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REPORTS

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6/92 PHASE II

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Brown McCarroll & Oaks Hartline

Austin, Texas

ENSR

Phase II Site Inspection Report Exxon Chemical Company 2607/2609 West Marland Boulevard Hobbs, New Mexico

ENSR Consulting and Engineering

June 1992

Document Number 1009-001-160

PRIVILEGED AND CONFIDENTIAL

Brown McCarroll & Oaks Hartline
Austin, Texas

Phase II Site Inspection Report
Former Exxon Chemical Company Facility
2607/2609 West Marland Boulevard
Hobbs, New Mexico

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EXECUTIVE SUMMARY

The subject facility is located at 2607/2609 West Marland Boulevard in Hobbs, New Mexico. The facility is currently owned by Electro-Support Systems Inc. (ESS), who purchased the property from Sweatt Construction (Sweatt) in January 1991. Sweatt used the facility for office space, truck maintenance and construction equipment storage.

During the period between 1980 to 1988, Sweatt leased the office Suite at 2906 West Marland to NL Treating (NL). Sweatt continued to use a majority of the yard and the offices at 2609 West Marland. Exxon assumed the lease in 1987. In March 1988, Exxon leased the entire property from Sweatt. From March 1988 to August 1989, Exxon used the facility for the storage and distribution of oilfield treating chemicals, as well as for office space.

ENSR Consulting and Engineering (ENSR) conducted a Phase I Preliminary Assessment of the facility in August 1991. As a result of the Phase I findings, a Phase II Site Inspection was conducted. ENSR conducted the Phase II Site Inspection of the West Marland facility in January 1992. The objectives of the Phase II Site Inspection were to:

- identify the presence and nature of known or suspected contamination in areas identified during the Phase I Preliminary Assessment, and

- delineate the horizontal and vertical extent of contamination that may require removal.

To accomplish the Site Inspection objectives, ENSR conducted a soil sampling program at the site. The samples were collected primarily from the surface of the soil beneath the caliche ground cover that extends over the yard area. Samples were also collected from boreholes and backhoe excavations to determine the depth of contamination.

The samples were analyzed for one of two suites of analytical parameters, Test A and Test B. Test A analytical parameters included TPH, pH, and RCRA metals. Test B analytical parameters included TPH, pH, RCRA metals, Target Compound List (TCL) Total Volatiles, and TCL Total Semi-Volatiles. Test B samples were primarily collected in areas displaying physical characteristics of contamination (staining and odor). Test B samples were also collected from selected areas that did not exhibit physical evidence of contamination but were in close proximity to a potential source of contamination. The additional data provided by the Total Volatile and Total Semi-Volatile analysis aided in fully understanding the types of organic contamination present in a given area.

The areas sampled during Phase II include:

- Yard Area - Eight Test A samples and one Test B sample were collected from a 100-foot grid pattern established in the facility yard.

- Loading Area - One Test A soil sample was collected at the area in front of the garage door at the assembly building were trucks may have been loaded. (Building No. 1 on site plot plan - Figure 2-2).

- Aboveground Diesel Tank Area - Two Test A and one Test B samples were collected from the former location of the diesel AST.

- Septic Tank Exploration Trench - One Test B sample was collected from a shallow, visually contaminated zone uncovered while conducting exploratory trenching in search of the facility septic tank.

- Septic Tank - Two Test B samples were collected from soils adjacent to the north and east walls of the septic Tank.

The following areas exhibiting physical evidence of contamination were observed during Phase II:

- Former location of aboveground diesel tank - A 6 to 8 inch thick layer of hydrocarbon saturated soil was observed just beneath the surface of the caliche pad. The soil appeared to be saturated with petroleum substances. Samples DT-2A and DT-2B were collected from this area. This contaminated area appeared to be approximately 10 to 15 square feet.

- Septic tank area - While excavating in search of the septic tank, a 3 to 6 inch layer of saturated soil was discovered just beneath the caliche ground cover. The soil appeared to be saturated with oil-like substances. This material was very similar to the material noted in the former location of the diesel tank which was approximately 35 feet southwest. This contaminated area was observed to be localized. Sample TR-1A was collected from this area.

- Location of yard grid sample YS-4A - This soil sample was collected in the general vicinity of the seven aboveground storage tanks (now removed) that were located along the east property line fence. This sample did not exhibit visual evidence of contamination but did have a petroleum odor.

The analytical results of the soil samples collected during Phase II Site Inspection revealed four areas with elevated TPH concentrations. In two of the areas volatile organic compounds were detected and in one area, naphthalene was detected. The contaminated areas were:

- Area of yard grid sample YS-4A(TPH)
- Former diesel tank area (TPH, volatiles)
- Septic tank exploration trench (TPH, volatiles, naphthalene)

As a result of the findings of the Phase II Site Inspection ENSR made the following recommendations:

1) Exxon should determine if notification to the State of New Mexico is required for this type of petroleum contamination.

2) Exxon should review the necessity for implementing a remedial response at this facility.

1.0 INTRODUCTION

A Phase I Preliminary Assessment was conducted in August and September 1991 at the West Marland Boulevard chemical distribution facility in Hobbs, New Mexico.

The results of this assessment were submitted to the law firm of Brown McCarroll & Oaks Hartline in a June 1992 report. The Phase I report identified areas requiring additional investigation. These areas were investigated in a Phase II Site Inspection conducted in January 1992. ENSR Consulting and Engineering (ENSR) conducted both the Preliminary Assessment and the Site Inspection.

This report presents the results of the Phase II Site Inspection and provides recommendations for evaluation of remedial activities at the facility.

2.0 FACILITY BACKGROUND

The subject facility is located at 2607/2609 West Marland Street in Hobbs, New Mexico. The facility is currently owned and operated by Electro-Support Systems, Inc. (ESS). ESS purchased the facility in January or February 1991 from Sweatt Construction (Sweatt). Sweatt used the facility for office space, truck maintenance, and construction equipment storage.

NL leased the office suite at 2606 West Marland intermittently from approximately 1980 until 1988. Exxon assumed this lease when it acquired NL in 1987. During this time, Sweatt used a majority of the property for its activities. NL used a small room as a laboratory to conduct emulsion tests from 1980 to 1988. Exxon leased the entire property (buildings and yard) from March 1988 to August 1989.

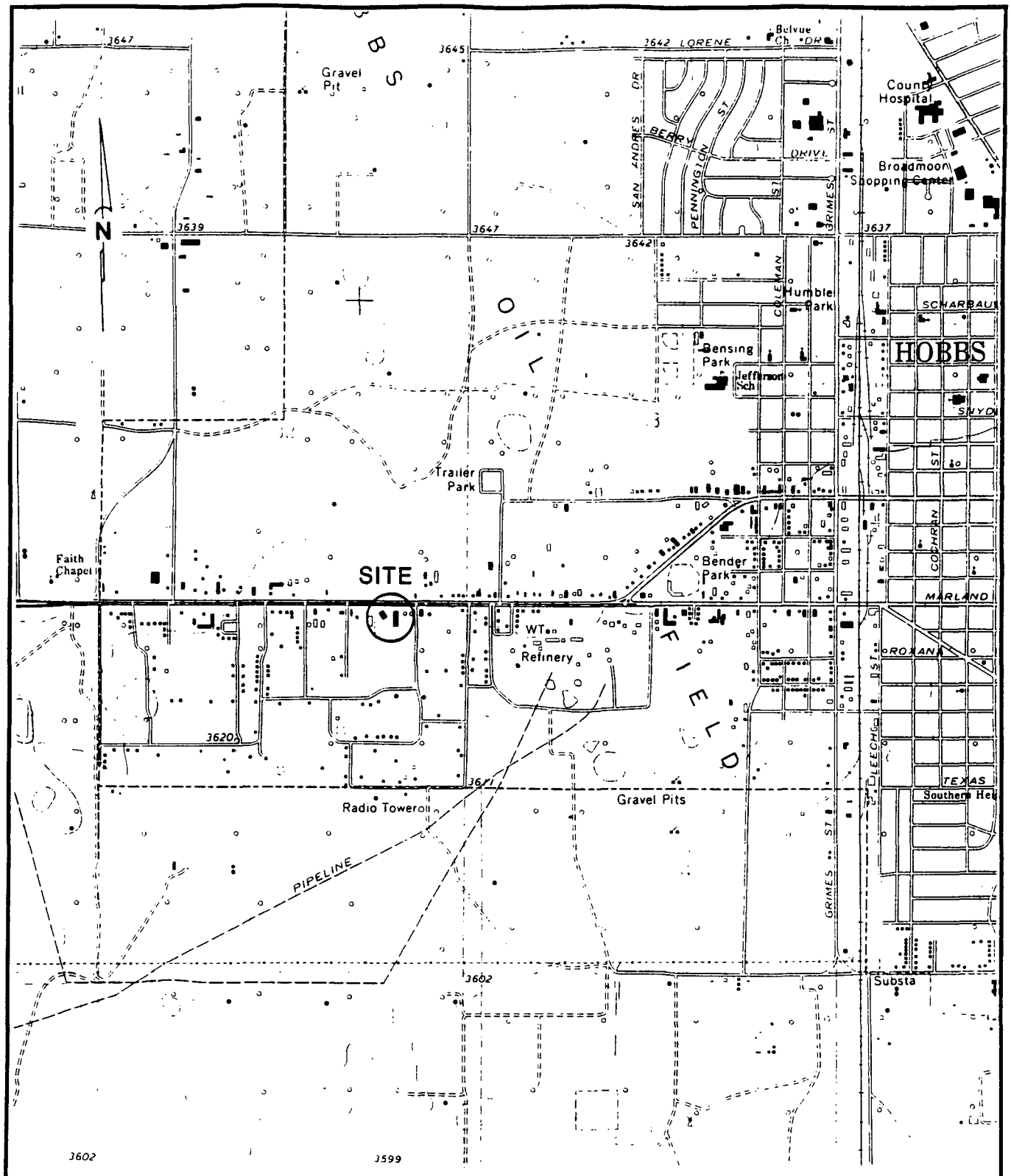
The site is approximately 2.15 acres and consists of two buildings and a caliche covered yard. The site location is shown on Figure 2-1. The site plot plan is shown on Figure 2-2. Two buildings are on the site, an office building and a warehouse assembly building. The main building consists of two office suites, 2607 West Marland and 2609 West Marland, and is located in the northern portion of the property. The main building is surrounded on the north and east by an asphalt parking area.

The warehouse assembly building (Bldg No. 1 on Site Plot Plan - Figure 2-2) is located along the west side of the property. This building is currently in use by the present owner, Electro Support Systems, Inc.

During the period that Exxon leased the entire property (March 1988 to August 1989) the facility was used for the storage and distribution of oilfield treating chemicals. Exxon maintained seven 750-gallon ASTs on the property for the storage of the oilfield chemicals. The tanks were installed with secondary containment. Chemical product was also stored in drums. Typically, 250 drums of product were stored on pallets at any one time in the yard. No blending or processing of these chemicals occurred at the site.

2.1 Previous Investigations

ENSR conducted a Phase I Preliminary Assessment in 1991 at the former Exxon Chemical site at 2607/2609 West Marland in Hobbs, New Mexico. Investigatory activities included site visits, interviews with personnel who worked at the facility, facility records review, and state agency or



0 2000 4000

SCALE IN FEET

Ref.: USGS, Hobbs West, New Mexico Quadrangle Map, 1979

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FIGURE 2-1

SITE LOCATION MAP

CHEMICAL DISTRIBUTION COMPANY

HOBBS, NEW MEXICO

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APPV'D:	REVISED:	1009-001-160

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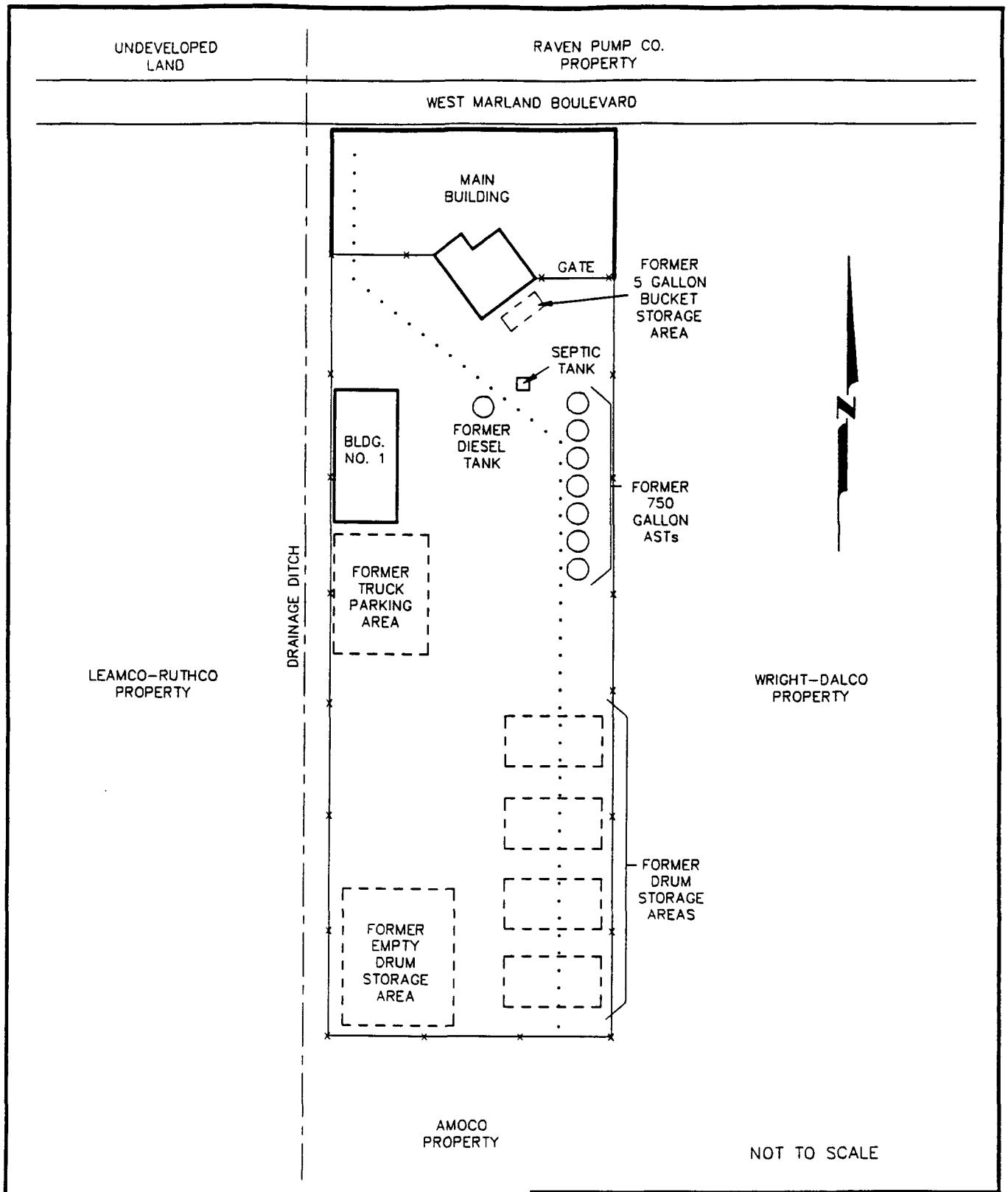

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FIGURE 2-2
SITE PLOT PLAN
CHEMICAL DISTRIBUTION COMPANY
HOBBS, NEW MEXICO

DRAWN: L.GAMBLE	DATE: 3-2-92	PROJECT NUMBER:
APPV'D:	REVISED:	1009-001-160

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EPA files research. The results were presented to Brown McCarroll & Oaks Hartline in a June 1992 report.

The major findings of the Phase I Preliminary assessment are summarized below.

- The property is presently owned and operated by Electro-Support Systems, Inc. (ESS). The site was subleased by Exxon from NL and Sweatt Construction Company from March 1988 to August 1990, and was used for office space and oilfield chemical storage and distribution. NL leased office space at 2609 Marland from Sweatt Construction Company from approximately 1980 until 1988.

- No processes currently take place at the site; no process wastewater was generated at the site; and no chemical blending occurred at the site - only storage and distribution.

- From March 1988 until August 1990 oilfield chemicals were stored in drums which were stored in drums in an area in the southeast portion of the yard and in seven 750-gallon storage tanks along the east fence southeast of the main building. Empty drums were stored in the southwest corner of the yard. The seven ASTs were removed in 1990.

- Oil emulsion tests were conducted at the facility by both NL and Exxon. The manner in which the samples were disposed of is unknown.

- Sweatt Construction maintained an aboveground diesel tank south of the main building. This tank was removed in 1988, and, according to facility personnel, a dark stain was left on the soil in the tank area. Sweatt removed 8 to 12 inches of soil from the yard and replaced it with a caliche rock layer before selling the property to ESS.

- A 500-gallon septic tank was located south of the main building and east of where the diesel storage tank had been. The septic tank was used until the facility was connected to the city sewer system in the spring of 1990.

- No water wells exist at the site. The groundwater table is estimated to be at a depth of 40 feet to 60 feet in this area.

The findings of the preliminary assessment provided the basis for developing the scope of work for the Site Inspection.

2.2 Phase II Site Inspection Objectives

The objectives of the Phase II Site Inspection at the West Marland Boulevard facility were to:

- identify the presence and nature of known or suspected contamination at the site, and
- delineate, where possible, the extent of contamination through visual observations and sampling.

2.3 Scope of Work

The scope of work for the Phase II site assessment at the facility included the following activities:

- Soil samples were collected at grid points within a 100-foot grid system established in the yard area. The samples were collected from surface soils and from selected soil borings.
- Soil samples were collected from selected areas that may have been impacted by previous activities at the facility. The samples were collected and from soil borings and backhoe excavations. These areas included:
  - Loading area
  - Aboveground diesel tank area
  - Septic Tank (including an exploratory trench)
- The soil samples collected were analyzed for either Test A or Test B analytical parameters as follows:
  - Test A: TPH, pH and RCRA metals
  - Test B: TPH, pH, RCRA metals, Target Compound List (TCL), Total Volatiles and TCL Total Semi-Volatiles

  Samples were collected from areas exhibiting physical evidence of contamination. Test B samples were also collected from areas that did not exhibit physical characteristics of contamination but were in close proximity to a potential source of contamination. The additional parameters of TCL total volatiles and TCL total semi-volatiles aided in fully understanding the types of organic contamination present at the site. Normally the Test B samples were first analyzed for TPH, pH, and RCRA metals. If TPH was present

then the samples were further analyzed for TCL total volatiles and TCC total semi-volatiles.

- The volume of contaminated soil which may require removal was estimated.

3.0 FIELD ACTIVITIES

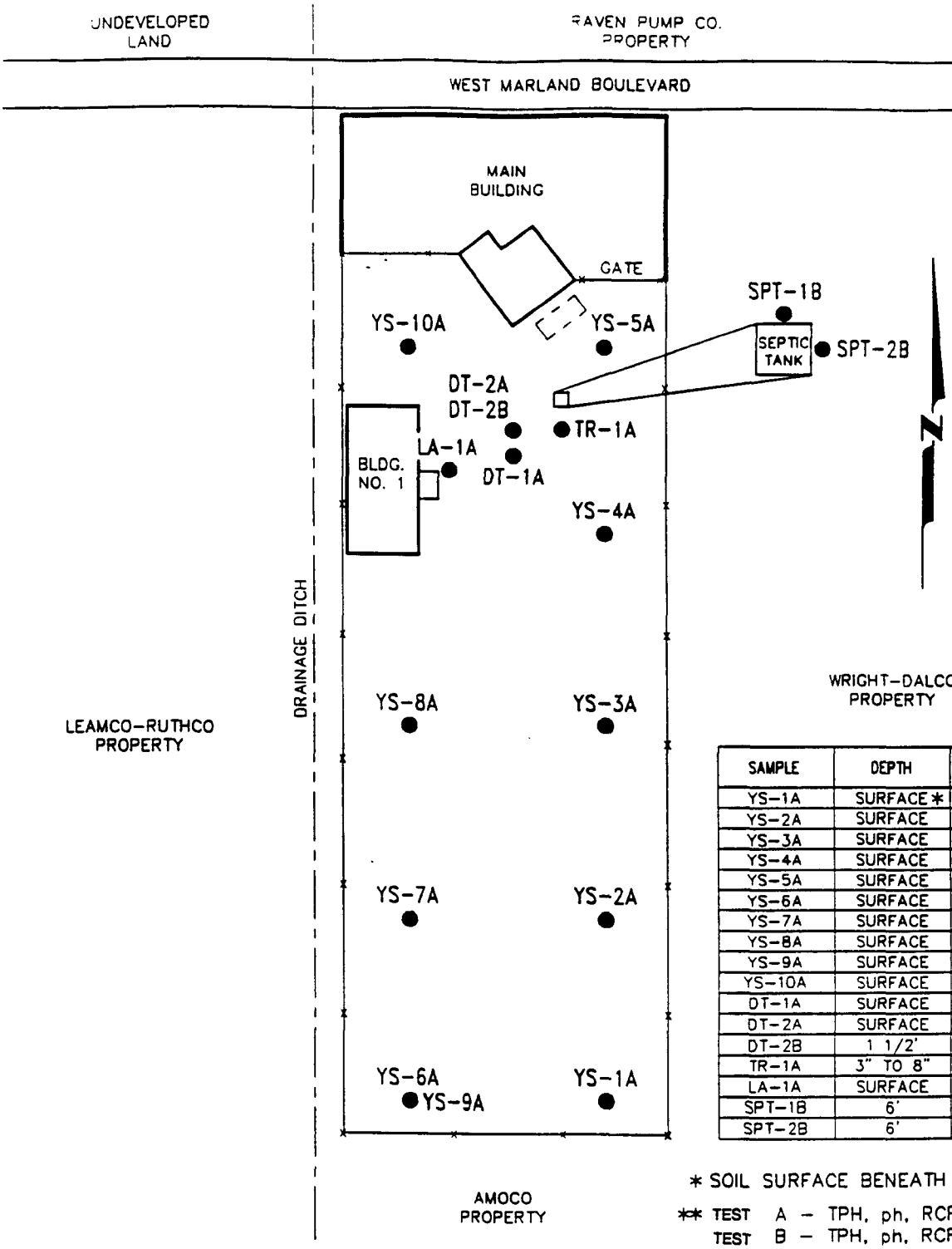
The Phase II Site Inspection was conducted from January 20 to January 29, 1992 at the West Marland Site. The sample locations are shown on Figure 3-1. The sample location coordinates are shown on Table 3-1. The analytical results are discussed in Section 6.0.

3.1 Soil Sampling

A total of 17 soil samples were collected at the West Marland site, including 1 QA/QC soil duplicate sample. The 17 samples were collected at grid points from a 100-foot grid system established in the yard and from 3 selected process areas that may have been contaminated from past facility activities. Fourteen surface soil samples and three soil samples were collected at depth. The three selected process areas included the loading area, the septic tank, and the above ground diesel tank area. Since the yard area is covered by a relatively new caliche pad varying in thickness from several inches to 3 feet, a hand auger was used to bore down to approximately original surface grade. This auger, as well as all other reusable sampling equipment, was decontaminated between each sample point. In areas exhibiting physical evidence of contamination, a soil boring or excavation was advanced until the visually identified bottom of the contaminated soil was reached. A sample was collected to verify that the bottom of contamination had been reached. A backhoe was used to collect samples from depths greater than the extent of the hand auger. The samples were analyzed for Test A (TPH, pH, RCRA metals) or Test B (TPH, pH, RCRA metals, TCL Total Volatiles and TCL Total Semi-volatiles) parameters.

3.1.1 Yard Area

A 100-foot grid system was established in the yard area, and samples were collected at the grid points. This resulted in two north-south rows of sample points with the rows 100 feet apart. A total of 10 soil samples were collected. Samples YS-1A through YS-10A were all analyzed for Test A parameters with the exception of sample YS-5A, which was analyzed for Test B parameters, due to its proximity to the former above ground chemical tank area. Sample YS-4A was the only yard grid sample showing evidence of contamination. The sample had a petroleum odor. No staining of the soil was observed in this sample.



SAMPLE	DEPTH	ANALYTICAL TEST **
YS-1A	SURFACE *	A
YS-2A	SURFACE	A
YS-3A	SURFACE	A
YS-4A	SURFACE	A
YS-5A	SURFACE	B
YS-6A	SURFACE	A
YS-7A	SURFACE	A
YS-8A	SURFACE	A
YS-9A	SURFACE	A
YS-10A	SURFACE	A
DT-1A	SURFACE	A
DT-2A	SURFACE	B
DT-2B	1 1/2'	A
TR-1A	3" TO 8"	B
LA-1A	SURFACE	A
SPT-1B	6'	B
SPT-2B	6'	B

* SOIL SURFACE BENEATH CALICHE PAD

** TEST A – TPH, ph, RCRA METALS
TEST B – TPH, ph, RCRA METALS, TOTAL VOLATILES, SEMIVOLATILES

NOT TO SCALE

LEGEND

- EXISTING STRUCTURE
- FENCE
- SAMPLE LOCATION

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FIGURE 3-1
SOIL SAMPLE LOCATIONS
CHEMICAL DISTRIBUTION COMPANY
HOBBS, NEW MEXICO

DRAWN: L.GAMBLE	DATE: 3-2-92	PROJECT NUMBER:
APPV'D:	REVISED:	1009-001-160

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TABLE 3-1

Sample Location Coordinates
Phase II Investigation
Former Chemical Facility
2607/2609 West Marland, Hobbs, New Mexico

Yard Grid Samples
YS-1A - 30' from east property line, 10' from south property line YS-2A - 30' from east property line, 110' from south property line YS-3A - 30' from east property line, 210' from south property line YS-4A - 30' from east property line, 310' from south property line YS-5A - 30' from east property line, 410' from south property line YS-6A - 30' from west property line, 10' from south property line YS-7A - 30' from west property line, 110' from south property line YS-8A - 30' from west property line, 210' from south property line [1]YS-9A - 30' from west property line, 10' from south property line YS-10A - 30' from west property line, 410' from south property line
Loading Area
LA-1A - 2' east of northeast corner of slab on east side at assembly building
Former Aboveground Diesel Tank Area
DT-1A - due east of northeast corner of assembly building and due south of south corner of main building DT-2A, 2B - 90' south of south corner of main building, 65' from east property line
Septic Tank Area
TR-1A - 63' south & 15' east of south corner of main building SPT-1B - 38' south and 30' east of south corner of main building SPT-2B - 42' south and 35' east of south corner of main building
[1] YS-9A is a duplicate of YS-6A [2] TR-1A collected from exploratory trench

3.1.2 Loading Area

An area which may have served for truck loading is located on the driveway in front of the garage door to the assembly building. Sample LA-1A was collected beneath the caliche pad at the caliche soil interface just northeast of the driveway leading to the garage door. This sample was analyzed for Test A parameters. No physical evidence of contamination was observed at this sample location.

3.1.3 Location of Former Aboveground Diesel Tank

Physical evidence of the former diesel ASTs location was not obvious, primarily because Sweatt Construction Company had removed the soil and covered the site with caliche before selling the property to ESS Inc. in 1991. Sample DT-1A was collected beneath the caliche pad at the caliche/soil interface based on the location of the AST shown on the site plot plan in the Phase I report. The sample was run for Test A parameters. No physical evidence of contamination was noted at this location, although laboratory analysis indicated a TPH concentration of 100 mg/kg. Shortly after DT-1A was collected, a small, approximately 1 square-foot area located 20 feet north of the DT-1A location was observed to have a different texture than the surrounding caliche. A small hole dug in the area revealed a 6 to 8 inch thick zone of what appeared to be petroleum saturated soil and caliche. The contaminated zone was just beneath the caliche surface (1 inch or less) and had a distinct petroleum odor. The caliche layer was very thin in this area. Sample DT-2A was collected from this shallow contaminated zone and was analyzed for Test B parameters. The sample was stained and had a distinct petroleum odor.

A soil boring at the location of sample DT-2A was advanced by hand augur through the contaminated zone to a depth of 1.5 feet. The lower vertical extent of the contaminated zone was visually observed to be 9 inches below grade. Sample DT-2B was collected at a depth of 1.5 foot and was analyzed for Test A parameters. Several small holes were dug with a pick axe in an attempt to locate the horizontal extent of contamination. This revealed an area of contamination which was observed to be approximately 15 square feet in area.

3.1.4 Septic Tank

A backhoe was used to excavate trenches along the north and east concrete walls of the septic tank. Sample SPT-1B was collected at a depth of 6 feet at the base of the north septic tank wall. Sample SPT-2B was collected at a depth of 6 feet at the base of the east septic tank wall. Both samples were analyzed for Test B analysis.

The soils adjacent to the south and west walls of the septic tank were not sampled due to the close proximity of a 22-inch high pressure gas line that transverses the property. No evidence of cracking or leaching was noted in the north and east walls. No physical evidence of leakage or soil contamination was observed.

3.1.5 Septic Tank Exploration Trench

In order to locate the septic tank, a backhoe was used to dig a 4-foot deep east-west trench approximately 25 feet long due east of the former location of the aboveground diesel tank. This trench was 63 feet due south of the south corner of the main building. The trenching procedure was unsuccessful at locating the septic tank. During the excavation work, a three to six vertical inch layer of hydrocarbon saturated soil and caliche was exposed. The contaminated zone extended 3 to 4 feet laterally along the trench and was similar to the contaminated zone noted in the aboveground diesel tank area. The contamination at both areas appeared to pre-date the present caliche pad. A sample of the contaminated material, sample TR-1A, was collected in the trench from a depth of 3 to 8 inches and was analyzed for Test B parameters. This sample was heavily stained and had a distinct petroleum odor.

3.2 Decontamination Procedures

Soil samples were collected using stainless steel hard auger and stainless steel trowel. All equipment was decontaminated between each sample point to minimize cross contamination between the samples. The equipment was first rinsed with de-ionized water then scrubbed with alconox non-phosphate detergent mixed with de-ionized water followed by a de-ionized water rinse. The equipment was then allowed to air dry.

4.0 FIELD AND LABORATORY QA/QC CONTROL

4.1 Sample Handling and Preservation Methods

Samples collected during Phase II were collected using a stainless steel auger or a stainless steel trowel.

The soil samples were collected from the trowel or auger and then placed directly into the appropriate pre-cleaned sample jar and labeled using indelible ink. The sample jar was placed in bubble wrap and then placed in an ice-filled ice chest for delivery to the AnalytiKEM Laboratory in Houston, Texas or to the Environ Express Laboratory in LaPorte, Texas. The ice chest was sealed with duct tape and chain-of-custody tape.

4.2 Chain-of-Custody and Recordkeeping Procedure

Proper chain-of-custody (COC) procedures were followed during sampling. A COC form was completed and shipped with the samples. Copies of all COC forms are included with the laboratory data packages in the Appendix section of this report. The following information was recorded on the COC form:

- Page Number
- Project Number
- Client/Project Number
- Field Logbook Number Appropriate to the Samples
- Field Sample No./identification
- Date and Time of Each Sample Collection
- Grab or Composite Sample
- Sample Container (size/material)
- Sample type (liquid, soil, sludge, etc.)
- Preservative used on each sample
- Analysis requested on each sample
- Sampler/Company/Agency Affiliation
- Date and time when samples are relinquished
- COC seal numbers, and
- Location/Destination of the analytical laboratory

All field activities were documented in a field logbook which is kept on file in ENSR's Houston office.

4.3 QA/QC Field Samples

A soil duplicate sample YS-9A (duplicate of YS-6A) was collected and analyzed for TPH, pH, and RCRA metals. A trip blank to be analyzed for Total Volatiles was included with the soil sample shipment to the AnalytiKEM laboratory in Houston.

An equipment blank was also collected and sent to the AnalytiKEM Laboratory for analysis. The equipment blank was collected using a stainless steel trowel and was analyzed for Total Volatiles, Total Semi-volatiles, and RCRA metals.

4.4 QA/QC Laboratory Samples

The following QA/QC laboratory procedures were employed during Phase II.

Method 1 - An analytical control sample consisting of all reagents and standards exposed to the complete preparation procedure beginning with sample preparation and ending with sample analysis. Method blank measures contamination introduced in the analytical laboratory.

Laboratory Duplicate - Laboratory split of a single sample. This provides a measure of the precision attainable by the laboratory.

Matrix Spike - An aliquot of a sample with known quantities of selected analytes. This provides measures of the laboratory's bias (accuracy) and precision.

Internal Standard - Known standard(s) added to every standard, QC sample, and environmental sample after preparation and prior to analysis. This allows for normalization of instrument response to a known concentration of internal standard. An internal standard is used for sample quantification of highly variable responses.

5.0 HEALTH AND SAFETY

A Health and Safety Plan designed for the Phase II Site Inspection field work at the West Marland Boulevard site is on file in ENSR Consulting and Engineering's Houston office.

6.0 ANALYTICAL RESULTS

This section presents the analytical results from the Phase II Site Inspection sampling performed at the site. The complete laboratory data package is included in Appendix A of this report.

6.1 Soil Samples

Table 6-1 provides the analytical results of the soil samples and the QA/QC samples collected during Phase II.

6.2 Summary of Analytical Results

- Yard Grid Sample YS-4A had a TPH concentration of 1710 mg/kg.
- Sample DT-1A had a TPH concentration of 100 mg/kg.
- Sample DT-2A had a TPH concentration of 406 mg/kg.
- Sample DT-2B had a TPH concentration of 100 mg/kg.
- Sample TR-1A had a TPH concentration of 9558 mg/kg.
- Volatile Organic Compounds above the detection limit were detected in Sample DT-2A:

-	4 Methyl, 2 Pentanone	730 µg/kg
-	2 Hexanone	670 µg/kg
-	Toluene	720 µg/kg
-	Ethylbenzene	220 µg/kg
-	Xylene	2,400 µg/kg

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Table 6.1
Analytical Test Results
Site Inspection
Exxon Chemical Americas
Hobbs, NM
West Marland Site

Sample I.D.	Location	Depth	TPH 8015 (M) (mg/kg)	Total Metals (mg/kg)								pH	Detected Total Volatiles Code(ug/kg)	Detected Total Semivolatiles Code(ug/kg)
				Ag	As	Ba	Cd	Cr	Hg	Pb	Se			
YS-1A	Yard Grid Sample	Surface	BDL	BDL	5.4	470	BDL	12	0.1	150	BDL	8.62		
YS-2A	Yard Grid Sample	Surface	BDL	BDL	2.8	250	BDL	3.6	BDL	12	BDL	7.94		
YS-3A	Yard Grid Sample	Surface	BDL	BDL	2.5	230	BDL	10	BDL	11	BDL	7.87		
YS-4A	Yard Grid Sample	Surface	1,710	BDL	3.1	220	BDL	6.8	BDL	18	BDL	8.06		
YS-5A	Yard Grid Sample	Surface	BDL	BDL	3.6	210	BDL	5.6	BDL	17	BDL	8.45	1(14)(B)	None Detected
YS-6A	Yard Grid Sample	Surface	BDL	BDL	5.6	540	BDL	16	0.2	170	BDL	8.05		
YS-7A	Yard Grid Sample	Surface	BDL	BDL	2.8	280	BDL	8.5	BDL	12	BDL	9.44		
YS-8A	Yard Grid Sample	Surface	BDL	BDL	2.6	120	BDL	14	BDL	14	BDL	8.22		
YS-9A	Duplicate of YS-6A	Surface	BDL	BDL	5.2	470	BDL	14	0.2	160	BDL	7.97		
YS-10A	Yard Grid Sample	Surface	BDL	BDL	3.6	300	BDL	4.6	BDL	49	BDL	8.12		
LA-1A	Loading Area	Surface	BDL	BDL	2.9	180	BDL	7.3	0.2	16	BDL	8.03		
DT-1A	Former Diesel Tank Area	Surface	100	BDL	3.5	250	BDL	2.8	BDL	6.8	BDL	8.51		
DT-2A	Former Diesel Tank Area	Surface	406	BDL	3.5	200	BDL	5.2	BDL	13	BDL	8.24	1(75), 2(730), 3(670), 4(720), 5(220), 6(2400)	None Detected
DT-2B	Former Diesel Tank Area	Surface	100	BDL	4.6	300	BDL	2.4	BDL	9.2	BDL	8.29		
TR-1A	Septic Tank Area (trench)	3"-8"	9,558	BDL	3.1	210	BDL	4.8	BDL	70	BDL	7.49	2(7900), 3(33,000), 4(13,000), 5(11,000), 6(370,000)	1(100,000)
SPT-1B	Septic Tank Area	6'	BDL	BDL	1.5	100	3.2	6.2	0.3	40	BDL	7.35	1(7)	
SPT-2B	Septic Tank Area	6'	BDL	BDL	1.6	140	BDL	11	0.1	14	BDL	7.37		
Trip Blank	QA/QC Sample												None Detected	
Equipment Blank	QA/QC Sample			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		7(12)	2(13)(B)

LEGEND

BDL = Below analytical detection limit

Blank cells indicate that the sample was not analyzed for that parameter.

COMPOUND CODE FOR VOLATILES

1) Acetone
2) 4-Methyl-2-Pentanone
3) 2-Hexanaone
4) Toluene
5) Ethylbenzene
6) Xylene (total)
7) Bromoform

COMPOUND CODE FOR SEMIVOLATILES

1) Napthalene
2) Di-n-Butylpthalate

- Laboratory analysis of DT-2A indicated the following contaminants to be present:

  - TPH 406 mg/kg
  - 4 Methyl, 2 Pentanone 730 µg/kg
  - 2 Hexanone 670 µg/kg
  - Toluene 720 µg/kg
  - Ethylbenzene 220 µg/kg
  - Xylene 2400 µg/kg

- Laboratory analysis indicated the following contaminants to be present in sample TR-1A:

  - TPH 9,558 mg/kg
  - 4-Methyl-2-Pentanone 7,900 µg/kg
  - 2-Hexanone 33,000 µg/kg
  - Toluene 13,000 µg/kg
  - Ethylbenzene 11,000 µg/kg
  - Xylene 370,000 µg/kg

- Sample TR-1A had a naphthalene concentration of 100,000 µg/kg.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Petroleum contaminated soils were present in samples collected at the location of the former aboveground diesel tank (samples, DT-1A, DT-2A, DT-2B), the septic tank exploration trench (sample TR-1A), and the location of yard grid sample YS-4A. Samples DT-2A and TR-1A had the following volatile compounds above detection limit: 4-methyl-2-pentanone, 2-hexanone, toluene, ethylbenzene, and xylene. Naphthalene, a semi-volatile compound was found in sample TR-1A. Petroleum hydrocarbons at or above 100 mg/kg was found in all samples collected from the three contaminated areas. The volume of contaminated soil at all three areas appears to be limited. The contamination is near the surface and ranges from several inches to 5 feet in thickness. A volume of approximately 10 cubic yards of petroleum contaminated soil appears to be present at each of the three areas.

7.2 Recommendations

1. Exxon should determine if notification to the State of New Mexico is required for the type of petroleum contamination identified.

2. Exxon should review the necessity of implementing a response action at the facility.

ANALYTICAL RESULTS

PREPARED FOR:

CINDY OVERTON
OF
ENSR

PRESENTED BY:

ENVIRON EXPRESS LABORATORIES
401 N. 11th ST.
LA PORTE, TEXAS 77571-315

1-713-471-0951 1-800-880-0156 (FAX): 1-713-471-5821

1009-001-164
TR-1A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: TR-1A Attn: C. OVERTON

Client: BROWN MARONEY (EXXON) Proj. No: 1009001164

Proj. Location: HOBBS - MARLAND Environ ID: 09809

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 28 / 92

Received: 01/ 30 / 92 Reported: 02/ 05 / 92 Invoice No.: 2119

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractables	9,558	< 25	25

Analyst: J.M. Date Extracted: 02/02/92 Date Analyzed: 02/03/92 @ 19:15
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
SPT-1B

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: SPT-1B Attn: C. OVERTON

Client: BROWN MARONEY (EXXON) Proj. No: 1009001164

Proj. Location: HOBBS - MARLAND Environ ID: 09810

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 28 / 92

Received: 01/ 30 / 92 Reported: 02/ 05 / 92 Invoice No.: 2119

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractables	< 25	< 25	25

Analyst: J.M. Date Extracted: 02/02/92 Date Analyzed: 02/03/92 @ 03:50
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
SPT-2B

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: SPT-2B Attn: C. OVERTON

Client: BROWN MARONEY (EXXON) Proj. No: 1009001164

Proj. Location: HOBBS - MARLAND Environ ID: 09811

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 28 / 92

Received: 01/ 30 / 92 Reported: 02/ 05 / 92 Invoice No.: 2119

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractables	< 25	< 25	25

Analyst: J.M. Date Extracted: 02/02/92 Date Analyzed: 02/03/92 @ 04:15
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

ENVIRON QUALITY CONTROL REPORT

ANALYSIS: TPH (GC)	METHOD: 8015M	MATRIX: SOIL
ANALYST: J.K.	DETECTION LIMIT:<25	UNITS: PPM (mg/kg)
DATE: 02/02/92	SAMPLES IN SET: 18	FREQUENCY: 1/20

SAMPLES:	09802-09811, 09823-09830

MATRIX SPIKE [MS] ANALYSIS

SAMPLE ID	[A] SAMPLE ANALYSIS PPM mg/kg	[B] SPIKE ADDED PPM mg/kg	[C] MS TOTAL PPM mg/kg	[D] MS ANALYSIS PPM mg/kg	[E] RECOVERY %
MATRIX	< 25	100	100	75	75

MATRIX DUPLICATE [MD] ANALYSIS

SAMPLE ID	[F] ORIG. SAMPLE ANALYSIS PPM mg/kg	[G] MD ANALYSIS PPM mg/kg	[H] RELATIVE DIFFERENCE %
MATRIX	75	73	3

MS TOTAL [C] = [A] + [B]

SAMPLE ANALYSIS [A] = [F + G] / 2

% RECOVERY [E] = 100 * |[D - A]| / [B]

% RELATIVE DIFFERENCE [H] = 200 * |[F - G]| / [F + G]

ND = NONE DETECTED WHEN ANALYZED

John E. Keller

JOHN KELLER, Ph.D

Express Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

ENVIRON EXPRESS LABORATORIES

401 North 11th, La Porte, Texas 77571
(713) 471-0951 / (800) 880-0156
Fax No. (713) 471-5821

Project No.	Project Name	Project Location	Turn Around Time Changes
1009-001-164	Brown Maroney (Exxon)	Hobbs-Marland	

Sampler's Affiliation: CNSR C&E

Samper's Name (PRINT): J S KUYKENDALL

Sampler's: (Signature) [signature]

Results to: Cindy Aceton phone 520990 fax

Sampler Remarks:

Address: 7000 Richmond

City: Houston TX 77098

Lab Remarks:

Invoice to: Same No. ( )

LABORATORY ANALYSIS
Reference EPA Method #

Lab Number	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat.l)	Sample Type (Liquid, Sludge, Etc.)	Preser-vative	BTEX 8020	TPH ~~418.1~~ 8015	Total Lead	TCLP Lead 1311	EPTOX Lead 1310				
09809	TR-1A	1-28-92 0900	✓		4oz ssum	Soil	4°C		✓							
09810	SPT-1B	1-28-92 0930	✓		4oz ssum	Soil	4°C		✓							
09811	SPT-2B	1-28-92 1000	✓		4oz ssum	Soil	4°C		✓							
																Due: 2-5-92 INV. #2119

Relinquished by: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Intact
[signature]	Date: 1-28 Time: 1600	[signature]	Date: 1/30 Time: 1030	Intact
	Date: Time:		Date: Time:	Intact

ANALYTICAL RESULTS

PREPARED FOR:

[redacted]

ENSR

PRESENTED BY:

ENVIRON EXPRESS LABORATORIES
401 N. 11th ST.
LA PORTE, TEXAS 77571-315

1-713-471-0951 1-800-880-0156 (FAX): 1-713-471-5821

1009-001-164
YS-1A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-1A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09593

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 01:33
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-2A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-2A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09594

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/28/92 Date Analyzed: 01/28/92 @ 23:08
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-3A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-3A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09595

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 01:57
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-4A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-4A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09596

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	1,710	< 25	25

Analyst: J.M. Date Extracted: 01/28/92 Date Analyzed: 01/28/92 @ 23:32
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-5A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-5A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09597

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 01:08

Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-6A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-6A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09598

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 02:22
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-7A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-7A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09599

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/28/92 Date Analyzed: 01/28/92 @ 23:56
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-8A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-8A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09600

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 02:46
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-9A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-9A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09601

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 09:40
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
LA-1A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: LA-1A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09602

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 10:04
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
DT-2A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: DT-2A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09604

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	406	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 10:53
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
DT-2B

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: DT-2B Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09605

Sample Matrix: SOIL Sample Depth: _____ Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	100	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 11:41
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

1009-001-164
YS-10A

Express Laboratories

401 North 11th • La Porte, Texas 77571

(713) 471-0951 • 1 (800) 880-0156 • FAX (713) 471-5821

Customer: ENSR Sample ID: YS-10A Attn: C. OVERTON

Client: EXXON Proj. No: 1009001164

Proj. Location: HOBBS-MARLAND Environ ID: 09606

Sample Matrix: SOIL Sample Depth: Sampled: 01/ 21 / 92

Received: 01/ 24 / 92 Reported: 01/ 29 / 92 Invoice No.: 2098

Test Method 8015(M)	Result PPM (mg/kg)	Blank PPM (mg/kg)	Detection Limit PPM (mg/kg)
Petroleum Extractable	< 25	< 25	25

Analyst: J.M. Date Extracted: 01/29/92 Date Analyzed: 01/29/92 @ 10:28
Standard : DIESEL

John E. Keller

John E. Keller, Ph.D.

