FINAL YEAR ZERO (YEAR 0) MONITORING REPORT

MIDDLE WATERWAY PROBLEM AREA—AREAS A AND B COMMENCEMENT BAY NEARSHORE/TIDEFLATS SUPERFUND SITE

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

Prepared for

Middle Waterway Action Committee

Prepared by

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October 17, 2005

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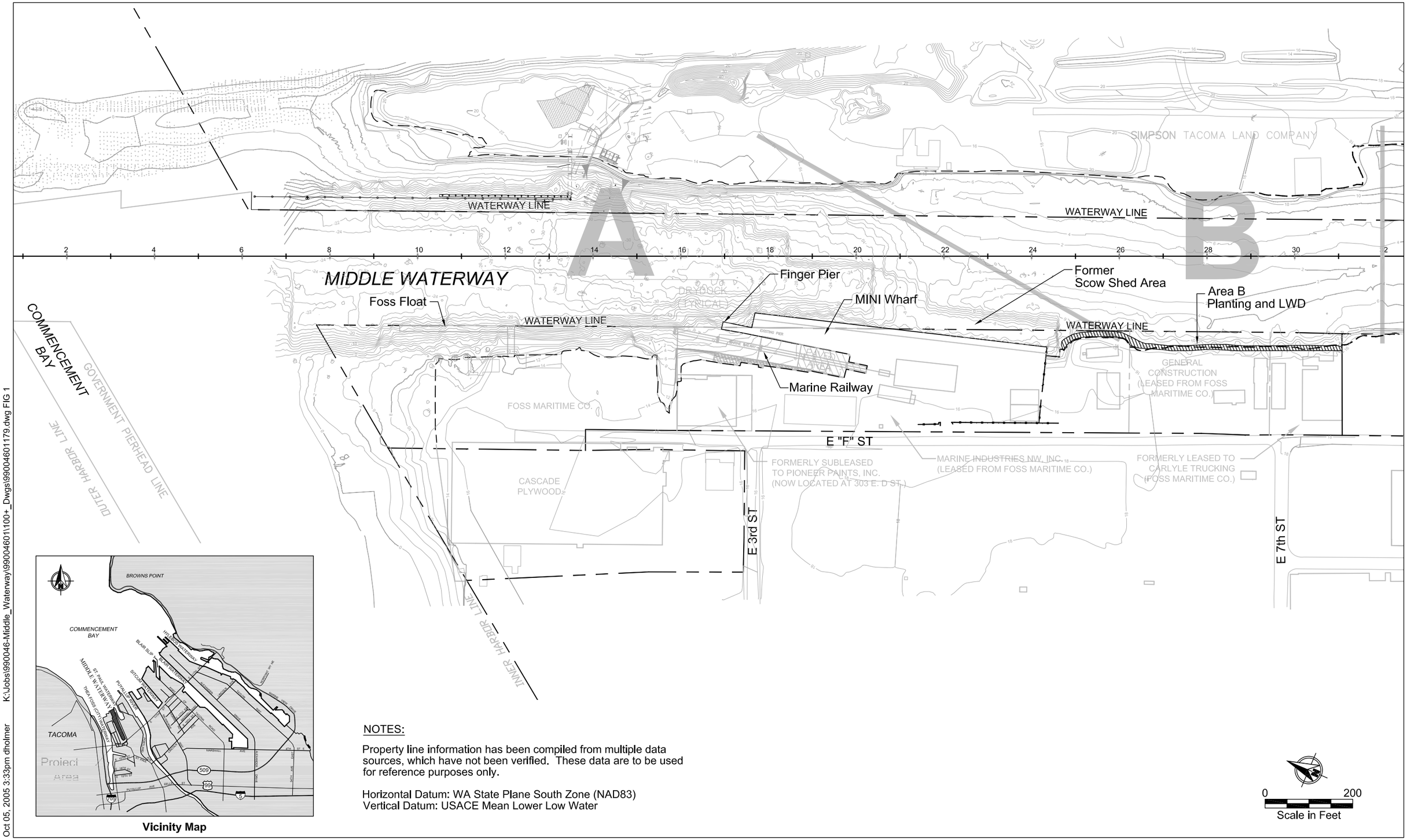
1 INTRODUCTION

This Year Zero (Year 0) Monitoring Report for the Middle Waterway Problem Area—Areas A and B (Figure 1), was prepared as required by Section 9.2 of the U.S. Environmental Protection Agency (EPA)-approved *Final Revised Operations, Monitoring, and Maintenance Plan* (*Final Revised OMMP—Areas A and B*; Anchor Environmental [Anchor] 2005) pursuant to the provisions of Section II.C of the Statement of Work (SOW) to the 1997 Administrative Order on Consent (AOC), which were incorporated into the March 2003 SOW by reference. The March 2003 SOW is an Attachment to the 2003 Consent Decree (CD) (EPA/Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]) for the Remedial Design and Remedial Action (RA) at the Middle Waterway Problem Area of the Commencement Bay Nearshore/Tideflats (CB/NT) Superfund Site. This submittal was prepared on behalf of the Middle Waterway Action Committee (MWAC), which consisted of Foss Maritime Company (Foss Maritime), Marine Industries Northwest, Inc. (MINI), and Pioneer Industries, Inc.

A majority of the RA construction was completed in Middle Waterway—Areas A and B by February 2004 and was finished by January 2005. Although a construction date has not yet been scheduled, MWAC plans to rebuild the Cook's Marine pier, which has been approved by EPA based on preliminary designs. Permits to rebuild the pier will not be required pursuant to CERCLA's permit exemption for onsite remedial action. The RA completion report was submitted to EPA on March 10, 2005. Figure 2 depicts the final EPA-selected remedies that were implemented during the RA, which require long-term monitoring. Phase I of the Year 0 monitoring activities were completed in June 2004 and Phase II activities were completed in June 2005 based on EPA comments dated March 25, 2005, and as described in a May 2, 2005 letter from MWAC to EPA (Appendix A). This document reports the monitoring activities and results generated during Phase I and Phase II events.

In addition to monitoring requirements defined in the *Final Revised OMMP—Areas A and B* (Anchor 2005), MINI is required to monitor the marine sediment at sampling locations adjacent to the pier, marine railway, and drydock as part of a National Pollutant Discharge Elimination System (NPDES) permit requirement. The NPDES sediment monitoring is also required to be coordinated with the monitoring activities described in the *Final Revised OMMP—Areas A and B* (Anchor 2005). Therefore, the sediment chemistry monitoring data collected in these areas and described in this report will also be used by MINI to comply with its NPDES permit.



Vicinity Map

NOTES:

Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

Horizontal Datum: WA State Plane South Zone (NAD83)
Vertical Datum: USACE Mean Lower Low Water

0 200
Scale in Feet

Oct 05, 2005 3:33pm dholmer K:\Jobs\990046-Middle_Waterway\99004601100+_Dwgs\99004601179.dwg FIG 1

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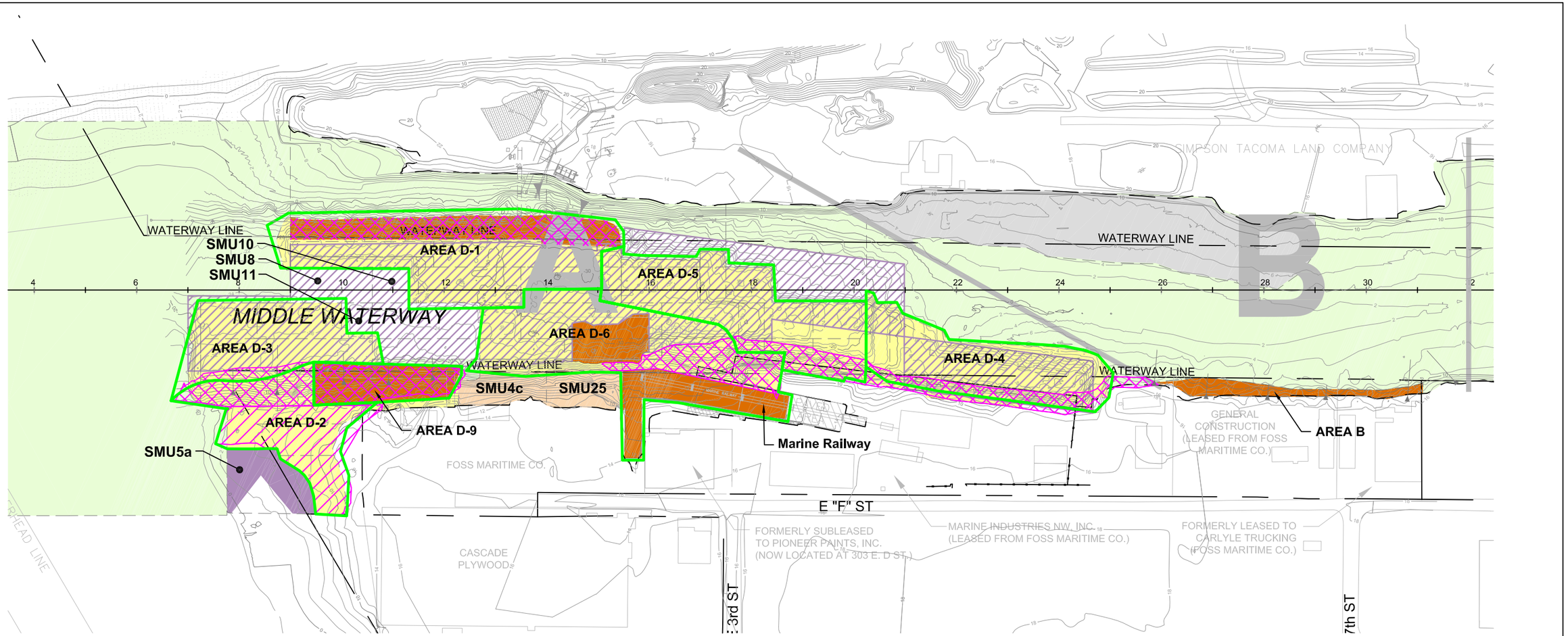
Figure 1
Vicinity and Post-Remedial Action Site Map
Middle Waterway Problem Area
Year Zero Monitoring Report



Dredge
Natural Recovery
No Action
Enhanced Natural Recovery with Surficial Cap
Dredge and Thick-Layer Cap
St. Paul Waterway Nearshore Facility Habitat Area
Dredge and Enhanced Natural Recovery
Enhanced Natural Recovery

Contractor Selected Dredge Areas

Backfill Areas

Slope Protection Material

WATERWAY AREAS

A Working Waterway Area

B Central Tideflats

0 200
Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Mar 14, 2005 10:36am cdavidson K:\Jobs\990046-Middle_Waterway\99004601\100+_Dwgs\99004601180.dwg YR ZERO FIG 2

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Figure 2
Final EPA - Approved Remedies Applied to Areas A and B
Middle Waterway Problem Area
Year Zero Monitoring Report

The remainder of this document details the information needed to fulfill requirements provided in the *Final Revised OMMP—Areas A and B* (Anchor 2005) for the long-term monitoring report as follows:

- **Section 2–Monitoring Objectives.** Summary of what monitoring activities are expected to accomplish.
- **Section 3–Monitoring Activities and Results**. Summary of all field activities, including a description of any deviations from the EPA-approved *Middle Waterway Problem Area Sampling and Analysis Plan* (SAP; Foster Wheeler 1998a), *Quality Assurance Project Plan* (QAPP; Foster Wheeler 1998b), and the *Final Revised OMMP—Areas A and B* (Anchor 2005), and a description of all monitoring results.
- **Section 4–Status of Institutional Controls.** Update on the status of each institutional control, including the implementation date and any changes affecting institutional controls.
- **Section 5–Additional Response Actions and Adaptive Monitoring Strategies.** Discussion of additional response actions (ARAs), if necessary, to confirm the continued successful performance of the RA, and recommendations of appropriate changes to the monitoring plan given conditions identified during the monitoring event.
- **Section 6–References.** Publication details for the references cited in the document.

2 MONITORING OBJECTIVES

The cleanup objective for the RA, as described in Section 10 of the 1989 Record of Decision (ROD; EPA 1989), states that "the selected remedy is to achieve acceptable sediment quality in a reasonable time frame." "Acceptable sediment quality" is defined as "the absence of acute or chronic adverse effects on biological resources or significant human health risks." The objectives of long-term monitoring activities in Middle Waterway—Areas A and B are to confirm that the RA continues to be protective of biological resources and human health. The specific objectives, as described in the *Final Revised OMMP—Areas A and B* (Anchor 2005), include the following:

- Monitor those areas in which contaminated sediments have been removed (i.e., dredged), addressed with a thick-layer cap, or addressed with placement of enhanced natural recovery (ENR) material including ENR with surficial cap, ENR only, and dredged with ENR.
- Monitor those areas in which sediment contamination problems are expected to be corrected by source control and natural recovery (NR).

The specific monitoring activities associated with each remedy are discussed in detail in the following section.

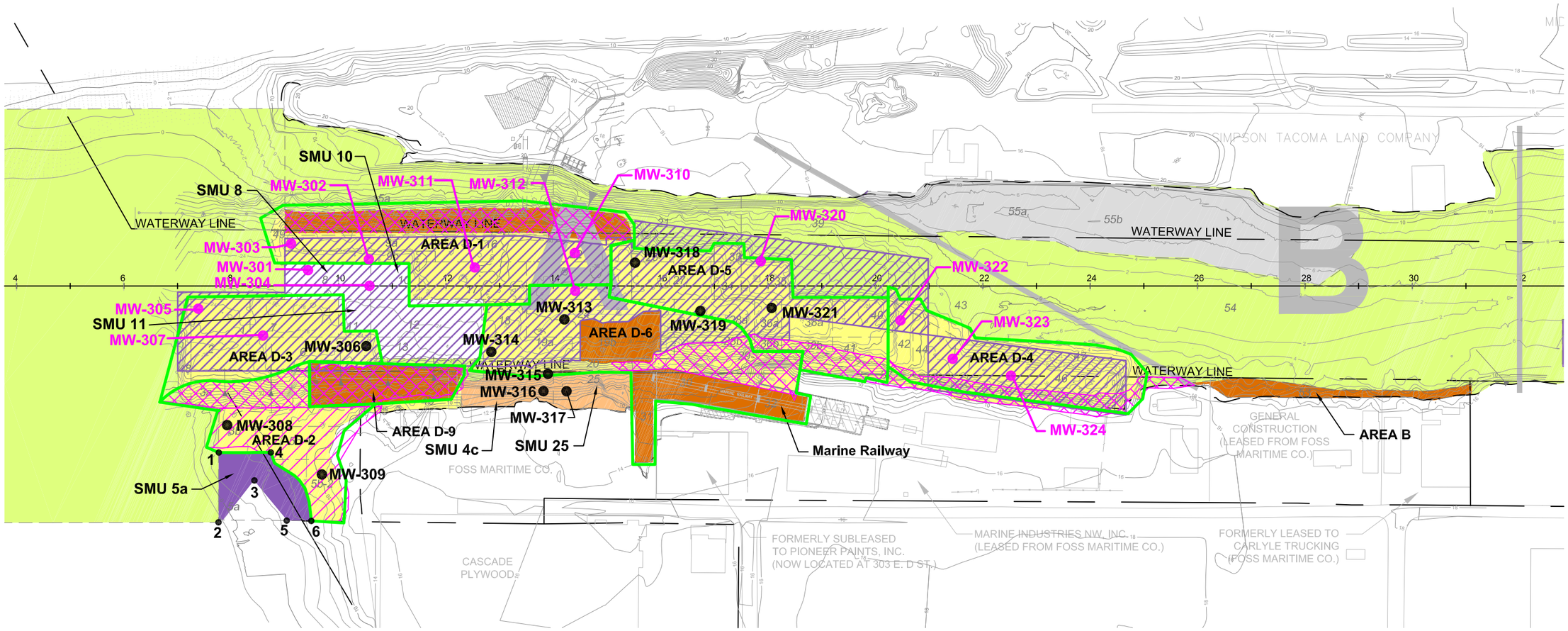
3 MONITORING ACTIVITIES AND RESULTS

Pursuant to the *Final Revised OMMP—Areas A and B* (Anchor 2005), Year 0 monitoring activities included: 1) collecting surface sediment samples to analyze for chemicals of concern (COCs) in areas with remedies identified as ENR, dredged with ENR, dredged, and NR; and 2) visual observations in the ENR with surficial cap area. Figure 3 identifies surface sediment monitoring stations for Year 0 and/or future monitoring events. The specific Year 0 monitoring activities are described in the remainder of this section.

3.1 ENR with Surficial Cap Monitoring

Monitoring was performed in SMU 5a to confirm that the RA work achieves performance standards specified in the ROD. This remedy was designed to improve habitat conditions and to address minor chemical exceedances. ENR with surficial cap consists of a 6-inch layer of ENR material (medium to coarse sand) underlying a 6-inch layer of surficial cap material (2-inch minus material). The monitoring objective in this area is to verify that the layer of surficial cap material has remained in the general area in which it was placed and that the remedy is performing as designed. Some seasonal movement of the surficial cap material is expected due to the wind and vessel wave action, which is characteristic of the area.

The monitoring objective was achieved by conducting a visual inspection at low tide to assess the coverage of surficial cap material. The area inspected is shown in purple on Figure 3. Digital photographs were taken from each station (Stations 1 to 6) looking towards nearby stations. For example, from Station 1, photographs were taken looking towards Station 4, Station 2, and Station 3. In addition, photographs of typical substrate between each station were also taken. GPS coordinates for each station are provided in Table 1.



Dredge
Natural Recovery
No Action
Enhanced Natural Recovery with Surficial Cap
Dredge and Thick-Layer Cap
St. Paul Waterway Nearshore Facility Habitat Area
Dredge and Enhanced Natural Recovery
Enhanced Natural Recovery

Contractor Selected Dredge Areas

Backfill Areas

Slope Protection Material

MW-301 ● Surface Sediment Sample Location and Number, Phase I

MW-304 ● Surface Sediment Sample Location and Number, Phase II

1 ● Corner Points of SMU 5a

WATERWAY AREAS

A Working Waterway Area

B Central Tideflats

0 200
Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Sep 29, 2005 11:14am cdavidson K:\Jobs\990046-Middle_Waterway\990046011100+_Dwgs\990046011189.dwg FIG 3 YR 0 PHASE I & II

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Figure 3
Surface Sediment Sample Locations for Phase I & II
Middle Waterway Problem Area
Year Zero Monitoring Report

Table 1
GPS Coordinates for Enhanced Natural Recovery with Surficial Cap Visual Assessment Stations

Station	Latitude N (NAD 83) (decimal degrees)	Longitude W (NAD 83) (decimal degrees)
1	47.26350416	122.4338139
2	47.26335855	122.434291
3	47.26327975	122.4338939
4	47.26326243	122.433652
5	47.26304489	122.434068
6	47.26292993	122.433994

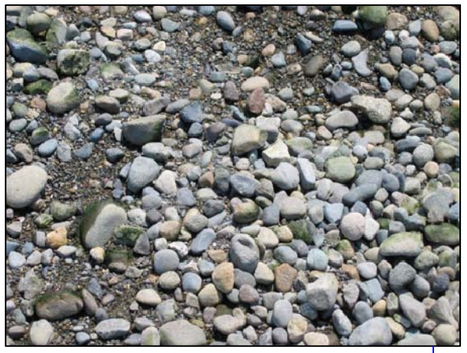
Note:
NAD North American Datum

The visual observations were collected on June 22, 2004 between 1230 and 1330. During this time, the tidal elevation was between 0.1 feet and -0.4 feet mean lower low water (MLLW) exposing the ENR with surficial cap area. Additional photographs were taken on April 27, 2005 between 1400 and 1500 when the tidal elevation was between -2.4 feet and -1.5 feet MLLW. Photographs were taken from the locations listed in Table 2 below and are shown on Figures 4 through 6.

Table 2
Locations Where Photographs Were Taken to Document the Visual Assessment of the ENR with Surficial Cap Area

Station Photo Taken From	Station Photo is Looking Towards	Comments
1	4	On Figure 4
3	1	On Figure 6
4	3	On Figure 4
4	6	On Figure 4
6	5	On Figure 5
5	3	On Figure 5
2	3	On Figure 5
2	1	On Figure 6

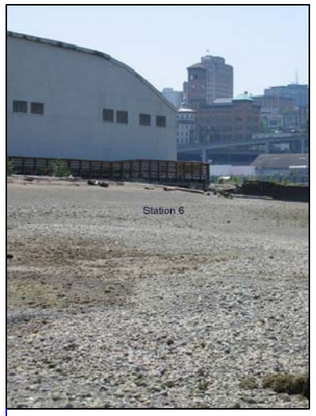
Station 1 looking towards Station 4



Typical substrate between Stations 1 and 4

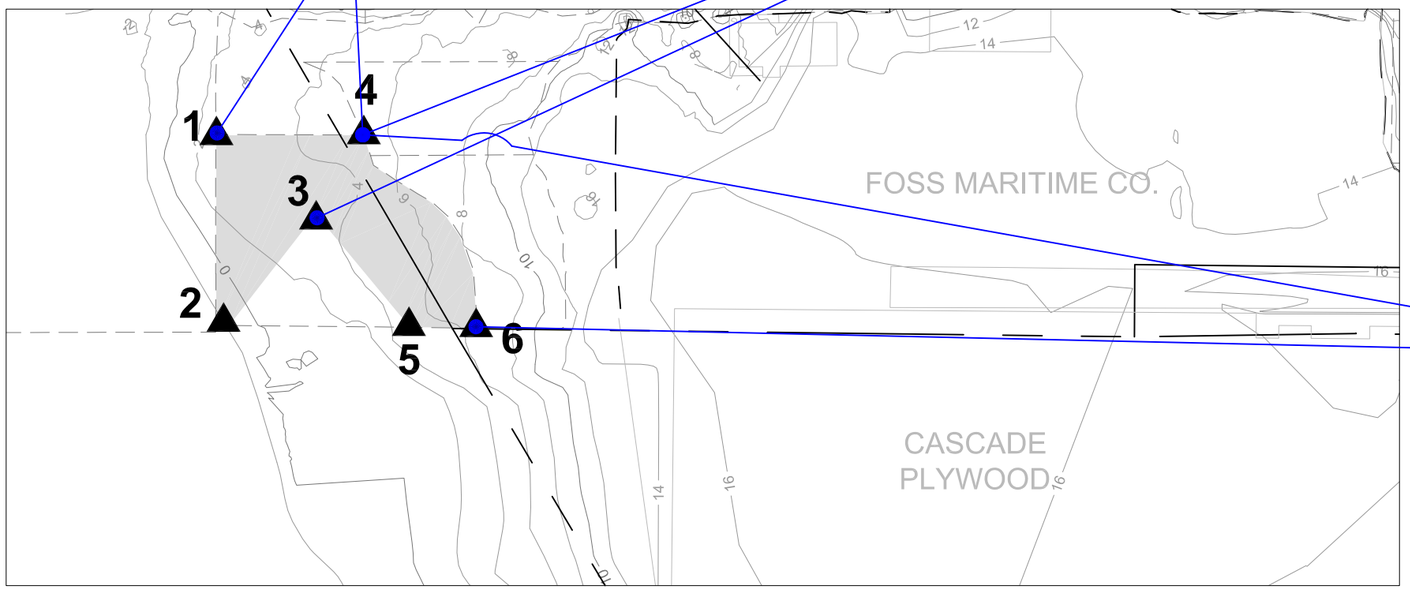
Station 4 looking towards Station 3

Typical substrate between Stations 3 and 4



Station 4 looking towards Station 6

Typical substrate between Stations 4 and 6



1▲ Sampling Station Location and Number

Enhanced Natural Recovery with Surficial Cap

0 50
Scale in Feet

Notes:

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2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Feb 17, 2005 3:53pm cdavidson K:\Jobs\990046-Middle_Waterway\99004601\100+_Dwgs\99004601182.dwg YEAR ZERO Fig 4

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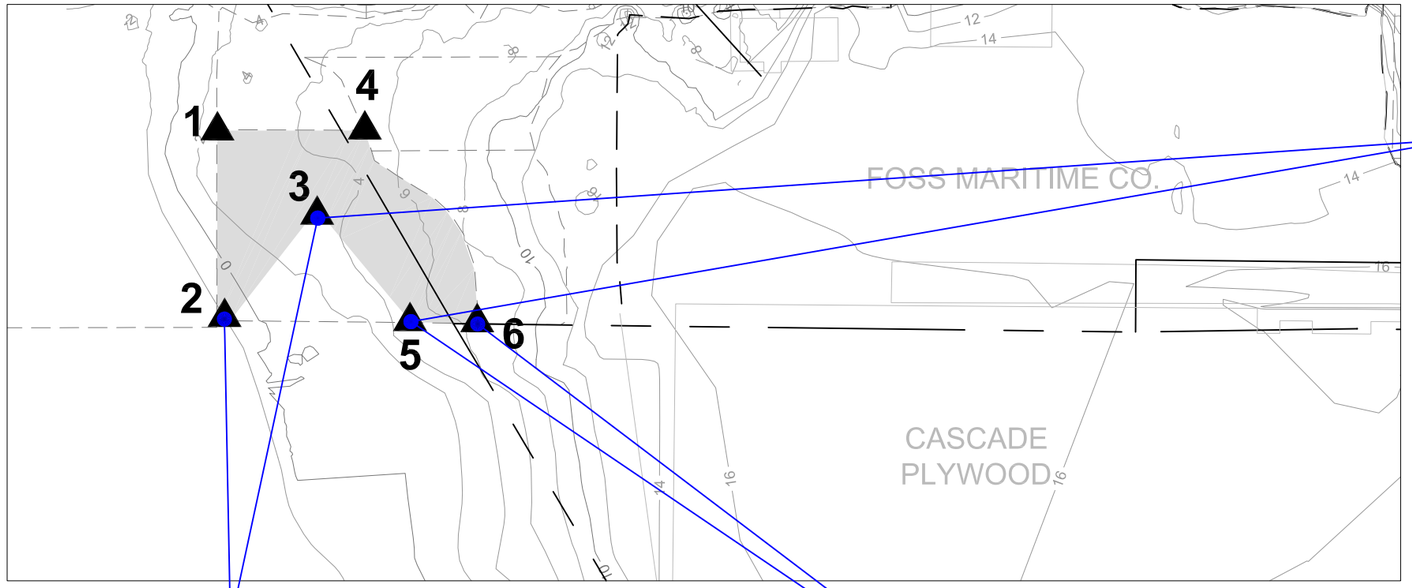
Figure 4
Enhanced Natural Recovery with Surficial Cap Monitoring Results
Middle Waterway Problem Area
Year Zero Monitoring Report



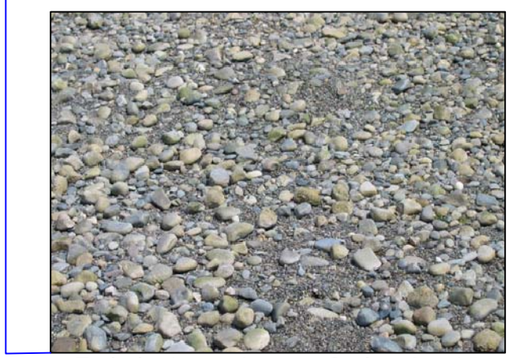
Station 2 looking towards Station 3

Typical substrate between Stations 2 and 3

Station 6 looking towards Station 5

Typical substrate between Stations 5 and 6

Station 5 looking towards Station 3



Typical substrate between Stations 3 and 5

1▲ Sampling Station Location and Number

Enhanced Natural Recovery with Surficial Cap

0 50

Scale in Feet

Notes:

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2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Feb 17, 2005 3:53pm cdavidson K:\Jobs\990046-Middle_Waterway\99004601\100+_Dwgs\99004601182.dwg YEAR ZERO Fig 5

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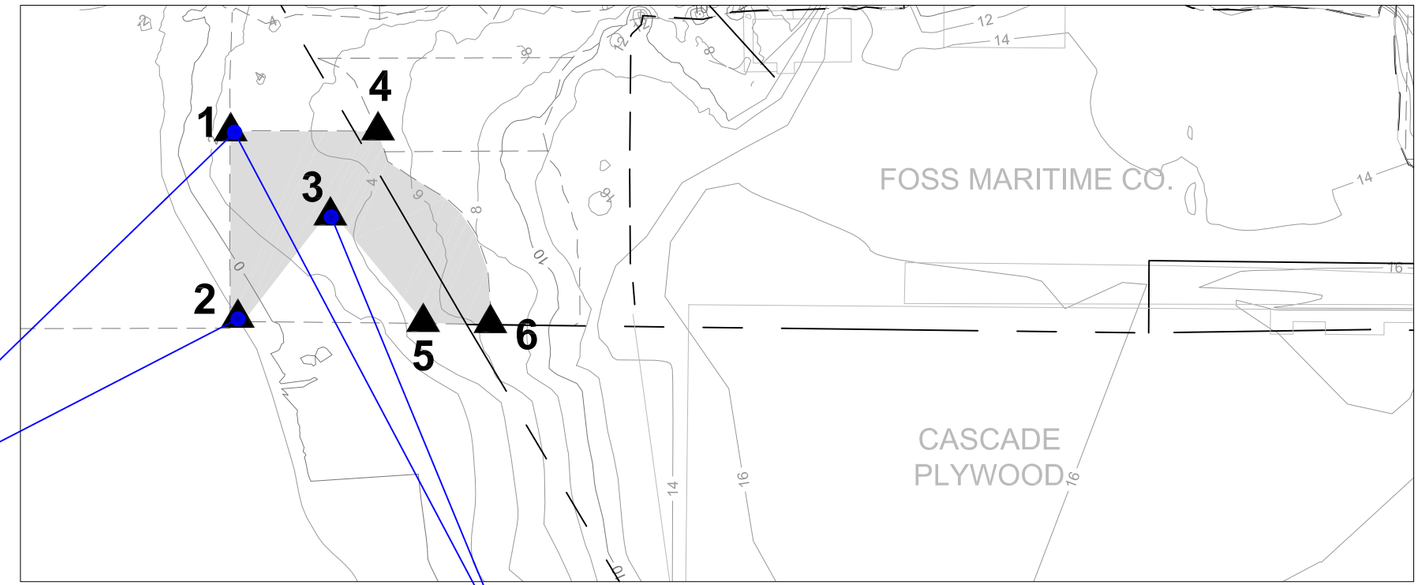
Figure 5
Enhanced Natural Recovery with Surficial Cap Monitoring Results
Middle Waterway Problem Area
Year Zero Monitoring Report

Station 2 looking towards Station 1

Typical substrate between Stations 1 and 2

Fine Grained Material Overlying
Enhanced Natural Recovery Material in
Area between Stations 1 and 2



Station 3 looking towards Station 1

Typical substrate between Stations 1 and 3

1▲ Sampling Station Location and Number

Enhanced Natural Recovery with Surficial Cap

0 50
Scale in Feet

Notes:

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2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Oct 06, 2005 10:13am cdavidson K:\Jobs\990046-Middle_Waterway\99004601100+_Dwgs\99004601191.dwg YEAR ZERO Fig 6

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Figure 6
Enhanced Natural Recovery with Surficial Cap Monitoring Results
Middle Waterway Problem Area
Year Zero Monitoring Report

As can be seen from the photographs, the surficial cap material was present in all areas, and no areas of concern were identified. Areas of concern are defined as areas in which surficial cap material has eroded such that the remedy no longer performs as designed. Areas between Stations 1 and 2 showed an increased fraction of sand compared to other locations within SMU 5a with more gravel on the surface. Therefore, additional observations were taken in this area during a low tide event on April 27, 2005. Additional observations included digging four to five holes between the two stations to determine if the surficial cap material was still in place or had eroded away. Results indicated that there was a thin layer of silt overlying a medium to coarse sand and gravel mixture, which is the composition of the placed surficial cap material (Figure 6). In addition, observations indicated that between these two stations, more of the medium to coarse sand fraction of the placed material is present on the surface compared with the rest of SMU 5a, in which the larger gravel fraction is on the surface and the medium to coarse sand is underneath. Evidence of localized movement of material in the form of small mounds was noted, especially between Stations 5 and 3 and Stations 3 and 1. Overall, the surficial cap material consisting of a mixture of medium to coarse sand and gravel was found to be in place over all of SMU 5a.

