
WP-2	2868-001	E9149.D	05/10/2001	7:35
WP-3	2868-002	E9150.D	05/10/2001	8:03
WP-4	2868-003	E9151.D	05/10/2001	8:31
WP-5	2868-004	E9152.D	05/10/2001	8:59
WP-7	2868-006	E9153.D	05/10/2001	9:26
MW-1	2892-001	E9154.D	05/10/2001	9:54
MW-2	2892-002	E9155.D	05/10/2001	10:22

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E9132.D

BFB Injection Date : 05/10/200

Inst ID: MSD E

BFB Injection Time: 10:40

m/z	Ion Abundance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	24.3
75	30.0 - 60.0% of mass 95	51.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Great than 50.0% of mass 95	61.1
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	61.3 (100.4)1
177	5.0 - 9.0% of mass 176	4.0 (6.6)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-3	2892-003	E9156.D	05/10/2001	10:50
A_5/8	2967-001	E9158.D	05/10/2001	11:46
A1	2966-001	E9159.D	05/11/2001	12:14
SPW-1	2912-007	E9160.D	05/11/2001	12:42
SUMP_1	2916-001	E9161.D	05/11/2001	1:10
FIELD_BLANK	2924-007	E9162.D	05/11/2001	1:38
TRIP_BLANK	2924-008	E9163.D	05/11/2001	2:05
MW1	2924-003	E9164.D	05/11/2001	2:33
MW7	2924-005	E9165.D	05/11/2001	3:01
MW6	2924-004	E9168.D	05/11/2001	4:25
MID	2931-002	E9170.D	05/11/2001	5:21
EFF	2931-003	E9171.D	05/11/2001	5:49
INF	2931-001	E9172.D	05/11/2001	6:17
INFL	2950-001	E9173.D	05/11/2001	6:45
B/W_GAC	2950-002	E9174.D	05/11/2001	7:13
EFF	2950-003	E9175.D	05/11/2001	7:41
2892-004MS	2892-004MS	E9176.D	05/11/2001	8:08
2892-004MSD	2892-004MSD	E9177.D	05/11/2001	8:35
MW-4	2892-004	E9179.D	05/11/2001	9:41
T-COMP	2949-009	E9180.D	05/11/2001	10:09

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E9135.D

Instrument ID: MSD E

Date Analyzed: 05/10/2001

Time Analyzed: 12:48

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
MW-1	2867-001DIL	05/10/2001	1:16
MW-5	2862-001	05/10/2001	1:44
LFB	LFB	05/10/2001	2:12
2898-005MS	2898-005MS	05/10/2001	2:40
2898-005MSD	2898-005MSD	05/10/2001	3:08
MW7	2898-005	05/10/2001	4:19
MW8	2898-006	05/10/2001	4:47
MW9	2898-007	05/10/2001	5:15
SUPPLY	2898-008	05/10/2001	5:43
WP-6	2868-005	05/10/2001	6:39
TRIP_BLANK	2868-007	05/10/2001	7:07
WP-2	2868-001	05/10/2001	7:35
WP-3	2868-002	05/10/2001	8:03
WP-4	2868-003	05/10/2001	8:31
WP-5	2868-004	05/10/2001	8:59
WP-7	2868-006	05/10/2001	9:26
MW-1	2892-001	05/10/2001	9:54
MW-2	2892-002	05/10/2001	10:22
MW-3	2892-003	05/10/2001	10:50
A_5/8	2967-001	05/10/2001	11:46
A1	2966-001	05/11/2001	12:14
SPW-1	2912-007	05/11/2001	12:42
SUMP_1	2916-001	05/11/2001	1:10
FIELD_BLANK	2924-007	05/11/2001	1:38
TRIP_BLANK	2924-008	05/11/2001	2:05
MW1	2924-003	05/11/2001	2:33
MW7	2924-005	05/11/2001	3:01
MW6	2924-004	05/11/2001	4:25
MID	2931-002	05/11/2001	5:21
EFF	2931-003	05/11/2001	5:49
INF	2931-001	05/11/2001	6:17
INFL	2950-001	05/11/2001	6:45

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E9135.D

Instrument ID: MSD E

Date Analyzed: 05/10/2001

Time Analyzed: 12:48

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
B/W_GAC	2950-002	05/11/2001	7:13
EFF	2950-003	05/11/2001	7:41
2892-004MS	2892-004MS	05/11/2001	8:08
2892-004MSD	2892-004MSD	05/11/2001	8:35
MW-4	2892-004	05/11/2001	9:41
T-COMP	2949-009	05/11/2001	10:09

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: NA

Lab ID: METHOD-BLK
 Client ID: METHOD-BLK
 Date Received: NA
 Date Analyzed: 05/10/2001
 Data file: E9135.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous- μ g/L (ppb)
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.61
Vinyl Chloride	ND		0.33
Bromomethane	ND		0.47
Chloroethane	ND		0.65
Trichlorofluoromethane	ND		0.38
Acrolein	ND		5.94
1,1-Dichloroethene	ND		0.5
Methylene Chloride	ND		1.91
Acrylonitrile	ND		1.27
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.33
Chloroform	ND		0.31
1,1,1-Trichloroethane	ND		0.38
Carbon Tetrachloride	ND		0.39
1,2-Dichloroethane(EDC)	ND		0.35
Benzene	ND		0.3
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.25
2-Chloroethylvinyl Ether	ND		0.25
cis-1,3-Dichloropropene	ND		0.19
Toluene	ND		0.33
trans-1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.31
Tetrachloroethene	ND		0.38
Dibromochloromethane	ND		0.31
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.9
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.27
1,3-Dichlorobenzene	ND		0.22
1,4-Dichlorobenzene	ND		0.22
1,2-Dichlorobenzene	ND		0.19

Total Target Compounds: 0

000020

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS Tentatively Identified Compounds

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 05/10/2001
Data file: E9135.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous- μ g/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

Response Factor Report MSD_E2

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Last Update : Wed May 09 13:20:33 2001
 Response via : Initial Calibration

Calibration Files

20 =E9085.D 5 =E9086.D 100 =E9087.D
 = = =

Compound		20	5	100	Avg	%RSD
-----ISTD-----						
1) I	Pentafluorobenzene					
2) T	Dichlorodifluorometha	0.149	0.120	0.202	0.157	26.54
3) P	Chloromethane	0.483	0.467	0.521	0.490	5.68
4) C	Vinyl Chloride	0.335	0.296	0.386	0.339	13.18
5) T	Bromomethane	0.151	0.156	0.151	0.153	1.76
6) T	Chloroethane	0.221	0.198	0.235	0.218	8.66
7) T	Trichlorofluoromethan	0.225	0.179	0.296	0.234	25.20
8) T	Acrolein	0.023	0.025	0.024	0.024	4.84
9) MC	1,1-Dichloroethene	0.251	0.232	0.279	0.254	9.40
10) T	Acetone	0.171	0.214	0.158	0.181	16.15
11) T	Carbon Disulfide	0.723	0.680	0.866	0.756	12.94
12) T	Vinyl Acetate	1.356	1.372	1.342	1.357	1.10
13) T	Methylene Chloride	0.347	0.365	0.341	0.351	3.60
14) T	Acrylonitrile	0.100	0.110	0.105	0.105	5.00
15) T	t-Butyl Alcohol (TBA)	0.028	0.034	0.027	0.030	12.54
16) T	trans-1,2-Dichloroeth	0.317	0.291	0.325	0.311	5.83
17) T	Methyl-t-Butyl Ether(	0.906	0.936	0.928	0.924	1.67
18) P	1,1-Dichloroethane	0.707	0.641	0.729	0.693	6.60
19) T	Diisopropyl Ether(DIP	1.548	1.572	1.552	1.557	0.83
20) T	cis-1,2-Dichloroethen	0.501	0.469	0.494	0.488	3.36
21) T	2,2-Dichloropropane	0.324	0.265	0.355	0.314	14.58
22) T	2-Butanone (MEK)	0.253	0.303	0.253	0.270	10.63
23) T	Bromochloromethane	0.220	0.219	0.218	0.219	0.50
25) C	Chloroform	0.821	0.797	0.829	0.816	2.01
26) T	1,1,1-Trichloroethane	0.480	0.371	0.558	0.469	19.96
27) T	Carbon Tetrachloride	0.367	0.244	0.490	0.367	33.52
28) T	1,1-Dichloropropene	0.505	0.418	0.569	0.497	15.24
29) T	1,2-Dichloroethane(ED	0.667	0.671	0.658	0.665	1.01
30) S	1,2-Dichloroethane-d4	0.558	0.576	0.553	0.563	2.17
-----ISTD-----						
31) I	1,4-Difluorobenzene					
32) M	Benzene	1.350	1.286	1.290	1.309	2.76
33) M	Trichloroethene	0.315	0.282	0.323	0.307	7.03
34) C	1,2-Dichloropropane	0.381	0.370	0.374	0.375	1.51
35) T	Dibromomethane	0.161	0.164	0.162	0.162	0.86
36) T	1,4-Dioxane	0.002	0.003	0.002	0.002	14.46
37) T	Bromodichloromethane	0.371	0.350	0.407	0.376	7.73
38) T	2-Chloroethylvinyl Et	0.159	0.153	0.171	0.161	5.83
39) T	cis-1,3-Dichloroprope	0.493	0.464	0.530	0.495	6.67
40) T	4-Methyl-2-pentanone(	0.280	0.278	0.295	0.284	3.38
41) S	Toluene-d8	1.010	0.999	1.010	1.007	0.62
42) MC	Toluene	0.849	0.783	0.823	0.818	4.07
43) T	trans-1,3-Dichloropro	0.408	0.379	0.450	0.412	8.62
44) T	1,1,2-Trichloroethane	0.202	0.207	0.199	0.203	2.04
45) T	Tetrachloroethene	0.283	0.241	0.288	0.271	9.62
46) T	1,3-Dichloropropane	0.455	0.458	0.435	0.449	2.80
47) T	2-Hexanone	0.234	0.219	0.253	0.236	7.27
48) T	Dibromochloromethane	0.198	0.185	0.243	0.208	14.69
49) T	1,2-Dibromoethane(EDB	0.224	0.218	0.228	0.223	2.37

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		-----ISTD-----					
50)	I	Chlorobenzene-d5					
51)	MP	Chlorobenzene	1.221	1.196	1.176		
52)	T	1,1,1,2-Tetrachloroet	0.350	0.329	0.381	1.198	1.86
53)	C	Ethylbenzene	2.000	1.792	1.977	0.354	7.39
54)	T	m,p-Xylene	0.774	0.719	0.716	1.923	5.92
55)	T	o-Xylene	0.776	0.725	0.720	0.736	4.45
56)	T	Styrene	1.279	1.207	1.216	0.740	4.19
57)	P	Bromoform	0.111	0.108	0.154	1.234	3.14
58)	T	Isopropylbenzene	1.724	1.471	1.778	0.124	20.71
59)	S	Bromofluorobenzene	0.621	0.622	0.627	1.657	9.87
60)	P	1,1,2,2-Tetrachloroet	0.320	0.330	0.320	0.624	0.49
61)	T	Bromobenzene	0.466	0.449	0.456	0.324	1.71
62)	T	1,2,3-Trichloropropan	0.335	0.343	0.329	0.457	1.80
63)	T	n-Propylbenzene	2.251	1.930	2.294	0.336	2.17
64)	T	2-Chlorotoluene	1.464	1.372	1.436	2.159	9.22
65)	T	1,3,5-Trimethylbenzen	1.625	1.448	1.608	1.424	3.32
66)	T	4-Chlorotoluene	1.726	1.640	1.674	1.560	6.25
67)	T	tert-Butylbenzene	1.276	1.089	1.324	1.680	2.58
68)	T	1,2,4-Trimethylbenzen	1.709	1.579	1.672	1.230	10.10
69)	T	sec-Butylbenzene	1.766	1.464	1.895	1.653	4.05
70)	T	1,3-Dichlorobenzene	0.877	0.873	0.832	1.709	12.93
71)	T	4-Isopropyltoluene	1.573	1.361	1.594	0.861	2.90
72)	T	1,4-Dichlorobenzene	0.893	0.880	0.870	1.509	8.52
73)	T	n-Butylbenzene	1.464	1.223	1.565	0.881	1.33
74)	T	1,2-Dichlorobenzene	0.800	0.833	0.762	1.417	12.37
75)	T	1,2-Dibromo-3-chlorop	0.038	0.038	0.047	0.798	4.42
76)	T	1,2,4-Trichlorobenzen	0.438	0.481	0.467	0.041	13.14
77)	T	Hexachlorobutadiene	0.214	0.234	0.236	0.462	4.84
78)	T	Naphthalene	0.638	0.812	0.723	0.228	5.22
79)	T	1,2,3-Trichlorobenzen	0.321	0.417	0.342	0.724	12.00
80)	T	Ethane, 1,1,2-trichlor	0.179	0.146	0.242	0.360	13.97
81)	T	Methyl Acetate	0.250	0.274	0.251	0.189	25.73
82)	T	Cyclohexane	0.322	0.244	0.443	0.258	5.19
83)	T	Methyl Cyclohexane	0.458	0.320	0.627	0.337	29.77
						0.468	32.89

(#) = Out of Range

EA050901.M

Wed May 09 13:20:44 2001

MSD_E2

000023

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9133.D
 Acq On : 10 May 2001 11:18 am
 Sample : 20-PPB-STD, 20-PPB-STD, A, 5mL, 100
 Misc : NA, NA, NA
 MS Integration Params: LSCINT.P

Vial: 2
 Operator: AMY
 Inst : MSD_E2
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Last Update : Wed May 09 13:20:33 2001
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 35% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	97	0.00
2 T	Dichlorodifluoromethane	0.157	0.163	-3.8	106	0.00
3 P	Chloromethane	0.490	0.467	4.7	94	0.00
4 C	Vinyl Chloride	0.339	0.350	-3.2	101	0.00
5 T	Bromomethane	0.153	0.174	-13.7	112	0.00
6 T	Chloroethane	0.218	0.236	-8.3	104	0.00
7 T	Trichlorofluoromethane	0.234	0.238	-1.7	102	0.00
8 T	Acrolein	0.024	0.018	25.0	73	0.00
9 MC	1,1-Dichloroethene	0.254	0.263	-3.5	102	0.00
10 T	Acetone	0.181	0.150	17.1	85	0.00
11 T	Carbon Disulfide	0.756	0.752	0.5	101	0.00
12 T	Vinyl Acetate	1.357	1.277	5.9	91	0.00
13 T	Methylene Chloride	0.351	0.340	3.1	95	0.00
T	Acrylonitrile	0.105	0.084	20.0	82	0.00
T	t-Butyl Alcohol (TBA)	0.030	0.027	10.0	93	0.00
16 T	trans-1,2-Dichloroethene	0.311	0.323	-3.9	99	-0.05
17 T	Methyl-t-Butyl Ether (MTBE)	0.924	0.808	12.6	87	0.00
18 P	1,1-Dichloroethane	0.693	0.727	-4.9	100	0.00
19 T	Diisopropyl Ether (DIPE)	1.557	1.505	3.3	94	0.00
20 T	cis-1,2-Dichloroethene	0.488	0.498	-2.0	96	0.00
21 T	2,2-Dichloropropane	0.314	0.385	-22.6	116	0.00
22 T	2-Butanone (MEK)	0.270	0.219	18.9	84	0.00
23 T	Bromochloromethane	0.219	0.208	5.0	91	0.00
25 C	Chloroform	0.816	0.831	-1.8	98	0.00
26 T	1,1,1-Trichloroethane	0.469	0.533	-13.6	108	0.00
27 T	Carbon Tetrachloride	0.367	0.416	-13.4	110	0.00
28 T	1,1-Dichloropropene	0.497	0.526	-5.8	101	0.00
29 T	1,2-Dichloroethane (EDC)	0.665	0.622	6.5	90	0.00
30 S	1,2-Dichloroethane-d4	0.563	0.516	8.3	90	0.00
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
32 M	Benzene	1.309	1.383	-5.7	99	0.00
33 M	Trichloroethene	0.307	0.320	-4.2	98	0.00
34 C	1,2-Dichloropropane	0.375	0.378	-0.8	96	0.00
35 T	Dibromomethane	0.162	0.148	8.6	89	0.00
36 T	1,4-Dioxane	0.002	0.002	0.0	73	0.00
37 T	Bromodichloromethane	0.376	0.365	2.9	95	0.00
38 T	2-Chloroethylvinyl Ether	0.161	0.129	-19.9	78	0.00
39 T	cis-1,3-Dichloropropene	0.495	0.478	3.4	94	0.00
40 T	4-Methyl-2-pentanone (MIBK)	0.284	0.230	19.0	80	0.00
41 S	Toluene-d8	1.007	1.012	-0.5	97	0.00
42 MC	Toluene	0.818	0.866	-5.9	99	0.00
43 T	trans-1,3-Dichloropropene	0.412	0.381	7.5	90	0.00
44 T	1,1,2-Trichloroethane	0.203	0.182	10.3	87	0.00
45 T	Tetrachloroethene	0.271	0.293	-8.1	100	0.00

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46	T	1,3-Dichloropropane	0.449	0.409	8.9	87	0.00
47	T	2-Hexanone	0.236	0.188	20.3	78	0.00
48	T	Dibromochloromethane	0.208	0.184	11.5	90	0.00
49	T	1,2-Dibromoethane (EDB)	0.223	0.195	12.6	84	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00
51	MP	Chlorobenzene	1.198	1.221	-1.9	95	0.00
52	T	1,1,1,2-Tetrachloroethane	0.354	0.359	-1.4	98	0.00
53	C	Ethylbenzene	1.923	2.072	-7.7	99	0.00
54	T	m,p-Xylene	0.736	0.800	-8.7	99	0.00
55	T	o-Xylene	0.740	0.791	-6.9	97	0.00
56	T	Styrene	1.234	1.268	-2.8	95	0.00
57	P	Bromoform	0.124	0.101	18.5	87	0.00
58	T	Isopropylbenzene	1.657	1.780	-7.4	98	0.00
59	S	Bromofluorobenzene	0.624	0.610	2.2	94	0.00
60	P	1,1,2,2-Tetrachloroethane	0.324	0.275	15.1	82	0.00
61	T	Bromobenzene	0.457	0.445	2.6	91	0.00
62	T	1,2,3-Trichloropropane	0.336	0.287	14.6	82	0.00
63	T	n-Propylbenzene	2.159	2.319	-7.4	98	0.00
64	T	2-Chlorotoluene	1.424	1.481	-4.0	96	0.00
65	T	1,3,5-Trimethylbenzene	1.560	1.646	-5.5	97	0.00
66	T	4-Chlorotoluene	1.680	1.743	-3.8	96	0.00
67	T	tert-Butylbenzene	1.230	1.316	-7.0	98	0.00
68	T	1,2,4-Trimethylbenzene	1.653	1.716	-3.8	96	0.00
69	T	sec-Butylbenzene	1.709	1.833	-7.3	99	0.00
70	T	1,3-Dichlorobenzene	0.861	0.845	1.9	92	0.00
71	T	4-Isopropyltoluene	1.509	1.610	-6.7	98	0.00
72	T	1,4-Dichlorobenzene	0.881	0.850	3.5	91	0.00
73	T	n-Butylbenzene	1.417	1.481	-4.5	96	0.00
74	T	1,2-Dichlorobenzene	0.798	0.735	7.9	88	0.00
75	T	1,2-Dibromo-3-chloropropane	0.041	0.031	24.4	80	0.00
76	T	1,2,4-Trichlorobenzene	0.462	0.367	20.6	80	0.00
77	T	Hexachlorobutadiene	0.228	0.217	4.8	96	0.00
78	T	1,2,3-Trichlorobenzene	0.360	0.253	29.7	75	0.00
80	T	Ethane, 1,1,2-trichloro-1,2,	0.189	0.215	-13.8	114	-0.01
81	T	Methyl Acetate	0.258	0.217	15.9	83	0.00
82	T	Cyclohexane	0.337	0.369	-9.5	109	0.00
83	T	Methyl Cyclohexane	0.468	0.526	-12.4	109	0.00