ENVIRON QUALITY CONTROL REPORT

ANALYSIS: TPH (GC)	METHOD: 8015M	MATRIX: SOIL
ANALYST: J.K.	DETECTION LIMIT:<25	UNITS: PPM (mg/kg)
DATE: 01/28/92	SAMPLES IN SET: 20	FREQUENCY: 1/20

SAMPLES:	09580-09591, 09593-09600

MATRIX SPIKE [MS] ANALYSIS

SAMPLE ID	[A] SAMPLE ANALYSIS PPM mg/kg	[B] SPIKE ADDED PPM mg/kg	[C] MS TOTAL PPM mg/kg	[D] MS ANALYSIS PPM mg/kg	[E] RECOVERY %
MATRIX	< 25	100	100	95	95

MATRIX DUPLICATE [MD] ANALYSIS

SAMPLE ID	[F] ORIG. SAMPLE ANALYSIS PPM mg/kg	[G] MD ANALYSIS PPM mg/kg	[H] RELATIVE DIFFERENCE %
MATRIX	95	94	1

MS TOTAL [C] = [A] + [B]
SAMPLE ANALYSIS [A] = [F + G] / 2
% RECOVERY [E] = 100 * |[D - A]| / [B]
% RELATIVE DIFFERENCE [H] = 200 * |[F - G]| / [F + G]
ND = NONE DETECTED WHEN ANALYZED

John E. Keller

JOHN KELLER, Ph.D

ENVIRON QUALITY CONTROL REPORT

ANALYSIS: TPH (GC)	METHOD: 8015M	MATRIX: SOIL
ANALYST: J.K.	DETECTION LIMIT:<25	UNITS: PPM (mg/kg)
DATE: 01/29/92	SAMPLES IN SET: 20	FREQUENCY: 1/20

SAMPLES:	09601-09606, 09665-09678

MATRIX SPIKE [MS] ANALYSIS

SAMPLE ID	[A] SAMPLE ANALYSIS PPM mg/kg	[B] SPIKE ADDED PPM mg/kg	[C] MS TOTAL PPM mg/kg	[D] MS ANALYSIS PPM mg/kg	[E] RECOVERY %
MATRIX	< 25	100	100	83	83

MATRIX DUPLICATE [MD] ANALYSIS

SAMPLE ID	[F] ORIG. SAMPLE ANALYSIS PPM mg/kg	[G] MD ANALYSIS PPM mg/kg	[H] RELATIVE DIFFERENCE %
MATRIX	83	80	4

MS TOTAL [C] = [A] + [B]
SAMPLE ANALYSIS [A] = [F + G] / 2
% RECOVERY [E] = 100 * |[D - A]| / [B]
% RELATIVE DIFFERENCE [H] = 200 * |[F - G]| / [F + G]
ND = NONE DETECTED WHEN ANALYZED

John E. Keller

JOHN KELLER, Ph.D

ENVIRON
Express Laboratories

CHAIN OF CUSTODY RECORD

ENVIRON EXPRESS LABORATORIES
401 North 11th, La Porte, Texas 77571
(713) 471-0951 / (800) 880-0156
Fax No. (713) 471-5821

Project No.	Project Name	Project Location	Turn Around Time: Check One
1009-001-164	Exxon	Hobbs - Marland	☐ 1 day ☐ 2 days ☒ ~~5~~ days

Sampler's Affiliation: ENSR
Samper's Name (PRINT): Scott Kuykendall
Sampler's: (Signature) [signature]

LABORATORY ANALYSIS
Reference EPA Method #

Results to: Cindy Overton phone 5209900 fax
Sampler Remarks:
Address: 3000 Richmond
City: Houston Tx 77459
Lab Remarks:
Invoice to: Same No. ( )

Lab Number	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat.)	Sample Type (Liquid, Sludge, Etc.)	Preservative	BTEX 8020	TPH-418.1 & 5	Total Lead	TCLP Lead 1311	EPTOX Lead 1310	
09593	45-1A	1-21-92 1000	✓		40z SSWM	SOIL	4°C		✓				
09594	45-2A	1-21-92 1030							✓				
09595	45-3A	1-21-92 1100							✓				
09596	45-4A	1-21-92 1115							✓				
09597	45-5A	1-21-92 1130							✓				
09598	45-6A	1-21-92 1315							✓				
09599	45-7A	1-21-92 1330							✓				
09600	45-8A	1-21-92 1345							✓				
09601	45-9A	1-21-92 1315							✓				DUE: 1-29-92 INV.# 2098
09602	LA-1A	1-21-92 1500							✓				

Relinquished by: (Signature) [signature]	Date: 1-22-92 Time: ~~1200~~	Received By: (Signature) [signature]	Date: 1/24 Time: 1030	Intact
Relinquished by: (Signature)	Date: 1530 Time:	Received By: (Signature)	Date: Time:	Intact

ENVIRON
Express Laboratories

CHAIN OF CUSTODY RECORD

ENVIRON EXPRESS LABORATORIES
401 North 11th, La Porte, Texas 77571
(713) 471-0951 / (800) 880-0156
Fax No. (713) 471-5821

Project No.	Project Name	Project Location	Turn Around Time Changes
1009-001-164	Exxon - Brown Maroney	Hobbs - Marland	

Sampler's Affiliation: ENSR C&E
Samper's Name (PRINT): SCOTT KUYKENDALL
Sampler's: (Signature)
LABORATORY ANALYSIS
Reference EPA Method #

Results to: CINDY OLIVER phone 520 9500 fax
Sampler Remarks:
Address: 3000 Richmond
City: Houston TX 77098
Lab Remarks:
Invoice to: SAME No. ( )

Lab Number	Field Sample No./ Identification	Date and Time	Grab	Comp.	Sample Container (Size/Mat.l)	Sample Type (Liquid, Sludge, Etc.)	Preservative	BTEX 8020	TPH 418.1 8015	Total Lead	TCLP Lead 1311	EPTOX Lead 1310
09603	DT-1A	1-22-92 0900	✓		402 SS wm	So, l	4°C		✓			
09604	DT-2A	1-22-92 1000	✓		402 SS wm	So, l	4°C		✓			
09605	DT-2B	1-22-92 1145	✓		402 SS wm	So, l	4°C		✓			
09606	YS-10A	1-22-92 1215	✓		402 SS wm	So, l	4°C		✓			

DUE: 1-29-92
INV. # 2098

Relinquished by: (Signature)	Date: 1-22-92 Time: 1530	Received By: (Signature)	Date: 1/24 Time: 1030	Intact
Relinquished by: (Signature)	Date: Time:	Received By: (Signature)	Date: Time:	Intact

AnalytiKEM *An American NuKEM Company*

AnalytiKEM Inc.
2925 Richmond Avenue
Houston, TX 77098
713/520-1495
713/520-9900
Fax: 713/523-7107

February 11, 1992

ENSR
3000 Richmond
Houston,, Tx 77098

Attention: Cindy Overton

Attached are reports of chemical analyses of samples received January 30, 1992. These analyses are:

Count	Test Code	Test Name	Test Method	Sampled	Matrix
3	Ag -S- -HOU	SILVER ON SOLID	EPA SW-846: 3050, 7760, AA	01/28/92	SOIL
3	As -S-GFA-HOU	ARSENIC ON SOLID	EPA SW-846: 7060, GRAPHITE FURNACE	01/28/92	SOIL
1	BNA -S- -HOU	SEMIVOLATILE ORGANICS/SOLID	EPA SW-846: 3550,8270, SON.,GC/MS	01/28/92	SOIL
3	Ba -S-ICP-HOU	BARIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/28/92	SOIL
3	Cd -S-ICP-HOU	CADMIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/28/92	SOIL
3	Cr -S-ICP-HOU	CHROMIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/28/92	SOIL
3	Hg -S- -HOU	MERCURY ON SOLID	EPA SW-846: 7471, COLD VAPOR	01/28/92	SOIL
3	Pb -S-ICP-HOU	LEAD ON SOLID	EPA SW-846: 3050,6010, ICP	01/28/92	SOIL
3	Se -S-GFA-HOU	SELENIUM ON SOLID	EPA SW-846: 7740, GRAPHITE FURNACE	01/28/92	SOIL
3	VOA -S- -HOU	VOLATILE ORGANICS ON SOLID	EPA SW-846: 8240, GC/MS	01/28/92	SOIL
3	pH -S- -HOU	pH ON SOLID	EPA SW-846: 9045	01/28/92	SOIL

Data contained in this report reflect a full quality control review and have met all applicable standards established by AnalytiKEM. AnalytiKEM quality assurance protocols are in accordance with EPA guidelines.

Should you have any questions, do not hesitate to contact me at (713) 520-1495.

Very Truly Yours,

AnalytiKEM

Bo Blankfield
Lab Director

BB/lis

Enclosures: Analytical Summary, Analytical Report, Chain of Custody, Sample Receipt Checklist, Quality Control Logs, ANALYTIKEM ID #A7861-1, ANALYTIKEM ID #A7861-2, ANALYTIKEM ID #A7861-3

LAB NO. A7861
PROJECT 1009-001-164 Brown Maroney Hobbs-Marland

AnalytiKEM *An American NuKEM Company*

SAMPLE DISPOSAL LETTER

AnalytiKEM Inc.
2925 Richmond Avenue
Houston, TX 77098
713/520-1495
713/520-9900
Fax: 713/523-7107

DATE: 02/11/92

TO: Cindy Overton

FROM: Bo Blankfield, Lab Director

PROJ. NO.: 1009-001-164 LAB NO.: A7861 RECEIVED:01/30/92
Brown Maroney Hobbs-Marland

It is the policy of AnalytiKEM Laboratories to dispose of unanalyzed portions of samples thirty days following submittal of the hard copy data package. Samples from lab number A7861 are due for disposal on March 17, 1992.

Please indicate your preference for disposal below and return this form to Lab Receiving personnel by March 3, 1992. **No response will be interpreted as permission to dispose of the samples on March 17, 1992 and charge your project accordingly.**

( )A. AnalytiKEM's preferred policy for disposal is to dispose of unused samples, including samples not analyzed, by drumming and transporting by a federally licensed hazardous waste transportation firm at a cost of $6.50/Field ID. **In an effort to present all relative charges in a timely manner, disposal charges will appear upon this project's billing summary unless this letter is returned with instructions indicating otherwise.**

( )B. AnalytiKEM will return remaining samples, including samples not authorized for analysis to the originating site at our expense.
ADDRESS OF THE
ORIGINATING SITE: _____

_____

( )C. AnalytiKEM will hold your sample at a cost of $20.00/Field ID per quarter for refrigerated storage or $6.50/Field ID per quarter for ambient storage. The project will be billed in advance each quarter based upon the number of samples in storage at the beginning of the quarter. The minimum storage fee per project will be $50.00 to cover administrative costs.

( ) Refrigerated ( ) Ambient ____ Number of Samples or ALL

Should you have any questions, do not hesitate to contact me at (713) 520-1495.
SIGNATURE: _____
BB/lis

LAB NO. A7861
PROJECT 1009-001-164 Brown Maroney Hobbs-Marland

AnalytiKEM
An American NuKEM Company
2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.	Client/Project Name	Project Location
1009-001-164	Brown Maroney (Exxon)	Hobbs-Marland

Lab ID No	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
1	TR-1A	1-28-92 0900	✓		16oz SSWM	Soil	4°C	pH / RCRA METALS	2-4-92 TP All BNA + VOA's were supposed to be on hold. Scott [illegible] take only TR-1A off. Cancel the other 2.
	TR-1A	1-28-92 0900	✓		4oz TALL	Soil	4°C	TOTAL Volatiles	
↓	TR-1A	1-28-92 0900	✓		16oz amb WM	Soil	4°C	TOTAL Semi Volatiles	
2	SPT-1B	1-28-92 0930	✓		16oz SSWM	Soil	4°C	pH / RCRA METALS	
	SPT-1B	1-28-92 0930	✓		4oz TALL	Soil	4°C	TOTAL Volatiles	
↓	SPT-1B	1-28-92 0930	✓		16oz amb WM	Soil	4°C	TOTAL Semi-Volatiles	
3	SPT-2B	1-28-92 1000	✓		16oz SSWM	Soil	4°C	pH / RCRA METALS	
	SPT-2B	1-28-92 1000	✓		4oz TALL	Soil	4°C	TOTAL Volatiles	
↓	SPT-2B	1-28-92 1000	✓		16oz amb WM	Soil	4°C	TOTAL Semi-Volatiles	

Samplers: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	COC Seal No.
J S Kyhler	J S Kyhler	Date: 1-28-92 Time: 1600		Date: Time:	
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	
ENSR C&E	Relinquished by: (Signature)	Date: Time:	Received by Laboratory: (Signature) Sonia West	Date: 1-30-92 Time: 0855	Contact:

REMARKS: (1-30-92 SW) All pH samples holding time expired upon receipt. Samples SPT-1B + SPT-2B, semi Vol. times were transposed either on COC or on labels. S. Kuykendall out til 1-31-92 per TAP use times on COC.

Data Results To:
1. Cindy Overton
2.

Laboratory No. A7861

ANALYTIKEM LABORATORIES
SAMPLE RECEIPT CHECKLIST

Client Brown Maroney Project Number 1009-001-164 Laboratory Number A7861

1. ✓	Shipped	Notes: Fed Ex# 1470288083
	Hand Delivered	
2. ✓	COC Present on Receipt	Notes:
	No COC	
3. ✓	COC Tape on Shipping Container	Notes: # 42329
	No COC Tape on Shipping Container	Notes:
4.	Samples Broken/Leaking	Notes:
✓	Sample Intact on Receipt	
	Other (See Notes)	
5.	Ambient on Receipt	Notes:
✓	Chilled on Receipt	10°C
6. ✓	Samples Preserved Correctly	Notes:
	Improper Preservatives	
✓	N/A (None Recommended)	
	Other (See Notes)	
7.	Received Within Holding Time	Notes:
✓	Not Received Within Holding Time	See below
	N/A (None Recommended)	
	Other (See Notes)	
8.	COC Tapes on Samples	Notes:
✓	No COC Tapes on Samples	
9.	Discrepancies Between COC and Sample Labels	Notes:
	No Discrepancies Noted	
	N/A (No COC Received)	

Additional Comments: All pH samples holding time expired upon receipt. SW 1-30-92
Samples SPT-1B + SPT-2B, Semi Vol. - times were transposed on either COC or on labels. S. Kuykendall is out until 1-31-92. Per TAP go by COC

Inspected and Logged in by: Sonia West Date/Time 1-30-92 1855

AnalytiKEM—Houston

Analytical Summary
02/11/92 12:44

Lab Number: A7861
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*		1 TR-1A SOIL	2 SPT-1B SOIL	3 SPT-2B SOIL
Ag	-S- -HOU	<1.1 MG/KG	<1.2 MG/KG	<1.2 MG/KG
	(MDL)	*(1.1)*	*(1.2)*	*(1.2)*
As	-S-GFA-HOU	3.1 MG/KG	1.5 MG/KG	1.6 MG/KG
	(MDL)	*(0.3)*	*(0.3)*	*(0.3)*
BNA	-S- -HOU	ATTACHED UG/KG	--	--
	(MDL)	*()**		
Ba	-S-ICP-HOU	210 MG/KG	100 MG/KG	140 MG/KG
	(MDL)	*(2.2)*	*(2.4)*	*(2.4)*
Cd	-S-ICP-HOU	<2.2 MG/KG	3.2 MG/KG	<2.4 MG/KG
	(MDL)	*(2.2)*	*(2.4)*	*(2.4)*
Cr	-S-ICP-HOU	4.8 MG/KG	6.2 MG/KG	11 MG/KG
	(MDL)	*(2.2)*	*(2.4)*	*(2.4)*
Hg	-S- -HOU	<0.05 MG/KG	0.3 MG/KG	0.1 MG/KG
	(MDL)	*(0.05)*	*(0.06)*	*(0.06)*
Pb	-S-ICP-HOU	70 MG/KG	40 MG/KG	14 MG/KG
	(MDL)	*(5.4)*	*(6.0)*	*(6.0)*
Se	-S-GFA-HOU	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG
	(MDL)	*(0.3)*	*(0.3)*	*(0.3)*

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: _____ Date: 2/11/92 _____ Date: 2/12/92

***** CONTINUED *****

...alytiKEM-Houston

Analytical Summary
02/11/92 12:44

Lab Number: A7861
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*	1 TR-1A SOIL	2 SPT-1B SOIL	3 SPT-2B SOIL
VOA -S- -HOU *(MDL)*	ATTACHED UG/KG *()**	ATTACHED UG/KG *()**	ATTACHED UG/KG *()**
pH -S- -HOU *(MDL)*	7.49 UNITS *(0.01)*	7.35 UNITS *(0.01)*	7.37 UNITS *(0.01)*

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytica results, billing and enclosed documentation.

Approvals: [signature] Date: 2/11/92 [signature] Date: 2/12/92

AnalytiKEM—Houston

Analytical Report
02/13/92 09:12

Brown Maroney Hobbs-Marland	Field ID: TR-1A	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 1	Time Sampled: 900
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	02/05/92 915
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.1	MG/KG	0.3	02/05/92 645
BNA -S- -HOU SEMIVOLATILE ORGANICS/SOLID EPA SW-846: 3550,8270, SON.,GC/MS	ATTACHED *1	UG/KG		Ext.: 02/02/92 Anal.: 02/11/92
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	210	MG/KG	2.2	02/03/92 858
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	02/03/92 858
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	4.8	MG/KG	2.2	02/03/92 858
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.05	MG/KG	0.05	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	70	MG/KG	5.4	02/03/92 858
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	02/04/92 650

*1 SEE ANALYTIKEM ID #A7861-1

***** CONTINUED *****

AnalytiKEM—Houston

Analytical Report
02/13/92 09:13

Brown Maroney Hobbs-Marland	Field ID: TR-1A	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 1	Time Sampled: 900
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
VOA -S- -HOU VOLATILE ORGANICS ON SOLID EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/KG		01/30/92
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.49	UNITS	0.01	01/30/92 1345

*1 SEE ANALYTIKEM ID #A7861-1

AnalytiKEM—Houston

Analytical Report
02/13/92 09:13

Brown Maroney Hobbs-Marland	Field ID: SPT-1B	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 2	Time Sampled: 930
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	02/05/92 915
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	1.5	MG/KG	0.3	02/05/92 645
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	100	MG/KG	2.4	02/03/92 858
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	3.2	MG/KG	2.4	02/03/92 858
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	6.2	MG/KG	2.4	02/03/92 858
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.3	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	40	MG/KG	6.0	02/03/92 858
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	02/04/92 650
VOA -S- -HOU VOLATILE ORGANICS ON SOLID EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/KG		01/30/92

*1 SEE ANALYTIKEM ID #A7861-2

***** CONTINUED *****

AnalytiKEM-Houston

Analytical Report
02/13/92 09:13

Brown Maroney Hobbs-Marland	Field ID: SPT-1B	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 2	Time Sampled: 930
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.35	UNITS	0.01	01/30/92 1345

AnalytiKEM—Houston

Analytical Report
02/13/92 09:13

Brown Maroney Hobbs-Marland	Field ID: SPT-2B	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 3	Time Sampled: 1000
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	02/05/92 915
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	1.6	MG/KG	0.3	02/05/92 645
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	140	MG/KG	2.4	02/03/92 858
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.4	MG/KG	2.4	02/03/92 858
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	11	MG/KG	2.4	02/03/92 858
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.1	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	14	MG/KG	6.0	02/03/92 858
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	02/04/92 650
VOA -S- -HOU VOLATILE ORGANICS ON SOLID EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/KG		01/30/92

*1 SEE ANALYTIKEM ID #A7861 3

***** CONTINUED *****

AnalytiKEM—Houston

Analytical Report
02/13/92 09:13

Brown Maroney Hobbs-Marland	Field ID: SPT-2B	Date Sampled: 01/28/92
Proj. No.: 1009-001-164	Lab ID: 3	Time Sampled: 1000
Lab No.: A7861	Matrix: SOIL (GRAB)	Date Received: 01/30/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.37	UNITS	0.01	01/30/92 1345

ANALYTIKEM – HOUSTON

SILVER QUALITY CONTROL LOG

EPA SW-846:7760, AA

DATE/TIME OF ANALYSIS: 5 Feb 92/0915 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7877 - 1→2 (L)			SAMPLE BLANK	-0.003 / 0.000
A7864 - 37 (L)			METHOD BLANK (L)	0.000 / 0.000
A7864-(S) 1→29, 31→36			P.E. STD. ERA-2	0.994 / 1.000
A7861 - 1→8 (S)			INTERNAL STD.	0.756 / 0.750
			METHOD BLANK (S)	-0.003 / 0.000

MATRIX SPIKE / PRECISION / MS DUPLICATE				ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A7877→MB (L) (A7864)	97			0.100	0.097	97		
A7877-2 (L)	92	97	5.3		0.092	92	0.097	97
A7864-37 (L)	95	97	2.1		0.095	95	0.097	97
A7861-MB (S)	102				0.102	102		
A7861-3 (S)	96	95	1.0		0.096	96	0.095	95
A7864-MB (S)	102				0.102	102		
A7864-5	94	96	2.1		0.094	94	0.096	96
A7864-20	94	98	4.2		0.094	94	0.098	98
A7864-MB (S)	98				0.098	98		
A7864-27	99	101	1.0		0.099	99	0.101	101
A7864-32	97	95	2.1		0.097	97	6.095	95

CONTROL LIMITS: AQUEOUS, ~~70-130~~ (7-131) 9–12 %RPD, 78–116 %REC. (80-115)

SOLIDS, SAME (14-18) %RPD, SAME %REC. (62-120)

0 OUT OF 7 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 18 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: Jane Mathis QA/QC: DeAnna M. Senegal

ANALYSIS: 5 Feb 92/0645

EPA SW-846:7060, AA

PAGE

LAB NUMBER-SAMPLE	MATRIX SPIKE PRECISION MS % REC.	MS DUPLICATE MSD % REC.	% RPD	SPIKE AMOUNT	ACCURACY MS RESULT	% REC.	M RES
A7861-MB (5)	88	—	—	0.04	0.0353	88	—
A7861-1 (3)	*	*	*		*		
A7877-MB (2)	86	—	—		0.0343	86	—
A7877-1 (2)	87	86	1.16		0.0348	87	0.0343
A7864-37 (2)	84	90	2.00		0.0336	84	0.0359
A7864-MB (5)	88	—	—		0.0350	88	—
A7864-1 (5)	*	*	*		*		*
A7864-12 (5)	*	*	*		*		*
A7864-MB (5)	73	—	—		0.0293	73	—
A7864-27 (5)	74	80	7.79		0.0298	74	—
A7864-32 (5)	78	87	10.9		0.0314	78	0.0318
							0.0347

COMMENTS

matrix interference resulted in the MS + MSD being out of control for samples A7861-1, A7864-1, & A7864-12, therefore an MDA was run on each

CHECK STANDA
SAMPLE B
METHOD B
EPA 378 -
P.E. STD.
INTERNAL ST
M D L

CONTROL LIMITS: AQUEOUS, 21-28 %RPD, 76-116 %REC
SOLIDS, SAME %RPD, SAME %REC

* out of control

3 OUT OF 7 DUPLICATES WERE OUTSIDE OF QC LIMITS

6 OUT OF 18 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST:

QA/QC:

ANALYTIKEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 3 Feb 92/0858 | EPA SW-846:6010 | PAGE 1 OF 2

LAB ID	A7867-1	A7844-1T	A7854-1T	A7861-1→3			
NOs							

PARAMETER		As	Se	Pb	Cd	Cr	Ba					
PE	ERA-3	1.06/1.00	9.55/10.0	1.00/1.00	0.999/1.00	0.978/1.00	0.984/1.00					
STDS												

A7867-MB(L) S/MSD %REC			95								
%RPD											
SPIKE AMT.			1.0								
A7844>854 MB(L) S/MSD %REC	90	80	97	100	97	96					
%RPD											
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2	2.0					
A7844-EXTBLK(L) S/MSD %REC	98	87	84	89	82	74*					
%RPD											
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2	2.0					
7844-1T (L) S/MSD %REC	92	96	76	80	74	67*					
%RPD											
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2	2.0					

CONTROL LIMITS:

AQUEOUS	%RPD.			16	15	16	13					
	%REC.			111→75	109→78	111→77	115→75					
SOLIDS	%RPD.											
	%REC.											

0/1* OUT OF 0/19 DUPLICATES WERE OUTSIDE OF QC LIMITS
OUT OF SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: A7867-1 MOA Performed/confirms initial result (insufficient Sx for QC
*out of extend control

ANALYST: James Mathis FEB 11 '92 QA/QC: DeAnna M. Senegal

ANALYTIKEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 3 Feb 92 / 0858 EPA SW-846:6010

	As	Se	Pb	Cd	Cr	Ba						
A7854-Ext Blk .S/MSD %REC(L)	83	88	80	85	79	64*						
%RPD												
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2	2.0						
17854-1T (L) .S/MSD %REC	91	78	88	86	82	63*						
%RPD												
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2	2.0						
17861-MB(S) .S/MSD %REC	~~104~~ Jm	~~115~~ Jm	104	115	88	82						
%RPD												
SPIKE AMT.			1.0	0.1	0.2	2.0						
17861-3 (S) .S/MSD %REC	~~74~~ / Jm	/	71/71	103/99	80/77	77/74						
%RPD			0	4.0	3.8	4.0						
SPIKE AMT.			1.0	0.1	0.2	2.0						
MS/MSD %REC												
%RPD												
SPIKE AMT.												
MS/MSD %REC												
%RPD												
SPIKE AMT.												

NTROL LIMITS:

QUEOUS	%RPD			16	15	16	13						
	%REC.			111→75	109→78	111→77	115→75						
SOLIDS	%RPD			17	16	17	14						
	%REC.			117→71	115→74	117→73	121→71						

0 OUT OF 4 DUPLICATES WERE OUTSIDE OF QC LIMITS
1* OUT OF 24 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: * out of internal control

ALYST: James Mathis FEB 0[illegible] QA/QC: DeAnna M. Senegal

ANALYTIKEM - HOUSTON

MERCURY QUALITY CONTROL LOG

EPA SW-846:7470, 7471 AA

DATE/TIME OF ANALYSIS: 3 Feb 92 / 0825 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7844-1T		A7861-2 MS + MSD were out of control, therefore another MoA was Run.	SAMPLE BLANK	
A7854-1T			METHOD BLANK	
A7846-16			EPA 1085-1 P.E. STD.	0.0104 / 0.0100
A7861-1-3			INTERNAL STD.	0.0073 / 0.0075
A7846-1-14			MDL	0.0010 / 0.0010

MATRIX SPIKE		PRECISION	MS DUPLICATE		ACCURACY				
LAB NUMBER-SAMPLE		MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
Blank		110	—	—	0.0050	0.0055	110	—	—
A7854-1T Ex Blk	(3)	102	—	—		0.0051	102	—	—
A7846-16	(4)	112	114	1.77		0.0056	112	0.0057	114
A7846-3	(c)	98	100	2.02		0.0049	98	0.0050	100
A7846-14	(5)	118	120	1.68		0.0059	118	0.0060	120
A7861-2	(5)	*		*		*		*	

CONTROL LIMITS: AQUEOUS, 11-15 %RPD, 81-123 %REC * out of control

SOLIDS, SAME %RPD, SAME %REC

1 OUT OF 4 DUPLICATES WERE OUTSIDE OF QC LIMITS

2 OUT OF 10 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: [signature] QA/QC: [signature]

ANALYTIKEM – HOUSTON

SELENIUM QUALITY CONTROL LOG

EPA SW-846:7741, AA

PE 5100

DATE/TIME OF ANALYSIS: 4 Feb 92 / 0650 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7861-1→3		Sample A7861-1 MS + MSD were out of control due to matrix interference therefore an MDA was run.	SAMPLE BLANK	
			METHOD BLANK	
			EPA 378-6 P.E. STD.	0.0050 / 0.0050
			INTERNAL STD.	0.0248 / 0.0250
			MDL	0.0054 / 0.0050

MATRIX SPIKE	PRECISION		MS DUPLICATE	ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A7861-M (S)	87	—	—	0.02	0.0174	87	—	—
A7861-1 (S)	51 *	54 *	5.71	↓	0.0102 *	51	0.0109 *	54

CONTROL LIMITS: AQUEOUS, 13-17 %RPD, 76-122 %REC. * out of control

SOLIDS, SAME %RPD, SAME %REC.

0 OUT OF 1 DUPLICATES WERE OUTSIDE OF QC LIMITS

2 OUT OF 3 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: George A. Stein QA/QC: DeAnna M. Senegal

QUALITY CONTROL LOG

Parameter: pH on Solid

Method of Analysis: EPA SW-846: 9045

Page: 1 of 1

Matrix: Soil

Date/Time: 1-30-92/1345

Lab Numbers	Detection Limits
A7861-(1→3)	0.01 unit

Calibration Stds./Blk	Absorbance/Conc.
Buffer 10.0 } 4.0 }	Cal.

Correlation Coefficient:

Comments:

Check Standards	Concentration Found/True
Sample Blank	
Method Blank	
P.E. Std.	
Internal Std. Buffer 7.0	7.01 units
Buffer 7.0 cars	7.04 ↓

Internal Quality Control Duplicates and Spikes

* Below MDL

Lab No. - Sample ID	Sample Conc.	Duplicate Conc.	Range	Percent RPD	Spiked Result	Sample Result	Spike Added	Percent Recovery
A7861-1	7.49	7.51	0.02	0.3				

Analyst: Leen Nguyen

QA/QC Approval:

VOLATILE ORGANICS ANALYSIS DATA SHEET

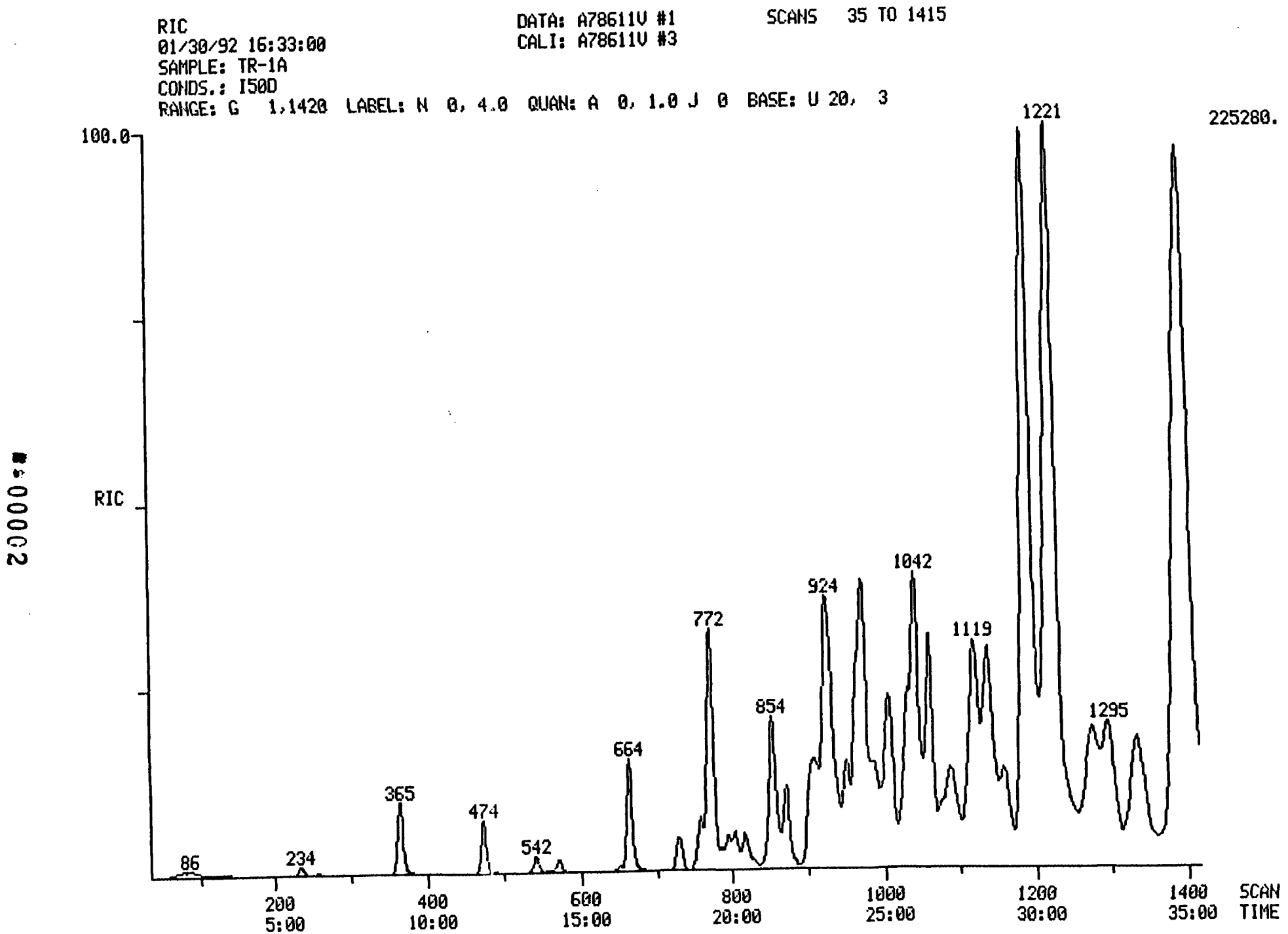
Laboratory Name:	AnalytiKEM-Hou	Concentration:	MED	Date Extracted:	01/30/92
Lab Sample ID:	A7861-1	Sample Matrix:	SOIL	Date Analyzed:	01/30/92
Client Sample ID:	TR-1A	Percent Moisture:	10.4	Dilution Factor:	4.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	5600	<	78-87-5	1,2-Dichloropropane	2800	<
74-83-9	Bromomethane	5600	<	10061-01-5	cis-1,3-Dichloropropene	2800	<
75-01-4	Vinyl Chloride	5600	<	79-01-6	Trichloroethene	2800	<
75-00-3	Chloroethane	5600	<	124-48-1	Dibromochloromethane	2800	<
75-09-2	Methylene Chloride	2800	<	79-00-5	1,1,2-Trichloroethane	2800	<
67-64-1	Acetone	5600	<	71-43-2	Benzene	2800	<
75-15-0	Carbon Disulfide	2800	<	10061-02-6	Trans-1,3-Dichloropropene	2800	<
75-35-4	1,1-Dichloroethene	2800	<	110-75-8	2-Chloroethylvinyl ether	5600	<
75-34-3	1,1-Dichloroethane	2800	<	75-25-2	Bromoform	2800	<
156-60-5	trans-1,2-Dichloroethene	2800	<	108-10-1	4-Methyl-2-Pentanone	7900	
67-66-3	Chloroform	2800	<	591-78-6	2-Hexanone	33000	
107-06-2	1,2-Dichloroethane	2800	<	127-18-4	Tetrachloroethene	2800	<
78-93-3	2-Butanone	5600	<	79-34-5	1,1,2,2-Tetrachloroethane	2800	<
71-55-6	1,1,1-Trichloroethane	2800	<	108-88-3	Toluene	13000	
56-23-5	Carbon Tetrachloride	2800	<	108-90-7	Chlorobenzene	2800	<
108-05-4	Vinyl Acetate	5600	<	100-41-4	Ethylbenzene	11000	
75-27-4	Bromodichloromethane	2800	<	100-42-5	Styrene	2800	<
				1330-20-7	Xylene (total)	370000	

The Lab ID for data on this page is A78611V.

< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/30/92 16:33:00
SAMPLE: TR-1A
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: A78611V #1
CALI: A78611V #3
SCANS 35 TO 1415
225280.
100.0
RIC
20000
86
234
365
474
542
664
772
854
924
1042
1119
1221
1295
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: A7861-2
Client Sample ID: SPT-1B

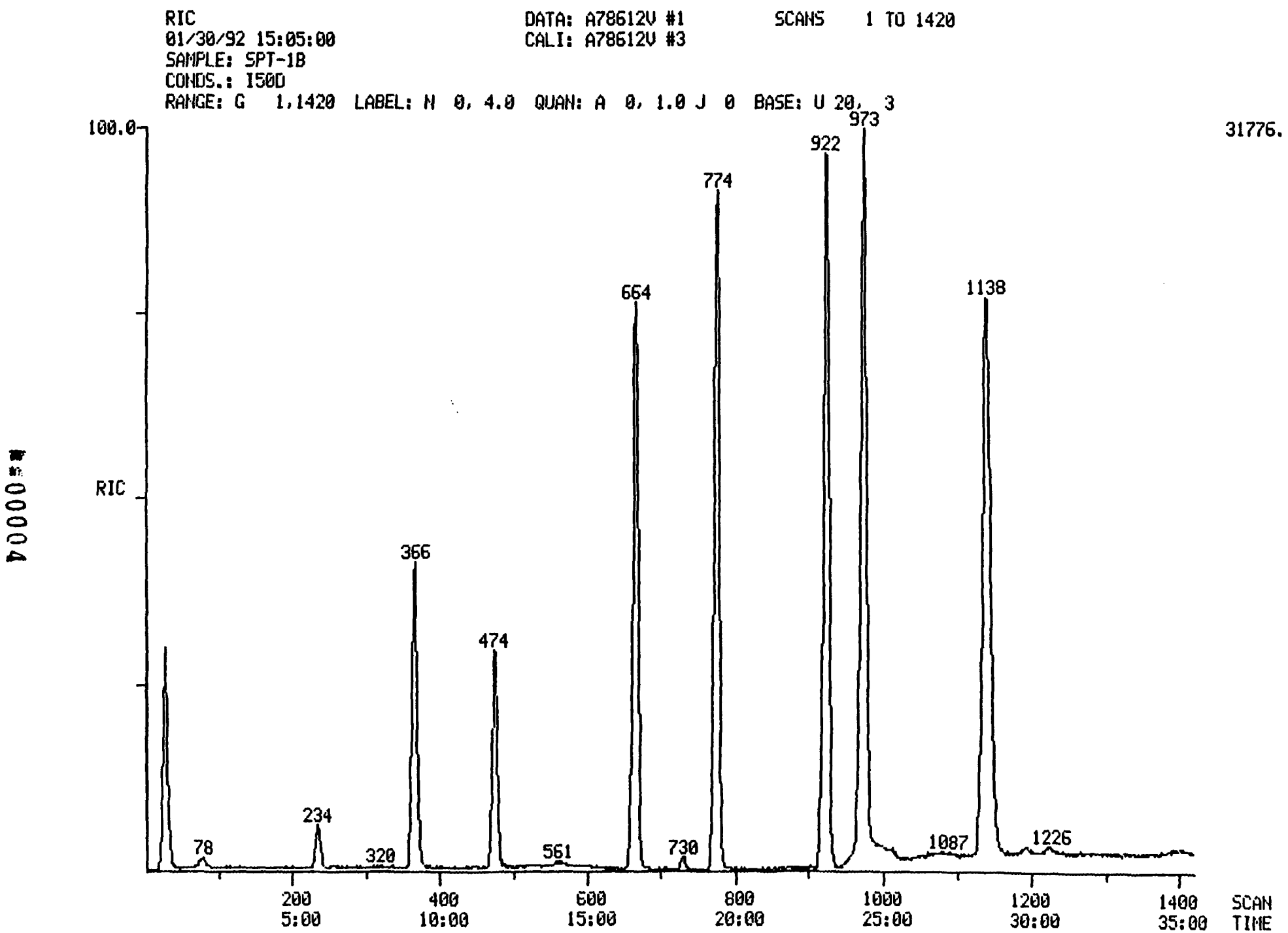
Concentration: LOW
Sample Matrix: SOIL
Percent Moisture: 14.9

Date Extracted: 01/30/92
Date Analyzed: 01/30/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	12	<	78-87-5	1,2-Dichloropropane	6	<
74-83-9	Bromomethane	12	<	10061-01-5	cis-1,3-Dichloropropene	6	<
75-01-4	Vinyl Chloride	12	<	79-01-6	Trichloroethene	6	<
75-00-3	Chloroethane	12	<	124-48-1	Dibromochloromethane	6	<
75-09-2	Methylene Chloride	7		79-00-5	1,1,2-Trichloroethane	6	<
67-64-1	Acetone	12	<	71-43-2	Benzene	6	<
75-15-0	Carbon Disulfide	6	<	10061-02-6	Trans-1,3-Dichloropropene	6	<
75-35-4	1,1-Dichloroethene	6	<	110-75-8	2-Chloroethylvinyl ether	12	<
75-34-3	1,1-Dichloroethane	6	<	75-25-2	Bromoform	6	<
156-60-5	trans-1,2-Dichloroethene	6	<	108-10-1	4-Methyl-2-Pentanone	12	<
67-66-3	Chloroform	6	<	591-78-6	2-Hexanone	12	<
107-06-2	1,2-Dichloroethane	6	<	127-18-4	Tetrachloroethene	6	<
78-93-3	2-Butanone	12	<	79-34-5	1,1,2,2-Tetrachloroethane	6	<
71-55-6	1,1,1-Trichloroethane	6	<	108-88-3	Toluene	6	<
56-23-5	Carbon Tetrachloride	6	<	108-90-7	Chlorobenzene	6	<
108-05-4	Vinyl Acetate	12	<	100-41-4	Ethylbenzene	6	<
75-27-4	Bromodichloromethane	6	<	100-42-5	Styrene	6	<
				1330-20-7	Xylene (total)	6	<

The Lab ID for data on this page is A78612V.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/30/92 15:05:00
SAMPLE: SPT-1B
CONDS.: I50D
DATA: A78612V #1
CALI: A78612V #3
SCANS 1 TO 1420
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
31776.
RIC
78
234
320
366
474
561
664
730
774
922
973
1087
1138
1226
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