Based on the visual survey and associated photographs, the ENR with surficial cap remedy is achieving performance standards and no ARAs are recommended.

3.2 ENR and Dredged with ENR Monitoring

Monitoring was performed in areas with ENR (SMUs 8, 10, and 11) and dredged with ENR remedies (Dredge Areas D-1, D-3, D-4, and portions of D-5 and D-6) to confirm that the RA work achieves performance standards specified in the ROD. The ENR remedy was designed to augment the natural sedimentation rate in areas with residual contamination by introducing a layer (4 to 6 inches) of clean material. Natural processes, primarily bioturbation and tidal action, will mix the clean material with the upper interval of the surface layer over time and thereby reduce chemical concentrations in the new biologically active zone. The “dredged with ENR” remedy was selected in the field to address residuals and is similar to the ENR remedy, except dredging was used to remove most of the contamination prior to placement of the material. The monitoring objective for both of these remedies is to verify that the surface sediments continue to naturally recover and meet expected sediment quality objective (SQO) chemical criteria within 10 years. In the event of

an SQO exceedance, MWAC may choose to perform confirmation biological sediment toxicity testing as described in the *Final Revised OMMP—Areas A and B* (Anchor 2005).

The monitoring objective for Year 0 was achieved during the construction verification process specified in the CQAP—Areas A and B (Anchor 2003) and through sediment chemistry testing and visual observations performed during two phases of sampling—Phase I in June 2004 and Phase II in June 2005. Results of each sampling phase are provided below and field data sheets for each phase are provided in Appendix B.

3.2.1 Phase I Monitoring Activities and Results

During the 2003-2004 work window, ENR material had been placed in the southern portion of D-3, and portions of D-5 and D-6 to accelerate the sediment recovery process. ENR material was placed in each area by a clamshell bucket dispersing a predetermined amount of material over a specified area (i.e., portion of a dredge area). The amount of material used in each area was determined based on covering the area with 6-9 inches of material. CQAP verification activities confirmed that ENR material had been placed as described above in these areas. Verification activities included observation during placement and reviewing the contractor's daily logs, which provide details of each area covered with ENR material. In addition, a dive survey was conducted to inspect the bottom and site conditions. In the ENR areas, material was found to be continuous and no bare spots were identified.

As part of the Phase I monitoring activities, surface sediment samples were collected in June 2004 in areas that were covered with ENR material during the 2003-2004 construction window. These sampling locations are shown on Figure 3 and include MW-306, MW-318, MW-319, MW-320, MW-321, MW-313 and MW-314. Visual observations of the collected samples (see Appendix B for a description of each grab sample) indicated that no mixing had occurred between the ENR material and the sediment surface; therefore, no samples were submitted to the laboratory for chemical analysis. The lack of mixing could be visually determined because the grain size of the ENR material is larger than the existing sediment surface. Additionally, Figure 7 shows photographs of surface sediment samples collected at stations MW307, MW318, MW319, and MW321 as examples of material collected in ENR areas during this sampling event.

These photographs show the presence of a coarse sand material that was placed as ENR material. As shown in MW307, little to no silt has accumulated or mixed with this material. Also, as shown in the photographs for MW318, MW319, and MW321, the grab sampler could not collect enough material to take a sample because the coarse material would get between the jaws of the sampler, preventing it from closing properly. In the future, as the ENR material mixes with the underlying sediment and new finer-grained material settles on top, subsequent monitoring events will collect surface sediment samples and submit them for chemical analysis of the COCs.

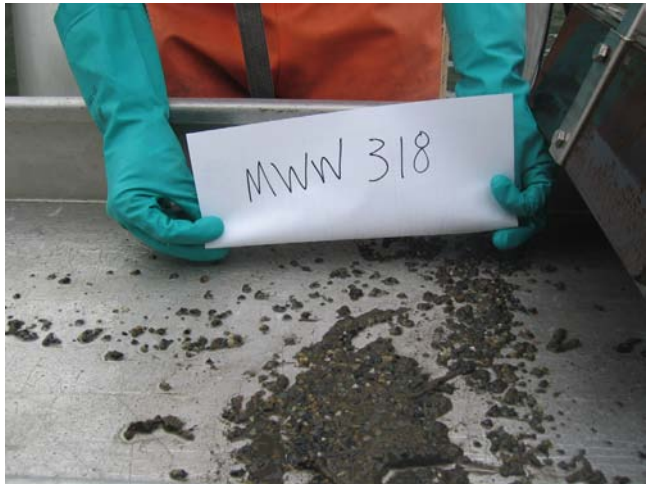

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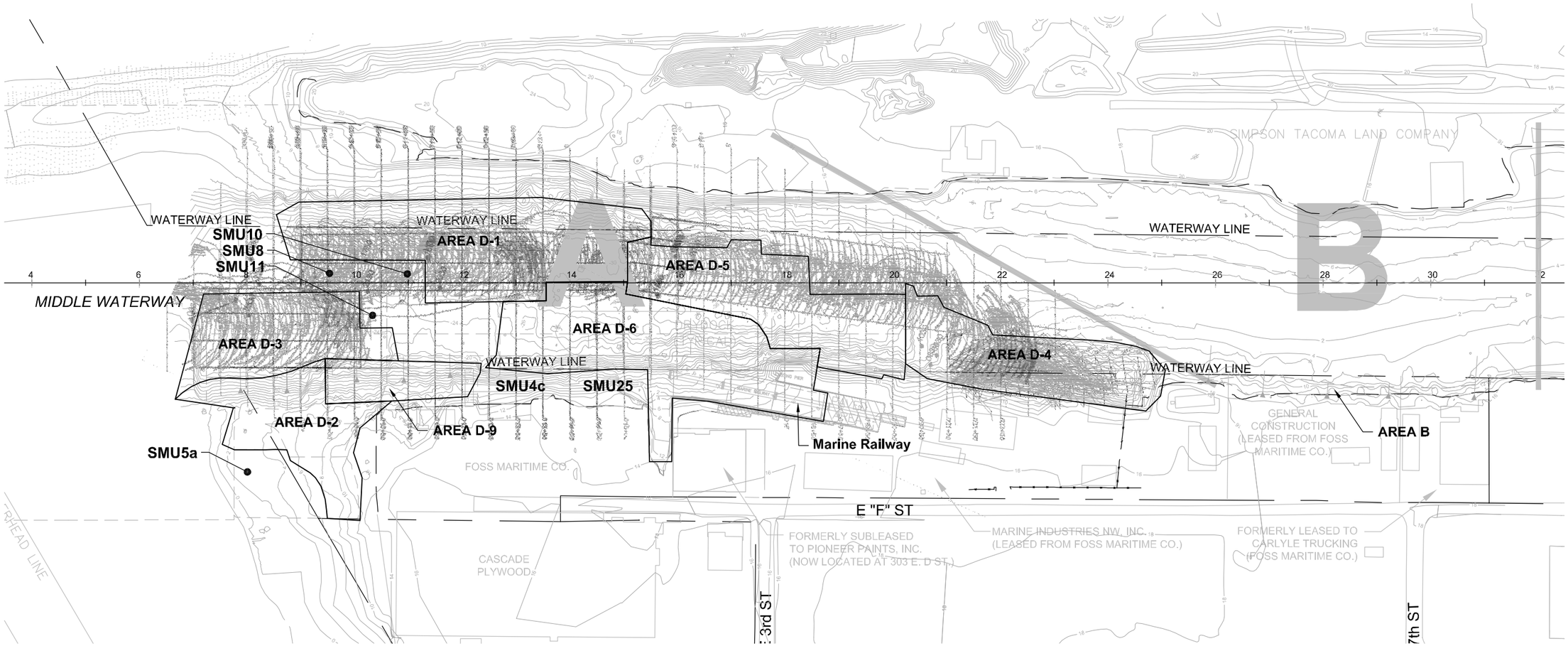
Figure 7
Examples of Material Collected in ENR Areas during the Phase I Monitoring Event, June 2004
Year Zero Monitoring Report

3.2.2 Phase II Monitoring Activities and Results

As part of the construction activities completed in 2005, MWAC and EPA determined it was necessary to place additional ENR material in SMUs 8, 10, and 11 (MW301 and MW304); as well as in Dredge Areas D-1 (MW302, MW303, MW310, MW311, and MW312), D-4 (MW322, MW323, and MW324), the northern portion of D-3 (MW305 and MW307), and the southern portion of D-5 (MW320) to accelerate the sediment recovery process. ENR material was placed in each area by a clamshell bucket dispersing enough material to cover the area (i.e., SMU, dredge area, or portion of dredge area) with 6-9 inches of material. Prior to beginning placement, a bucket of material was spread on the barge to determine the area covered by each bucketful and to verify the depth of material placed. As part of the CQAP verification activities for these areas, placement of the ENR material was confirmed. The verification activities included observation during placement, reviewing the contractor's daily logs, and recording bucket swings over the areas covered with ENR material using WINOPS software and a differential global positioning system (DGPS) at the time the material was placed. Bucket swings were recorded on all days of the Phase II work, as shown on Figure 8, which shows that material was placed to cover the intended areas. A dive survey was also performed in the Phase II ENR areas and material was found to be continuous and no bare spots were identified.

As part of Phase II sampling activities, surface sediment grabs were collected in June 2005 to confirm that the ENR material is still present where placed and to determine if silt has mixed in with the ENR material. Per the May 2, 2005 letter (Appendix A), MWAC and EPA agreed that grain size analyses would be run on the samples, and results would be compared to the grain size of the placed material to determine if fine grained material had mixed in with the ENR material. If grain size comparisons indicated the presence of finer grained material, those samples would then be submitted to the laboratory for chemical testing.



Contractor Selected Dredge Areas

WATERWAY AREAS

A Working Waterway Area

B Central Tideflats

0 200

Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83)
Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

4. * Coverage is documented by recording "bucket swings" using WINOPS.

Oct 05, 2005 3:45pm dholmer K:\Jobs\990046-Middle_Waterway\99004601\100+_Dwgs\99004601190.dwg FIG X-1

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Figure 8
Documentation of Coverage* During Placement of ENR Material in 2005
Middle Waterway Problem Area
Year Zero Monitoring Report

Samples were collected in locations shown on Figure 3 and were submitted to the laboratory (Analytical Resources, Inc. [ARI] of Tukwila, Washington) for grain size analysis. Results were compared to the grain size analysis of the placed material and are summarized in Table 3 and in a Grain Size Memo provided as Appendix C. Samples were submitted for chemical testing if the grain size analysis results indicated greater than a 5 percent change in the finest material categories (for the #100 sieve or 0.149 mm and the #200 sieve or 0.074 mm) between the sampled material and the placed ENR material (average of triplicate samples). In addition to the grain size results, notes in the field indicated that many of the samples had a thin layer (less than 1 cm) of silt on top of the grab. These observations were confirmed by the grain size analyses. Therefore, samples from the following locations were submitted to the laboratory for testing of the COCs: MW303, MW305, MW307, MW310, MW312, MW320, MW322, MW323, and MW324. Results of the chemical testing are provided in Table 4 and indicate no SQO exceedances of the COCs.

Areas with samples indicating little or no evidence of a silt layer (i.e., samples not submitted for chemical testing) were generally located near the mouth of the waterway or near the log storage area, where vessel action has likely precluded siltation. In these areas, the results of chemical testing of the ENR material prior to placement will be used to chemically characterize the surface sediment for this monitoring period. The results of those tests are shown in Table 5 and are fully documented in Appendix E. Subsequent monitoring events will collect surface sediment samples in these areas and submit them for analyses of the COCs.

Field notes indicated the presence of wood debris in samples on the east side of the waterway (MW301, MW302, MW303, MW310, and MW311). As stated in the *Final Revised OMMP—Areas A and B* (Anchor 2005), MWAC will not address wood debris accumulation resulting from activities in the log haul-out area. Simpson Timber Company will monitor wood debris accumulation in this area of the waterway as part of their Washington State Department of Natural Resource Aquatic Use Authorization Permit.

Table 3
Grain Size Distribution of Enhanced Natural Recovery Samples and Modified Base Cap Material

Sample ID	Percent Finer Than										Field Observation	Submitted for Chemical Analysis[1]
	3/4"	1/2"	3/8"	#4	#10	#20	#40	#60	#100	#200		
Modified Base Cap												
MWMBC-SDA-050622-A	100	100	100	95.2	69.9	55.2	35.7	14.7	4.7	1.1		
MWMBC-SDA-050622-B	100	100	100	95.9	74.3	58.5	37.3	15.2	4.7	0.8		
MWMBC-SDA-050622-C	100	100	100	94.8	70.3	55.0	33.9	13.9	4.4	0.8		
Modified Base Cap (Average)	100	100	100	95.3	71.5	56.2	35.6	14.6	4.6	0.9		
ENR Samples												
MW301-SDA-050622	100	100	100	99.8	83.3	46.2	15.3	3.5	1.7	1.3	Seven attempts made. Sand or wood caught in jaws interfering with seal. No evidence of silt layer on top of any of the grabs.	N
MW302-SDA-050623	100	100	100	99.7	89.4	60.0	28.3	10.5	6.5	4.9	Surface of sample covered 15 by small wood debris, shell hash present, no observed silt layer on top.	N
MW303-SDA-050622	100	100	100	99.7	76.5	40.7	18.3	10.4	8.7	7.5	25 wood debris on top, ~0.5cm silt layer on top of grab.	Y
MW304-SDA-050623	100	100	100	100	87.6	59.1	27.0	7.7	3.1	1.9	No evidence of silt on surface.	N
MW305-SDA-050622	100	100	100	98.3	82.2	54.7	35.4	23.2	16.7	11.0	Shell hash and 2 cm thick layer of silt on surface.	Y
MW305-SSA-050622	100	100	100	98.9	82.6	54.8	34.2	22.7	16.6	11.4	Field duplicate of MW305-SDA.	Y
MW307-SDA-050622	100	100	100	99.6	81.5	50.2	28.2	18.0	14.2	10.6	Snails and 1 cm of silt on surface, worms at depth.	Y
MW310-SDA-050623	100	100	100	99.9	81.3	54.4	30.1	17.8	13.8	10.8	Seven attempts made. Very thin layer of silt on surface, 10 wood debris (bark) on surface.	Y
MW311-SDA-050623	100	100	100	100	87.5	55.9	23.4	6.8	2.7	1.5	Dusting of silt on surface (<0.5mm), absent in some locations. Shell hash. 5 wood debris.	N
MW312-SDA-050622	100	100	100	100	98.0	77.0	53.0	32.0	22.0	19.0	2 cm of silt on surface. Pockets of silt at depth.	Y
MW320-SDA-050622	100	100	100	99.4	71.4	41.8	19.6	10.6	8.3	7.0	Very thin layer of silt of surface (<0.5cm), Shell hash.	Y
MW322-SDA-050622	100	100	100	100	100	99.0	94.0	80.0	63.0	54.0[2]	1 cm of silt on surface. 50% silt pockets at depth.	Y
MW323-SDA-050622	100	100	100	100	99.5	93.4	61.9	28.5	15.8	9.9	Less than 1 cm of silt on surface. Pockets of silt at depth.	Y
MW324-SDA-050622	100	100	100	100	98.0	92.0	73.0	51.0	35.0	26.0[2]	1 cm of silt on surface. Silt pockets at depth.	Y

Note:
[1]Per OMMP, these are 0 to 10 cm intervals
[2] Samples collected adjacent to Area B channel outlet

Table 4
Summary of Validated Phase II Sediment Chemistry Data

Location ID Sample ID Sample Date	Commencement Bay SQOs	MWMBC MWMBC-SDA-050622 6/22/2005	MWW301 MW301-SDA-050622 6/22/2005	MWW302 MW302-SDA-050623 6/23/2005	MWW303 MW303-SDA-050622 6/22/2005	MWW304 MW304-SDA-050623 6/23/2005	MWW305 MW305-SDA-050622 6/22/2005	MWW305 MW305-SSA-050622 6/22/2005	MWW307 MW307-SDA-050622 6/22/2005
Conventionals (%)									
Total organic carbon	--	--	--	--	0.8	--	0.99	0.99	1.17
Total solids	--	--	--	--	84.6	--	81.3	84.1	81.4
Grain Size (%)									
Gravel	--	4.8	0.2	0.3	0.3	0.00 U	1.7	1.1	0.4
Sand	--	94.1	98.5	94.9	92.2	98.2	87.2	87.5	89
Fines	--	1.1	1.3	4.9	7.5	1.9	11	11.4	10.6
Metals (mg/kg)									
Antimony	150	--	--	--	5.28 U	--	5.93 U	5.06 U	5.50 U
Arsenic	57	--	--	--	1.44 U	--	3.56 U	4.01 U	2.15 U
Cadmium	5.1	--	--	--	0.528 U	--	0.593 U	0.506 U	0.55 U
Copper	390	--	--	--	14.7	--	40.4	52.4	27
Lead	450	--	--	--	4.25	--	12.1	13.4	7.67
Mercury	0.59	--	--	--	0.0514	--	0.124	0.0772	0.0517
Nickel	140	--	--	--	11.7	--	13.1	15	15.9
Silver	6.1	--	--	--	1.06 U	--	1.19 U	1.01 U	1.10 U
Zinc	410	--	--	--	24.2	--	37.7	47.4	35.2
Pesticides (µg/kg)									
4,4'-DDD	16	--	--	--	--	--	--	--	--
4,4'-DDE	9	--	--	--	--	--	--	--	--
4,4'-DDT	34	--	--	--	--	--	--	--	--
PCBs (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--
Total PCBs (SMS)	300	--	--	--	--	--	--	--	--
PAHs (µg/kg)									
2-Chloronaphthalene	--	--	--	--	2.23 U	--	2.37 U	2.30 U	2.26 U
Benzo(a)anthracene	1600	--	--	--	2.08 J	--	6.34	14.7	4.2
Benzo(a)pyrene	1600	--	--	--	1.42 J	--	9.96	17.8	2.26 U
Benzo(g,h,i)perylene	720	--	--	--	2.23 UJ	--	2.37 UJ	9.38 J	2.26 UJ
Total benzofluoranthenes	3600	--	--	--	5.55	--	12.5	31.1	7.04
Chrysene	2800	--	--	--	2.78	--	6.92	21.3	5.84
Dibenzo(a,h)anthracene	230	--	--	--	2.23 U	--	2.37 U	4.03	2.26 U
Fluoranthene	2500	--	--	--	5.87	--	15.9	50.8	12.7
Pyrene	3300	--	--	--	7.43	--	18.5	45.1	13.4
Total HPAH	17000	--	--	--	25.13	--	70.1	194	43.2
2-Methylnaphthalene	670	--	--	--	0.752 J	--	1.94 J	2.92	1.99 J
Acenaphthene	500	--	--	--	2.23 U	--	2.6	4.54	1.58 J
Acenaphthylene	1300	--	--	--	2.23 U	--	1.41 J	2.99	1.17 J
Anthracene	960	--	--	--	1.54 J	--	4.01	6.9	3.98
Fluorene	540	--	--	--	2.23 UJ	--	1.54 J	3.42 J	1.52 J
Indeno(1,2,3-cd)pyrene	690	--	--	--	2.23 U	--	2.37 U	12	2.26 U
Naphthalene	2100	--	--	--	2.54	--	2.37 U	9.97	4.6
Phenanthrene	1500	--	--	--	2.79	--	10.9	29.6	8.56
Total LPAH	5200	--	--	--	6.87	--	23.3	69.4	21.4

Notes:

U The analyte was analyzed for, but not detected above the sample reporting limit.

J The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

Table 4
Summary of Validated Phase II Sediment Chemistry Data

Location ID Sample ID Sample Date	Commencement Bay SQOs	MWW310 MW310-SDA-050623 6/23/2005	MWW311 MW311-SDA-050623 6/23/2005	MWW312 MW312-SDA-050622 6/22/2005	MWW316 MW316-SCA-050622 6/22/2005	MWW320 MW320-SDA-050622 6/22/2005	MWW322 MW322-SDA-050622 6/22/2005	MWW323 MW323-SDA-050622 6/22/2005	MWW324 MW324-SDA-050622 6/22/2005
Conventionals (%)									
Total organic carbon	--	1.98	--	1.26	1.62	0.98	1.46	0.74	1.05
Total solids	--	78.8	--	77.7	73.1	84.6	71.6	78.8	80.2
Grain Size (%)									
Gravel	--	0.1	0.00 U	--	27.1	0.6	--	0.00 U	--
Sand	--	89.1	98.4	--	41.2	92.4	--	90.1	--
Fines	--	10.8	1.5	--	4.8	7	--	9.9	--
Metals (mg/kg)									
Antimony	150	6.19 U	--	5.72 U	6.29 U	5.15 U	6.40 U	5.47 U	5.89 U
Arsenic	57	6.19 U	--	2.40 U	13.3	2.42 U	4.57 U	1.63 U	2.98 U
Cadmium	5.1	0.619 U	--	0.572 U	0.629 U	0.515 U	0.64 U	0.547 U	0.589 U
Copper	390	24.6	--	40.8	151	21.2	61.2	26.7	37.2
Lead	450	6.97	--	13.3	90.7	7.12	34.1	14.9	24.8
Mercury	0.59	0.0511	--	0.088	0.49	0.0623	0.182	0.121	0.141
Nickel	140	14.9	--	15.4	17.2	18.6	9.89	8.27	14.8
Silver	6.1	1.24 U	--	1.14 U	1.26 U	1.03 U	1.28 U	1.09 U	1.18 U
Zinc	410	36.2	--	40.3	220	32.3	73.4	34.6	48.2
Pesticides (µg/kg)									
4,4'-DDD	16	--	--	--	0.979 J	--	--	--	--
4,4'-DDE	9	--	--	--	2.32 J	--	--	--	--
4,4'-DDT	34	--	--	--	4.75 J	--	--	--	--
PCBs (µg/kg)									
Aroclor 1016	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1221	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1232	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1242	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1248	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1254	--	--	--	--	9.98 UJ	--	--	--	--
Aroclor 1260	--	--	--	--	9.98 UJ	--	--	--	--
Total PCBs (SMS)	300	--	--	--	9.98 UJ	--	--	--	--
PAHs (µg/kg)									
2-Chloronaphthalene	--	2.35 U	--	2.42 U	2.61 U	2.20 U	2.64 U	2.45 U	2.27 U
Benzo(a)anthracene	1600	5.09	--	6.65	25.7	15.8	24.6	13.1	13
Benzo(a)pyrene	1600	6.76	--	4.53	19.8	17.1	22	15.8	9.29
Benzo(g,h,i)perylene	720	2.35 UJ	--	7.67 J	19.6 J	12.5 J	14.9 J	13.4 J	7.59 J
Total benzofluoranthenes	3600	9.35	--	12.6	36	19.8	30.8	21.4	14.4
Chrysene	2800	6.51	--	9.76	29.6	13.2	23.5	13.6	9.86
Dibenzo(a,h)anthracene	230	2.35 U	--	2.42 U	6.13	2.20 U	2.64 U	2.45 U	2.27 U
Fluoranthene	2500	22.2	--	23.4	45.2	28.4	79.2	35.5	28.2
Pyrene	3300	18.1	--	24.6	73.5	42.1	95.6	50.4	40.5
Total HPAH	17000	68	--	89.2	256	149	291	163	123
2-Methylnaphthalene	670	2.73	--	2.97	4.11	1.31 J	11.8	5.78	3.12
Acenaphthene	500	3.89	--	2.84	5.17	2.88	9.21	7.16	3.5
Acenaphthylene	1300	1.75 J	--	2.59	11.9	5.93	9.24	7.04	4.38
Anthracene	960	4.86	--	5.41	14.6	7.49	21.1	7.53	7.66
Fluorene	540	3.03 J	--	2.15 J	4.99 J	2.35 J	9.91 J	4.6 J	3.15 J
Indeno(1,2,3-cd)pyrene	690	2.35 U	--	3.65	18	11.6	12.2	9.73	6.8
Naphthalene	2100	7.08	--	8.97	12	5.7	33.9	21.2	13.6
Phenanthrene	1500	15.6	--	11.9	22.1	12	52.3	21	12.7
Total LPAH	5200	36.2	--	37.5	88.8	48	148	78.3	51.8

Notes:

U The analyte was analyzed for, but not detected above the s

J The analyte was analyzed for and positively identified, bu

Table 5
Chemical Testing Results for the Enhanced Natural Recovery Material

		Commencement Bay SQO	ENR Material
Conventionals (%)			
	Total Solids	-	85.97
	Total Organic Carbon	-	0.05
Metals (mg/kg)			
	Mercury	0.59	0.00888 J
	Cadmium	5.1	0.115 J B1
	Silver	6.1	1.05 U
	Arsenic	57	1.26 J
	Nickel	140	11
	Antimony	150	5.27 U
	Copper	390	11.7 B2
	Zinc	410	15
	Lead	450	1.22
PCBs (mg/kg)			
	Total PCBs	0.3	0.0108 U
Pesticides (µg/kg)			
	4,4'-DDD	16	2.26 U
	4,4'-DDE	9	2.26 U
	4,4'-DDT	34	2.26 U
	Hexachlorobenzene	22	2.26 U
	Hexachlorobutadiene	11	1.11 U
SVOC (µg/kg)			
	2,4-Dimethylphenol	29	2.23 U
	2-Methylnaphthalene	670	2.23 U
	2-Methylphenol	63	5.57 U
	Acenaphthene	500	2.23 U
	Acenaphthylene	1300	2.23 U
	Anthracene	960	2.23 U
	Benzo(a)anthracene	1600	2.23 U
	Benzo(a)pyrene	1600	2.23 U
	Benzo(g,h,i)perylene	720	2.23 U
	Benzoic acid	650	66.8 U
	Benzyl alcohol	73	5.57 U
	bis(2-Ethylhexyl)phthalate	1300	21 J B1
	Butylbenzylphthalate	900	6.99 J B1
	Chrysene	2800	2.23 U
	Dibenzo(a,h)anthracene	230	2.23 U
	Dibenzofuran	540	5.57 U
	Diethylphthalate	200	11.1 U
	Dimethylphthalate	160	11.1 U
	Di-n-butylphthalate	1400	13.9 B1
	Di-n-octylphthalate	6200	22.3 U
	Fluoranthene	2500	2.23 U
	Fluorene	540	2.23 U
	Indeno(1,2,3-cd)pyrene	690	2.23 U
	Naphthalene	2100	1.11 U
	n-Nitrosodiphenylamine	28	2.23 U
	Pentachlorophenol	360	11.1 U
	Phenanthrene	1500	2.23 U
	Phenol	420	5.57 U
	Pyrene	3300	2.23 U

Table 5
Chemical Testing Results for the Enhanced Natural Recovery Material

		Commencement Bay SQO	ENR Material
VOC (µg/kg)			
	1,2,4-Trichlorobenzene	51	1.11 U
	1,2-Dichlorobenzene	50	1.11 U
	1,3-Dichlorobenzene	170	1.11 U
	1,4-Dichlorobenzene	110	1.11 U
	Ethylbenzene	10	1.11 U
	Tetrachloroethene	57	1.11 U
	Xylenes, total	40	2.22 U

Notes:

B1 This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

B2 This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the associated method blank (greater than ten times the concentration reported in the blank).