(#) = Out of Range

E9085.D EA050901.M

Thu May 10 12:01:55 2001 MSD_E2

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VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 05/10/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	AQUEOUS	E9135.D	92	99	92
2867-001DIL	AQUEOUS	E9136.D	99	99	99
2862-001	AQUEOUS	E9137.D	92	99	98
LFB	AQUEOUS	E9138.D	92	101	99
2898-005MS	AQUEOUS	E9139.D	90	101	100
2898-005MSD	AQUEOUS	E9140.D	90	100	98
2898-005	AQUEOUS	E9142.D	85	98	92
2898-006	AQUEOUS	E9143.D	85	99	96
2898-007	AQUEOUS	E9144.D	87	98	94
2898-008	AQUEOUS	E9145.D	86	98	95
2868-005	AQUEOUS	E9147.D	90	96	93
2868-007	AQUEOUS	E9148.D	90	96	92
2868-001	AQUEOUS	E9149.D	90	98	93
2868-002	AQUEOUS	E9150.D	91	97	93
2868-003	AQUEOUS	E9151.D	93	97	94
2868-004	AQUEOUS	E9152.D	93	98	94
2868-006	AQUEOUS	E9153.D	93	99	97
2892-001	AQUEOUS	E9154.D	91	95	92
2892-002	AQUEOUS	E9155.D	90	98	93
2892-003	AQUEOUS	E9156.D	92	97	97
2967-001	AQUEOUS	E9158.D	92	98	96
2966-001	AQUEOUS	E9159.D	93	98	97
2912-007	AQUEOUS	E9160.D	94	97	97
2916-001	AQUEOUS	E9161.D	93	97	94

Concentration

Aqueous

SMC1 = 1,2-Dichloroethane-d4

30 ppb

72-141

SMC2 = Toluene-d8

30 ppb

94-101

SMC3 = Bromofluorobenzene

30 ppb

82-110

Column to be used to flag recovery values —

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 05/10/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
2924-007	AQUEOUS	E9162.D	93	98	95
2924-008	AQUEOUS	E9163.D	95	98	95
2924-003	AQUEOUS	E9164.D	98	97	95
2924-005	AQUEOUS	E9165.D	95	97	93
2924-004	AQUEOUS	E9168.D	95	100	97
2931-002	AQUEOUS	E9170.D	102	97	100
2931-003	AQUEOUS	E9171.D	97	98	98
2931-001	AQUEOUS	E9172.D	92	97	96
2950-001	AQUEOUS	E9173.D	90	97	96
2950-002	AQUEOUS	E9174.D	94	97	94
2950-003	AQUEOUS	E9175.D	97	97	95
2892-004MS	AQUEOUS	E9176.D	97	100	101
2892-004MSD	AQUEOUS	E9177.D	98	100	101
2892-004	AQUEOUS	E9179.D	95	98	95
2949-009	AQUEOUS	E9180.D	98	98	94

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	72-141
SMC2 = Toluene-d8	30 ppb	94-101
SMC3 = Bromofluorobenzene	30 ppb	82-110

Column to be used to flag recovery values —

AQUEOUS VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2898-005

Batch No.: EA0156

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0.0	28.1	141	49 - 168
Benzene	20.0	0.0	22.1	111	58 - 145
Trichloroethene	20.0	0.0	23.9	120	50 - 158
Toluene	20.0	0.0	21.7	109	58 - 147
Chlorobenzene	20.0	0.0	21.5	108	58 - 145

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	0.0	27.4	137	3	20	49 - 168
Benzene	0.0	22.4	112	1	14	58 - 145
Trichloroethene	0.0	24.4	122	2	18	50 - 158
Toluene	0.0	22.0	110	1	15	58 - 147
Chlorobenzene	0.0	21.7	109	1	14	58 - 145

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Non calculable

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

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INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 2898-005MSD
 Client ID: 2898-005MSD
 Date Received: NA
 Date Analyzed: 05/10/2001
 Data file: E9140.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous- $\mu\text{g/L}$ (ppb)
 Dilution Factor: 1
 % Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
Chloromethane	20.0	0.0	24.6	123	0.0	23.6	118
Vinyl Chloride	20.0	0.0	36.9	185	0.0	36.1	180
Bromomethane	20.0	0.0	28.2	141	0.0	27.5	138
Chloroethane	20.0	0.0	25.8	129	0.0	25.6	128
Trichlorofluoromethane	20.0	0.0	28.0	140	0.0	24.1	120
Acrolein	200	0.0	96.0	48	0.0	93.0	47
1,1-Dichloroethene	20.0	0.0	28.1	141	0.0	27.4	137
Methylene Chloride	20.0	0.0	20.2	101	0.0	19.6	98
Acrylonitrile	200	0.0	167.5	84	0.0	164.3	82
trans-1,2-Dichloroethene	20.0	0.0	22.8	114	0.0	22.5	113
1,1-Dichloroethane	20.0	0.0	21.7	108	0.0	21.9	109
Chloroform	20.0	0.0	21.2	106	0.0	21.5	108
1,1,1-Trichloroethane	20.0	0.0	24.0	120	0.0	23.8	119
Carbon Tetrachloride	20.0	0.0	24.5	123	0.0	23.9	120
1,2-Dichloroethane(EDC)	20.0	0.0	18.8	94	0.0	18.9	95
Benzene	20.0	0.0	22.1	110	0.0	22.4	112
Trichloroethene	20.0	0.0	23.9	120	0.0	24.4	122
1,2-Dichloropropane	20.0	0.0	21.0	105	0.0	21.0	105
Bromodichloromethane	20.0	0.0	20.1	100	0.0	20.3	101
2-Chloroethylvinyl Ether	20.0	0.0	14.7	73	0.0	14.4	72
cis-1,3-Dichloropropene	20.0	0.0	20.1	101	0.0	20.5	103
Toluene	20.0	0.0	21.7	108	0.0	22.0	110
trans-1,3-Dichloropropene	20.0	0.0	19.9	100	0.0	19.8	99
1,1,2-Trichloroethane	20.0	0.0	18.4	92	0.0	18.1	91
Tetrachloroethene	20.0	0.0	25.0	125	0.0	24.9	125
Dibromochloromethane	20.0	0.0	19.0	95	0.0	19.4	97
Chlorobenzene	20.0	0.0	21.5	107	0.0	21.7	109
Ethylbenzene	20.0	0.0	23.9	120	0.0	24.2	121
total-Xylenes	60.0	0.0	69.1	115	0.0	69.8	116
Bromoform	20.0	0.0	17.8	89	0.0	17.5	88
1,1,2,2-Tetrachloroethane	20.0	0.0	17.8	89	0.0	17.3	86
1,3-Dichlorobenzene	20.0	0.0	21.4	107	0.0	21.0	105
1,4-Dichlorobenzene	20.0	0.0	21.0	105	0.0	20.6	103
1,2-Dichlorobenzene	20.0	0.0	19.3	97	0.0	18.8	94

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E9085.D
Instrument ID: MSD_E

Date Analyzed: 05/09/2001
Time Analyzed: 11:33

30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
24 HOUR STD	448886	6.57	641142	7.40	501727	10.75
UPPER LIMIT	897772	7.07	1282284	7.90	1003454	11.25
LOWER LIMIT	224443	6.07	320571	6.90	250863.5	10.25
LAB SAMPLE ID						
01 5-PPB-STD	451549	6.57	644391	7.40	494620	10.75
02 100-PPB-STD	444869	6.57	647047	7.40	498578	10.75
03 METHOD-BLK	464913	6.57	657556	7.40	506166	10.75
04 2839-006DIL	458194	6.57	649599	7.40	496690	10.75
05 2839-015DIL	425576	6.57	607249	7.40	468486	10.75
06 2839-021DIL	424328	6.57	608459	7.40	471683	10.75
07 2855-001	442141	6.57	636626	7.40	494394	10.75
08 LFB	443574	6.57	640597	7.40	489814	10.75
09 2855-003MS	423404	6.57	614093	7.40	477062	10.75
10 2855-003MSD	445018	6.57	647582	7.40	493201	10.75
11 2839-016	432609	6.57	626738	7.40	473549	10.75
12 2839-017	415457	6.57	604438	7.40	463366	10.75
13 2839-018	412888	6.57	600748	7.40	461291	10.75
14 2839-019	409470	6.57	594497	7.40	461417	10.75
15 2839-020	428155	6.57	627404	7.40	473095	10.75
16 TCLP-BLK	420638	6.57	611610	7.40	467663	10.75
17 2827-001	403388	6.57	589896	7.40	453431	10.75
18 2828-004	395392	6.57	582974	7.40	451959	10.75
19 2855-002	415216	6.57	606974	7.40	462723	10.75
20 2855-003	402888	6.57	587243	7.40	451629	10.75
21 2855-004	416936	6.57	606375	7.40	461614	10.75
22 2855-005	388083	6.57	567685	7.40	445504	10.75

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E9133.D
Instrument ID: MSD_E

Date Analyzed: 05/10/2001
Time Analyzed: 11:18

30UG/L		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
24 HOUR STD UPPER LIMIT LOWER LIMIT		435473	6.57	619504	7.40	478376	10.75
		870946	7.07	1239008	7.90	956752	11.25
		217736.5	6.07	309752	6.90	239188	10.25
LAB SAMPLE ID							
01	METHOD-BLK	414189	6.57	594706	7.40	456932	10.75
02	2867-001DIL	402935	6.57	580086	7.40	449860	10.75
03	2862-001	403735	6.57	583913	7.40	450583	10.75
04	LFB	414713	6.57	597939	7.40	465113	10.75
05	2898-005MS	411982	6.57	594873	7.40	458166	10.75
06	2898-005MSD	431161	6.57	625388	7.40	473498	10.75
07	2898-005	410247	6.57	594188	7.40	440843	10.75
08	2898-006	398993	6.57	577995	7.40	443007	10.75
09	2898-007	426498	6.57	616949	7.40	458383	10.75
10	2898-008	408961	6.57	591029	7.40	444474	10.75
11	2868-005	418543	6.57	604530	7.40	452412	10.75
12	2868-007	415709	6.57	605658	7.40	448418	10.75
13	2868-001	407360	6.57	594123	7.40	440627	10.75
14	2868-002	408534	6.57	597194	7.40	443029	10.75
15	2868-003	404148	6.57	596064	7.40	440589	10.75
16	2868-004	392892	6.57	573779	7.40	431276	10.75
17	2868-006	411640	6.57	604224	7.40	456769	10.75
18	2892-001	409491	6.57	593924	7.40	444625	10.75
19	2892-002	409472	6.57	596381	7.40	446538	10.75
20	2892-003	419422	6.57	612956	7.40	460216	10.75
21	2967-001	426237	6.57	611753	7.40	467984	10.75
22	2966-001	421316	6.57	604995	7.40	460461	10.75

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E9133.D
Instrument ID: MSD_E

Date Analyzed: 05/10/2001
Time Analyzed: 11:18

30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
24 HOUR STD	435473	6.57	619504	7.40	478376	10.75
UPPER LIMIT	870946	7.07	1239008	7.90	956752	11.25
LOWER LIMIT	217736.5	6.07	309752	6.90	239188	10.25
LAB SAMPLE ID						
23 2912-007	407858	6.57	592382	7.40	449421	10.75
24 2916-001	432170	6.57	617378	7.40	464102	10.75
25 2924-007	403164	6.57	585543	7.40	446154	10.75
26 2924-008	400603	6.57	581218	7.40	445235	10.75
27 2924-003	396059	6.57	575840	7.40	444193	10.75
28 2924-005	407578	6.57	594269	7.40	449423	10.75
29 2924-004	403914	6.57	587134	7.40	441847	10.75
30 2931-002	388551	6.57	578042	7.40	445184	10.75
31 2931-003	398597	6.57	580981	7.40	449002	10.75
32 2931-001	428247	6.57	625109	7.40	463339	10.75
33 2950-001	427391	6.57	618906	7.40	463281	10.75
34 2950-002	429504	6.57	620720	7.40	464457	10.75
35 2950-003	415802	6.57	607060	7.40	453677	10.75
36 2892-004MS	418936	6.57	612394	7.40	471394	10.75
37 2892-004MSD	403822	6.57	590174	7.40	460753	10.75
38 2892-004	496793	6.57	719063	7.40	542071	10.75
39 2949-009	416599	6.57	606883	7.40	456446	10.75
40						
41						
42						
43						
44						

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

Data File : C:\HPCHEM\1\DATA\05-10-01\E9154.D
Acq On : 10 May 2001 9:54 pm
Sample : MW-1,2892-001,A,5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
IS Integration Params: LSCINT.P
Quant Time: May 11 8:47 2001

Vial: 23
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration
DataAcq Meth : EA042501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.57	168	409491	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.40	114	593924	30.00	UG	0.00
50) Chlorobenzene-d5	10.75	117	444625	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.91	65	209706	27.31	UG	0.00
Spiked Amount	30.000	Range 90 - 142	Recovery	=	91.03%	
41) Toluene-d8	9.07	98	569749	28.59	UG	0.00
Spiked Amount	30.000	Range 90 - 100	Recovery	=	95.30%	
59) Bromofluorobenzene	12.15	95	255043	27.60	UG	0.00
Spiked Amount	30.000	Range 75 - 106	Recovery	=	92.00%	

Target Compounds

3) Chloromethane	2.21	50	21870	3.27	UG	Qvalue 99

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

E9154.D EA050901.M

Fri May 11 09:57:41 2001

MSD_E2

Page 1

000033

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
S Integration Params: LSCINT.P
Quant Time: May 11 8:48 2001

Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration
DataAcq Meth : EA042501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.57	168	409472	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.40	114	596381	30.00	UG	0.00
50) Chlorobenzene-d5	10.75	117	446538	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.91	65	207579	27.04	UG	0.00
Spiked Amount	30.000	Range	90 - 142	Recovery	=	90.13%
41) Toluene-d8	9.07	98	586067	29.29	UG	0.00
Spiked Amount	30.000	Range	90 - 100	Recovery	=	97.63%
59) Bromofluorobenzene	12.15	95	257791	27.78	UG	0.00
Spiked Amount	30.000	Range	75 - 106	Recovery	=	92.60%

Target Compounds

						Qvalue
33) Trichloroethene	7.70	95	19325	3.17	UG	99
45) Tetrachloroethene	9.79	166	236785	44.02	UG	# 100
53) Ethylbenzene	10.90	91	15745	0.55	UG	99

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

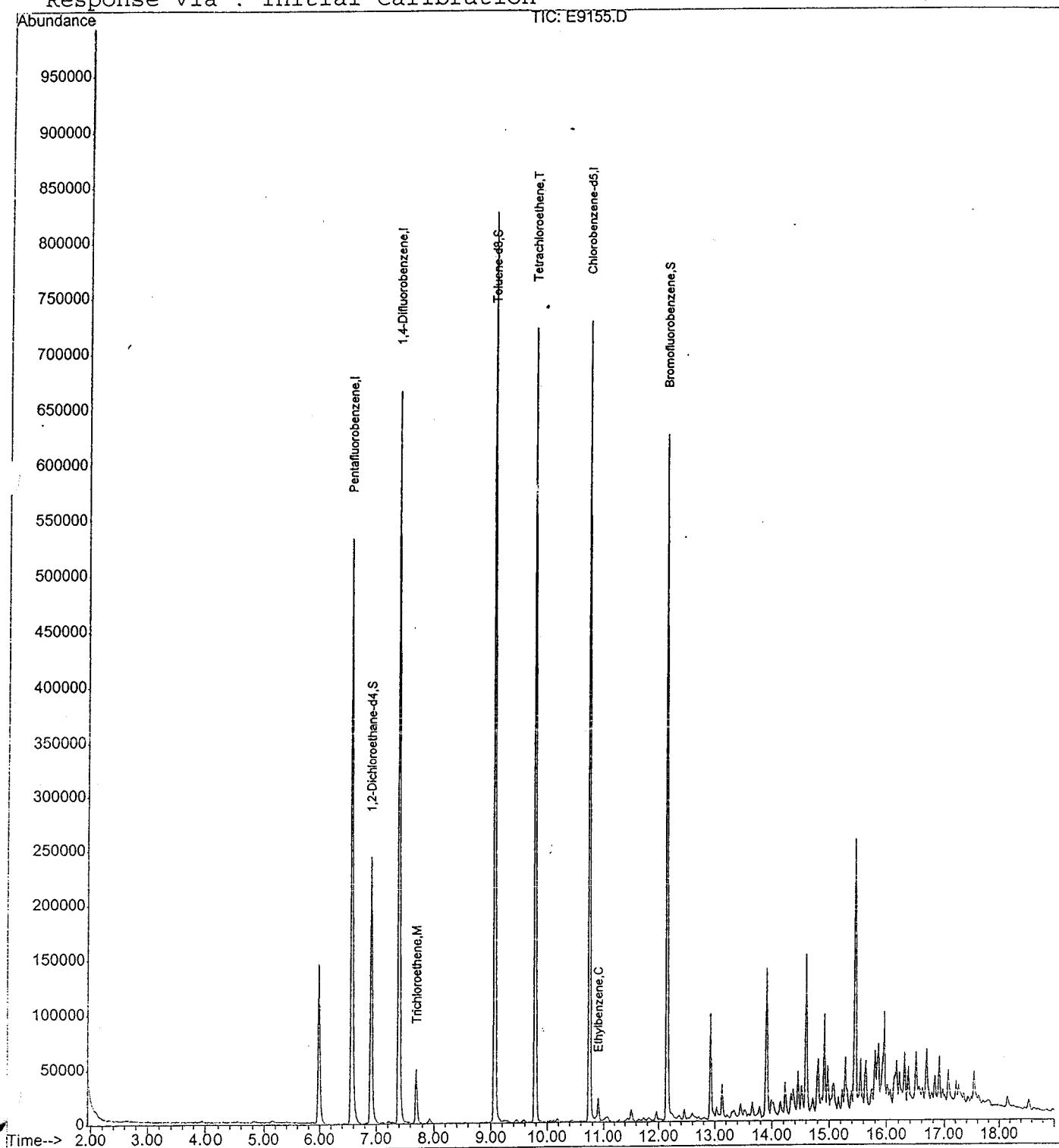
Quantitation Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P
Quant Time: May 11 8:48 2001

Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
 Acq On : 10 May 2001 10:22 pm
 Sample : MW-2,2892-002,A,1mL,100
 Misc : GEOVATION/WARWICK,5/02/01,5/04/01
 S Integration Params: LSCINT.P

Vial: 24
 Operator: AMY
 Inst : MSD_E2
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Smoothing : ON
 Sampling : 1
 Start Thrs: 0.2
 Stop Thrs : 0
 Filtering: 5
 Min Area: 1 % of largest Peak
 Max Peaks: 100
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
 Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.984	763	773	799	rVB	146101	357964	20.79%	2.664%
2	6.570	871	885	912	rBV	533627	1255048	72.90%	9.339%
3	6.910	939	950	976	rBV	243618	575005	33.40%	4.279%
4	7.401	1032	1044	1064	rBV	666588	1450961	84.28%	10.797%
5	7.705	1093	1102	1115	rVB2	49948	110247	6.40%	0.820%
6	9.070	1348	1363	1387	rBV2	827706	1721615	100.00%	12.811%
7	9.786	1489	1500	1525	rBV	722510	1470262	85.40%	10.941%
	10.749	1671	1684	1700	rBV	728688	1421784	82.58%	10.580%
	10.905	1702	1714	1722	rVB	21338	49725	2.89%	0.370%
20	11.512	1823	1830	1846	rVB4	11155	27936	1.62%	0.208%
11	12.150	1939	1952	1964	rBV	625119	1196077	69.47%	8.900%
12	12.459	2003	2011	2017	rBV2	10241	19630	1.14%	0.146%
13	12.924	2091	2100	2108	rBV	98023	192313	11.17%	1.431%
14	13.133	2133	2140	2151	rVB2	30844	60730	3.53%	0.452%
15	13.458	2195	2202	2209	rVV4	12427	27760	1.61%	0.207%
16	13.656	2232	2240	2250	rBV	13098	26962	1.57%	0.201%
17	13.787	2259	2265	2272	rVB3	10747	22949	1.33%	0.171%
18	13.913	2278	2289	2299	rBV3	136389	302772	17.59%	2.253%
19	13.996	2299	2305	2309	rBV3	13781	31383	1.82%	0.234%
20	14.148	2326	2334	2344	rBV7	12529	31091	1.81%	0.231%
21	14.237	2344	2351	2361	rVB	30359	61562	3.58%	0.458%
22	14.336	2362	2370	2373	rBV	19149	36389	2.11%	0.271%
23	14.373	2373	2377	2386	rVV6	20380	42211	2.45%	0.314%
24	14.457	2387	2393	2399	rVV	35977	61563	3.58%	0.458%
25	14.525	2400	2406	2413	rVV3	21849	41931	2.44%	0.312%
26	14.603	2413	2421	2432	rVB2	144921	303449	17.63%	2.258%
27	14.718	2433	2443	2451	rVB8	12790	32029	1.86%	0.238%
28	14.812	2451	2461	2467	rBV4	49110	118078	6.86%	0.879%
29	14.922	2475	2482	2488	rVB	82653	129998	7.55%	0.967%
	14.980	2488	2493	2499	rVB	37151	62235	3.61%	0.463%
31	15.079	2505	2512	2523	rVB7	24892	76055	4.42%	0.566%