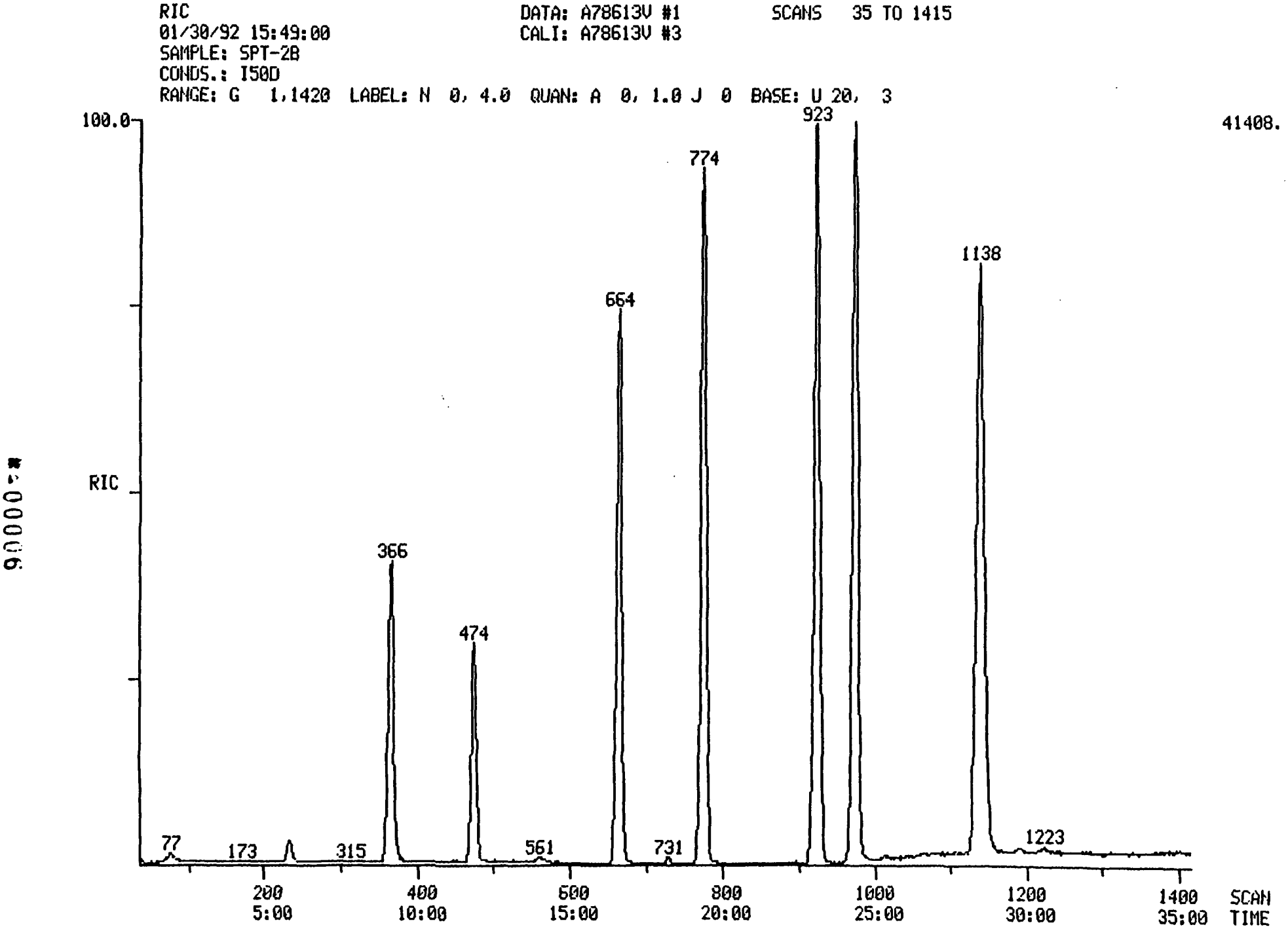
VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	01/30/92
Lab Sample ID:	A7861-3	Sample Matrix:	SOIL	Date Analyzed:	01/30/92
Client Sample ID:	SPT-2B	Percent Moisture:	16.0	Dilution Factor:	1.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	12	<	78-87-5	1,2-Dichloropropane	6	<
74-83-9	Bromomethane	12	<	10061-01-5	cis-1,3-Dichloropropene	6	<
75-01-4	Vinyl Chloride	12	<	79-01-6	Trichloroethene	6	<
75-00-3	Chloroethane	12	<	124-48-1	Dibromochloromethane	6	<
75-09-2	Methylene Chloride	6	<	79-00-5	1,1,2-Trichloroethane	6	<
67-64-1	Acetone	12	<	71-43-2	Benzene	6	<
75-15-0	Carbon Disulfide	6	<	10061-02-6	Trans-1,3-Dichloropropene	6	<
75-35-4	1,1-Dichloroethene	6	<	110-75-8	2-Chloroethylvinyl ether	12	<
75-34-3	1,1-Dichloroethane	6	<	75-25-2	Bromoform	6	<
156-60-5	trans-1,2-Dichloroethene	6	<	108-10-1	4-Methyl-2-Pentanone	12	<
67-66-3	Chloroform	6	<	591-78-6	2-Hexanone	12	<
107-06-2	1,2-Dichloroethane	6	<	127-18-4	Tetrachloroethene	6	<
78-93-3	2-Butanone	12	<	79-34-5	1,1,2,2-Tetrachloroethane	6	<
71-55-6	1,1,1-Trichloroethane	6	<	108-88-3	Toluene	6	<
56-23-5	Carbon Tetrachloride	6	<	108-90-7	Chlorobenzene	6	<
108-05-4	Vinyl Acetate	12	<	100-41-4	Ethylbenzene	6	<
75-27-4	Bromodichloromethane	6	<	100-42-5	Styrene	6	<
				1330-20-7	Xylene (total)	6	<

The Lab ID for data on this page is A78613V.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/30/92 15:49:00
SAMPLE: SPT-2B
CONDS.: I50D
DATA: A78613V #1
CALI: A78613V #3
SCANS 35 TO 1415
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
41408.
RIC
923
774
1138
664
366
474
77
173
315
561
731
1223
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

BROMOFLUOROBENZENE

Tuning Report
01/30/92 10:03:00 + 6:49
Instrument: I50D
#268 to #279 summed - #301 to #305 - #250 to #251
Case Number:

Data: BF013092D1 # 273
Cali: BF013092D1 # 3
Analyst: RMS
Laboratory:

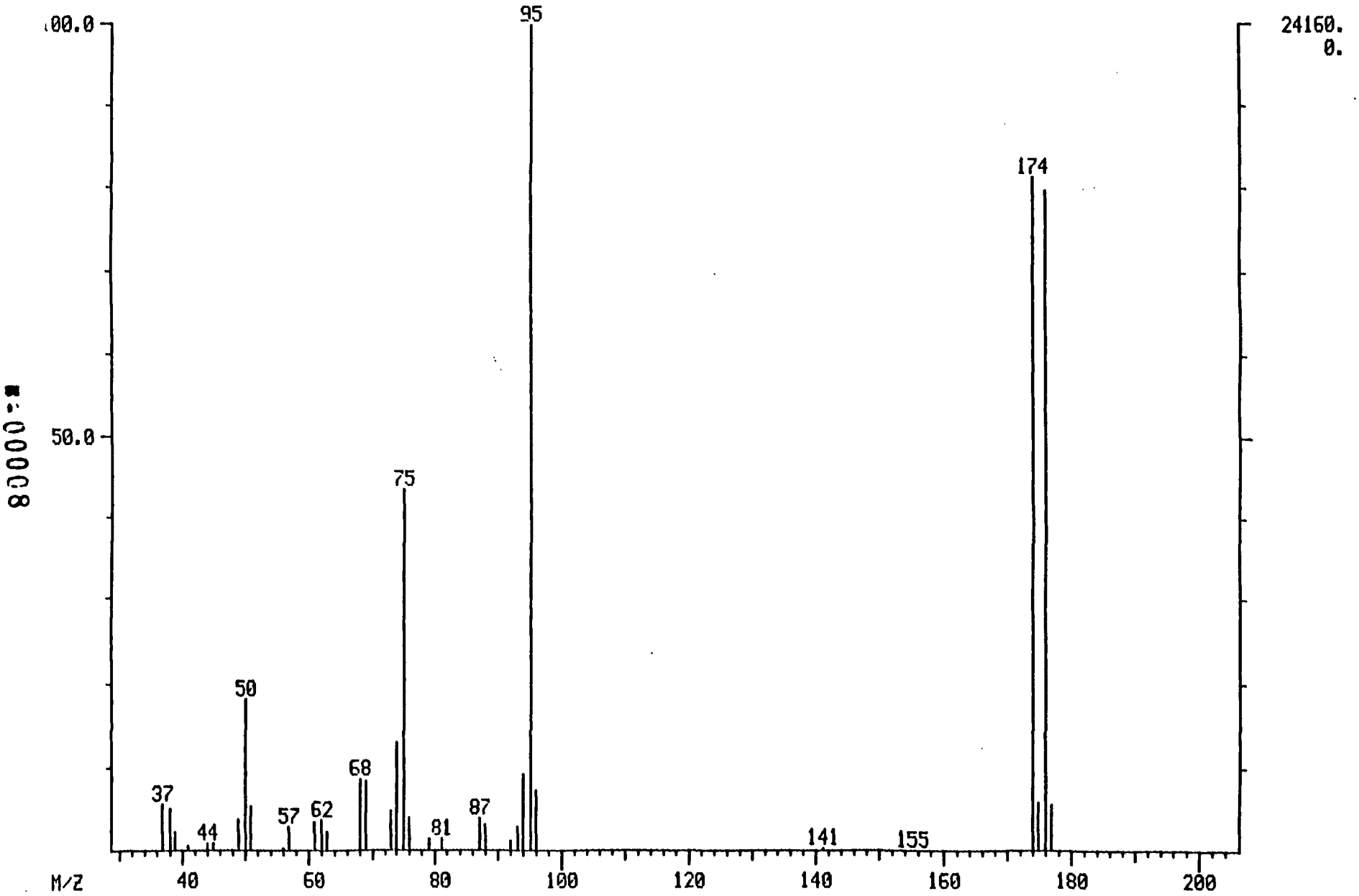
Base m/z: 95
RIC: 106112.
Acct. No.: 8506-091
Contract:

			Ion Abundance Criteria				
m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
50	4320.	17.9	15.0	40.0	95	17.9	PASS
75	10544.	43.6	30.0	60.0	95	43.6	PASS
95	24160.	100.0	100.0	---	---	100.0	PASS
96	1718.	7.1	5.0	9.0	95	7.1	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	19680.	81.5	50.0	---	95	81.5	PASS
175	1398.	5.8	5.0	9.0	174	7.1	PASS
176	19296.	79.9	95.0	101.0	174	98.0	PASS
177	1336.	5.5	5.0	9.0	176	6.9	PASS

MASS SPECTRUM
01/30/92 10:03:00 + 6:49
SAMPLE: BFB CALIBRATION
CONDS.: I50D
TEMP: 225 DEG. C
#268 TO #279 SUMMED - #301 TO #305 - #250 TO #251

DATA: BF013092D1 #273
CALI: BF013092D1 #3

BASE M/Z: 95
RIC: 106112.



Mass List
01/30/92 10:03:00 + 6:49
Sample: BFB CALIBRATION
Conds.: I50D
#268 to #279 summed - #301 to #305 - #250 to #251

Data: BF013092D1 # 273
Cali: BF013092D1 # 3

Base m/z: 95
RIC: 106112.

37 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

Mass		% RA	Inten.
37?		5.55	1340.
38?		4.90	1184.
39?		2.28	551.
41?		0.45	109.
44?	S	0.90	218.
45?	S	0.79	192.
49?		3.59	867.
50?		17.88	4320.
51?		5.38	1300.
56?		0.22	54.
57?	S	2.86	690.
61?		3.43	828.
62?		3.57	863.
63?		2.33	564.
68?		8.58	2072.
69		8.36	2020.
73	S	4.60	1112.
74		12.95	3128.
75		43.64	10544.
76		3.94	953.
79		1.41	341.
81		1.47	354.
87		3.81	921.
88	S	3.01	727.
92		0.97	234.
93		2.83	684.
94		9.17	2216.
95		100.00	24160.
96		7.11	1718.
141		0.17	42.
155		0.07	17.
174		81.46	19680.
175		5.79	1398.
176		79.87	19296.
177		5.53	1336.

CONTINUING CALIBRATION CHECK
VOLATILE HSL COMPOUNDS

Case No: STAND Region: _____ Calibration Date: 01/30/92
Contractor: AnalytiKEM-Hou Time: 10:19
Contract No: _____ Laboratory ID: CC013092D1
Instrument ID: I50D Initial Cali. Date: 12/26/91

Minimum RF for SPCC is 0.300 (1) Maximum %D for CCC is 25%

Compound	AVE RF	RF(50)	% D	CCC	SPCC
Chloromethane	1.488	1.270	14.7		* *
Bromomethane	1.222	1.202	1.6		
Vinyl Chloride	1.353	1.210	10.6	*	
Chloroethane	0.871	0.803	7.8		
Methylene Chloride	1.966	1.389	29.3		
Acetone	0.623	0.524	15.9		
Carbon Disulfide	2.998	2.623	12.5		
1,1-Dichloroethene	1.122	1.080	3.7	*	
1,1-Dichloroethane	2.386	2.555	-7.1		* *
trans-1,2-Dichloroethene	1.272	1.290	-1.4		
Chloroform	2.486	3.028	-21.8	*	
1,2-Dichloroethane	1.404	1.965	-40.0		
2-Butanone	0.044	0.027	38.6		
1,1,1-Trichloroethane	0.416	0.429	-3.1		
Carbon Tetrachloride	0.361	0.416	-15.2		
Vinyl Acetate	0.214	0.130	39.3		
Bromodichloromethane	0.477	0.545	-14.3		
1,2-Dichloropropane	0.329	0.314	4.6	*	
cis-1,3-Dichloropropene	0.468	0.520	-11.1		
Trichloroethene	0.368	0.377	-2.4		
Dibromochloromethane	0.452	0.489	-8.2		
1,1,2-Trichloroethane	0.286	0.287	-0.3		
Benzene	0.756	0.782	-3.4		
Trans-1,3-Dichloropropene	0.339	0.294	13.3		
Bromoform	0.426	0.411	3.5		* *
4-Methyl-2-Pentanone	0.402	0.302	24.9		
2-Hexanone	0.391	0.290	25.8		
Tetrachloroethene	0.420	0.443	-5.5		
1,1,2,2-Tetrachloroethane	0.593	0.518	12.6		* *
Toluene	0.624	0.624	0.0	*	
Chlorobenzene	0.844	0.851	-0.8		* *
Ethylbenzene	0.416	0.427	-2.6	*	
Styrene	0.802	0.831	-3.6		
Xylene (total)	0.467	0.508	-8.8		

RF(50) - Response Factor from daily standard file at 50 ug/l
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Mininum RF for Bromoform is 0.250

Form VII

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB013092D1
Client Sample ID: MB013092D1

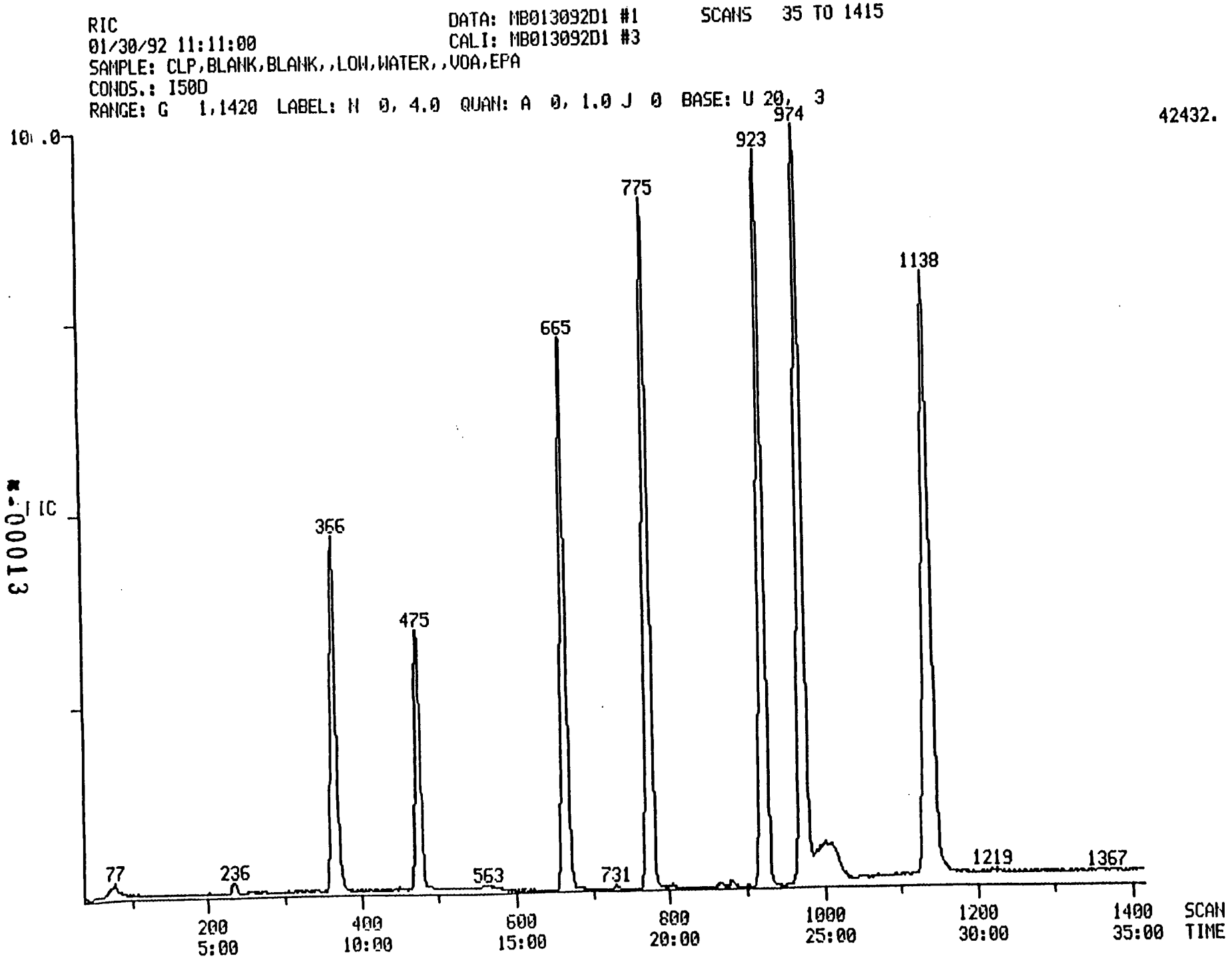
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

Date Extracted: 01/30/92
Date Analyzed: 01/30/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10	<	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is MB013092D1.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/30/92 11:11:00
DATA: MB013092D1 #1
CALI: MB013092D1 #3
SCANS 35 TO 1415
SAMPLE: CLP,BLANK,BLANK,,LOW,WATER,,VOA,EPA
CONDS.: 150D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
42432.
10 .0
RIC
*.00013
77
236
366
475
563
665
731
775
923
974
1138
1219
1367
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: A7861

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	MB013092D1	99	96	96	103	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: HOUSTON Case No.: A7861 SAS No.: _____ SDG No.: A7861

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	SPT-1B	103	95	94	108	0
02	SPT-2B	103	94	100	103	0

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(81-117)
SMC2 (BFB)	= Bromofluorobenzene	(74-121)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: HOUSTON Case No.: A7861 SAS No.: _____ SDG No.: A7861

Level:(low/med) MED

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	TR-1A	98	114	100	106	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(81-117)
SMC2 (BFB) = Bromofluorobenzene	(74-121)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

INITIAL CALIBRATION DATA
VOLATILE HSL COMPOUNDS

Case No: STAND Region: Instrument ID: I50D
Contractor: AnalytiKEM-Hou Calibration Date: 12/23/91
Contract No:

Min AVE RF for SPCC is 0.300 (1) Max %RSD for CCC is 30%

Laboratory ID	IC1223020D1 / IC1223050D2	IC1226100D1 / IC1226150D1	IC1226200D2				
Compound	RF(20)	RF(50)	RF(100)	RF(150)	RF(200)	AVE RF	% RSD	CCC* SPCC**
Chloromethane	1.503	1.330	1.675	1.496	1.436	1.488	8.4	* *
Bromomethane	1.418	1.297	1.291	1.109	0.996	1.222	13.7	
Vinyl Chloride	1.431	1.279	1.464	1.312	1.280	1.353	6.5	*
Chloroethane	0.934	0.795	0.960	0.833	0.831	0.871	8.3	
Methylene Chloride	3.489	2.141	1.466	1.284	1.450	1.966	46.4	
Acetone	0.478	0.639	0.700	0.711	0.587	0.623	15.3	
Carbon Disulfide	2.963	2.857	3.160	3.101	2.911	2.998	4.3	
1,1-Dichloroethene	1.236	1.080	1.175	1.111	1.009	1.122	7.8	*
1,1-Dichloroethane	2.548	2.314	2.555	2.344	2.169	2.386	6.9	* *
trans-1,2-Dichloroethene	1.298	1.262	1.306	1.258	1.238	1.272	2.3	
Chloroform	2.726	2.466	2.611	2.393	2.233	2.486	7.7	*
1,2-Dichloroethane	1.500	1.406	1.430	1.382	1.301	1.404	5.2	
2-Butanone	0.041	0.045	0.048	0.044	0.040	0.044	7.4	
1,1,1-Trichloroethane	0.456	0.444	0.411	0.386	0.383	0.416	8.0	
Carbon Tetrachloride	0.422	0.391	0.348	0.337	0.309	0.361	12.4	
Vinyl Acetate	0.211	0.216	0.227	0.217	0.198	0.214	4.9	
Bromodichloromethane	0.518	0.506	0.477	0.449	0.435	0.477	7.5	
1,2-Dichloropropane	0.371	0.334	0.336	0.306	0.299	0.329	8.7	*
cis-1,3-Dichloropropene	0.504	0.517	0.462	0.432	0.423	0.468	9.0	
Trichloroethene	0.424	0.396	0.360	0.340	0.322	0.368	11.3	
Dibromochloromethane	0.525	0.462	0.463	0.408	0.400	0.452	11.2	
1,1,2-Trichloroethane	0.343	0.290	0.297	0.250	0.248	0.286	13.7	
Benzene	0.815	0.786	0.757	0.722	0.698	0.756	6.2	
Trans-1,3-Dichloropropene	0.396	0.274	0.362	0.337	0.327	0.339	13.3	
2-Chloroethylvinyl ether	0.062	0.056	0.047	0.024	0.052	0.048	30.3	
Bromoform	0.478	0.458	0.418	0.384	0.390	0.426	9.7	* *
4-Methyl-2-Pentanone	0.478	0.376	0.403	0.380	0.372	0.402	11.0	
2-Hexanone	0.387	0.340	0.419	0.420	0.390	0.391	8.3	
Tetrachloroethene	0.486	0.431	0.424	0.390	0.368	0.420	10.7	
1,1,2,2-Tetrachloroethane	0.712	0.559	0.602	0.545	0.547	0.593	11.9	* *
Toluene	0.655	0.613	0.644	0.610	0.597	0.624	3.9	*
Chlorobenzene	0.951	0.843	0.880	0.786	0.762	0.844	8.9	* *
Ethylbenzene	0.465	0.418	0.417	0.387	0.391	0.416	7.5	*
Styrene	0.896	0.827	0.790	0.750	0.748	0.802	7.7	
Xylene (total)	0.540	0.483	0.452	0.431	0.430	0.467	9.9	
Toluene-d8	0.944	0.941	0.962	0.971	0.981	0.960	1.8	
Bromofluorobenzene	0.676	0.657	0.646	0.635	0.672	0.657	2.6	
1,2-Dichloroethane-d4	1.242	1.256	1.302	1.352	1.386	1.308	4.7	
Benzene-d6	0.812	0.819	0.791	0.804	0.801	0.805	1.3	

Response Factor (number is the amount of ug/L)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Minimum AVE RF for Bromoform is 0.250

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

aboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	02/02/92
Lab Sample ID:	A7861-1	Sample Matrix:	SOIL	Date Analyzed:	02/11/92
Client Sample ID:	TR-1A	Percent Moisture:	10.0	Dilution Factor:	20

SEMIVOLATILE COMPOUNDS

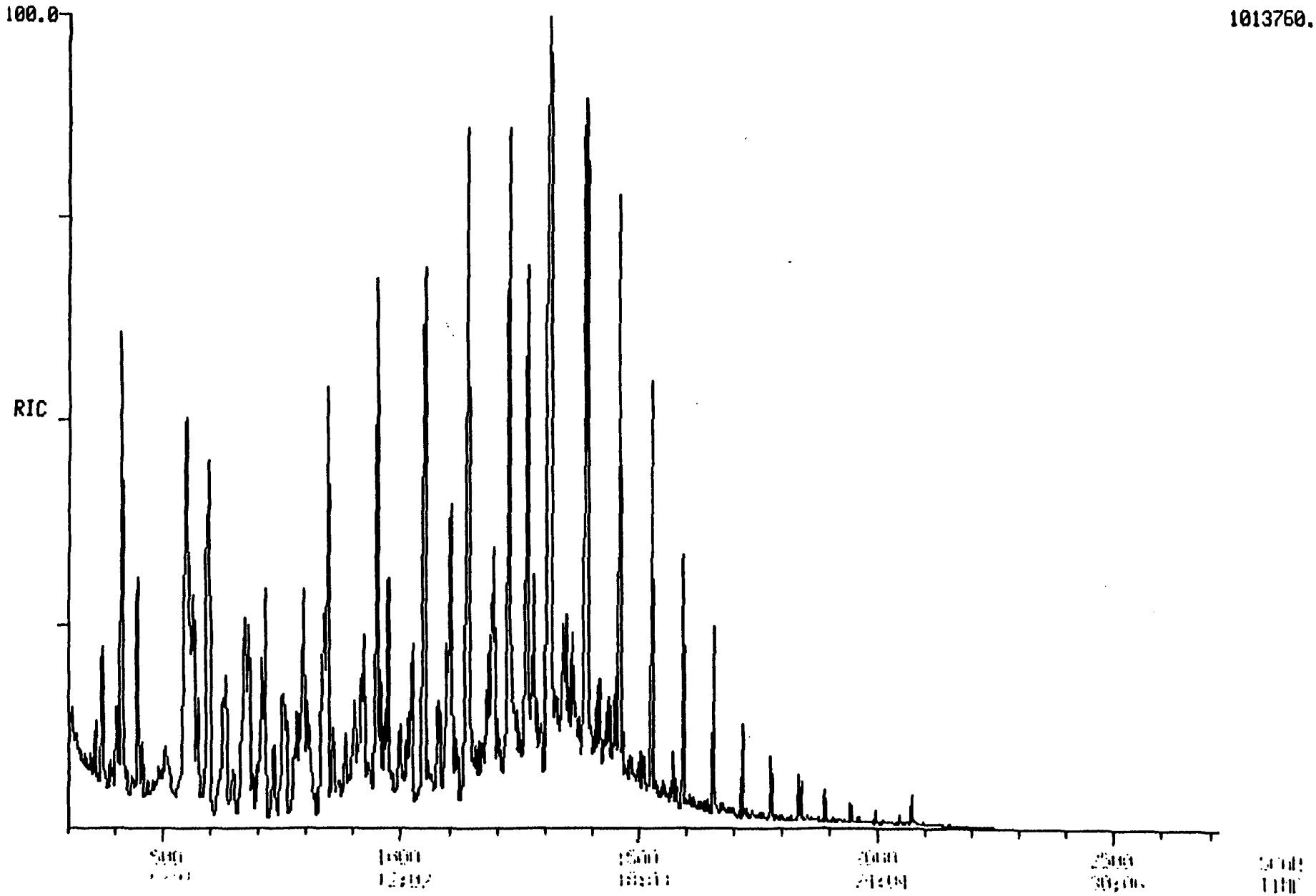
CAS Number		ug/Kg		CAS Number		ug/Kg	
08-95-2	Phenol	7300	<	606-20-2	2,6-Dinitrotoluene	7300	<
62-53-3	Aniline	7300	<	99-09-2	3-Nitroaniline	35000	<
111-44-4	bis(2-Chloroethyl)Ether	7300	<	83-32-9	Acenaphthene	7300	<
5-57-8	2-Chlorophenol	7300	<	51-28-5	2,4-Dinitrophenol	35000	<
41-73-1	1,3-Dichlorobenzene	7300	<	100-02-7	4-Nitrophenol	35000	<
106-46-7	1,4-Dichlorobenzene	7300	<	132-64-9	Dibenzofuran	4400	¼
100-51-6	Benzyl Alcohol	7300	<	121-14-2	2,4-Dinitrotoluene	7300	<
5-50-1	1,2-Dichlorobenzene	7300	<	84-66-2	Diethylphthalate	7300	<
95-48-7	2-Methylphenol	7300	<	7005-72-3	4-Chlorophenyl phenyl ether	7300	<
39638-32-9	bis(2-Chloroisopropyl)Ether	7300	<	86-73-7	Fluorene	7300	<
06-44-5	4-Methylphenol	7300	<	100-01-6	4-Nitroaniline	35000	<
121-64-7	N-Nitroso-Di-n-Propylamine	7300	<	534-52-1	4,6-Dinitro-2-Methylphenol	35000	<
67-72-1	Hexachloroethane	7300	<	86-30-6	N-Nitrosodiphenylamine (1)	7300	<
98-95-3	Nitrobenzene	7300	<	101-55-3	4-Bromophenyl phenyl ether	7300	<
78-59-1	Isophorone	7300	<	118-74-1	Hexachlorobenzene	7300	<
88-75-5	2-Nitrophenol	7300	<	87-86-5	Pentachlorophenol	35000	<
105-67-9	2,4-Dimethylphenol	7300	<	85-01-8	Phenanthrene	7300	<
65-85-0	Benzoic Acid	35000	<	120-12-7	Anthracene	7300	<
111-91-1	bis(2-Chloroethoxy)Methane	7300	<	84-74-2	Di-n-Butylphthalate	7300	<
120-83-2	2,4-Dichlorophenol	7300	<	206-44-0	Fluoranthene	7300	<
120-82-1	1,2,4-Trichlorobenzene	7300	<	129-00-0	Pyrene	7300	<
91-20-3	Naphthalene	100000		85-68-7	Butylbenzylphthalate	7300	<
106-47-8	4-Chloroaniline	7300	<	91-94-1	3,3'-Dichlorobenzidine	15000	<
87-68-3	Hexachlorobutadiene	7300	<	56-55-3	Benzo(a)Anthracene	7300	<
59-50-7	4-Chloro-3-Methylphenol	7300	<	117-81-7	bis(2-Ethylhexyl)Phthalate	7300	<
91-57-6	2-Methylnaphthalene	7300	<	218-01-9	Chrysene	7300	<
77-47-4	Hexachlorocyclopentadiene	7300	<	117-84-0	Di-n-Octyl Phthalate	7300	<
88-06-2	2,4,6-Trichlorophenol	7300	<	205-99-2	Benzo(b)Fluoranthene	7300	<
95-95-4	2,4,5-Trichlorophenol	35000	<	207-08-9	Benzo(k)Fluoranthene	7300	<
91-58-7	2-Chloronaphthalene	7300	<	50-32-8	Benzo(a)Pyrene	7300	<
88-74-4	2-Nitroaniline	35000	<	193-39-5	Indeno(1,2,3-cd)Pyrene	7300	<
131-11-3	Dimethyl Phthalate	7300	<	53-70-3	Dibenz(a,h)Anthracene	7300	<
208-96-8	Acenaphthylene	7300	<	191-24-2	Benzo(g,h,i)Perylene	7300	<

The Lab ID for data on this page is A78611SC.

¼ - Reported value is less than the detection limit.

< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

RIC DATA: A7861SC #1 SCANS 300 TO 2717
02/11/92 1:47:00 CALI: A7861SC #3
SAMPLE: CLP,A7861,A7861,TR-1A,LOW,SOIL,A7861-1,BNA,EPA
CONDS.: I50B
RANGE: G 1,2717 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



BROMOFLUOROBENZENE

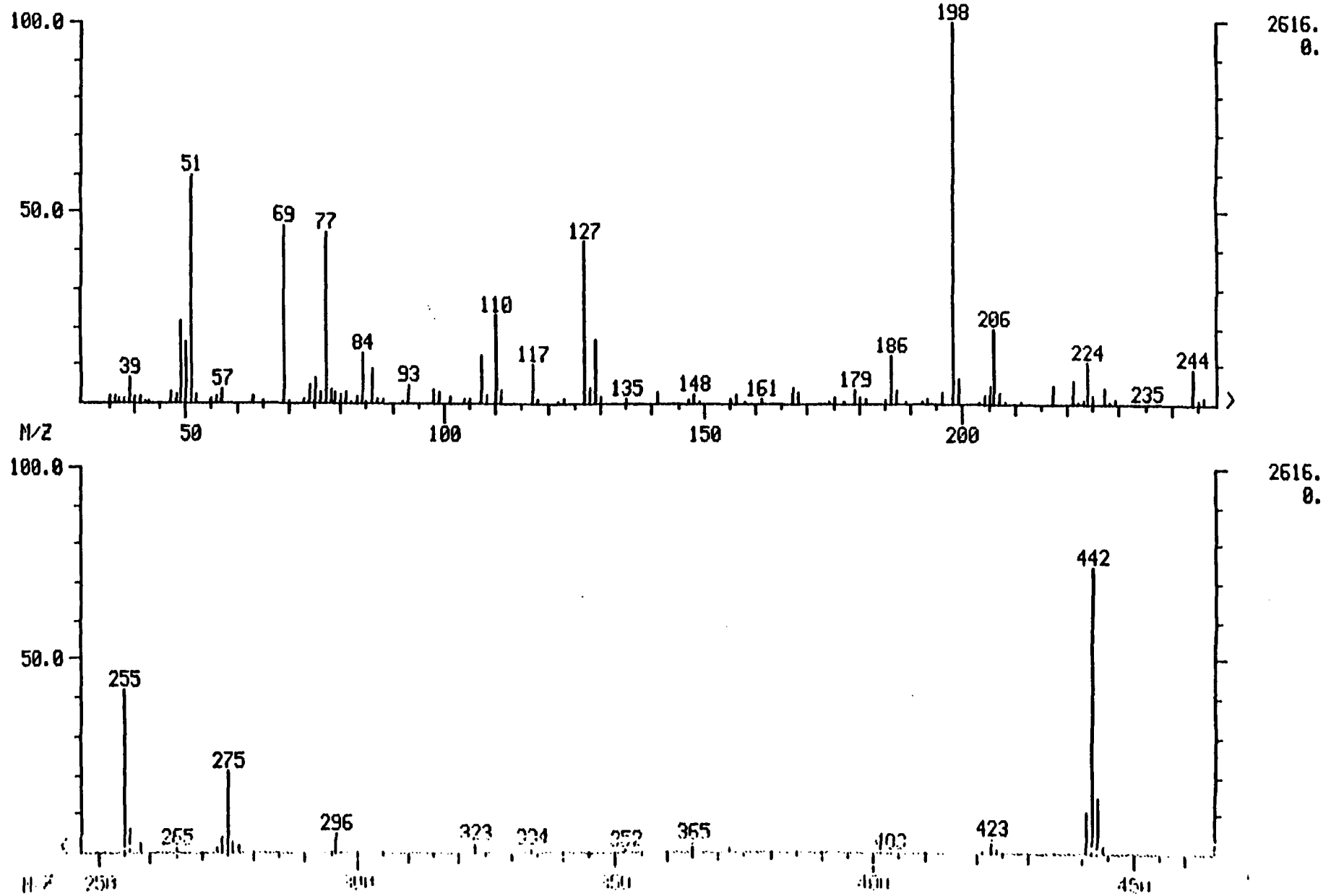
Tuning Report — Data: DF021092B1 # 516 — Base m/z: 198
10/92 14:06:00 + 6:13 — Cali: CALTAB # 3 — RIC: 22208.
Instrument: I50B — Analyst: BPB — Acct. No.: 8506-091
#515 to #517 averaged - #517 to #518 - #502
Case Number: ANALYTIKEM — Laboratory: ANALYTIKEM — Contract: -
Comments: SW 846:8270 ION ABUNDANCE CRITERIA

			Ion Abundance Criteria				
m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
51	1562.	59.71	30.00	60.00	198	59.71	PASS
68	0.	0.00	---	2.00	69	0.00	PASS
69	1226.	46.87	---	100.00	198	46.87	PASS
70	8.	0.31	---	2.00	69	0.65	PASS
127	1110.	42.43	40.00	60.00	198	42.43	PASS
197	0.	0.00	---	1.00	198	0.00	PASS
198	2616.	100.00	100.0	---	---	100.00	PASS
199	170.	6.50	5.00	9.00	198	6.50	PASS
275	542.	20.72	10.00	30.00	198	20.72	PASS
365	65.	2.48	1.00	---	198	2.48	PASS
441	276.	10.55	---	100.00	443	72.44	PASS
442	1950.	74.54	40.00	---	198	74.54	PASS
443	381.	14.56	17.00	23.00	442	19.54	PASS

MASS SPECTRUM
02/10/92 14:06:00 + 6:13
SAMPLE: DFTPP 50 NG
CONDS.: I50B
TEMP: 227 DEG. C
#515 TO #517 AVERAGED - #517 TO #518 - #502

DATA: DF021092B1 #516
CALI: CALTAB #3

BASE M/Z: 198
RIC: 22208.



40004

Mass List
10/92 14:06:00 + 6:13
Sample: DFTPP 50 NG
Comps.: I50B
#515 to #517 averaged - #517 to #518 - #502

Data: DF02109281 # 516
Cali: CALTAB # 3

Base m/z: 198
RIC: 22208.

35		0.00	0.	Minima	Min	Inten:	25.
444				Maxima	#	0	
Mass		% RA	Inten.	Mass		% RA	Inten.
35?	S	1.83	48.	155	S	1.49	39.
36?	S	1.95	51.	156	S	2.18	57.
37?	S	1.22	32.	161	S	1.49	39.
38?	S	1.45	38.	167	S	4.24	111.
39?	S	6.42	168.	168	S	2.71	71.
40?	S	1.53	40.	175	S	1.64	43.
41?	S	1.68	44.	179	S	3.40	89.
47?	S	3.21	84.	180	S	1.87	49.
48?	S	2.18	57.	181	S	1.03	27.
49?	S	21.60	565.	185	S	1.34	35.
50?	S	16.28	426.	186	S	12.31	322.
51?	S	59.71	1562.	187	S	3.56	93.
52?	S	2.56	67.	193	S	1.30	34.
55?	S	1.03	27.	196	S	3.10	81.
56?	S	1.87	49.	198	S	100.00	2616.
57?	S	3.33	87.	199	S	6.50	170.
63?	S	1.80	47.	204	S	2.56	67.
69	S	46.87	1226.	205	S	4.70	123.
74	S	5.01	131.	206	S	19.69	515.
75	S	6.65	174.	207	S	3.17	83.
76	S	3.06	80.	217	S	5.08	133.
77	S	45.03	1178.	221	S	5.93	155.
78	S	3.40	89.	223	S	1.26	33.
79	S	2.71	71.	224	S	10.93	286.
80	S	2.52	66.	225	S	2.60	68.
81	S	3.25	85.	227	S	4.20	110.
83	S	1.87	49.	229	S	0.99	26.
84	S	13.15	344.	244	S	8.94	234.
86	S	9.17	240.	245	S	1.11	29.
87	S	0.99	26.	246	S	1.80	47.
93	S	4.93	129.	255	S	41.97	1098.
98	S	3.67	96.	256	S	6.12	160.
99	S	2.79	73.	258	S	2.48	65.
101	S	1.80	47.	265	S	0.99	26.
105	S	1.19	31.	273	S	1.38	36.
107	S	12.31	322.	274	S	4.09	107.
108	S	2.10	55.	275	S	20.72	542.
110	S	23.59	617.	276	S	3.17	83.
111	S	3.33	87.	277	S	1.72	45.
117	S	9.94	260.	296	S	5.08	133.
118	S	1.11	29.	323	S	2.29	60.
123	S	1.19	31.	334	S	1.41	37.
127	S	42.43	1110.	365	S	2.48	65.
128	S	3.94	103.	423	S	3.75	98.
129	S	16.48	431.	441	S	10.55	276.
130	S	1.76	46.	442	S	74.54	1950.
135	S	1.45	38.	443	S	14.56	381.
141	S	2.79	73.	444	S	1.61	42.
147	S	1.22	32.				
148	S	2.37	62.				