J The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

U The analyte was analyzed for, but not detected above the sample reporting limit.

3.2.3 Summary of Phase I and II Monitoring Activities and Results

Based on the results of the monitoring activities conducted during Phase I and Phase II sampling events, the ENR and dredged with ENR remedies are expected to continue to achieve performance standards and no ARAs are recommended. For the areas where ENR material had not mixed with the underlying sediment, it is assumed that the chemical criteria are met based on the chemical testing conducted on the ENR material prior to placement. Chemical monitoring will be performed in these areas during the Year 3 monitoring event as silt moves into the area and the material is naturally mixed with the underlying sediment surface.

3.3 Dredged Area Monitoring

Monitoring was performed in Dredge Area D-2 to confirm that the RA work achieves performance standards specified in the ROD. This remedy was designed to remove the sediments containing chemical concentrations above the SQOs. Additionally, the area was backfilled to the original grade with surficial cap material since elevations in this area are above -10 feet MLLW (the outer extent of shallow subtidal habitat). The monitoring objective in this area was to verify that the sediment surface (0 to 10 cm) continues to meet the SQO chemical criteria following the RA.

The monitoring objective was achieved by collecting surface sediment (0 to 10 cm) samples within Dredge Area D-2 (Figure 3) on June 22, 2004. Two locations were targeted for sample collection. However, sediment samples could not be submitted to the laboratory for analysis due to the large size of the material (Figure 9). The surface consists of surficial cap material (i.e., habitat mix consisting of a mixture of medium to coarse sand and gravel) that was used to backfill the area to its original grade to maintain intertidal and shallow subtidal habitat in areas above -10 feet MLLW. This material is assumed to be clean since chemical contaminants tend to affix to smaller sized particles. In subsequent sampling years, if this backfill material (as shown in photographs in Figure 9) is not found at these sampling locations and the underlying material has been exposed, sediment samples will be collected and submitted to the laboratory for chemical analysis. The material placed in this area was placed to prevent habitat conversion, not to isolate any remaining contaminants. As confirmed during the CQAP sediment sampling activities, contaminants in this area were removed during the dredging action.

Based on the presence of habitat mix material on the surface of the area, the dredge remedy is continuing to achieve performance standards and no ARAs are recommended.

3.4 Thick-Layer Cap Monitoring

Monitoring was performed in the thick-layer cap areas (Dredge Areas D-1 [east slope]), portions of D-6, D-9, the Marine Railway, and Area B [SMU 53]) to confirm that the RA work achieves performance standards specified in the ROD. This remedy was designed to isolate contaminated areas where sediment quality has been degraded and chemical contamination will not be completely removed. The monitoring objective in these areas is to verify that the thick-layer cap has remained in place and continues to function as designed.

The monitoring objective for Year 0 was achieved during the CQAP—Areas A and B verification process in which the Project Engineer verified that the cap was placed as specified in the final design. Verification activities included comparing hydrographic or land-based surveys of the cap areas to the pre-cap surveys. The results of the verification activities are used for this round of monitoring because it is expected that conditions did not change between the time the thick-layer cap was placed and the monitoring event. Figures 10 through 14 show the post-cap bathymetry for each of the thick-layer cap areas, which will serve as a baseline survey to compare future monitoring results. The cross sections provide the baseline survey grades that will be used to compare grades obtained during hydrographic and/or land-based surveys as part of future monitoring events. In addition, subsequent monitoring events will include a visual survey of each capped area as described in the *Final Revised OMMP—Areas A and B* (Anchor 2005).

Based on the verification activities conducted under the CQAP—Areas A and B, the thick-layer cap remedy is achieving performance standards and no ARAs are recommended.

Sample Station MWW-308

Sample Station MWW-309

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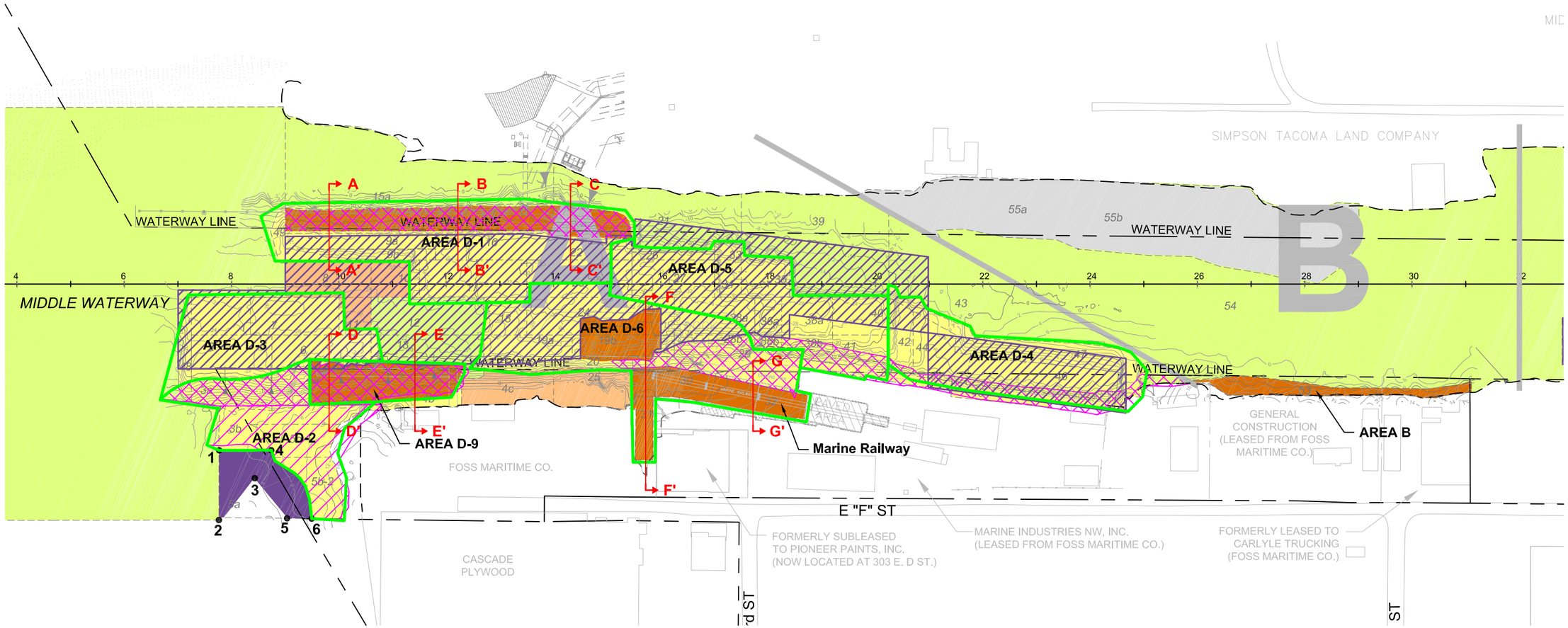
Figure 9
Surface Sediment Conditions at the Targeted Sampling Stations in Dredge Area D-2
Middle Waterway Problem Area



Dredge
Natural Recovery
No Action
Enhanced Natural Recovery
Dredge and Thick-Layer Cap
St. Paul Waterway Nearshore Facility Habitat Area
Dredge and Enhanced Natural Recovery
Enhanced Natural Recovery

Contractor Specified Dredge Areas

Backfill Areas

Slope Protection Material

A A' Cross Section Location and Designation

WATERWAY AREAS
A Working Waterway Area
B Central Tideflats

0 200
Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Sep 30, 2005 10:29am cdavidson K:\Jobs\990046-Middle_Waterway\99004601\100+_Dwgs\99004601185.dwg FIG 10 YR 0

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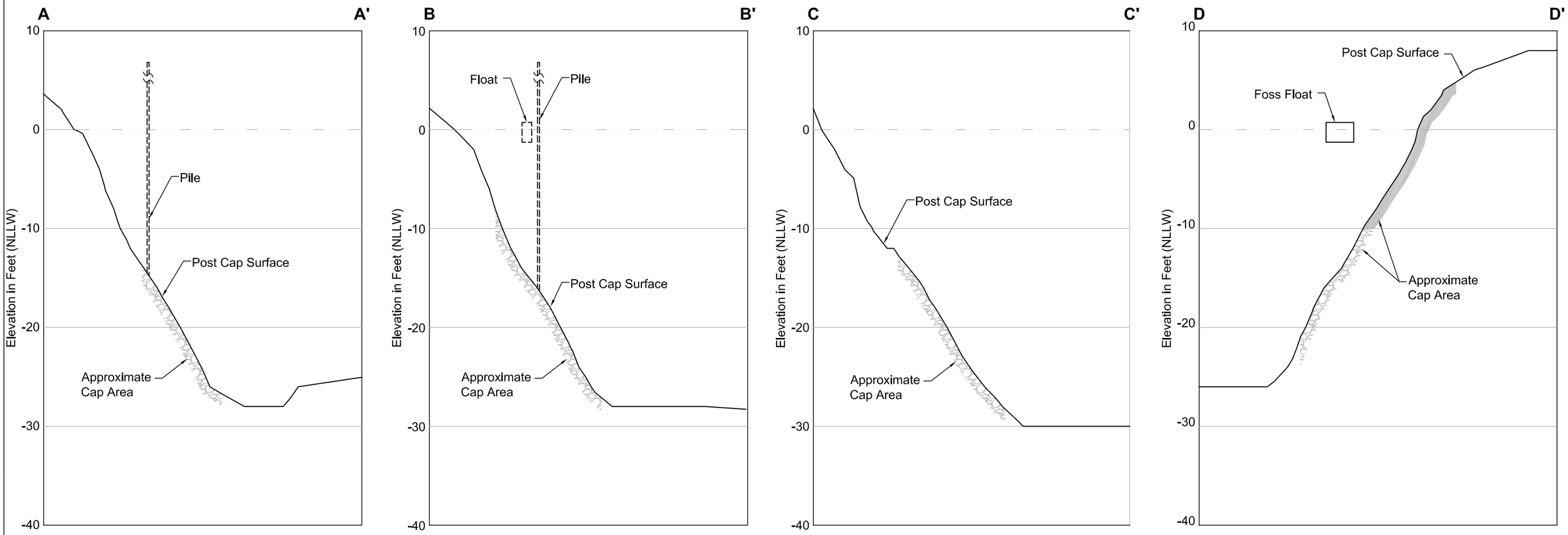
Figure 10
Area A Thick-Layer Cap Cross Section Locations
Middle Waterway Problem Area
Year Zero Monitoring Report



Surficial Cap Material (2-Inch Minus) Overlying Riprap

Riprap

Note:
For a specific description of the riprap material, please see the Record Plan Drawings (C-10, C-11) in Appendix A of the Final Remedial Action Pre-Certification Inspection Letter Report and the Remedial Action Completion Report (Anchor Environmental 2005).

Horizontal Scale in Feet
0 50 100
0 10 20
Vertical Scale in Feet
Vertical Exaggeration x 5

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83)
Vertical Datum: USACE Mean Lower Low Water

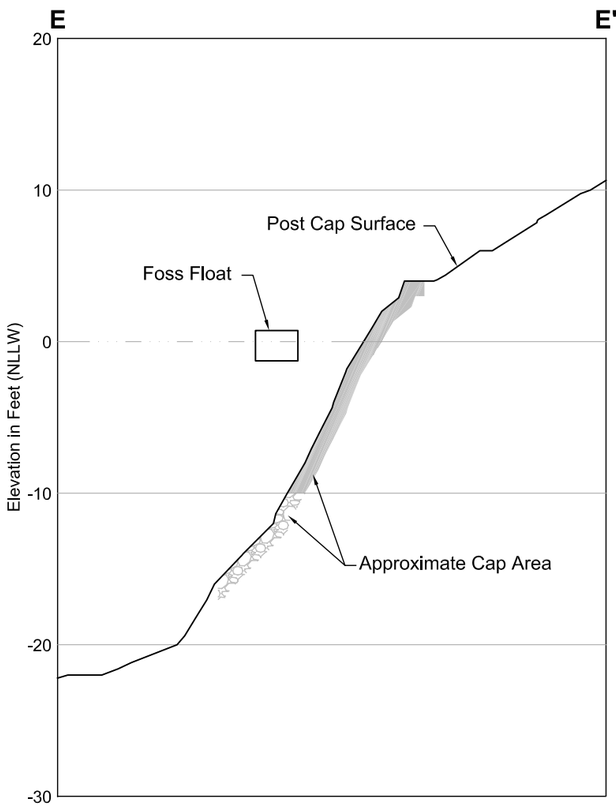
3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

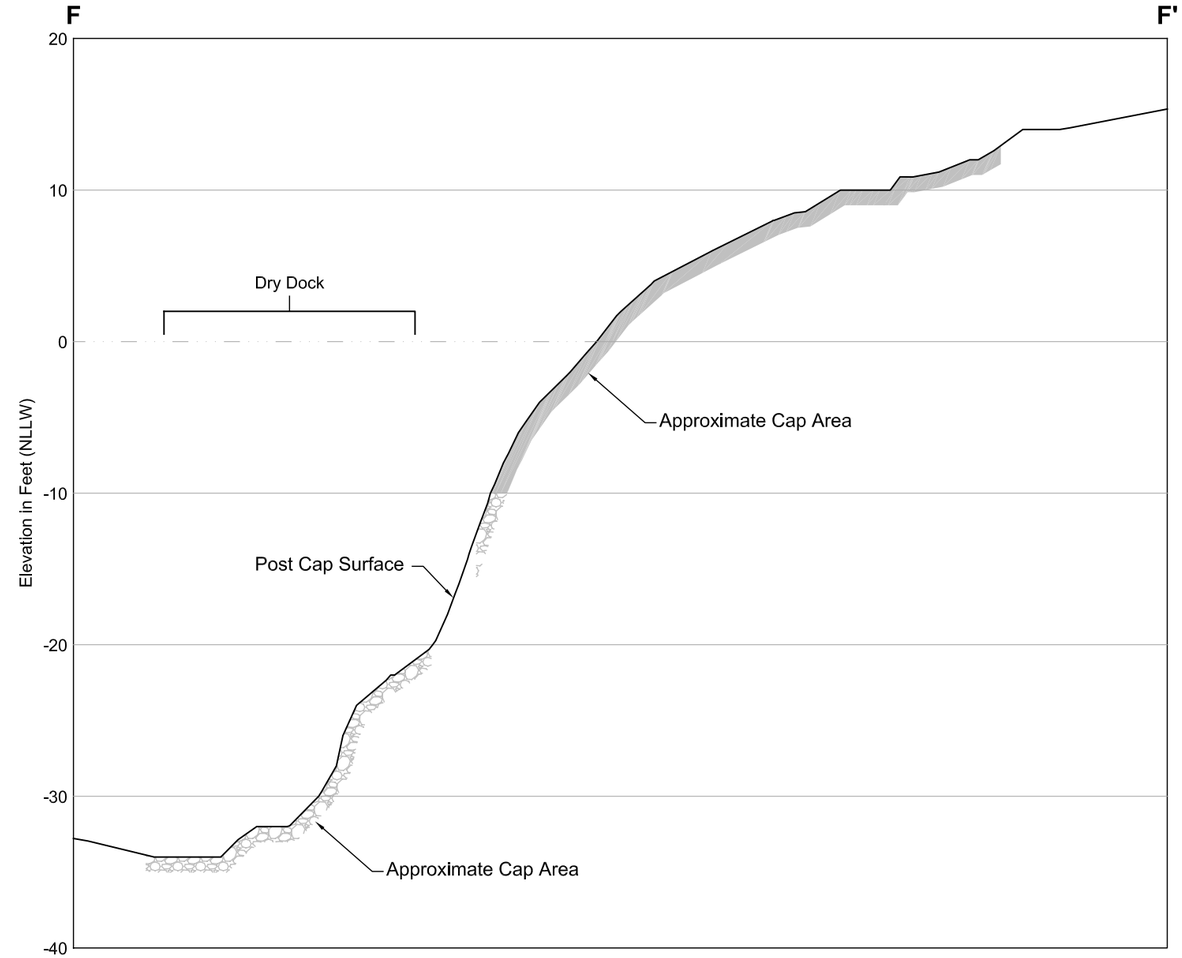
4. These cross sections will be used as the baseline to compare future monitoring results.

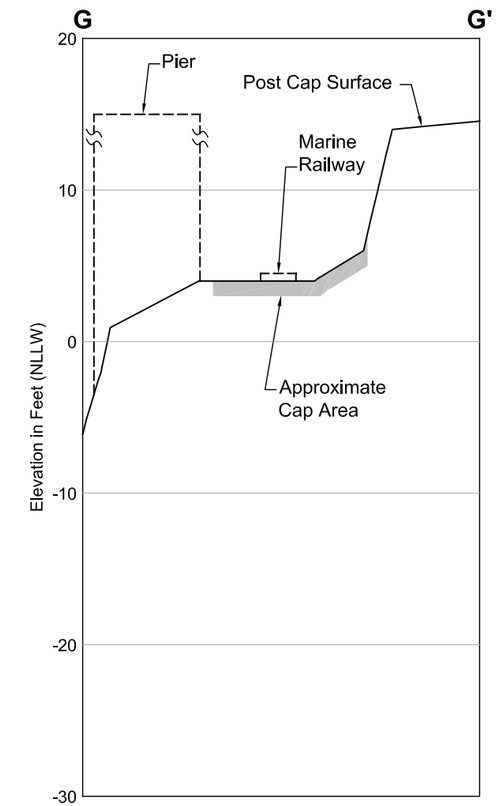
Oct 17, 2005 2:23pm dholmer K:\Jobs\990046-Middle_Waterway\990046011100+_Dwgs\990046011185.dwg FIG 11 YR 0

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 11
Cross Sections through the Capped Areas at Year Zero (Baseline) (1 of 2)
Middle Waterway Problem Area
Year Zero Monitoring Report







Surficial Cap Material (2-Inch Minus) Overlying Riprap

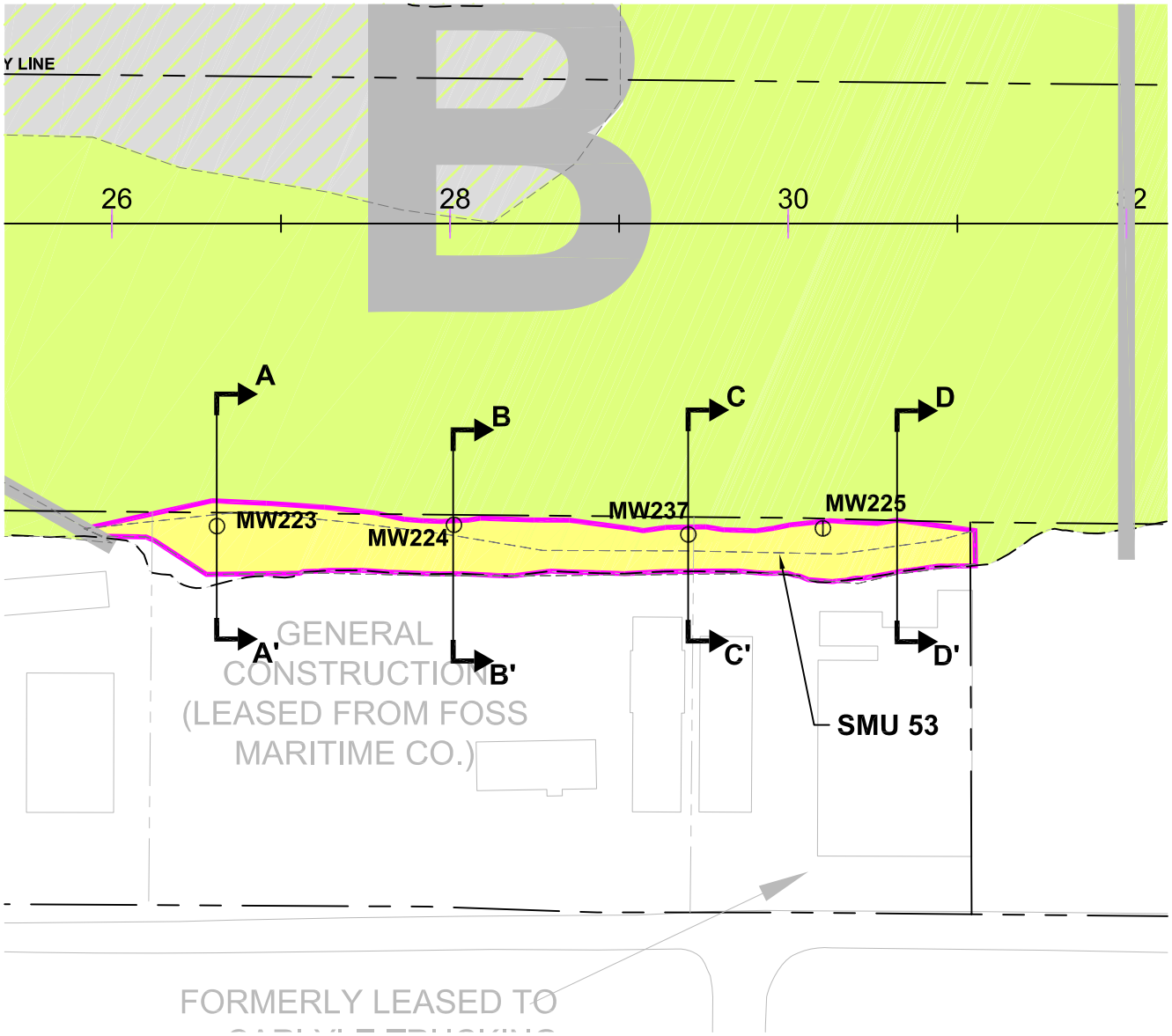
Riprap

Note:
For a specific description of the riprap material, please see the Record Plan Drawings (C-10, C-11) in Appendix A of the Final Remedial Action Pre-Certification Inspection Letter Report and the Remedial Action Completion Report (Anchor Environmental 2005).

Horizontal Scale in Feet
0 50 100
0 10 20
Vertical Scale in Feet
Vertical Exaggeration x 5

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 12
Cross Sections through the Capped Areas at Year Zero (Baseline) (2 of 2)
Middle Waterway Problem Area
Year Zero Monitoring Report



Extents of SMU 53 Remediation Area

MW223 Post-Dredge Confirmation Discrete Sampling Station

A-A' Cross Section Location and Designation

WATERWAY AREAS

A Working Waterway Area

B Central Tideflats

0 100

Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

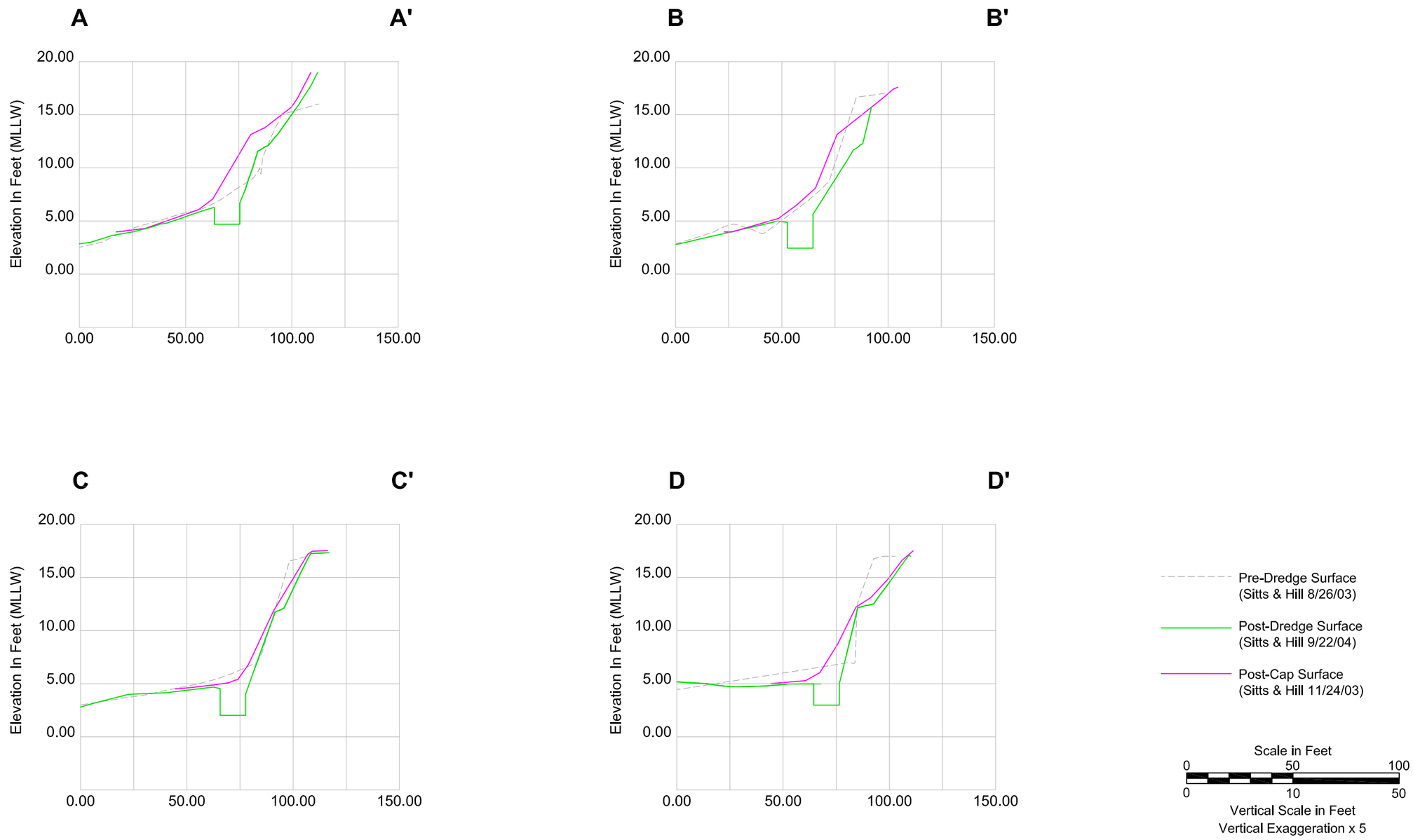
2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water.

Sep 30, 2005 10:30am cdavidson K:\Jobs\990046-Middle_Waterway\99004601100+_Dwgs\99004601184.dwg YEAR ZERO Fig 13

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 13

Area B Cross Section Locations
Middle Waterway Problem Area
Year Zero Monitoring Report



Sep 30, 2005 10:31am cdavidson K:\Jobs\990046-Middle_Waterway\99004601100+_Dwgs\99004601184.dwg YEAR ZERO Fig 14

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 14
Area B (SMU 53) Thick-Layer Cap Cross Section Data
Middle Waterway Problem Area
Year Zero Monitoring Report

3.5 NR Monitoring

Monitoring was performed in the NR areas, including SMUs 4c and 25, to confirm that the RA work achieves performance standards specified in the ROD. This remedy is used in areas where sediment quality is expected to improve over time without active remediation of the sediments, allowing the areas to recover through natural processes. The monitoring objective in these areas is to verify that the surface sediment (0 to 10 cm) continues to naturally recover and meet expected SQO chemical criteria within 10 years following the RA. In the event of an SQO exceedance, MWAC may choose to perform confirmation biological sediment toxicity testing as described in the *Final Revised OMMP—Areas A and B* (Anchor 2005).