C00039

32	15.163	2523	2528	2536	rVB3	11428	17549	1.02%	0.131%
33	15.231	2536	2541	2546	rBV2	18089	31742	1.84%	0.236%
34	15.288	2546	2552	2565	rVB2	47989	114426	6.65%	0.851%
35	15.393	2565	2572	2576	rBV4	16823	32734	1.90%	0.244%
36	15.456	2576	2584	2594	rBV3	241484	509856	29.61%	3.794%
	15.550	2596	2602	2612	rVB2	41527	76996	4.47%	0.573%
38	15.639	2612	2619	2628	rVB5	41545	91831	5.33%	0.683%
39	15.743	2632	2639	2644	rBV5	15649	35767	2.08%	0.266%
40	15.796	2644	2649	2654	rBV2	46004	87719	5.10%	0.653%
41	15.858	2654	2661	2667	rVV4	48938	115713	6.72%	0.861%
42	15.963	2671	2681	2687	rVV	78104	179856	10.45%	1.338%
43	16.136	2708	2714	2716	rBV3	26527	47671	2.77%	0.355%
44	16.167	2717	2720	2725	rVV2	35013	51285	2.98%	0.382%
45	16.219	2726	2730	2735	rVV3	21231	31474	1.83%	0.234%
46	16.313	2742	2748	2754	rVB3	46300	84890	4.93%	0.632%
47	16.371	2754	2759	2772	rBV2	32453	67639	3.93%	0.503%
48	16.507	2778	2785	2791	rBV	43491	83377	4.84%	0.620%
49	16.690	2812	2820	2832	rVB3	46715	107803	6.26%	0.802%
50	16.831	2842	2847	2854	rBV2	20965	35349	2.05%	0.263%
51	16.915	2856	2863	2868	rVB2	38927	67962	3.95%	0.506%
52	17.072	2887	2893	2911	rBV6	28861	73397	4.26%	0.546%
53	17.213	2915	2920	2924	rVV	17847	28098	1.63%	0.209%
54	17.265	2925	2930	2942	rVB	13939	36488	2.12%	0.272%
55	17.537	2976	2982	2995	rVB5	26291	58420	3.39%	0.435%
56	18.154	3094	3100	3113	rVB5	10072	27344	1.59%	0.203%
57	18.541	3169	3174	3185	rVB8	10248	25381	1.47%	0.189%

Sum of corrected areas: 13438481

E9155.D EA050901.M

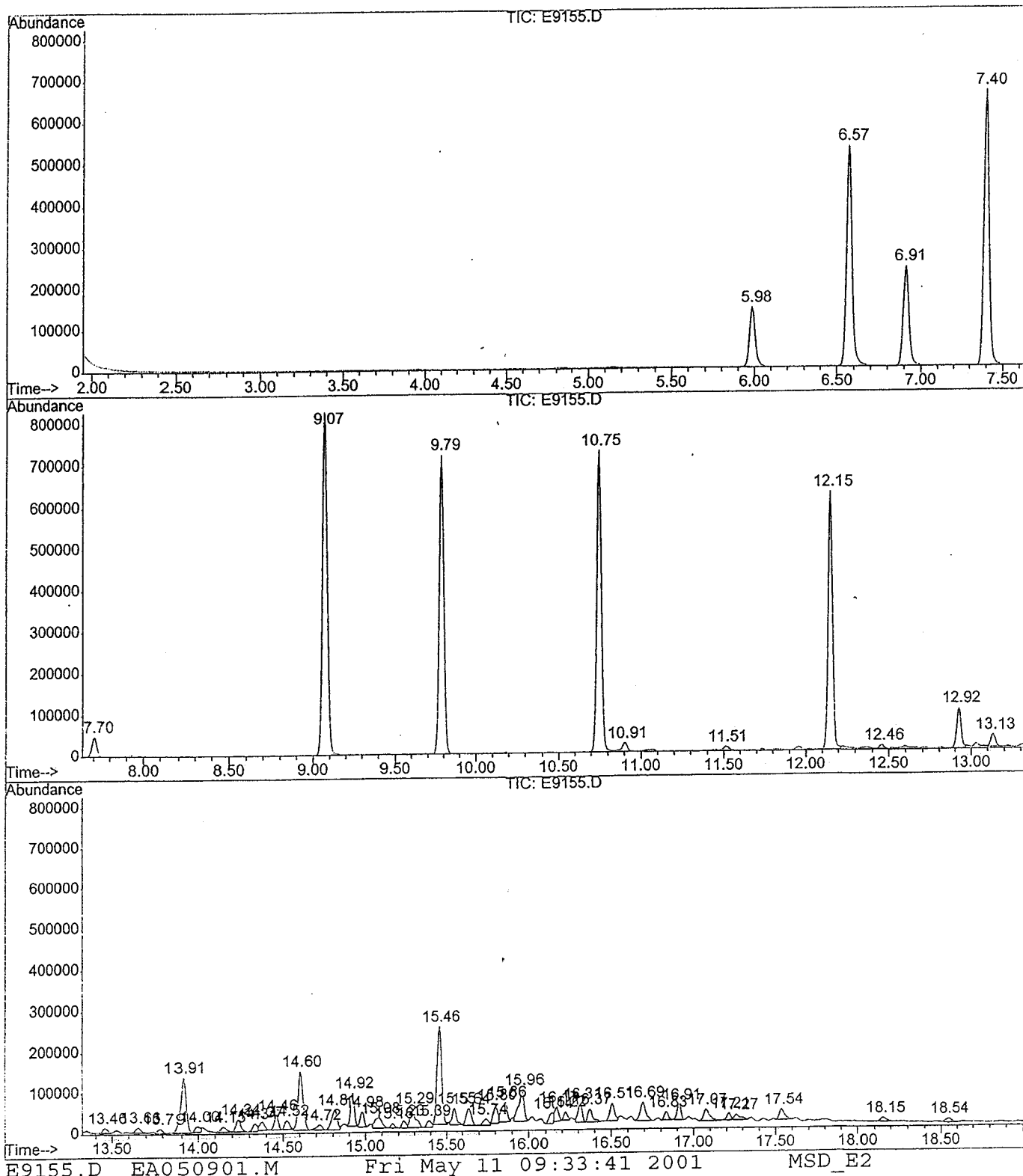
Fri May 11 09:33:40 2001

MSD_E2

000040

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
 Operator : AMY
 Acquired : 10 May 2001 10:22 pm using AcqMethod EA042501
 Instrument : MSD_E2
 Sample Name: MW-2, 2892-002, A, 1mL, 100
 Misc Info : GEOVATION/WARWICK, 5/02/01, 5/04/01
 Vial Number: 24
 Quant File : EA050901.RES (RTE Integrator)



E9155.D EA050901.M Fri May 11 09:33:41 2001 MSD_E2

C000041

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

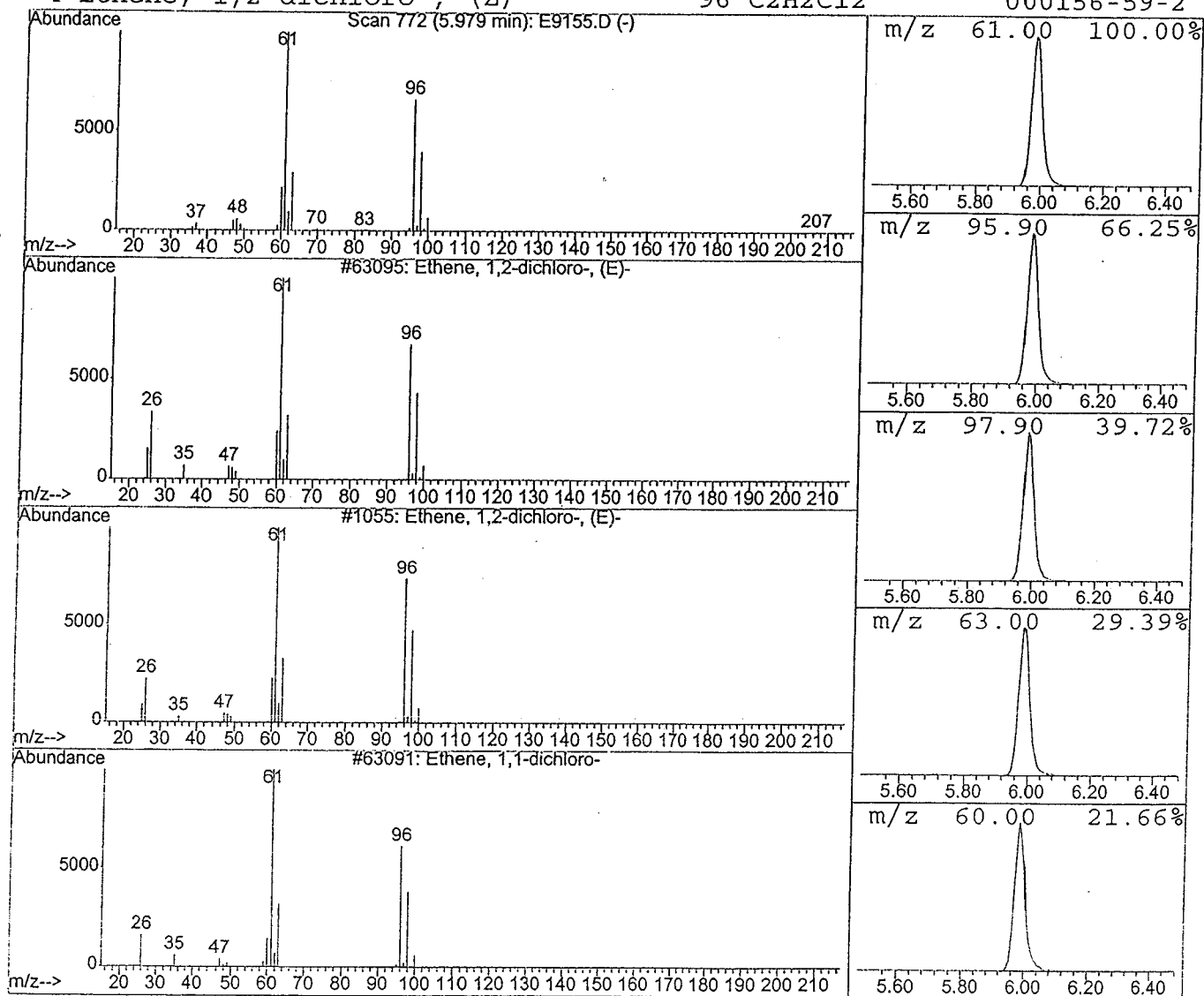
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 1 Ethene, 1,2-dichloro-, (cis)- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.98	8.56 UG	357964	Pentafluorobenzene	6.57

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		Ethene, 1,2-dichloro-, (E)-	96	C2H2Cl2	000156-60-5	96
2		Ethene, 1,2-dichloro-, (E)-	96	C2H2Cl2	000156-60-5	96
3		Ethene, 1,1-dichloro-	96	C2H2Cl2	000075-35-4	95
4		Ethene, 1,2-dichloro-, (Z)-	96	C2H2Cl2	000156-59-2	95



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

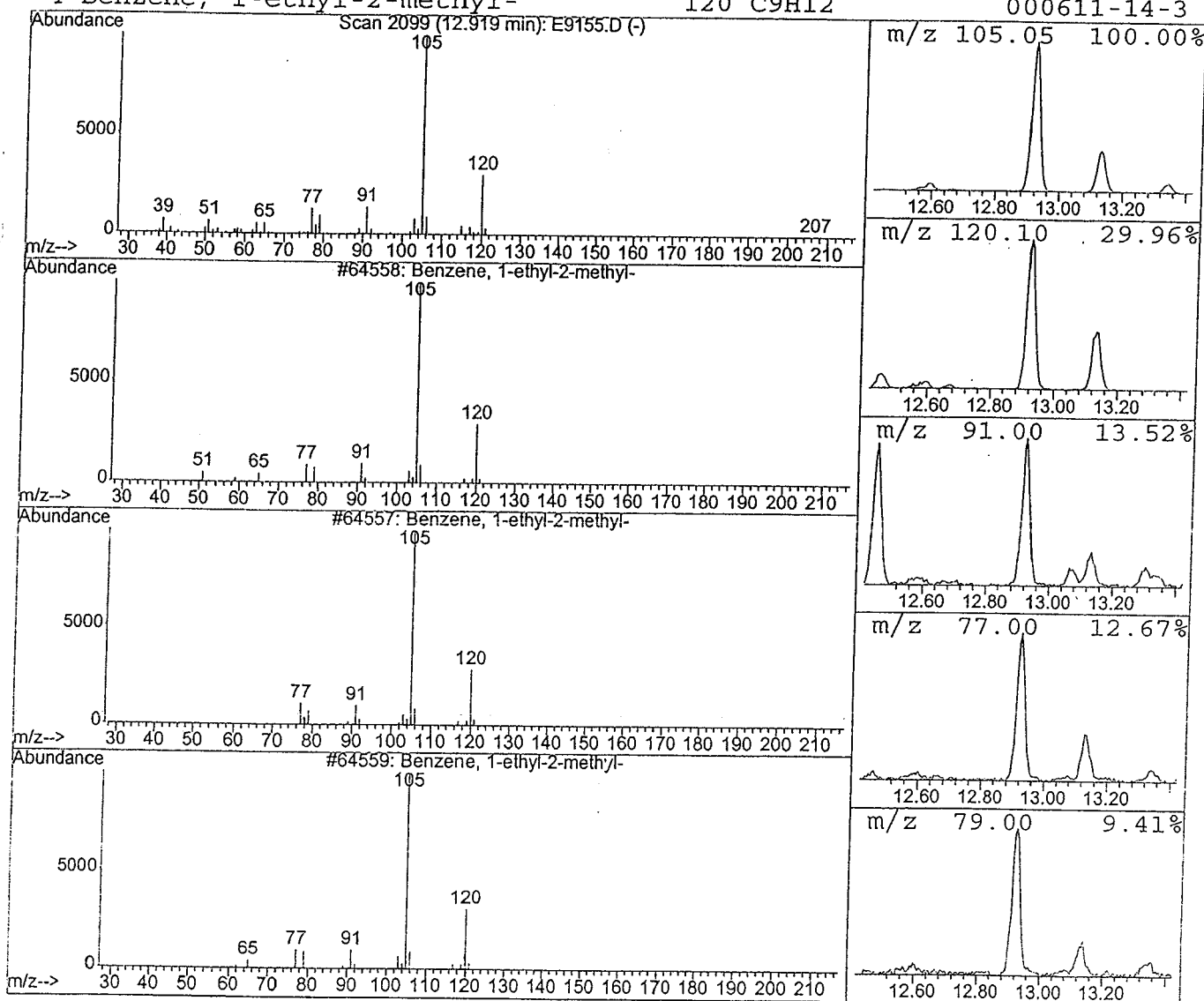
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 2 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.92	4.06 UG	192313	Chlorobenzene-d5	10.75

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94



Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

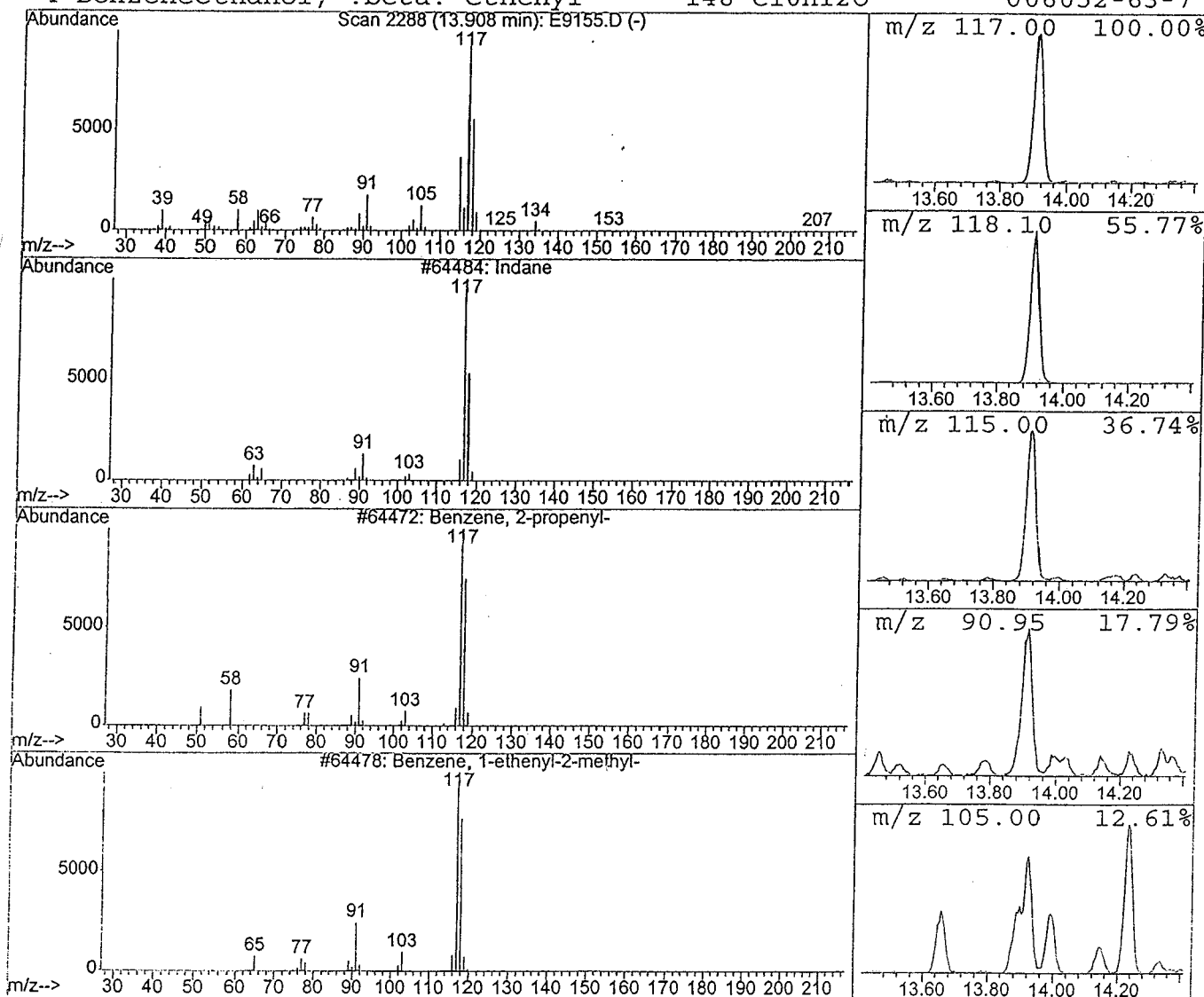
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 3 Unknown aromatic Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.91	6.39 UG	302772	Chlorobenzene-d5	10.75

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			Indane	118	C9H10	000496-11-7	94
2			Benzene, 2-propenyl-	118	C9H10	000300-57-2	90
3			Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	89
4			Benzeneethanol, .beta.-ethenyl-	148	C10H12O	006052-63-7	78



Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

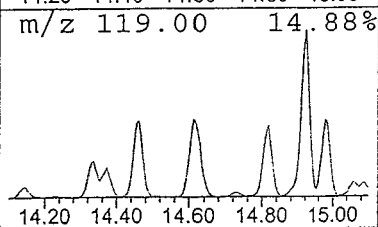
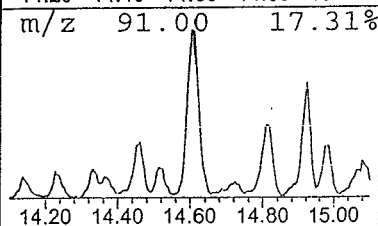
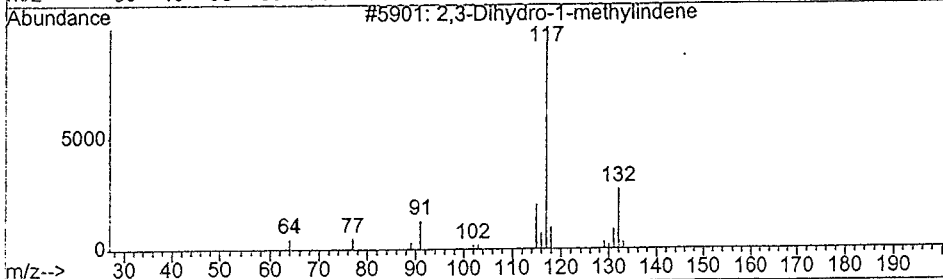
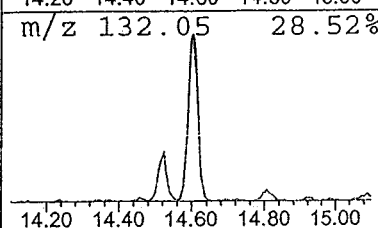
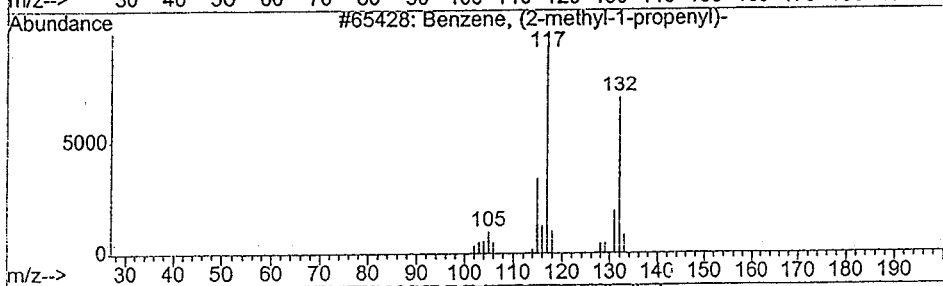
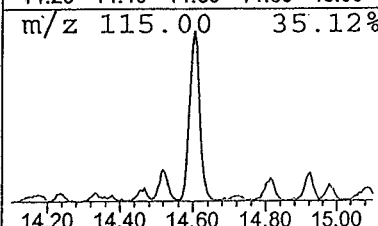
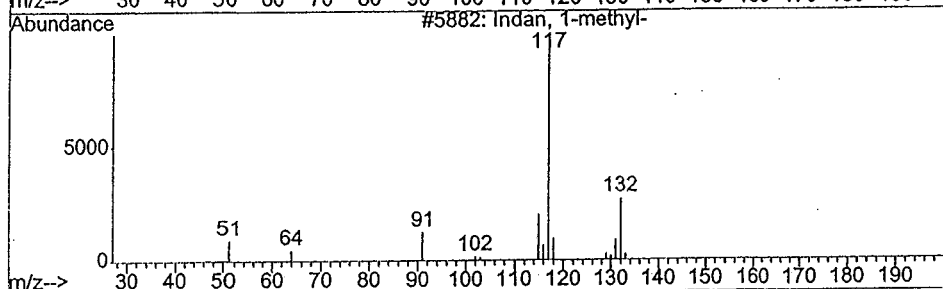
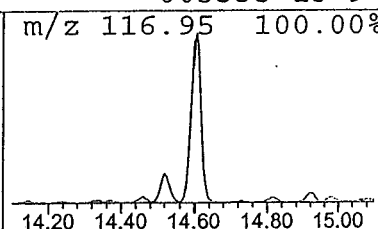
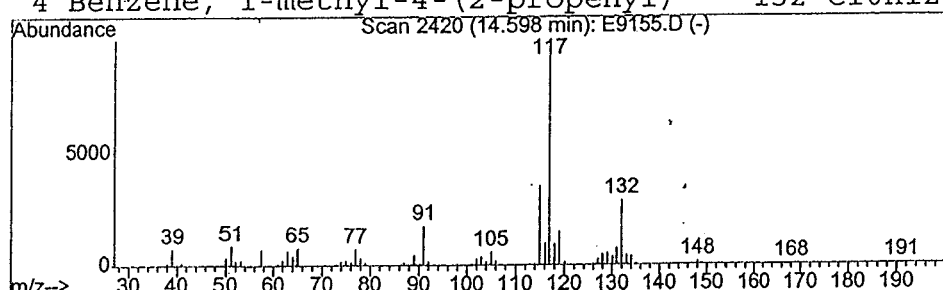
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 4 Unknown aromatic Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.60	6.40 UG	303449	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-		132	C10H12	000767-58-8	81
2	Benzene, (2-methyl-1-propenyl)-		132	C10H12	000768-49-0	81
3	2,3-Dihydro-1-methylindene		132	C10H12	027133-93-3	81
4	Benzene, 1-methyl-4-(2-propenyl)-		132	C10H12	003333-13-9	72



Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

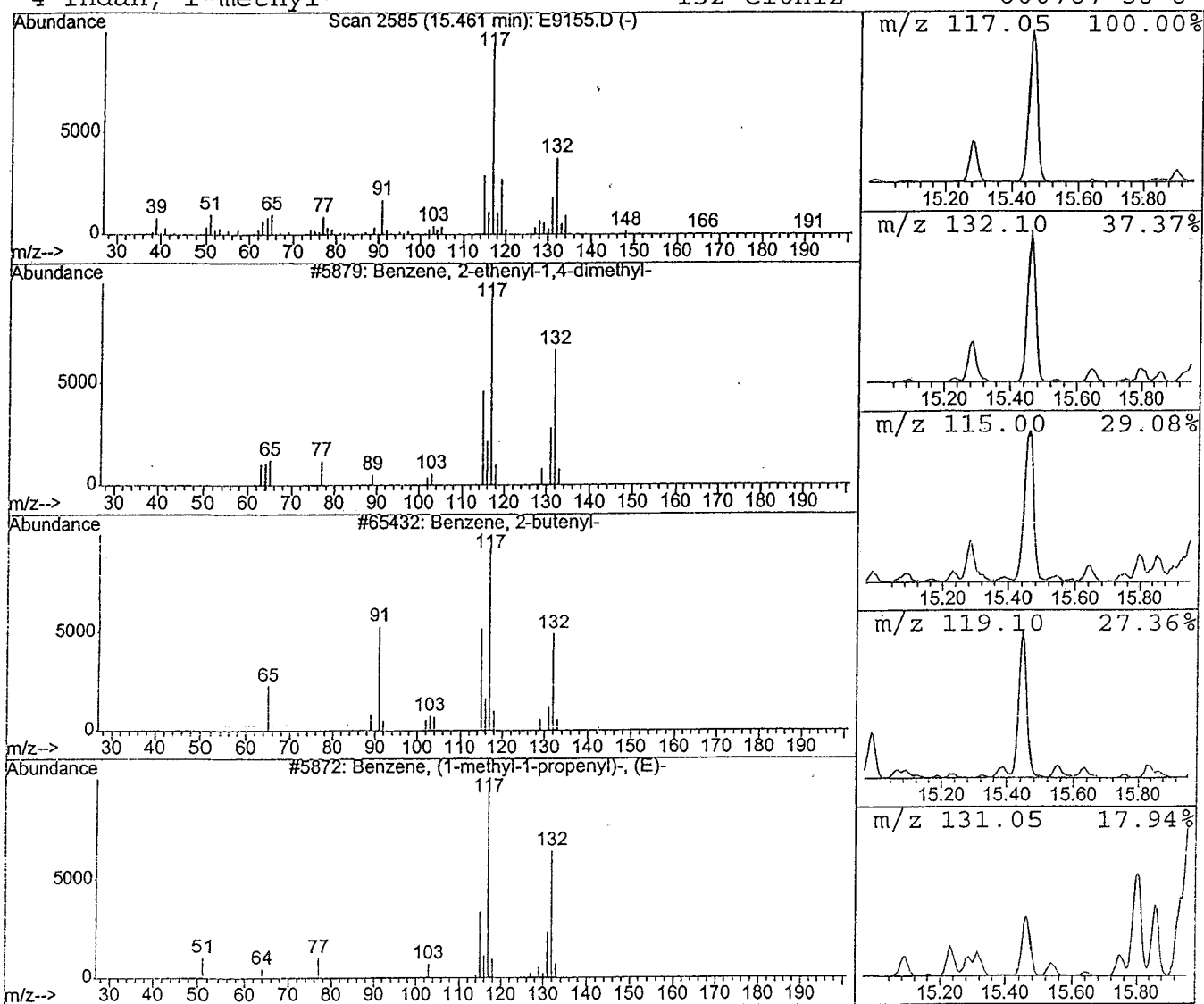
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 5 Unknown aromatic Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.46	10.76 UG	509856	Chlorobenzene-d5	10.75

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
2			Benzene, 2-butenyl-	132	C10H12	001560-06-1	89
3			Benzene, (1-methyl-1-propenyl)-, (E	132	C10H12	000768-00-3	70
4			Indan, 1-methyl-	132	C10H12	000767-58-8	70



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9155.D
Acq On : 10 May 2001 10:22 pm
Sample : MW-2,2892-002,A,1mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

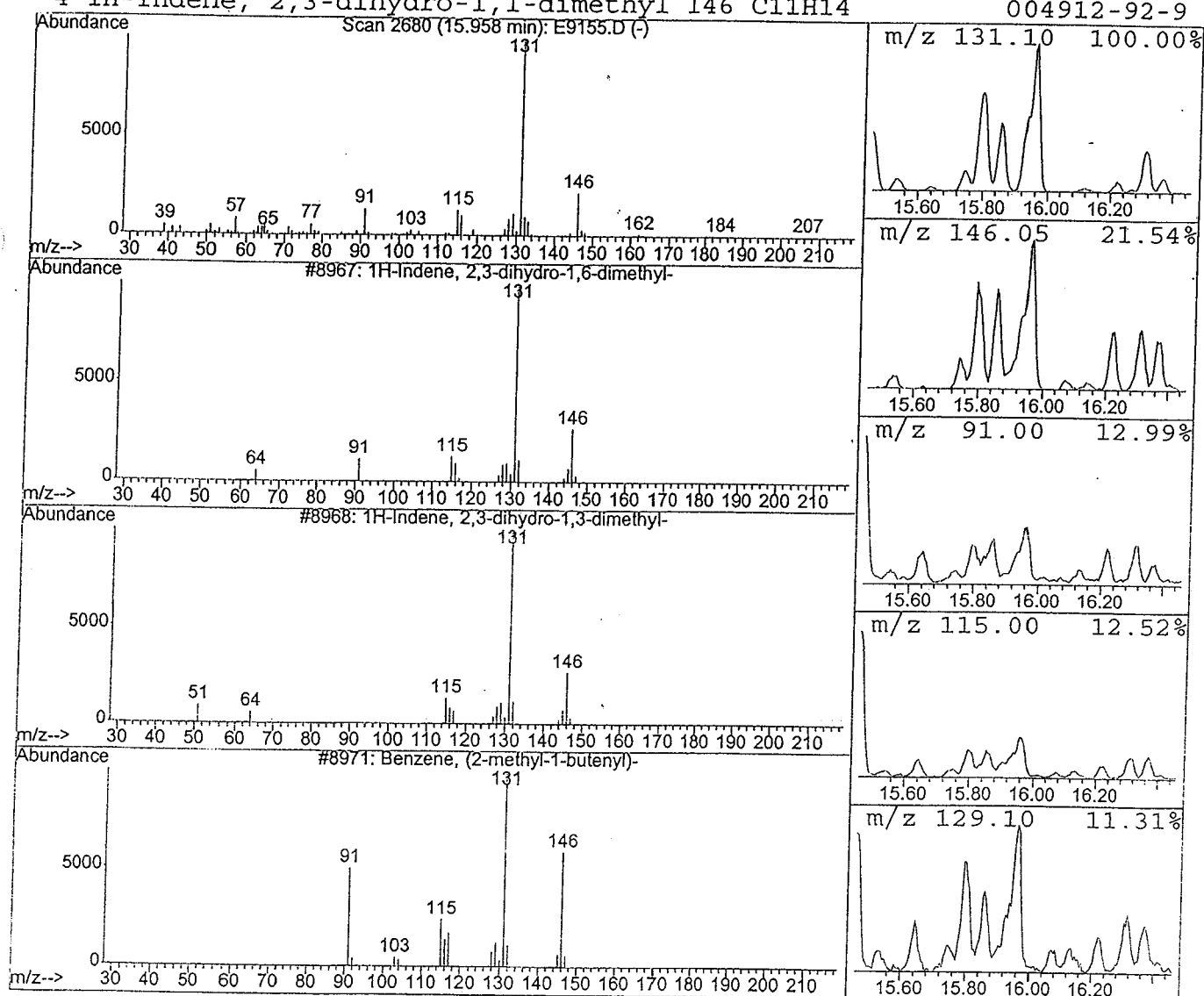
Vial: 24
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 6 Unknown aromatic Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.96	3.80 UG	179856	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		1H-Indene, 2,3-dihydro-1,6-dimethyl	146	C11H14	017059-48-2	95
2		1H-Indene, 2,3-dihydro-1,3-dimethyl	146	C11H14	004175-53-5	87
3		Benzene, (2-methyl-1-butenyl)-	146	C11H14	056253-64-6	74
4		1H-Indene, 2,3-dihydro-1,1-dimethyl	146	C11H14	004912-92-9	74



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
S Integration Params: LSCINT.P
Quant Time: May 11 8:49 2001

Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration
DataAcq Meth : EA042501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.57	168	419422	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.40	114	612956	30.00	UG	0.00
50) Chlorobenzene-d5	10.75	117	460216	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.91	65	215996	27.46	UG	0.00
Spiked Amount	30.000	Range	90 - 142	Recovery	=	91.53%
41) Toluene-d8	9.07	98	601294	29.24	UG	0.00
Spiked Amount	30.000	Range	90 - 100	Recovery	=	97.47%
59) Bromofluorobenzene	12.15	95	277358	29.00	UG	0.00
Spiked Amount	30.000	Range	75 - 106	Recovery	=	96.67%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
33) Trichloroethene	7.70	95	6038	0.96	UG	98
45) Tetrachloroethene	9.79	166	25772	4.66	UG	# 78

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

E9156.D EA050901.M

Fri May 11 09:57:56 2001

MSD_E2

Page 1

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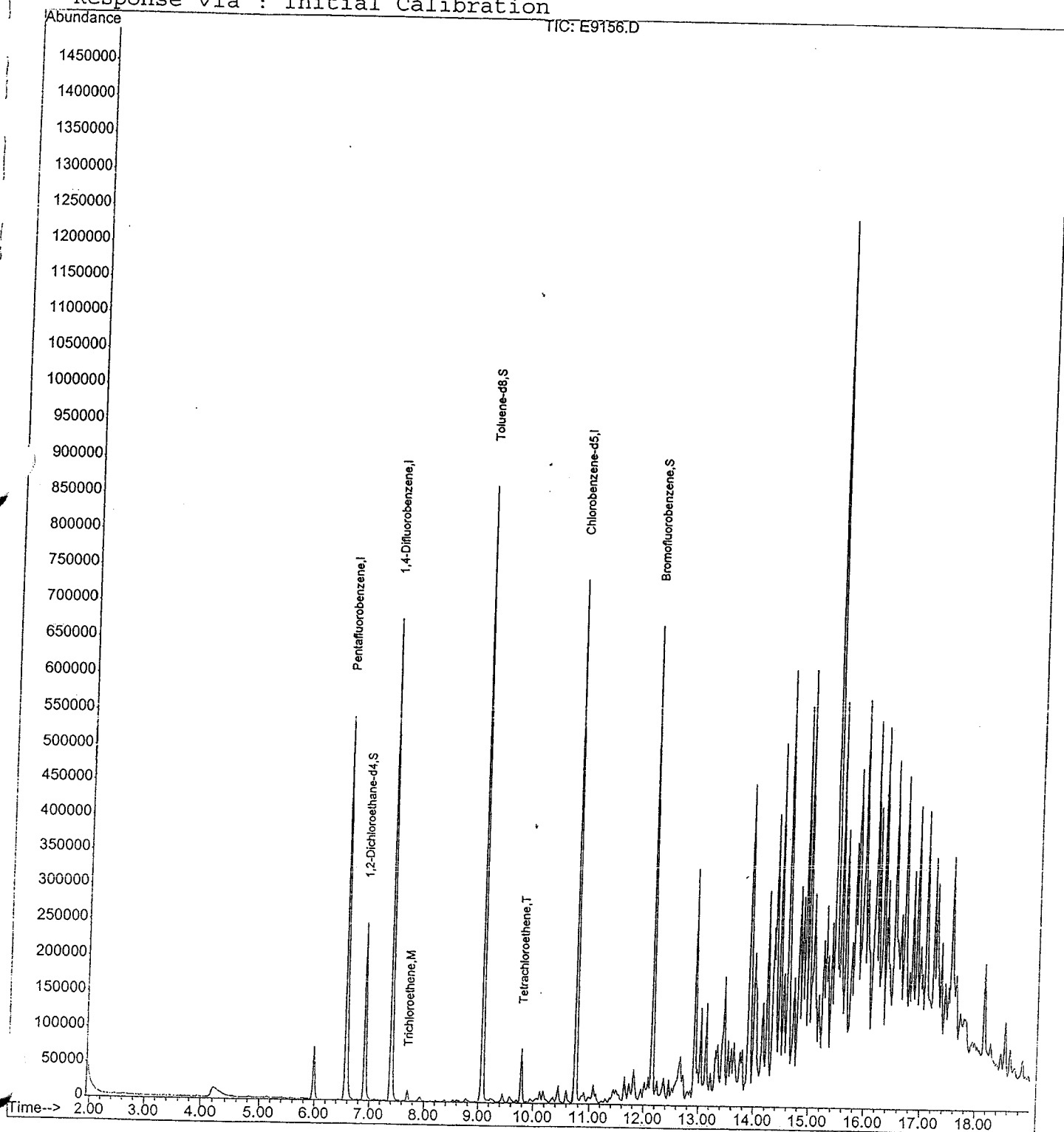
Quantitation Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P
Quant Time: May 11 8:49 2001

Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RE:

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
 Acq On : 10 May 2001 10:50 pm
 Sample : MW-3,2892-003,A,0.5mL,100
 Misc : GEOVATION/WARWICK,5/02/01,5/04/01
 S Integration Params: LSCINT.P

Vial: 25
 Operator: AMY
 Inst : MSD_E2
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Smoothing : ON
 Sampling : 1
 Start Thrs: 0.2
 Stop Thrs : 0
 Filtering: 5
 Min Area: 1 % of largest Peak
 Max Peaks: 100
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
 Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.218	420	436	446	rBV2	13497	68297	2.80%	0.183%
2	5.986	761	774	799	rVB	75535	196084	8.05%	0.526%
3	6.572	872	886	913	rBV	543832	1278751	52.48%	3.432%
4	6.912	939	951	971	rBV2	249490	600246	24.63%	1.611%
5	7.398	1031	1044	1064	rBV	678953	1483291	60.87%	3.981%
6	7.702	1094	1102	1118	rVB2	15755	35854	1.47%	0.096%
7	9.072	1346	1364	1383	rBV2	866306	1790543	73.48%	4.806%
	9.449	1426	1436	1450	rVB3	12494	32364	1.33%	0.087%
	9.585	1450	1462	1477	rBV3	8858	30450	1.25%	0.082%
0	9.789	1491	1501	1514	rBV	77384	171671	7.05%	0.461%
11	10.123	1559	1565	1570	rVV	16079	33071	1.36%	0.089%
12	10.181	1570	1576	1597	rVV3	16158	48977	2.01%	0.131%
13	10.448	1616	1627	1646	rVB2	25125	66345	2.72%	0.178%
14	10.594	1646	1655	1672	rBV3	18473	45659	1.87%	0.123%
15	10.746	1672	1684	1700	rBV	737177	1478227	60.66%	3.967%
16	10.903	1710	1714	1722	rVV3	15482	33504	1.37%	0.090%
17	10.997	1722	1732	1738	rVV9	8627	30807	1.26%	0.083%
18	11.070	1739	1746	1752	rVV3	26797	63711	2.61%	0.171%
19	11.122	1752	1756	1766	rVB3	13729	27350	1.12%	0.073%
20	11.447	1809	1818	1823	rBV4	14192	37269	1.53%	0.100%
21	11.651	1849	1857	1867	rBV5	35088	81917	3.36%	0.220%
22	11.734	1867	1873	1882	rVV6	23822	64490	2.65%	0.173%
23	11.818	1882	1889	1905	rVB6	43956	126189	5.18%	0.339%
24	11.959	1905	1916	1920	rBV4	15703	39425	1.62%	0.106%
25	12.017	1920	1927	1932	rVV3	22278	51237	2.10%	0.138%
26	12.085	1935	1940	1944	rVV	28934	56098	2.30%	0.151%
27	12.147	1944	1952	1961	rVV	663115	1258725	51.66%	3.378%
28	12.242	1965	1970	1976	rVB3	22095	41214	1.69%	0.111%
29	12.367	1983	1994	2005	rVB7	29938	94114	3.86%	0.253%
	12.456	2005	2011	2017	rBV	27747	50705	2.08%	0.136%
31	12.665	2028	2051	2056	rBV5	50614	202743	8.32%	0.544%