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: _____ Calibration Date: 02/10/92
Contractor: AnalytiKEM-Hou Time: 14:22
Contract No: _____ Laboratory ID: CC021092B1
Instrument ID: I50B Initial Cali. Date: 01/01/92

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
Phenol		1.876	1.372	26.9	*	
bis(2-Chloroethyl)Ether		1.443	1.324	8.2		
2-Chlorophenol		1.374	1.068	22.3		
1,3-Dichlorobenzene		1.350	1.730	-28.1		
1,4-Dichlorobenzene		1.418	1.801	-27.0	*	
Benzyl Alcohol		0.812	0.613	24.5		
1,2-Dichlorobenzene		1.284	1.604	-24.9		
2-Methylphenol		1.165	1.061	8.9		
bis(2-Chloroisopropyl)Ether		2.130	1.798	15.6		
4-Methylphenol		1.096	1.042	4.9		
N-Nitroso-Di-n-Propylamine		1.113	1.443	-29.6		* *
Hexachloroethane		0.620	0.944	-52.3		
Nitrobenzene		0.454	0.417	8.1		
Isophorone		0.539	0.638	-18.4		
2-Nitrophenol		0.189	0.155	18.0	*	
2,4-Dimethylphenol		0.321	0.281	12.5		
Benzoic Acid	x	0.086	0.085	1.2		
bis(2-Chloroethoxy)Methane		0.501	0.458	8.6		
2,4-Dichlorophenol		0.266	0.222	16.5	*	
1,2,4-Trichlorobenzene		0.294	0.385	-31.0		
Naphthalene		0.937	0.988	-5.4		
4-Chloroaniline		0.175	0.043	75.4		
Hexachlorobutadiene		0.185	0.240	-29.7	*	
4-Chloro-3-Methylphenol		0.282	0.207	26.6	*	
2-Methylnaphthalene		0.536	0.710	-32.5		
Hexachlorocyclopentadiene		0.203	0.197	3.0		* *
2,4,6-Trichlorophenol		0.375	0.264	29.6	*	
2,4,5-Trichlorophenol	x	0.306	0.271	11.4		
2-Chloronaphthalene		1.037	1.104	-6.5		
2-Nitroaniline	x	0.466	0.281	39.7		
Dimethyl Phthalate		1.081	1.062	1.8		
Acenaphthylene		1.589	1.583	0.4		
2,6-Dinitrotoluene		0.283	0.313	-10.6		
3-Nitroaniline	x	0.208	0.178	14.4		
Acenaphthene		1.018	0.962	5.5	*	
2,4-Dinitrophenol	x	0.116	0.055	52.6		* *
4-Nitrophenol	x	0.154	0.057	63.0		* *

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)

Form VII

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

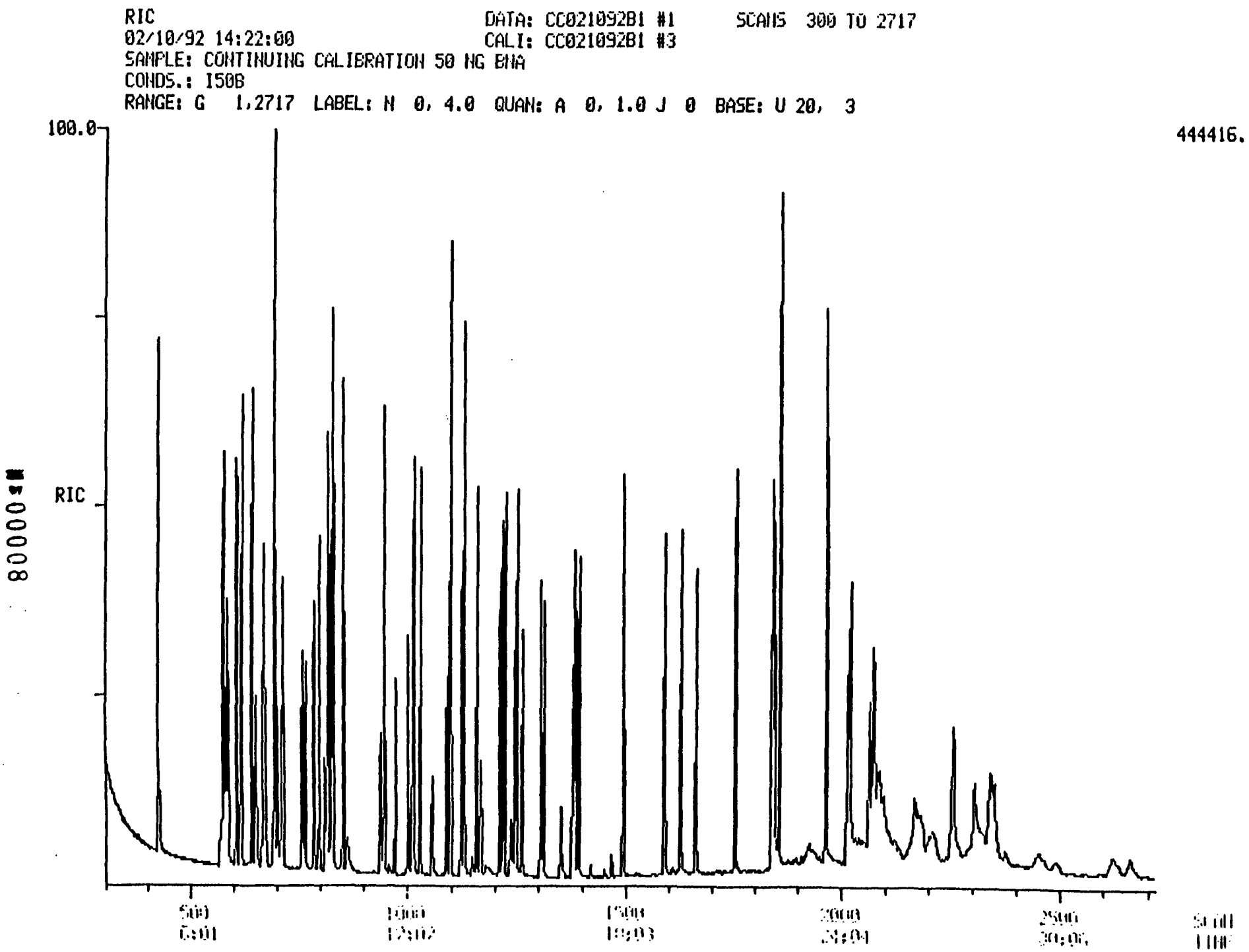
Case No: STAND Region: _____ Calibration Date: 02/10/92
Contractor: AnalytiKEM-Hou Time: 14:22
Contract No: _____ Laboratory ID: CC021092B1
Instrument ID: I50B Initial Cali. Date: 01/01/92

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
Dibenzofuran		1.372	1.365	0.5		
2,4-Dinitrotoluene		0.324	0.300	7.4		
Diethylphthalate		1.244	1.110	10.8		
4-Chlorophenyl phenyl ether		0.688	0.555	19.3		
Fluorene		1.262	1.025	18.8		
4-Nitroaniline	x	0.219	0.050	77.2		
4,6-Dinitro-2-Methylphenol	x	0.125	0.084	32.8		
N-Nitrosodiphenylamine (1)		0.455	0.457	-0.4	*	
4-Bromophenyl phenyl ether		0.234	0.227	3.0		
Hexachlorobenzene		0.279	0.297	-6.5		
Pentachlorophenol	x	0.145	0.101	30.3	*	
Phenanthrene		0.985	0.987	-0.2		
Anthracene		0.911	0.942	-3.4		
Di-n-Butylphthalate		1.361	1.600	-17.6		
Fluoranthene		1.046	1.141	-9.1	*	
Pyrene		0.699	1.247	-78.4		
Butylbenzylphthalate		0.435	0.757	-74.0		
3,3'-Dichlorobenzidine		0.249	0.477	-91.6		
Benzo(a)Anthracene		0.896	1.008	-12.5		
bis(2-Ethylhexyl)Phthalate		0.737	1.121	-52.1		
Chrysene		0.791	1.033	-30.6		
Di-n-Octyl Phthalate		1.316	1.702	-29.3	*	
Benzo(b)Fluoranthene		1.329	1.195	10.1		
Benzo(k)Fluoranthene		0.773	1.311	-69.6		
Benzo(a)Pyrene		0.850	0.969	-14.0	*	
Indeno(1,2,3-cd)Pyrene		0.580	0.818	-41.0		
Dibenz(a,h)Anthracene		0.483	0.653	-35.2		
Benzo(g,h,i)Perylene		0.602	0.693	-15.1		

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Cannot be separated from diphenylamine

Form VII


RIC
02/10/92 14:22:00
DATA: CC021092B1 #1
CALI: CC021092B1 #3
SCANS 300 TO 2717
SAMPLE: CONTINUING CALIBRATION 50 NG BNA
CONDS.: I50B
RANGE: G 1,2717 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
444416.
RIC
80000
500
6:01
1000
12:02
1500
18:03
2000
24:04
2500
30:05

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB4655LS
Client Sample ID: MB4655LS

Concentration: LOW
Sample Matrix: SOIL
Percent Moisture:

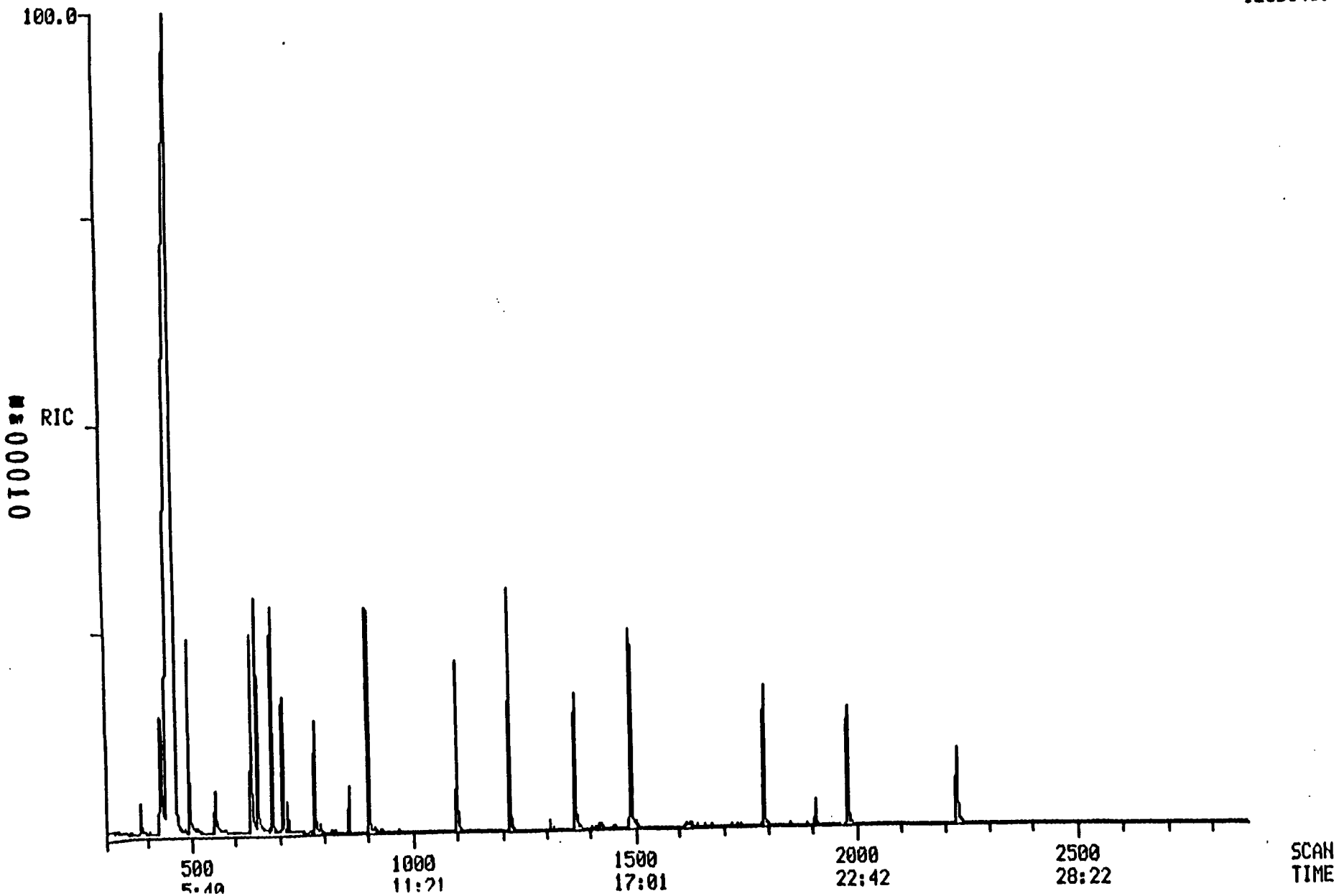
Date Extracted: 02/02/92
Date Analyzed: 02/03/92
Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
108-95-2	Phenol	330	<	606-20-2	2,6-Dinitrotoluene	330	<
62-53-3	Aniline	330	<	99-09-2	3-Nitroaniline	1600	<
11-44-4	bis(2-Chloroethyl)Ether	330	<	83-32-9	Acenaphthene	330	<
5-57-8	2-Chlorophenol	330	<	51-28-5	2,4-Dinitrophenol	1600	<
541-73-1	1,3-Dichlorobenzene	330	<	100-02-7	4-Nitrophenol	1600	<
106-46-7	1,4-Dichlorobenzene	330	<	132-64-9	Dibenzofuran	330	<
100-51-6	Benzyl Alcohol	330	<	121-14-2	2,4-Dinitrotoluene	330	<
95-50-1	1,2-Dichlorobenzene	330	<	84-66-2	Diethylphthalate	330	<
95-48-7	2-Methylphenol	330	<	7005-72-3	4-Chlorophenyl phenyl ether	330	<
39638-32-9	bis(2-Chloroisopropyl)Ether	330	<	86-73-7	Fluorene	330	<
106-44-5	4-Methylphenol	330	<	100-01-6	4-Nitroaniline	1600	<
621-64-7	N-Nitroso-Di-n-Propylamine	330	<	534-52-1	4,6-Dinitro-2-Methylphenol	1600	<
67-72-1	Hexachloroethane	330	<	86-30-6	N-Nitrosodiphenylamine (1)	330	<
98-95-3	Nitrobenzene	330	<	101-55-3	4-Bromophenyl phenyl ether	330	<
78-59-1	Isophorone	330	<	118-74-1	Hexachlorobenzene	330	<
88-75-5	2-Nitrophenol	330	<	87-86-5	Pentachlorophenol	1600	<
105-67-9	2,4-Dimethylphenol	330	<	85-01-8	Phenanthrene	330	<
65-85-0	Benzoic Acid	1600	<	120-12-7	Anthracene	330	<
111-91-1	bis(2-Chloroethoxy)Methane	330	<	84-74-2	Di-n-Butylphthalate	330	<
120-83-2	2,4-Dichlorophenol	330	<	206-44-0	Fluoranthene	330	<
120-82-1	1,2,4-Trichlorobenzene	330	<	129-00-0	Pyrene	330	<
91-20-3	Naphthalene	330	<	85-68-7	Butylbenzylphthalate	330	<
106-47-8	4-Chloroaniline	330	<	91-94-1	3,3'-Dichlorobenzidine	660	<
87-68-3	Hexachlorobutadiene	330	<	56-55-3	Benzo(a)Anthracene	330	<
59-50-7	4-Chloro-3-Methylphenol	330	<	117-81-7	bis(2-Ethylhexyl)Phthalate	330	<
91-57-6	2-Methylnaphthalene	330	<	218-01-9	Chrysene	330	<
77-47-4	Hexachlorocyclopentadiene	330	<	117-84-0	Di-n-Octyl Phthalate	330	<
88-06-2	2,4,6-Trichlorophenol	330	<	205-99-2	Benzo(b)Fluoranthene	330	<
95-95-4	2,4,5-Trichlorophenol	1600	<	207-08-9	Benzo(k)Fluoranthene	330	<
91-58-7	2-Chloronaphthalene	330	<	50-32-8	Benzo(a)Pyrene	330	<
88-74-4	2-Nitroaniline	1600	<	193-39-5	Indeno(1,2,3-cd)Pyrene	330	<
131-11-3	Dimethyl Phthalate	330	<	53-70-3	Dibenz(a,h)Anthracene	330	<
208-96-8	Acenaphthylene	330	<	191-24-2	Benzo(g,h,i)Perylene	330	<

The Lab ID for data on this page is MB4655LS.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

RIC
02/03/92 12:06:00
DATA: MB4655LS #1
CALI: MB4655LS #3
SCANS 300 TO 2882
SAMPLE: CLP,BLANK,BLANK,MB4655LS,LOW,SOIL,MB4655LS,BNA,EPA
CONDS.: 150E
RANGE: G 1,2882 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: ANALYTI Case No.: A7861 SAS No.: _____ SDG No.: A7861

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SPT-2B	84	83	134	68	109	74	0	0	0
02	SPT-2B-MS	84	103	156 *	95	122 *	111	0	0	2
03	SPT-2B-MS	90	83	247 *	84	120	57	0	0	1
04	SPT-2B-MSD	83	87	68	65	128 *	39	0	0	1
05	TR-1A	824 *	135 *	0 D	0 D	189 *	0 D	0	0	3
06	MB4655LS	63	71	87	64	76	69	0	0	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(-)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(-)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: A7861

Matrix Spike - EPA Sample No.: SPT-2B Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	7880	0	4973	63	26- 90
2-Chlorophenol	7880	0	6399	81	25-102
1,4-Dichlorobenzene	3940	0	3058	78	28-104
N-Nitroso-di-n-prop.(1)	3940	0	2483	63	41-126
1,2,4-Trichlorobenzene	3940	0	3129	79	38-107
4-Chloro-3-methylphenol	7880	0	4642	59	26-103
Acenaphthene	3940	0	2798	71	31-137
4-Nitrophenol	7880	0	3011	38	11-114
2,4-Dinitrotoluene	3940	0	2892	73	28- 89
Pentachlorophenol	7880	0	5997	76	17-109
Pyrene	3940	0	27190	690 *	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	7900	3699	47	29	35	26- 90
2-Chlorophenol	7900	5312	67	19	50	25-102
1,4-Dichlorobenzene	3950	2862	72	8	27	28-104
N-Nitroso-di-n-prop.(1)	3950	1818	46	31	38	41-126
1,2,4-Trichlorobenzene	3950	3067	78	1	23	38-107
4-Chloro-3-methylphenol	7900	3043	39	41 *	33	26-103
Acenaphthene	3950	2158	55	25 *	19	31-137
4-Nitrophenol	7900	1968	25	41	50	11-114
2,4-Dinitrotoluene	3950	2000	51	35	47	28- 89
Pentachlorophenol	7900	4110	52	38	47	17-109
Pyrene	3950	7099	180 *	117 *	36	35-142

(1) N-Nitroso-di-n-propylamine

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

RPD: 3 out of 11 outside limits
Spike Recovery: 2 out of 22 outside limits

COMMENTS: CLP,A7861,A7861,SPT-2B,LOW,SOIL,A7861-3,BNA,EPA I50B

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: _____ Instrument ID: I50B
Contractor: AnalytiKEM-Hou Calibration Date: 01/01/92
Contract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC01018020 / IC01018050	IC01018080 / IC01018120	IC01018160				
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	CCC* SPCC**
Phenol	1.900	2.056	2.098	1.717	1.609	1.876	11.3	*
bis(2-Chloroethyl)Ether	1.660	1.700	1.297	1.151	1.408	1.443	16.3	
2-Chlorophenol	1.374	1.486	1.538	1.211	1.263	1.374	10.2	
1,3-Dichlorobenzene	1.372	1.461	1.347	1.304	1.264	1.350	5.5	
1,4-Dichlorobenzene	1.416	1.605	1.328	1.390	1.350	1.418	7.8	*
Benzyl Alcohol	0.759	0.779	0.733	0.453	1.338	0.812	39.7	
1,2-Dichlorobenzene	1.289	1.352	1.316	1.239	1.225	1.284	4.1	
2-Methylphenol	1.148	1.334	1.062	0.957	1.323	1.165	14.1	
bis(2-Chloroisopropyl)Ether	2.332	2.597	0.381	2.296	3.045	2.130	48.0	
4-Methylphenol	1.074	1.310	0.943	1.142	1.013	1.096	12.8	
N-Nitroso-Di-n-Propylamine	1.017	1.182	1.122	1.112	1.131	1.113	5.4	* *
Hexachloroethane	0.578	0.663	0.630	0.604	0.626	0.620	5.1	
Nitrobenzene	0.542	0.547	0.434	0.379	0.368	0.454	19.0	
Isophorone	0.886	0.757	0.369	0.188	0.494	0.539	52.7	
2-Nitrophenol	0.176	0.224	0.222	0.163	0.159	0.189	16.9	*
2,4-Dimethylphenol	0.319	0.355	0.363	0.274	0.294	0.321	11.9	
Benzoic Acid	x	0.113	0.083	0.091	0.055	0.086	28.0	
bis(2-Chloroethoxy)Methane	0.545	0.579	0.476	0.453	0.450	0.501	11.6	
2,4-Dichlorophenol	0.253	0.300	0.309	0.233	0.236	0.266	13.5	*
1,2,4-Trichlorobenzene	0.302	0.335	0.302	0.284	0.247	0.294	10.9	
Naphthalene	1.005	1.043	0.917	0.857	0.864	0.937	8.9	
4-Chloroaniline	0.320	0.257	0.096	0.130	0.070	0.175	62.1	
Hexachlorobutadiene	0.199	0.216	0.178	0.165	0.168	0.185	11.8	*
4-Chloro-3-Methylphenol	0.246	0.300	0.319	0.247	0.296	0.282	11.8	*
2-Methylnaphthalene	0.592	0.603	0.503	0.511	0.469	0.536	11.0	
Hexachlorocyclopentadiene	0.303	0.091	0.214	0.247	0.159	0.203	40.2	* *
2,4,6-Trichlorophenol	0.302	0.365	0.483	0.400	0.324	0.375	19.0	*
2,4,5-Trichlorophenol	x	0.356	0.483	0.318	0.324	0.370	20.8	
2-Chloronaphthalene	1.061	1.147	1.114	1.032	0.832	1.037	11.9	
2-Nitroaniline	x	0.549	0.490	0.481	0.344	0.466	18.6	
Dimethyl Phthalate	1.068	1.061	1.118	1.155	1.002	1.081	5.4	
Acenaphthylene	1.608	1.632	1.679	1.722	1.304	1.589	10.4	
2,6-Dinitrotoluene	0.258	0.357	0.336	0.193	0.271	0.283	23.1	
3-Nitroaniline	x	0.243	0.329	0.052	0.208	0.208	55.7	
Acenaphthene	1.012	1.021	1.095	1.080	0.882	1.018	8.3	*
2,4-Dinitrophenol	x	0.054	0.143	0.137	0.129	0.116	35.9	* *
4-Nitrophenol	x	0.134	0.192	0.156	0.135	0.154	17.6	* *

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng

Form VI

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

Case No: STAND Region: _____ Instrument ID: I50B
Contractor: AnalytiKEM-Hou Calibration Date: 01/01/92
Contract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC01018020 IC01018050	IC01018080 IC01018120	IC01018160				CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Dibenzofuran	1.480	1.430	1.423	1.449	1.079	1.372	12.1	
2,4-Dinitrotoluene	0.272	0.332	0.345	0.343	0.327	0.324	9.2	
Diethylphthalate	1.064	1.151	1.336	1.496	1.172	1.244	13.8	
4-Chlorophenyl phenyl ether	0.560	0.647	0.804	0.825	0.605	0.688	17.4	
Fluorene	1.061	1.209	1.419	1.483	1.140	1.262	14.4	
4-Nitroaniline	x	0.154	0.233	0.307	0.181	0.219	30.8	
4,6-Dinitro-2-Methylphenol	x	0.086	0.156	0.146	0.112	0.125	25.7	
N-Nitrosodiphenylamine (1)	0.454	0.443	0.502	0.456	0.421	0.455	6.5	*
4-Bromophenyl phenyl ether	0.237	0.278	0.240	0.233	0.180	0.234	15.0	
Hexachlorobenzene	0.263	0.306	0.304	0.300	0.222	0.279	13.0	
Pentachlorophenol	x	0.129	0.178	0.143	0.129	0.145	16.0	*
Phenanthrene	0.992	1.130	1.028	0.981	0.794	0.985	12.4	
Anthracene	0.941	1.026	0.960	0.904	0.723	0.911	12.5	
Di-n-Butylphthalate	1.309	1.650	1.418	1.281	1.148	1.361	13.8	
Fluoranthene	1.008	1.250	1.175	1.105	0.897	1.087	12.8	*
Pyrene	0.787	0.689	0.694	0.635	0.691	0.699	7.8	
Butylbenzylphthalate	0.504	0.471	0.424	0.370	0.406	0.435	12.2	
3,3'-Dichlorobenzidine	0.143	0.232	0.315	0.297	0.257	0.249	27.1	
Benzo(a)Anthracene	0.976	1.010	0.918	0.752	0.823	0.896	12.0	
Bis(2-Ethylhexyl)Phthalate	0.826	0.850	0.747	0.674	0.588	0.737	14.7	
Chrysene	1.135	0.930	0.698	0.658	0.535	0.791	30.3	
Di-n-Octyl Phthalate	1.190	1.442	1.438	1.478	1.031	1.316	14.9	*
Benzo(b)Fluoranthene	1.094	1.292	1.700	1.500	1.179	1.353	18.2	
Benzo(k)Fluoranthene	0.972	1.176	0.802	0.502	1.179	0.926	30.7	
Benzo(a)Pyrene	0.931	1.012	0.848	0.784	0.677	0.850	15.2	*
Indeno(1,2,3-cd)Pyrene	0.813	0.833	0.466	0.374	0.416	0.580	38.6	
Dibenz(a,h)Anthracene	0.615	0.703	0.429	0.319	0.347	0.483	35.0	
Benzo(g,h,i)Perylene	0.776	0.824	0.482	0.382	0.544	0.602	31.7	
Nitrobenzene-d5	0.612	0.595	0.424	0.401	0.392	0.485	22.5	
2-Fluorobiphenyl	1.480	1.315	1.143	1.069	0.920	1.185	18.4	
Terphenyl-d14	0.768	0.663	0.589	0.560	0.682	0.652	12.6	
Phenol-d5	1.585	1.714	1.493	1.462	1.545	1.560	6.3	
2-Fluorophenol	1.267	1.283	1.143	1.146	1.093	1.186	7.1	
2,4,6-Tribromophenol	0.145	0.223	0.244	0.246	0.200	0.212	19.7	

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng
(1) - - Cannot be separated from diphenylamine

Form VI

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: _____ Instrument ID: FINN
Contractor: AnalytiKEM-Hou Calibration Date: 09/25/91
Contract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC0925E020		IC0925E080		IC0925E160			
	CC092591E1		IC0925E120					CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Phenol	1.553	1.810	2.247	1.671	1.678	1.792	15.1	*
bis(2-Chloroethyl)Ether	1.258	1.721	1.452	1.209	1.262	1.380	15.3	
2-Chlorophenol	1.042	1.254	1.514	1.136	1.154	1.220	14.8	
1,3-Dichlorobenzene	1.166	1.422	1.356	1.222	1.245	1.282	8.1	
1,4-Dichlorobenzene	1.207	1.438	1.326	1.292	1.152	1.283	8.6	*
Benzyl Alcohol	0.595	0.653	0.698	0.637	0.518	0.620	11.0	
1,2-Dichlorobenzene	1.129	1.405	1.312	1.222	1.111	1.236	10.0	
2-Methylphenol	0.934	1.059	1.008	0.919	0.927	0.969	6.3	
bis(2-Chloroisopropyl)Ether	0.525	0.585	0.484	1.626	0.450	0.734	68.3	
4-Methylphenol	0.948	1.137	1.124	1.000	0.979	1.038	8.4	
N-Nitroso-Di-n-Propylamine	0.894	1.089	0.720	0.579	0.835	0.823	23.2	* *
Hexachloroethane	0.464	0.568	0.543	0.506	0.482	0.513	8.4	
Nitrobenzene	0.312	0.370	0.338	0.327	0.310	0.331	7.4	
Isophorone	0.591	0.597	0.683	0.615	0.537	0.605	8.7	
2-Nitrophenol	0.149	0.181	0.224	0.159	0.174	0.177	16.3	*
2,4-Dimethylphenol	0.249	0.265	0.360	0.276	0.280	0.286	15.1	
Benzoic Acid	x	0.179	0.130	0.134	0.133	0.144	16.2	
bis(2-Chloroethoxy)Methane	0.416	0.502	0.447	0.411	0.406	0.436	9.2	
2,4-Dichlorophenol	0.220	0.270	0.328	0.235	0.245	0.260	16.3	*
1,2,4-Trichlorobenzene	0.267	0.315	0.303	0.272	0.269	0.285	7.8	
Naphthalene	0.815	0.944	0.862	0.772	0.686	0.816	11.8	
4-Chloroaniline	0.206	0.187	0.326	0.307	0.139	0.233	34.5	
Hexachlorobutadiene	0.145	0.152	0.156	0.146	0.142	0.148	3.8	*
4-Chloro-3-Methylphenol	0.239	0.289	0.340	0.259	0.264	0.278	14.0	*
2-Methylnaphthalene	0.589	0.592	0.571	0.528	0.461	0.548	10.0	
Hexachlorocyclopentadiene	0.213	0.052	0.302	0.295	0.260	0.224	45.7	* *
2,4,6-Trichlorophenol	0.269	0.329	0.425	0.308	0.309	0.328	17.8	*
2,4,5-Trichlorophenol	x	0.349	0.353	0.328	0.336	0.342	3.4	
2-Chloronaphthalene	0.893	1.085	1.037	0.929	0.918	0.972	8.6	
2-Nitroaniline	x	0.339	0.351	0.336	0.280	0.326	9.7	
Dimethyl Phthalate	0.977	1.199	1.127	1.052	1.033	1.078	8.0	
Acenaphthylene	1.415	1.424	1.566	1.448	1.348	1.440	5.5	
2,6-Dinitrotoluene	0.231	0.320	0.302	0.291	0.295	0.288	11.7	
3-Nitroaniline	x	0.339	0.338	0.326	0.280	0.321	8.7	
Acenaphthene	0.922	1.043	0.974	0.887	0.817	0.929	9.2	*
2,4-Dinitrophenol	x	0.144	0.134	0.115	0.127	0.130	9.4	* *
4-Nitrophenol	x	0.118	0.108	0.084	0.086	0.099	16.9	* *

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng

Form VI

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

Case No: STAND Region: _____ Instrument ID: FINN
Contractor: AnalytiKEM-Hou Calibration Date: 09/25/91
Contract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC0925E020		IC0925E080		IC0925E160			
	CC092591E1		IC0925E120					CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Dibenzofuran	1.227	1.223	1.259	1.200	1.017	1.185	8.1	
2,4-Dinitrotoluene	0.274	0.367	0.316	0.312	0.302	0.314	10.7	
Diethylphthalate	0.957	1.174	1.110	1.044	1.024	1.062	7.8	
4-Chlorophenyl phenyl ether	0.483	0.547	0.519	0.509	0.499	0.511	4.7	
Fluorene	0.988	1.142	1.017	0.986	0.930	1.013	7.8	
4-Nitroaniline	x	0.151	0.151	0.174	0.154	0.158	7.0	
4,6-Dinitro-2-Methylphenol	x	0.123	0.116	0.092	0.102	0.108	12.9	
N-Nitrosodiphenylamine (1)	0.391	0.356	0.410	0.377	0.386	0.384	5.1	*
4-Bromophenyl phenyl ether	0.182	0.206	0.193	0.184	0.189	0.191	5.0	
Hexachlorobenzene	0.228	0.238	0.231	0.220	0.209	0.225	4.9	
Pentachlorophenol	x	0.141	0.169	0.133	0.140	0.146	10.9	*
Phenanthrene	0.815	0.956	0.870	0.813	0.747	0.840	9.3	
Anthracene	0.815	0.793	0.861	0.766	0.700	0.787	7.6	
Di-n-Butylphthalate	1.049	1.316	1.214	1.092	1.029	1.140	10.7	
Fluoranthene	0.841	1.019	0.966	0.856	0.765	0.889	11.5	*
Pyrene	1.007	1.119	1.013	0.885	0.850	0.975	11.1	
Butylbenzylphthalate	0.489	0.636	0.568	0.514	0.499	0.541	11.3	
3,3'-Dichlorobenzidine	0.187	0.144	0.252	0.265	0.260	0.222	24.2	
Benzo(a)Anthracene	0.903	1.054	0.918	0.887	0.854	0.923	8.3	
bis(2-Ethylhexyl)Phthalate	0.758	0.864	0.769	0.678	0.690	0.752	9.9	
Chrysene	0.773	0.800	0.740	0.614	0.563	0.698	14.9	
Di-n-Octyl Phthalate	1.242	2.273	1.587	1.531	1.585	1.644	23.1	*
Benzo(b)Fluoranthene	0.807	1.461	1.106	1.192	1.182	1.150	20.4	
Benzo(k)Fluoranthene	0.888	1.039	0.805	0.566	0.809	0.821	20.9	
Benzo(a)Pyrene	0.795	1.043	0.855	0.807	0.830	0.866	11.7	*
Indeno(1,2,3-cd)Pyrene	0.786	1.152	0.978	0.926	0.955	0.959	13.7	
Dibenz(a,h)Anthracene	0.690	1.003	0.836	0.794	0.807	0.826	13.7	
Benzo(g,h,i)Perylene	0.589	0.956	0.737	0.687	0.704	0.735	18.4	
Nitrobenzene-d5	0.359	0.367	0.349	0.332	0.315	0.344	6.1	
2-Fluorobiphenyl	1.100	1.137	1.099	1.027	0.998	1.072	5.4	
Terphenyl-d14	0.834	0.803	0.790	0.748	0.709	0.777	6.3	
Phenol-d5	1.378	1.555	1.569	1.469	1.454	1.485	5.3	
2-Fluorophenol	1.032	1.107	1.180	1.219	1.088	1.125	6.6	
2,4,6-Tribromophenol	0.184	0.167	0.176	0.174	0.171	0.174	3.6	

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng
(1) - - Cannot be separated from diphenylamine

Form VI

AnalytiKEM *An American NuKEM Company*

AnalytiKEM Inc.
2925 Richmond Avenue
Houston, TX 77098
713/520-1495
713/520-9900
Fax: 713/523-7107

February 7, 1992

ENSR
3000 Richmond
Houston,, Tx 77098

Attention: Cindy Overton

Attached are reports of chemical analyses of samples received January 24, 1992. These analyses are:

Count	Test Code	Test Name	Test Method	Sampled	Matrix
1	Ag - - -HOU	SILVER	EPA SW-846: 7760, ATOMIC ABSORPTION	01/22/92	LIQUID
14	Ag -S- -HOU	SILVER ON SOLID	EPA SW-846: 3050, 7760, AA	01/21/92 01/22/92	SOIL
1	As - -GFA-HOU	ARSENIC	EPA SW-846: 7060, GRAPHITE FURNACE	01/22/92	LIQUID
14	As -S-GFA-HOU	ARSENIC ON SOLID	EPA SW-846: 7060, GRAPHITE FURNACE	01/21/92 01/22/92	SOIL
1	BNA - - -HOU	SEMIVOLATILE ORGANICS	EPA SW-846: 3520,8270, LLE,GC/MS	01/22/92	LIQUID
1	BNA -S- -HOU	SEMIVOLATILE ORGANICS/SOLID	EPA SW-846: 3550,8270, SON.,GC/MS	01/22/92	SOIL
1	Ba - -ICP-HOU	BARIUM	EPA SW-846: 6010, ICP	01/22/92	LIQUID
14	Ba -S-ICP-HOU	BARIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/21/92 01/22/92	SOIL
1	Cd - -ICP-HOU	CADMIUM	EPA SW-846: 6010, ICP	01/22/92	LIQUID
14	Cd -S-ICP-HOU	CADMIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/21/92 01/22/92	SOIL
1	Cr - -ICP-HOU	CHROMIUM	EPA SW-846: 6010, ICP	01/22/92	LIQUID
14	Cr -S-ICP-HOU	CHROMIUM ON SOLID	EPA SW-846: 3050,6010, ICP	01/21/92 01/22/92	SOIL
1	Hg - - -HOU	MERCURY	EPA SW-846: 7470, COLD VAPOR	01/22/92	LIQUID
14	Hg -S- -HOU	MERCURY ON SOLID	EPA SW-846: 7471, COLD VAPOR	01/21/92 01/22/92	SOIL
1	Pb - -ICP-HOU	LEAD	EPA SW-846: 6010, ICP	01/22/92	LIQUID
14	Pb -S-ICP-HOU	LEAD ON SOLID	EPA SW-846: 3050,6010, ICP	01/21/92 01/22/92	SOIL
1	Se - -GFA-HOU	SELENIUM	EPA SW-846: 7740, GRAPHITE FURNACE	01/22/92	LIQUID
14	Se -S-GFA-HOU	SELENIUM ON SOLID	EPA SW-846: 7740, GRAPHITE FURNACE	01/21/92 01/22/92	SOIL
2	VOA - - -HOU	VOLATILE ORGANIC ANALYSES	EPA SW-846: 8240, GC/MS	01/22/92	LIQUID
2	VOA -S- -HOU	VOLATILE ORGANICS ON SOLID	EPA SW-846: 8240, GC/MS	01/21/92 01/22/92	SOIL
14	pH -S- -HOU	pH ON SOLID	EPA SW-846: 9045	01/21/92 01/22/92	SOIL

Data contained in this report reflect a full quality control review and have met all applicable standards established by AnalytiKEM. AnalytiKEM quality assurance protocols are in accordance with EPA guidelines.

Should you have any questions, do not hesitate to contact me at (713) 520-1495.

Very Truly Yours,

AnalytiKEM

Bo Blankfield
Lab Director

BB/lis

Enclosures: Analytical Summary, Analytical Report, Chain of Custody, Sample Receipt Checklist, Quality Control Logs, ANALYTIKEM ID #A7846-12, ANALYTIKEM ID #A7846-15, ANALYTIKEM ID #A7846-16, ANALYTIKEM ID #A7846-5

LAB NO. A7846
PROJECT 1009-001-164 Brown Maroney Hobbs-Marland

AnalytiKEM
An American NuKEM Company
2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.	Client/Project Name	Project Location
K09-001-164	Exxon - Brown Maroney	Hobbs - Marland

Lab ID No.	Field Sample No./Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	Analysis Requested	Laboratory Remarks
1	YS-1A	1-21-92 1000	✓		16oz SSwm	Soil	4°C	Pb, RCRA METALS	
2.	YS-2A	1-21-92 1030	✓		↓	↓	↓	↓	
3	YS-3A	1-21-92 1100	✓		↓	↓	↓	↓	
4	YS-4A	1-21-92 1115	✓		↓	↓	↓	↓	
5	YS-5A	1-21-92 1130	✓		↓	↓	↓	↓	
5	YS-5A	1-21-92 1130	✓		4oz TALL	Soil	4°C	TOTAL V	nVOA's 1/27/92 cottk
5	YS-5A	1-21-92 1130	✓		16oz Amb wm	↓	↓	TOTAL Se	
6	YS-6A	1-21-92 1315	✓		16oz SSwm	Soil	4°C	Pb, RCR	
7	YS-9A	1-21-92 1315	✓		↓	↓	4°C	↓	
8	YS-7A	1-21-92 1330	✓		↓	↓	4°C	↓	

Sample YS-5A wanted VOA's & Semi-VOA's on "HOLD" but VOA's got run anyway. JSK

Samplers: (Signature) [signature]

Affiliation: ELSR C&E

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
[signature]	Date: 1-20-92 Time: 1530		Date: Time:
	Date: Time:		Date: Time:
	Date: Time:	Received by Laboratory: (Signature) [signature]	Date: 1-24-92 Time: 11:02

Seal No.:

REMARKS: Scott Kuykendall

Data Results To:
1. Cindy OVERTON
2.

Laboratory No.: A7846

AnalytiKEM

An American NuKEM Company

2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.: 1009-001-164

Client/Project Name: EXXON - Brown Maroney

Project Location: Hobbs - MARLAND

Lab ID No.	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
09	YS-8A	1-21-92 1345	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
10	KA-1A	1-21-92 1500	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
11	DT-1A	1-22-92 [illegible]	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
12	DF2A	1-22-92 1000 [illegible]	✓		4 oz Tall	Soil	4°C	TOTAL Volatiles - hold per Scott K 1/27/92	2/4/92 VOA taken off hold.
12	DT-2A	1-22-92 [illegible]	✓		16 oz Amb WM	Soil	4°C	TOTAL Semi-Volatiles	
12	DT-2A	1-22-92 1000	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
13	DT-2B	1-22-92 1145	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
14	YS-10A	1-22-92 1215	✓		16 oz SSWM	Soil	4°C	ph/RCRA METALS	
15	TripBlank-1	1-22 1315	✓		40 ml VOA	H_2O	4°C	~~RCRA METALS~~ TOTAL Volatiles	
15	TripBlank-1	1-22 1315	✓		40 ml VOA	H_2O	4°C	TOTAL Volatiles	

Samplers: (Signature) [signature]

Affiliation: ENSR C+E

Relinquished by: (Signature) [signature] Date: 1-22-92 Time: 1330

Relinquished by: (Signature) Date: Time:

Relinquished by: (Signature) Date: Time:

Received by: (Signature) Date: Time:

Received by: (Signature) Date: Time:

Received by Laboratory: (Signature) [signature] Date: 1-24 Time: 11:02

COC Seal No. Intact

REMARKS:

Data Results To:
1. CINDY OLENTON
2.

Laboratory No. A7846

AnalytiKEM
An American NuKEM Company
2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.: 609-001-164
Client/Project Name: Exxon - Brown Maroney
Project Location: Hobbs - Maryland

Lab ID No.	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
14	Equipment blank-1	1-22-92 1300	✓		32 oz PLASTIC	H_2O	HNO_3	RCRA METALS	
14	Equipment blank-1	1-22-92 1300	✓		32 oz amb wm	H_2O	4°C	TOTAL SEMI-VOLATILES	
14	Equipment blank-1	1-22-92 1300	✓		40 ml VOA X2	H_2O	4°C	TOTAL VOLATILES	

Samplers: (Signature) [signature]
Affiliation: ENSR CORE

Relinquished by: (Signature) [signature] Date: 1-22-92 Time: 1530
Relinquished by: (Signature) Date: Time:
Relinquished by: (Signature) Date: Time:

Received by: (Signature) Date: Time:
Received by: (Signature) Date: Time:
Received by Laboratory; (Signature) [signature] Date: 1-24-92 Time: 11:02

COC Seal No.

REMARKS:

Data Results To:
1.
2.

Laboratory No. A7846

ANALYTIKEM LABORATORIES
SAMPLE RECEIPT CHECKLIST

Client Brown Maroney   Project Number 1009-001-164   Laboratory Number A284

1. ✓ Shipped — Notes: Federal Express #1470288094
___ Hand Delivered

2. ✓ COC Present on Receipt — Notes:
___ No COC

3. ___ COC Tape on Shipping Container — Notes:
✓ No COC Tape on Shipping Container — Notes:

4. ___ Samples Broken/Leaking — Notes:
___ Sample Intact on Receipt
___ Other (See Notes)

5. ___ Ambient on Receipt — Notes:
✓ Chilled on Receipt — 12°C

6. ___ Samples Preserved Correctly — Notes:
___ Improper Preservatives
✓ N/A (None Recommended)
___ Other (See Notes)

7. ✓ Received Within Holding Time — Notes:
___ Not Received Within Holding Time
___ N/A (None Recommended)
___ Other (See Notes)

8. ___ COC Tapes on Samples — Notes:
✓ No COC Tapes on Samples

9. ✓ Discrepancies Between COC and Sample Labels — Notes: See Below.
___ No Discrepancies Noted
___ N/A (No COC Received)

Additional Comments: pH, RCRA mtls 1,2,3 GS-1, ~~GS~~ GS2, GS3, does not list A on the jar labels. Received 2 jar 2a pH, RCRA mtls. (GS-6A) Did not receive a jar 2a GS9A-pH, RCRA mtls. Did not receive jar 2a pH, RCRA mtls. DT-2B. Received jar 2a pH, RCRA mtls DT1B not on C-of-C. Lid broken on

Inspected and Logged in by: Sal Neal   Date/Time 1-24-92 11:03

Comp Blank B.NA

AnalytiKEM—Houston

Analytical Summary
02/10/92 12:17

Lab Number: A7846
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*	1 YS-1A SOIL	2 YS-2A SOIL	3 YS-3A SOIL	4 YS-4A SOIL	5 YS-5A SOIL	6 YS-6A SOIL	7 YS-9A SOIL	8 YS-7A SOIL
Ag -S- -HOU	<1.3 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.2 MG/KG	<1.2 MG/KG	<1.2 MG/KG
(MDL)	*(1.3)*	*(1.1)*	*(1.1)*	*(1.1)*	*(1.1)*	*(1.2)*	*(1.2)*	*(1.2)*
As -S-GFA-HOU	5.4 MG/KG	2.8 MG/KG	2.5 MG/KG	3.1 MG/KG	3.6 MG/KG	5.6 MG/KG	5.2 MG/KG	2.8 MG/KG
(MDL)	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*
Ba -S-ICP-HOU	470 MG/KG	250 MG/KG	230 MG/KG	220 MG/KG	210 MG/KG	540 MG/KG	470 MG/KG	280 MG/KG
(MDL)	*(2.5)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.3)*	*(2.5)*	*(2.4)*	*(2.3)*
Cd -S-ICP-HOU	<2.5 MG/KG	<2.2 MG/KG	<2.2 MG/KG	<2.2 MG/KG	<2.3 MG/KG	<2.5 MG/KG	<2.4 MG/KG	<2.3 MG/KG
(MDL)	*(2.5)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.3)*	*(2.5)*	*(2.4)*	*(2.3)*
Cr -S-ICP-HOU	12 MG/KG	3.6 MG/KG	10 MG/KG	6.8 MG/KG	5.6 MG/KG	16 MG/KG	14 MG/KG	8.5 MG/KG
(MDL)	*(2.5)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.3)*	*(2.5)*	*(2.4)*	*(2.3)*
Hg -S- -HOU	0.1 MG/KG	<0.06 MG/KG	<0.06 MG/KG	<0.06 MG/KG	<0.06 MG/KG	0.2 MG/KG	0.2 MG/KG	<0.06 MG/KG
(MDL)	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*
Pb -S-ICP-HOU	150 MG/KG	12 MG/KG	11 MG/KG	18 MG/KG	17 MG/KG	170 MG/KG	160 MG/KG	12 MG/KG
(MDL)	*(6.3)*	*(5.6)*	*(5.6)*	*(5.6)*	*(5.7)*	*(6.2)*	*(6.1)*	*(5.8)*
Se -S-GFA-HOU	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG
(MDL)	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*
VOA -S- -HOU	--	--	--	--	ATTACHED UG/KG	--	--	--
(MDL)					*()**			

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: Jan McDaniel Date: 2-11-92 Brenda T. Davis Date: 2/11/92

CONTINUED

AnalytiKEM—Houston

Analytical Summary
02/10/92 12:18

Lab Number: A7846
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID	1	2	3	4	5	6	7	8
Field ID	YS-1A	YS-2A	YS-3A	YS-4A	YS-5A	YS-6A	YS-9A	YS-7A
Test /Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
pH -S- -HOU	8.62 UNITS	7.94 UNITS	7.87 UNITS	8.06 UNITS	8.45 UNITS	8.05 UNITS	7.97 UNITS	9.44 UNITS
(MDL)	*(0.01)*	*(0.01)*	*(0.01)*	*(0.01)*	*(0.01)*	*(0.01)*	*(0.01)*	*(0.01)*

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: [signature] Date: 2/7/92 [signature] Date: 2/11/92

****** CONTINUED ******

AnalytiKEM-Houston

Analytical Summary
02/10/92 12:18

Lab Number: A7846
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*	9 YS-8A SOIL	10 LA-1A SOIL	11 DT-1A SOIL	12 DT-2A SOIL	13 DT-2B SOIL	14 YS-10A SOIL	15 TRIP BLANK LIQUID	16 EQUIP. BLANK LIQUID
Ag - - -HOU	--	--	--	--	--	--	--	<0.01 MG/L
(MDL)								*(0.01)*
Ag -S- -HOU	<1.2 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.1 MG/KG	<1.1 MG/KG	--	--
(MDL)	*(1.2)*	*(1.1)*	*(1.1)*	*(1.1)*	*(1.1)*	*(1.1)*		
As - -GFA-HOU	--	--	--	--	--	--	--	<0.005 MG/L
(MDL)								*(0.005)*
As -S-GFA-HOU	2.6 MG/KG	2.9 MG/KG	3.5 MG/KG	3.5 MG/KG	4.6 MG/KG	3.6 MG/KG	--	--
(MDL)	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*		
BNA - - -HOU	--	--	--	--	--	--	--	ATTACHED UG/L
(MDL)								*()**
BNA -S- -HOU	--	--	--	ATTACHED UG/KG	--	--	--	--
(MDL)				*()**				
Ba - -ICP-HOU	--	--	--	--	--	--	--	<0.02 MG/L
(MDL)								*(0.02)*
Ba -S-ICP-HOU	120 MG/KG	180 MG/KG	250 MG/KG	200 MG/KG	300 MG/KG	300 MG/KG	--	--
(MDL)	*(2.3)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.1)*		
Cd - -ICP-HOU	--	--	--	--	--	--	--	<0.010 MG/L
(MDL)								*(0.010)*

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: Joann Coale Date: 2/7/92 Brenda T. Gaskie Date: 2/11/92

****** CONTINUED ******

AnalytiKEM—Houston

Analytical Summary
02/10/92 12:18

Lab Number: A7846
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*	9 YS-8A SOIL	10 LA-1A SOIL	11 DT-1A SOIL	12 DT-2A SOIL	13 DT-2B SOIL	14 YS-10A SOIL	15 TRIP BLANK LIQUID	16 EQUIP. BLANK LIQUID
Cd -S-ICP-HOU	<2.3 MG/KG	<2.2 MG/KG	<2.2 MG/KG	<2.2 MG/KG	<2.2 MG/KG	<2.1 MG/KG	--	--
(MDL)	*(2.3)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.1)*		
Cr - -ICP-HOU	--	--	--	--	--	--	--	<0.02 MG/L
(MDL)								*(0.02)*
Cr -S-ICP-HOU	14 MG/KG	7.3 MG/KG	2.8 MG/KG	5.2 MG/KG	2.4 MG/KG	4.6 MG/KG	--	--
(MDL)	*(2.3)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.2)*	*(2.1)*		
Hg - - -HOU	--	--	--	--	--	--	--	<0.001 MG/L
(MDL)								*(0.001)*
Hg -S- -HOU	<0.06 MG/KG	0.2 MG/KG	<0.05 MG/KG	<0.05 MG/KG	<0.05 MG/KG	<0.05 MG/KG	--	--
(MDL)	*(0.06)*	*(0.06)*	*(0.05)*	*(0.05)*	*(0.05)*	*(0.05)*		
Pb - -ICP-HOU	--	--	--	--	--	--	--	<0.02 MG/L
(MDL)								*(0.02)*
Pb -S-ICP-HOU	14 MG/KG	16 MG/KG	6.8 MG/KG	13 MG/KG	9.2 MG/KG	49 MG/KG	--	--
(MDL)	*(5.7)*	*(5.6)*	*(5.4)*	*(5.4)*	*(5.4)*	*(5.3)*		
Se - -GFA-HOU	--	--	--	--	--	--	--	<0.005 MG/L
(MDL)								*(0.005)*
Se -S-GFA-HOU	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	<0.3 MG/KG	--	--
(MDL)	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*	*(0.3)*		