During the Phase I sampling event, surface sediment (0 to 10 cm) sample collection was attempted at target locations (MW315, MW316, and MW317) within SMUs 4c and 25 (Figure 3). Three locations, including two intertidal and one subtidal, were targeted for sample collection. However, samples could not be collected for analysis due to the presence of large concrete rubble, bricks, gravel, and cobble (Figure 15). In consultation with EPA, conditions within SMUs 4c and 25 were further explored during a low tide on April 27, 2005 to determine locations conducive to collecting sediment samples. MWAC and EPA agreed that MWAC would collect the intertidal samples from land during an extreme low tide and would attempt to collect a subtidal sample from various locations offshore of the toe of the slope.

In June 2005 during the Phase II sampling event, a composite intertidal sample was collected by hand from land at the toe of the riprap slope from MW316 and MW317 locations. Eight attempts to collect a subtidal surface sediment sample (MW315) by boat offshore of the slope were unsuccessful due to the presence of rocks. Therefore, the NR area will be characterized by the intertidal composite sample (MW316). The collected composite sample was submitted to the laboratory for analysis of COCs and PCBs and DDT. As described in the *Final Revised OMMP—Areas A and B* (Anchor 2005), PCB and DDT analyses were conducted because these compounds were found in exceedance of the SQOs in SMUs adjacent to 4c and 25 during previous investigations. If sampling results are below the SQOs, PCBs and DDT will be removed from the performance criteria analyte list for subsequent monitoring events.

Sample Station MWW-316

Sample Station MWW-317

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 15
Surface Sediment Conditions at the Intertidal Stations in the Natural Recovery Areas
Middle Waterway Problem Area

Results of the surface sediment sample analyses for MW316 indicated no exceedances of the SQOs for both the COCs and the additional analytes, PCBs and DDT (Table 4). In the *Final Revised OMMP—Areas A and B* (Anchor 2005), performance criteria were detailed in Table 6-1 for SMUs 4c and 25. These criteria are to be used to compare monitoring results in Years 0, 3, and 5 to determine if performance standards (i.e., SQOs) are likely to be met within a 10-year period. The performance criteria for Years 0, 3, and 5 are for the sediment chemistry results to be within 10 percent of the SQOs, 5 percent of the SQOs, and at or below the SQOs, respectively. Since none of the analytes exceeded the SQOs, the Year 0, 3, and 5 performance criteria were met during this monitoring event. Therefore, based on the sediment chemistry results, no ARAs are recommended for this area.

3.6 Sampling and Data Quality Assurance/Quality Control (QA/QC)

3.6.1 Sampling QA/QC

The objective of QA/QC sampling was to ensure that proper sampling practices were observed during field activities. One split sample (duplicate) was collected during Phase II monitoring activities to determine variability in chemical concentrations between samples of the same sediment. This QA/QC sample was collected according to methods outlined in the SAP. The sample was analyzed for the COCs (i.e., metals, PAHs, and mercury).

3.6.2 Data QA/QC

One data validation report was provided to Anchor by Laboratory Data Consultants, Inc, Carlsbad, California, an independent data validator. Based on a review of sediment data, the overall data quality objectives set forth in the QAPP were met. Therefore, the sediment data presented in this report are of adequate quality. The results of the data validation assessment are summarized below and provided as Appendix D.

The data review and validation was performed using the reporting format, data qualifiers, and criteria described in EPA's *Functional Guidelines for Evaluating Inorganics Analyses*, December 1994; *Functional Guidelines for Evaluating Organics Analyses*, December 1994; EPA's *Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996*; or criteria in the analytical methods. Validated data may have been qualified for

any of several reasons, including laboratory deviation from the designated method, failure to meet the criteria in the analytical method or in the references named above, and the professional judgment of the reviewer. Data validation qualifiers have been assigned to the data to assist in the interpretation of the data and its usability. Reported values without data qualifiers have met all data quality criteria and are acceptable for use as reported by the laboratory.

No significant issues arose during data validation of test results. The test results were generally within the requirements of the referenced methods and Puget Sound Estuary Program guidance. The laboratory data, as qualified, are acceptable for use.

3.7 Deviations from the Final Revised OMMP—Areas A and B SAP or QAPP

The following deviations from the *Final Revised OMMP—Areas A and B* (Anchor 2005) occurred during the Year 0 monitoring event:

- Surface sediment samples collected during the Phase I sampling event (June 2004) in the ENR areas were not submitted to the laboratory for chemical analysis as described in the *Final Revised OMMP—Areas A and B* (Anchor 2005). Chemical analysis was not performed due to the lack of mixing with the underlying fine-grained substrate. Instead, photographs were taken to document the presence of the placed ENR material.
- Similarly, four surface sediment samples collected in June 2005 in the areas where ENR material had been placed during the 2004-2005 work window were not submitted to the laboratory for chemical analysis due to the lack of mixing with the underlying fine-grained material. Instead, the surface sediment samples were submitted for grain size analysis to confirm that the grain size is similar to the grain size of the placed ENR material.
- Surface sediment samples were not collected in Dredge Area D-2 as the area was backfilled with surficial cap material, a mixture of coarse sand and gravel. This material was too large to submit to the laboratory for chemical analysis. Therefore, photographs were provided to confirm that the placed surficial cap material still remains.

- The target subtidal sample in the NR area (SMUs 4c and 25) could not be collected due to the presence of large rocks; therefore, the sediment chemistry for these areas was characterized by the intertidal composite sample only (MW316).

In addition, there was one deviation from the project SAP and QAPP related to changes in surface sediment sample location identification procedures. Each sediment sample location was assigned an unique alpha-numeric identifier, 10 characters in length (e.g., MW315SDAY0). The identifier is described as follows:

- The first two letters identify the project:
  MW = Middle Waterway
- The next three digits identify the station number
- The next letter identifies the sampling matrix:
  S = Sediment
  W = Water
- The next letter identifies the sample type:
  D = Discrete
  C = Composite
  S = Split
  E = Equipment rinsate
- The next letter indicates the depth interval:
  A = Surface
- The next two places indicate the monitoring event year:
  Y0 = Year Zero Monitoring Event

This location identification procedure will be used during subsequent monitoring events.

4 STATUS OF INSTITUTIONAL CONTROLS

Institutional controls identified in the *Final Revised OMMP—Areas A and B* (Anchor 2005) are related to the long-term integrity of the thick-layer cap areas and are in accordance with the provisions set forth in Section IX (Access and Institutional Controls) of the CD. As a status update, the following actions have been implemented in accordance with the CD:

- A regulated navigation area (RNA) request has been prepared for the thick-layer cap areas and was submitted to the Coast Guard in the spring of 2005 (Appendix F). MWAC has reviewed a draft of the Coast Guard's Notice of Proposed Rulemaking for the Establishment of an RNA. Publication of the Notice in the Federal Register for public comment is expected in early 2006. The RNA will prohibit activities such as anchoring, dragging, trawling, or other activities that involve disrupting the function of the thick-layer caps.
- For each property where access and/or land/water use restrictions are needed pursuant to Section IX of the CD, an easement running with the land has been executed and recorded with the Auditor's Office of Pierce County. The easement grants a right of access to the property for conducting any activity related to the CD, and grants the right to enforce land/water use restrictions as defined in the CD.

5 ADDITIONAL RESPONSE ACTIONS AND ADAPTIVE MONITORING STRATEGIES

5.1 Additional Response Actions

Year 0 monitoring results have confirmed that the RA meets the performance standards specified in the ROD for each remedy. Therefore, no ARAs are recommended.

5.2 Adaptive Monitoring Strategies

MWAC recommends changing two monitoring activities for the next scheduled monitoring event in response to conditions identified during the Year 0 monitoring event. These activities include the following:

- Dredge Area D-2 was dredged to a clean surface and backfilled to original grade with surficial cap material (i.e., habitat mix). Backfilling was required in this area to avoid habitat conversion of intertidal and shallow subtidal habitat (above -10 feet MLLW) to deep subtidal habitat (below -10 feet MLLW). The surficial cap material is a mixture of sand and gravel (2-inch minus material) and is too large to submit for chemical analyses. MWAC recommends that monitoring activities for this area in subsequent years be modified to a visual observation. If small-grained material (i.e., sand or silt) is apparent at these two sample locations, surface samples will be collected and submitted to the laboratory for analyses. If surficial cap material is apparent, photographs will be taken for documentation and MWAC will assume that the area continues to achieve the performance standards specified in the ROD.
- As described in the *Final Revised OMMP—Areas A and B* (Anchor 2005), remove PCBs and DDT from the analyte list in the NR areas (SMUs 4c and 25) since these compounds were detected below the SQOs during this monitoring event.

5.3 Monitoring Event Schedule

The next scheduled monitoring event pursuant to the *Final Revised OMMP—Areas A and B* (Anchor 2005) will be the summer of 2007. Monitoring activities will include:

- Visual inspections for ENR with surficial cap monitoring in SMU 5a.
- Hydrographic/land surveys and visual/dive inspections for thick-layer cap areas.
- Surface sediment collection for ENR monitoring (SMUs 8, 10, and 11) and dredged with ENR monitoring (Dredge Areas D-1, D-3, D-4, and portions of D-5 and D-6).
- Surface sediment collection for NR monitoring in SMUs 4c and 25.

- Visual observations in Dredge Area D-2 to confirm that the surface substrate is similar to its current composition. Dredge Area D-2 consists of a surface layer of habitat mix material consisting of medium to coarse sand and gravel.

Monitoring details are provided in the *Final Revised OMMP—Areas A and B* dated February 14, 2005.

6 REFERENCES

Anchor Environmental, L.L.C. (Anchor). 2005. Final Revised Operations, Monitoring, and Maintenance Plan—Areas A and B. Prepared by Anchor Environmental. February 14, 2005.

Anchor Environmental, L.L.C. (Anchor). 2003. Construction Quality Assurance Plan, Areas A and B. Middle Waterway Problem Area Commencement Bay Nearshore/Tideflats Superfund Site. Prepared by Anchor Environmental for Middle Waterway Action Committee. July 21, 2003.

Environmental Protection Agency (EPA). 1989. Commencement Bay Nearshore/Tideflats Record of Decision. Prepared by EPA, Region 10, Seattle, Washington. September 1989.

Foster Wheeler Environmental Corporation (Foster Wheeler). 1998a. Sampling and Analysis Plan. Prepared by Foster Wheeler Environmental Corporation for Middle Waterway Action Committee. April 13, 1998.

Foster Wheeler Environmental Corporation (Foster Wheeler). 1998b. Quality Assurance Project Plan. Prepared by Foster Wheeler Environmental Corporation for Middle Waterway Action Committee. April 13, 1998.

APPENDIX A

MAY 2, 2005 LETTER FROM MWAC TO EPA

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

VIA HAND DELIVERY; RETURN RECEIPT REQUESTED

May 2, 2005

Nancy Harney, Project Coordinator
U.S. Environmental Protection Agency
Region 10 (ECL-111)
1200 Sixth Avenue
Seattle, WA 98101

RE: Conference Call Summary (April 22, 2005)—Year Zero (Year 0) Monitoring Report Comments

Dear Ms. Harney:

This letter is to summarize the additional Year 0 monitoring actions that the Middle Waterway Action Committee (MWAC) and the U. S. Environmental Protection Agency (EPA) agreed to perform to be consistent with the objectives of the Final Revised OMMP, dated February 14, 2005 (Final OMMP). These activities were discussed during a conference call on Friday, April 22, 2005 between Anchor Environmental, L.L.C. (Anchor) representing MWAC, EPA, and the U.S. Army Corps of Engineers (Corps). The agreed-to actions include the following:

1. MWAC and the Corps conducted a site visit during a low tide on April 27, 2005 to view SMU 5a ENR (with surficial cap) area to further explore the substrate conditions between Station 1 and Station 2 (see Figure 6 in the Year 0 Report). Photographs in the Draft Year 0 Monitoring Report indicate fine-grained material between Stations 1 and 2 relative to other locations within SMU 5a. The visual inspection was to confirm that the finer-grained material overlays the ENR material and the large material has not eroded away. The visual inspection included approximately four to five holes between the two stations to view the underlying material. Findings from the investigation are described below.
    - A thin layer of silt overlying a medium sand and gravel mixture was present (placed surficial cap material; see attached photographs in Figure 2).

- Areas closer to Station 1 contained less silt overlying the surficial cap material.
- Throughout most of SMU 5a, the surficial cap material has sorted leaving the gravel fraction on the surface with the sand fraction underneath.
- The surficial cap material consisting of a mixture of medium sand and gravel was found to be in place between Stations 1 and 2.

These findings will be added to the final version of the Year 0 Report.

2. Pursuant to the Final OMMP, one composite intertidal sample and one subtidal sample need to be collected in the natural recovery areas SMUs 4c and 25. During the 2004 Year 0 sampling event, no samples could be collected due to the presence of riprap along the slope in the targeted intertidal sampling areas, as well as offshore in the targeted subtidal sampling area. Conditions in SMUs 4c and 25 were viewed on April 27, 2005 to determine if there is any location within the area conducive to collecting a sediment sample. MWAC and the Corps determined that samples would be collected in the following manner:
    - A composite intertidal sample will be collected from land at the toe of the riprap slope from two or three different locations that are spatially representative of the area during an extreme low tide (at least -3.0 feet MLLW).
    - A subtidal sample will be collected from a boat offshore of the slope in any location that the grab sampler is able to collect material. If three attempts in any one location are unsuccessful at obtaining a sample, the sampling crew will move to a different location. If no material is collected after trying at five different sampling stations, the subtidal sample will be abandoned and the performance criteria for the natural recovery area will be based on the composite intertidal sample only. This approach is reasonable because it is expected that more material would be moving into the subtidal area, thereby facilitating natural recovery, than in the intertidal slope area.

These findings will be added to the final version of the Year 0 Report.

3. In areas where ENR material was placed during the 2004-2005 work window, MWAC will obtain surface sediment samples in May or June 2005 to document that the ENR material is in place. If there is no fine-grained material mixed in with the ENR material, a sample will be collected and submitted to the lab for grain size analysis to document that the material is of the same grain size as the placed ENR material. In addition, photographs will be taken of each sample to confirm that the ENR material is in place. If there is fine-grained material mixed in with the ENR material, samples will be collected and submitted to the lab for analysis for the chemicals of concern. The ENR material placed in 2004-2005 was placed in all of D-

1 and D-4, all of SMUs 8, 10, and 11, the northern two-thirds of D-3, and the southern third of D-5. Therefore, the following stations will be sampled (Figure 1, Phase II):

a. MW301
b. MW302
c. MW303
d. MW304
e. MW305
f. MW307
g. MW310
h. MW311
i. MW312
j. MW320
k. MW322
l. MW323
m. MW324

These findings will be added to the final version of the Year 0 Report.

4. Although Year 0 monitoring occurred in two phases, the Year 3 monitoring will occur in one phase for all sampling stations regardless of when the Year 0 monitoring occurred. The Year 3 monitoring event will occur in the summer of 2007.

5. EPA's comments will be addressed the Year 0 Monitoring Report will be revised after completion of the above-mentioned tasks.

6. Citizens for a Healthy Bay's (CHB's) comments related to the NR areas will be addressed as soon as possible in writing pending the completion of the activities listed above.

If you have any questions regarding this letter, please do not hesitate to reach me at (206) 903-3312 or dtempleton@anchorenv.com.

Sincerely,

David W. Templeton, Project Coordinator
Anchor Environmental, L.L.C.

cc: MWAC
Kim Maree Johannessen, Johannessen & Associates
Bill Joyce, Salter Joyce Ziker, PLLC
John Malek, EPA
Kim Takasaki, USACE
Russ McMillian, Ecology
Robert Taylor, NOAA
Emile Pitre, USACE
Leslie Ann Rose, Citizens for a Healthy Bay
file

APPENDIX B

PHASE I AND II FIELD DATA SHEETS

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

No Sample Collected

Surface Sediment Field Sample Record

Collection Date: 6/23/09
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 306

Sampling Crew: EA/AW/KD
Sampling Vessel: Anchor Boat
Sampling Method: Van Veen
Subcontractor(s):
Station Coordinates: (N) / Lat. 47 15 47.405
E / (W) Long. 122 25 58.047
Weather: O'cast 65°F
Datum: (NAD 83) / WGS 84 Zone:

Sample ID: MWW-306-SDAY0
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 24.6 Penetration/Sampled Depth: Time: 1536
Bioassay

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	47.405 58.047
gravel	gray	slight	Petroleum	Coarse sand in jaws
sand C M F	black	moderate	other:	did not close
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: 2 Water Depth: 24.7 Penetration/Sampled Depth: Time: 1539
Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	Coarse sand in jaws
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		Enr material did not collect
organic matter	brown surface	overwhelming		

EAPM

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: EAPM

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

NO SAMPLE COLLECTED

Surface Sediment Field Sample Record

Collection Date: 6/23/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 307

Sampling Crew: EA/AW/LD
Sampling Vessel: ANCHOR BOAT Sampling Method: VAN VEEN
Subcontractor(s):
Station Coordinates: (N) Lat. 47 15 47.858 Weather: OVCAST 65°F
E / (W) Long. 122 25 58.337
Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-307-SDAYO
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 25.7 Penetration/Sampled Depth: Time: 1510
Bioassay 47.614 58.198

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	COARSE SAND
gravel	gray	slight	Petroleum	IN JAWS
sand C M F	black	moderate	other:	DID NOT
silt clay	brown	strong		CLOSE
organic matter	brown surface	overwhelming		

EAPOY

Grab Number: 2 Water Depth: 24.6 Penetration/Sampled Depth: 12/0 Time: 1515
Chemistry 47.858 58.337

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	ALL COARSE
gravel	gray	slight	Petroleum	SAND - ERR
sand C M F	black	moderate	other:	MATERIAL
silt clay	brown	strong		NO SAMPLE COLLECTED
organic matter	brown surface	overwhelming		

ALL COARSE SAND (<1 mm of silt on surface)

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EHMY

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: EAPOY

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

No Sample Collected

Surface Sediment Field Sample Record

Collection Date: 6/22/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW - 308

Sampling Crew: GAPPY
Sampling Vessel: ON FOOT Sampling Method:
Subcontractor(s):
Station Coordinates: N / Lat. 47 15 48.66875 Weather: SUNNY 80°F
E (W) / Long. 122 26 00.99637
Datum: (NAD 83) / WGS 84 Zone:

Sample ID: MWW 308 SDAYO
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: NOT COLLECTED DUE TO GRAVEL SUBSTRATE Water Depth: Penetration/Sampled Depth: Time: 1350
Bioassay

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	NO SEDIMENT TO SAMPLE -- ALL GRAVELS PHOTO HABITAT MIX
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: GAPPY

No Sample Collected

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

Surface Sediment Field Sample Record

Collection Date: 6/22/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 309

Sampling Crew: GAPPY
Sampling Vessel: 0 FOOT
Sampling Method:
Subcontractor(s):
Station Coordinates: N / Lat. TARGET 47 15 46.70824
E / (W) / Long. 122 26 01.15223
Weather: SUNNY 80°F
Datum: NAD 83 / WGS 84
Zone:

Sample ID: MWW 309 SDA40
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: Water Depth: Penetration/Sampled Depth: Time: 1345
Bioassay NO SAMPLE COLLECTED DUE TO GRAVEL SUBSTRATE

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	NO SEDIMENT TO SAMPLE – ALL GRAVELS. HABITAT PHOTO MIX
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

GAPPY

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: GAPPY

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

No Sample Collected

Surface Sediment Field Sample Record

Collection Date: 6/23/04

Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 313

Sampling Crew: EA/KD/AW

Sampling Vessel: Anchor Boat Sampling Method: Van Veen

Subcontractor(s):

Station Coordinates: N / Lat. 47 15 43.82438 Weather: O'cast 65°F

E / W / Long. 122 25 54.63588

Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-313-SDA40

Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 32' Penetration/Sampled Depth: Time: 1345

Bioassay

43.838 54.507

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	H_2O, some coarse sand
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: 2 Water Depth: 32' Penetration/Sampled Depth: 0/0 Time: 1350

Chemistry

43.838 54.507

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	Coarse sand – thin layer fine material – no silt or finer sand
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: Water Depth: Penetration/Sampled Depth: Time:

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: Water Depth: Penetration/Sampled Depth: Time:

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: EAPM

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

No Sample Collected

Surface Sediment Field Sample Record

Collection Date: 6/23/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 314

Sampling Crew: EA | LD | AW
Sampling Vessel: Anchor Boat Sampling Method: Van Veen
Subcontractor(s):
Station Coordinates: (N)/ Lat. 47 1544.80232 Weather: Overcast 65°F
E /(W)/ Long. 122 2556.24823
Datum: (NAD 83)/ WGS 84 Zone:

Sample ID: MWW-314-SDA40
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 25.3 Penetration/Sampled Depth: Time: 1335
Bioassay ON TARGET

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	SOME COARSE SAND - NOT ENOUGH
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: 2 Water Depth: 25.2 Penetration/Sampled Depth: Time: 1337
Chemistry 44.77156.345

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	H_2O, COARSE SAND (SOME) (ENR MATERIAL) → SO WILL NOT COLLECT
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: 3 (EA) Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPM

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: EAPM

No SAMPLE COLLECTED

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

Surface Sediment Field Sample Record

Collection Date: 6/23/04

Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 315

Sampling Crew: EA/KD/AW

Sampling Vessel: Anchor Boat Sampling Method: Van Veen

Subcontractor(s):

Station Coordinates: N / Lat. 47° 15' 43.686 Weather:

E / W / Long. 122° 25' 56.158

Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-315-SDAYO

Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 20' Penetration/Sampled Depth: 0 Time: 950 PDT

Bioassay

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	all water from observations during low tide on 6/21 - believe bottom to be riprap, cobble & concrete rubble
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:

Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: Water Depth: Penetration/Sampled Depth: Time:

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

KMD

Grab Number: Water Depth: Penetration/Sampled Depth: Time:

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: KMD

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

No Sample Collected

Surface Sediment Field Sample Record

Collection Date: 6/21/04

Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 316

Sampling Crew: WICK, D'ORAZIO

Sampling Vessel: on foot Sampling Method: PHOTO

Subcontractor(s):

Station Coordinates: N / Lat. 47 15 43, 63025 Weather: SUNNY 90°F

E / W / Long. 122 25 56, 63309

Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW 316 SDAY0

Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Bioassay DID NOT SAMPLE DUE TO SUBSTRATE

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	Steep rip rap slope.
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: D'ORAZIO

No Sample Collected

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

Surface Sediment Field Sample Record

Collection Date: 6/21/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID: M WW 317**

Sampling Crew: Nick, D'Orazio
Sampling Vessel: on foot
Sampling Method: PHOTOS!
Subcontractor(s):
Station Coordinates: N / Lat. 47 15 43.24380
E / W / Long. 122 25 56.37553
Weather: SUNNY 80°F - 90°F
Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW 317 SDAYO
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay DID NOT SAMPLE DUE TO UNFAVORABLE SUBSTRATE

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	sample site on steep rip-rap slope. large concrete chunks, cobble, gravel
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface GAPPM	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

Recorded by: D'Orazio / APPM

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

NO SAMPLE COLLECTED

Surface Sediment Field Sample Record

Collection Date: 6/23/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 318

Sampling Crew: EA/KD/AW
Sampling Vessel: Sampling Method: Van Veen
Subcontractor(s):
Station Coordinates: N / Lat. 47 15 42.709 Weather: O'CAST 60°F-65°F
E / W / Long. 122 25 52.116
Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-318-SDAYO
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 33.6 Penetration/Sampled Depth: Time: 1317
Bioassay 42.709 52.116

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	H_2O, some
gravel	gray	slight	Petroleum	COARSE SAND
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPOY

Grab Number: 2 Water Depth: 34.5 Penetration/Sampled Depth: Time: 1320
Chemistry 43.038 52.386

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	H_2O, some
gravel	gray	slight	Petroleum	COARSE SAND
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPOY

Grab Number: 3 Water Depth: 33.8 Penetration/Sampled Depth: Time: 1324
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle) 43.257 53.020

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	UNABLE TO
gravel	gray	slight	Petroleum	GET ANY SAMPLE
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPOY

Grab Number: 4 Water Depth: 34.1 Penetration/Sampled Depth: Time: 1327
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle) 43.257 52.904

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	SOME
gravel	gray	slight	Petroleum	COARSE
sand C M F	black	moderate	other:	SAND
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPOY

Recorded by: EAPOY

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

NO SAMPLE COLLECTED

Surface Sediment Field Sample Record

Collection Date: 6/23/04

Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 319

Sampling Crew: EA/KD/AW

Sampling Vessel: ANCHOR BOAT Sampling Method: VAN VEEN

Subcontractor(s):

Station Coordinates: N/ Lat. 47 15 41.612 Weather: O'CAST 65°F

E / W/ Long. 122 25 52.912

Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-319-SDAY0

Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 38 Penetration/Sampled Depth: 10/0 Time: 1300

Bioassay

Sediment Type:	Sediment Color:	Sediment Odor:	
cobble	D.O.	none	H2S
gravel	gray	slight	Petroleum
sand C M F	black	moderate	other:
silt clay	brown	strong	
organic matter	brown surface	overwhelming	

COARSE SAND (ENR MATERIAL)

Comments: 41.612 52.912 50 ft EAST OF TARGET ALL ENR MATERIAL SO DID NOT COLLECT

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:	
cobble	D.O.	none	H2S
gravel	gray	slight	Petroleum
sand C M F	black	moderate	other:
silt clay	brown	strong	
organic matter	brown surface	overwhelming	

Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:	
cobble	D.O.	none	H2S
gravel	gray	slight	Petroleum
sand C M F	black	moderate	other:
silt clay	brown	strong	
organic matter	brown surface	overwhelming	

Comments:

EAPM

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____

Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:	
cobble	D.O.	none	H2S
gravel	gray	slight	Petroleum
sand C M F	black	moderate	other:
silt clay	brown	strong	
organic matter	brown surface	overwhelming	

Comments:

Recorded by: EAPM

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

NO SAMPLE COLLECTED

Surface Sediment Field Sample Record

Collection Date: 6/23/04
Date/Time Lab Drop Off:

Project Name: Middle Waterway **Project No: 990046-01** **Station ID:** MWW 321

Sampling Crew: EA/KD/AW
Sampling Vessel: ANCHOR BOAT
Sampling Method: Van Veen
Subcontractor(s):
Station Coordinates: N / Lat. 47° 15' 40.442
E / Long. 122° 25' 52.040
Weather: OVERCAST, LIGHT BREEZE
Datum: NAD 83 / WGS 84 Zone:

Sample ID: MWW-321-SDAY0
Analysis: SQO Metals /Hg (total) / SQO PCBs / SQO PAH; Phenols / SQO PAH; Phenols; Pthalates
TS / Grain Size / TOC / Moisture
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 36' Penetration/Sampled Depth: Time: 1030
Bioassay

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	WATER / NO SAMPLE
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

REJECT

Grab Number: 2 Water Depth: 35' Penetration/Sampled Depth: Time: 1210
Chemistry

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	NO SED
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

REJECT

Grab Number: 3 Water Depth: 29.8 Penetration/Sampled Depth: Time: 1213
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	NO SED ALL H_2O
gravel	gray	slight	Petroleum	
sand C M F	black	moderate	other:	
silt clay	brown	strong		some coarse sand (enrichment)
organic matter	brown surface	overwhelming		

REJECT

Grab Number: 4 & 6 Water Depth: ~~36~~ 30 Penetration/Sampled Depth: 0/0 Time: ~~1219~~/~~1220~~ 1233
Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Comments:
cobble	D.O.	none	H2S	moved 70 ft N of target cannot collect sample
gravel	gray	slight	Petroleum	
sand C M F COARSE SAND	black	moderate	other:	
silt clay	brown	strong		
organic matter	brown surface	overwhelming		

EAPPY

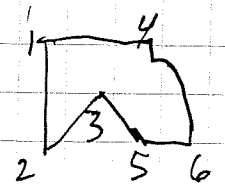
Recorded by: EAPPY

Location MWW - COOKS MARINE Date 6/22/04 93

Project / Client MWAC

ARRIVE 0630: MET DALE DISCUSSED WINCH OPTIONS → MOUNTED NEW WINCH & TROUBLE SHOOTED; SEEMS TO BE WORKING AFTER TIGHTENING SCREWS HOLDING WIRES IN RELAY BOX & → PRIOR TO TIGHTENING WIGGLED WIRES GOING INTO RELAY & WINCH STOPPED ∴ SUSPECTED WIRING IN RELAY TO BE LOOSE → DALE WILL STOP BY TONIGHT TO CONFIRM; BOUGHT QUICK DISCONNECT AT WEST MARINE → DALE WILL INSTALL TONIGHT