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32	12.717	2058	2061	2070	rVB5	34540	61654	2.53%	0.165%
33	12.806	2070	2078	2083	rBV10	10798	30749	1.26%	0.083%
34	12.921	2091	2100	2108	rBV	321630	655059	26.88%	1.758%
35	13.031	2115	2121	2128	rVB	110378	189369	7.77%	0.508%
36	13.136	2133	2141	2152	rVB	123291	254738	10.45%	0.684%
7	13.220	2152	2157	2164	rVB3	25336	43483	1.78%	0.117%
38	13.308	2166	2174	2177	rBV3	58772	118548	4.86%	0.318%
39	13.340	2178	2180	2190	rVB2	54607	94162	3.86%	0.253%
40	13.460	2190	2203	2211	rVB2	153316	425095	17.45%	1.141%
41	13.533	2211	2217	2222	rBV3	64147	111860	4.59%	0.300%
42	13.586	2223	2227	2232	rBV2	38975	53582	2.20%	0.144%
43	13.633	2232	2236	2248	rVB2	57262	132696	5.45%	0.356%
44	13.748	2252	2258	2261	rBV2	42849	76364	3.13%	0.205%
45	13.784	2262	2265	2272	rVB3	58467	98802	4.05%	0.265%
46	13.915	2273	2290	2298	rBV4	431537	1191730	48.91%	3.198%
47	13.999	2298	2306	2324	rBV5	183381	641546	26.33%	1.722%
48	14.151	2326	2335	2344	rBV4	99596	253177	10.39%	0.679%
49	14.234	2344	2351	2362	rVB	257874	542096	22.25%	1.455%
50	14.334	2363	2370	2373	rBV	206800	388052	15.92%	1.041%
51	14.370	2373	2377	2387	rVB3	334516	661560	27.15%	1.776%
52	14.459	2387	2394	2401	rVB	440800	758997	31.15%	2.037%
53	14.532	2401	2408	2414	rBV2	114734	250096	10.26%	0.671%
54	14.606	2414	2422	2433	rVB4	554588	1301562	53.41%	3.493%
55	14.721	2434	2444	2451	rVB6	125039	297709	12.22%	0.799%
56	14.810	2451	2461	2466	rBV3	251562	664676	27.28%	1.784%
57	14.862	2466	2471	2477	rBV5	169960	313614	12.87%	0.842%
58	14.919	2477	2482	2488	rVB	450241	696158	28.57%	1.868%
59	14.977	2488	2493	2499	rBV	501112	819664	33.64%	2.200%
60	15.029	2500	2503	2505	rBV2	62355	74241	3.05%	0.199%
61	15.066	2506	2510	2518	rVB5	159402	327639	13.45%	0.879%
62	15.165	2525	2529	2537	rVB3	75807	141437	5.80%	0.380%
63	15.238	2537	2543	2548	rBV2	151608	325790	13.37%	0.874%
64	15.285	2548	2552	2556	rVV	128089	161797	6.64%	0.434%
65	15.385	2566	2571	2577	rBV2	174396	355547	14.59%	0.954%
66	15.453	2577	2584	2592	rVV3	1101805	2436769	100.00%	6.540%
67	15.547	2597	2602	2612	rVV	454731	809487	33.22%	2.173%
68	15.636	2613	2619	2629	rVB6	284868	648735	26.62%	1.741%
69	15.746	2632	2640	2644	rBV3	120991	266548	10.94%	0.715%
70	15.798	2644	2650	2654	rBV	215263	404184	16.59%	1.085%
71	15.861	2654	2662	2667	rVB2	298920	743045	30.49%	1.994%
72	15.960	2672	2681	2688	rVV4	432159	1112144	45.64%	2.985%
73	16.023	2688	2693	2707	rVB9	207924	683622	28.05%	1.835%
74	16.164	2708	2720	2726	rBV2	434420	1076390	44.17%	2.889%
75	16.222	2726	2731	2736	rVB	253833	382512	15.70%	1.027%
76	16.311	2741	2748	2754	rVB4	420701	842961	34.59%	2.262%
77	16.373	2754	2760	2766	rBV4	201350	436588	17.92%	1.172%
78	16.504	2778	2785	2792	rBV2	339786	714875	29.34%	1.919%
79	16.687	2813	2820	2832	rVB2	325311	785977	32.25%	2.109%
8	16.834	2842	2848	2855	rBV	181774	314012	12.89%	0.843%
8	16.912	2856	2863	2868	rVB2	281146	498559	20.46%	1.338%

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82	16.970	2869	2874	2879	rBV3	80009	152642	6.26%	0.410%
83	17.074	2887	2894	2905	rBV3	280557	621063	25.49%	1.667%
84	17.215	2915	2921	2925	rBV	207469	330746	13.57%	0.888%
85	17.262	2925	2930	2942	rVB3	173063	392894	16.12%	1.054%
86	17.351	2942	2947	2955	rVB2	127683	239408	9.82%	0.643%
7	17.425	2956	2961	2968	rBV5	62708	130934	5.37%	0.351%
8	17.482	2969	2972	2976	rBV2	41090	60389	2.48%	0.162%
89	17.534	2976	2982	2994	rBV4	204857	448611	18.41%	1.204%
90	18.152	3093	3100	3117	rVB4	129053	309765	12.71%	0.831%
91	18.544	3168	3175	3185	rVB4	77641	202463	8.31%	0.543%
92	18.638	3187	3193	3201	rBV3	36807	82140	3.37%	0.220%

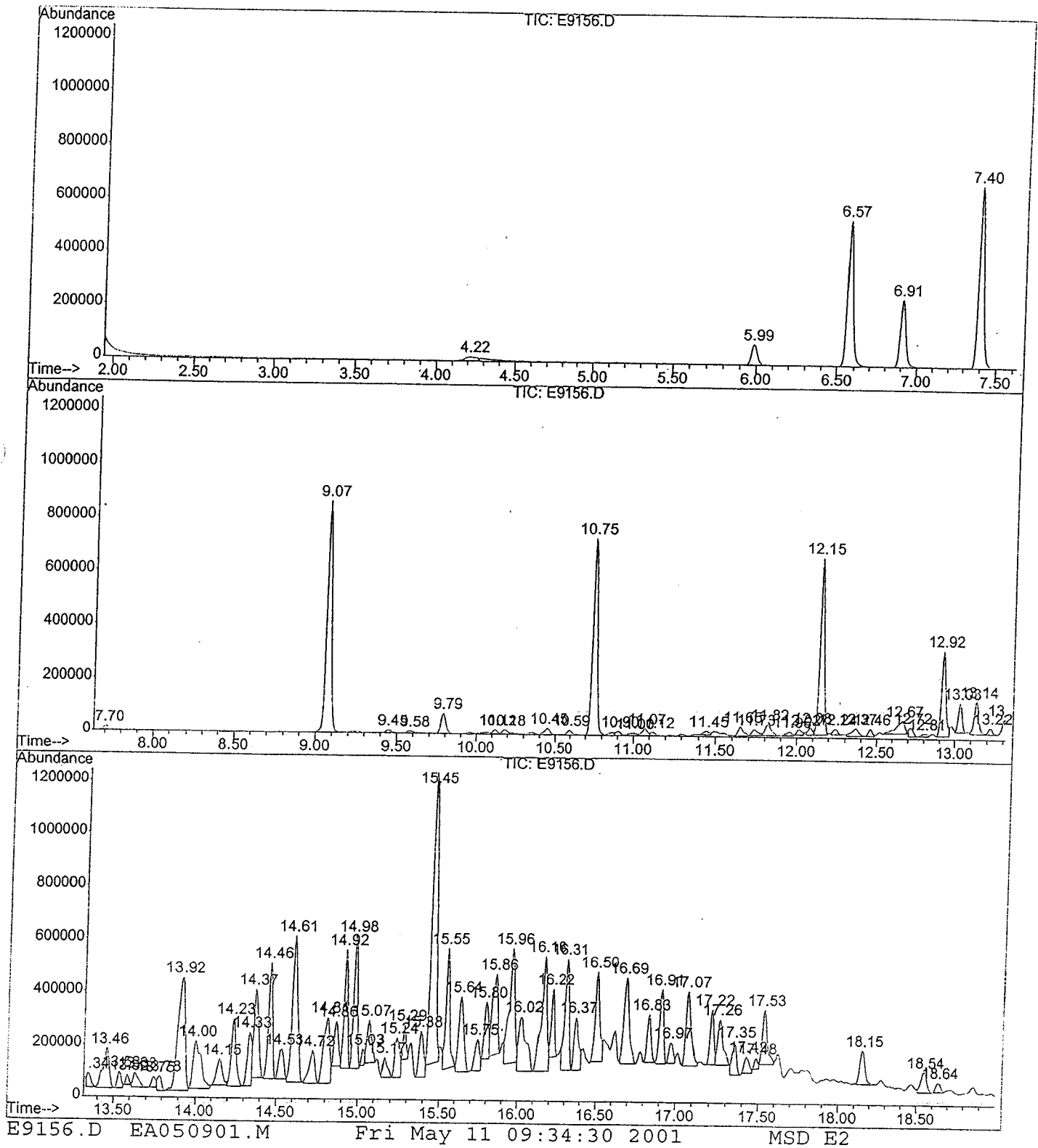
Sum of corrected areas: 37260040

E9156.D EA050901.M

Fri May 11 09:34:28 2001 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
 Operator : AMY
 Acquired : 10 May 2001 10:50 pm using AcqMethod EA042501
 Instrument : MSD_E2
 Sample Name: MW-3, 2892-003, A, 0.5mL, 100
 Misc Info : GEOVATION/WARWICK, 5/02/01, 5/04/01
 Vial Number: 25
 Quant File : EA050901.RES (RTE Integrator)



000053

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

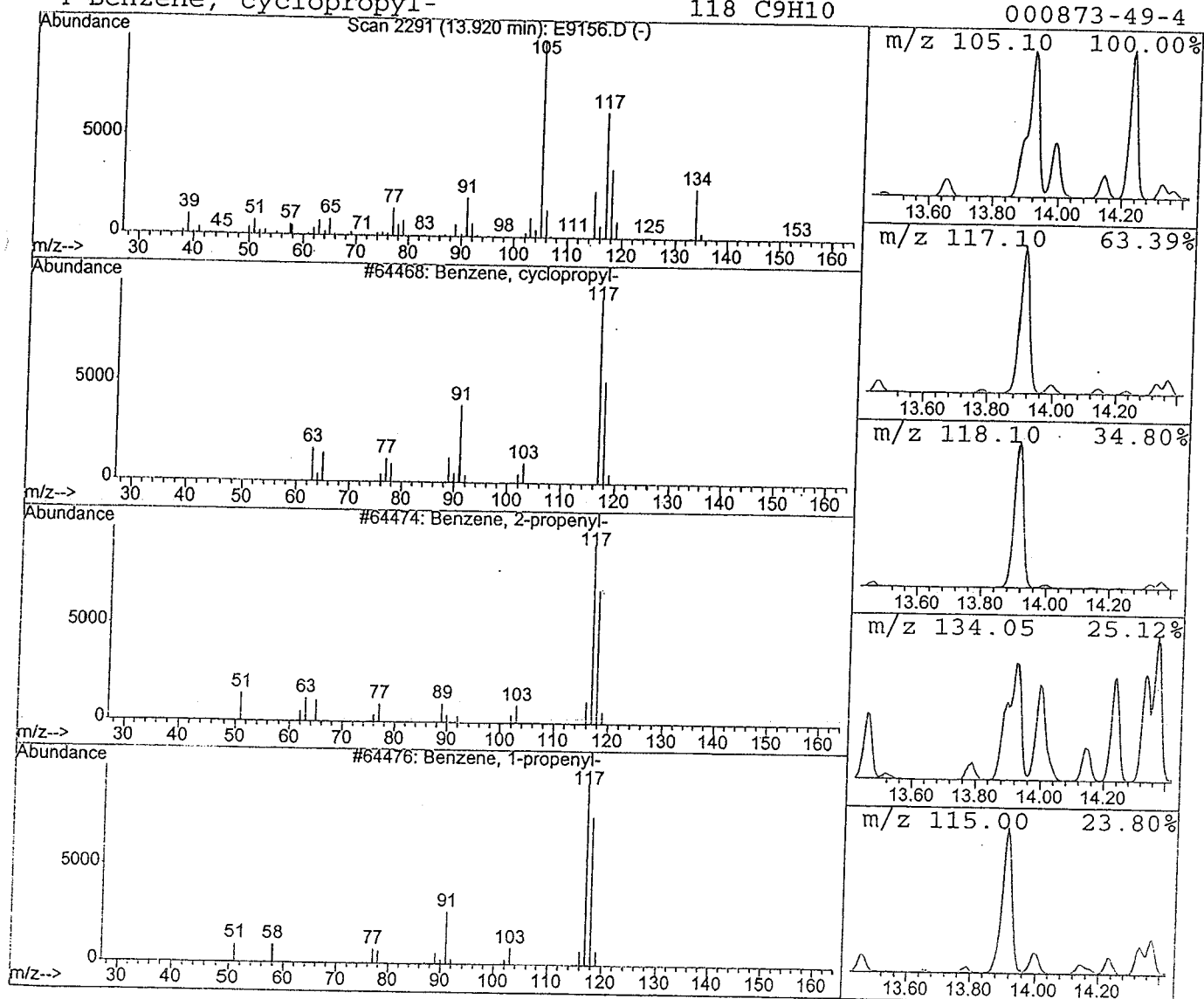
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 1 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.92	24.19 UG	1191730	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		Benzene, cyclopropyl-	118	C9H10	000873-49-4	60
2		Benzene, 2-propenyl-	118	C9H10	000300-57-2	60
3		Benzene, 1-propenyl-	118	C9H10	000637-50-3	60
4		Benzene, cyclopropyl-	118	C9H10	000873-49-4	60



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

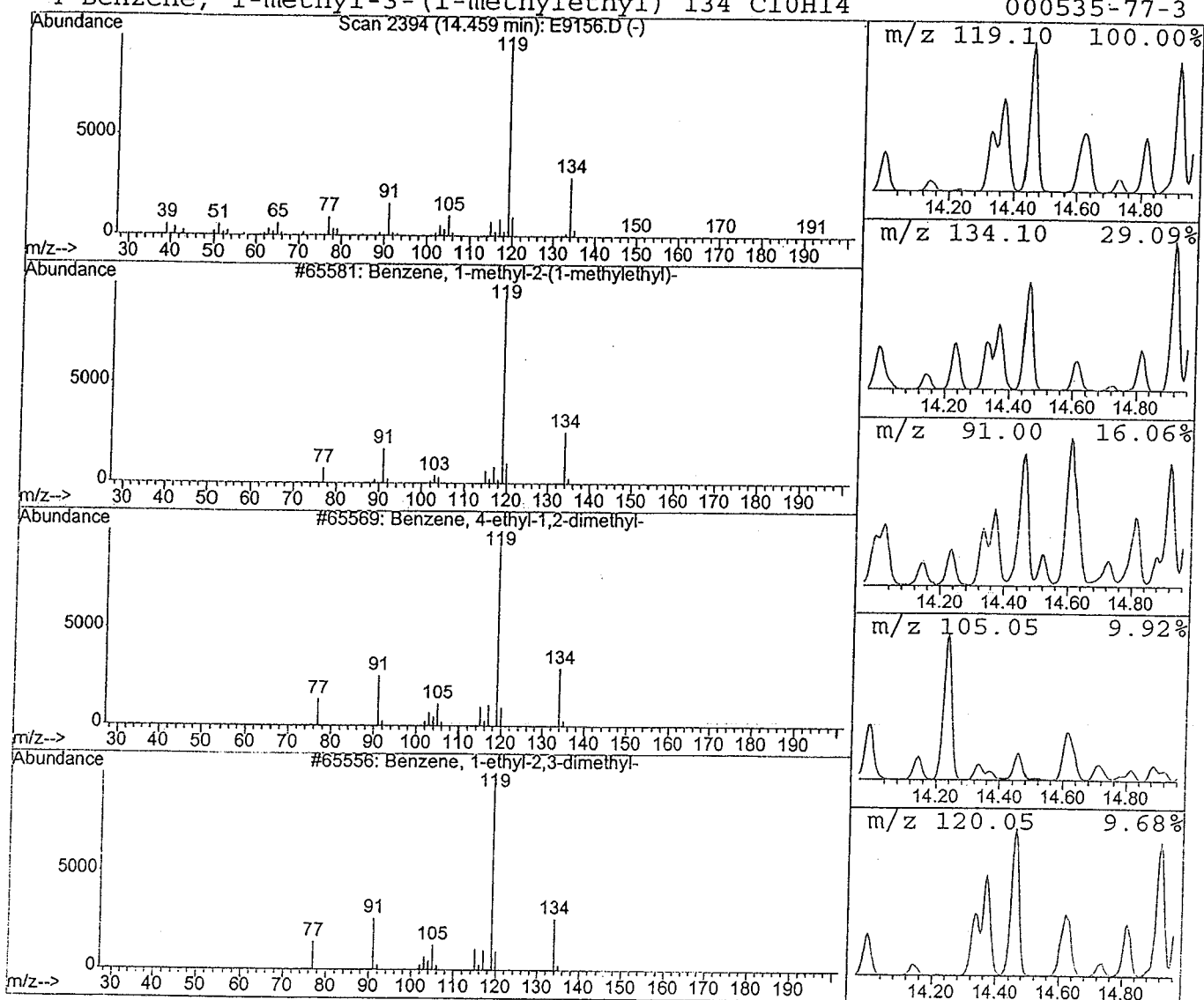
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 2 Substituted benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.46	15.40 UG	758997	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	95
2		Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
3		Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
4		Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	94



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

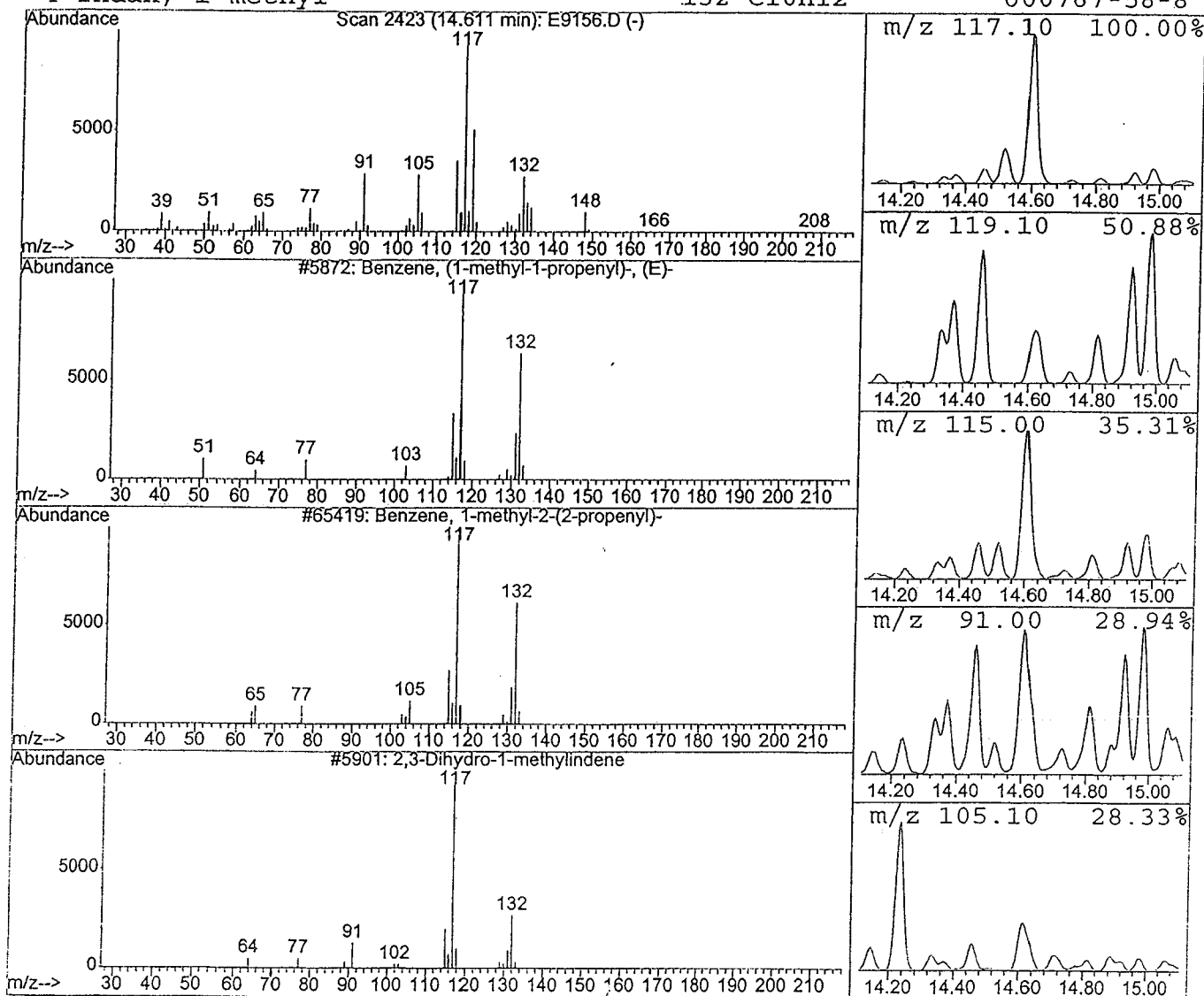
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 3 Unknown aromatic Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.61	26.41 UG	1301560	Chlorobenzene-d5	10.75