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: Joann Hood Date: 2/11/92 Brenda P. Jaime Date: 2/11/92

****** CONTINUED ******

AnalytiKEM—Houston

Analytical Summary
02/10/92 12:18

Lab Number: A7846
Project: 1009-001-164
Brown Maroney Hobbs-Marland

Lab ID / *Field ID* / *Test /Matrix*	9 YS-8A SOIL	10 LA-1A SOIL	11 DT-1A SOIL	12 DT-2A SOIL	13 DT-2B SOIL	14 YS-10A SOIL	15 TRIP BLANK LIQUID	16 EQUIP. BLANK LIQUID
VOA - - -HOU *(MDL)*	--	--	--	--	--	--	ATTACHED UG/L *()**	ATTACHED UG/L *()**
VOA -S- -HOU *(MDL)*	--	--	--	ATTACHED UG/KG *()**	--	--	--	--
pH -S- -HOU *(MDL)*	8.22 UNITS *(0.01)*	8.03 UNITS *(0.01)*	8.51 UNITS *(0.01)*	8.24 UNITS *(0.01)*	8.29 UNITS *(0.01)*	8.12 UNITS *(0.01)*	--	--

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: Joan M. Davis Date: 2/7/92 Brenda K. Davila Date: 2/11/92

AnalytiKEM—Houston

Analytical Report
02/10/92 12:19

Brown Maroney Hobbs-Marland	Field ID: YS-1A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 1	Time Sampled: 1000
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.3	MG/KG	1.3	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	5.4	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	470	MG/KG	2.5	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.5	MG/KG	2.5	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	12	MG/KG	2.5	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.1	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	150	MG/KG	6.3	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.62	UNITS	0.01	01/28/92 800

AnalytiKEM-Houston

Analytical Report
02/10/92 12:19

Brown Maroney Hobbs-Marland	Field ID: YS-2A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 2	Time Sampled: 1030
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	2.8	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	250	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	3.6	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	12	MG/KG	5.6	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.94	UNITS	0.01	01/28/92 800

AnalytiKEM-Houston

Analytical Report
02/10/92 12:19

Brown Maroney Hobbs-Marland	Field ID: YS-3A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 3	Time Sampled: 1100
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	2.5	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	230	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	10	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	11	MG/KG	5.6	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.87	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:19

Brown Maroney Hobbs-Marland	Field ID: YS-4A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 4	Time Sampled: 1115
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.1	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	220	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	6.8	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	18	MG/KG	5.6	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.06	UNITS	0.01	01/28/92 800

AnalytiKEM-Houston

Analytical Report
02/10/92 12:19

Brown Maroney Hobbs-Marland	Field ID: YS-5A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 5	Time Sampled: 1130
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.6	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	210	MG/KG	2.3	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.3	MG/KG	2.3	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	5.6	MG/KG	2.3	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	17	MG/KG	5.7	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
VOA -S- -HOU VOLATILE ORGANICS ON SOLID EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/KG		01/27/92

*1 SEE ANALYTIKEM ID #A7846-5

***** CONTINUED *****

AnalytiKEM—Houston

Analytical Report
02/10/92 12:20

Brown Maroney Hobbs-Marland	Field ID: YS-5A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 5	Time Sampled: 1130
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.45	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:20

Brown Maroney Hobbs-Marland	Field ID: YS-6A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 6	Time Sampled: 1315
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	5.6	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	540	MG/KG	2.5	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.5	MG/KG	2.5	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	16	MG/KG	2.5	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.2	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	170	MG/KG	6.2	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.05	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:20

Brown Maroney Hobbs-Marland	Field ID: YS-9A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 7	Time Sampled: 1315
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	5.2	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	470	MG/KG	2.4	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.4	MG/KG	2.4	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	14	MG/KG	2.4	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.2	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	160	MG/KG	6.1	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	7.97	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:20

Brown Maroney Hobbs-Marland	Field ID: YS-7A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 8	Time Sampled: 1330
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	2.8	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	280	MG/KG	2.3	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.3	MG/KG	2.3	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	8.5	MG/KG	2.3	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	12	MG/KG	5.8	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	9.44	UNITS	0.01	01/28/92 800

AnalytiKEM-Houston

Analytical Report
02/10/92 12:20

Brown Maroney Hobbs-Marland	Field ID: YS-8A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 9	Time Sampled: 1345
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.2	MG/KG	1.2	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	2.6	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	120	MG/KG	2.3	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.3	MG/KG	2.3	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	14	MG/KG	2.3	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.06	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	14	MG/KG	5.7	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.22	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:21

Brown Maroney Hobbs-Marland	Field ID: LA-1A	Date Sampled: 01/21/92
Proj. No.: 1009-001-164	Lab ID: 10	Time Sampled: 1500
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	2.9	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	180	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	7.3	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	0.2	MG/KG	0.06	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	16	MG/KG	5.6	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.03	UNITS	0.01	01/28/92 800

AnalytiKEM-Houston

Analytical Report
02/10/92 12:21

Brown Maroney Hobbs-Marland	Field ID: DT-1A	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 11	Time Sampled: 900
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.5	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	250	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	2.8	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.05	MG/KG	0.05	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	6.8	MG/KG	5.4	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.51	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:21

Brown Maroney Hobbs-Marland	Field ID: DT-2A	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 12	Time Sampled: 1000
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.5	MG/KG	0.3	01/30/92 650
BNA -S- -HOU SEMIVOLATILE ORGANICS/SOLID EPA SW-846: 3550,8270, SON.,GC/MS	ATTACHED *1	UG/KG		Ext.: 01/31/92 Anal.: 02/04/92
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	200	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	5.2	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.05	MG/KG	0.05	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	13	MG/KG	5.4	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650

*1 SEE ANALYTIKEM ID #A7846-12

***** CONTINUED *****

AnalytiKEM—Houston

Analytical Report
02/10/92 12:21

Brown Maroney Hobbs-Marland	Field ID: DT-2A	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 12	Time Sampled: 1000
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
VOA -S- -HOU VOLATILE ORGANICS ON SOLID EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/KG		Ext.: 02/04/92 Anal.: 02/04/92
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.24	UNITS	0.01	01/28/92 800

*1 SEE ANALYTIKEM ID #A7846-12

AnalytiKEM—Houston

Analytical Report
02/10/92 12:21

Brown Maroney Hobbs-Marland	Field ID: DT-2B	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 13	Time Sampled: 1145
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	4.6	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	300	MG/KG	2.2	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.2	MG/KG	2.2	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	2.4	MG/KG	2.2	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.05	MG/KG	0.05	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	9.2	MG/KG	5.4	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.29	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:22

Brown Maroney Hobbs-Marland	Field ID: YS-10A	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 14	Time Sampled: 1215
Lab No.: A7846	Matrix: SOIL (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag -S- -HOU SILVER ON SOLID EPA SW-846: 3050, 7760, AA	<1.1	MG/KG	1.1	01/30/92 1630
As -S-GFA-HOU ARSENIC ON SOLID EPA SW-846: 7060, GRAPHITE FURNACE	3.6	MG/KG	0.3	01/30/92 650
Ba -S-ICP-HOU BARIUM ON SOLID EPA SW-846: 3050,6010, ICP	300	MG/KG	2.1	01/30/92 752
Cd -S-ICP-HOU CADMIUM ON SOLID EPA SW-846: 3050,6010, ICP	<2.1	MG/KG	2.1	01/30/92 752
Cr -S-ICP-HOU CHROMIUM ON SOLID EPA SW-846: 3050,6010, ICP	4.6	MG/KG	2.1	01/30/92 752
Hg -S- -HOU MERCURY ON SOLID EPA SW-846: 7471, COLD VAPOR	<0.05	MG/KG	0.05	02/03/92 825
Pb -S-ICP-HOU LEAD ON SOLID EPA SW-846: 3050,6010, ICP	49	MG/KG	5.3	01/30/92 752
Se -S-GFA-HOU SELENIUM ON SOLID EPA SW-846: 7740, GRAPHITE FURNACE	<0.3	MG/KG	0.3	01/30/92 650
pH -S- -HOU pH ON SOLID EPA SW-846: 9045	8.12	UNITS	0.01	01/28/92 800

AnalytiKEM—Houston

Analytical Report
02/10/92 12:22

Brown Maroney Hobbs-Marland	Field ID: TRIP BLANK	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 15	Time Sampled: 1315
Lab No.: A7846	Matrix: LIQUID (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
VOA - - -HOU VOLATILE ORGANIC ANALYSES EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/L		01/28/92

*1 SEE ANALYTIKEM ID #A7846-15

AnalytiKEM-Houston

Analytical Report
02/10/92 12:22

Brown Maroney Hobbs-Marland	Field ID: EQUIP. BLANK	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 16	Time Sampled: 1300
Lab No.: A7846	Matrix: LIQUID (GRAB)	Date Received:01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag - - -HOU SILVER EPA SW-846: 7760, ATOMIC ABSORPTION	<0.01	MG/L	0.01	01/30/92 1620
As - -GFA-HOU ARSENIC EPA SW-846: 7060, GRAPHITE FURNACE	<0.005	MG/L	0.005	01/30/92 650
BNA - - -HOU SEMIVOLATILE ORGANICS EPA SW-846: 3520,8270, LLE,GC/MS	ATTACHED *1	UG/L		Ext.: 01/29/92 Anal.:02/01/92
Ba - -ICP-HOU BARIUM EPA SW-846: 6010, ICP	<0.02	MG/L	0.02	01/30/92 752
Cd - -ICP-HOU CADMIUM EPA SW-846: 6010, ICP	<0.010	MG/L	0.010	01/30/92 752
Cr - -ICP-HOU CHROMIUM EPA SW-846: 6010, ICP	<0.02	MG/L	0.02	01/30/92 752
Hg - - -HOU MERCURY EPA SW-846: 7470, COLD VAPOR	<0.001	MG/L	0.001	02/03/92 825
Pb - -ICP-HOU LEAD EPA SW-846: 6010, ICP	<0.02	MG/L	0.02	01/30/92 752
Se - -GFA-HOU SELENIUM EPA SW-846: 7740, GRAPHITE FURNACE	<0.005	MG/L	0.005	01/30/92 650

*1 SEE ANALYTIKEM ID #A7846-16

***** CONTINUED *****

AnalytiKEM—Houston

Analytical Report
02/10/92 12:22

Brown Maroney Hobbs-Marland	Field ID: EQUIP. BLANK	Date Sampled: 01/22/92
Proj. No.: 1009-001-164	Lab ID: 16	Time Sampled: 1300
Lab No.: A7846	Matrix: LIQUID (GRAB)	Date Received: 01/24/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
VOA - - -HOU VOLATILE ORGANIC ANALYSES EPA SW-846: 8240, GC/MS	ATTACHED *1	UG/L		01/28/92

*1 SEE ANALYTIKEM ID #A7846-16

ANALYTIKEM – HOUSTON

SILVER QUALITY CONTROL LOG

EPA SW-846:7760, AA

DATE/TIME OF ANALYSIS: 30JAN92/1620 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7846-1-7th			SAMPLE BLANK	
A7846-16			METHOD BLANK	
A7846-IT			EPA-2 P.E. STD.	1.034/1.00
A7854-IT			CCNS ~~INTERNAL~~ STD.	0.777/0.750

MATRIX SPIKE	PRECISION		MS DUPLICATE	ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A7846-MB	106	—	—	0.100	0.106	106	—	—
A7846-16	107	111	367		0.107	107	0.111	111
A7846-MB	(5) 102	—	-		0.102	102	—	—
A7846-4	(5) 100	(5) 99	(5) 1.00		0.100	100	0.099	99
A7846-1th	(5) 103	(5) 104	0.97		0.103	103	0.104	104
A7854 A7844-MB	102	—	—		0.102	102	—	—
A7844-EXT BLK	99	—	—		0.099	99	—	—
A7844-IT	101	—	—		0.101	101	—	—
A7854-EXT BLK	99	—	—		0.099	99	—	—
A7854-IT	96	—	—		0.096	96	—	—

CONTROL LIMITS: AQUEOUS, 9–12 %RPD, 78–116 %REC.

SOLIDS, SAME %RPD, SAME %REC.

0 OUT OF 3 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 13 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: [signature] ITM QA/QC: Delinna M. Senegal

5000 PC

ANALYTIKEM – HOUSTON

ARSENIC QUALITY CONTROL LOG

EPA SW-846:7060, AA

DATE/TIME OF ANALYSIS: 30 JAN 92/0650 PAGE 1 OF 1

LAB NUMBER-SAMPLE	COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7846-1→14, 16		SAMPLE BLANK	
		METHOD BLANK	
		EPA 378-6 P.E. STD.	0.0241 / 0.023
		INTERNAL STD.	0.0775 / 0.0750
		MDL	0.0051 / 0.0050

MATRIX SPIKE / PRECISION / MS DUPLICATE				ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A7846-MB	77 (5)	—	—	0.04	0.0309	77	—	—
A7846-4	73 (5)	79	7.89		0.0292	73	0.0315	79
A7846-14	52 * (5)	67 *	25.21		0.0207	52 *	0.0267	67 *
A7846-16	70 * (5)	70 * (5)	0		0.0280	70 *	0.0280	70 *

CONTROL LIMITS: AQUEOUS, 21–28 %RPD, 76–116 %REC * out of control

SOLIDS, SAME %RPD, SAME %REC

QMS 4.3 2 OUT OF 3 DUPLICATES WERE OUTSIDE OF QC LIMITS

4 OUT OF 7 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: [signature] JAN 31 PM QA/QC: [signature]

ANALYTIKEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 30JAN92/0752 EPA SW-846:6010 PAGE 1 OF 2

LAB ID	A7846 - 1→14,16						
NOs							

PARAMETER		Pb	Cd	Cr	Ba							
PE	ERA-3	1.07/1.00	1.05/1.00	1.03/1.00	1.03/1.00							
STDS												
A7846-MB (4) MS/MSD %REC		105	107	106	101							
%RPD												
SPIKE AMT.		1.0	0.1	0.2	2.0							
A7846-16 (4) MS/MSD %REC		105/113	106/110	104/106	100/100							
%RPD		7.3	3.7	1.9	0							
SPIKE AMT.		1.0	0.1	0.2	2.0							
A7846-MB(5) MS/MSD %REC		93	97	96	97							
%RPD												
SPIKE AMT.		1.0	0.1	0.2	2.0							
A7846-14 4(5) MS/MSD %REC		77/76	101/98	98/106	85/84							
%RPD		1.3	3.0	7.8	1.2							
SPIKE AMT.		1.0	0.1	0.2	2.0							

CONTROL LIMITS:

AQUEOUS	%RPD.	16	15	16	13							
	%REC.	111→75	109→78	111→77	115→75							
SOLIDS	%RPD.	17	16	17	14							
	%REC.	117→71	115→74	117→73	121→71							

0 OUT OF 8 DUPLICATES WERE OUTSIDE OF QC LIMITS
0 OUT OF 24 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: _____

ANALYST: Carmen Mathis QA/QC: DeAnna M. Senegal

ANALYTIKEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 30JAN92/0752 EPA SW-846:6010 PAGE 2 OF 2

	Pb	Cd	Cr	Ba							
A7846-14 (S) S/MSD %REC	79/86	89/97	96/89	78/88							
%RPD	8.4	8.6	7.6	12							
SPIKE AMT.	1.0	0.1	0.2	2.0							
S/MSD %REC											
%RPD											
SPIKE AMT.											
S/MSD %REC											
%RPD											
SPIKE AMT.											
S/MSD %REC											
%RPD											
SPIKE AMT.											
MS/MSD %REC											
%RPD											
SPIKE AMT.											
MS/MSD %REC											
%RPD											
SPIKE AMT.											

CONTROL LIMITS:

AQUEOUS	%RPD											
	%REC.											
SOLIDS	%RPD	17	16	17	14							
	%REC.	117->71	115->74	117->73	121->74							

0 OUT OF 4 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 8 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: _____

ANALYST: James Matthew JAN 31 A.M. QA/QC: Delinna M. Senegal

ANALYTIKEM – HOUSTON

MERCURY QUALITY CONTROL LOG

EPA SW-846:7470, 7471 AA

DATE/TIME OF ANALYSIS: 3 Feb 92 / 0825 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7844-1T		A7861-2 MS + MSD were out of control, therefore another MOA was Run.	SAMPLE BLANK	
A7854-1T			METHOD BLANK	
A7846-16			EKA 1085-1 P.E. STD.	0.0104 / 0.0100
A7861-1-3			INTERNAL STD.	0.0073 / 0.0075
A7846-1-14			MDL	0.0010 / 0.0010

MATRIX SPIKE	PRECISION		MS DUPLICATE	ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
Blank	110	—	—	0.0050	0.0055	110	—	—
A7854-1T EX BLK (B)	102	—	—		0.0051	102	—	—
A7846-16 (A)	112	114	1.77		0.0056	112	0.0057	114
A7846-3 (C)	98	100	2.02		0.0049	98	0.0050	100
A7846-14 (S)	118	120	1.68		0.0059	118	0.0060	120
A7861-2 (S)	*		*		*		*	

CONTROL LIMITS: AQUEOUS, 11-15 %RPD, 81-123 %REC * out of control

SOLIDS, SAME %RPD, SAME %REC

1 OUT OF 4 DUPLICATES WERE OUTSIDE OF QC LIMITS

2 OUT OF 10 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: [signature] QA/QC: Virginia M. Perrigan

Z3030

ANALYTIKEM – HOUSTON

SELENIUM QUALITY CONTROL LOG

EPA SW-846:7740, GFAA

PE Z 3030

DATE/TIME OF ANALYSIS: 30 JAN 92/0650 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A7846 -1->14, 16		* out of control - MSA performed	SAMPLE BLANK	0.0026 / 0.0000
			METHOD BLANK	0.0000 / 0.0000
			P.E. STD.	0.0508 / 0.0500
			INTERNAL STD.	

MATRIX SPIKE	PRECISION	MS DUPLICATE		ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A7846-MB (5)	93			0.02	0.0186	93		
A7846-4 (3)	90	67*	29*		0.0181	90	0.0134	67
A7846-14 (5)	76	80	5.1		0.0152	76	0.0159	80
A7846-MB (L)	89				0.0178	89		
A7846-16 (L)	90	103	13	↓	0.0180	90	0.0206	103

CONTROL LIMITS: AQUEOUS, 15–20 %RPD, 75–116 %REC.

SOLIDS, SAME %RPD, SAME %REC.

1 OUT OF 3 DUPLICATES WERE OUTSIDE OF QC LIMITS

1 OUT OF 8 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: James Mathis QA/QC: Belinda M. Gregg

AnalytikEM-Houston

QUALITY CONTROL LOG

Parameter: pH on solid

Method of Analysis: EPA SW-846, 9045

Page: 1 of 1

Matrix: Soil

Date/Time: 1-28-92/0800

Lab Numbers	Detection Limits
A7846-1(1-14)	0.01 units

Calibration Stds./Blk	Absorbance/Conc.
Buffer 10.00	2 pt. Cal.
4.00	

Correlation Coefficient:

Comments:

Check Standards	Concentration Found/True
Sample Blank	EE'm
Method Blank	EE'm
P.E. Std.	EE'm
Internal Std. Buffer 7.00	7.03 units EE'm
Buffer 700 ccds	7.04 units
	7.05 units

Internal Quality Control Duplicates and Spikes

* Below MDL

Lab No. - Sample ID	Sample Conc.	Duplicate Conc.	Range	Percent RPD	Spiked Result	Sample Result	Spike Added	Percent Recovery
A7846-1	8.62	8.63	0.01	0.1				
A7846-11	8.51	8.51	0	0				

Analyst: Eselwin

QA/QC Approval:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: A7846-5
Client Sample ID: YS-5A

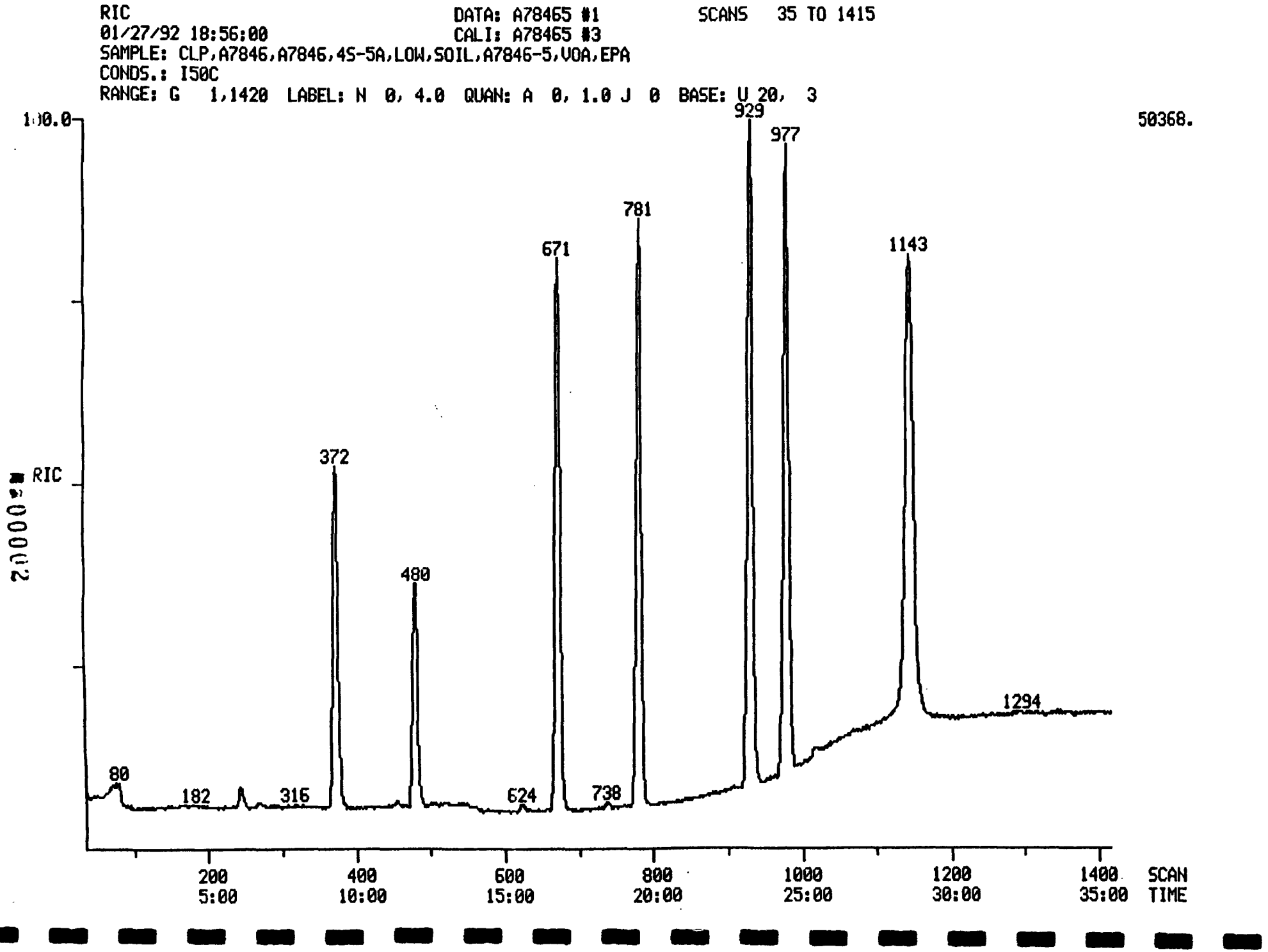
Concentration: LOW
Sample Matrix: SOIL
Percent Moisture: 13.8

Date Extracted: 01/27/92
Date Analyzed: 01/27/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	12	<	78-87-5	1,2-Dichloropropane	6	<
74-83-9	Bromomethane	12	<	10061-01-5	cis-1,3-Dichloropropene	6	<
75-01-4	Vinyl Chloride	12	<	79-01-6	Trichloroethene	6	<
75-00-3	Chloroethane	12	<	124-48-1	Dibromochloromethane	6	<
75-09-2	Methylene Chloride	6	<	79-00-5	1,1,2-Trichloroethane	6	<
67-64-1	Acetone	14	B	71-43-2	Benzene	6	<
75-15-0	Carbon Disulfide	6	<	10061-02-6	Trans-1,3-Dichloropropene	6	<
75-35-4	1,1-Dichloroethene	6	<	110-75-8	2-Chloroethylvinyl ether	12	<
75-34-3	1,1-Dichloroethane	6	<	75-25-2	Bromoform	6	<
156-60-5	trans-1,2-Dichloroethene	6	<	108-10-1	4-Methyl-2-Pentanone	12	<
67-66-3	Chloroform	6	<	591-78-6	2-Hexanone	12	<
107-06-2	1,2-Dichloroethane	6	<	127-18-4	Tetrachloroethene	6	<
78-93-3	2-Butanone	12	B<	79-34-5	1,1,2,2-Tetrachloroethane	6	<
71-55-6	1,1,1-Trichloroethane	6	<	108-88-3	Toluene	6	<
56-23-5	Carbon Tetrachloride	6	<	108-90-7	Chlorobenzene	6	<
108-05-4	Vinyl Acetate	12	<	100-41-4	Ethylbenzene	6	<
75-27-4	Bromodichloromethane	6	<	100-42-5	Styrene	6	<
				1330-20-7	Xylene (total)	6	<

The Lab ID for data on this page is A78465.
B - Compound was detected in the QC blank.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/27/92 18:56:00
DATA: A78465 #1
CALI: A78465 #3
SCANS 35 TO 1415
SAMPLE: CLP,A7846,A7846,4S-5A,LOW,SOIL,A7846-5,VOA,EPA
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
50368.
RIC
20000
80
182
316
372
480
624
671
738
781
929
977
1143
1294
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: A7846-12
Client Sample ID: DT-2A

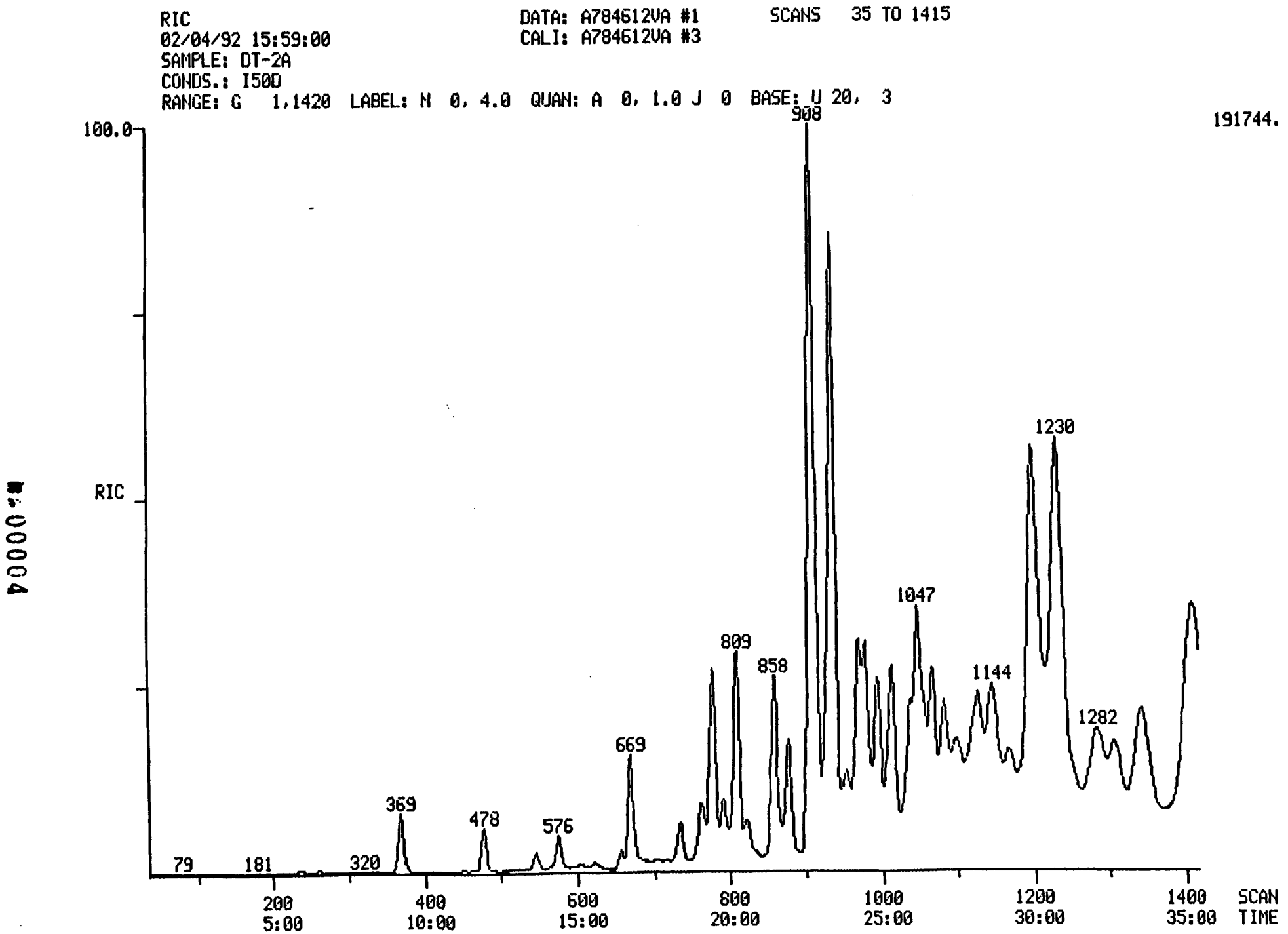
Concentration: LOW
Sample Matrix: SOIL
Percent Moisture: 3.0

Date Extracted: 02/04/92
Date Analyzed: 02/04/92
Dilution Factor: 5.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
74-87-3	Chloromethane	52	<	78-87-5	1,2-Dichloropropane	26	<
74-83-9	Bromomethane	52	<	10061-01-5	cis-1,3-Dichloropropene	26	<
75-01-4	Vinyl Chloride	52	<	79-01-6	Trichloroethene	26	<
75-00-3	Chloroethane	52	<	124-48-1	Dibromochloromethane	26	<
75-09-2	Methylene Chloride	26	<	79-00-5	1,1,2-Trichloroethane	26	<
67-64-1	Acetone	75		71-43-2	Benzene	26	<
75-15-0	Carbon Disulfide	26	<	10061-02-6	Trans-1,3-Dichloropropene	26	<
75-35-4	1,1-Dichloroethene	26	<	110-75-8	2-Chloroethylvinyl ether	52	<
75-34-3	1,1-Dichloroethane	26	<	75-25-2	Bromoform	26	<
156-60-5	trans-1,2-Dichloroethene	26	<	108-10-1	4-Methyl-2-Pentanone	730	
67-66-3	Chloroform	26	<	591-78-6	2-Hexanone	670	
107-06-2	1,2-Dichloroethane	26	<	127-18-4	Tetrachloroethene	26	<
78-93-3	2-Butanone	52	<	79-34-5	1,1,2,2-Tetrachloroethane	26	<
71-55-6	1,1,1-Trichloroethane	26	<	108-88-3	Toluene	720	
56-23-5	Carbon Tetrachloride	26	<	108-90-7	Chlorobenzene	26	<
108-05-4	Vinyl Acetate	52	<	100-41-4	Ethylbenzene	220	
75-27-4	Bromodichloromethane	26	<	100-42-5	Styrene	26	<
				1330-20-7	Xylene (total)	2400	

The Lab ID for data on this page is A784612VA.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
02/04/92 15:59:00
SAMPLE: DT-2A
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: A784612VA #1
CALI: A784612VA #3
SCANS 35 TO 1415
191744.
100.0
RIC
4.00004
908
1230
1047
809
858
1144
1282
669
369
478
576
79
181
320
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

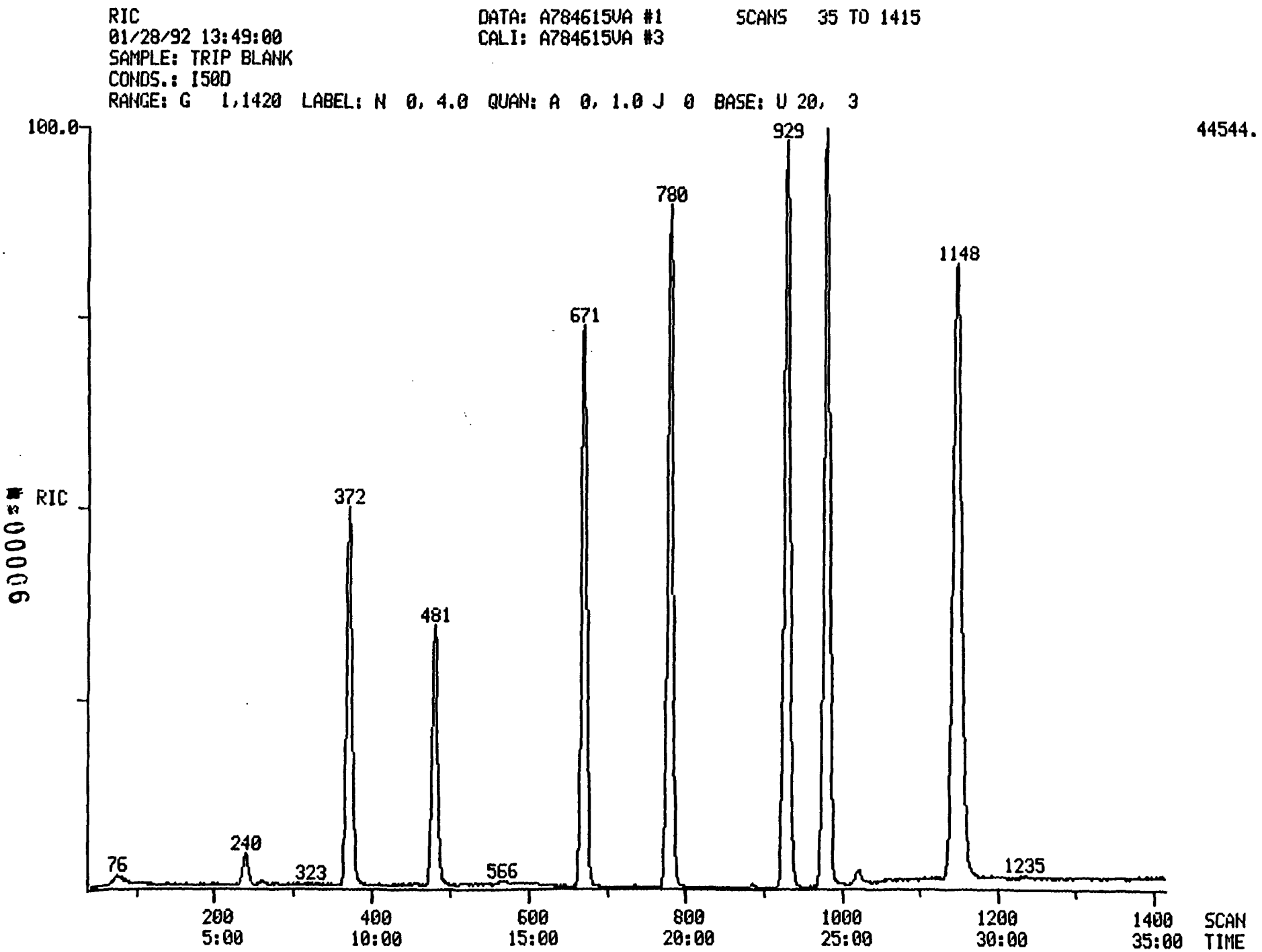
VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	01/28/92
Lab Sample ID:	A7846-15	Sample Matrix:	WATER	Date Analyzed:	01/28/92
Client Sample ID:	TRIP_BLANK	Percent Moisture:	100.0	Dilution Factor:	1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10	<	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is A784615VA.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/28/92 13:49:00
SAMPLE: TRIP BLANK
CONDS.: I50D
DATA: A784615VA #1
CALI: A784615VA #3
SCANS 35 TO 1415
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
44544.
90000
RIC
76
240
323
372
481
566
671
780
929
1148
1235
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: A7846-16
Client Sample ID: EQUIP_BLANK

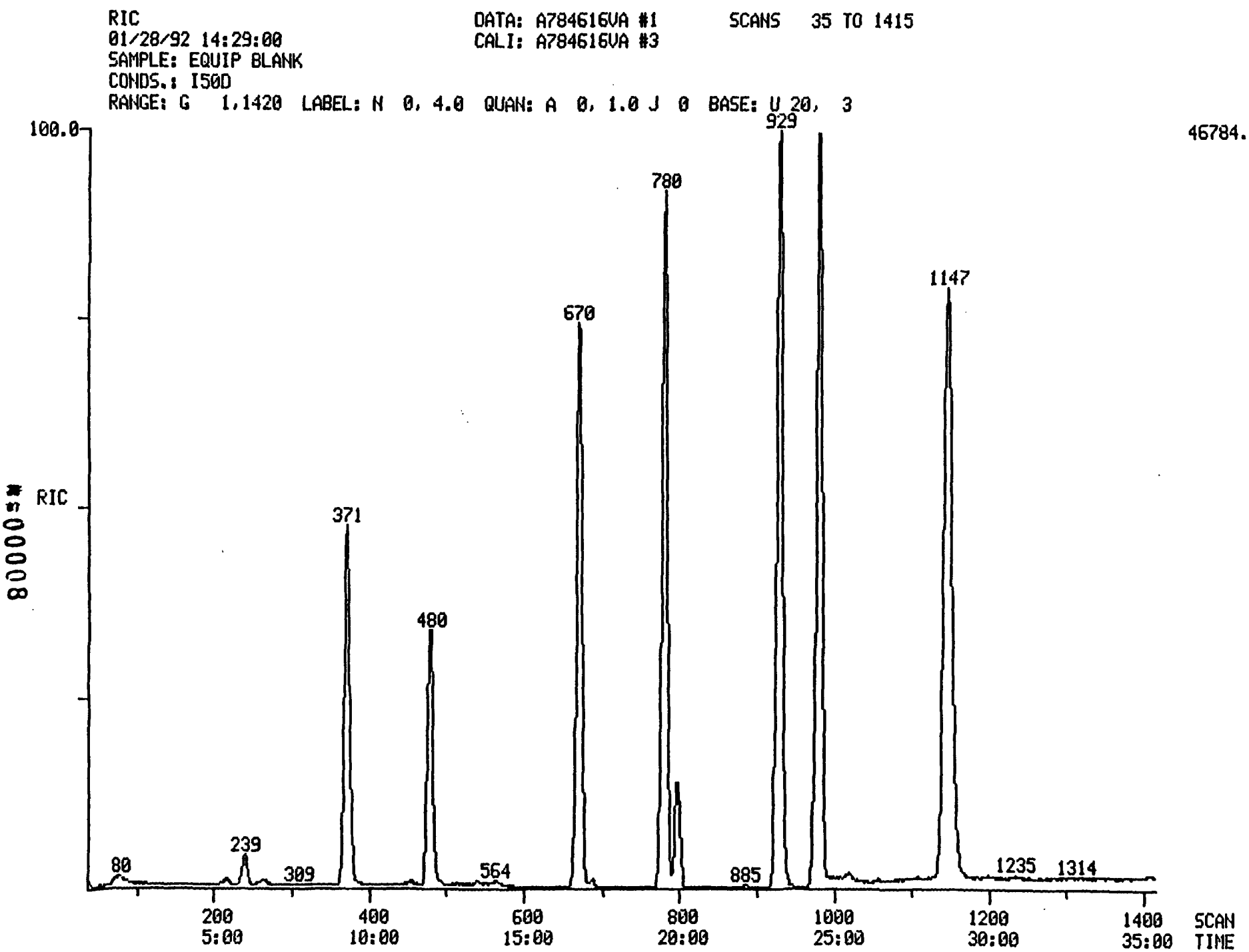
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

Date Extracted: 01/28/92
Date Analyzed: 01/28/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10	<	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	12	
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is A784616VA.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/28/92 14:29:00
SAMPLE: EQUIP BLANK
CONDS.: I50D
DATA: A784616VA #1
CALI: A784616VA #3
SCANS 35 TO 1415
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
46784.
80000**
RIC
80
239
309
371
480
564
670
780
885
929
1147
1235
1314
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

BROMOFLUOROBENZENE

Tuning Report
01/27/92 11:25:00 + 7:03
Instrument: I50C
#267 to #298 averaged - #304
Case Number:

Data: BF012792C1 # 282
Cali: BF012792C1 # 3
Analyst: RMS-MFC
Laboratory:

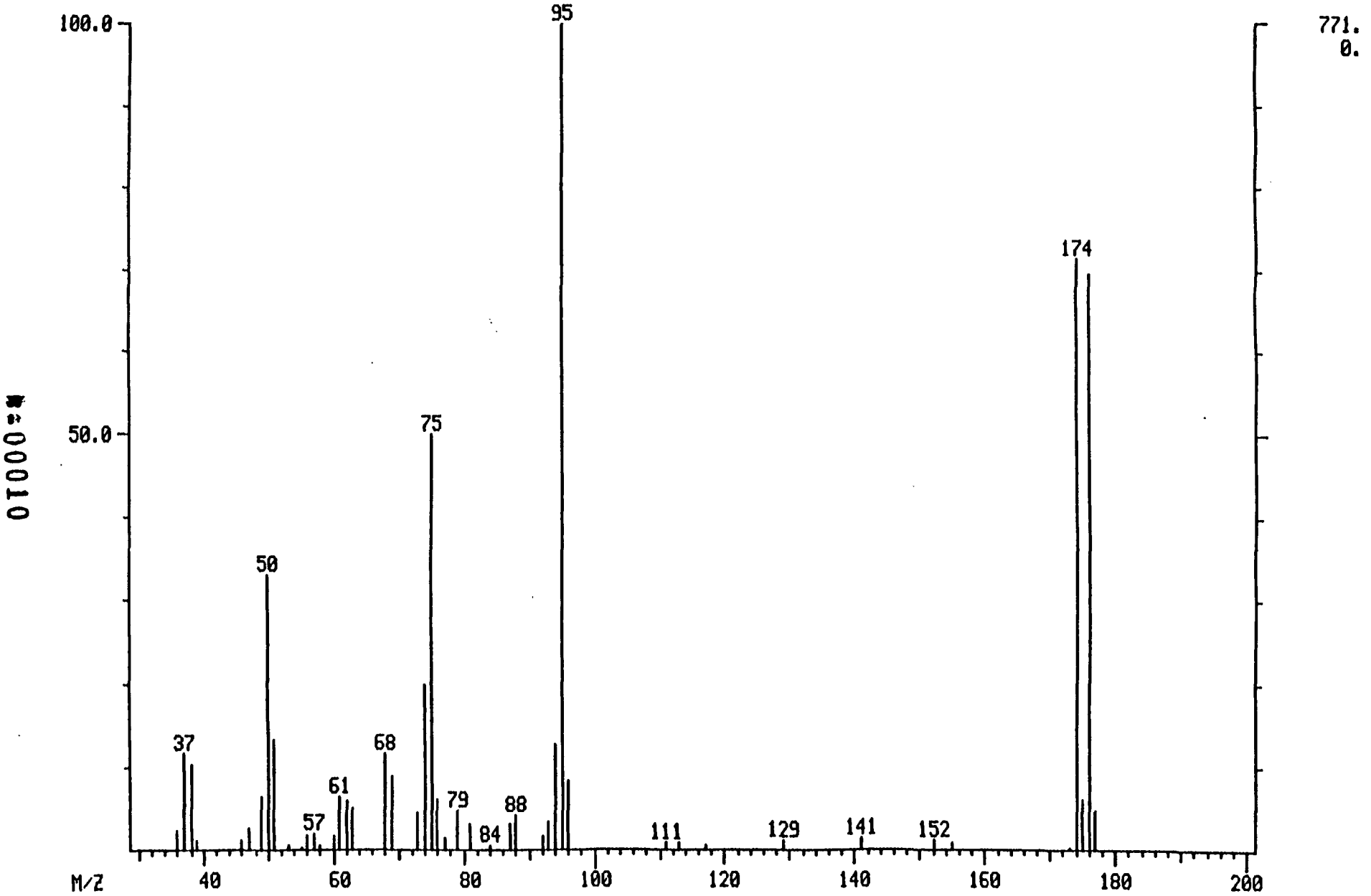
Base m/z: 95
RIC: 3932.
Acct. No.: 8506-090
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	256.	33.2	15.0	40.0	95	33.2	PASS
75	385.	49.9	30.0	60.0	95	49.9	PASS
95	771.	100.0	100.0	---	---	100.0	PASS
96	64.	8.3	5.0	9.0	95	8.3	PASS
173	2.	0.3	---	2.0	174	0.4	PASS
174	552.	71.6	50.0	---	95	71.6	PASS
175	46.	6.0	5.0	9.0	174	8.3	PASS
176	536.	69.5	95.0	101.0	174	97.1	PASS
177	36.	4.7	5.0	9.0	176	6.7	PASS

MASS SPECTRUM
01/27/92 11:25:00 + 7:03
SAMPLE: BFB CALIBRATION
CONDS.: I50C
TEMP: 225 DEG. C
#267 TO #298 AVERAGED - #304 - #260

DATA: BF012792C1 #282
CALI: BF012792C1 #3

BASE M/Z: 95
RIC: 3932.