11:30: BEGAN MARKING 5m w/ STAKES FOR MONITORING PURPOSES → LOW TIDE = 1445



WILL TAKE PHOTO B/W POINTS MARKED 1–6 (SEE FIGURE 4-1 FROM OMMP AT WEW)

1230: BEGAN OBSERVATIONS

PHOTO-~~46~~: TAKEN BEHIND 5–6 LOOKING TOWARDS 3 + 3 0139

— ~~PHOTO 45~~: 6 LOOKING TO 5 0140

— ~~45~~: TYPICAL SUBSTRATE B/W POINTS 5+6 0141

Location _____ Date _____

Project / Client _____

PROP 4B: FROM 5 LOOKING TOWARDS 3 0142
MOUND 1/2 WAY B/W 5+3
- 4: TYPICAL OF MOUND + B/W MOUND + 5 0143
- MOUND LOOKING TOWARDS 3 0144
- TYPICAL SUBSTRATE B/W MOUND + 3 0145
DOES NOT SEEM TO BE MOVING GRAVEL AWAY; STILL MIX OF GRAVEL + COARSE SAND (FISH MIX)
- 3 LOOKING TOWARDS 4
- TYPICAL SUBSTRATE B/W 1+4
B/W 1+4 → lower spot → material may have moved around + bit but habitat mix still on surface
- AT 4 LOOKING TOWARDS 5 & 6
B/W 4, 5+6 MOUND OF HABITAT MIX MATERIAL THROUGHOUT
- TYPICAL SUB B/W 4 + 5(+6)
- 5+6 FROM TOSS FLOAT SIDE
- towards 1+4
- 3 TOWARDS 1 0152
B/W 3+1 (closer to 3) AREA SHOWS some movement of mat but still a mix of coarse sand + gravel - small pockets of fine sand
0153 typical sub close to 3 b/w 1+3 (20 feet)

Location _____ Date _____

Project / Client _____

- med sand pockets 0154
- after first 20 ft from 3; typ sub b/w 3+1 0155
- b/w 3+1 0156
- b/w 3+2 0157
- typ sub b/w 3+2 0158
area b/w 0 + -2 b/w 2+3 is mix of small gravel, coarse sand + med sand → no larger gravels
- typ substrate in -2 contour around 2 0159
- b/w 1+2 0160
substrate b/w 1+2 → at -2' mix contour → coarse + med sand w/ small gravel
areas higher than -2 → no gravel gravel + coarse sand
- typ substrate higher than -2 b/w 1+2 0161
- typ sub at -2 contour 0162
- 2 looking towards 5+6 → no fish mix added 0163
- 2 looking towards 3 → in the "wedge" 0164
that mat was placed by manatee, but was by crew
- 1 looking towards 4 0165
- typ sub b/w 1+4 (more gravels less sand) 0166
- 4 looking towards 3 0167
- typ sub b/w 4+3 0168
- 4 looking towards 6 0169
- typ substrate b/w 4+6 0170

Location _____ Date _____

Project / Client _____

- b/w 4 & 6 looking towards 5 & 6 0171
- b/w 4 & 6 looking towards 2 0172
- b/w 4 & 6 looking towards 1 & 3 0173
- b/w 4 & 6 looking towards 1 & 4 0174

- OVERALL: MATERIAL HAS MOVED AROUND TO SOME EXTENT BUT ALL AREAS STILL A MIX OF GRAVEL & COARSE SAND EXCEPT ~~FOR~~ SMALL MARGIN B/W 1 + 2 THAT IS DEEP - 2' MLLW CONTOUR WHICH CONSISTS MAINLY OF COARSE SAND w/ small GRAVEL → NO AREAS OF CONCERN TO REPORT

END: 1331

1331: UNABLE TO TAKE INTERTIDAL SAMPLES MLLW 308 + 309 IN AREA D-2

↓ BOTH STATIONS ~~ARE~~ (W) CONSIST OF GRAVEL ∴ DID NOT SAMPLE

- 309 SUB 0175
- 308 SUB 0176

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 301 MW-301SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW301SDA050622 Comments: Collected GS only. No evidence of a silt layer on top in any of the grabs
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 26.3 Penetration/Sampled Depth: 7cm Time: 1432
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Sand in jaws resulted in poor recovery	Surface:	none	H2S	none
		slight	Petroleum	slight Rejected.
Subsurface:	Subsurface:	moderate	other:	moderate
All sands No surface silt		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2,3,4 Water Depth: 26.5 Penetration/Sampled Depth: Time: 1438 1440 1444
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Rock in jaws	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 5,6 Water Depth: 27.7 28.3 Penetration/Sampled Depth: 2cm Time: 1500 1502
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Winnowed due to rock wood	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 7 Water Depth: 28.5 Penetration/Sampled Depth: 7 Time: 1513
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Med crse sand	Surface: olive grey	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 23 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 302 MW-302SDA050623

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW302SDA050623 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: _____ Water Depth: 28 Penetration/Sampled Depth: _____ Time: 0850
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: WOOD	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2 Water Depth: 28 Penetration/Sampled Depth: 10 cm Time: 0853
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: 15% small wood debris medium capsand	Surface: olive grey	none	H2S	none
		slight	Petroleum	slight
Subsurface: shell hash	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: collected chemistry samples - probably won't run due to lack of silt layer

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: _____

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 303 MW-303SPA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather: Overcast
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS: Trimble Geo XT

Sample Number: Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 24.2 Penetration/Sampled Depth: Time: 1048
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface: WOOD IN JAWS	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2 Water Depth: 25.2 Penetration/Sampled Depth: Time: 1052
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface: DIDN'T TRIP	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 3 Water Depth: 24.2 Penetration/Sampled Depth: 11cm Time: 1054
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: 25% wood debris silty Sand ~.5cm	Surface: LT Brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: CAP Sand, medium	Subsurface: olive grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 23 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 304 **MW-**304/SDA050623

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW304SDA050623 Comments: No evidence of silt on surface
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 28 Penetration/Sampled Depth: Time: 0910
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: DID NOT close	Surface:	none	H2S	none
Subsurface:	Subsurface:	slight	Petroleum	slight
		moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: No evidence of silt on top of cap sand

Grab Number: 2,3 Water Depth: 27 Penetration/Sampled Depth: 6cm Time: 0918 0926
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: DID	Surface: NOT close	none	H2S	none
Subsurface:	Subsurface: sand in jaws	slight	Petroleum	slight
		moderate	other:	moderate
		strong		heavy
		overwhelming		

Removed to 2 jars

Additional Comments:

Grab Number: 4 Water Depth: 26 Penetration/Sampled Depth: Time: 0931
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: DID	Surface: NOT close	none	H2S	none
Subsurface:	Subsurface: sand in jaws	slight	Petroleum	slight
		moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 5 Water Depth: 26.5 Penetration/Sampled Depth: 6cm Time: 0938
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: med cap sand	Surface: olive grey	none	H2S	none
Subsurface:	Subsurface:	slight	Petroleum	slight
		moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: ~~Collect Grain size only~~

Recorded by: B McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 305 MW-305SDA-050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on station Weather: OVERCAST
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW305SDA Comments:
Analysis: TOC / Grainsize / Metals / ~~PCB~~ / ~~DDT~~ / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 23 Penetration/Sampled Depth: 10cm Time: 1343
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Sandy silt 2cm shells	Surface: Lt brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: Polychaetes CAP sand (medium	Subsurface: olive & grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time: 1350
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: Split sample from grab #1

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 307 **MW-**307SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather: Overcast
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW307SDA050622 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 25 Penetration/Sampled Depth: Time: 1408
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Grab Subsurface:	Surface: didn't Close Subsurface:	none slight moderate strong overwhelming	H2S Petroleum other:	none slight moderate heavy

Additional Comments:

Grab Number: 2,3 Water Depth: 25 Penetration/Sampled Depth: Time: 1411 1415
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Subsurface: Rock starfish in jaws	Surface: jaws Subsurface:	none slight moderate strong overwhelming	H2S Petroleum other:	none slight moderate heavy

Additional Comments:

Grab Number: 4 Water Depth: 25 Penetration/Sampled Depth: 9.5 cm Time: 1420
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: 1 cm silty sand snails Subsurface: medium cap sand worms	Surface: Lt brown Subsurface: olive grey	none slight moderate strong overwhelming	H2S Petroleum other:	none slight moderate heavy

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Subsurface:	Surface: Subsurface:	none slight moderate strong overwhelming	H2S Petroleum other:	none slight moderate heavy

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 23 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 310 **MW-310SDA050623**

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW310SDA050623 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 31 Penetration/Sampled Depth: Time: 0950
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: Grab fell over - only water

Grab Number: 2 Water Depth: 31 Penetration/Sampled Depth: Time: 0952
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
Wood in JAWS		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 3 Water Depth: 31 Penetration/Sampled Depth: 7cm Time: 0955
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Dusting of silt on top. 10% wood debris (bark)	Surface: Lt brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: med cap sand	Subsurface: olive grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: Use this grab for sample

Grab Number: 4, 5, 6, 7 Water Depth: 31 Penetration/Sampled Depth: Time: 1005
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle) 1008

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:	1011
Surface:	Surface:	none	H2S	none	1014
		slight	Petroleum	slight	
Subsurface:	Subsurface:	moderate	other:	moderate	
		strong		heavy	
		overwhelming			

Additional Comments: Reject #4. Wood in JAW #5, 6, 7

Recorded by: B McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 23 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 311 MW-311SDA 050623

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. On Station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW 311SDA 050623 Comments: Very thin layer of silt on surface <.5mm in places; Absent in others
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1, 2, 3 Water Depth: 27 Penetration/Sampled Depth: Time: 1049
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle) 1053
1057

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
Wood	debris	strong		heavy
		overwhelming		

Additional Comments: Added weights

Grab Number: 4, 5, 6 Water Depth: 27 Penetration/Sampled Depth: 7cm Time: 1104
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle) 1107
1112

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: 5% wood debris shell hash, cap sand	Surface: olive grey	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
medium cap sand	olive grey	strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by:

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 312 **MW-**312SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 37 Penetration/Sampled Depth: 12 cm Time: 1547
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: 2cm siltly sand	Surface: Lt brown over Lt grey	none	H2S	none → some bubbles After homogenization
		slight	Petroleum	slight
Subsurface: med sand cap material w/ pocots of grey silt	Subsurface: olive grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: B. McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: X June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 315 **MW-**315SDA0606 22

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. 997831 Weather:
E / W / Long. 1243407, -77.09 (HAG)
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW315SDA050622 Comments: Unable to get sample in 8 attempts Abandon station. Some grabs got 3cm of coarse sand & cobble surface light brown, dk brown @ depth shell hash
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: Penetration/Sampled Depth: Time: 1222
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface: Rock in Gr	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2,3,4 Water Depth: 10 Penetration/Sampled Depth: Time: 1225 1228 1231
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface: Rock	Subsurface: Grab	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 5,6 Water Depth: Rocks Penetration/Sampled Depth: @ 99783 N 1243407 E (-77.09 HAG) Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 7,8 Water Depth: 17 Penetration/Sampled Depth: Time: 1250 1252
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: 995965 N } Rock in #7
124332 E }

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 16C **MW-** 16CSCA0506 316SCA0506 22 22

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW316SCA050622 Comments: 16C is composite of 316 & 317
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)
Sample composited @ 1205

Grab Number: 1 Water Depth: 0 Penetration/Sampled Depth: 10cm Time: 1140
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: sand w/ shell 0 to 4cm	Surface: Lt brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: cobble w/ course sand, shells	Subsurface: DK green ~~black~~	moderate	other:	moderate
		strong		heavy
		overwhelming		

slight sheen on water from creosote pile

Additional Comments: Pile w/ 0.5m w/ creosote; metal debris

Grab Number: 2 Water Depth: 0 Penetration/Sampled Depth: 10 cm Time: 1152
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: course sand 3cm 20% cobble, seaweed	Surface: Lt brown to brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: shell debris silty sand, wet cobble	Subsurface: Lt brown	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: B McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 320 MW-320SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW320SDA050622 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 25 Penetration/Sampled Depth: Time: 1525
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Winnowing.	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface: cockle in JAWS	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2 Water Depth: 25 Penetration/Sampled Depth: 9cm Time: 1533
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: silty sand - trace shell hash <0.3cm	Surface: Lt brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: med sand cap ~~shell~~	Subsurface: olive grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 322 **MW-** 322SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW322SDA 050622 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 11.2 Penetration/Sampled Depth: Pr. Time: 1026
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface: DIDN'T	moderate TRIP	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 2 Water Depth: 10.7 Penetration/Sampled Depth: Time: 1029
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface: DIDN'T	Subsurface: TRIP	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: 3 Water Depth: 10.8 Penetration/Sampled Depth: 12 cm Time: 1032
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: silty sand 1cm	Surface: Lt Brown	none	H2S	none
		slight	Petroleum	slight
Subsurface: cap sand w/50% silt pockets	Subsurface: olive grey sand	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: B. McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 323 MW-323SDA 050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on station Weather: overcast, rain
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: MW323SDA050622 Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 5.0ft Penetration/Sampled Depth: 11 cm Time: 1008
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: silty sand <1cm	Surface: Lt brown	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
med cap sand w/ pockets of grey silt	dmegrey	strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: Bruce McDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** 324 MW-324SDA050622

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. on Station E / W / Long. Weather: overcast, Drizzle, 60°F
Datum: NAD 83 / WGS 84 Zone: GPS: Trimble

Sample Number: Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 6.9 Penetration/Sampled Depth: 7cm Time: 0936
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

REJECT

Additional Comments:

Grab Number: 2 Water Depth: 6.9 Penetration/Sampled Depth: 11cm Time: 0944
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: Silty Sand	Surface: Lt brown 1cm	none	H2S	none
		slight	Petroleum	slight
Subsurface: Sand med Pockets of grey silt	Subsurface: olive grey	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments: Some polychaetes

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: Water Depth: Penetration/Sampled Depth: Time:
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: BMcDonald

ANCHOR ENVIRONMENTAL, L.L.C.

Surface Sediment Field Sample Record

Collection Date: 22 June 05
Shipping Date: 23 June 05

Project Name: *MWW Year 0 Monitoring* **Project No:** *990046-01 T 36* **Station ID:** MBC MW-MBCSDA0506 22

Sampling Crew: Bruce McDonald, Bryan Patterson, Ali Wick
Sampling Vessel: *Anchor Boat* Sampling Method: Van Veen Grab
Station Coordinates: N / Lat. N/A Weather:
E / W / Long.
Datum: NAD 83 / WGS 84 Zone: GPS:

Sample Number: Comments:
Analysis: TOC / Grainsize / Metals / PCB / DDT / PAH / Archive
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: — Penetration/Sampled Depth: 10cm Time: 0955
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface: SAnd	Surface: olive grey	none	H2S	none
		slight	Petroleum	slight
Subsurface: SAnd	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Grab Number: _____ Water Depth: _____ Penetration/Sampled Depth: _____ Time: _____
Bioassay / Chemistry (circle) AVS/SEM; Total Sulfides; VOC Sample (circle)

Sediment Type:	Sediment Color:	Sediment Odor:		Sheen:
Surface:	Surface:	none	H2S	none
		slight	Petroleum	slight
Subsurface:	Subsurface:	moderate	other:	moderate
		strong		heavy
		overwhelming		

Additional Comments:

Recorded by: Bruce McDonald

APPENDIX C

GRAIN SIZE MEMO

MEMORANDUM

To:	**Nancy Harney, U.S. Environmental Protection Agency**
From:	**Bruce McDonald, Anchor Environmental**
CC:	**David Templeton, Anchor Environmental**
	Elizabeth Appy, Anchor Environmental
	File
Date:	**July 25, 2005**
Re:	**Middle Waterway Monitoring**

This memorandum summarizes grain size information collected on July 22 and 23, 2005 as agreed to per MWAC's letter dated May 2, 2005. This memorandum also addresses questions raised by Kym Takaski in an email dated July 15, 2005 that you forwarded to me on July 20, 2005.[1]

Table 1 presents both grain size information for the original material (Modified Base Cap; [MBC]) and the ENR samples (MWMBC-SDA-050622, ran in triplicate as the QA sample). The attached table also includes comments recorded in the field log at the time of collection and summarizes our recommendation to perform chemical analysis or not. Below are our observations and recommendations:

- All of the samples that were collected confirmed the presence of ENR material (modified base cap)[2]
- Most samples exhibited a thin veneer (approx. 1 cm) of silt on the surface of the MBC.
- Other samples appeared to be all cap material (e.g., MW301, MW304, and MW311).

[1] It should be noted that the sampled from Station MW316 was included in the grain size data set that was forwarded to you and that this sample is the composite bank sample from the Natural Recovery area within SMUs 4c and 25. Therefore, it was required to be chemically analyzed.

[2] Some of the samples further up in the waterway (e.g., MW322 and MW324) had pockets of silt interbedded in the ENR material. This is not surprising considering the proximity of these locations to the main channel from the head of the waterway.

APPENDIX D

PHASE II DATA VALIDATION REPORT

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Anchor Environmental, LLC
1423 3rd Avenue, Suite 300
Seattle, WA 98101-2226
ATTN: Ms. Sue Snyder

September 20, 2005

SUBJECT: Middle Waterway, Data Validation

Dear Ms. Snyder,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on August 29, 2005. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 13978:

SDG #	Fraction
128711	Semivolatiles, Chlorinated Pesticides, Polychlorinated Biphenyls, Metals, Total Organic Carbon

The data validation was performed under EPA Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco

Stella S. Cuenco
Project Manager/Senior Chemist

V:\LOGIN\Anchor\Middle\13978COV.wpd

Attachment 1

Reports on CD

LDC #13978 (Anchor Environmental-Seattle WA / Middle Waterway)

LDC	SDG#	DATE REC'D	(3) DATE DUE	SVOA (8270C)		Pest. (8081A)		PCBs (8082)		Metals (SW846)		TOC (9060)																									
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	128711/G5G140229	08/29/05	09/20/05	0	11	0	1	0	1	0	11	0	11																								
Total	B/SZ			0	11	0	1	0	1	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS, MSD, or DUP's.

13978ST.wpd

Middle Waterway
Data Validation Reports
LDC# 13978

Semivolatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Middle Waterway

Collection Date: June 22 through June 23, 2005

LDC Report Date: September 13, 2005

Matrix: Sediment

Parameters: Semivolatiles

Validation Level: EPA Level IV

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): 128711

Sample Identification

MW303-SDA-050622
MW305-SDA-050622
MW305-SSA-050622
MW307-SDA-050622
MW310-SDA-050623
MW312-SDA-050622
MW316-SCA-050622
MW320-SDA-050622
MW322-SDA-050622
MW323-SDA-050622
MW324-SDA-050622
MW312-SDA-050622MS
MW312-SDA-050622MSD

Introduction

This data review covers 13 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all semivolatile target compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/12/05	Indeno(1,2,3-cd)pyrene	31.3	MW303-SDA-050622 MW305-SDA-050622 MW305-SSA-050622 MW307-SDA-050622 MW310-SDA-050623 MW312-SDA-050622 MW316-SCA-050622 MW312-SDA-050622MS MW312-SDA-050622MSD SS1466-MB	J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were greater than or equal to 0.05.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW312-SDA-050622MS/MSD (MW312-SDA-050622)	Benzo(g,h,i)perylene	-	-	37 (≤35)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Middle Waterway
Semivolatiles - Data Qualification Summary - SDG 128711

SDG	Sample	Compound	Flag	A or P	Reason
128711	MW303-SDA-050622 MW305-SDA-050622 MW305-SSA-050622 MW307-SDA-050622 MW310-SDA-050623 MW312-SDA-050622 MW316-SCA-050622	Indeno(1,2,3-cd)pyrene	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
128711	MW312-SDA-050622	Benzo(g,h,i)perylene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (RPD)

Middle Waterway
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 128711

No Sample Data Qualified in this SDG

LDC #: 13978A2

SDG #: 128711

Laboratory: Severn Trent Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/12/05

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22 - 6/23/05
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	RRF non SPCC
IV.	Continuing calibration	SW	↓
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/CRQLs	A	
XIII.	Tentatively identified compounds (TICs)	N	not reported
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note:
A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment

1	2 MW303-SDA-050622	11	14 MW324-SDA-050622	21	MB- SS1466	31	
2	4 MW305-SDA-050622	12	MW312-SDA-050622MS	22		32	
3	5 MW305-SSA-050622	13	MW312-SDA-050622MSD	23		33	
4	6 MW307-SDA-050622	14		24		34	
5	7 MW310-SDA-050623	15		25		35	
6	9 MW312-SDA-050622	16		26		36	
7	10 MW316-SCA-050622	17		27		37	
8	11 MW320-SDA-050622	18		28		38	
9	12 MW322-SDA-050622	19		29		39	
10	13 MW323-SDA-050622	20		30		40	

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Reviewer: B
2nd Reviewer: R

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $\geq$ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: K

Validation Area	Yes	No	NA	Findings/Comments
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

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SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	7/12/05	P55622	JJJ	31.3		1→7, 12, 13	J/UJ/A
						551466-MB	

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		12 + 13	LLL	( )	( )	37 (35)	6	J/UJ/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (1000 std)	Recalculated RRF (1000 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	070105PAH	7/1/05	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.102	1.102	1.116	1.116	12.15	12.15
			Fluorene (3rd internal standard)	1.627	1.627	1.404	1.404	23.16	23.16
			~~Pentachlorophenol (4th internal standard)~~ Anthracene	1.113	1.113	1.106	1.106	8.49	8.49
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.066	1.066	1.045	1.045	17.04	17.04
			Benzo(a)pyrene (6th internal standard)	1.026	1.026	0.957	0.957	24.76	24.76
2	071305PAH	7/13/05	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	0.992	0.992	1.127	1.127	12.03	12.03
			Fluorene (3rd internal standard)	1.269	1.269	1.405	1.405	8.95	8.95
			~~Pentachlorophenol (4th internal standard)~~ Anthracene	1.046	1.046	1.100	1.100	9.63	9.63
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	0.975	0.975	1.031	1.031	6.11	6.11
			Benzo(a)pyrene (6th internal standard)	0.946	0.946	0.920	0.920	8.43	8.43
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	P55622	7/12/05	~~Phenol (1st~~ internal standard)					
			Naphthalene (2nd internal standard)	1.116	1.074	1.074	3.8	3.8
			Fluorene (3rd internal standard)	1.404	1.284	1.284	8.5	8.5
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.106	1.070	1.070	3.3	3.3
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.045	0.990	0.990	5.3	5.3
			Benzo(a)pyrene (6th internal standard)	1.049	1.179	1.179	12.4	12.4
2	P55656	7/13/05	Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)	1.127	1.239	1.239	9.9	9.9
			Fluorene (3rd internal standard)	1.405	1.352	1.352	3.8	3.8
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.100	1.070	1.070	2.7	2.7
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.031	0.965	0.965	6.4	6.4
			Benzo(a)pyrene (6th internal standard)	1.083	1.026	1.026	5.3	5.3
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A2
SDG #: 12871

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	500	519.94	104	104	0
2-Fluorobiphenyl	↓	503.68	101	101	↓
Terphenyl-d14	↓	357.65	71.5	71.5	↓
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MS - MSD I * 2/(MS + MSD) MS = Matrix spike percent recovery MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 12 + 13

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Phenol											
2-Chlorophenol											
1,4-Dichlorobenzene											
N-Nitroso-di-n-propylamine											
1,2,4-Trichlorobenzene											
4-Chloro-3-methylphenol											
Acenaphthene	63.2	63.2	2.8	68.2	65.7	103	103	103	~~99.5~~ 103	0	4
4-Nitrophenol											
2,4-Dinitrotoluene											
Pentachlorophenol											
Pyrene	63.2	63.2	25	~~63.2~~ 91	76.3	105	105	84.5	~~81~~ 84.5	22	17

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.
% RPD were calc. using % R.

MSDCLC.2S

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA

Where: SSC = Spike concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: SS1466 - LCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Phenol										
2-Chlorophenol										
1,4-Dichlorobenzene										
N-Nitroso-di-n-propylamine										
1,2,4-Trichlorobenzene										
4-Chloro-3-methylphenol										
Acenaphthene	50	50	55.9	55.7	112	112	111	111	0.9	0.4
4-Nitrophenol										
2,4-Dinitrotoluene										
Pentachlorophenol										
Pyrene	50	50	49.3	48.7	98.7	98.7	97.3	97.3	1.4	1.2

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A2
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

$$\text{Concentration} = \frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #11, Naphthalene

Conc. = (121397)(1000)(2)( )( )
( )( )( )( )( )
~~364473~~ ~~1.116~~ 21.9416 0.8021
899246 1.127

=

13.6 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Middle Waterway
Data Validation Reports
LDC# 13978

Chlorinated Pesticides

LDC Report# 13978A3a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Middle Waterway

Collection Date: June 22, 2005

LDC Report Date: September 13, 2005

Matrix: Sediment

Parameters: Chlorinated Pesticides

Validation Level: EPA Level IV

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): 128711

Sample Identification

MW316-SCA-050622
MW316-SCA-050622MS
MW316-SCA-050622MSD

Introduction

This data review covers 3 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of single and multicomponent compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW316-SCA-050622MS/MSD (MW316-SCA-050622)	4,4'-DDT	-	-	71 (≤47)	J (all detects) UJ (all non-detects)	A
	4,4'-DDD	-	41.8 (44-141)	-	J (all detects) UJ (all non-detects)	

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

b. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XI. Target Compound Identification

All target compound identifications were within validation criteria.

XII. Compound Quantitation and Reported CRQLs

All compound quantitation and CRQLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40.0% relative percent differences (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
MW316-SCA-050622	4,4'-DDD	98	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

XV. Field Blanks

No field blanks were identified in this SDG.

Middle Waterway
Chlorinated Pesticides - Data Qualification Summary - SDG 128711

SDG	Sample	Compound	Flag	A or P	Reason
128711	MW316-SCA-050622	4,4'-DDT 4,4'-DDD	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)
128711	MW316-SCA-050622	4,4'-DDD	J (all detects)	A	Compound quantitation and CRQLs (RPD)

Middle Waterway
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 128711

No Sample Data Qualified in this SDG

LDC #: 13978A3a

SDG #: 128711

Laboratory: Severn Trent Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/12/05

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A ~~SW~~	Sampling dates: 6/22/05
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	A	
XII.	Compound quantitation and reported CRQLs	SW	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ~~Soil~~ Sediment

1	MW316-SCA-050622	11	PE1868	21		31	
2	MW316-SCA-050622MS	12		22		32	
3	MW316-SCA-050622MSD	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: BJ
2nd Reviewer: KC

Method: Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns ≤ 15%.0 for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%.0 or percent recovieries 85-115%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 13978A3a
SDG #: 12871

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: B
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE.	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	2 & 3	O	( )	( )	71 (47)	#1	J/UJ/A
		M	( )	41.8 (44-141)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet. column Finding ≤ 40	Associated Samples	Qualifications
	M	98	1	J/A det

Comments: See sample calculation verification worksheet for recalculations

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (10 std)	Recalculated CF (10 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	7/15/05	4,4' DDT (RTX CLP)	$5.06\cancel{4} \times 10^5$	$5.06\cancel{5} \times 10^5$	5.124×10^5	5.124×10^5	4.50	4.50
			(RTX CLP II)	$4.22\cancel{3} \times 10^5$	$4.22\cancel{4} \times 10^5$	4.213×10^5	4.213×10^5	10.48	10.48
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A3a
SDG #: 12871

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC_____ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ECD12434	7/15/05	4,4' DDT RTX-CLP	40	41.962	41.962	4.9	4.9
	6:20PM		RTX-CLPII	40	39.024	39.024	2.4	2.4
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	RTX-CLP	20	18.102	90.5	90.5	0
Decachlorobiphenyl	↓	↓	24.495	122	122	0
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Notes:

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Concentration

RPD = I MS - MSD I * 2/(MS + MSD)

MS = Matrix spike percent recovery; MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 2 & 3

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD		
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated	
gamma-BHC												
Heptachlor												
Aldrin												
Dieldrin												
Endrin												
4,4'-DDT 34-159	22.9	22.9	4.7	30.2	14.3	111	111	~~35.3~~ ~~35.3~~ ~~41.9~~	~~41.9~~ 41.8 ~~41.9~~ FM	100	91	≤ 47
4,4'-DDD 44-141	↓	↓	0.98	16.6	12.3	68.1	68.2	41.8	~~49.4~~ FM	48	30	≤ 41
4,4'-DDE 47-140	↓	↓	2.3	32.7	37.8	133	133	131	131 ~~155~~ FM	1.5	14	≤ 40

Comments: Refer ot Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 6 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration

RPD = I LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: PE 1868

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	-	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Gamma-BHC											
Heptachlor											
Aldrin											
Dieldrin											
Endrin											
4,4'-DDT	20	20	0	17.5	14.8	87.4	87.4	74	74	17	17

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A3a
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Example:

Sample I.D. #1 4,4-DDE

Conc. = $\frac{(1163303 \times 10 \times 1)}{(6.459 \times 10^5 \quad 10.6164 \quad 0.7309)}$

=

2.32 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note:

C:\WPDOCS\WRK\PEST\RECALC.3S

Middle Waterway
Data Validation Reports
LDC# 13978

Polychlorinated Biphenyls

LDC Report# 13978A3b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Middle Waterway

Collection Date: June 22, 2005

LDC Report Date: September 13, 2005

Matrix: Sediment

Parameters: Polychlorinated Biphenyls

Validation Level: EPA Level IV

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): 128711

Sample Identification

MW316-SCA-050622
MW316-SDA-050622MS
MW316-SDA-050622MSD

Introduction

This data review covers 3 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
MW316-SCA-050622	1	Decachlorobiphenyl	135 (65-126)	All TCL compounds	J (all detects)	P
MB-PB0983	1	Decachlorobiphenyl	129 (65-126)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

b. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XI. Target Compound Identification

All target compound identifications were within validation criteria.