Hit#	of	Tentative ID	MW	MolForm	CAS#	Qual
1	5	Benzene, (1-methyl-1-propenyl)-, (E)	132	C10H12	000768-00-3	70
2		Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	64
3		2,3-Dihydro-1-methylindene	132	C10H12	027133-93-3	64
4		Indan, 1-methyl-	132	C10H12	000767-58-8	64



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

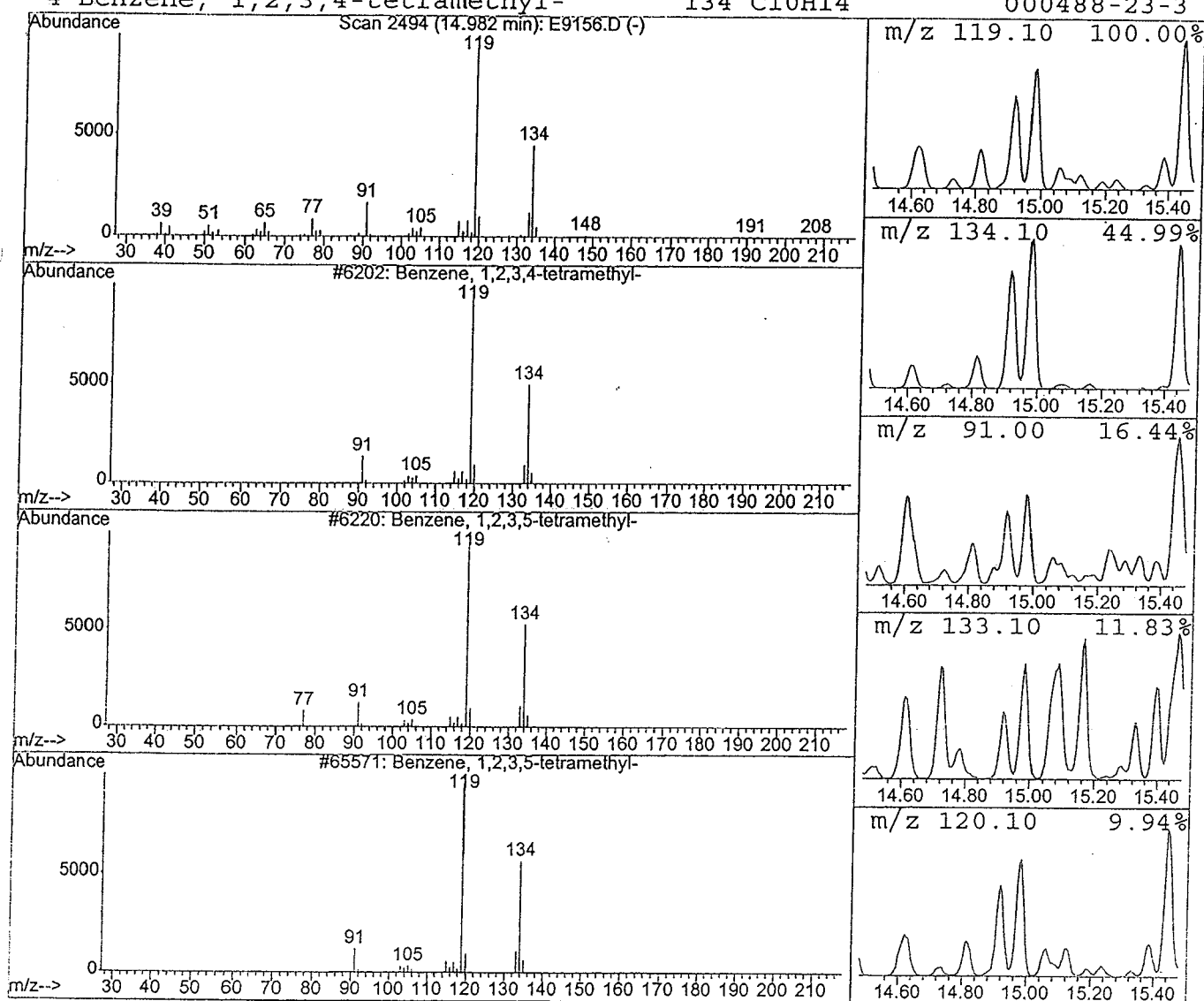
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 4 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.98	16.63 UG	819664	Chlorobenzene-d5	10.75

Hit#	of	Tentative ID	MW	MolForm	CAS#	Qual
1	5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
2		Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
3		Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
4		Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

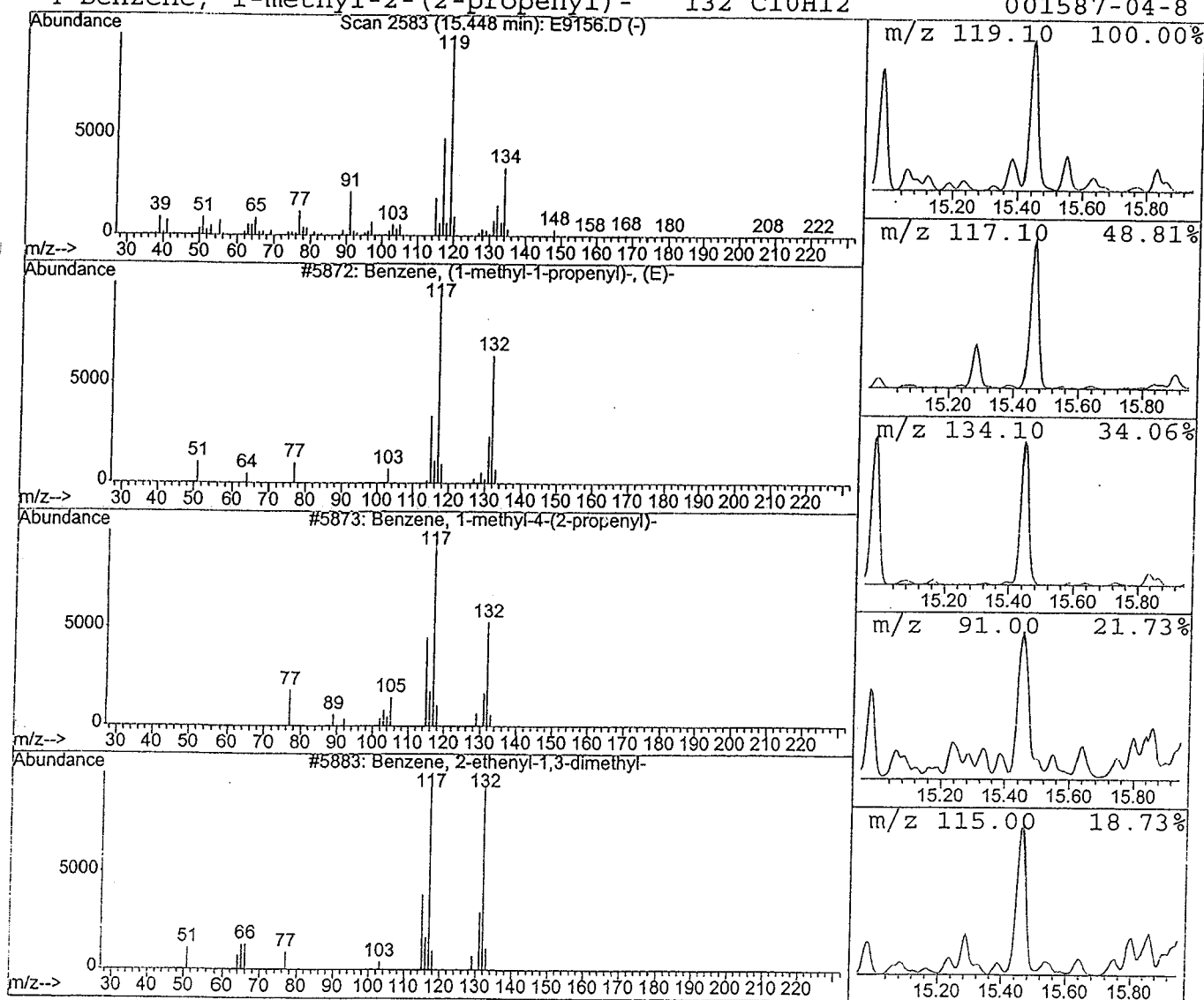
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 5 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.45	49.45 UG	2436770	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		Benzene, (1-methyl-1-propenyl)-, (E)	132	C10H12	000768-00-3	70
2		Benzene, 1-methyl-4-(2-propenyl)-	132	C10H12	003333-13-9	70
3		Benzene, 2-ethenyl-1,3-dimethyl-	132	C10H12	002039-90-9	70
4		Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	55



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

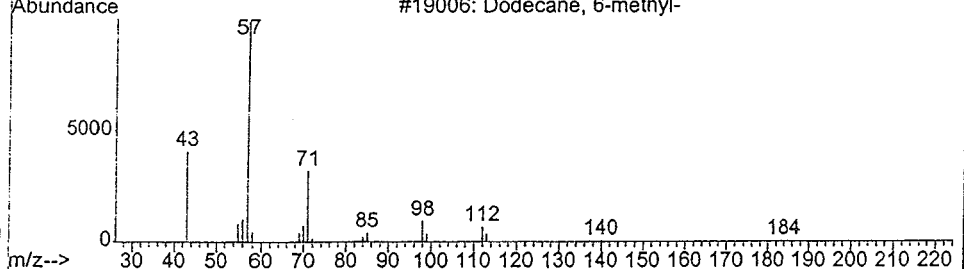
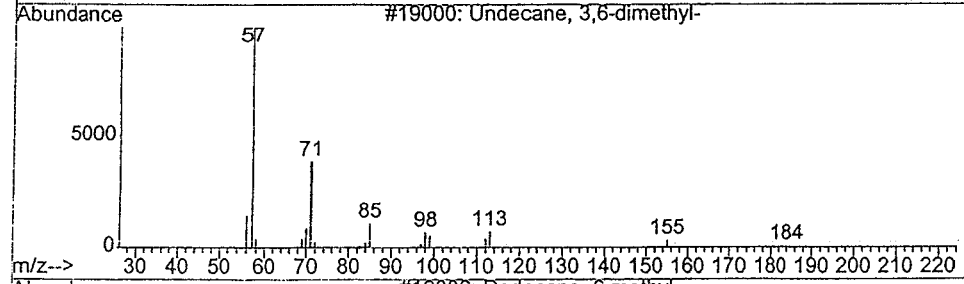
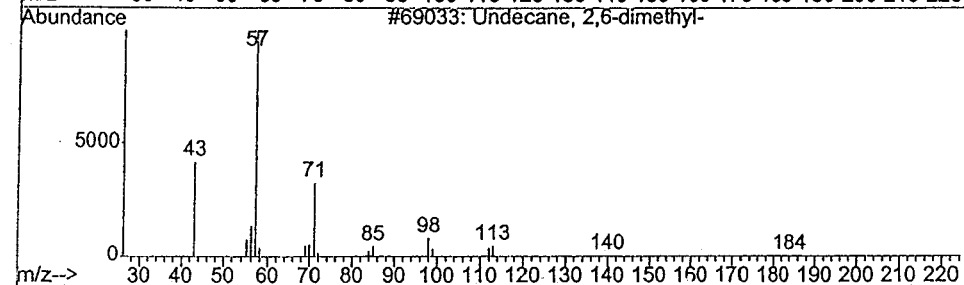
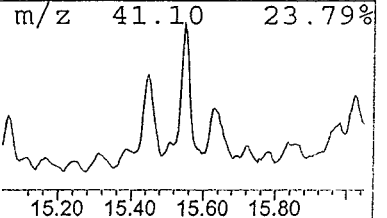
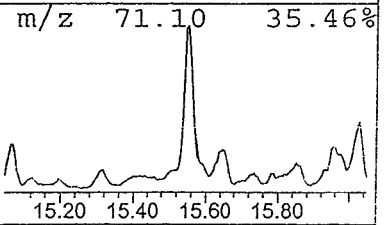
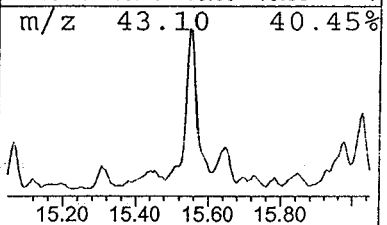
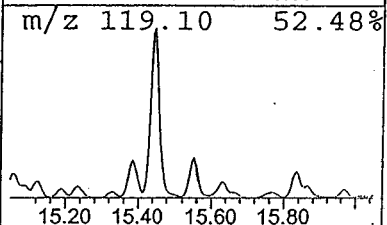
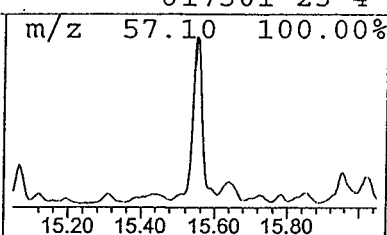
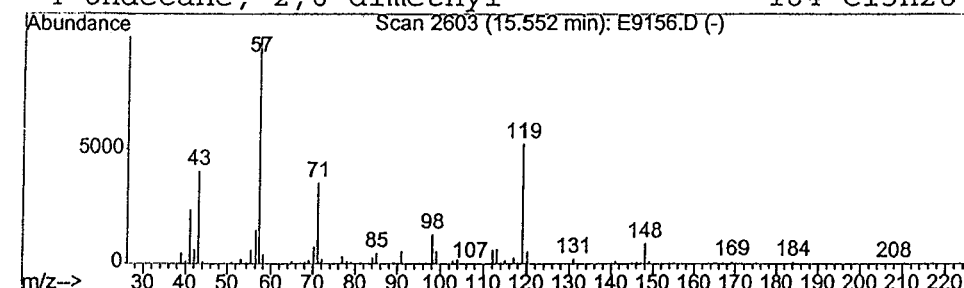
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 6 Unknown alkane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.55	16.43 UG	809487	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Undecane, 2,6-dimethyl-	184	C13H28	017301-23-4	70	
2	Undecane, 3,6-dimethyl-	184	C13H28	017301-28-9	55	
3	Dodecane, 6-methyl-	184	C13H28	006044-71-9	50	
4	Undecane, 2,6-dimethyl-	184	C13H28	017301-23-4	46	



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

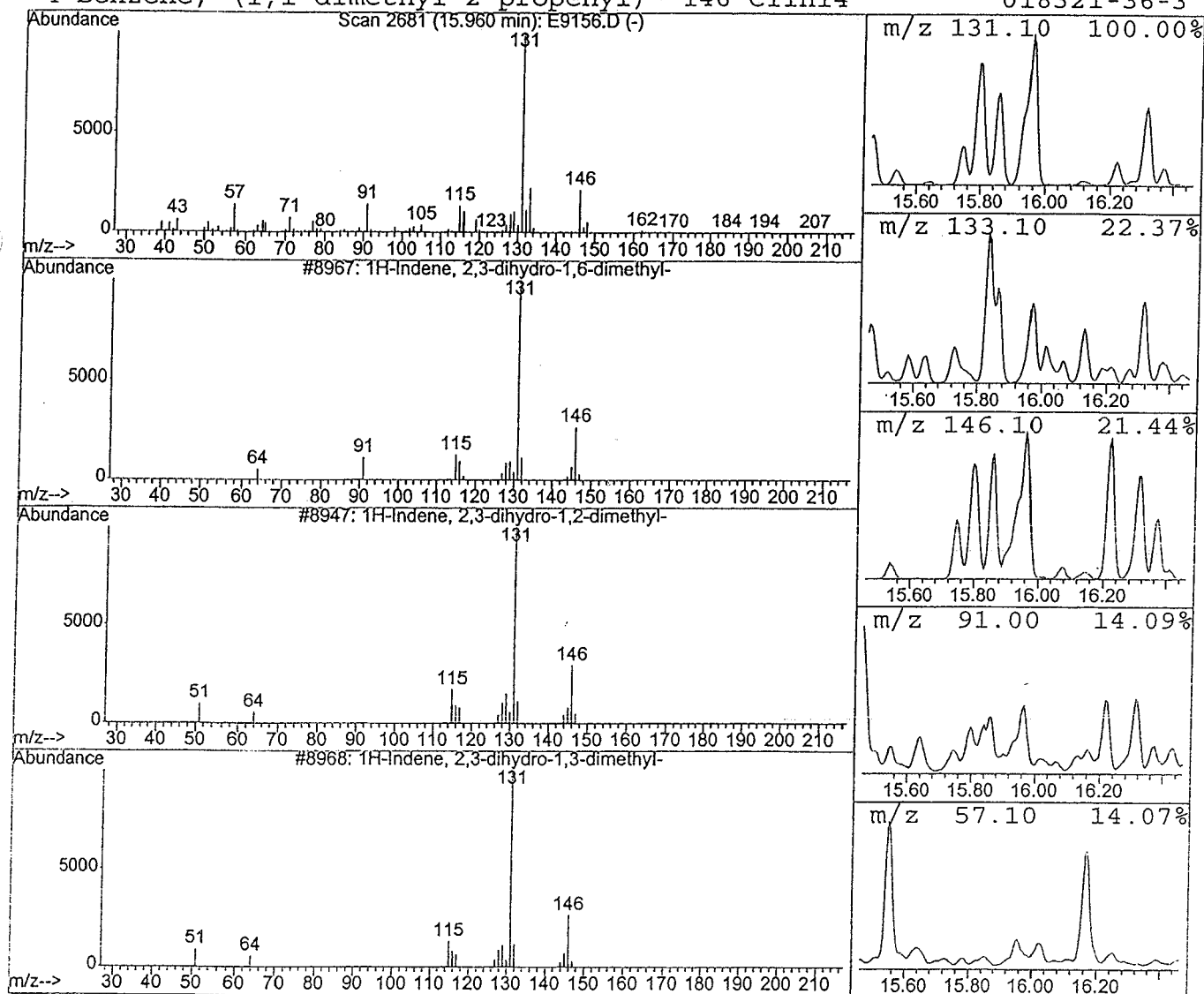
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 7 Unknown aromatic Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.96	22.57 UG	1112140	Chlorobenzene-d5	10.75

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			1H-Indene, 2,3-dihydro-1,6-dimethyl	146	C11H14	017059-48-2	93
2			1H-Indene, 2,3-dihydro-1,2-dimethyl	146	C11H14	017057-82-8	87
3			1H-Indene, 2,3-dihydro-1,3-dimethyl	146	C11H14	004175-53-5	87
4			Benzene, (1,1-dimethyl-2-propenyl)-	146	C11H14	018321-36-3	81



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

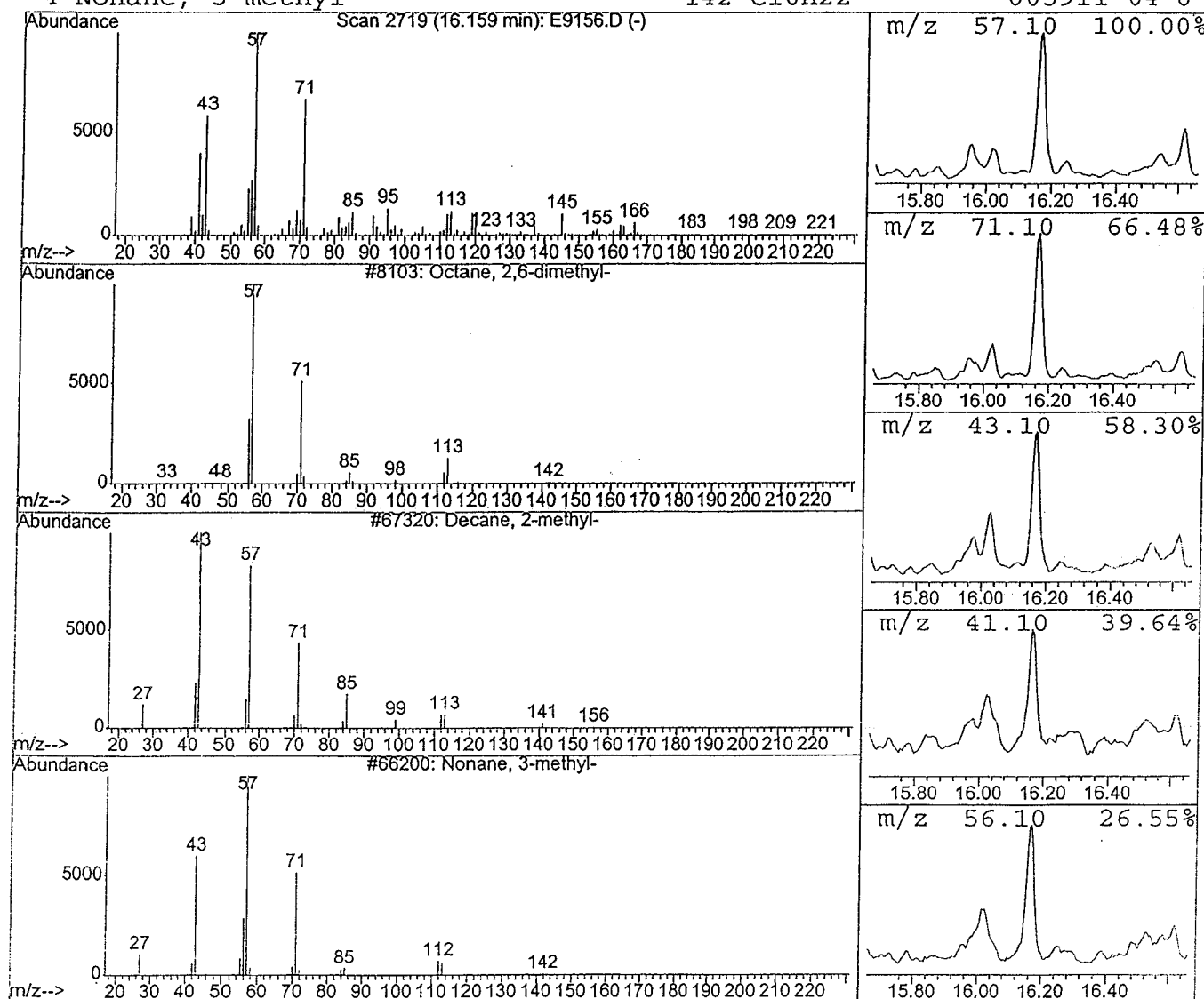
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 8 Unknown alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.16	21.84 UG	1076390	Chlorobenzene-d5	10.75