Mass List
01/27/92 11:25:00 + 7:03
Sample: BFB CALIBRATION
Conds.: I50C
#267 to #298 averaged - #304

Data: BF012792C1 # 282
Cali: BF012792C1 # 3

Base m/z: 95
RIC: 3932.

36		0.00	0.	Minima	Min Inten:	0.
177				Maxima	# 0	
Mass		% RA	Inten.			
36?	S	2.20	17.			
37?	S	11.54	89.			
38?	S	10.12	78.			
39?	S	1.17	9.			
46?	S	1.04	8.			
47?	S	2.59	20.			
49?	S	6.36	49.			
50?	S	33.20	256.			
51?	S	13.36	103.			
53?	S	0.52	4.			
55?	S	0.26	2.			
56?	S	1.69	13.			
57?	S	1.95	15.			
58?	S	0.52	4.			
60?	S	1.56	12.			
61?	S	6.36	49.			
62?	S	5.71	44.			
63?	S	5.06	39.			
65?	S	0.13	1.			
68?	S	11.54	89.			
69	S	8.82	68.			
70	S	0.13	1.			
73	S	4.41	34.			
74	S	19.84	153.			
75	S	49.94	385.			
76	S	5.97	46.			
77	S	1.43	11.			
79	S	4.80	37.			
81	S	3.11	24.			
84	S	0.52	4.			
87	S	3.11	24.			
88	S	4.02	31.			
92	S	1.69	13.			
93	S	3.37	26.			
94	S	12.84	99.			
95	S	100.00	771.			
96	S	8.30	64.			
111	S	0.78	6.			
113	S	0.78	6.			
117	S	0.65	5.			
129	S	1.04	8.			
141	S	1.43	11.			
152	S	1.04	8.			
155	S	0.78	6.			
173	S	0.26	2.			
174	S	71.60	552.			
175	S	5.97	46.			
176	S	69.52	536.			
177	S	4.67	36.			

BROMOFLUOROBENZENE

Tuning Report
01/28/92 10:44:00 + 6:58
Instrument: I50D
#272 to #287 summed - #299
Case Number:

Data: BF012892D1 # 279
Cali: CALTAB # 3
Analyst: RMS

Laboratory:

Base m/z: 95
RIC: 104192.
Acct. No.: 8506-091

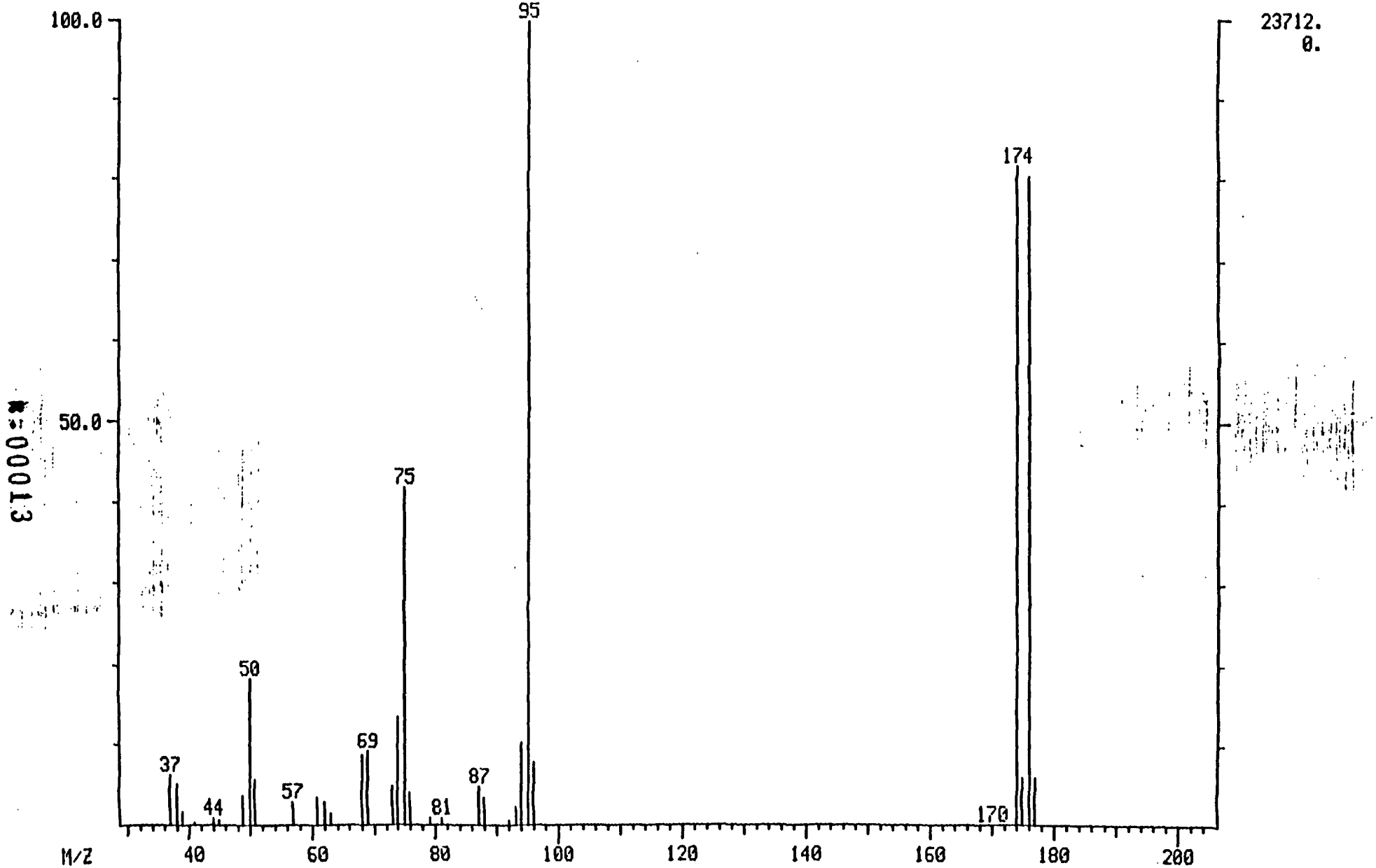
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	4344.	18.3	15.0	40.0	95	18.3	PASS
75	9968.	42.0	30.0	60.0	95	42.0	PASS
95	23712.	100.0	100.0	---	---	100.0	PASS
96	1866.	7.9	5.0	9.0	95	7.9	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	19392.	81.8	50.0	---	95	81.8	PASS
175	1408.	5.9	5.0	9.0	174	7.3	PASS
176	19072.	80.4	95.0	101.0	174	98.3	PASS
177	1364.	5.8	5.0	9.0	176	7.2	PASS

MASS SPECTRUM
01/28/92 10:44:00 + 6:58
SAMPLE: BFB 50NG
CONDS.: I50D
TEMP: 225 DEG. C
#272 TO #287 SUMMED - #299 - #268 TO #270

DATA: BF01289201 #279
CALI: CALTAB #3

BASE M/Z: 95
RIC: 104192.



Mass List
01/28/92 10:44:00 + 6:58
Sample: BFB 50NG
Conds.: I50D
#272 to #287 summed - #299

Data: BF012892D1 # 279
Cali: CALTAB # 3

Base m/z: 95
RIC: 104192.

37 0.00 0.
177

Minima Min Inten: 0.
Maxima # 0

Mass		% RA	Inten.
37?		5.95	1410.
38?		4.92	1166.
39?		1.72	407.
41?	S	0.19	46.
42?		0.06	15.
44?	S	0.74	176.
45?	S	0.61	144.
49?		3.46	821.
50?	S	18.32	4344.
51?		5.45	1292.
56?		0.13	32.
57?	S	2.87	680.
58?	S	0.13	30.
61?		3.28	777.
62?		2.64	625.
63?		1.49	353.
68?		8.67	2056.
69		9.24	2192.
73	S	4.61	1094.
74		13.58	3220.
75	S	42.04	9968.
76		3.96	938.
79		0.85	201.
81		0.94	223.
87		4.58	1086.
88	S	3.41	808.
92		0.46	110.
93		2.15	509.
94		10.14	2404.
95	S	100.00	23712.
96	S	7.87	1866.
170	S	0.13	30.
174	S	81.78	19392.
175		5.94	1408.
176	S	80.43	19072.
177		5.75	1364.

BROMOFLUOROBENZENE

Tuning Report
02/04/92 10:07:00 + 6:46
Instrument: I50D
#265 to #277 summed - #298 to #305 - #236 to #239
Case Number:

Data: BF020492D1 # 271
Cali: BF020492D1 # 3
Analyst: BPB
Laboratory:

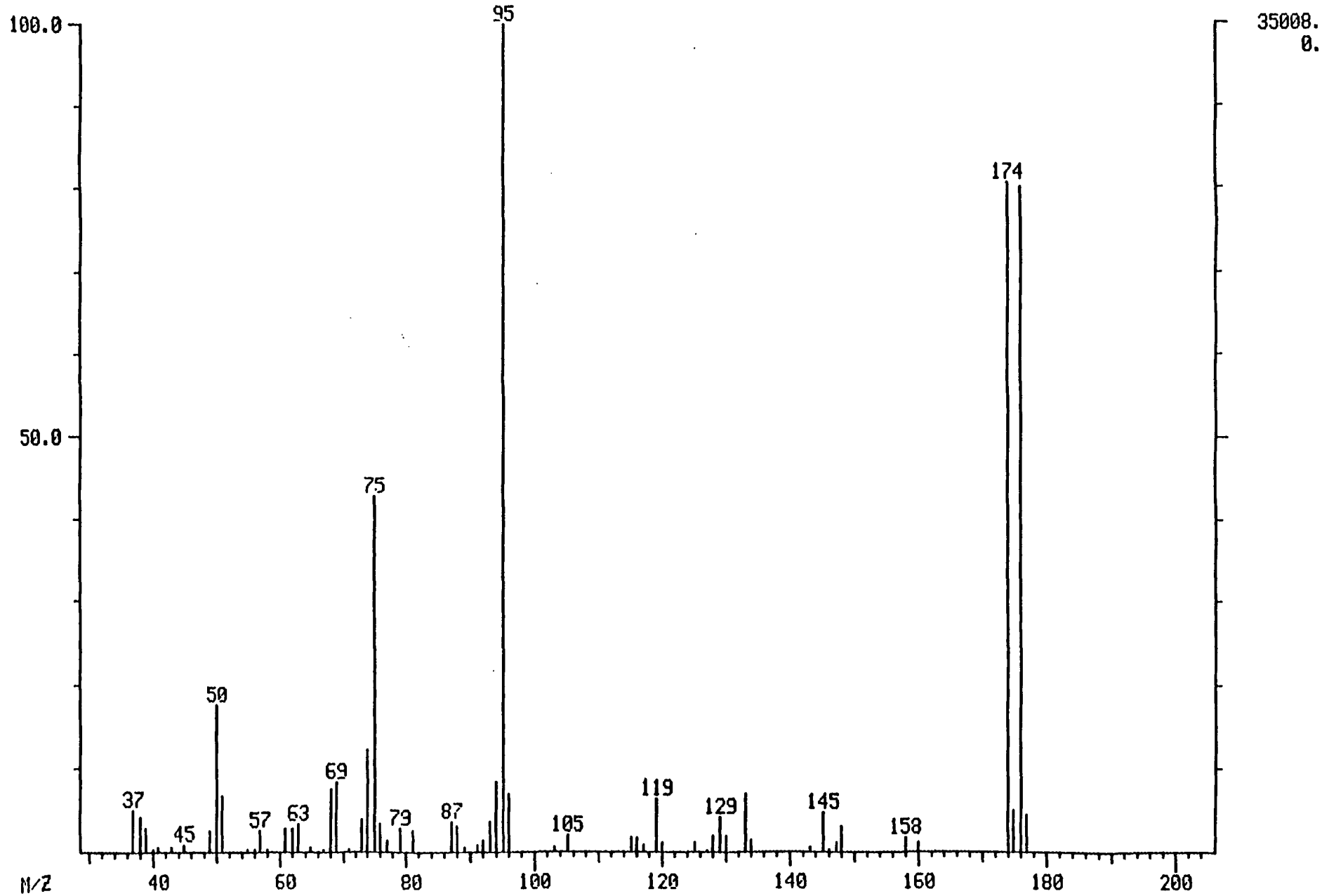
Base m/z: 95
RIC: 168960.
Acct. No.: 8506-091
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	6112.	17.5	15.0	40.0	95	17.5	PASS
75	15008.	42.9	30.0	60.0	95	42.9	PASS
95	35008.	100.0	100.0	---	---	100.0	PASS
96	2380.	6.8	5.0	9.0	95	6.8	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	28224.	80.6	50.0	---	95	80.6	PASS
175	1750.	5.0	5.0	9.0	174	6.2	PASS
176	28064.	80.2	95.0	101.0	174	99.4	PASS
177	1572.	4.5	5.0	9.0	176	5.6	PASS

MASS SPECTRUM
02/04/92 10:07:00 + 6:46
SAMPLE: BFB CALIBRATION
CONDS.: I50D
TEMP: 225 DEG. C
#265 TO #277 SUMMED - #298 TO #305 - #236 TO #239

DATA: BF020492D1 #271
CALI: BF020492D1 #3

BASE M/Z: 95
RIC: 168960.



Mass List
02/04/92 10:07:00 + 6:46
Sample: BFB CALIBRATION
Conds.: I50D
#265 to #277 summed - #298 to #305 - #236 to #239

Data: BF020492D1 # 271
Cali: BF020492D1 # 3

Base m/z: 95
RIC: 168960.

37		0.00	0.	Minima	Min	Inten:		0.
177				Maxima	#	0		
Mass		% RA	Inten.	Mass		% RA		Inten.
37?		4.92	1722.	120	S	0.99		346.
38?		4.18	1462.	125	S	1.23		431.
39?	S	2.80	979.	127	S	0.40		141.
40?	S	0.23	82.	128	S	1.95		681.
41?	S	0.46	160.	129	S	4.23		1480.
43?	S	0.64	225.	130	S	1.92		672.
44?	S	0.02	6.	133	S	6.84		2396.
45?	S	0.71	249.	134	S	1.44		504.
49?		2.62	917.	143		0.66		232.
50?		17.46	6112.	145	S	4.68		1640.
51?	S	6.50	2276.	146	S	0.26		90.
53?	S	0.08	28.	147	S	1.07		376.
55?	S	0.29	102.	148	S	2.92		1022.
56?		0.24	84.	158	S	1.75		611.
57?	S	2.61	914.	160		1.17		410.
58?	S	0.21	73.	174		80.62		28224.
61?		2.85	998.	175		5.00		1750.
62?		2.86	1001.	176		80.16		28064.
63?	S	3.42	1198.	177		4.49		1572.
65?	S	0.64	225.					
67?		0.29	103.					
68?		7.46	2612.					
69	S	8.42	2948.					
70		0.11	38.					
71	S	0.17	61.					
73		3.95	1384.					
74		12.02	4208.					
75		42.87	15008.					
76		3.42	1196.					
77	S	1.35	472.					
78	S	0.09	33.					
79	S	2.69	940.					
81	S	2.39	835.					
87		3.46	1210.					
88	S	2.97	1040.					
89	S	0.43	151.					
91	S	0.86	302.					
92	S	1.34	470.					
93		3.64	1274.					
94		8.42	2948.					
95	S	100.00	35008.					
96		6.80	2380.					
97		0.06	20.					
103	S	0.47	164.					
105	S	1.96	687.					
115	S	1.72	602.					
116	S	1.73	606.					
117	S	0.89	313.					
118	S	0.05	17.					
119	S	6.25	2188.					

CONTINUING CALIBRATION CHECK
VOLATILE HSL COMPOUNDS

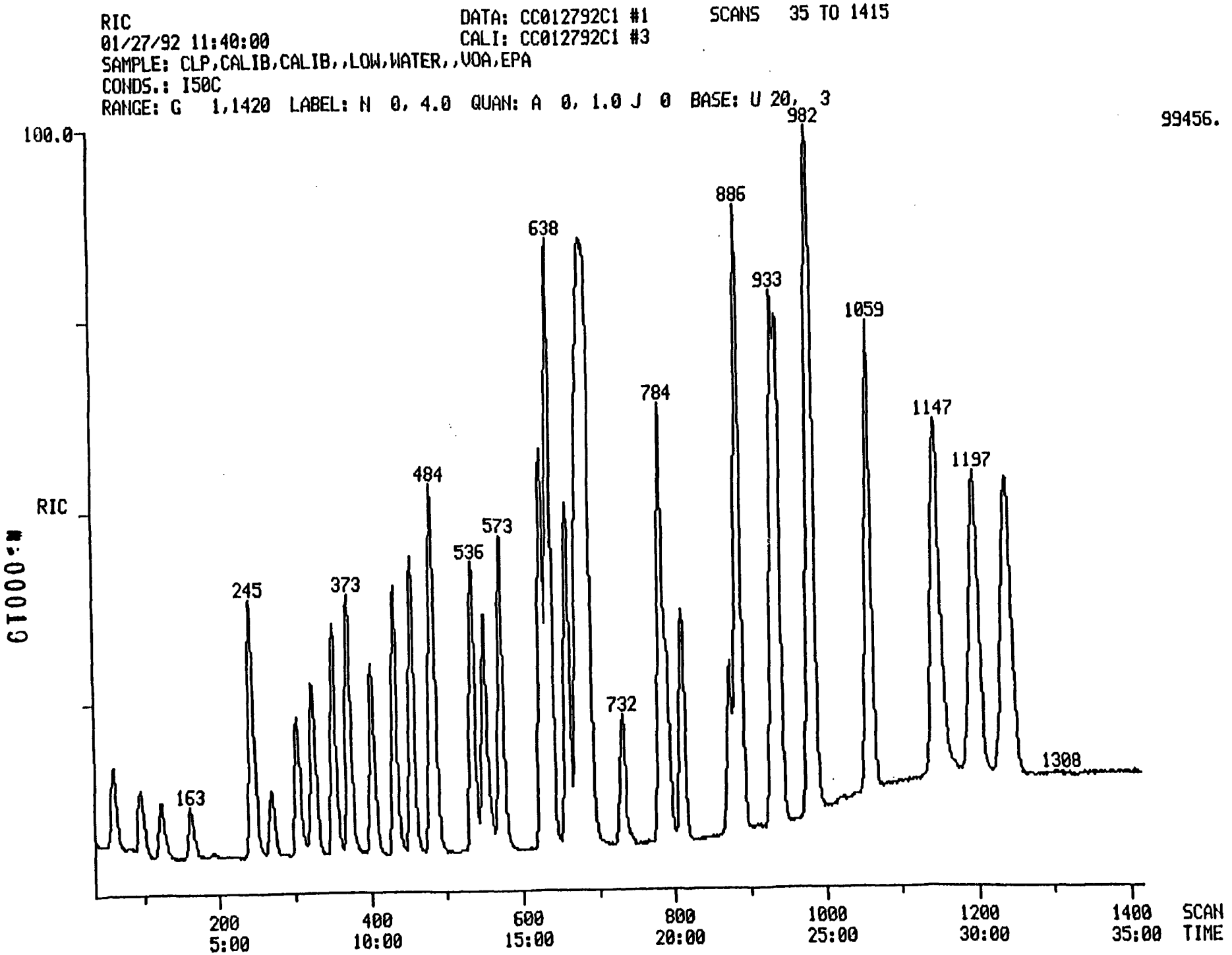
Case No: STAND Region: _____ Calibration Date: 01/27/92
Contractor: AnalytiKEM-Hou Time: 11:40
Contract No: _____ Laboratory ID: CC012792C1
Instrument ID: I50C Initial Cali. Date: 12/31/91

Minimum RF for SPCC is 0.300 (1) Maximum %D for CCC is 25%

Compound	AVE RF	RF(50)	% D	CCC	SPCC
Chloromethane	0.919	1.816	-97.6		* *
Bromomethane	1.122	0.989	11.9		
Vinyl Chloride	1.221	1.320	-8.1	*	
Chloroethane	1.114	0.897	19.5		
Methylene Chloride	1.920	1.701	11.4		
Acetone	0.739	0.656	11.2		
Carbon Disulfide	3.616	3.766	-4.1		
1,1-Dichloroethene	1.325	1.176	11.2	*	
1,1-Dichloroethane	3.620	3.187	12.0		* *
trans-1,2-Dichloroethene	1.454	1.702	-17.1		
Chloroform	3.371	3.457	-2.6	*	
1,2-Dichloroethane	2.504	2.486	0.7		
2-Butanone	0.043	0.042	2.3		
1,1,1-Trichloroethane	0.514	0.519	-1.0		
Carbon Tetrachloride	0.408	0.353	13.5		
Vinyl Acetate	0.179	0.109	39.1		
Bromodichloromethane	0.643	0.606	5.8		
1,2-Dichloropropane	0.464	0.482	-3.9	*	
cis-1,3-Dichloropropene	0.620	0.648	-4.5		
Trichloroethene	0.357	0.349	2.2		
Dibromochloromethane	0.507	0.421	17.0		
1,1,2-Trichloroethane	0.326	0.303	7.1		
Benzene	0.943	1.030	-9.2		
Trans-1,3-Dichloropropene	0.549	0.538	2.0		
Bromoform	0.464	0.295	36.4		* *
4-Methyl-2-Pentanone	0.439	0.790	-80.0		
2-Hexanone	0.864	0.581	32.8		
Tetrachloroethene	0.351	0.348	0.9		
1,1,2,2-Tetrachloroethane	0.786	0.698	11.2		* *
Toluene	0.692	0.758	-9.5	*	
Chlorobenzene	0.854	0.856	-0.2		* *
Ethylbenzene	0.425	0.453	-6.6	*	
Styrene	0.822	0.867	-5.5		
Xylene (total)	0.483	0.516	-6.8		

RF(50) - Response Factor from daily standard file at 50 ug/l
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Mininum RF for Bromoform is 0.250

Form VII


RIC
01/27/92 11:40:00
SAMPLE: CLP,CALIB,CALIB,,LOW,WATER,,VOA,EPA
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: CC012792C1 #1
CALI: CC012792C1 #3
SCANS 35 TO 1415
99456.
100.0
RIC
163
245
373
484
536
573
638
732
784
886
933
982
1059
1147
1197
1308
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

CONTINUING CALIBRATION CHECK
VOLATILE HSL COMPOUNDS

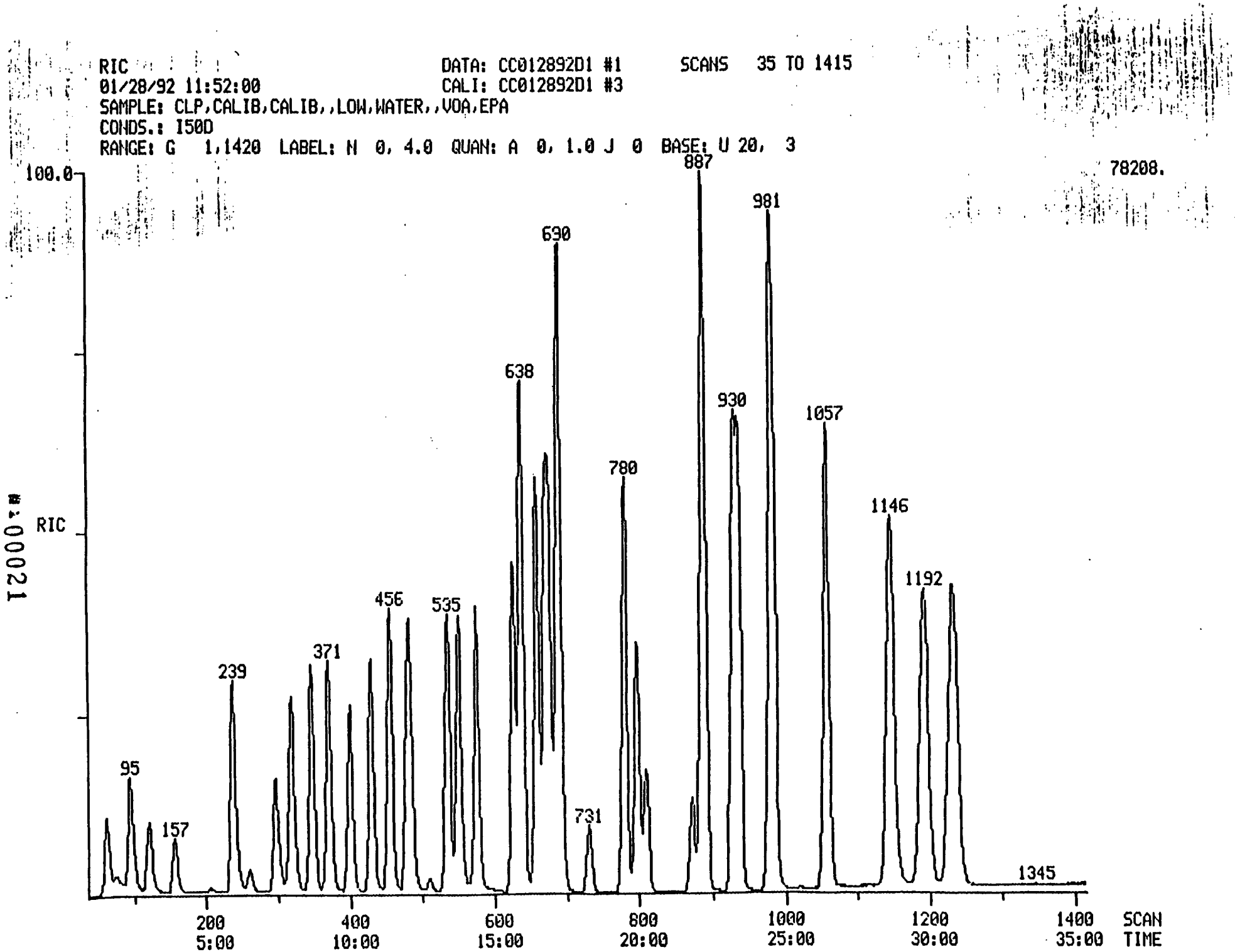
Case No: STAND Region: _____ Calibration Date: 01/28/92
Contractor: AnalytiKEM-Hou Time: 11:52
Contract No: _____ Laboratory ID: CC012892D1
Instrument ID: I50D Initial Cali. Date: 12/26/91

Minimum RF for SPCC is 0.300 (1) Maximum %D for CCC is 25%

Compound	AVE RF	RF(50)	% D	CCC	SPCC
Chloromethane	1.488	1.440	3.2		* *
Bromomethane	1.222	1.332	-9.0		
Vinyl Chloride	1.353	1.316	2.7	*	
Chloroethane	0.871	0.866	0.6		
Methylene Chloride	1.966	1.498	23.8		
Acetone	0.623	0.469	24.7		
Carbon Disulfide	2.998	2.793	6.8		
1,1-Dichloroethene	1.122	1.289	-14.9	*	
1,1-Dichloroethane	2.386	2.775	-16.3		* *
trans-1,2-Dichloroethene	1.272	1.483	-16.6		
Chloroform	2.486	3.077	-23.8	*	
1,2-Dichloroethane	1.404	1.896	-35.0		
2-Butanone	0.044	0.027	38.6		
1,1,1-Trichloroethane	0.416	0.458	-10.1		
Carbon Tetrachloride	0.361	0.404	-11.9		
Vinyl Acetate	0.214	0.124	42.1		
Bromodichloromethane	0.477	0.490	-2.7		
1,2-Dichloropropane	0.329	0.348	-5.8	*	
cis-1,3-Dichloropropene	0.468	0.567	-21.2		
Trichloroethene	0.368	0.428	-16.3		
Dibromochloromethane	0.452	0.486	-7.5		
1,1,2-Trichloroethane	0.286	0.291	-1.7		
Benzene	0.756	0.854	-13.0		
Trans-1,3-Dichloropropene	0.339	0.306	9.7		
Bromoform	0.426	0.405	4.9		* *
4-Methyl-2-Pentanone	0.402	0.293	27.1		
2-Hexanone	0.391	0.240	38.6		
Tetrachloroethene	0.420	0.479	-14.0		
1,1,2,2-Tetrachloroethane	0.593	0.536	9.6		* *
Toluene	0.624	0.686	-9.9	*	
Chlorobenzene	0.844	0.924	-9.5		* *
Ethylbenzene	0.416	0.453	-8.9	*	
Styrene	0.802	0.861	-7.4		
Xylene (total)	0.467	0.514	-10.1		

RF(50) - Response Factor from daily standard file at 50 ug/l
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Mininum RF for Bromoform is 0.250

Form VII


RIC
01/28/92 11:52:00
SAMPLE: CLP,CALIB,CALIB,,LOW,WATER,,VOA,EPA
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: CC012892D1 #1
CALI: CC012892D1 #3
SCANS 35 TO 1415
78208.
100.0
RIC
#:00021
95
157
239
371
456
535
638
630
731
780
887
930
981
1057
1146
1192
1345
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

CONTINUING CALIBRATION CHECK
VOLATILE HSL COMPOUNDS

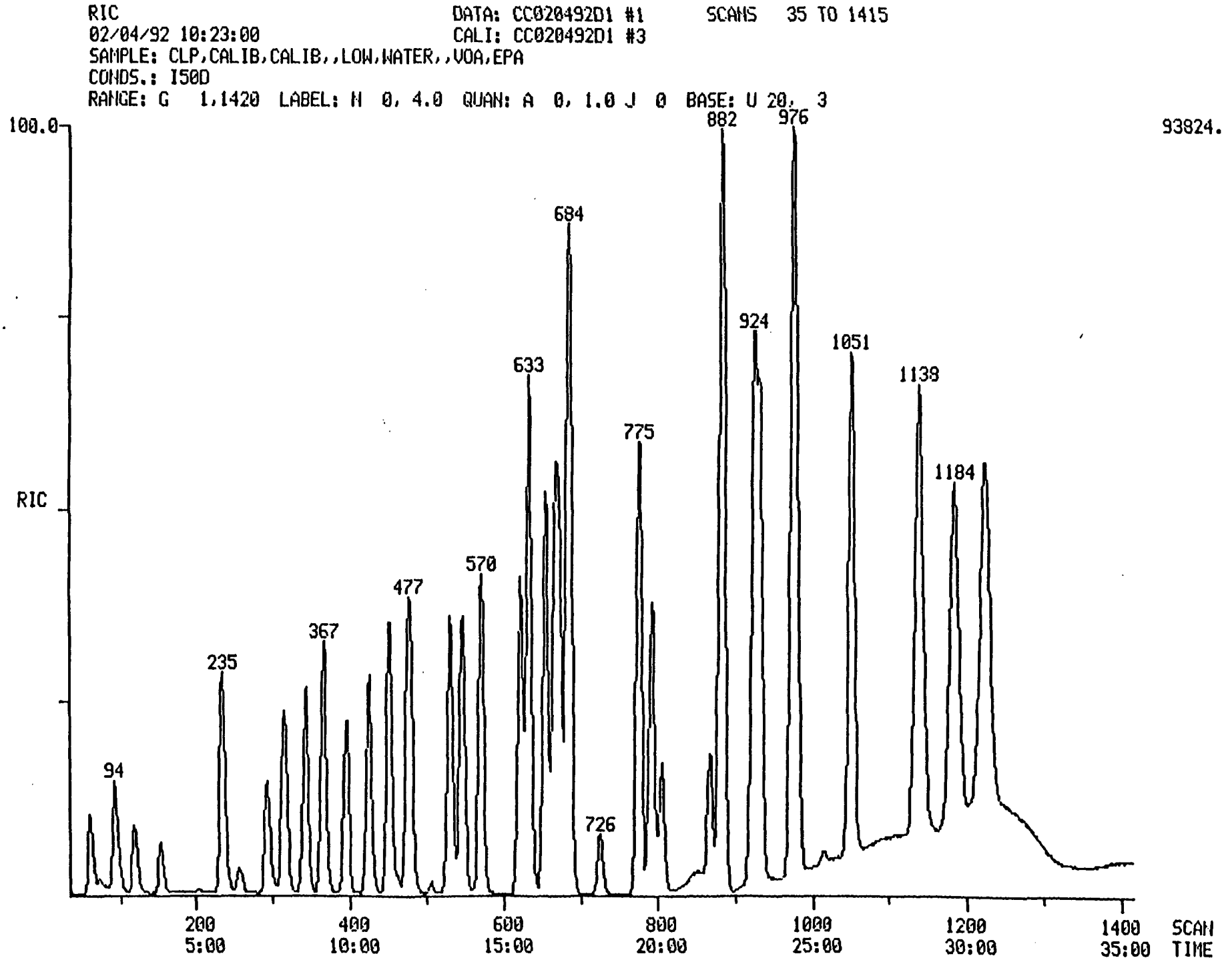
Case No: STAND Region: _____ Calibration Date: 02/04/92
Contractor: AnalytiKEM-Hou Time: 10:23
Contract No: _____ Laboratory ID: CC020492D1
Instrument ID: I50D Initial Cali. Date: 12/26/91

Minimum RF for SPCC is 0.300 (1) Maximum %D for CCC is 25%

Compound	AVE RF	RF(50)	% D	CCC	SPCC
Chloromethane	1.488	1.352	9.1		* *
Bromomethane	1.222	1.234	-1.0		
Vinyl Chloride	1.353	1.183	12.6	*	
Chloroethane	0.871	0.781	10.3		
Methylene Chloride	1.966	1.401	28.7		
Acetone	0.623	0.567	9.0		
Carbon Disulfide	2.998	2.603	13.2		
1,1-Dichloroethene	1.122	1.036	7.7	*	
1,1-Dichloroethane	2.386	2.499	-4.7		* *
trans-1,2-Dichloroethene	1.272	1.262	0.8		
Chloroform	2.486	2.827	-13.7	*	
1,2-Dichloroethane	1.404	2.017	-43.7		
2-Butanone	0.044	0.024	45.5		
1,1,1-Trichloroethane	0.416	0.421	-1.2		
Carbon Tetrachloride	0.361	0.383	-6.1		
Vinyl Acetate	0.214	0.125	41.6		
Bromodichloromethane	0.477	0.526	-10.3		
1,2-Dichloropropane	0.329	0.302	8.2	*	
cis-1,3-Dichloropropene	0.468	0.505	-7.9		
Trichloroethene	0.368	0.367	0.3		
Dibromochloromethane	0.452	0.482	-6.6		
1,1,2-Trichloroethane	0.286	0.265	7.3		
Benzene	0.756	0.724	4.2		
Trans-1,3-Dichloropropene	0.339	0.284	16.2		
Bromoform	0.426	0.423	0.7		* *
4-Methyl-2-Pentanone	0.402	0.274	31.8		
2-Hexanone	0.391	0.297	24.0		
Tetrachloroethene	0.420	0.435	-3.6		
1,1,2,2-Tetrachloroethane	0.593	0.472	20.4		* *
Toluene	0.624	0.620	0.6	*	
Chlorobenzene	0.844	0.843	0.1		* *
Ethylbenzene	0.416	0.424	-1.9	*	
Styrene	0.802	0.810	-1.0		
Xylene (total)	0.467	0.510	-9.2		

RF(50) - Response Factor from daily standard file at 50 ug/l
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Mininum RF for Bromoform is 0.250

Form VII


RIC
02/04/92 10:23:00
SAMPLE: CLP,CALIB,CALIB,,LOW,WATER,,VOA,EPA
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: CC020492D1 #1
CALI: CC020492D1 #3
SCANS 35 TO 1415
100.0
93824.
RIC
94
235
367
477
570
633
684
726
775
882
924
976
1051
1138
1184
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

*=00023

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB012792C1
Client Sample ID: MB012792C1

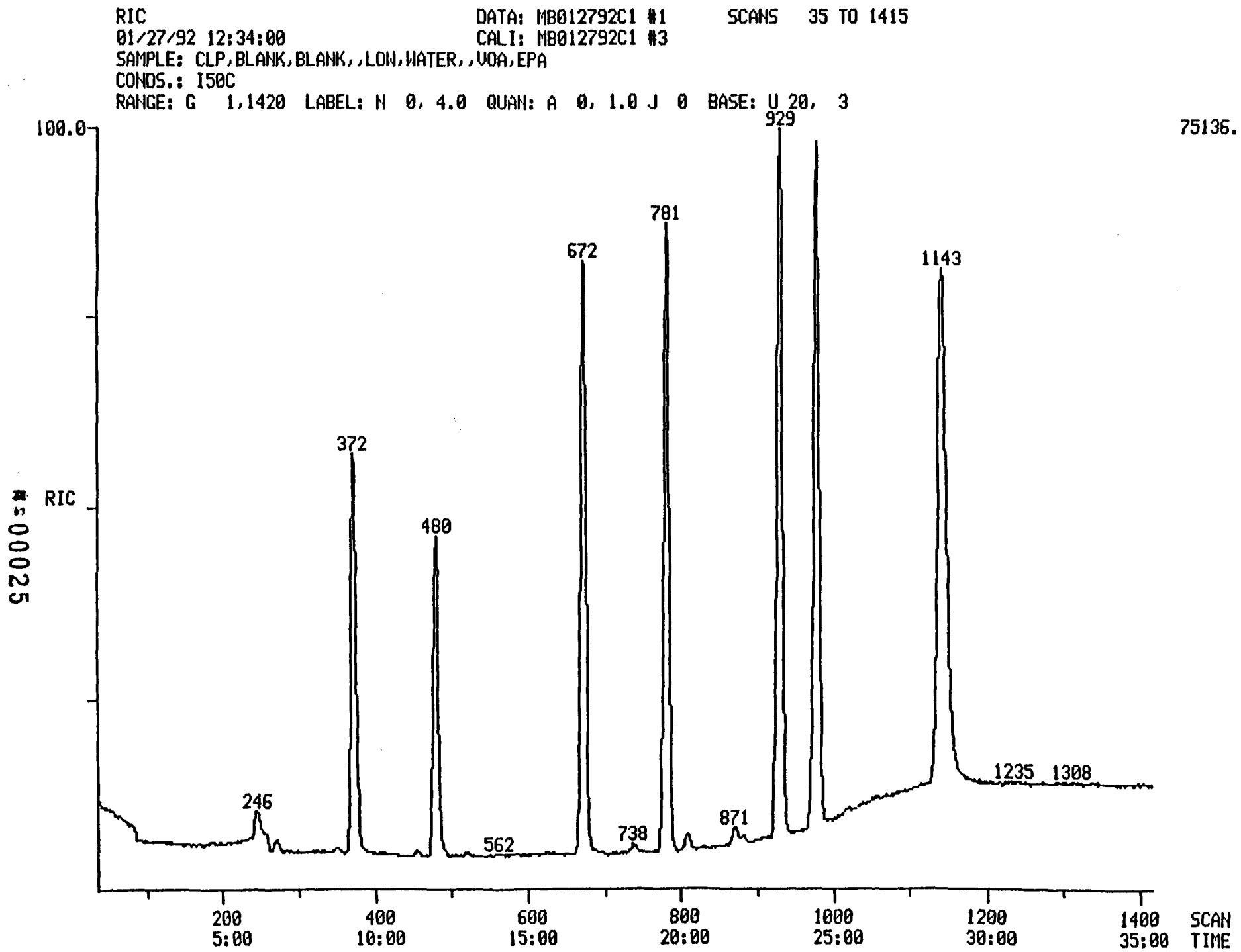
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

Date Extracted: 01/27/92
Date Analyzed: 01/27/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10		71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	7	=	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is MB012792C1.
= - Reported value is less than the detection limit.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/27/92 12:34:00
DATA: MB012792C1 #1
CALI: MB012792C1 #3
SCANS 35 TO 1415
SAMPLE: CLP,BLANK,BLANK,,LOW,WATER,,VOA,EPA
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
75136.
RIC
.00025
246
372
480
562
672
738
781
871
929
1143
1235
1308
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB012892D1
Client Sample ID: MB012892D1

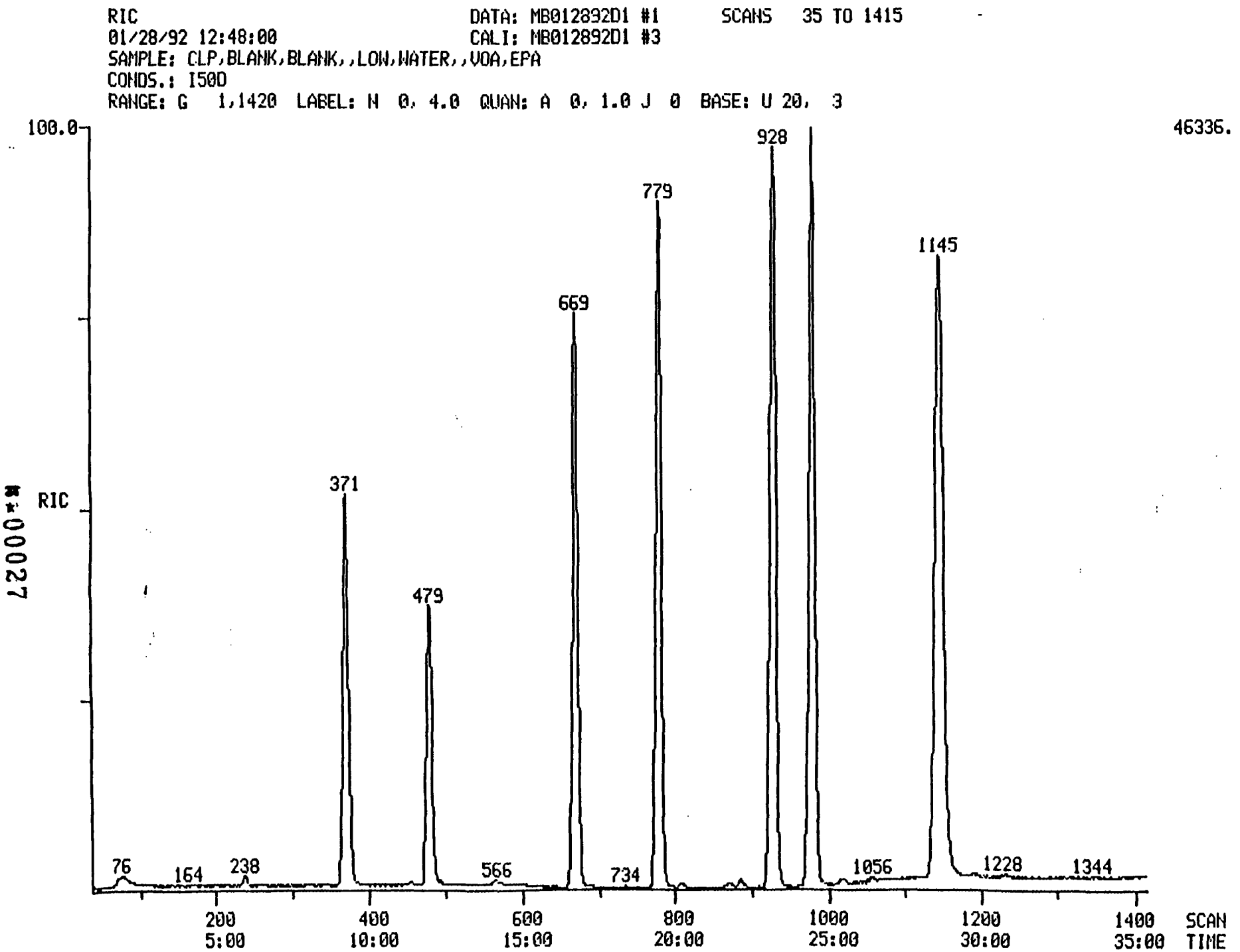
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

Date Extracted: 01/28/92
Date Analyzed: 01/28/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10	<	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is MB012892D1.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
01/28/92 12:48:00
DATA: MB012892D1 #1
CALI: MB012892D1 #3
SCANS 35 TO 1415
SAMPLE: CLP,BLANK,BLANK,,LOW,WATER,,VOA,EPA
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
46336.
RIC
**00027
371
479
669
779
928
1145
76
164
238
566
734
1056
1228
1344
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB020492D1
Client Sample ID: MB020492D1