XII. Compound Quantitation and Reported CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

XV. Field Blanks

No field blanks were identified in this SDG.

Middle Waterway
Polychlorinated Biphenyls - Data Qualification Summary - SDG 128711

No Sample Data Qualified in this SDG

Middle Waterway
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 128711

No Sample Data Qualified in this SDG

LDC #: 13978A3b

SDG #: 128711

Laboratory: Severn Trent Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/12/05

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/22/05
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	A	
XII.	Compound quantitation and reported CRQLs	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: sediments

1	MW316-SCA-050622	11	MB - PB0983	21		31	
2	MW316-SCA-050622MS	12		22		32	
3	MW316-SCA-050622MSD	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 13978A3b
SDG #: 1287811

VALIDATION FINDINGS CHECKLIST

Reviewer: B
2nd Reviewer: R

Method: Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?			✓	
Were endrin and 4,4'-DDT breakdowns ≤ 15%.0 for individual breakdown in the Evaluation mix standards?			✓	
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%.0 or percent recovieries 85-115%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 13978A36
SDG #: 128781

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 13978A36
SDG #: 12871

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: ✓ GC ___ HPLC

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	1	column 1	PCB	135 (65-126)	J/P det
				( )	
				( )	
	MB-PB0983	↓	↓	129 (↓)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decafluorobiphenyl (DCB)	U	Tripentyltin
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate

LDC #: 13978A36
SDG #: 1287811

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC_____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (500 std)	Recalculated CF (500 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	~~7/19/05~~ 7/15/05 050714	7/15/05	Aroclor 1260 - 1 (signal 1)	6.078×10^4	6.078×10^4	6.235×10^4	6.235×10^4	2.94	2.94
			(signal 2)	6.436×10^4	6.43×10^4	6.366×10^4	6.366×10^4	9.65	9.65
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICLC ISB

LDC #: 13978A36
SDG #: 1287811

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	PCB6196	7/17/05	Aroclor 1260-1	100	97.516	97.516	2.5	2.5
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 12978A3b
SDG #: 12871

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	not specified	20	18.089	90.4	90.4	0
Decachlorobiphenyl	↓	↓	26.975	135	135	0
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Notes:

LDC #: 13978A3b
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: JS
2nd Reviewer: K

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration

RPD = I MS - MSD I * 2/(MS + MSD)

MS = Matrix spike percent recovery
MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 2 & 3

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC											
Heptachlor											
Aldrin											
Dieldrin											
Endrin											
4,4'-DDT											
Aroclor 1260	0.102	0.102	0	0.105	0.101	103	103	99	99	4	4

Comments: Refer ot Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

C:\WPDOCS\WRK\PEST\MSDCLC.3S

LDC #: 13978A3b
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Concentration

RPD = I LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboratory control sample percent recovery; LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: PB0983-LCS

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	-	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
Gamma-BHC											
Heptachlor											
Aldrin											
Dieldrin											
Endrin											
4,4'-DDT											
Aroclor 1260	0.1	0.1	0	0.099	0.101	99	99	101	101	2	2

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A3b
SDG #: 12871

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Example:

Sample I.D. _____ _____:

Conc. = (_____)
(_____)

= all ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Note: _____

C:\WPDOCS\WRK\PEST\RECALC.3S

Middle Waterway
Data Validation Reports
LDC# 13978

Metals

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Middle Waterway

Collection Date: June 22 through June 23, 2005

LDC Report Date: September 12, 2005

Matrix: Sediment

Parameters: Metals

Validation Level: EPA Level IV

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): 128711

Sample Identification

MW303-SDA-050622
MW305-SDA-050622
MW305-SSA-050622
MW307-SDA-050622
MW310-SDA-050623
MW312-SDA-050622
MW316-SCA-050622
MW320-SDA-050622
MW322-SDA-050622
MW323-SDA-050622
MW324-SDA-050622
MW324-SDA-050622MS
MW324-SDA-050622DUP

Introduction

This data review covers 13 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B and 7000 for Metals. The metals analyzed were Antimony, Arsenic, Cadmium, Copper, Lead, Mercury, Nickel, Silver, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Arsenic	1.06 mg/Kg	All samples in SDG 128711
ICB/CCB	Antimony Arsenic	4.4 ug/L 13.5 ug/L	All samples in SDG 128711

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW303-SDA-050622	Arsenic	1.44 mg/Kg	1.44U mg/Kg
MW305-SDA-050622	Arsenic	3.56 mg/Kg	3.56U mg/Kg
MW305-SSA-050622	Arsenic	4.01 mg/Kg	4.01U mg/Kg
MW307-SDA-050622	Arsenic	2.15 mg/Kg	2.15U mg/Kg
MW312-SDA-050622	Arsenic	2.4 mg/Kg	2.4U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW320-SDA-050622	Arsenic	2.42 mg/Kg	2.42U mg/Kg
MW322-SDA-050622	Arsenic	4.57 mg/Kg	4.57U mg/Kg
MW323-SDA-050622	Arsenic	1.63 mg/Kg	1.63U mg/Kg
MW324-SDA-050622	Arsenic	2.98 mg/Kg	2.98U mg/Kg

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Standard reference material (SRM) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
MW324-SDA-050622L	Copper	20.8 (≤10)	All samples in SDG 128711	J (all detects)	A

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Middle Waterway
Metals - Data Qualification Summary - SDG 128711

SDG	Sample	Analyte	Flag	A or P	Reason
128711	MW303-SDA-050622 MW305-SDA-050622 MW305-SSA-050622 MW307-SDA-050622 MW310-SDA-050623 MW312-SDA-050622 MW316-SCA-050622 MW320-SDA-050622 MW322-SDA-050622 MW323-SDA-050622 MW324-SDA-050622	Copper	J (all detects)	A	ICP serial dilution (%D)

Middle Waterway
Metals - Laboratory Blank Data Qualification Summary - SDG 128711

SDG	Sample	Analyte	Modified Final Concentration	A or P
128711	MW303-SDA-050622	Arsenic	1.44U mg/Kg	A
128711	MW305-SDA-050622	Arsenic	3.56U mg/Kg	A
128711	MW305-SSA-050622	Arsenic	4.01U mg/Kg	A
128711	MW307-SDA-050622	Arsenic	2.15U mg/Kg	A
128711	MW312-SDA-050622	Arsenic	2.4U mg/Kg	A
128711	MW320-SDA-050622	Arsenic	2.42U mg/Kg	A
128711	MW322-SDA-050622	Arsenic	4.57U mg/Kg	A
128711	MW323-SDA-050622	Arsenic	1.63U mg/Kg	A
128711	MW324-SDA-050622	Arsenic	2.98U mg/Kg	A

LDC #: 13978A4

SDG #: 128711

Laboratory: Severn Trent Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9-9-05

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-22-05 through 6-23-05
II.	Calibration	A	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	MS
VI.	Duplicate Sample Analysis	A	DUP
VII.	Laboratory Control Samples (LCS)	A	SRM
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	" "
X.	ICP Serial Dilution	SW	
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: all sediment

1	MW303-SDA-050622	11	MW324-SDA-050622	21		31	
2	MW305-SDA-050622	12	MW324-SDA-050622MS	22		32	
3	MW305-SSA-050622	13	MW324-SDA-050622~~MSD~~ DUP	23		33	
4	MW307-SDA-050622	14	PBS	24		34	
5	MW310-SDA-050623	15		25		35	
6	MW312-SDA-050622	16		26		36	
7	MW316-SCA-050622	17		27		37	
8	MW320-SDA-050622	18		28		38	
9	MW322-SDA-050622	19		29		39	
10	MW323-SDA-050622	20		30		40	

Notes:

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: WM

Method: Metals (EPA SW 826 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Was a midrange cyanide standard distilled?			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
IV. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			
VI. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients ≥ 0.995?			✓	
Do all applicable analysies have duplicate injections?			✓	

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: MH

Validation Area	Yes	No	NA	Findings/Comments
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%?			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?	✓			
Were all percent differences (%Ds) ≤ 10%?		✓		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
VIII. Internal Standards (EPA SW 846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XIII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: MM

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1 → 11	Sed	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
QC 12, 13	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		~~Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___~~
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
ICP Trace	Sed	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,

Comments: Mercury by CVAA if performed

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Prep Blank/ICB/CCB Findings

Page: 1 of 1
Reviewer: MG
2nd Reviewer: MY

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)
Blank concentration units, unless otherwise noted: mg/L Associated Samples: all

	Blank Identification										
Analyte	ICB	CCB1	CCB2	CCB3	PB ( )	ICB	CCB1	CCB2	CCB3	PB ( )	Analyte
Al											Al
Sb	0.0044										Sb
As	0.0122	0.0135									As
Ba											Ba
Be											Be
Cd											Cd
Ca											Ca
Cr											Cr
Co											Co
Cu											Cu
Fe											Fe
Pb											Pb
Mg											Mg
Mn											Mn
Hg											Hg
Ni											Ni
K											K
Se											Se
Ag											Ag
Na											Na
Tl											Tl
V											V
Zn											Zn
B											B
Mo											Mo
Sr											Sr

The highest concentration found in the Prep Blank and ICB/CCB for each analyte is circled on this worksheet and transferred to the PB/ICB/CCB Qualified Samples worksheet.

BLNKICB.4SW

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000) Soil preparation factor applied: 100 x
Sample Concentration units, unless otherwise noted: mg/kg Associated Samples: all

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Blank Action Limit	1	2	3	4	6	8	9	10	11		
Al															Al
Sb			4.4	2.20											Sb
As	1.06		13.5	6.75	1.44	3.56	4.01	2.15	2.4	2.42	4.57	1.63	2.98		As
Ba															Ba
Be															Be
Cd															Cd
Ca															Ca
Cr															Cr
Co															Co
Cu															Cu
Fe															Fe
Pb															Pb
Mg															Mg
Mn															Mn
Hg															Hg
Ni															Ni
K															K
Se															Se
Ag															Ag
Na															Na
Tl															Tl
V															V
Zn															Zn
B															B
Mo															Mo
Sr															Sr

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

BLNKSMP.4S2

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: MG
2nd Reviewer: MY

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A If analyte concentrations were > 50X the IDL, was an ICP serial dilution analyzed?
Y N N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Diluted Sample ID	Matrix	Analyte	%D	Associated Samples	Qualifications
1	11	sed.	Cu	20.8 (≤10)	all	J dets / A

Comments:

SDIL.4S2

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
1131 ICV	ICP (Initial calibration)	Cd	499.9	500	99.98	99.98	Y
	GFAA (Initial calibration)						
0727 ICV	CVAA (Initial calibration)	Hg	4.14	4.00	104	104	
1815 CCV	ICP (Continuing calibration)	Ag	994.4	1000	99.44	99.44	
	GFAA (Continuing calibration)						
1220 CCV	CVAA (Continuing calibration)	Hg	5.08	5.00	102	102	
	ICP/MS (Initial calibration)						
	ICP/MS (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: MG
2nd Reviewer: MG

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
1152 ICSAB	ICP Interference check	Zn	2.721 (mg/L)	3 (mg/L)	90.70	90.70	Y
1809 SRM	Laboratory control sample	As	144.55 (mg/kg)	154 (mg/kg)	94	not reported	↓
1801 12	Matrix spike	Ni	(SSR-SR) 109.44 (mg/kg)	115 (mg/kg)	95	96	↓
1750/1754 13	Duplicate	Pb	24.77 (mg/kg)	22.67 (mg/kg)	8.9	8.3	↓
1750/1748 11	ICP serial dilution	Cu	0.3157 (mg/L)	0.2500 (mg/L)	20.8	not reported	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A4
SDG #: 128711

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: MM

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for #11, As were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)(\%S)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor
%S = Decimal percent solids

Recalculation:

$$\frac{(0.0253\ mg/L)(0.050\ L)(1)}{(0.0005289\ kg)(0.8021\ solid)} = 2.982\ mg/kg$$

Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	As	1.44	1.45	Y
	Cu	14.7	14.7	
	Pb	4.25	4.25	
	Ni	11.7	11.7	
	Zn	24.2	24.2	
	Hg	0.0514	0.0514	
11	As	2.98	2.98	
	Cu	37.2	37.2	
	Pb	24.8	24.8	
	Ni	14.8	14.8	
	Zn	48.2	48.2	
	Hg	0.141	0.152	

RECALC.4S2

Middle Waterway
Data Validation Reports
LDC# 13978

Total Organic Carbon

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Middle Waterway

Collection Date: June 22 through June 23, 2005

LDC Report Date: September 12, 2005

Matrix: Sediment

Parameters: Total Organic Carbon

Validation Level: EPA Level IV

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): 128711/G5G140229

Sample Identification

MW303-SDA-050622
MW305-SDA-050622
MW305-SSA-050622
MW307-SDA-050622
MW310-SDA-050623
MW312-SDA-050622
MW316-SCA-050622
MW320-SDA-050622
MW322-SDA-050622
MW323-SDA-050622
MW324-SDA-050622
MW303-SDA-050622MS
MW303-SDA-050622MSD

Introduction

This data review covers 13 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9060 Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total organic carbon contaminants were found in the method blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

All sample result verifications were acceptable.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Middle Waterway
Total Organic Carbon - Data Qualification Summary - SDG 128711/G5G140229

No Sample Data Qualified in this SDG

Middle Waterway
Total Organic Carbon - Laboratory Blank Data Qualification Summary - SDG 128711/G5G140229

No Sample Data Qualified in this SDG

LDC #: 13978A6

SDG #: 128711/G5G140229

Laboratory: Severn Trent Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9-9-05

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: Total organic carbon (EPA SW846 Method 9060)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-22-05 through 6-23-05
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/MSD
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: all sediment

1	MW303-SDA-050622	11	MW324-SDA-050622	21		31	
2	MW305-SDA-050622	12	MW303-SDA-050622MS	22		32	
3	MW305-SSA-050622	13	MW303-SDA-050622MSD	23		33	
4	MW307-SDA-050622	14	PBS	24		34	
5	MW310-SDA-050623	15		25		35	
6	MW312-SDA-050622	16		26		36	
7	MW316-SCA-050622	17		27		37	
8	MW320-SDA-050622	18		28		38	
9	MW322-SDA-050622	19		29		39	
10	MW323-SDA-050622	20		30		40	

Notes:

LDC #: 13978A6
SDG #: 128711/G5G140229

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MG
2nd Reviewer: MN

Method: Inorganics (EPA Method 9060)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 13978A6
SDG #: 128711/G5G140229

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: MM

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 13978A6
SDG #: 128711/G5G140229

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer: MM

METHOD: Inorganics, Method 9060

The correlation coefficient (r) for the calibration of TOC was recalculated. Calibration date: 7-27-05

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte		mg C (units)	Area (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	TOC	Blank	0.0 (mg)	68	r^2=0.9996	r^2=0.9949	Y
Calibration verification		Standard 1	0.1 ( )	519			
		Standard 2	0.5 ( )	1795			
		Standard 3	5.0 ( )	13406			
		Standard 4	10.0 ( )	25793			
		Standard 5	–	–			
		Standard 6	–	–			
		Standard 7	–	–			
Calibration verification	TOC	ICV	3.054 (mgC)	3.0 (mgC)	101.8	101.82	
Calibration verification	TOC	ICV	3.013 (mgC)	3.0 (mgC)	100.4	100.44	
Calibration verification	TOC	CCV	4.938 (mgC)	5.0 (mgC)	98.8	98.77	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A6
SDG #: 128711/G5G140229

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: MG
2nd Reviewer: MH

METHOD: Inorganics, Method 9060

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	TOC	12000 (mg/kg)	12700 (mg/kg)	94	94	Y
12	Matrix spike sample	TOC	(SSR-SR) 45000 (mg/kg)	46000 ~~12~~ (mg/kg)	98	98	↓
12/13	Duplicate sample	TOC	53000 (mg/kg)	52600 (mg/kg)	0.76	0.75	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 13978A6 **VALIDATION FINDINGS WORKSHEET** Page: 1 of 1
SDG #: 128711/G5G140229 Sample Calculation Verification Reviewer: MG
2nd reviewer: MM

METHOD: Inorganics, Method 9060

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for #1, TOC reported with a positive detect were recalculated and verified using the following equation:

Concentration = $y = mx + b$

where y = Area
$m = 2561.45$
$b = 324.5$
x = mg C

Recalculation:

Ave Area (4432) = 2561.45(x) + 324.5

1.6036 mg C = x

then

$$\frac{1.6036 \text{ mg}}{(0.0002057 \text{ kg})} = 7797.8 \text{ mg/kg}$$

Ave sample size

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	1	TOC	8000	7800	Y
2	11	TOC	10500	10300	↓

Note:

APPENDIX F

REGULATED NAVIGATION AREA (RNA) REQUEST MEMO

MIDDLE WATERWAY

Protecting the Environment, Promoting the Economy

MEMORANDUM

To: Rear Admiral Jeffrey M. Garrett, 13th Coast Guard District Commander

From: David Templeton, Middle Waterway Project Coordinator, Anchor Environmental, L.L.C.

cc: Bruce McDonald, Anchor Environmental, L.L.C.

Date: March 16, 2005

Re: Request for Establishment of Regulated Navigation Areas

On behalf of the Middle Waterway Action Committee (MWAC), this memo is to request the establishment of regulated navigation areas (RNAs) in Middle Waterway, Commencement Bay, Tacoma, Washington. This request is pursuant to the Code for Federal Registration (CFR) Title 33, Part 165. The proposed RNAs are to be used to preserve the integrity of clean sediment caps placed over certain areas of Middle Waterway—Areas A and B as part of a Superfund cleanup action. This memo proposes to prohibit activities that would remove the sediment cap material placed to contain contaminated sediments, unless the intent is to completely remove the underlying contaminated sediment. As described in detail later in this memo, the thick-layer cap was designed to be compatible with activities common to a working waterfront. The rest of this memo provides background for this request, the purpose of this request, and information required for proposing RNAs.

Background and Purpose

The Middle Waterway—Areas A and B is part of the Commencement Bay Nearshore/Tideflats Superfund Site and is located between the Thea Foss Waterway and the St. Paul Waterway in Commencement Bay, Washington. The Middle Waterway—Areas A and B Superfund cleanup encompassed the northern two-thirds of the waterway (Figure 1). The site includes property owned by Foss Maritime Company (Foss Maritime), Simpson Timber Company (Simpson), and the Washington State Department of Natural Resources (DNR), as well as property leased by

Marine Industries Northwest, Inc. (MINI). MWAC is a group of potentially responsible parties, including Foss Maritime, MINI, and Pioneer Industries, that is leading the cleanup effort in Areas A and B of the waterway in conjunction with the United States Environmental Protection Agency (EPA).

Remediation activities identified for Areas A and B included dredging, placement of enhanced natural recovery material (i.e., 4-6 inches of clean sand), placement of a thick-layer cap, and natural recovery. A thick-layer cap consists of approximately three feet of sand and gravel and light-loose riprap and was placed in various locations within the waterway to contain contaminated sediments. These caps were designed to withstand activities common to a working waterfront. The thick-layer cap areas cover approximately two acres of sediment in Areas A and B of the waterway (Figure 1).

To comply with Section IX of the 2003 Consent Decree and as part of the long-term Operations, Monitoring, and Maintenance Plan (OMMP) for Middle Waterway Areas A and B (Anchor Environmental 2005), MWAC must maintain the integrity of these capped areas in perpetuity or until the underlying contaminated sediment is completely removed. Therefore, MWAC is requesting that RNAs prohibiting activities that will remove thick-layer cap material, unless the intent of the activity is to completely remove the underlying contaminated sediment, be established within each of the thick layer cap areas.

Required Information

Specific details, as requested in CFR Title 33 Part 165.5, related to this request are provided below.

(1) **Name of the person submitting the request:** David Templeton, Middle Waterway Project Coordinator, Anchor Environmental, L.L.C. on behalf of MWAC.

(2) **The location and boundaries of the RNAs:** Location information (northing and easting; coordinates in Washington State Plane South Zone [NAD 83] latitude and longitude) is provided below for the corners of each zone and are shown on Figure 1 (attached).

Cap Area #	Owner	ID	NORTH-Y	EAST-X	LAT-DMS-NAD 83	LONG-DMS-NAD83
1	Simpson	1	709840.875	1160774.956	N 47 15 49.337401538	W 122 25 55.056380380
1	Simpson	2	709253.679	1161009.18	N 47 15 43.600168858	W 122 25 51.452988398
1	Simpson	3	709223.696	1160974.285	N 47 15 43.295900007	W 122 25 51.948121927
1	Simpson	4	709823.823	1160734.968	N 47 15 49.159481958	W 122 25 55.629935854
2	Foss Maritime	5	709688.32	1160532.471	N 47 15 47.773520692	W 122 25 58.516910615
2	Foss Maritime	6	709418.584	1160637.859	N 47 15 45.137532154	W 122 25 56.893557419
2	Foss Maritime	7	709417.712	1160570.939	N 47 15 45.112749606	W 122 25 57.863206866
2	Foss Maritime	8	709655.448	1160453.889	N 47 15 47.430163441	W 122 25 59.644237279
3	DNR	9	709253.516	1160799.084	N 47 15 43.547790609	W 122 25 54.498103351
3	DNR	10	709123.994	1160874.852	N 47 15 42.288113851	W 122 25 53.353927393
3	DNR	11	709224.464	1160730.885	N 47 15 43.244651738	W 122 25 55.476276290
3	DNR	12	709101.104	1160784.653	N 47 15 42.040457355	W 122 25 54.653153189
4	Foss Maritime	13	709126.954	1160752.405	N 47 15 42.287727164	W 122 25 55.129737319
4	Foss Maritime	14	708808.143	1160833.95	N 47 15 39.161739667	W 122 25 53.834632165
4	Foss Maritime	15	708796.405	1160790.685	N 47 15 39.035461547	W 122 25 54.457541589
4	Foss Maritime	16	709072.045	1160718.695	N 47 15 41.737790748	W 122 25 55.598834593
4	Foss Maritime	17	709026.153	1160609.724	N 47 15 41.258635564	W 122 25 57.161966096
4	Foss Maritime	18	709056.929	1160596.677	N 47 15 41.559147141	W 122 25 57.362001106
5	Foss Maritime	19	708163.966	1161136.388	N 47 15 32.878736819	W 122 25 49.222595603
5	Foss Maritime	20	707679.658	1161340.816	N 47 15 28.149446408	W 122 25 46.087999816
5	Foss Maritime	21	707671.729	1161322.509	N 47 15 28.066789560	W 122 25 46.350512285
5	Foss Maritime	22	708087.93	1161139.19	N 47 15 32.129169647	W 122 25 49.155010444

(3) **Date, Time, and Duration that the RNAs should be established:** The RNAs should be established as soon as possible and last in perpetuity, or until the underlying contaminated sediment is completely removed.

(4) **Description of the activities planned for the RNAs:** As described above, the proposed RNAs are areas where a thick-layer cap consisting of sand, gravel, and riprap was placed during the Middle Waterway Areas A and B Superfund cleanup project. Planned

activities in the thick-layer cap areas are consistent with existing waterfront uses within Areas A and B of the waterway. Cap area #1 is currently used by Simpson as a log haul-out area. Routine activities in this area include tug-boat and log-rafting activities.

Foss Maritime owns a floating dock, consisting of steel piles and floating dock sections, used for tug-boat moorage over cap area #2. MINI leases cap area #4 from Foss Maritime and operates a marine railway. Activities common in this area include removal and launching of boats for repair and other boat repair and maintenance activities. MINI also operates a moveable dry dock over cap area #3. This land is owned by DNR and is leased to MINI under an Aquatic Use Authorization Permit. Cap area #5 is located in a more passive area of the waterway and is not currently used for industrial waterway activities.

The thick-layer cap areas were designed to be compatible with the activities described above that are associated with a working waterfront. The material used for the cap was chosen to be able to contain underlying sediments without altering the main activities of the working waterway.

(5) **Nature of the restrictions desired:** MWAC requests that the restrictions prohibit activities such as anchoring, dragging, trawling, or other activities that involve disrupting the integrity of the cap. The caps are able to withstand site-specific activities such as pile driving, log rafting, barge traffic, and marine pier development and operation without compromising their function. No other navigation restrictions are desired.

(6) **Reason why the restrictions are desired:** The RNAs are desired to comply with the long-term operations, monitoring, and maintenance requirements of thick-layer cap areas completed under EPA's Superfund cleanup process. MWAC is required by EPA to maintain the structural integrity of the thick-layer cap areas in perpetuity or until the underlying contaminated sediments are completely removed.

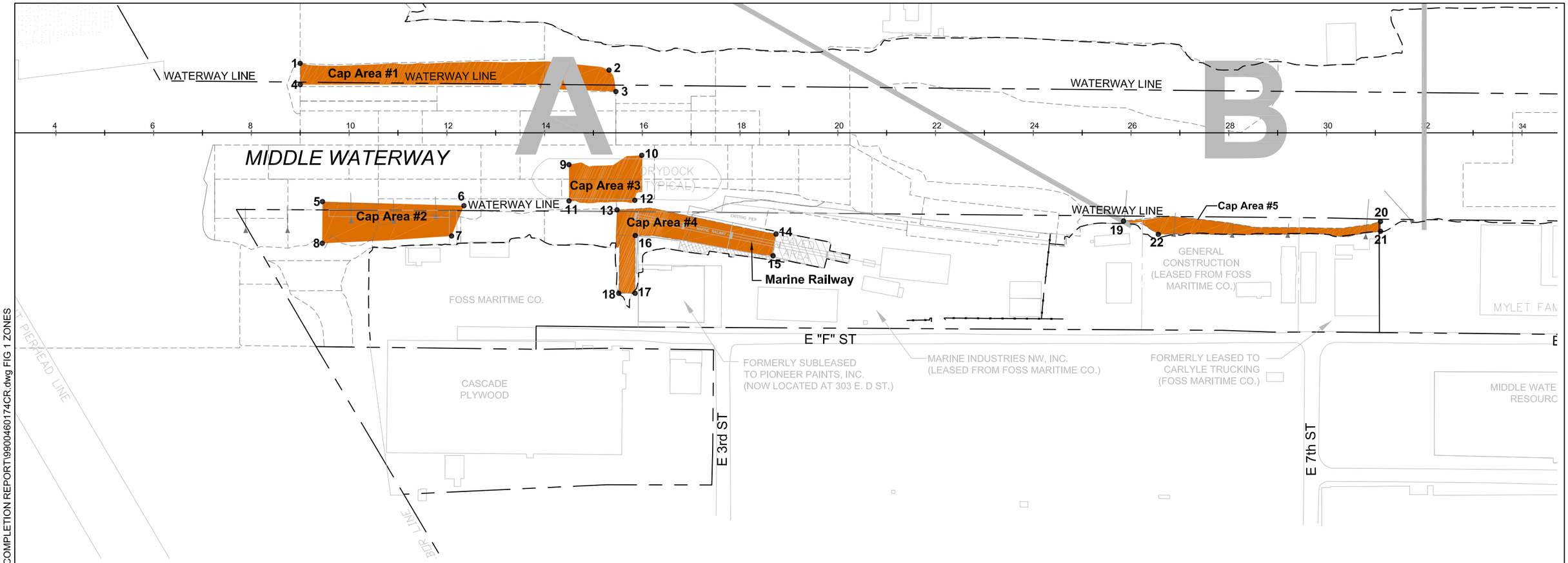
Please provide documentation that this memo has been received and a status update of the rule-making process to establish the RNAs. If you need additional information please feel free to contact David Templeton at (206) 287-9130 or via email at dtempleton@anchorenv.com.