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,6-dimethyl-			142	C10H22	002051-30-1	64
2	Decane, 2-methyl-			156	C11H24	006975-98-0	59
3	Nonane, 3-methyl-			142	C10H22	005911-04-6	59
4	Nonane, 3-methyl-			142	C10H22	005911-04-6	59



Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

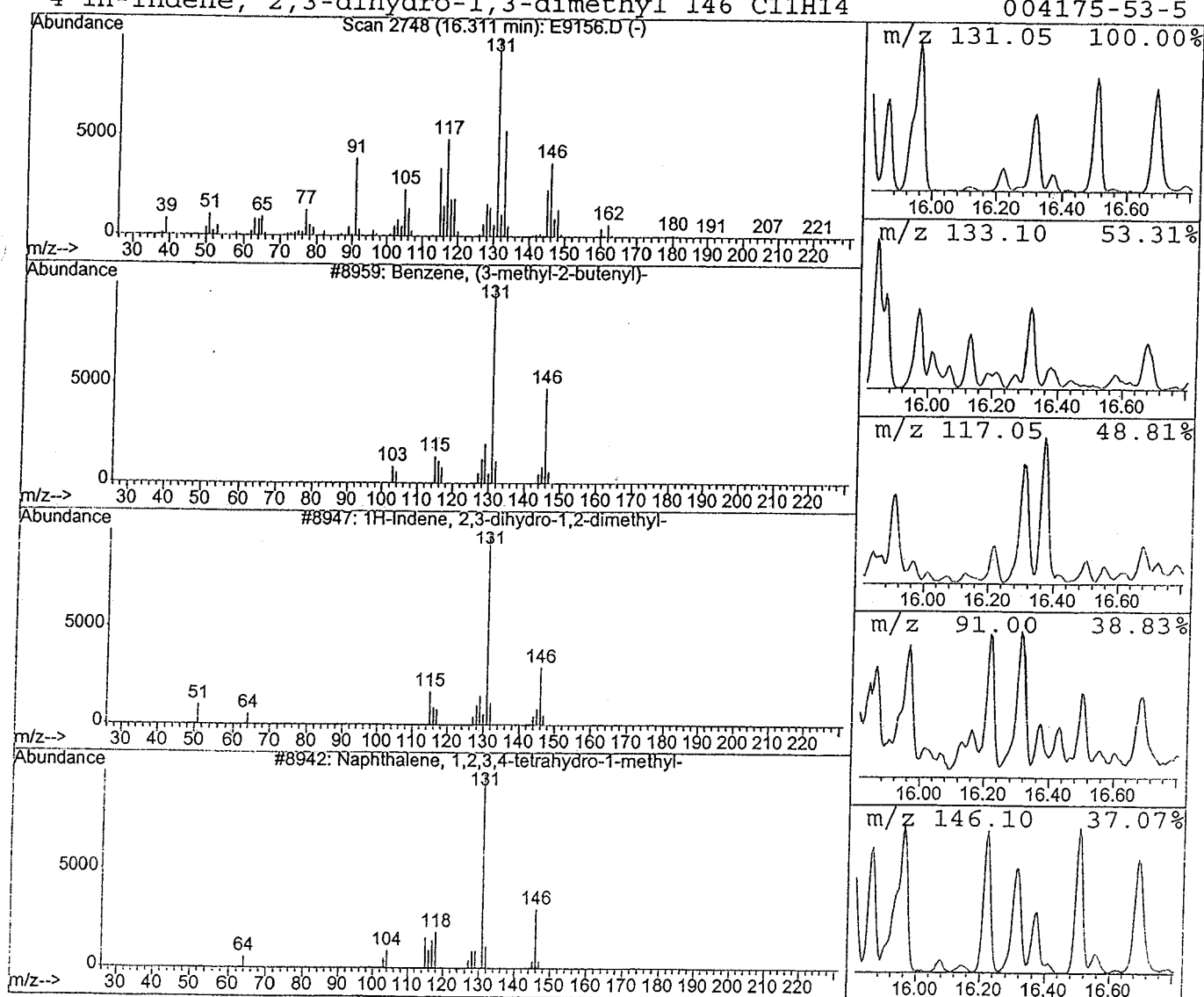
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 9 Unknown aromatic Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.31	17.11 UG	842961	Chlorobenzene-d5	10.75

Hit#	of	Tentative ID	MW	MolForm	CAS#	Qual
1	5	Benzene, (3-methyl-2-butenyl)-	146	C11H14	004489-84-3	70
2		1H-Indene, 2,3-dihydro-1,2-dimethyl	146	C11H14	017057-82-8	55
3		Naphthalene, 1,2,3,4-tetrahydro-1-m	146	C11H14	001559-81-5	55
4		1H-Indene, 2,3-dihydro-1,3-dimethyl	146	C11H14	004175-53-5	55



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9156.D
Acq On : 10 May 2001 10:50 pm
Sample : MW-3,2892-003,A,0.5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P

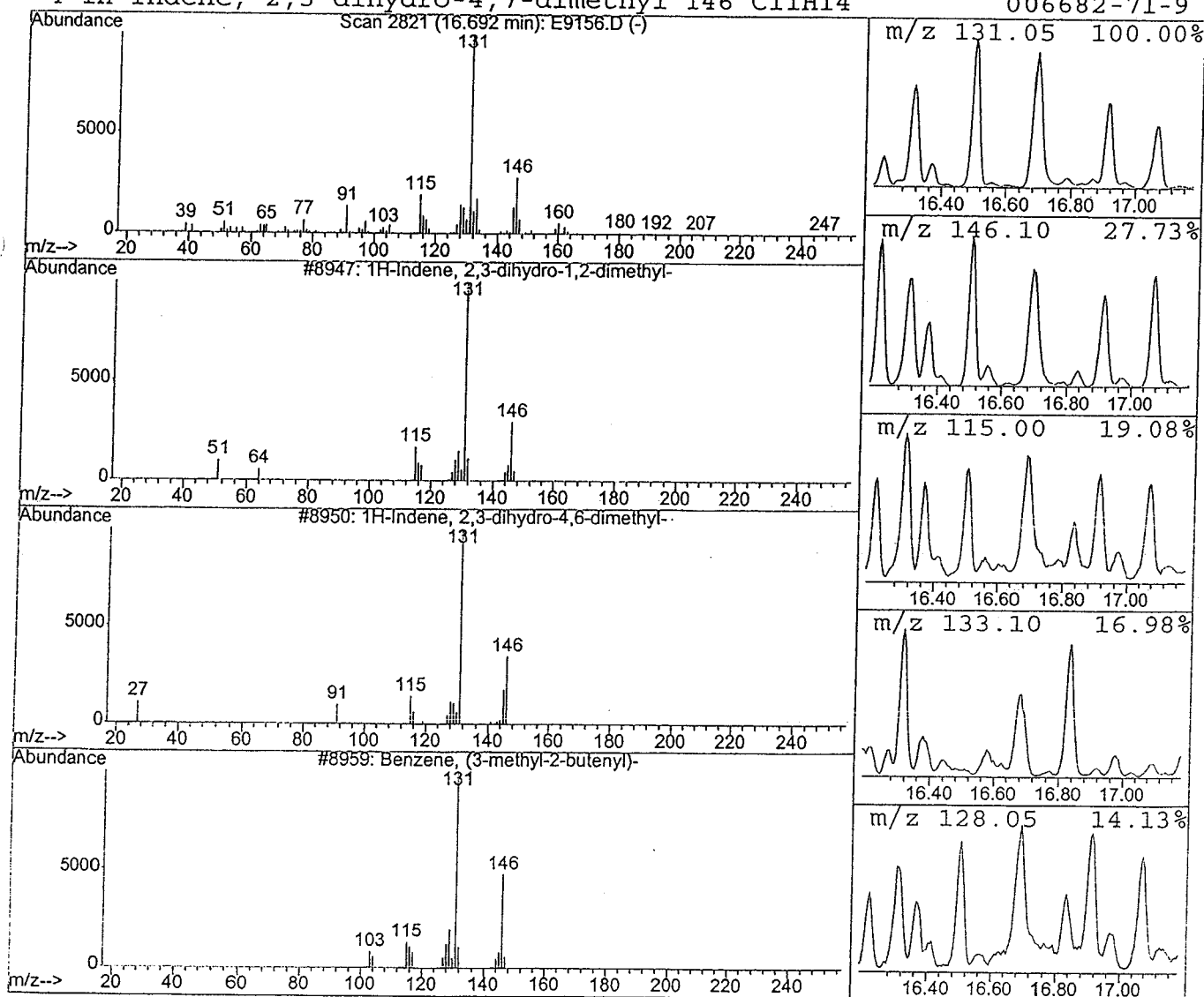
Vial: 25
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

Peak Number 10 Unknown aromatic Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.69	15.95 UG	785977	Chlorobenzene-d5	10.75

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1		1H-Indene, 2,3-dihydro-1,2-dimethyl	146	C11H14	017057-82-8	81
2		1H-Indene, 2,3-dihydro-4,6-dimethyl	146	C11H14	001685-82-1	76
3		Benzene, (3-methyl-2-butenyl)-	146	C11H14	004489-84-3	76
4		1H-Indene, 2,3-dihydro-4,7-dimethyl	146	C11H14	006682-71-9	76



Data File : C:\HPCHEM\1\DATA\05-10-01\E9179.D

Acq On : 11 May 2001 9:41 am

Sample : MW-4,2892-004,A,5mL,100

Misc : GEOVATION/WARWICK,5/02/01,5/04/01

MS Integration Params: LSCINT.P

Quant Time: May 11 10:02 2001

Vial: 48

Operator: AMY

Inst : MSD_E2

Multiplr: 1.00

Quant Results File: EA050901.RES

Quant.Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)

Title : VOLATILE ORGANICS BY EPA METHOD 624

Last Update : Wed May 09 13:20:33 2001

Response via : Initial Calibration

DataAcq Meth : EA042501

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.57	168	496793	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.40	114	719063	30.00	UG	0.00
50) Chlorobenzene-d5	10.75	117	542071	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.91	65	265698	28.52	UG	0.00
Spiked Amount	30.000	Range	90 - 142	Recovery	=	95.07%
41) Toluene-d8	9.07	98	708997	29.39	UG	0.00
Spiked Amount	30.000	Range	90 - 100	Recovery	=	97.97%
59) Bromofluorobenzene	12.15	95	320525	28.45	UG	0.00
Spiked Amount	30.000	Range	75 - 106	Recovery	=	94.83%

Target Compounds

Qvalue

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

E9179.D EA050901.M

Fri May 11 10:08:22 2001

MSD_E2

Page 1

000064

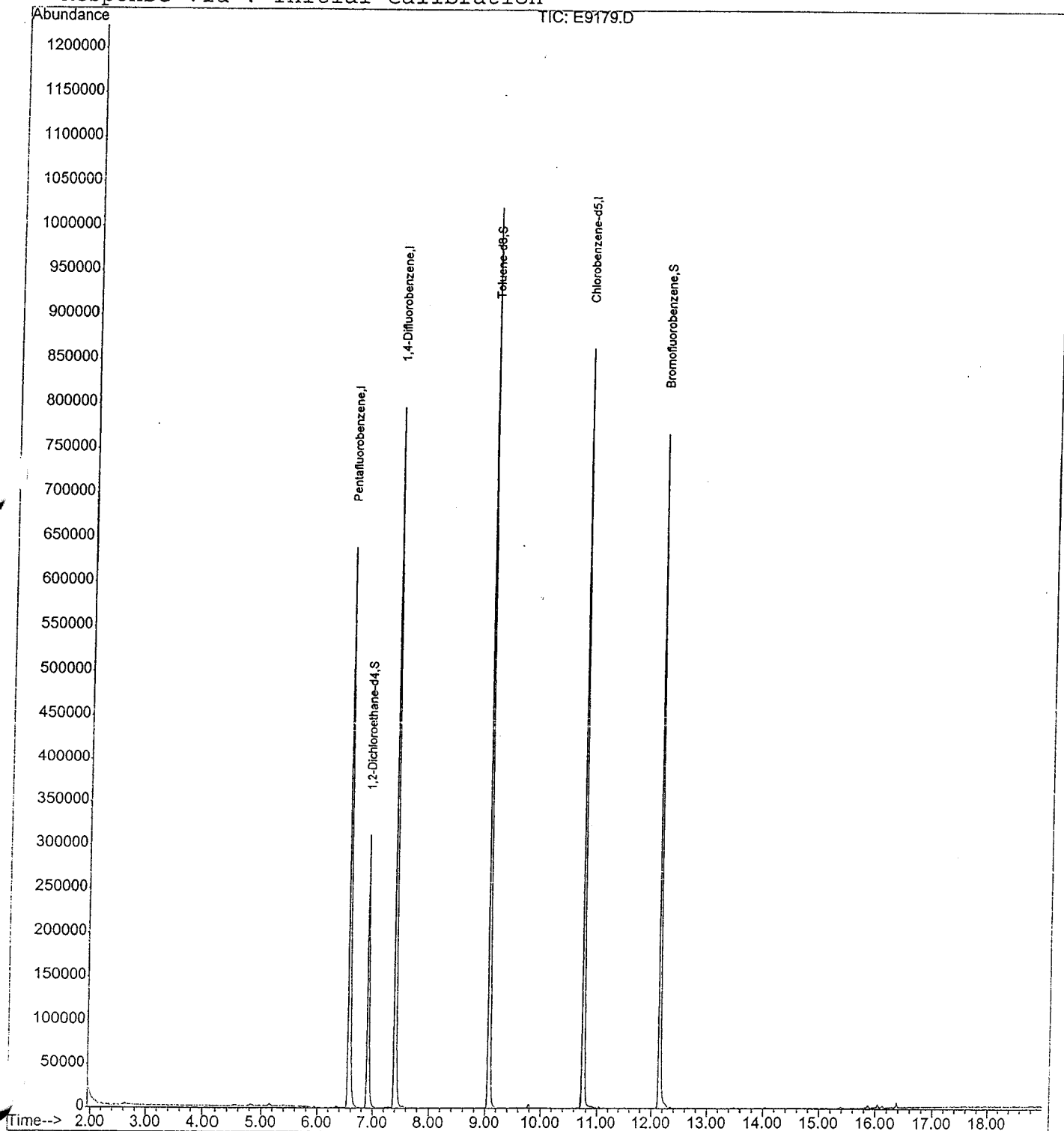
Quantitation Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9179.D
Acq On : 11 May 2001 9:41 am
Sample : MW-4,2892-004,A,5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
MS Integration Params: LSCINT.P
Quant Time: May 11 10:02 2001

Vial: 48
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9179.D
Acq On : 11 May 2001 9:41 am
Sample : MW-4,2892-004,A,5mL,100
Misc : GEOVATION/WARWICK,5/02/01,5/04/01
S Integration Params: LSCINT.P

Vial: 48
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.572	871	886	908	rBV	639479	1511043	73.14%	16.302%
2	6.912	940	951	980	rBV	311712	736123	35.63%	7.941%
3	7.398	1031	1044	1068	rBV	796406	1747932	84.61%	18.857%
4	9.072	1351	1364	1384	rBV	1021222	2065865	100.00%	22.287%
5	10.746	1672	1684	1713	rBV	863843	1729232	83.70%	18.655%
6	12.147	1942	1952	1986	rBV	767951	1479142	71.60%	15.957%

Sum of corrected areas: 9269337

E9179.D EA050901.M

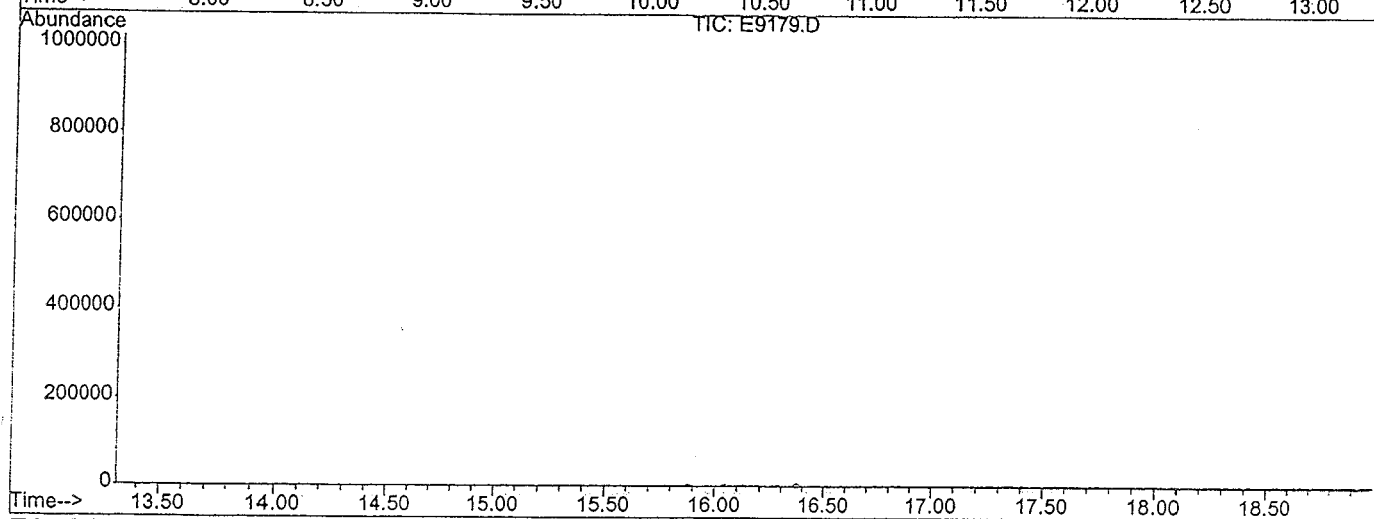
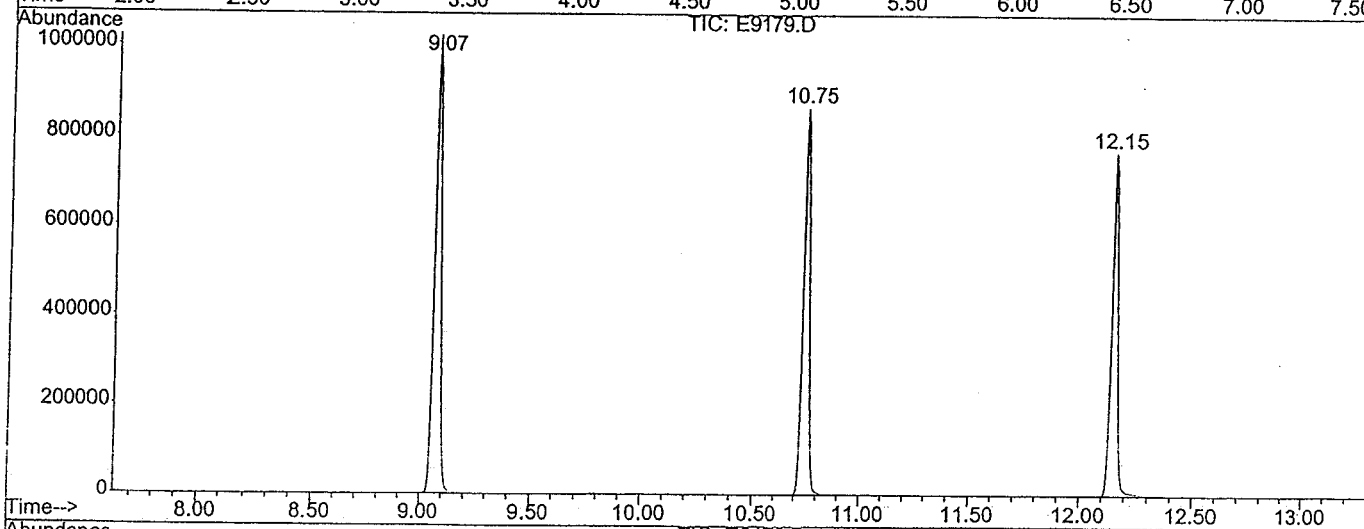
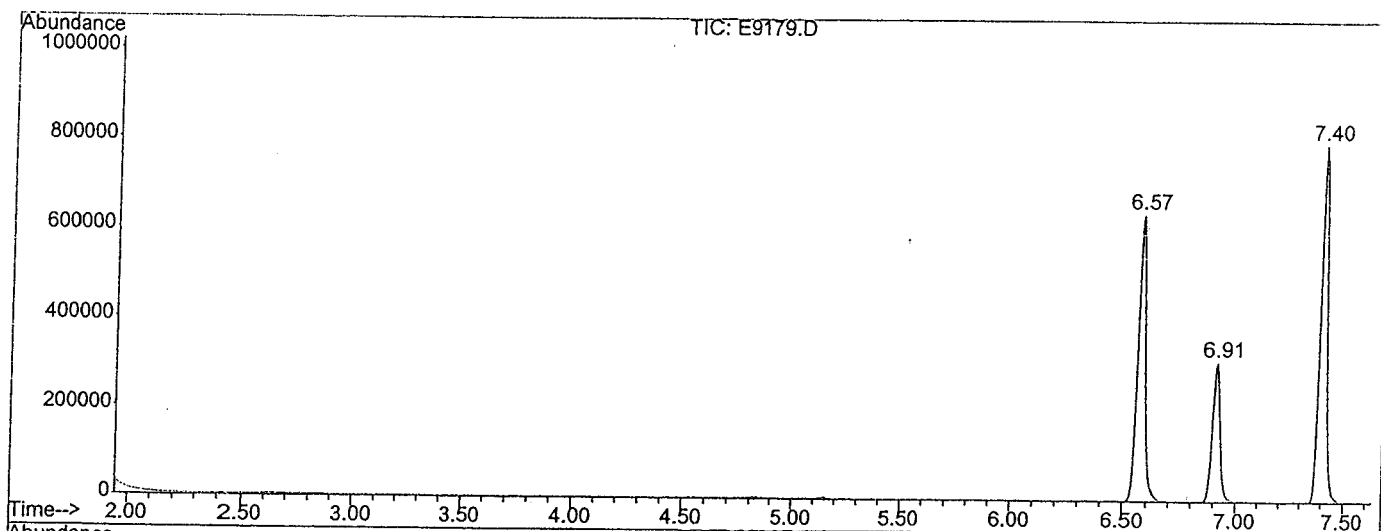
Fri May 11 10:08:29 2001