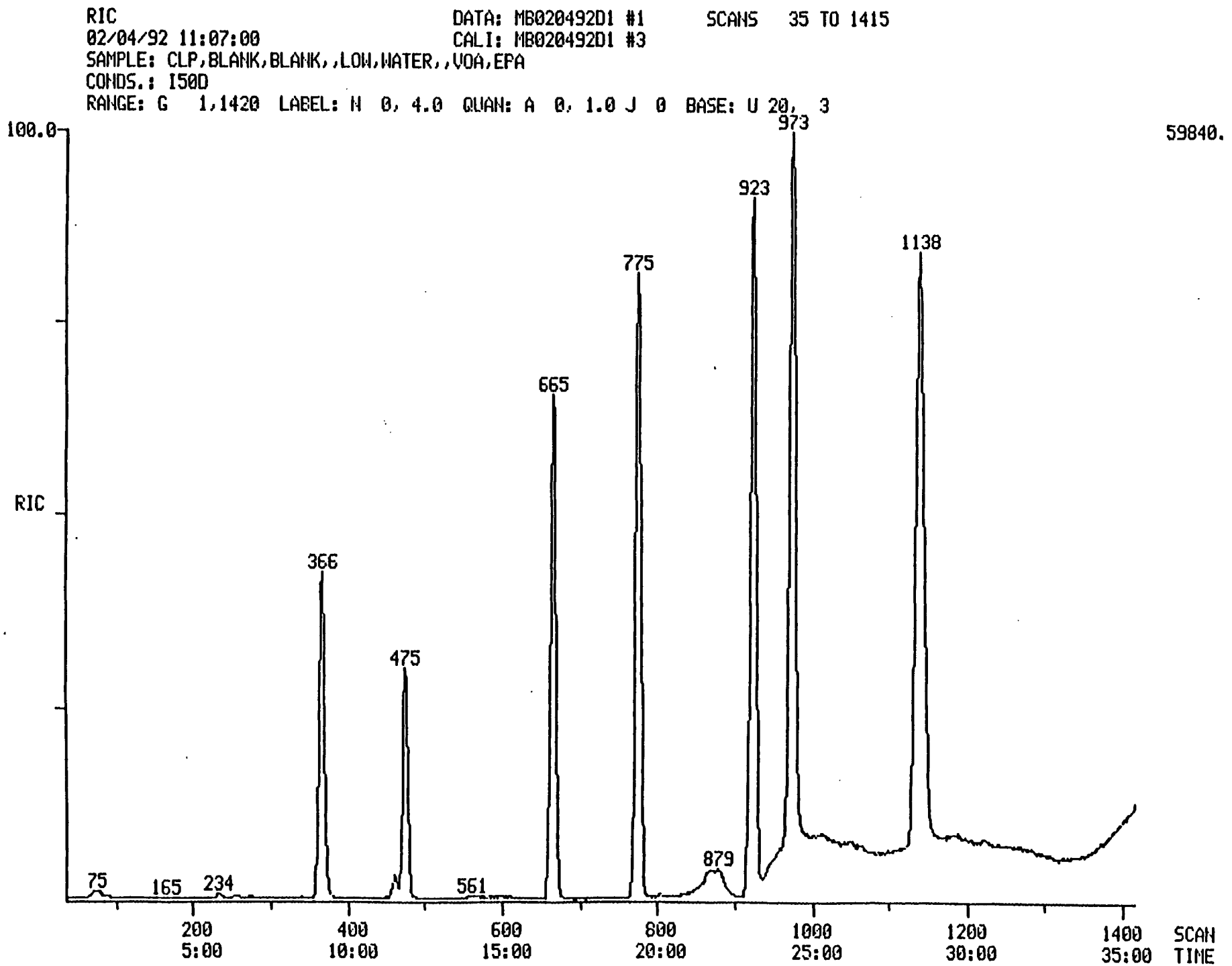
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

Date Extracted: 02/04/92
Date Analyzed: 02/04/92
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	5	<	79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	10	<	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	25	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	5	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	10	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is MB020492D1.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
02/04/92 11:07:00
DATA: MB020492D1 #1
CALI: MB020492D1 #3
SCANS 35 TO 1415
SAMPLE: CLP,BLANK,BLANK,,LOW,WATER,,VOA,EPA
CONDS.: I50D
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
59840.
RIC
62000
75
165
234
366
475
561
665
775
879
923
973
1138
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: HOUSTON Case No.: A7846 SAS No.: _____ SDG No.: A7846

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	EQUIP_BLANK	102	94	98	101	0
02	TRIP_BLANK	99	97	94	101	0
03	MB012792C1	101	97	97	98	0
04	MB012892D1	99	100	99	104	0
05	MB020492D1	102	94	96	106	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: HOUSTON Case No.: A7846 SAS No.: _____ SDG No.: A7846

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	DT-2A	110	97	99	113	0
02	YS-5A	101	94	78	97	0

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(81-117)
SMC2 (BFB)	= Bromofluorobenzene	(74-121)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

INITIAL CALIBRATION DATA
VOLATILE HSL COMPOUNDS

Case No: STAND Region: Instrument ID: I50C
Contractor: AnalytiKEM-Hou Calibration Date: 12/31/91
Contract No:

Min AVE RF for SPCC is 0.300 (1) Max %RSD for CCC is 30%

Laboratory ID	IC1231020C1	IC1231050C1	IC1231100C1	IC1231150C1	IC1231200C1			CCC*
Compound	RF(20)	RF(50)	RF(100)	RF(150)	RF(200)	AVE RF	% RSD	SPCC**
Chloromethane	0.710	0.719	1.058	0.973	1.136	0.919	21.3	* *
Bromomethane	1.510	0.909	1.159	1.033	1.000	1.122	20.9	
Vinyl Chloride	1.185	1.027	1.384	1.218	1.293	1.221	10.9	*
Chloroethane	1.432	0.913	1.127	1.084	1.014	1.114	17.5	
Methylene Chloride	2.623	1.830	1.940	1.659	1.547	1.920	21.9	
Acetone	0.970	1.174	0.432	0.766	0.351	0.739	47.3	
Carbon Disulfide	4.143	2.885	4.346	3.328	3.379	3.616	16.8	
1,1-Dichloroethene	1.726	1.147	1.289	1.251	1.212	1.325	17.4	*
1,1-Dichloroethane	4.812	3.112	3.501	3.360	3.317	3.620	18.8	* *
trans-1,2-Dichloroethene	1.752	1.189	1.583	1.406	1.338	1.454	15.0	
Chloroform	4.366	2.930	3.255	3.196	3.107	3.371	16.9	*
1,2-Dichloroethane	3.131	2.062	2.783	2.323	2.219	2.504	17.6	
2-Butanone	0.053	0.063	0.025	0.050	0.025	0.043	40.0	
1,1,1-Trichloroethane	0.605	0.444	0.593	0.479	0.447	0.514	15.4	
Carbon Tetrachloride	0.478	0.372	0.409	0.407	0.376	0.408	10.4	
Vinyl Acetate	0.223	0.161	0.184	0.166	0.160	0.179	14.8	
Bromodichloromethane	0.708	0.570	0.744	0.617	0.574	0.643	12.3	
1,2-Dichloropropane	0.564	0.447	0.455	0.432	0.423	0.464	12.3	*
cis-1,3-Dichloropropene	0.709	0.565	0.707	0.573	0.545	0.620	13.1	
Trichloroethene	0.421	0.343	0.349	0.337	0.335	0.357	10.1	
Dibromochloromethane	0.612	0.483	0.488	0.472	0.482	0.507	11.6	
1,1,2-Trichloroethane	0.408	0.309	0.307	0.302	0.305	0.326	14.0	
Benzene	1.083	0.839	1.068	0.888	0.837	0.943	13.0	
Trans-1,3-Dichloropropene	0.622	0.494	0.626	0.510	0.491	0.549	12.6	
2-Chloroethylvinyl ether	0.416	0.325	0.318	0.326	0.327	0.342	12.1	
Bromoform	0.519	0.406	0.509	0.454	0.433	0.464	10.5	* *
4-Methyl-2-Pentanone	0.503	0.439	0.411	0.419	0.421	0.439	8.5	
2-Hexanone	1.037	0.870	0.781	0.911	0.722	0.864	14.1	
Tetrachloroethene	0.416	0.336	0.349	0.331	0.322	0.351	10.8	
1,1,2,2-Tetrachloroethane	0.867	0.755	0.844	0.749	0.715	0.786	8.4	* *
Toluene	0.721	0.628	0.810	0.665	0.637	0.692	10.9	*
Chlorobenzene	0.916	0.825	0.876	0.833	0.819	0.854	4.8	* *
Ethylbenzene	0.440	0.388	0.493	0.414	0.392	0.425	10.1	*
Styrene	0.814	0.757	0.985	0.774	0.782	0.822	11.3	
Xylene (total)	0.491	0.440	0.586	0.443	0.453	0.483	12.7	
Toluene-d8	0.996	1.117	1.130	1.106	1.121	1.094	5.1	
Bromofluorobenzene	0.736	0.733	0.724	0.741	0.749	0.737	1.3	
1,2-Dichloroethane-d4	2.205	1.970	2.081	2.199	2.268	2.145	5.5	
Benzene-d6	0.764	1.006	0.968	0.977	0.988	0.941	10.6	

Response Factor (number is the amount of ug/L)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Minimum AVE RF for Bromoform is 0.250

INITIAL CALIBRATION DATA
VOLATILE HSL COMPOUNDS

Case No: STAND Region: Instrument ID: I50D
Contractor: AnalytiKEM-Hou Calibration Date: 12/23/91
Contract No:

Min AVE RF for SPCC is 0.300 (1) Max %RSD for CCC is 30%

Laboratory ID	IC1223020D1 IC1223050D2	IC1226100D1 IC1226150D1	IC1226200D2				CCC*
Compound	RF(20)	RF(50)	RF(100)	RF(150)	RF(200)	AVE RF	% RSD	SPCC**
Chloromethane	1.503	1.330	1.675	1.496	1.436	1.488	8.4	* *
Bromomethane	1.418	1.297	1.291	1.109	0.996	1.222	13.7	
Vinyl Chloride	1.431	1.279	1.464	1.312	1.280	1.353	6.5	*
Chloroethane	0.934	0.795	0.960	0.833	0.831	0.871	8.3	
Methylene Chloride	3.489	2.141	1.466	1.284	1.450	1.966	46.4	
Acetone	0.478	0.639	0.700	0.711	0.587	0.623	15.3	
Carbon Disulfide	2.963	2.857	3.160	3.101	2.911	2.998	4.3	
1,1-Dichloroethene	1.236	1.080	1.175	1.111	1.009	1.122	7.8	*
1,1-Dichloroethane	2.548	2.314	2.555	2.344	2.169	2.386	6.9	* *
trans-1,2-Dichloroethene	1.298	1.262	1.306	1.258	1.238	1.272	2.3	
Chloroform	2.726	2.466	2.611	2.393	2.233	2.486	7.7	*
1,2-Dichloroethane	1.500	1.406	1.430	1.382	1.301	1.404	5.2	
2-Butanone	0.041	0.045	0.048	0.044	0.040	0.044	7.4	
1,1,1-Trichloroethane	0.456	0.444	0.411	0.386	0.383	0.416	8.0	
Carbon Tetrachloride	0.422	0.391	0.348	0.337	0.309	0.361	12.4	
Vinyl Acetate	0.211	0.216	0.227	0.217	0.198	0.214	4.9	
Bromodichloromethane	0.518	0.506	0.477	0.449	0.435	0.477	7.5	
1,2-Dichloropropane	0.371	0.334	0.336	0.306	0.299	0.329	8.7	*
cis-1,3-Dichloropropene	0.504	0.517	0.462	0.432	0.423	0.468	9.0	
Trichloroethene	0.424	0.396	0.360	0.340	0.322	0.368	11.3	
Dibromochloromethane	0.525	0.462	0.463	0.408	0.400	0.452	11.2	
1,1,2-Trichloroethane	0.343	0.290	0.297	0.250	0.248	0.286	13.7	
Benzene	0.815	0.786	0.757	0.722	0.698	0.756	6.2	
Trans-1,3-Dichloropropene	0.396	0.274	0.362	0.337	0.327	0.339	13.3	
2-Chloroethylvinyl ether	0.062	0.056	0.047	0.024	0.052	0.048	30.3	
Bromoform	0.478	0.458	0.418	0.384	0.390	0.426	9.7	* *
4-Methyl-2-Pentanone	0.478	0.376	0.403	0.380	0.372	0.402	11.0	
2-Hexanone	0.387	0.340	0.419	0.420	0.390	0.391	8.3	
Tetrachloroethene	0.486	0.431	0.424	0.390	0.368	0.420	10.7	
1,1,2,2-Tetrachloroethane	0.712	0.559	0.602	0.545	0.547	0.593	11.9	* *
Toluene	0.655	0.613	0.644	0.610	0.597	0.624	3.9	*
Chlorobenzene	0.951	0.843	0.880	0.786	0.762	0.844	8.9	* *
Ethylbenzene	0.465	0.418	0.417	0.387	0.391	0.416	7.5	*
Styrene	0.896	0.827	0.790	0.750	0.748	0.802	7.7	
Xylene (total)	0.540	0.483	0.452	0.431	0.430	0.467	9.9	
Toluene-d8	0.944	0.941	0.962	0.971	0.981	0.960	1.8	
Bromofluorobenzene	0.676	0.657	0.646	0.635	0.672	0.657	2.6	
1,2-Dichloroethane-d4	1.242	1.256	1.302	1.352	1.386	1.308	4.7	
Benzene-d6	0.812	0.819	0.791	0.804	0.801	0.805	1.3	

Response Factor (number is the amount of ug/L)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Minimum AVE RF for Bromoform is 0.250

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

aboratory Name: AnalytiKEM-Hou
ab Sample ID: A7846-12
Client Sample ID: DT-2A

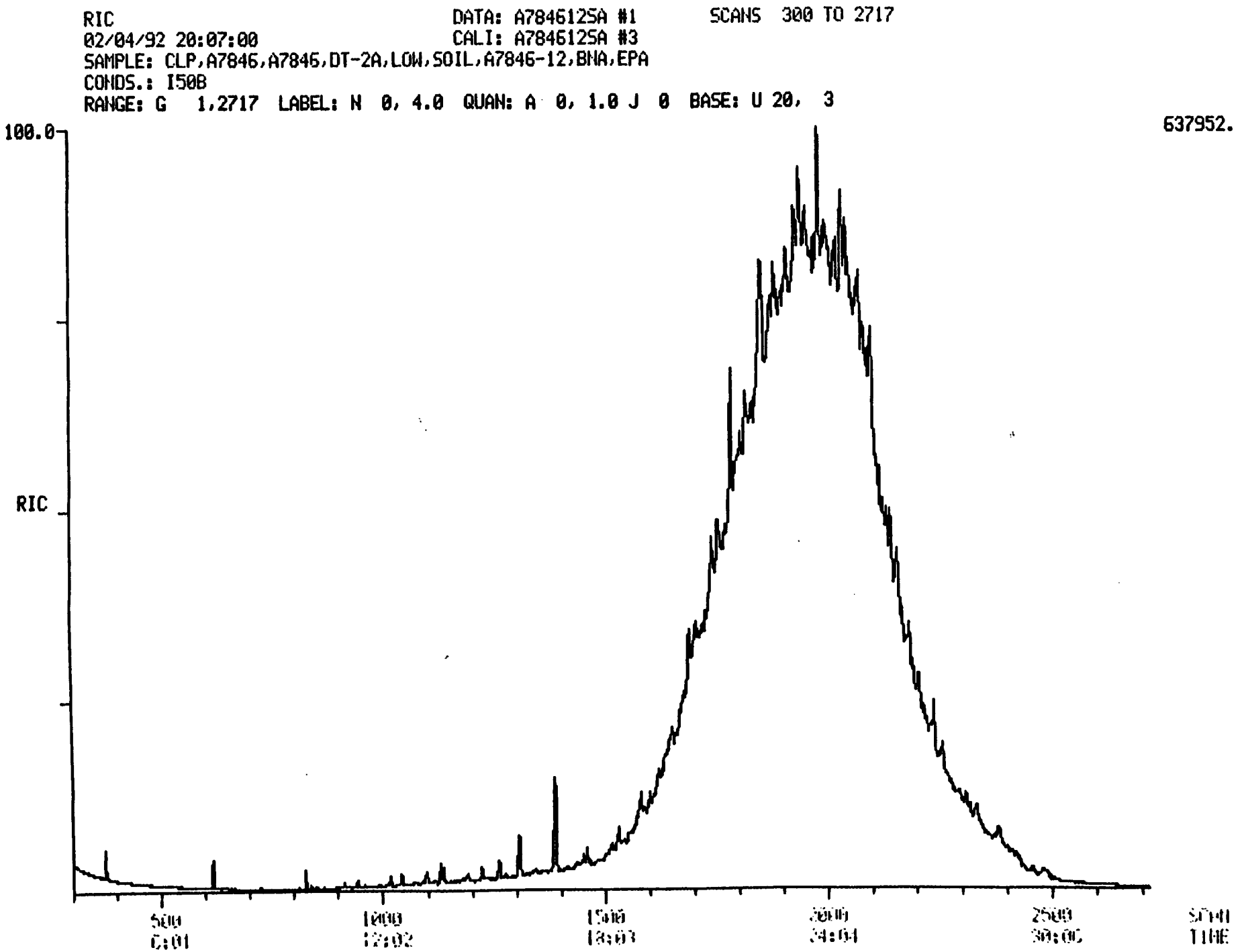
Concentration: LOW
Sample Matrix: SOIL
Percent Moisture: 5.0

Date Extracted: 01/31/92
Date Analyzed: 02/04/92
Dilution Factor: 25

SEMIVOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
08-95-2	Phenol	8600	<	606-20-2	2,6-Dinitrotoluene	8600	<
2-53-3	Aniline	8600	<	99-09-2	3-Nitroaniline	42000	<
111-44-4	bis(2-Chloroethyl)Ether	8600	<	83-32-9	Acenaphthene	8600	<
95-57-8	2-Chlorophenol	8600	<	51-28-5	2,4-Dinitrophenol	42000	<
41-73-1	1,3-Dichlorobenzene	8600	<	100-02-7	4-Nitrophenol	42000	<
06-46-7	1,4-Dichlorobenzene	8600	<	132-64-9	Dibenzofuran	8600	<
100-51-6	Benzyl Alcohol	8600	<	121-14-2	2,4-Dinitrotoluene	8600	<
5-50-1	1,2-Dichlorobenzene	8600	<	84-66-2	Diethylphthalate	8600	<
5-48-7	2-Methylphenol	8600	<	7005-72-3	4-Chlorophenyl phenyl ether	8600	<
39638-32-9	bis(2-Chloroisopropyl)Ether	8600	<	86-73-7	Fluorene	8600	<
106-44-5	4-Methylphenol	8600	<	100-01-6	4-Nitroaniline	42000	<
21-64-7	N-Nitroso-Di-n-Propylamine	8600	<	534-52-1	4,6-Dinitro-2-Methylphenol	42000	<
7-72-1	Hexachloroethane	8600	<	86-30-6	N-Nitrosodiphenylamine (1)	8600	<
98-95-3	Nitrobenzene	8600	<	101-55-3	4-Bromophenyl phenyl ether	8600	<
8-59-1	Isophorone	8600	<	118-74-1	Hexachlorobenzene	8600	<
8-75-5	2-Nitrophenol	8600	<	87-86-5	Pentachlorophenol	42000	<
105-67-9	2,4-Dimethylphenol	8600	<	85-01-8	Phenanthrene	8600	<
65-85-0	Benzoic Acid	42000	<	120-12-7	Anthracene	8600	<
11-91-1	bis(2-Chloroethoxy)Methane	8600	<	84-74-2	Di-n-Butylphthalate	8600	<
20-83-2	2,4-Dichlorophenol	8600	<	206-44-0	Fluoranthene	8600	<
120-82-1	1,2,4-Trichlorobenzene	8600	<	129-00-0	Pyrene	8600	<
91-20-3	Naphthalene	8600	<	85-68-7	Butylbenzylphthalate	8600	<
106-47-8	4-Chloroaniline	8600	<	91-94-1	3,3'-Dichlorobenzidine	17000	<
87-68-3	Hexachlorobutadiene	8600	<	56-55-3	Benzo(a)Anthracene	8600	<
59-50-7	4-Chloro-3-Methylphenol	8600	<	117-81-7	bis(2-Ethylhexyl)Phthalate	8600	<
91-57-6	2-Methylnaphthalene	8600	<	218-01-9	Chrysene	8600	<
77-47-4	Hexachlorocyclopentadiene	8600	<	117-84-0	Di-n-Octyl Phthalate	8600	<
88-06-2	2,4,6-Trichlorophenol	8600	<	205-99-2	Benzo(b)Fluoranthene	8600	<
95-95-4	2,4,5-Trichlorophenol	42000	<	207-08-9	Benzo(k)Fluoranthene	8600	<
91-58-7	2-Chloronaphthalene	8600	<	50-32-8	Benzo(a)Pyrene	8600	<
88-74-4	2-Nitroaniline	42000	<	193-39-5	Indeno(1,2,3-cd)Pyrene	8600	<
131-11-3	Dimethyl Phthalate	8600	<	53-70-3	Dibenz(a,h)Anthracene	8600	<
208-96-8	Acenaphthylene	8600	<	191-24-2	Benzo(g,h,i)Perylene	8600	<

The Lab ID for data on this page is A784612SA.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
DATA: A7846125A #1
SCANS 300 TO 2717
02/04/92 20:07:00
CALI: A7846125A #3
SAMPLE: CLP,A7846,A7846,DT-2A,LOW,SOIL,A7846-12,BNA,EPA
CONDS.: I50B
RANGE: G 1,2717 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
637952.
100.0
RIC
23000
500
6:01
1000
12:02
1500
18:03
2000
24:04
2500
30:05
SCAN
TIME

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

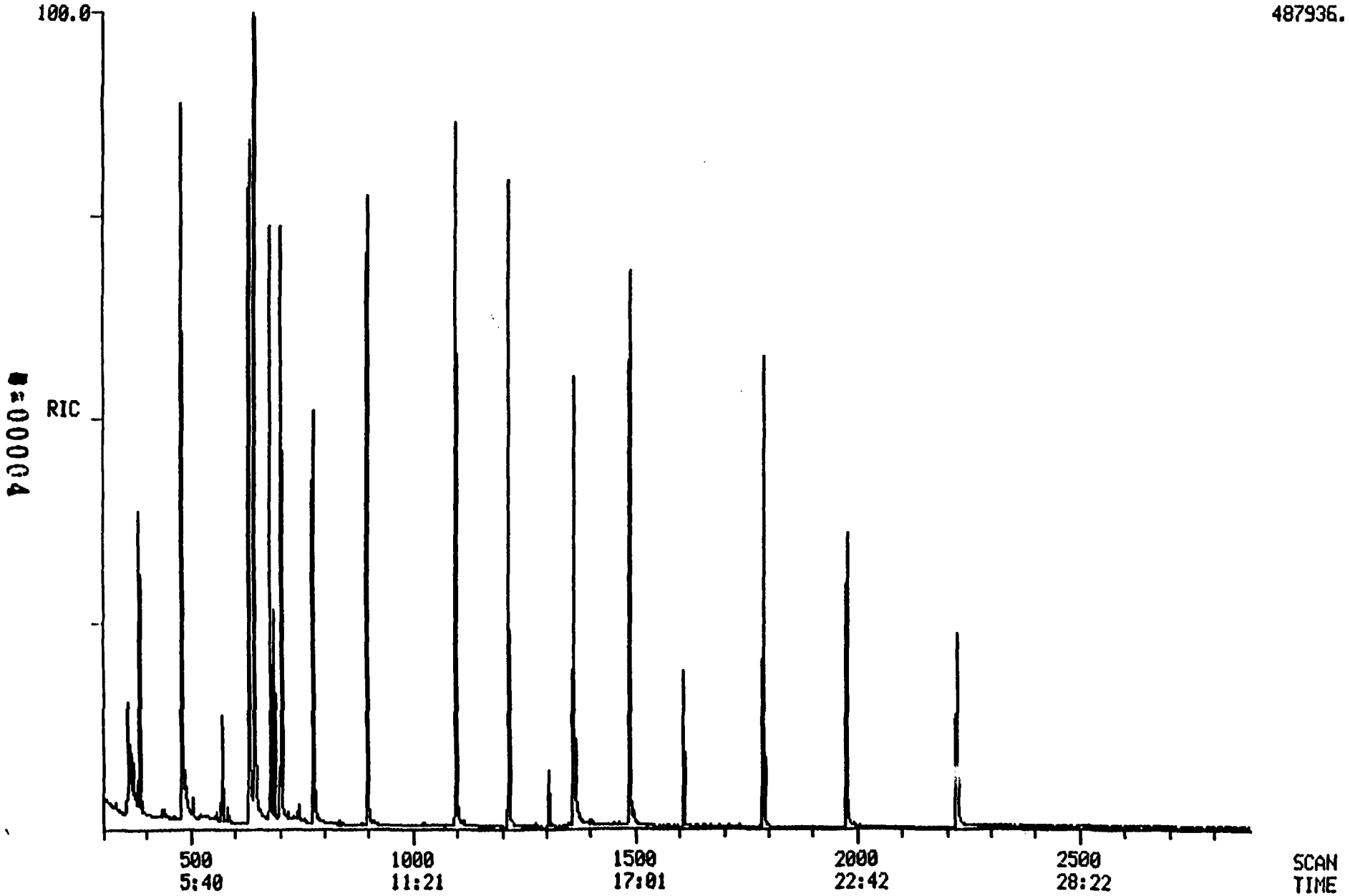
Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: A7846-16
Client Sample ID: EQBLANK
Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0
Date Extracted: 01/29/92
Date Analyzed: 02/01/92
Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
108-95-2	Phenol	10	<	606-20-2	2,6-Dinitrotoluene	10	<
62-53-3	Aniline	10	<	99-09-2	3-Nitroaniline	50	<
111-44-4	bis(2-Chloroethyl)Ether	10	<	83-32-9	Acenaphthene	10	<
95-57-8	2-Chlorophenol	10	<	51-28-5	2,4-Dinitrophenol	50	<
541-73-1	1,3-Dichlorobenzene	10	<	100-02-7	4-Nitrophenol	50	<
106-46-7	1,4-Dichlorobenzene	10	<	132-64-9	Dibenzofuran	10	<
100-51-6	Benzyl Alcohol	10	<	121-14-2	2,4-Dinitrotoluene	10	<
95-50-1	1,2-Dichlorobenzene	10	<	84-66-2	Diethylphthalate	10	<
95-48-7	2-Methylphenol	10	<	7005-72-3	4-Chlorophenyl phenyl ether	10	<
39638-32-9	bis(2-Chloroisopropyl)Ether	10	<	86-73-7	Fluorene	10	<
106-44-5	4-Methylphenol	10	<	100-01-6	4-Nitroaniline	50	<
621-64-7	N-Nitroso-Di-n-Propylamine	10	<	534-52-1	4,6-Dinitro-2-Methylphenol	50	<
67-72-1	Hexachloroethane	10	<	86-30-6	N-Nitrosodiphenylamine (1)	10	<
98-95-3	Nitrobenzene	10	<	101-55-3	4-Bromophenyl phenyl ether	10	<
78-59-1	Isophorone	10	<	118-74-1	Hexachlorobenzene	10	<
88-75-5	2-Nitrophenol	10	<	87-86-5	Pentachlorophenol	50	<
105-67-9	2,4-Dimethylphenol	10	<	85-01-8	Phenanthrene	10	<
65-85-0	Benzoic Acid	50	<	120-12-7	Anthracene	10	<
111-91-1	bis(2-Chloroethoxy)Methane	10	<	84-74-2	Di-n-Butylphthalate	13	B
120-83-2	2,4-Dichlorophenol	10	<	206-44-0	Fluoranthene	10	<
120-82-1	1,2,4-Trichlorobenzene	10	<	129-00-0	Pyrene	10	<
91-20-3	Naphthalene	10	<	85-68-7	Butylbenzylphthalate	10	<
106-47-8	4-Chloroaniline	10	<	91-94-1	3,3'-Dichlorobenzidine	20	<
87-68-3	Hexachlorobutadiene	10	<	56-55-3	Benzo(a)Anthracene	10	<
59-50-7	4-Chloro-3-Methylphenol	10	<	117-81-7	bis(2-Ethylhexyl)Phthalate	10	<
91-57-6	2-Methylnaphthalene	10	<	218-01-9	Chrysene	10	<
77-47-4	Hexachlorocyclopentadiene	10	<	117-84-0	Di-n-Octyl Phthalate	10	<
88-06-2	2,4,6-Trichlorophenol	10	<	205-99-2	Benzo(b)Fluoranthene	10	<
95-95-4	2,4,5-Trichlorophenol	50	<	207-08-9	Benzo(k)Fluoranthene	10	<
91-58-7	2-Chloronaphthalene	10	<	50-32-8	Benzo(a)Pyrene	10	<
88-74-4	2-Nitroaniline	50	<	193-39-5	Indeno(1,2,3-cd)Pyrene	10	<
131-11-3	Dimethyl Phthalate	10	<	53-70-3	Dibenz(a,h)Anthracene	10	<
208-96-8	Acenaphthylene	10	<	191-24-2	Benzo(g,h,i)Perylene	10	<

The Lab ID for data on this page is A784616S.
B - Compound was detected in the QC blank.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

RIC DATA: A7846165 #1 SCANS 300 TO 2882
02/01/92 1:29:00 CALI: A7846165 #3
SAMPLE: CLP,A7846,A7846,EQBLANK,LOW,WATER,A7846-16,BNA,EPA
CONDS.: I50E
RANGE: G 1,2882 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



DECAFLUOROTRIPHENYLPHOSPHINE

Tuning Report
01/31/92 16:29:00 + 6:31
Instrument: FINN
#574 - #581
Case Number: AK
Comments: METHOD 625 ION ABUNDANCE CRITERIA

Data: DF013192E1 # 574
Cali: DF013192E1 # 3
Analyst: BPB

Laboratory: AKEM

Base m/z: 198
RIC: 21856.
Acct. No.: 8506-091

Contract: -

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
51	1294.	45.95	30.00	60.00	198	45.95	PASS
68	0.	0.00	---	2.00	69	0.00	PASS
69	1464.	51.99	0.00	100.00	198	51.99	PASS
70	13.	0.46	---	2.00	69	0.89	PASS
127	1314.	46.66	40.00	60.00	198	46.66	PASS
197	0.	0.00	---	1.00	198	0.00	PASS
198	2816.	100.00	100.0	---	---	100.00	PASS
199	204.	7.24	5.00	9.00	198	7.24	PASS
275	514.	18.25	10.00	30.00	198	18.25	PASS
365	64.	2.27	1.00	---	198	2.27	PASS
441	218.	7.74	---	100.00	443	67.70	PASS
442	1624.	57.67	40.00	---	198	57.67	PASS
443	322.	11.43	17.00	23.00	442	19.83	PASS

Fun
150

BROMOFLUOROBENZENE

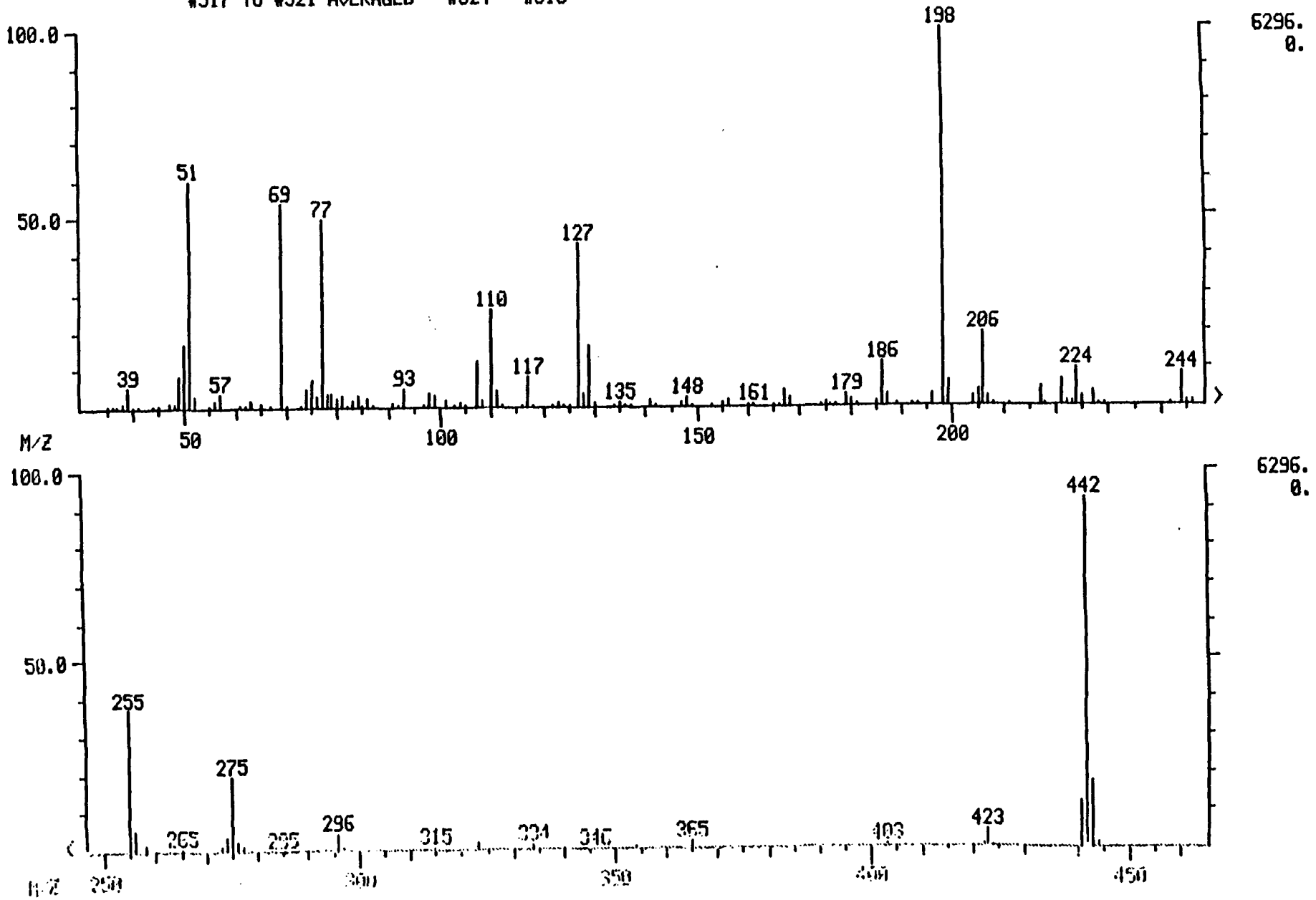
Tuning Report — Data: DF020492B1 # 519 — Base m/z: 198
DE/04/92 11:38:00 + 6:15 — Cali: CALTAB # 3 — RIC: 52544.
Instrument: I50B — Analyst: BPB — Acct. No.: 8506-092
#517 to #521 averaged - #524
Case Number: ANALYTIKEM — Laboratory: ANALYTIKEM — Contract: -
Comments: SW 846:8270 ION ABUNDANCE CRITERIA

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
51	3768.	59.85	30.00	60.00	198	59.85	PASS
68	7.	0.11	---	2.00	69	0.21	PASS
69	3376.	53.62	---	100.00	198	53.62	PASS
70	43.	0.68	---	2.00	69	1.27	PASS
127	2720.	43.20	40.00	60.00	198	43.20	PASS
197	10.	0.16	---	1.00	198	0.16	PASS
198	6296.	100.00	100.0	---	---	100.00	PASS
199	417.	6.62	5.00	9.00	198	6.62	PASS
275	1216.	19.31	10.00	30.00	198	19.31	PASS
365	122.	1.94	1.00	---	198	1.94	PASS
441	743.	11.80	---	100.00	443	67.30	PASS
442	5792.	91.99	40.00	---	198	91.99	PASS
443	1104.	17.53	17.00	23.00	442	19.06	PASS

MASS SPECTRUM
02/04/92 11:38:00 + 6:15
SAMPLE: DFTPP 50NG
CONDS.: I50B
TEMP: 228 DEG. C
#517 TO #521 AVERAGED - #524 - #515

DATA: DF020492B1 #519
CALI: CALTAB #3

BASE M/Z: 198
RIC: 52544.



Mass List Data: DF020492B1 # 519 Base m/z: 198
[illegible]4/92 11:38:00 + 6:15 Cali: CALTAB # 3 RIC: 52544.
Sample: DFTPP 50NG
Cond's.: I50B
#517 to #521 averaged - #524

35		0.00	0.	Minima	Min	Inten:	44.
444				Maxima	#	0	
Mass		% RA	Inten.	Mass		% RA	Inten.
38?	S	1.03	65.	161	S	0.86	54.
39?	S	5.26	331.	167	S	4.30	271.
47?	S	1.49	94.	168	S	2.13	134.
48?	S	1.46	92.	175	S	1.32	83.
49?	S	8.35	526.	179	S	2.80	176.
50?	S	16.52	1040.	180	S	1.91	120.
51?	S	59.85	3768.	181	S	0.78	49.
52?	S	3.10	195.	185	S	1.25	79.
55?	S	0.76	48.	186	S	11.20	705.
56?	S	1.94	122.	187	S	3.29	207.
57?	S	3.75	236.	192	S	0.78	49.
63?	S	1.92	121.	193	S	0.87	55.
65?	S	0.97	61.	196	S	2.78	175.
69	S	53.62	3376.	198	S	100.00	6296.
73	S	0.73	46.	199	S	6.62	417.
74	S	4.67	294.	204	S	2.32	146.
75	S	7.10	447.	205	S	4.30	271.
76	S	3.03	191.	206	S	19.09	1202.
77	S	49.81	3136.	207	S	2.64	166.
78	S	3.68	232.	211	S	0.73	46.
79	S	3.32	209.	217	S	4.73	298.
80	S	2.24	141.	221	S	6.35	400.
81	S	3.29	207.	222	S	0.98	62.
83	S	1.94	122.	223	S	0.95	60.
84	S	2.89	182.	224	S	9.72	612.
86	S	2.68	169.	225	S	2.51	158.
91	S	0.92	58.	227	S	3.61	227.
93	S	4.53	285.	229	S	0.81	51.
98	S	3.41	215.	244	S	8.64	544.
99	S	2.87	181.	245	S	1.05	66.
101	S	1.62	102.	246	S	1.32	83.
104	S	0.98	62.	255	S	37.10	2336.
105	S	0.83	52.	256	S	5.48	345.
107	S	11.83	745.	258	S	1.91	120.
108	S	1.91	120.	273	S	1.05	66.
110	S	25.83	1626.	274	S	3.40	214.
111	S	3.92	247.	275	S	19.31	1216.
117	S	7.99	503.	276	S	2.60	164.
123	S	1.21	76.	277	S	1.49	94.
127	S	43.20	2720.	296	S	4.02	253.
128	S	3.57	225.	323	S	1.78	112.
129	S	16.26	1024.	334	S	0.97	61.
130	S	1.46	92.	365	S	1.94	122.
135	S	1.37	86.	372	S	0.89	56.
137	S	0.70	44.	423	S	4.16	262.
141	S	1.99	125.	424	S	0.71	45.
147	S	1.06	67.	441	S	11.80	743.
148	S	2.32	146.	442	S	91.99	5792.
155	S	1.06	67.	443	S	17.53	1104.
156	S	1.64	103.	444	S	1.43	90.