References

Anchor Environmental, L.L.C. (Anchor). 2005. Operations, Monitoring, and Maintenance Plan, Areas A and B. Middle Waterway Problem Area Commencement Bay Nearshore/Tideflats Superfund Site. Prepared by Anchor Environmental for Middle Waterway Action Committee. February 2005.

EPA. 2002. Final Explanation of Significant Differences. Middle Waterway Problem Area. Commencement Bay Nearshore/Tideflats. EPA Region 10.

EPA. 1989. Commencement Bay Nearshore/Tideflats Record of Decision. EPA Region 10. September 1989.



Coordinate Table

Cap Area	Owner	ID	NORTHING	EASTING	LAT-DMS-NAD 83	LONG-DMS-NAD83
1	Simpson	1	709840.8751	1160774.956	N 47 15 49.337401538	W 122 25 55.056380380
1	Simpson	2	709253.679	1161009.18	N 47 15 43.600168858	W 122 25 51.452988398
1	Simpson	3	709223.6963	1160974.285	N 47 15 43.295900007	W 122 25 51.948121927
1	Simpson	4	709823.8229	1160734.968	N 47 15 49.159481958	W 122 25 55.629935854
2	Foss Maritime	5	709688.3201	1160532.471	N 47 15 47.773520692	W 122 25 58.516910615
2	Foss Maritime	6	709418.5839	1160637.859	N 47 15 45.137532154	W 122 25 56.893557419
2	Foss Maritime	7	709417.7122	1160570.939	N 47 15 45.112749606	W 122 25 57.863206866
2	Foss Maritime	8	709655.4476	1160453.889	N 47 15 47.430163441	W 122 25 59.644237279
3	WA DNR	9	709253.516	1160799.084	N 47 15 43.547790609	W 122 25 54.498103351
3	WA DNR	10	709123.9939	1160874.852	N 47 15 42.288113851	W 122 25 53.353927393
3	WA DNR	11	709224.4641	1160730.885	N 47 15 43.244651738	W 122 25 55.476276290
3	WA DNR	12	709101.1037	1160784.653	N 47 15 42.040457355	W 122 25 54.653153189
4	Foss Maritime	13	709126.9541	1160752.405	N 47 15 42.287727164	W 122 25 55.129737319
4	Foss Maritime	14	708808.1428	1160833.95	N 47 15 39.161739667	W 122 25 53.834632165
4	Foss Maritime	15	708796.4045	1160790.685	N 47 15 39.035461547	W 122 25 54.457541589
4	Foss Maritime	16	709072.0448	1160718.695	N 47 15 41.737790748	W 122 25 55.598834593
4	Foss Maritime	17	709026.1533	1160609.724	N 47 15 41.258635564	W 122 25 57.161966096
4	Foss Maritime	18	709056.9294	1160596.677	N 47 15 41.559147141	W 122 25 57.362001106
5	Foss Maritime	19	708163.9657	1161136.388	N 47 15 32.878736819	W 122 25 49.222595603
5	Foss Maritime	20	707679.6578	1161340.816	N 47 15 28.149446408	W 122 25 46.087999816
5	Foss Maritime	21	707671.7286	1161322.509	N 47 15 28.066789560	W 122 25 46.350512285
5	Foss Maritime	22	708087.9298	1161139.19	N 47 15 32.129169647	W 122 25 49.155010444

Thick-Layer Cap Areas

1• Coordinate Location and ID
See Coordinate Table

WATERWAY AREAS

A Working Waterway Area

B Central Tideflats

0 200
Scale in Feet

Notes:

1. Property line information has been compiled from multiple data sources, which have not been verified. These data are to be used for reference purposes only.

2. Horizontal Datum: WA State Plane South Zone (NAD83) Vertical Datum: USACE Mean Lower Low Water

3. Bathymetry is from the Post-Cap Survey provided by Bluewater Engineering.

Feb 17, 2005 3:44pm cdavidson K:\Jobs\990046-Middle_Waterway\99004601\2004 COMPLETION REPORT\99004601174CR.dwg FIG 1 ZONES

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Proposed Regulated Navigation Areas
Middle Waterway Problem Area

APPENDIX E

LABORATORY ANALYSIS RESULTS FOR THE ENHANCED NATURAL RECOVERY MATERIAL TESTING (ON CD)

SEVERN TRENT STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

TRANSMITTAL MEMORANDUM

DATE: September 29, 2004

TO: Michael Lloyd
Lloyd & Assoc. Inc.
38210 SE 92nd
Snoqualmie, WA 98065

PROJECT: Middle Waterway

REPORT NUMBER: 123627

TOTAL NUMBER OF PAGES: 5/9

Enclosed are the test results for one sample received at STL Seattle on September 16, 2004.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Darla Powell
Project Manager

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

STL Seattle

Sample Identification:

Lab. No.	Client ID	Date/Time Sampled	Matrix
123627-1	040916/GNW/MW	09-16-04 11:20	solid

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

SEVERN TRENT STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

ANALYTICAL NARRATIVE

Client: Lloyd & Assoc. Inc.

Date: September 30, 2004

Project: Middle Waterway

Lab No.: 123627

Delivered By: Submitter

Condition of samples upon receipt: Samples were received in good condition. Chain of custody was in order.

Sample Identification:

Lab. No.	Client ID	Date Sampled	Matrix
123627-1	040916/GNW/MW	09-16-04	solid

SAMPLE EXTRACTION AND ANALYSIS

VOLATILE ORGANICS

Sample 123627-1 was analyzed for volatile organics in accordance with EPA Method 8260B. The sample was prepared/extracted and analyzed on 9-16-04, which was within the required holding time.

Low-level Toluene and o-Xylene contamination was present in the method blank associated with sample batch VOA908. The reported value for Bromomethane is above the RL. The reported values for Toluene and o-Xylene are above the MDL, but below the RL. The data has been flagged "B1" or "B2" as appropriate.

The relative percent difference values for Bromomethane and 4-Isopropyltoluene in the duplicate analysis of sample 123627-1 exceeded the quality control limits due to analyte levels near the practical quantitation limit.

All other quality control was within the acceptance limits.

No other difficulties were encountered during the volatile organic analyses.

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

STL Seattle

ANALYTICAL NARRATIVE

Client: Lloyd & Assoc. Inc. Date: September 30, 2004

Project: Middle Waterway Lab No.: 123627

SEMIVOLATILE ORGANICS

Sample 123627-1 was analyzed for semivolatile organics in accordance with EPA Method 8270C. The sample was extracted on 9-17-04 and analyzed on 9-21-04, which was within the required holding time.

Low-level Di-n-butylphthalate, Butylbenzylphthalate and bis(2-Ethylhexyl)phthalate contamination was present in the method blank associated with sample batch SS1197. The reported values are above the MDL, but below the RL. The data has been flagged "B1" or "B2" as appropriate.

The percent recovery of 2-Fluorobiphenyl (surrogate compound) in the blank spike associated with batch SS1197 exceeded the quality control limits. All spiked compound were within limits and the remaining surrogates were within limits.

The percent recovery of 2,4,6-Tribromophenol (surrogate compound) in the blank spike duplicate associated with batch SS1197 exceeded the quality control limits. All spiked compound were within limits and the remaining surrogates were within limits.

All other quality control was within the acceptance limits.

No other difficulties were encountered during the semivolatile organic analyses.

ORGANOCHLORINE PESTICIDES

Sample 123627-1 were analyzed for organochlorine pesticides in accordance with EPA Method 8081A. The sample was extracted and analyzed on 9-17-04, which was within the required holding time.

All reported values underwent second column confirmation. The data are flagged "C1" or "C2" as appropriate.

The recovery value for Aldrin, gamma-BHC (Lindane) and Dieldrin in the matrix spike / matrix spike duplicate associated with sample 123618-3 (Batch QC sample) was outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery (PE1750).

All quality control was within the acceptance limits.

No difficulties were encountered during the chlorinated pesticides analyses.

PCBs

Sample 1236274-1 was analyzed for PCBs in accordance with EPA Method 8082. The sample was extracted and analyzed on 9-20-04, which was within the required holding time.

All reported values underwent second column confirmation. The data are flagged "C1" or "C2" as appropriate.

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

STL Seattle

ANALYTICAL NARRATIVE

Client: Lloyd & Assoc. Inc. Date: September 30, 2004

Project: Middle Waterway Lab No.: 123627

PCBs continued
All quality control was within the acceptance limits.

No difficulties were encountered during the PCB analyses.

TOTAL METALS
Sample 123627-1 was analyzed for total metals in accordance with EPA Methods 6010/7470. The sample was digested on 9-20-04 and 9-21-04 and analyzed on 9-20-04 and 9-21-04, which was within the required holding time.

Low-level Cadmium, Copper and Silver contamination was present in the method blank associated with sample batch SP497. The reported value is above the MDL, but below the RL. The data has been flagged "B1" or "B2" as appropriate.

The relative percent difference value for Arsenic, Cadmium and Lead in the duplicate analysis of sample 123627-1 exceeded the quality control limits due to analyte levels near the practical quantitation limit.

All other quality control was within the acceptance limits.

No other difficulties were encountered during the total metals analyses.

PERCENT MOISTURE
Sample 123627-1 was analyzed for total percent moisture in accordance with EPA Method 160.3. The sample was prepared and analyzed on 9-22-04, which was within the required holding time.

All quality control was within the acceptance limits.

No difficulties were encountered during the percent moisture analyses.

TOTAL ORGANIC CARBON
Sample 123627-1 was subcontracted to STL Burlington for TOC analysis. The final report is located at the back of this data package.

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/2004
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	85.97
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Dibromofluoromethane	94.5		75	125
Fluorobenzene	83.1		75	125
Toluene-D8	86.9		75	125
Ethylbenzene-d10	94.7		75	125
Bromofluorobenzene	89.3		75	125
Trifluorotoluene	91.4		75	125

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Dichlorodifluoromethane	ND	1.11	0.0453	
Chloromethane	ND	1.11	0.388	
Vinyl chloride	ND	1.11	0.206	
Bromomethane	0.766	1.11	0.389	J B1
Chloroethane	ND	1.11	0.635	
Trichlorofluoromethane	ND	1.11	0.388	
1,1-Dichloroethene	ND	1.11	0.432	
Methylene chloride	3.64	1.11	0.182	
trans-1,2-Dichloroethene	ND	1.11	0.277	
1,1-Dichloroethane	ND	1.11	0.056	
2,2-Dichloropropane	ND	1.11	0.0747	
cis-1,2-Dichloroethene	ND	1.11	0.0997	
Bromochloromethane	ND	1.11	0.0507	
Chloroform	ND	1.11	0.0589	
1,1,1-Trichloroethane	ND	1.11	0.0636	
Carbon Tetrachloride	ND	1.11	0.0933	
1,1-Dichloropropene	ND	1.11	0.885	
Benzene	ND	1.11	0.0701	
1,2-Dichloroethane	ND	1.11	0.0859	
Trichloroethene	ND	1.11	0.0356	
1,2-Dichloropropane	ND	1.11	0.0419	
Dibromomethane	ND	1.11	0.0718	
Bromodichloromethane	ND	1.11	0.0685	
cis-1,3-Dichloropropene	ND	1.11	0.0404	
Toluene	0.11	1.11	0.0338	J B1
trans-1,3-Dichloropropene	ND	1.11	0.0502	

STL Seattle

Volatile Organics by USEPA Method 5035/8260B data for 123627-01 continued...

Analyte	Result (ug/kg)	RL	MDL	Flags
1,1,2-Trichloroethane	ND	1.11	0.088	
Tetrachloroethene	ND	1.11	0.112	
1,3-Dichloropropane	ND	1.11	0.0594	
Dibromochloromethane	ND	1.11	0.0715	
1,2-Dibromoethane	ND	1.11	0.0563	
Chlorobenzene	ND	1.11	0.0492	
Ethylbenzene	ND	1.11	0.0274	
1,1,1,2-Tetrachloroethane	ND	1.11	0.0433	
m,p-Xylene	ND	2.22	0.0934	
o-Xylene	ND	1.11	0.0332	
Styrene	ND	1.11	0.0266	
Bromoform	ND	1.11	0.0686	
Isopropylbenzene	ND	1.11	0.0413	
Bromobenzene	ND	1.11	0.044	
n-Propylbenzene	ND	1.11	0.052	
1,1,2,2-Tetrachloroethane	ND	1.11	0.0624	
1,2,3-Trichloropropane	ND	1.11	0.074	
2-Chlorotoluene	ND	1.11	0.048	
1,3,5-Trimethylbenzene	ND	1.11	0.0422	
4-Chlorotoluene	ND	1.11	0.0917	
t-Butylbenzene	ND	1.11	0.0267	
1,2,4-Trimethylbenzene	ND	1.11	0.0468	
sec-Butylbenzene	ND	1.11	0.0432	
1,3-Dichlorobenzene	ND	1.11	0.0382	
4-Isopropyltoluene	0.142	1.11	0.0619	J
1,4-Dichlorobenzene	ND	1.11	0.054	
n-Butylbenzene	ND	1.11	0.103	
1,2-Dichlorobenzene	ND	1.11	0.0563	
1,2-Dibromo-3-chloropropane	ND	1.11	0.132	
1,3,5-Trichlorobenzene	ND	1.11	0.0954	
1,2,4-Trichlorobenzene	ND	1.11	0.108	
1,2,3-Trichlorobenzene	ND	1.11	0.105	
Hexachlorobutadiene	ND	1.11	0.0649	
Naphthalene	ND	1.11	0.457	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
% Solids	85.97
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
2 - Fluorophenol	86.6		36	145
Phenol - d5	96.2		38	149
Nitrobenzene - d5	84.5		38	141
2 - Fluorobiphenyl	105		42	140
2,4,6 - Tribromophenol	89.3		28	143
p - Terphenyl - d14	95.1		42	151

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Phenol	ND	5.57	0.805	
1,3-Dichlorobenzene	ND	5.57	0.948	
1,4-Dichlorobenzene	ND	5.57	0.936	
Benzyl Alcohol	ND	5.57	2.22	
1,2-Dichlorobenzene	ND	5.57	0.756	
2-Methylphenol	ND	5.57	1.05	
3-&4-Methylphenol	ND	5.57	1.31	
Hexachloroethane	ND	5.57	1.88	
2,4-Dimethylphenol	ND	2.23	0.852	
Benzoic Acid	ND	66.8	17.8	
1,2,4-Trichlorobenzene	ND	5.57	0.945	
Naphthalene	ND	2.23	0.986	
2-Methylnaphthalene	ND	2.23	0.579	
Dimethylphthalate	ND	11.1	2.18	
Acenaphthylene	ND	2.23	0.656	
Acenaphthene	ND	2.23	0.571	
Dibenzofuran	ND	5.57	0.514	
Diethylphthalate	ND	11.1	4.02	
Fluorene	ND	2.23	0.719	
N-Nitrosodiphenylamine	ND	2.23	0.637	
Pentachlorophenol	ND	11.1	2.16	
Phenanthrene	ND	2.23	0.661	
Anthracene	ND	2.23	0.423	
Di-n-butylphthalate	13.9	11.1	2.03	B1
Fluoranthene	ND	2.23	1.12	
Pyrene	ND	2.23	0.378	

STL Seattle

Semivolatile Organics by USEPA Method 8270 data for 123627-01 continued...

Analyte	Result (ug/kg)	RL	MDL	
Butylbenzylphthalate	6.99	22.3	2.38	J B1
Benzo(a)anthracene	ND	2.23	1.12	
Chrysene	ND	2.23	0.796	
bis(2-Ethylhexyl)phthalate	21	22.3	2.04	J B1
Di-n-octylphthalate	ND	22.3	2.05	
Benzofluoranthenes	ND	4.45	1.01	
Benzo(a)pyrene	ND	2.23	0.705	
Indeno(1,2,3-cd)pyrene	ND	2.23	0.508	
Dibenz(a,h)anthracene	ND	2.23	0.691	
Benzo(g,h,i)perylene	ND	2.23	0.535	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/17/2004
% Solids	85.97
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	80.5		47	144
Decachlorobiphenyl	104		51	149

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Aldrin	ND	1.13	0.116	
gamma-BHC (Lindane)	ND	1.13	0.136	
4,4'-DDD	ND	2.26	0.231	
4,4'-DDE	ND	2.26	0.226	
4,4'-DDT	ND	2.26	0.266	
Dieldrin	ND	2.26	0.275	
Heptachlor	ND	1.13	0.113	
alpha-Chlordane	ND	1.13	0.122	
gamma-Chlordane	ND	1.13	0.137	
Hexachlorobenzene	ND	2.26	1.01	
Hexachlorobutadiene	ND	1.13	0.486	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/2004
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	85.97
Dilution Factor	1

PCBs by EPA Method 8082

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	82.5		60	123
Decachlorobiphenyl	78.2		65	126

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Aroclor 1016	ND	0.0108	0.00318	
Aroclor 1221	ND	0.0108	0.00318	
Aroclor 1232	ND	0.0108	0.00318	
Aroclor 1242	ND	0.0108	0.00318	
Aroclor 1248	ND	0.0108	0.00318	
Aroclor 1254	ND	0.0108	0.00175	
Aroclor 1260	ND	0.0108	0.00175	

STL Seattle

Client Name	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/04
Date Prepared:	9/20/04
Date Analyzed:	9/20/04
Dilution Factor	1
% Solids	85.97

Metals by ICP - USEPA Method 6010

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Arsenic	1.26	2.11	0.907	J
Antimony	ND	5.27	1.13	
Beryllium	0.0822	0.211	0.0464	J
Cadmium	0.115	0.527	0.0449	J B1
Chromium	9.51	1.05	0.0944	
Copper	11.7	2.11	0.241	B2
Lead	1.22	1.05	0.432	
Nickel	11	1.05	0.106	
Selenium	ND	5.27	1.02	
Silver	ND	1.05	0.0559	
Thallium	ND	5.27	1.35	
Zinc	15	2.11	0.0827	

STL Seattle

Client Name	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW
Lab ID:	123627-01
Date Received:	9/16/04
Date Prepared:	9/21/04
Date Analyzed:	9/21/04
Dilution Factor	1
% Solids	85.97

Mercury by CVAA - USEPA Method 7471

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Mercury	0.00888	0.0225	0.00596	J

STL Seattle

Client Name	Lloyd & Assoc. Inc.
Project Name	Middle Waterway
Date Received	09-16-04

General Chemistry Parameters

Client Sample ID	040916/GNW/MW
Lab ID	123627-01

Parameter	Method	Date Analyzed	Units	Result	PQL
% Moisture	EPA 160.3	9-22-04	%	14.03	0.01

STL Seattle

Lab ID:	Method Blank - VOA908
Date Received:	-
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Dibromofluoromethane	103		75	125
Fluorobenzene	85		75	125
Toluene-D8	85.2		75	125
Ethylbenzene-d10	96.5		75	125
Bromofluorobenzene	90.8		75	125
Trifluorotoluene	90.8		75	125

Sample results are on an as received basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Dichlorodifluoromethane	ND	1	0.0409	
Chloromethane	ND	1	0.35	
Vinyl chloride	ND	1	0.186	
Bromomethane	1.12	1	0.351	N
Chloroethane	ND	1	0.573	
Trichlorofluoromethane	ND	1	0.35	
1,1-Dichloroethene	ND	1	0.39	
Methylene chloride	ND	1	0.164	
trans-1,2-Dichloroethene	ND	1	0.25	
1,1-Dichloroethane	ND	1	0.0505	
2,2-Dichloropropane	ND	1	0.0674	
cis-1,2-Dichloroethene	ND	1	0.09	
Bromochloromethane	ND	1	0.0458	
Chloroform	ND	1	0.0532	
1,1,1-Trichloroethane	ND	1	0.0574	
Carbon Tetrachloride	ND	1	0.0842	
1,1-Dichloropropene	ND	1	0.799	
Benzene	ND	1	0.0633	
1,2-Dichloroethane	ND	1	0.0775	
Trichloroethene	ND	1	0.0321	
1,2-Dichloropropane	ND	1	0.0378	
Dibromomethane	ND	1	0.0648	
Bromodichloromethane	ND	1	0.0618	
cis-1,3-Dichloropropene	ND	1	0.0365	
Toluene	0.0457	1	0.0305	J N
trans-1,3-Dichloropropene	ND	1	0.0453	

STL Seattle

Volatile Organics by USEPA Method 5035/8260B data for VOA908 continued...

Analyte	Result (ug/kg)	RL	MDL	Flags
1,1,2-Trichloroethane	ND	1	0.0794	
Tetrachloroethene	ND	1	0.101	
1,3-Dichloropropane	ND	1	0.0536	
Dibromochloromethane	ND	1	0.0645	
1,2-Dibromoethane	ND	1	0.0508	
Chlorobenzene	ND	1	0.0444	
Ethylbenzene	ND	1	0.0247	
1,1,1,2-Tetrachloroethane	ND	1	0.0391	
m,p-Xylene	ND	2	0.0843	
o-Xylene	0.0301	1	0.03	J N
Styrene	ND	1	0.024	
Bromoform	ND	1	0.0619	
Isopropylbenzene	ND	1	0.0373	
Bromobenzene	ND	1	0.0397	
n-Propylbenzene	ND	1	0.0469	
1,1,2,2-Tetrachloroethane	ND	1	0.0563	
1,2,3-Trichloropropane	ND	1	0.0668	
2-Chlorotoluene	ND	1	0.0433	
1,3,5-Trimethylbenzene	ND	1	0.0381	
4-Chlorotoluene	ND	1	0.0828	
t-Butylbenzene	ND	1	0.0241	
1,2,4-Trimethylbenzene	ND	1	0.0422	
sec-Butylbenzene	ND	1	0.039	
1,3-Dichlorobenzene	ND	1	0.0345	
4-Isopropyltoluene	ND	1	0.0559	
1,4-Dichlorobenzene	ND	1	0.0487	
n-Butylbenzene	ND	1	0.0926	
1,2-Dichlorobenzene	ND	1	0.0508	
1,2-Dibromo-3-chloropropane	ND	1	0.119	
1,3,5-Trichlorobenzene	ND	1	0.0861	
1,2,4-Trichlorobenzene	ND	1	0.0971	
1,2,3-Trichlorobenzene	ND	1	0.0952	
Hexachlorobutadiene	ND	1	0.0586	
Naphthalene	ND	1	0.412	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	VOA908
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
QC Batch ID:	VOA908

Volatile Organics by USEPA Method 5035/8260B

Compound Name	Blank Result (ug/kg)	Spike Amount (ug/kg)	BS Result (ug/kg)	BS % Rec.	BSD Result (ug/kg)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	4	4.65	116	4.49	112	-3.5	
Benzene	0	4	4.38	109	4.47	112	2.7	
Trichloroethene	0	4	3.85	96.2	4	99.9	3.8	
Toluene	0.046	4	4.2	104	4.05	100	-3.9	
Chlorobenzene	0	4	4.67	117	4.45	111	-5.3	

STL Seattle

Lab ID:	Blank Spike - SVOA908
Date Received:	-
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Dibromofluoromethane	95.4		75	125
Fluorobenzene	83.9		75	125
Toluene-D8	88.9		75	125
Ethylbenzene-d10	100		75	125
Bromofluorobenzene	101		75	125
Trifluorotoluene	95.8		75	125

Sample results are on an as received basis.

Analyte	**Result (ug/kg)**	**RL**	**MDL**	**Flags**
1,1-Dichloroethene	4.65	1	0.39	
Benzene	4.38	1	0.0633	
Trichloroethene	3.85	1	0.0321	
Toluene	4.2	1	0.0305	B2
Chlorobenzene	4.67	1	0.0444	

STL Seattle

Lab ID:	Blank Spike Duplicate - DVOA908
Date Received:	-
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Dibromofluoromethane	94.1		75	125
Fluorobenzene	83.8		75	125
Toluene-D8	90.3		75	125
Ethylbenzene-d10	96.7		75	125
Bromofluorobenzene	95.3		75	125
Trifluorotoluene	98		75	125

Sample results are on an as received basis.

Analyte	**Result (ug/kg)**	**RL**	**MDL**	**Flags**
1,1-Dichloroethene	4.49	1	0.39	
Benzene	4.47	1	0.0633	
Trichloroethene	4	1	0.0321	
Toluene	4.05	1	0.0305	B2
Chlorobenzene	4.45	1	0.0444	

STL Seattle

Matrix Spike Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
QC Batch ID:	VOA908

Volatile Organics by USEPA Method 5035/8260B

ompound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	Flag
,1-Dichloroethene	0	4.27	4.3	101	
enzene	0	4.27	4.55	106	
richloroethene	0	4.27	3.79	88.7	
oluene	0.11	4.27	4.06	92.4	
hlorobenzene	0	4.27	4.26	99.8	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - ms
Lab ID:	123627S01
Date Received:	9/16/2004
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	85.97
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Dibromofluoromethane	93.4		75	125
Fluorobenzene	83.9		75	125
Toluene-D8	90.2		75	125
Ethylbenzene-d10	96.1		75	125
Bromofluorobenzene	96.9		75	125
Trifluorotoluene	90.2		75	125

Sample results are on a dry weight basis.

Analyte	**Result (ug/kg)**	**RL**	**MDL**	**Flags**
1,1-Dichloroethene	4.3	1.07	0.417	
Benzene	4.55	1.07	0.0676	
Trichloroethene	3.79	1.07	0.0343	
Toluene	4.06	1.07	0.0326	B2
Chlorobenzene	4.26	1.07	0.0474	

STL Seattle

Duplicate Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
QC Batch ID:	VOA908

Volatile Organics by USEPA Method 5035/8260B

Parameter Name	Sample Result (ug/kg)	Duplicate Result (ug/kg)	RPD %	Flag
Dichlorodifluoromethane	0	0	NC	
Chloromethane	0	0	NC	
Vinyl chloride	0	0	NC	
Bromomethane	0.766	0.461	50.0	x4a
Chloroethane	0	0	NC	
Trichlorofluoromethane	0	0	NC	
1,1-Dichloroethene	0	0	NC	
Methylene chloride	3.64	2.87	24.0	
trans-1,2-Dichloroethene	0	0	NC	
1,1-Dichloroethane	0	0	NC	
2,2-Dichloropropane	0	0	NC	
cis-1,2-Dichloroethene	0	0	NC	
Bromochloromethane	0	0	NC	
Chloroform	0	0	NC	
1,1,1-Trichloroethane	0	0	NC	
Carbon Tetrachloride	0	0	NC	
1,1-Dichloropropene	0	0	NC	
Benzene	0	0	NC	
1,2-Dichloroethane	0	0	NC	
Trichloroethene	0	0	NC	
1,2-Dichloropropane	0	0	NC	
Dibromomethane	0	0	NC	
Bromodichloromethane	0	0	NC	
cis-1,3-Dichloropropene	0	0	NC	
Toluene	0.11	0.0997	9.8	
trans-1,3-Dichloropropene	0	0	NC	
1,1,2-Trichloroethane	0	0	NC	
Tetrachloroethene	0	0	NC	
1,3-Dichloropropane	0	0	NC	
Dibromochloromethane	0	0	NC	
1,2-Dibromoethane	0	0	NC	
Chlorobenzene	0	0	NC	
Ethylbenzene	0	0	NC	
1,1,1,2-Tetrachloroethane	0	0	NC	
m,p-Xylene	0	0	NC	

STL Seattle

o-Xylene	0	0	NC	
Styrene	0	0	NC	
Bromoform	0	0	NC	
Isopropylbenzene	0	0	NC	
Bromobenzene	0	0	NC	
n-Propylbenzene	0	0	NC	
1,1,2,2-Tetrachloroethane	0	0	NC	
1,2,3-Trichloropropane	0	0	NC	
2-Chlorotoluene	0	0	NC	
1,3,5-Trimethylbenzene	0	0	NC	
4-Chlorotoluene	0	0	NC	
t-Butylbenzene	0	0	NC	
1,2,4-Trimethylbenzene	0	0	NC	
sec-Butylbenzene	0	0	NC	
1,3-Dichlorobenzene	0	0	NC	
4-Isopropyltoluene	0.142	0.356	-86.0	x4a
1,4-Dichlorobenzene	0	0	NC	
n-Butylbenzene	0	0	NC	
1,2-Dichlorobenzene	0	0	NC	
1,2-Dibromo-3-chloropropane	0	0	NC	
1,3,5-Trichlorobenzene	0	0	NC	
1,2,4-Trichlorobenzene	0	0	NC	
1,2,3-Trichlorobenzene	0	0	NC	
Hexachlorobutadiene	0	0	NC	
Naphthalene	0	0	NC	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - dup
Lab ID:	123627R01
Date Received:	-
Date Prepared:	9/16/2004
Date Analyzed:	9/16/2004
% Solids	85.97
Dilution Factor	1

Volatile Organics by USEPA Method 5035/8260B

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Dibromofluoromethane	96.3		75	125
Fluorobenzene	87.3		75	125
Toluene-D8	86.7		75	125
Ethylbenzene-d10	98.6		75	125
Bromofluorobenzene	96.5		75	125
Trifluorotoluene	91.9		75	125

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Dichlorodifluoromethane	ND	1.11	0.0453	
Chloromethane	ND	1.11	0.388	
Vinyl chloride	ND	1.11	0.206	
Bromomethane	0.461	1.11	0.389	J B1
Chloroethane	ND	1.11	0.635	
Trichlorofluoromethane	ND	1.11	0.388	
1,1-Dichloroethene	ND	1.11	0.432	
Methylene chloride	2.87	1.11	0.182	
trans-1,2-Dichloroethene	ND	1.11	0.277	
1,1-Dichloroethane	ND	1.11	0.0559	
2,2-Dichloropropane	ND	1.11	0.0747	
cis-1,2-Dichloroethene	ND	1.11	0.0997	
Bromochloromethane	ND	1.11	0.0507	
Chloroform	ND	1.11	0.0589	
1,1,1-Trichloroethane	ND	1.11	0.0636	
Carbon Tetrachloride	ND	1.11	0.0933	
1,1-Dichloropropene	ND	1.11	0.885	
Benzene	ND	1.11	0.0701	
1,2-Dichloroethane	ND	1.11	0.0859	
Trichloroethene	ND	1.11	0.0356	
1,2-Dichloropropane	ND	1.11	0.0419	
Dibromomethane	ND	1.11	0.0718	
Bromodichloromethane	ND	1.11	0.0685	
cis-1,3-Dichloropropene	ND	1.11	0.0404	
Toluene	0.0997	1.11	0.0338	J B1
trans-1,3-Dichloropropene	ND	1.11	0.0502	

STL Seattle

Volatile Organics by USEPA Method 5035/8260B data for 123627R01 continued...