MSD_E2

000066

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\05-10-01\E9179.D
 Operator : AMY
 Acquired : 11 May 2001 9:41 am using AcqMethod EA042501
 Instrument : MSD_E2
 Sample Name: MW-4,2892-004,A,5mL,100
 Misc Info : GEOVATION/WARWICK,5/02/01,5/04/01
 Vial Number: 48
 Quant File :EA050901.RES (RTE Integrator)



E9179.D EA050901.M Fri May 11 10:08:30 2001 MSD_E2

000052

Data File : C:\HPCHEM\1\DATA\05-10-01\E9135.D
Acq On : 10 May 2001 12:48 pm
Sample : METHOD-BLK, METHOD-BLK, A, 5mL, 100
Misc : NA, NA, NA
MS Integration Params: LSCINT.P
Quant Time: May 10 13:21 2001

Vial: 4
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA050901.RES

Quant Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed May 09 13:20:33 2001
Response via : Initial Calibration
DataAcq Meth : EA042501

Internal Standards

	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.57	168	414189	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.40	114	594706	30.00	UG	0.00
50) Chlorobenzene-d5	10.75	117	456932	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.91	65	213937	27.55	UG	0.00
Spiked Amount	30.000	Range	90 - 142	Recovery	=	91.83%
41) Toluene-d8	9.07	98	591178	29.63	UG	0.00
Spiked Amount	30.000	Range	90 - 100	Recovery	=	98.77%
59) Bromofluorobenzene	12.15	95	261686	27.55	UG	0.00
Spiked Amount	30.000	Range	75 - 106	Recovery	=	91.83%

Target Compounds

Qvalue

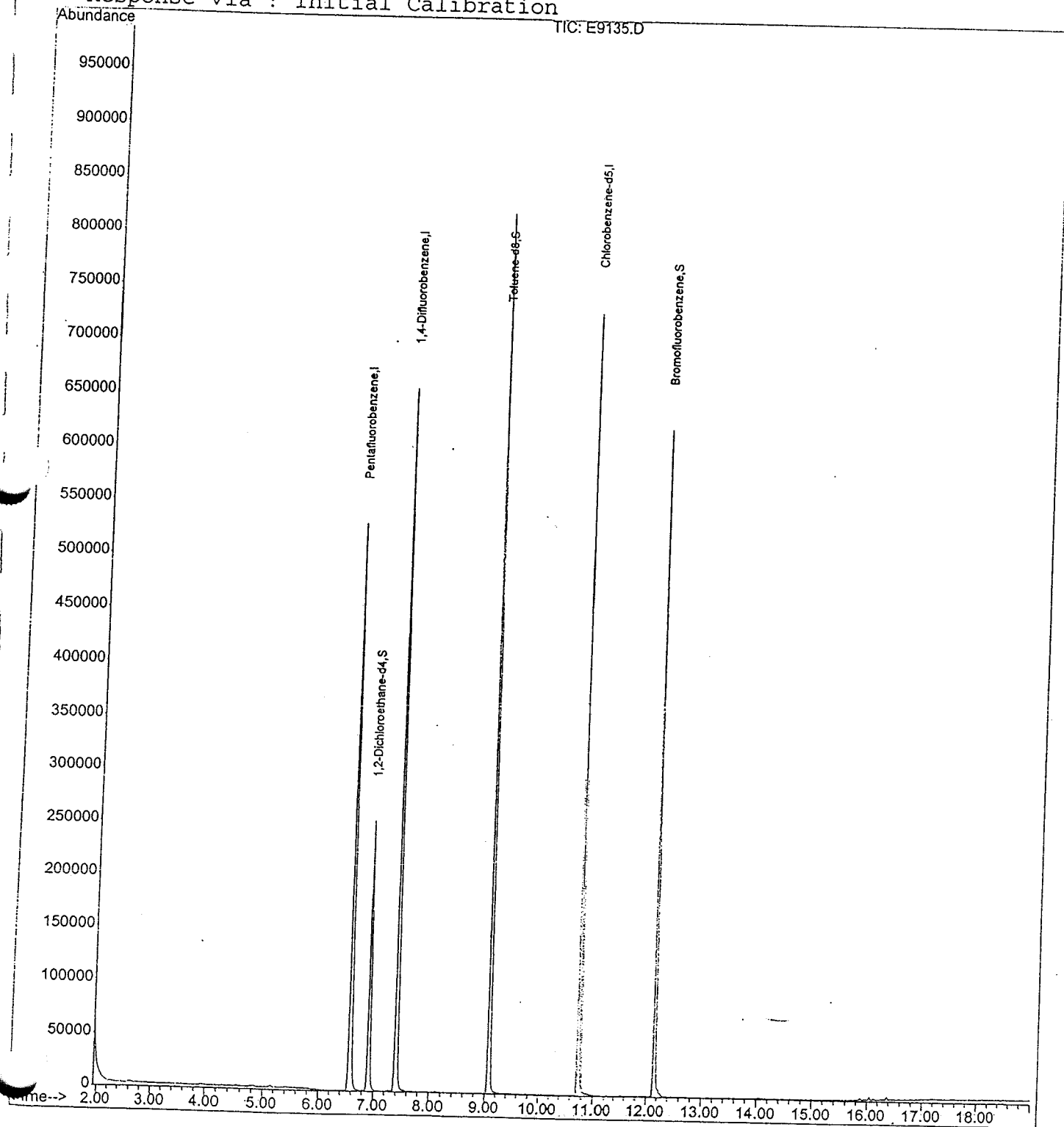
Quantitation Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9135.D
 Acq On : 10 May 2001 12:48 pm
 Sample : METHOD-BLK, METHOD-BLK, A, 5mL, 100
 Misc : NA, NA, NA
 MS Integration Params: LSCINT.P
 Quant Time: May 10 13:21 2001

Vial: 4
 Operator: AMY
 Inst : MSD_E2
 Multiplr: 1.00

Quant Results File: EA050901.RES

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Last Update : Wed May 09 13:20:33 2001
 Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\05-10-01\E9135.D
Acq On : 10 May 2001 12:48 pm
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P

Vial: 4
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA050901.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0
Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.569	871	885	915	rBV	531171	1242748	72.67%	16.259%
2	6.909	939	950	975	rBV	253825	595319	34.81%	7.789%
3	7.401	1032	1044	1063	rBV	657119	1437951	84.09%	18.813%
4	9.069	1352	1363	1388	rBV	821862	1710049	100.00%	22.372%
5	10.748	1672	1684	1703	rBV	732135	1435900	83.97%	18.786%
6	12.150	1939	1952	1986	rBV2	624553	1221568	71.43%	15.982%

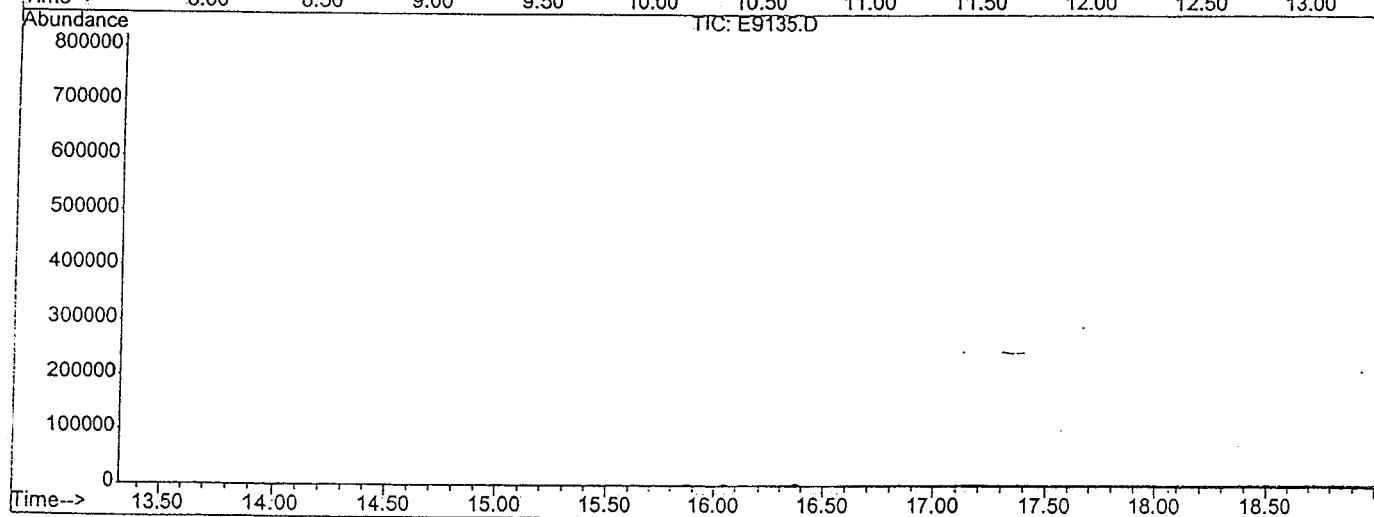
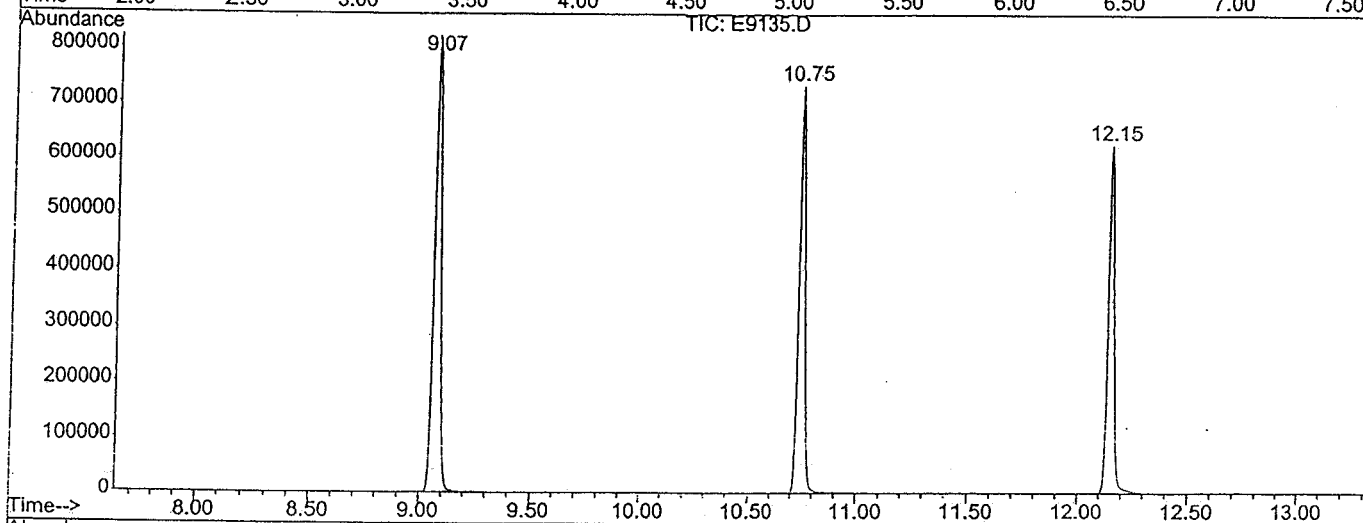
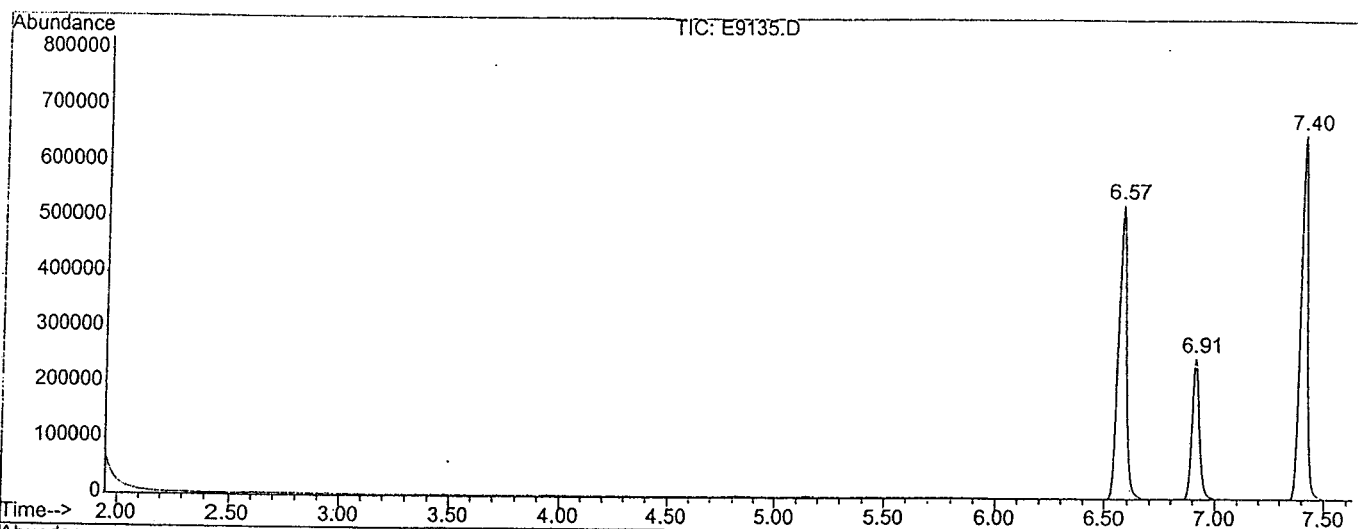
Sum of corrected areas: 7643535

E9135.D EA050901.M

Thu May 10 13:22:28 2001 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\05-10-01\E9135.D
 Operator : AMY
 Acquired : 10 May 2001 12:48 pm using AcqMethod EA042501
 Instrument : MSD_E2
 Sample Name: METHOD-BLK, METHOD-BLK, A, 5mL, 100
 Misc Info : NA, NA, NA
 Vial Number: 4
 Quant File : EA050901.RES (RTE Integrator)



E9135.D EA050901.M

Thu May 10 13:22:29 2001

MSD_E2

000071

CLIENT & PROJECT

REPORTING

Company Name:	Generation Consultants Inc.	Invoice to:	
P.O. Box 293		Fax to:	
Address: 468 Rt. 17A		Fax #:	
Florida, N.Y. 10921		Report to:	
		Address:	
Telephone #: 845-651-4141		Invoice to:	
Fax #: 651-0040		Address:	
Project Name: Warwick			
Project Manager: Bob Zimmer			
Reference ID#:			
PO#:			

SAMPLE INFORMATION

SAMPLE MATRIX	
W - Waste	SL - Sludge A - Aqueous
O - Oil	X - Other S - Soil
GW - Groundwater	SOL - Solid

[illegible]

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

CUSTODY LOG

Signature	Date	Time	Signature
Relinquished by: <i>Jani Kutzgimer</i>	5/4/01	10:25am	Received by: <i>J. Kutzgimer</i>
Relinquished by: <i>J. Kutzgimer</i>	5-4-01	1360	Received by: <i>David W. Fadden</i>
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:

LAB COPIES - WHITE & YELLOW - CLIENT COPY - BULK

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Turnaround Time				Report Format
<u>Conditional / TPHC</u>				Results Only <u>Reduced</u> Regulatory SRP Disk**; dbf or wkl
24 hr*	48 hr	72 hr	1 wk NA Other:	
<u>Verbal/Fax</u>				
24 hr*	48 hr*	72 hr*	1 wk*	2 wk Other:
<u>Hard Copy</u>				
72 hr*	1 wk*	2 wk*	3 wk Other:	Other:

*Prior to sample arrival, Lab notification is required.

***Prior to sample arrival, Lab notification is required.**

ANALYTICAL PARAMETERS / PRESERVATIVES

[illegible]

COOLER TEMP. 4 °C

Comments

[illegible]

Concentrations Expected	Known Hazard: yes no
LOW MED HIGH	Describe:

Comments:

Lab Case #

2892

PAGE:

30

CHAIN OF CUSTODY

Case No.: E01-2892

P.O. #: _____

Project : WARWICK

Client/Project: GEOVATION/WARWICK

Client Address:

Billing Address:

Geovation Consultants Inc.

Geovation Consultants Inc.

468 Route 17A

468 Route 17A

P.O. Box 293

P.O. Box 293

Florida, NY 10921

Florida, NY 10921

Date Received: 05/04/01

Verbal Due: May 18

Time Received: 13:10

Report Due: May 25

Report Format: Reduced

# of Containers	2	2	2	2
IAL ID #	2892-001	2892-002	2892-003	2892-004
Client ID #	MW-1	MW-2	MW-3	MW-4
Matrix	Aqueous	Aqueous	Aqueous	Aqueous
Sample Date	05/02/01	05/02/01	05/02/01	05/02/01
Sample Time	13:45	14:50	14:25	13:15
VO+10, PP LIST	✓	✓	✓	✓

Comments:

000073

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO:

2892

CLIENT:

GEOVATION

COOLER TEMPERATURE: 2° - 6°C: ☒ (See Chain of Custody)

CHAIN OF CUSTODY:

COMPLETE / INCOMPLETE

Comments:

Sample Bottles Intact:

☒

Comments:

Sample Labels Intact/ Correct:

☒

Sufficient Sample Volume:

☒

Correct bottles/ preservative:

☒

Samples received in

holding time/ prep time:

☒

Headspace/ bubbles in voa samples:

☒

Samples to be subcontracted:

☒

Preserved Sample pH checked:

☒

(Excluding voa samples)

KEY

☒ = YES

☒ = NO

☒ = N/A

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY:

INITIAL

JDM

DATE

5/4/01

CORRECTIVE ACTION REQUIRED:

YES

(SEE BELOW)

NO

CLIENT NOTIFIED:

YES

Date/ Time:

NO

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY:

INITIAL

JDM

DATE

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-2892
 Client : Geovation Consultants Inc.
 Project : WARWICK

	GC/MS V		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
VO+10, PP LIST	2892-001	A				5/1/01	9:00	AS
	2892-002	A						
	2892-003	A						
	2892-004	A						

REVIEW & APPROVAL:
 REMARKS :

[Signature]