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: _____ Calibration Date: 01/31/92
Contractor: AnalytiKEM-Hou Time: 16:42
Contract No: _____ Laboratory ID: CC013192E1
Instrument ID: FINN Initial Cali. Date: 09/26/91

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
Phenol		1.792	1.624	9.4	*	
bis(2-Chloroethyl)Ether		1.380	1.906	-38.1		
2-Chlorophenol		1.220	1.434	-17.5		
1,3-Dichlorobenzene		1.282	1.634	-27.5		
1,4-Dichlorobenzene		1.283	1.562	-21.7	*	
Benzyl Alcohol		0.620	1.014	-63.5		
1,2-Dichlorobenzene		1.236	1.620	-31.1		
2-Methylphenol		0.969	1.476	-52.3		
bis(2-Chloroisopropyl)Ether		0.734	2.397	-226.6		
4-Methylphenol		1.038	1.316	-26.8		
N-Nitroso-Di-n-Propylamine		0.823	1.567	-90.4		* *
Hexachloroethane		0.513	0.836	-63.0		
Nitrobenzene		0.331	0.548	-65.6		
Isophorone		0.605	0.988	-63.3		
2-Nitrophenol		0.177	0.179	-1.1	*	
2,4-Dimethylphenol		0.286	0.348	-21.7		
Benzoic Acid	x	0.144	0.106	26.4		
bis(2-Chloroethoxy)Methane		0.436	0.602	-38.1		
2,4-Dichlorophenol		0.260	0.245	5.8	*	
1,2,4-Trichlorobenzene		0.285	0.321	-12.6		
Naphthalene		0.816	0.955	-17.0		
4-Chloroaniline		0.233	0.175	24.9		
Hexachlorobutadiene		0.148	0.154	-4.1	*	
4-Chloro-3-Methylphenol		0.278	0.310	-11.5	*	
2-Methylnaphthalene		0.548	0.614	-12.0		
Hexachlorocyclopentadiene		0.224	0.102	54.5		* *
2,4,6-Trichlorophenol		0.328	0.271	17.4	*	
2,4,5-Trichlorophenol	x	0.342	0.324	5.3		
2-Chloronaphthalene		0.972	1.204	-23.9		
2-Nitroaniline	x	0.326	0.536	-64.4		
Dimethyl Phthalate		1.078	1.272	-18.0		
Acenaphthylene		1.440	1.591	-10.5		
2,6-Dinitrotoluene		0.288	0.361	-25.3		
3-Nitroaniline	x	0.321	0.319	0.6		
Acenaphthene		0.929	0.932	-0.3	*	
2,4-Dinitrophenol	x	0.130	0.050	61.5		* *
4-Nitrophenol	x	0.099	0.079	20.2		* *

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)

Form VII

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

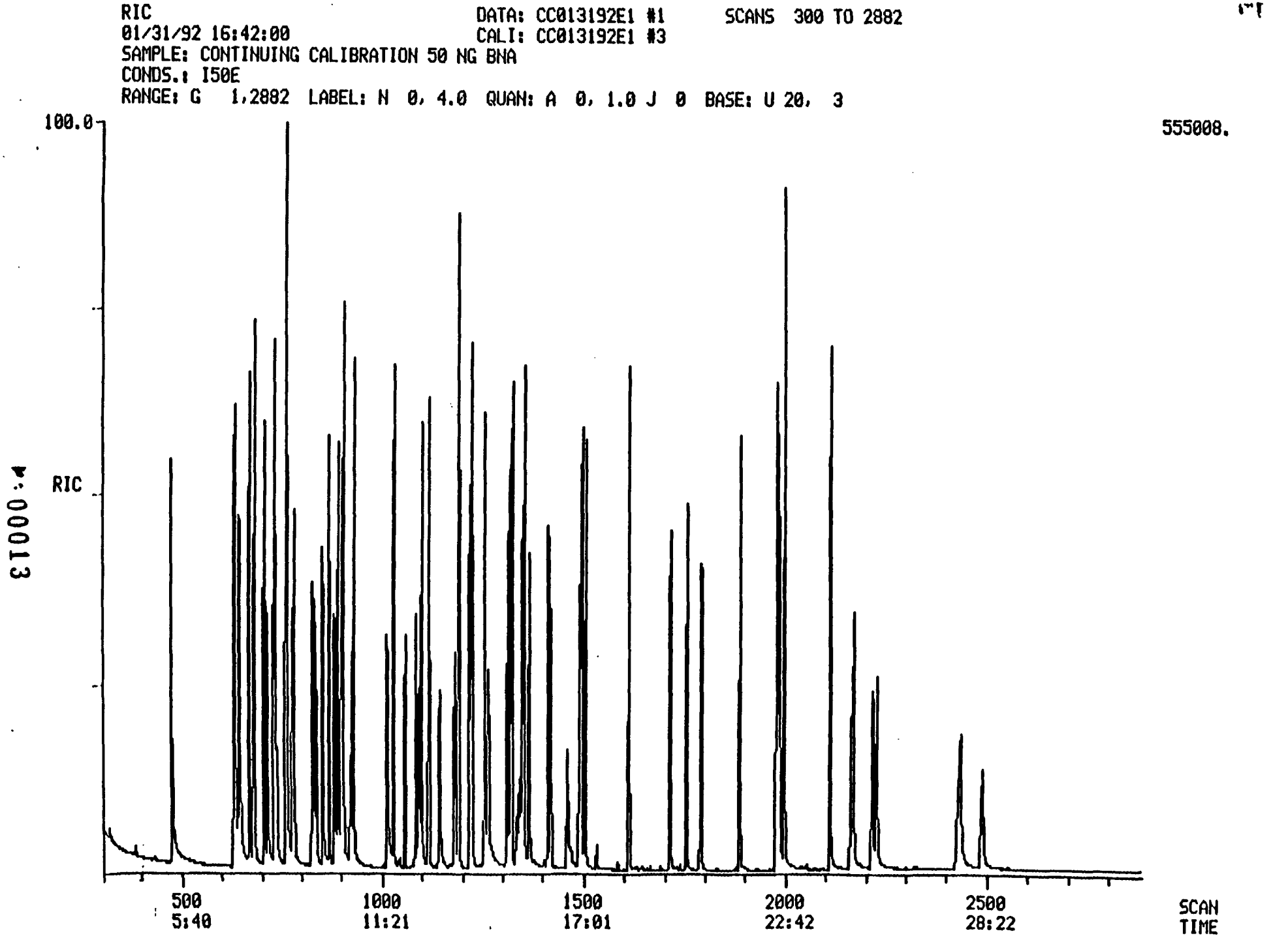
Case No: STAND Region: _____ Calibration Date: 01/31/92
Contractor: AnalytiKEM-Hou Time: 16:42
Contract No: _____ Laboratory ID: CC013192E1
Instrument ID: FINN Initial Cali. Date: 09/26/91

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
Dibenzofuran		1.185	1.453	-22.6		
2,4-Dinitrotoluene		0.314	0.446	-42.0		
Diethylphthalate		1.062	1.365	-28.5		
4-Chlorophenyl phenyl ether		0.511	0.561	-9.8		
Fluorene		1.013	1.074	-6.0		
4-Nitroaniline	x	0.158	0.225	-42.4		
4,6-Dinitro-2-Methylphenol	x	0.108	0.067	38.0		
N-Nitrosodiphenylamine (1)		0.384	0.486	-26.6	*	
4-Bromophenyl phenyl ether		0.191	0.193	-1.0		
Hexachlorobenzene		0.225	0.214	4.9		
Pentachlorophenol	x	0.146	0.105	28.1	*	
Phenanthrene		0.840	0.930	-10.7		
Anthracene		0.787	0.898	-14.1		
Di-n-Butylphthalate		1.140	1.394	-22.3		
Fluoranthene		0.889	0.890	-0.1	*	
Pyrene		0.975	1.248	-28.0		
Butylbenzylphthalate		0.541	0.808	-49.4		
3,3'-Dichlorobenzidine		0.222	0.287	-29.3		
Benzo(a)Anthracene		0.923	1.072	-16.1		
bis(2-Ethylhexyl)Phthalate		0.752	1.120	-48.9		
Chrysene		0.698	0.911	-30.5		
Di-n-Octyl Phthalate		1.644	2.101	-27.8	*	
Benzo(b)Fluoranthene		1.150	0.985	14.3		
Benzo(k)Fluoranthene		0.821	0.985	-20.0		
Benzo(a)Pyrene		0.866	1.002	-15.7	*	
Indeno(1,2,3-cd)Pyrene		0.959	0.879	8.3		
Dibenz(a,h)Anthracene		0.826	0.704	14.8		
Benzo(g,h,i)Perylene		0.735	0.804	-9.4		

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Cannot be separated from diphenylamine

Form VII


RIC
01/31/92 16:42:00
DATA: CC013192E1 #1
CALI: CC013192E1 #3
SCANS 300 TO 2882
SAMPLE: CONTINUING CALIBRATION 50 NG BNA
CONDS.: I50E
RANGE: G 1,2882 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
555008.
RIC
500
5:40
1000
11:21
1500
17:01
2000
22:42
2500
28:22
SCAN
TIME

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: _____ Calibration Date: 02/04/92
ontractor: AnalytiKEM-Hou Time: 11:50
ontract No: _____ Laboratory ID: CC020492B1
Instrument ID: I50B Initial Cali. Date: 01/01/92

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
henol		1.876	1.602	14.6	*	
is(2-Chloroethyl)Ether		1.443	1.640	-13.7		
2-Chlorophenol		1.374	1.144	16.7		
1,3-Dichlorobenzene		1.350	1.643	-21.7		
,4-Dichlorobenzene		1.418	1.738	-22.6	*	
Benzyl Alcohol		0.812	0.732	9.9		
1,2-Dichlorobenzene		1.284	1.544	-20.2		
2-Methylphenol		1.165	1.148	1.5		
bis(2-Chloroisopropyl)Ether		2.130	3.045	-43.0		
4-Methylphenol		1.096	1.131	-3.2		
N-Nitroso-Di-n-Propylamine		1.113	1.242	-11.6		* *
Hexachloroethane		0.620	0.794	-28.1		
Nitrobenzene		0.454	0.501	-10.4		
Isophorone		0.539	0.823	-52.7		
2-Nitrophenol		0.189	0.181	4.2	*	
2,4-Dimethylphenol		0.321	0.304	5.3		
Benzoic Acid	x	0.086	0.126	-46.5		
bis(2-Chloroethoxy)Methane		0.501	0.520	-3.8		
2,4-Dichlorophenol		0.266	0.264	0.8	*	
1,2,4-Trichlorobenzene		0.294	0.407	-38.4		
Naphthalene		0.937	1.022	-9.1		
4-Chloroaniline		0.175	0.172	1.7		
Hexachlorobutadiene		0.185	0.223	-20.5	*	
4-Chloro-3-Methylphenol		0.282	0.271	3.9	*	
2-Methylnaphthalene		0.536	0.751	-40.1		
Hexachlorocyclopentadiene		0.203	0.193	4.9		* *
2,4,6-Trichlorophenol		0.375	0.302	19.5	*	
2,4,5-Trichlorophenol	x	0.306	0.340	-11.1		
2-Chloronaphthalene		1.037	1.180	-13.8		
2-Nitroaniline	x	0.466	0.360	22.7		
Dimethyl Phthalate		1.081	1.146	-6.0		
Acenaphthylene		1.589	1.563	1.6		
2,6-Dinitrotoluene		0.283	0.323	-14.1		
3-Nitroaniline	x	0.208	0.245	-17.8		
Acenaphthene		1.018	0.965	5.2	*	
2,4-Dinitrophenol	x	0.116	0.080	31.0		* *
4-Nitrophenol	x	0.154	0.065	57.8		* *

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)

Form VII

CONTINUING CALIBRATION CHECK
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

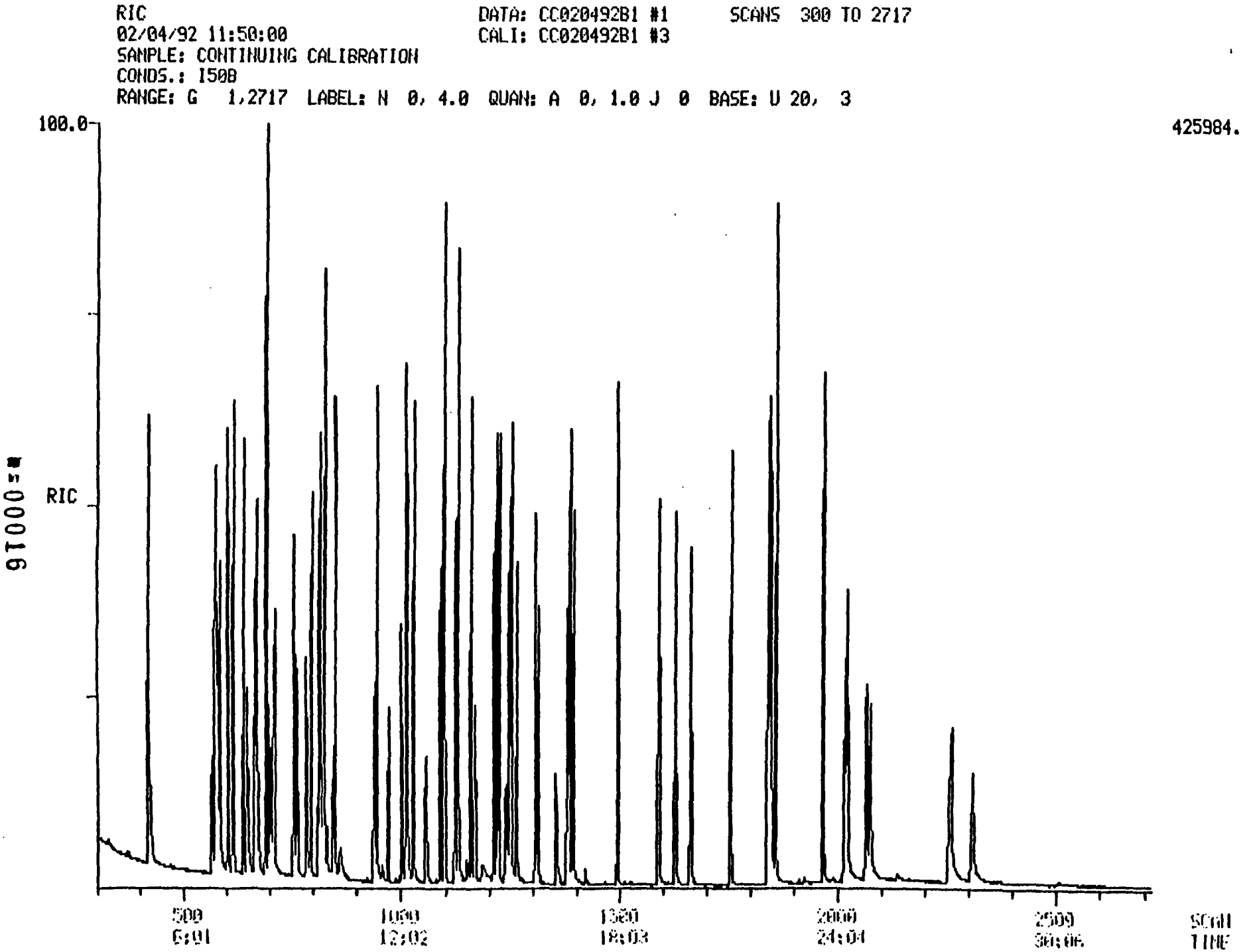
Case No: STAND Region: _____ Calibration Date: 02/04/92
Contractor: AnalytiKEM-Hou Time: 11:50
Contract No: _____ Laboratory ID: CC020492B1
Instrument ID: I50B Initial Cali. Date: 01/01/92

Minimum RF for SPCC is 0.050 Maximum %D for CCC is 30%

Compound		AVE RF	RF(50)	% D	CCC	SPCC
Dibenzofuran		1.372	1.437	-4.7		
2,4-Dinitrotoluene		0.324	0.341	-5.2		
Diethylphthalate		1.244	1.107	11.0		
4-Chlorophenyl phenyl ether		0.688	0.617	10.3		
Fluorene		1.262	1.054	16.5		
4-Nitroaniline	x	0.219	0.111	49.3		
4,6-Dinitro-2-Methylphenol	x	0.125	0.101	19.2		
N-Nitrosodiphenylamine (1)		0.455	0.513	-12.7	*	
4-Bromophenyl phenyl ether		0.234	0.221	5.6		
Hexachlorobenzene		0.279	0.261	6.5		
Pentachlorophenol	x	0.145	0.102	29.7	*	
Phenanthrene		0.985	0.966	1.9		
Anthracene		0.911	0.954	-4.7		
Di-n-Butylphthalate		1.361	1.447	-6.3		
Fluoranthene		1.046	1.006	3.8	*	
Pyrene		0.699	1.188	-70.0		
Butylbenzylphthalate		0.435	0.748	-72.0		
3,3'-Dichlorobenzidine		0.249	0.721	-189.6		
Benzo(a)Anthracene		0.896	1.009	-12.6		
bis(2-Ethylhexyl)Phthalate		0.737	1.003	-36.1		
Chrysene		0.791	1.003	-26.8		
Di-n-Octyl Phthalate		1.316	1.595	-21.2	*	
Benzo(b)Fluoranthene		1.329	1.155	13.1		
Benzo(k)Fluoranthene		0.773	0.986	-27.6		
Benzo(a)Pyrene		0.850	0.903	-6.2	*	
Indeno(1,2,3-cd)Pyrene		0.580	0.803	-38.4		
Dibenz(a,h)Anthracene		0.483	0.647	-34.0		
Benzo(g,h,i)Perylene		0.602	0.716	-18.9		

RF(50) - Response Factor from daily standard file at concentration indicated (50 total nanograms)
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
x - - - Due to low response analyze at 80 total nanograms
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Cannot be separated from diphenylamine

Form VII


RIC
02/04/92 11:50:00
SAMPLE: CONTINUING CALIBRATION
CONDS.: I50B
DATA: CC020492B1 #1
CALI: CC020492B1 #3
SCANS 300 TO 2717
RANGE: G 1,2717 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
425984.
RIC
9T000
500
6:01
1000
12:02
1500
18:03
2000
24:04
2500
30:06
SCAN
TIME

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB4645LL
Client Sample ID: MB4645LL

Concentration: LOW
Sample Matrix: WATER
Percent Moisture: 100.0

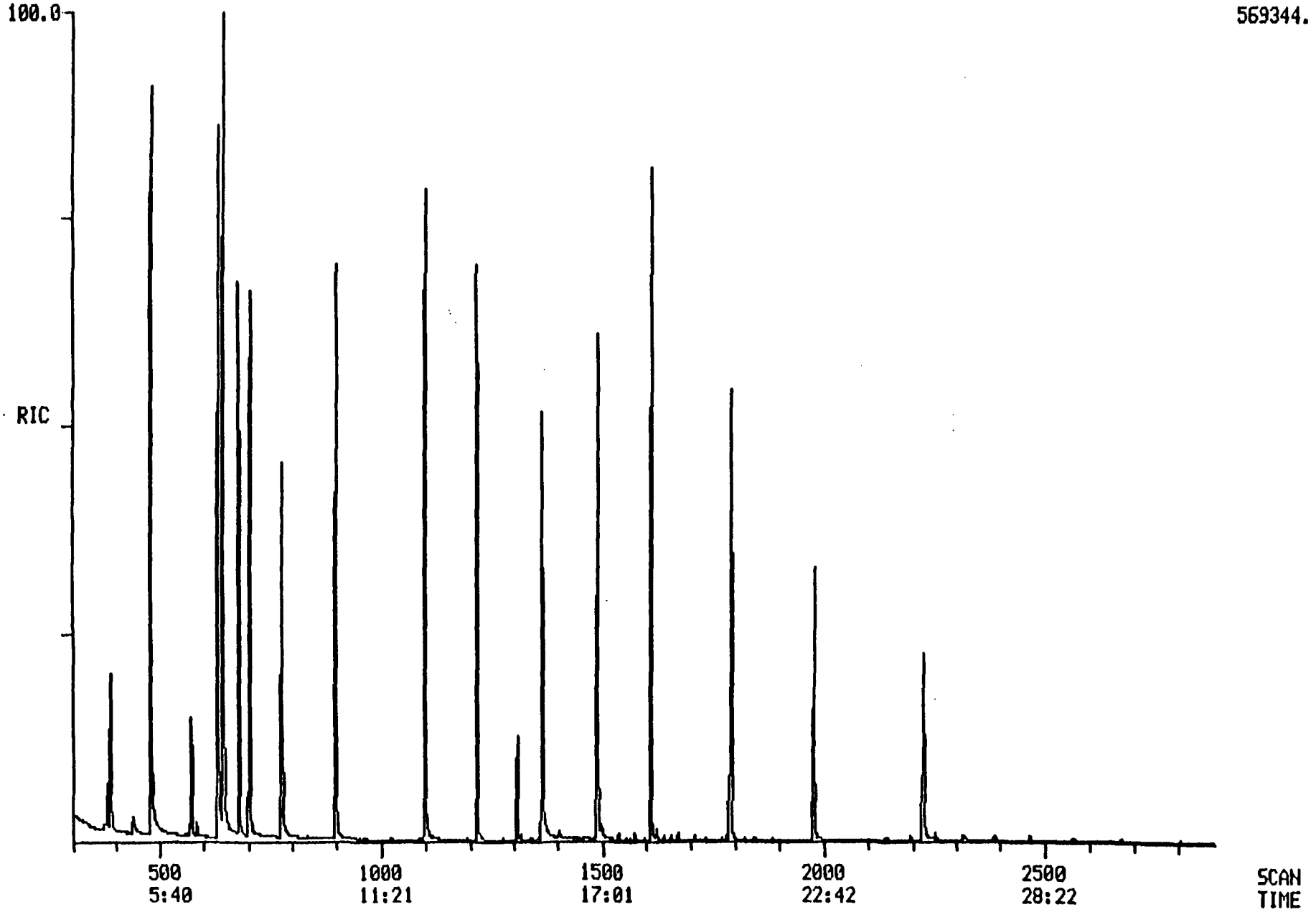
Date Extracted: 01/29/92
Date Analyzed: 02/01/92
Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
108-95-2	Phenol	10	<	606-20-2	2,6-Dinitrotoluene	10	<
62-53-3	Aniline	10	<	99-09-2	3-Nitroaniline	50	<
111-44-4	bis(2-Chloroethyl)Ether	10	<	83-32-9	Acenaphthene	10	<
95-57-8	2-Chlorophenol	10	<	51-28-5	2,4-Dinitrophenol	50	<
541-73-1	1,3-Dichlorobenzene	10	<	100-02-7	4-Nitrophenol	50	<
106-46-7	1,4-Dichlorobenzene	10	<	132-64-9	Dibenzofuran	10	<
100-51-6	Benzyl Alcohol	10	<	121-14-2	2,4-Dinitrotoluene	10	<
95-50-1	1,2-Dichlorobenzene	10	<	84-66-2	Diethylphthalate	10	<
95-48-7	2-Methylphenol	10	<	7005-72-3	4-Chlorophenyl phenyl ether	10	<
39638-32-9	bis(2-Chloroisopropyl)Ether	10	<	86-73-7	Fluorene	10	<
106-44-5	4-Methylphenol	10	<	100-01-6	4-Nitroaniline	50	<
621-64-7	N-Nitroso-Di-n-Propylamine	10	<	534-52-1	4,6-Dinitro-2-Methylphenol	50	<
67-72-1	Hexachloroethane	10	<	86-30-6	N-Nitrosodiphenylamine (1)	10	<
98-95-3	Nitrobenzene	10	<	101-55-3	4-Bromophenyl phenyl ether	10	<
78-59-1	Isophorone	10	<	118-74-1	Hexachlorobenzene	10	<
88-75-5	2-Nitrophenol	10	<	87-86-5	Pentachlorophenol	50	<
105-67-9	2,4-Dimethylphenol	10	<	85-01-8	Phenanthrene	10	<
65-85-0	Benzoic Acid	50	<	120-12-7	Anthracene	10	<
111-91-1	bis(2-Chloroethoxy)Methane	10	<	84-74-2	Di-n-Butylphthalate	61	
120-83-2	2,4-Dichlorophenol	10	<	206-44-0	Fluoranthene	10	<
120-82-1	1,2,4-Trichlorobenzene	10	<	129-00-0	Pyrene	10	<
91-20-3	Naphthalene	10	<	85-68-7	Butylbenzylphthalate	10	<
106-47-8	4-Chloroaniline	10	<	91-94-1	3,3'-Dichlorobenzidine	20	<
87-68-3	Hexachlorobutadiene	10	<	56-55-3	Benzo(a)Anthracene	10	<
59-50-7	4-Chloro-3-Methylphenol	10	<	117-81-7	bis(2-Ethylhexyl)Phthalate	10	<
91-57-6	2-Methylnaphthalene	10	<	218-01-9	Chrysene	10	<
77-47-4	Hexachlorocyclopentadiene	10	<	117-84-0	Di-n-Octyl Phthalate	10	<
88-06-2	2,4,6-Trichlorophenol	10	<	205-99-2	Benzo(b)Fluoranthene	10	<
95-95-4	2,4,5-Trichlorophenol	50	<	207-08-9	Benzo(k)Fluoranthene	10	<
91-58-7	2-Chloronaphthalene	10	<	50-32-8	Benzo(a)Pyrene	10	<
88-74-4	2-Nitroaniline	50	<	193-39-5	Indeno(1,2,3-cd)Pyrene	10	<
131-11-3	Dimethyl Phthalate	10	<	53-70-3	Dibenz(a,h)Anthracene	10	<
208-96-8	Acenaphthylene	10	<	191-24-2	Benzo(g,h,i)Perylene	10	<

The Lab ID for data on this page is MB4645LLS.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

RIC
02/01/92 2:08:00
DATA: MB4645LLS #1
CALI: MB4645LLS #3
SCANS 300 TO 2882
SAMPLE: CLP,BLANK,BLANK,MB4645LL,LOW,WATER,MB4645LL,BNA.EPA
CONDS.: I50E
RANGE: G 1,2882 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name: AnalytiKEM-Hou
Lab Sample ID: MB4654LS
Client Sample ID: MB4654LS

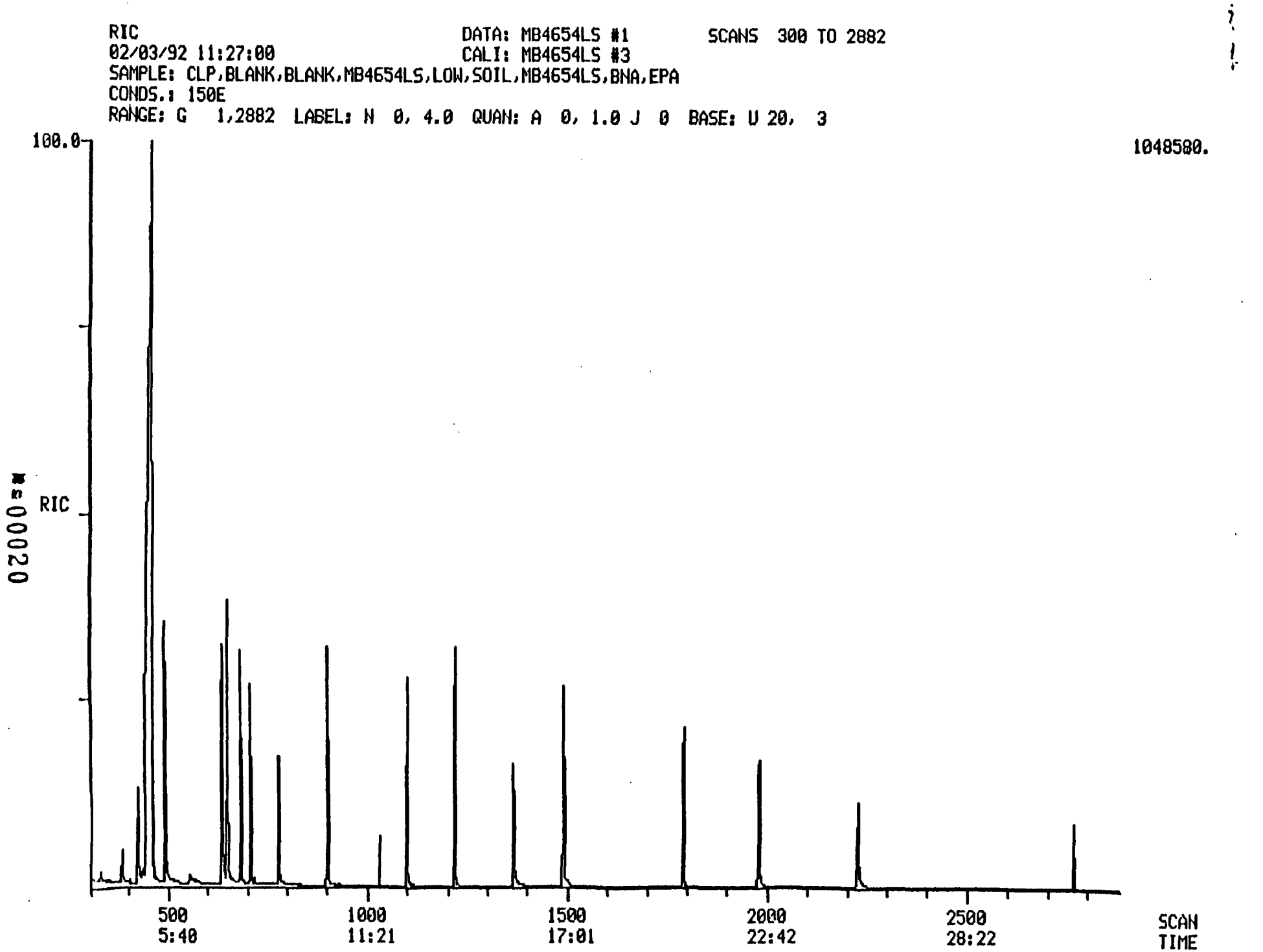
Concentration: LOW
Sample Matrix: SOIL
Percent Moisture:

Date Extracted: 01/31/92
Date Analyzed: 02/03/92
Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg	
108-95-2	Phenol	330	<	606-20-2	2,6-Dinitrotoluene	330	<
62-53-3	Aniline	330	<	99-09-2	3-Nitroaniline	1600	<
111-44-4	bis(2-Chloroethyl)Ether	330	<	83-32-9	Acenaphthene	330	<
95-57-8	2-Chlorophenol	330	<	51-28-5	2,4-Dinitrophenol	1600	<
541-73-1	1,3-Dichlorobenzene	330	<	100-02-7	4-Nitrophenol	1600	<
106-46-7	1,4-Dichlorobenzene	330	<	132-64-9	Dibenzofuran	330	<
100-51-6	Benzyl Alcohol	330	<	121-14-2	2,4-Dinitrotoluene	330	<
95-50-1	1,2-Dichlorobenzene	330	<	84-66-2	Diethylphthalate	330	<
95-48-7	2-Methylphenol	330	<	7005-72-3	4-Chlorophenyl phenyl ether	330	<
39638-32-9	bis(2-Chloroisopropyl)Ether	330	<	86-73-7	Fluorene	330	<
106-44-5	4-Methylphenol	330	<	100-01-6	4-Nitroaniline	1600	<
621-64-7	N-Nitroso-Di-n-Propylamine	330	<	534-52-1	4,6-Dinitro-2-Methylphenol	1600	<
67-72-1	Hexachloroethane	330	<	86-30-6	N-Nitrosodiphenylamine (1)	330	<
98-95-3	Nitrobenzene	330	<	101-55-3	4-Bromophenyl phenyl ether	330	<
78-59-1	Isophorone	330	<	118-74-1	Hexachlorobenzene	330	<
88-75-5	2-Nitrophenol	330	<	87-86-5	Pentachlorophenol	1600	<
105-67-9	2,4-Dimethylphenol	330	<	85-01-8	Phenanthrene	330	<
65-85-0	Benzoic Acid	1600	<	120-12-7	Anthracene	330	<
111-91-1	bis(2-Chloroethoxy)Methane	330	<	84-74-2	Di-n-Butylphthalate	330	<
120-83-2	2,4-Dichlorophenol	330	<	206-44-0	Fluoranthene	330	<
120-82-1	1,2,4-Trichlorobenzene	330	<	129-00-0	Pyrene	330	<
91-20-3	Naphthalene	330	<	85-68-7	Butylbenzylphthalate	330	<
106-47-8	4-Chloroaniline	330	<	91-94-1	3,3'-Dichlorobenzidine	660	<
87-68-3	Hexachlorobutadiene	330	<	56-55-3	Benzo(a)Anthracene	330	<
59-50-7	4-Chloro-3-Methylphenol	330	<	117-81-7	bis(2-Ethylhexyl)Phthalate	330	<
91-57-6	2-Methylnaphthalene	330	<	218-01-9	Chrysene	330	<
77-47-4	Hexachlorocyclopentadiene	330	<	117-84-0	Di-n-Octyl Phthalate	330	<
88-06-2	2,4,6-Trichlorophenol	330	<	205-99-2	Benzo(b)Fluoranthene	330	<
95-95-4	2,4,5-Trichlorophenol	1600	<	207-08-9	Benzo(k)Fluoranthene	330	<
91-58-7	2-Chloronaphthalene	330	<	50-32-8	Benzo(a)Pyrene	330	<
88-74-4	2-Nitroaniline	1600	<	193-39-5	Indeno(1,2,3-cd)Pyrene	330	<
131-11-3	Dimethyl Phthalate	330	<	53-70-3	Dibenz(a,h)Anthracene	330	<
208-96-8	Acenaphthylene	330	<	191-24-2	Benzo(g,h,i)Perylene	330	<

The Lab ID for data on this page is MB4654LS.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
02/03/92 11:27:00
DATA: MB4654LS #1
CALI: MB4654LS #3
SCANS 300 TO 2882
SAMPLE: CLP,BLANK,BLANK,MB4654LS,LOW,SOIL,MB4654LS,BNA,EPA
CONDS.: 150E
RANGE: G 1,2882 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
1048580.
RIC
m=00020
500
5:40
1000
11:21
1500
17:01
2000
22:42
2500
28:22
SCAN
TIME

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: _____ Case No.: A7846 SAS No.: _____ SDG No.: A7846

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	EQBLANK	98	109	123	97 *	106 *	114	0	0	2
02	MB4645LL	104	108	128	104 *	113 *	122	0	0	2

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-94)	
S5 (2FP)	= 2-Fluorophenol	(21-100)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(-)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(-)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ANALYTIKEM-HOU Contract: _____

Lab Code: ANALYTI Case No.: A7846 SAS No.: _____ SDG No.: A7846

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	DT-2A	0 D	0 D	0 D	0 D	0 D	0 D	0	0	0
02	MB4654LS	77	78	82	72	84	61	0	0	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(-)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(-)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

ase No: STAND Region: _____ Instrument ID: FINN
Contractor: AnalytiKEM-Hou Calibration Date: 09/25/91
`ontract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

aboratory ID	IC0925E020		IC0925E080		IC0925E160			
	CC092591E1		IC0925E120					CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
^henol	1.553	1.810	2.247	1.671	1.678	1.792	15.1	*
is(2-Chloroethyl)Ether	1.258	1.721	1.452	1.209	1.262	1.380	15.3	
‹-Chlorophenol	1.042	1.254	1.514	1.136	1.154	1.220	14.8	
1,3-Dichlorobenzene	1.166	1.422	1.356	1.222	1.245	1.282	8.1	
,4-Dichlorobenzene	1.207	1.438	1.326	1.292	1.152	1.283	8.6	*
enzyl Alcohol	0.595	0.653	0.698	0.637	0.518	0.620	11.0	
1,2-Dichlorobenzene	1.129	1.405	1.312	1.222	1.111	1.236	10.0	
?-Methylphenol	0.934	1.059	1.008	0.919	0.927	0.969	6.3	
is(2-Chloroisopropyl)Ether	0.525	0.585	0.484	1.626	0.450	0.734	68.3	
-Methylphenol	0.948	1.137	1.124	1.000	0.979	1.038	8.4	
N-Nitroso-Di-n-Propylamine	0.894	1.089	0.720	0.579	0.835	0.823	23.2	* *
exachloroethane	0.464	0.568	0.543	0.506	0.482	0.513	8.4	
itrobenzene	0.312	0.370	0.338	0.327	0.310	0.331	7.4	
Isophorone	0.591	0.597	0.683	0.615	0.537	0.605	8.7	
2-Nitrophenol	0.149	0.181	0.224	0.159	0.174	0.177	16.3	*
,4-Dimethylphenol	0.249	0.265	0.360	0.276	0.280	0.286	15.1	
enzoic Acid	x	0.179	0.130	0.134	0.133	0.144	16.2	
bis(2-Chloroethoxy)Methane	0.416	0.502	0.447	0.411	0.406	0.436	9.2	
,4-Dichlorophenol	0.220	0.270	0.328	0.235	0.245	0.260	16.3	*
,2,4-Trichlorobenzene	0.267	0.315	0.303	0.272	0.269	0.285	7.8	
Naphthalene	0.815	0.944	0.862	0.772	0.686	0.816	11.8	
4-Chloroaniline	0.206	0.187	0.326	0.307	0.139	0.233	34.5	
exachlorobutadiene	0.145	0.152	0.156	0.146	0.142	0.148	3.8	*
-Chloro-3-Methylphenol	0.239	0.289	0.340	0.259	0.264	0.278	14.0	*
2-Methylnaphthalene	0.589	0.592	0.571	0.528	0.461	0.548	10.0	
exachlorocyclopentadiene	0.213	0.052	0.302	0.295	0.260	0.224	45.7	* *
,4,6-Trichlorophenol	0.269	0.329	0.425	0.308	0.309	0.328	17.8	*
‹,4,5-Trichlorophenol	x	0.349	0.353	0.328	0.336	0.342	3.4	
2-Chloronaphthalene	0.893	1.085	1.037	0.929	0.918	0.972	8.6	
-Nitroaniline	x	0.339	0.351	0.336	0.280	0.326	9.7	
imethyl Phthalate	0.977	1.199	1.127	1.052	1.033	1.078	8.0	
Acenaphthylene	1.415	1.424	1.566	1.448	1.348	1.440	5.5	
?,6-Dinitrotoluene	0.231	0.320	0.302	0.291	0.295	0.288	11.7	
-Nitroaniline	x	0.339	0.338	0.326	0.280	0.321	8.7	
cenaphthene	0.922	1.043	0.974	0.887	0.817	0.929	9.2	*
2,4-Dinitrophenol	x	0.144	0.134	0.115	0.127	0.130	9.4	* *
Nitrophenol	x	0.118	0.108	0.084	0.086	0.099	16.9	* *

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

Case No: STAND Region: Instrument ID: FINN
Contractor: AnalytiKEM-Hou Calibration Date: 09/25/91
Contract No:

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC0925E020	IC0925E080	IC0925E160					
	CC092591E1	IC0925E120						CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Dibenzofuran	1.227	1.223	1.259	1.200	1.017	1.185	8.1	
2,4-Dinitrotoluene	0.274	0.367	0.316	0.312	0.302	0.314	10.7	
Diethylphthalate	0.957	1.174	1.110	1.044	1.024	1.062	7.8	
4-Chlorophenyl phenyl ether	0.483	0.547	0.519	0.509	0.499	0.511	4.7	
Fluorene	0.988	1.142	1.017	0.986	0.930	1.013	7.8	
2-Nitroaniline	x	0.151	0.151	0.174	0.154	0.158	7.0	
4,6-Dinitro-2-Methylphenol	x	0.123	0.116	0.092	0.102	0.108	12.9	
N-Nitrosodiphenylamine (1)	0.391	0.356	0.410	0.377	0.386	0.384	5.1	*
4-Bromophenyl phenyl ether	0.182	0.206	0.193	0.184	0.189	0.191	5.0	
Hexachlorobenzene	0.228	0.238	0.231	0.220	0.209	0.225	4.9	
Pentachlorophenol	x	0.141	0.169	0.133	0.140	0.146	10.9	*
Phenanthrene	0.815	0.956	0.870	0.813	0.747	0.840	9.3	
Anthracene	0.815	0.793	0.861	0.766	0.700	0.787	7.6	
Di-n-Butylphthalate	1.049	1.316	1.214	1.092	1.029	1.140	10.7	
Fluoranthene	0.841	1.019	0.966	0.856	0.765	0.889	11.5	*
Pyrene	1.007	1.119	1.013	0.885	0.850	0.975	11.1	
Butylbenzylphthalate	0.489	0.636	0.568	0.514	0.499	0.541	11.3	
3,3'-Dichlorobenzidine	0.187	0.144	0.252	0.265	0.260	0.222	24.2	
Benzo(a)Anthracene	0.903	1.054	0.918	0.887	0.854	0.923	8.3	
Bis(2-Ethylhexyl)Phthalate	0.758	0.864	0.769	0.678	0.690	0.752	9.9	
Chrysene	0.773	0.800	0.740	0.614	0.563	0.698	14.9	
Di-n-Octyl Phthalate	1.242	2.273	1.587	1.531	1.585	1.644	23.1	*
Benzo(b)Fluoranthene	0.807	1.461	1.106	1.192	1.182	1.150	20.4	
Benzo(k)Fluoranthene	0.888	1.039	0.805	0.566	0.809	0.821	20.9	
Benzo(a)Pyrene	0.795	1.043	0.855	0.807	0.830	0.866	11.7	*
Indeno(1,2,3-cd)Pyrene	0.786	1.152	0.978	0.926	0.955	0.959	13.7	
Dibenz(a,h)Anthracene	0.690	1.003	0.836	0.794	0.807	0.826	13.7	
Benzo(g,h,i)Perylene	0.589	0.956	0.737	0.687	0.704	0.735	18.4	
Nitrobenzene-d5	0.359	0.367	0.349	0.332	0.315	0.344	6.1	
2-Fluorobiphenyl	1.100	1.137	1.099	1.027	0.998	1.072	5.4	
Terphenyl-d14	0.834	0.803	0.790	0.748	0.709	0.777	6.3	
Phenol-d5	1.378	1.555	1.569	1.469	1.454	1.485	5.3	
2-Fluorophenol	1.032	1.107	1.180	1.219	1.088	1.125	6.6	
2,4,6-Tribromophenol	0.184	0.167	0.176	0.174	0.171	0.174	3.6	

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng
(1) - - Cannot be separated from diphenylamine

Form VI

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

Case No: STAND Region: Instrument ID: 1508
Contractor: AnalytiKEM-Hou Calibration Date: 01/01/92
Contract No:

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC01018020 IC01018050	IC01018080 IC01018120	IC01018160				CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Phenol	1.900	2.056	2.098	1.717	1.609	1.876	11.3	*
bis(2-Chloroethyl)Ether	1.660	1.700	1.297	1.151	1.408	1.443	16.3	
2-Chlorophenol	1.374	1.486	1.538	1.211	1.263	1.374	10.2	
1,3-Dichlorobenzene	1.372	1.461	1.347	1.304	1.264	1.350	5.5	
1,4-Dichlorobenzene	1.416	1.605	1.328	1.390	1.350	1.418	7.8	*
Benzyl Alcohol	0.759	0.779	0.733	0.453	1.338	0.812	39.7	
1,2-Dichlorobenzene	1.289	1.352	1.316	1.239	1.225	1.284	4.1	
2-Methylphenol	1.148	1.334	1.062	0.957	1.323	1.165	14.1	
bis(2-Chloroisopropyl)Ether	2.332	2.597	0.381	2.296	3.045	2.130	48.0	
4-Methylphenol	1.074	1.310	0.943	1.142	1.013	1.096	12.8	
N-Nitroso-Di-n-Propylamine	1.017	1.182	1.122	1.112	1.131	1.113	5.4	* *
Hexachloroethane	0.578	0.663	0.630	0.604	0.626	0.620	5.1	
Nitrobenzene	0.542	0.547	0.434	0.379	0.368	0.454	19.0	
Isophorone	0.886	0.757	0.369	0.188	0.494	0.539	52.7	
2-Nitrophenol	0.176	0.224	0.222	0.163	0.159	0.189	16.9	*
2,4-Dimethylphenol	0.319	0.355	0.363	0.274	0.294	0.321	11.9	
Benzoic Acid	x	0.113	0.083	0.091	0.055	0.086	28.0	
bis(2-Chloroethoxy)Methane	0.545	0.579	0.476	0.453	0.450	0.501	11.6	
2,4-Dichlorophenol	0.253	0.300	0.309	0.233	0.236	0.266	13.5	*
1,2,4-Trichlorobenzene	0.302	0.335	0.302	0.284	0.247	0.294	10.9	
Naphthalene	1.005	1.043	0.917	0.857	0.864	0.937	8.9	
4-Chloroaniline	0.320	0.257	0.096	0.130	0.070	0.175	62.1	
Hexachlorobutadiene	0.199	0.216	0.178	0.165	0.168	0.185	11.8	*
4-Chloro-3-Methylphenol	0.246	0.300	0.319	0.247	0.296	0.282	11.8	*
2-Methylnaphthalene	0.592	0.603	0.503	0.511	0.469	0.536	11.0	
Hexachlorocyclopentadiene	0.303	0.091	0.214	0.247	0.159	0.203	40.2	* *
2,4,6-Trichlorophenol	0.302	0.365	0.483	0.400	0.324	0.375	19.0	*
2,4,5-Trichlorophenol	x	0.356	0.339	0.318	0.213	0.306	21.0	
2-Chloronaphthalene	1.061	1.147	1.114	1.032	0.832	1.037	11.9	
2-Nitroaniline	x	0.549	0.490	0.481	0.344	0.466	18.6	
Dimethyl Phthalate	1.068	1.061	1.118	1.155	1.002	1.081	5.4	
Acenaphthylene	1.608	1.632	1.679	1.722	1.304	1.589	10.4	
2,6-Dinitrotoluene	0.258	0.357	0.336	0.193	0.271	0.283	23.1	
3-Nitroaniline	x	0.243	0.329	0.052	0.208	0.208	55.7	
Acenaphthene	1.012	1.021	1.095	1.080	0.882	1.018	8.3	*
2,4-Dinitrophenol	x	0.054	0.143	0.137	0.129	0.116	35.9	* *
4-Nitrophenol	x	0.134	0.192	0.156	0.135	0.154	17.6	* *

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng

INITIAL CALIBRATION DATA
SEMIVOLATILE HSL COMPOUNDS
(Page 2)

Case No: STAND Region: _____ Instrument ID: I50B
Contractor: AnalytiKEM-Hou Calibration Date: 01/01/92
Contract No: _____

Minimum AVE RF for SPCC is 0.050 Maximum %RSD for CCC is 30%

Laboratory ID	IC01018020 IC01018050		IC01018080 IC01018120		IC01018160			CCC*
Compound	RF(20)	RF(50)	RF(80)	RF(120)	RF(160)	AVE RF	% RSD	SPCC**
Dibenzofuran	1.480	1.430	1.423	1.449	1.079	1.372	12.1	
2,4-Dinitrotoluene	0.272	0.332	0.345	0.343	0.327	0.324	9.2	
Diethylphthalate	1.064	1.151	1.336	1.496	1.172	1.244	13.8	
4-Chlorophenyl phenyl ether	0.560	0.647	0.804	0.825	0.605	0.688	17.4	
Fluorene	1.061	1.209	1.419	1.483	1.140	1.262	14.4	
4-Nitroaniline	x	0.154	0.233	0.307	0.181	0.219	30.8	
4,6-Dinitro-2-Methylphenol	x	0.086	0.156	0.146	0.112	0.125	25.7	
N-Nitrosodiphenylamine (1)	0.454	0.443	0.502	0.456	0.421	0.455	6.5	*
4-Bromophenyl phenyl ether	0.237	0.278	0.240	0.233	0.180	0.234	15.0	
Hexachlorobenzene	0.263	0.306	0.304	0.300	0.222	0.279	13.0	
Pentachlorophenol	x	0.129	0.178	0.143	0.129	0.145	16.0	*
Phenanthrene	0.992	1.130	1.028	0.981	0.794	0.985	12.4	
Anthracene	0.941	1.026	0.960	0.904	0.723	0.911	12.5	
Di-n-Butylphthalate	1.309	1.650	1.418	1.281	1.148	1.361	13.8	
Fluoranthene	1.008	1.250	1.175	1.105	0.897	1.087	12.8	*
Pyrene	0.787	0.689	0.694	0.635	0.691	0.699	7.8	
Butylbenzylphthalate	0.504	0.471	0.424	0.370	0.406	0.435	12.2	
3,3'-Dichlorobenzidine	0.143	0.232	0.315	0.297	0.257	0.249	27.1	
Benzo(a)Anthracene	0.976	1.010	0.918	0.752	0.823	0.896	12.0	
bis(2-Ethylhexyl)Phthalate	0.826	0.850	0.747	0.674	0.588	0.737	14.7	
Chrysene	1.135	0.930	0.698	0.658	0.535	0.791	30.3	
Di-n-Octyl Phthalate	1.190	1.442	1.438	1.478	1.031	1.316	14.9	*
Benzo(b)Fluoranthene	0.972	1.292	1.700	1.500	1.179	1.329	21.2	
Benzo(k)Fluoranthene	1.106	1.176	0.802	0.502	0.280	0.773	49.7	
Benzo(a)Pyrene	0.931	1.012	0.848	0.784	0.677	0.850	15.2	*
Indeno(1,2,3-cd)Pyrene	0.813	0.833	0.466	0.374	0.416	0.580	38.6	
Dibenz(a,h)Anthracene	0.615	0.703	0.429	0.319	0.347	0.483	35.0	
Benzo(g,h,i)Perylene	0.776	0.824	0.482	0.382	0.544	0.602	31.7	
Nitrobenzene-d5	0.612	0.595	0.424	0.401	0.392	0.485	22.5	
2-Fluorobiphenyl	1.480	1.315	1.143	1.069	0.920	1.185	18.4	
Terphenyl-d14	0.768	0.663	0.589	0.560	0.682	0.652	12.6	
Phenol-d5	1.585	1.714	1.493	1.462	1.545	1.560	6.3	
2-Fluorophenol	1.267	1.283	1.143	1.146	1.093	1.186	7.1	
2,4,6-Tribromophenol	0.145	0.223	0.244	0.246	0.200	0.212	19.7	

Response Factor (number is the amount of nanograms)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
x - - - Not detectable at 20 ng
(1) - - Cannot be separated from diphenylamine

Form VI