Analyte	Result (ug/kg)	RL	MDL	Flags
1,1,2-Trichloroethane	ND	1.11	0.088	
Tetrachloroethene	ND	1.11	0.112	
1,3-Dichloropropane	ND	1.11	0.0594	
Dibromochloromethane	ND	1.11	0.0715	
1,2-Dibromoethane	ND	1.11	0.0563	
Chlorobenzene	ND	1.11	0.0492	
Ethylbenzene	ND	1.11	0.0274	
1,1,1,2-Tetrachloroethane	ND	1.11	0.0433	
m,p-Xylene	ND	2.22	0.0934	
o-Xylene	ND	1.11	0.0332	
Styrene	ND	1.11	0.0266	
Bromoform	ND	1.11	0.0686	
Isopropylbenzene	ND	1.11	0.0413	
Bromobenzene	ND	1.11	0.044	
n-Propylbenzene	ND	1.11	0.052	
1,1,2,2-Tetrachloroethane	ND	1.11	0.0624	
1,2,3-Trichloropropane	ND	1.11	0.074	
2-Chlorotoluene	ND	1.11	0.048	
1,3,5-Trimethylbenzene	ND	1.11	0.0422	
4-Chlorotoluene	ND	1.11	0.0917	
t-Butylbenzene	ND	1.11	0.0267	
1,2,4-Trimethylbenzene	ND	1.11	0.0467	
sec-Butylbenzene	ND	1.11	0.0432	
1,3-Dichlorobenzene	ND	1.11	0.0382	
4-Isopropyltoluene	0.356	1.11	0.0619	J
1,4-Dichlorobenzene	ND	1.11	0.054	
n-Butylbenzene	ND	1.11	0.103	
1,2-Dichlorobenzene	ND	1.11	0.0563	
1,2-Dibromo-3-chloropropane	ND	1.11	0.132	
1,3,5-Trichlorobenzene	ND	1.11	0.0954	
1,2,4-Trichlorobenzene	ND	1.11	0.108	
1,2,3-Trichlorobenzene	ND	1.11	0.105	
Hexachlorobutadiene	ND	1.11	0.0649	
Naphthalene	ND	1.11	0.456	

STL Seattle

Lab ID:	Method Blank - SS1197
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/20/2004
% Solids	
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
2 - Fluorophenol	81		36	145
Phenol - d5	85.9		38	149
Nitrobenzene - d5	128		38	141
2 - Fluorobiphenyl	134		42	140
2,4,6 - Tribromophenol	123		28	143
p - Terphenyl - d14	129		42	151

Sample results are on an as received basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Phenol	ND	5	0.723	
1,3-Dichlorobenzene	ND	5	0.852	
1,4-Dichlorobenzene	ND	5	0.841	
Benzyl Alcohol	ND	5	1.99	
1,2-Dichlorobenzene	ND	5	0.679	
2-Methylphenol	ND	5	0.944	
3-&4-Methylphenol	ND	5	1.18	
Hexachloroethane	ND	5	1.69	
2,4-Dimethylphenol	ND	2	0.765	
Benzoic Acid	ND	60	16	
1,2,4-Trichlorobenzene	ND	5	0.849	
Naphthalene	ND	2	0.886	
2-Methylnaphthalene	ND	2	0.52	
Dimethylphthalate	ND	10	1.96	
Acenaphthylene	ND	2	0.589	
Acenaphthene	ND	2	0.513	
Dibenzofuran	ND	5	0.462	
Diethylphthalate	ND	10	3.61	
Fluorene	ND	2	0.646	
N-Nitrosodiphenylamine	ND	2	0.572	
Pentachlorophenol	ND	10	1.94	
Phenanthrene	ND	2	0.594	
Anthracene	ND	2	0.38	
Di-n-butylphthalate	6.05	10	1.82	J
Fluoranthene	ND	2	1.01	
Pyrene	ND	2	0.34	

STL Seattle

Semivolatile Organics by USEPA Method 8270 data for SS1197 continued...

Analyte		Result (ug/kg)	RL	MDL	
Butylbenzylphthalate		3.99	20	2.14	J
Benzo(a)anthracene	ND		2	1.01	
Chrysene	ND		2	0.715	
bis(2-Ethylhexyl)phthalate		11.1	20	1.83	J
Di-n-octylphthalate	ND		20	1.84	
Benzofluoranthenes	ND		4	0.906	
Benzo(a)pyrene	ND		2	0.633	
Indeno(1,2,3-cd)pyrene	ND		2	0.456	
Dibenz(a,h)anthracene	ND		2	0.621	
Benzo(g,h,i)perylene	ND		2	0.481	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	SS1197
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
QC Batch ID:	SS1197

Semivolatile Organics by USEPA Method 8270

Compound Name	Blank Result (ug/kg)	Spike Amount (ug/kg)	BS Result (ug/kg)	BS % Rec.	BSD Result (ug/kg)	BSD % Rec.	RPD	Flag
Phenol	0	75	49.6	66.2	51.5	68.7	3.7	
1,4-Dichlorobenzene	0	50	35.8	71.6	31.1	62.1	-14	
1,2,4-Trichlorobenzene	0	50	36.8	73.6	37.7	75.5	2.5	
Acenaphthene	0	50	40.4	80.8	42.3	84.7	4.7	
Pentachlorophenol	0	75	27.8	37.1	29.7	39.6	6.5	
Pyrene	0	50	43.8	87.6	41.4	82.9	-5.5	

STL Seattle

Lab ID:	Blank Spike - SSS1197
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
% Solids	
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
2 - Fluorophenol	134		36	145
Phenol - d5	128		38	149
Nitrobenzene - d5	119		38	141
2 - Fluorobiphenyl	142	N	42	140
2,4,6 - Tribromophenol	132		28	143
p - Terphenyl - d14	145		42	151

Sample results are on an as received basis.

Analyte	**Result (ug/kg)**	**RL**	**MDL**	**Flags**
Phenol	49.6	5	0.723	
1,4-Dichlorobenzene	35.8	5	0.841	
1,2,4-Trichlorobenzene	36.8	5	0.849	
Acenaphthene	40.4	2	0.513	
Pentachlorophenol	27.8	10	1.94	
Pyrene	43.8	2	0.34	

STL Seattle

Lab ID:	Blank Spike Duplicate - DSS1197
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
% Solids	
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
2 - Fluorophenol	124		36	145
Phenol - d5	114		38	149
Nitrobenzene - d5	128		38	141
2 - Fluorobiphenyl	131		42	140
2,4,6 - Tribromophenol	145	N	28	143
p - Terphenyl - d14	144		42	151

Sample results are on an as received basis.

Analyte	**Result (ug/kg)**	**RL**	**MDL**	**Flags**
Phenol	51.5	5	0.723	
1,4-Dichlorobenzene	31.1	5	0.841	
1,2,4-Trichlorobenzene	37.7	5	0.849	
Acenaphthene	42.3	2	0.513	
Pentachlorophenol	29.7	10	1.94	
Pyrene	41.4	2	0.34	

STL Seattle

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
QC Batch ID:	SS1197

Semivolatile Organics by USEPA Method 8270

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
Phenol	0	83.4	73.1	87.7	81.2	96.1	9.1	
1,4-Dichlorobenzene	0	55.6	45.4	81.6	50.6	89.8	9.6	
1,2,4-Trichlorobenzene	0	55.6	52.4	94.2	46.1	81.8	-14	
Acenaphthene	0	55.6	63.7	115	58.1	103	-11	
Pentachlorophenol	0	83.4	64.8	77.7	65.4	77.4	-0.39	
Pyrene	0	55.6	64.8	116	62.6	111	-4.4	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - ms
Lab ID:	123627S01
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
% Solids	85.97
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
2 - Fluorophenol	71.3		36	145
Phenol - d5	85.4		38	149
Nitrobenzene - d5	60.6		38	141
2 - Fluorobiphenyl	77.2		42	140
2,4,6 - Tribromophenol	101		28	143
p - Terphenyl - d14	98.7		42	151

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Phenol	73.1	5.56	0.804	
1,4-Dichlorobenzene	45.4	5.56	0.935	
1,2,4-Trichlorobenzene	52.4	5.56	0.944	
Acenaphthene	63.7	2.22	0.571	
Pentachlorophenol	64.8	11.1	2.16	
Pyrene	64.8	2.22	0.378	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - msd
Lab ID:	123627D01
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/21/2004
% Solids	85.97
Dilution Factor	1

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
2 - Fluorophenol	77.8		36	145
Phenol - d5	91.9		38	149
Nitrobenzene - d5	58.8		38	141
2 - Fluorobiphenyl	79.8		42	140
2,4,6 - Tribromophenol	97.2		28	143
p - Terphenyl - d14	103		42	151

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Phenol	81.2	5.63	0.815	
1,4-Dichlorobenzene	50.6	5.63	0.948	
1,2,4-Trichlorobenzene	46.1	5.63	0.957	
Acenaphthene	58.1	2.25	0.578	
Pentachlorophenol	65.4	11.3	2.19	
Pyrene	62.6	2.25	0.383	

STL Seattle

Lab ID:	Method Blank - PE1750
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/17/2004
% Solids	
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	84.4		47	144
Decachlorobiphenyl	106		51	149

Sample results are on an as received basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Aldrin	ND	1	0.103	
gamma-BHC (Lindane)	ND	1	0.12	
4,4'-DDD	ND	2	0.204	
4,4'-DDE	ND	2	0.2	
4,4'-DDT	ND	2	0.235	
Dieldrin	ND	2	0.243	
Heptachlor	ND	1	0.1	
alpha-Chlordane	ND	1	0.108	
gamma-Chlordane	ND	1	0.121	
Hexachlorobenzene	ND	2	0.89	
Hexachlorobutadiene	ND	1	0.43	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	PE1750
Date Prepared:	9/17/2004
Date Analyzed:	9/17/2004
QC Batch ID:	PE1750

Organochlorine Pesticides by EPA Method 8081A

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Aldrin	0	0.02	0.0209	104	0.0228	114	9.2	
gamma-BHC (Lindane)	0	0.02	0.021	105	0.0228	114	8.2	
4,4'-DDD	0	0.02	0.0192	95.8	0.0228	114	17	
4,4'-DDE	0	0.02	0.0191	95.4	0.0221	110	14	
4,4'-DDT	0	0.02	0.0192	96.2	0.0242	121	23	
Dieldrin	0	0.02	0.0213	106	0.0241	121	13	
Heptachlor	0	0.02	0.0198	99.2	0.0214	107	7.6	
alpha-Chlordane	0	0.02	0.0184	92.1	0.0211	105	13	
gamma-Chlordane	0	0.02	0.0191	95.6	0.0217	109	13	

STL Seattle

Lab ID:	Blank Spike - SPE1750
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/17/2004
% Solids	
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	84.1		47	144
Decachlorobiphenyl	89.4		51	149

Sample results are on an as received basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Aldrin	20.9	1	0.103	C1
gamma-BHC (Lindane)	21	1	0.12	C1
4,4'-DDD	19.2	2	0.204	C1
4,4'-DDE	19.1	2	0.2	C1
4,4'-DDT	19.2	2	0.235	C1
Dieldrin	21.3	2	0.243	C1
Heptachlor	19.8	1	0.1	C1
alpha-Chlordane	18.4	1	0.108	C1
gamma-Chlordane	19.1	1	0.121	C1
Hexachlorobenzene	19.3	2	0.89	C1
Hexachlorobutadiene	15.4	1	0.43	C1

STL Seattle

Lab ID:	Blank Spike Duplicate - DPE1750
Date Received:	-
Date Prepared:	9/17/2004
Date Analyzed:	9/17/2004
% Solids	
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	87.8		47	144
Decachlorobiphenyl	109		51	149

Sample results are on an as received basis.

Analyte	Result (ug/kg)	RL	MDL	Flags
Aldrin	22.8	1	0.103	C1
gamma-BHC (Lindane)	22.8	1	0.12	C1
4,4'-DDD	22.8	2	0.204	C1
4,4'-DDE	22.1	2	0.2	C1
4,4'-DDT	24.2	2	0.235	C1
Dieldrin	24.1	2	0.243	C1
Heptachlor	21.4	1	0.1	C1
alpha-Chlordane	21.1	1	0.108	C1
gamma-Chlordane	21.7	1	0.121	C1
Hexachlorobenzene	20.5	2	0.89	C1
Hexachlorobutadiene	15.8	1	0.43	C1

STL Seattle

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	091504-SP-19
Lab ID:	123618-03
Date Prepared:	9/17/2004
Date Analyzed:	9/20/2004
QC Batch ID:	PE1750

Organochlorine Pesticides by EPA Method 8081A

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Aldrin	0	0.0299	0.0463	155	0.0449	153	-1.3	x7
gamma-BHC (Lindane)	0	0.0299	0.0407	136	0.0379	129	-5.3	x7
4,4'-DDD	0	0.0299	0.0413	138	0.0405	138	0	
4,4'-DDE	0	0.0299	0.0399	133	0.0389	132	-0.75	
4,4'-DDT	0	0.0299	0.0434	145	0.0407	138	-4.9	
Dieldrin	0	0.0299	0.0432	144	0.0411	140	-2.8	x7
Heptachlor	0	0.0299	0.0372	124	0.0347	118	-5	
alpha-Chlordane	0	0.0299	0.0353	118	0.0345	117	-0.85	
gamma-Chlordane	0	0.0299	0.0379	127	0.0367	125	-1.6	

STL Seattle

Client Name:	Tetra Tech, Inc.
Client ID:	091504-SP-19 - ms
Lab ID:	123618S03
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/20/2004
% Solids	62.31
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	105		47	144
Decachlorobiphenyl	125		51	149

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Aldrin	0.0463	0.00598	0.00299	C1
gamma-BHC (Lindane)	0.0407	0.00598	0.00299	C1
4,4'-DDD	0.0413	0.00598	0.00299	C1
4,4'-DDE	0.0399	0.00598	0.00299	C1
4,4'-DDT	0.0434	0.00598	0.00299	C1
Dieldrin	0.0432	0.00598	0.00299	C1
Heptachlor	0.0372	0.00598	0.00299	C1
alpha-Chlordane	0.0353	0.00598	0.00299	C1
gamma-Chlordane	0.0379	0.00598	0.00299	C1
Hexachlorobenzene	0.593	0.00598	0.00299	C1
Hexachlorobutadiene	0.0301	0.00598	0.00299	C1

STL Seattle

Client Name:	Tetra Tech, Inc.
Client ID:	091504-SP-19 - msd
Lab ID:	123618D03
Date Received:	9/16/2004
Date Prepared:	9/17/2004
Date Analyzed:	9/20/2004
% Solids	62.31
Dilution Factor	1

Organochlorine Pesticides by EPA Method 8081A

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	106		47	144
Decachlorobiphenyl	128		51	149

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Aldrin	0.0449	0.00589	0.00294	C1
gamma-BHC (Lindane)	0.0379	0.00589	0.00294	C1
4,4'-DDD	0.0405	0.00589	0.00294	C1
4,4'-DDE	0.0389	0.00589	0.00294	C1
4,4'-DDT	0.0407	0.00589	0.00294	C1
Dieldrin	0.0411	0.00589	0.00294	C1
Heptachlor	0.0347	0.00589	0.00294	C1
alpha-Chlordane	0.0345	0.00589	0.00294	C1
gamma-Chlordane	0.0367	0.00589	0.00294	C1
Hexachlorobenzene	0.491	0.00589	0.00294	C1
Hexachlorobutadiene	0.0288	0.00589	0.00294	C1

STL Seattle

Lab ID:	Method Blank - PB0808
Date Received:	-
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	
Dilution Factor	1

PCBs by EPA Method 8082

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	81		60	123
Decachlorobiphenyl	80.2		65	126

Sample results are on an as received basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Aroclor 1016	ND	0.01	0.00295	
Aroclor 1221	ND	0.01	0.00295	
Aroclor 1232	ND	0.01	0.00295	
Aroclor 1242	ND	0.01	0.00295	
Aroclor 1248	ND	0.01	0.00295	
Aroclor 1254	ND	0.01	0.00162	
Aroclor 1260	ND	0.01	0.00162	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	PB0808
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
QC Batch ID:	PB0808

PCBs by EPA Method 8082

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Aroclor 1242	0	0.1	0.0809	80.9	0.0816	81.6	0.86	
Aroclor 1260	0	0.1	0.0936	93.6	0.0947	94.7	1.2	

STL Seattle

Lab ID:	Blank Spike - SPB0808
Date Received:	-
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	
Dilution Factor	1

PCBs by EPA Method 8082

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Tetrachloro-m-xylene	81.1		60	123
Decachlorobiphenyl	79		65	126

Sample results are on an as received basis.

Analyte	**Result (mg/kg)**	**RL**	**MDL**	**Flags**
Aroclor 1242	0.0809	0.01	0.00295	C1
Aroclor 1260	0.0936	0.01	0.00162	C1

STL Seattle

Lab ID:	Blank Spike Duplicate - DPB0808
Date Received:	-
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	
Dilution Factor	1

PCBs by EPA Method 8082

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tetrachloro-m-xylene	81.6		60	123
Decachlorobiphenyl	80.8		65	126

Sample results are on an as received basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Aroclor 1242	0.0816	0.01	0.00295	C1
Aroclor 1260	0.0947	0.01	0.00162	C1

STL Seattle

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
QC Batch ID:	PB0808

PCBs by EPA Method 8082

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Aroclor 1242	0	0.11	0.0943	86	0.0966	89.5	4	
Aroclor 1260	0	0.11	0.106	96.5	0.104	96.6	0.1	

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - ms
Lab ID:	123627S01
Date Received:	9/16/2004
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	85.97
Dilution Factor	1

PCBs by EPA Method 8082

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Tetrachloro-m-xylene	82.2		60	123
Decachlorobiphenyl	81.3		65	126

Sample results are on a dry weight basis.

Analyte	**Result (mg/kg)**	**RL**	**MDL**	**Flags**
Aroclor 1242	0.0943	0.011	0.00323	C1
Aroclor 1260	0.106	0.011	0.00178	C1

STL Seattle

Client Name:	Lloyd & Assoc. Inc.
Client ID:	040916/GNW/MW - msd
Lab ID:	123627D01
Date Received:	9/16/2004
Date Prepared:	9/20/2004
Date Analyzed:	9/20/2004
% Solids	85.97
Dilution Factor	1

PCBs by EPA Method 8082

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Tetrachloro-m-xylene	83.9		60	123
Decachlorobiphenyl	80.7		65	126

Sample results are on a dry weight basis.

Analyte	**Result (mg/kg)**	**RL**	**MDL**	**Flags**
Aroclor 1242	0.0966	0.0108	0.00319	C1
Aroclor 1260	0.104	0.0108	0.00175	C1

STL Seattle

Lab ID:	Method Blank - SP497
Date Received:	-
Date Prepared:	9/20/04
Date Analyzed:	9/20/04
Dilution Factor	1

Metals by ICP - USEPA Method 6010

Sample results are on an as received basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Arsenic	ND	2	0.861	
Antimony	ND	5	1.07	
Beryllium	ND	0.2	0.044	
Cadmium	0.0529	0.5	0.0426	J
Chromium	ND	1	0.0896	
Copper	0.996	2	0.228	J
Lead	ND	1	0.41	
Nickel	ND	1	0.101	
Selenium	ND	5	0.968	
Silver	0.112	1	0.0531	J
Thallium	ND	5	1.28	
Zinc	ND	2	0.0785	

STL Seattle

Lab ID:	Method Blank - ZS119
Date Received:	-
Date Prepared:	9/21/04
Date Analyzed:	9/21/04
Dilution Factor	1

Mercury by CVAA - USEPA Method 7471

Sample results are on an as received basis.

Analyte	Result (mg/kg)	RL	MDL	Flags
Mercury	ND	0.02	0.0053	

STL Seattle

Matrix Spike Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/20/04
Date Analyzed:	9/20/04
QC Batch ID:	SP497

Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Arsenic	1.26	372	347	93	
Antimony	0	279	252	91	
Beryllium	0.082	9.29	8.62	92	
Cadmium	0.12	9.29	8.31	88	
Chromium	9.5	37.2	46	98	
Copper	12	46.4	61.3	107	
Lead	1.2	92.9	88.4	94	
Nickel	11	92.9	101	97	
Selenium	0	372	318	86	
Silver	0	55.7	50	90	
Thallium	0	372	347	94	
Zinc	15	92.9	100	92	

STL Seattle

Matrix Spike Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/21/04
Date Analyzed:	9/21/04
QC Batch ID:	ZS119

Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Mercury	0.00888	0.221	0.248	108	

STL Seattle

Duplicate Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/20/04
Date Analyzed:	9/20/04
QC Batch ID:	SP497

Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Arsenic	1.3	2.1	-47.0	X4a
Antimony	0	0	NC	
Beryllium	0.082	0.093	-13.0	
Cadmium	0.12	0	200.0	X4a
Chromium	9.5	8.5	11.0	
Copper	12	12	0.0	
Lead	1.2	2	-50.0	X4a
Nickel	11	12	-8.7	
Selenium	0	0	NC	
Silver	0	0	NC	
Thallium	0	0	NC	
Zinc	15	18	-18.0	

STL Seattle

Duplicate Report

Client Sample ID:	040916/GNW/MW
Lab ID:	123627-01
Date Prepared:	9/21/04
Date Analyzed:	9/21/04
QC Batch ID:	ZS119

Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Mercury	0.0089	0.011	-21.0	

STL Seattle

Laboratory Control Sample

Lab ID:	RSP497
Date Prepared:	9/20/04
Date Analyzed:	9/20/04
QC Batch ID:	SP497

Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	True Value (mg/kg)	Lower Limit (mg/kg)	Upper Limit (mg/kg)	Flag
Arsenic	110	114	81.5	145	Pass
Antimony	170	152	0	329	Pass
Beryllium	130	133	109	157	Pass
Cadmium	96	102	84.5	121	Pass
Chromium	160	171	135	206	Pass
Copper	120	112	90.4	134	Pass
Lead	98	104	81.8	126	Pass
Nickel	130	122	98.4	146	Pass
Selenium	150	169	111	227	Pass
Silver	49	78.6	0	165	Pass
Thallium	160	171	132	210	Pass
Zinc	160	194	155	233	Pass

STL Seattle

Laboratory Control Sample

Lab ID:	RZS119
Date Prepared:	9/21/04
Date Analyzed:	9/21/04
QC Batch ID:	ZS119

Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	True Value (mg/kg)	Lower Limit (mg/kg)	Upper Limit (mg/kg)	Flag
Mercury	4.4	3.71	2.53	5	Pass

STL Seattle

QUALITY CONTROL REPORT

Client Sample ID: 040916/GNW/MW
Lab ID: 123627-01
QC Batch Number: 1060-85

Duplicate

Parameter	Sample Result (%)	Duplicate Result (%)	RPD (%)	Flag
% Moisture	14.03	13.75	2.02	

DATA QUALIFIER DEFINITIONS

SEVERN TRENT STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

DATA QUALIFIERS AND ABBREVIATIONS

B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).

C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be < 40%.

C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 40%. The higher result was reported unless anomalies were noted.

C3: Second analysis confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be ≤ 30%.

C4: Second analysis confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 30%. The original analysis was reported unless anomalies were noted.

M: GC/MS confirmation was performed. The result derived from the original analysis was reported.

D: The reported result for this analyte was calculated based on a secondary dilution factor.

E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

MCL: Maximum Contaminant Level

MDL: Method Detection Limit

RL: Reporting Limit

N: See analytical narrative

ND: Not Detected

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.

X2: Contaminant does not appear to be "typical" product.

X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.

X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.

X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

X5: Matrix spike recovery was not determined due to the required dilution.

X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.

X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.

X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.

X8: Surrogate recovery was not determined due to the required dilution.

X9: Surrogate recovery outside advisory QC limits due to matrix interference.

CHAIN OF CUSTODY

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL 00060

Client: MANSON CONST	Project Manager: M. Lloyd	Date: 9/16/04	Chain of Custody Number: 11287
Address: P.O. BOX 24067	Telephone Number (Area Code)/Fax Number: 206-793-2628	Lab Number: 173427	Page 1 of 1
City: SEATTLE State: WA Zip Code: 98124	Site Contact	Lab Contact	
Project Name and Location (State): MIDDLE WATERWAY	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: PO#S 51553			

Analysis (Attach list if more space is needed): Moisture; Metals (ICP/PQL); VOA's 8260; SVOC's 8270; PCB 8082; Pesticides 8081; TOC-SM 5310

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Moisture	Metals (ICP/PQL)	VOA's 8260	SVOC's 8270	PCB 8082	Pesticides 8081	TOC-SM 5310	Special Instructions/ Conditions of Receipt
04091G/GNW/MW	9/16/04	1120				X	X						X	X	X	X	X	X	X	4 bottles

Sample provided by Louie from Glacier Northwest as representative of materials to be delivered to the site.

* = Low level method deletion for SGO's/SMSS

GNW = Glacier Northwest MW = MIDDLE WATERWAY

Cooler: ☐ Yes ☒ No Cooler Temp: ____	Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown	Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☒ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other ____	QC Requirements (Specify): Level IV - DQ data package.		

	Date	Time		Date	Time
1. Relinquished By: Michael Lloyd	9/16/04	1215	1. Received By: [signature]	9-16-04	12:15
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

DATA DELIVERABLES PACKAGE

VOLATILE ORGANICS DATA PACKAGE

SAMPLE DATA

Quantitation Report (QT Reviewed)

Data File : E:\DATA\09162004\AG18137.D
Acq On : 16 Sep 2004 6:05 pm
Sample : 123627-01 voa908
Misc : soil #5.249
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:47:09 2004

Vial: 21
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	455068	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	760945	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	146880	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	309589	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	226871	9.45 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 94.50%		
39) Fluorobenzene(S)	7.25	96	856335	8.31 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 83.10%#		
41) Trifluorotoluene(S)	7.98	146	794675	18.28 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 91.40%		
50) Toluene-d8(S)	9.03	98	802095	8.69 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 86.90%#		
60) Ethylbenzene-d10(S)	10.74	98	1038337	9.47 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 94.70%		
69) Bromofluorobenzene(S)	12.09	174	225495	8.93 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 89.30%		

Target Compounds					Qvalue
3) Chloromethane	1.90	50	15897	Below Cal	95
5) Bromomethane	2.45	94	4456	0.69 ug/Kg	97
8) Acrolein	3.55	56	1008	Below Cal #	47
15) Methylene Chloride	4.32	49	130997	3.29 ug/Kg	98
31) Cyclohexane	6.54	56	9379	Below Cal #	27
51) Toluene	9.10	91	11003	0.10 ug/Kg	89
80) 4-Isopropyltoluene	13.42	119	11517	0.13 ug/Kg	77
87) 1,3,5-Trichlorobenzene	15.19	180	957	Below Cal	89
88) 1,2,4-Trichlorobenzene	15.94	180	547	Below Cal #	59
90) Naphthalene	16.26	128	5870	Below Cal	94
91) 1,2,3-Trichlorobenzene	16.55	180	241	Below Cal #	1

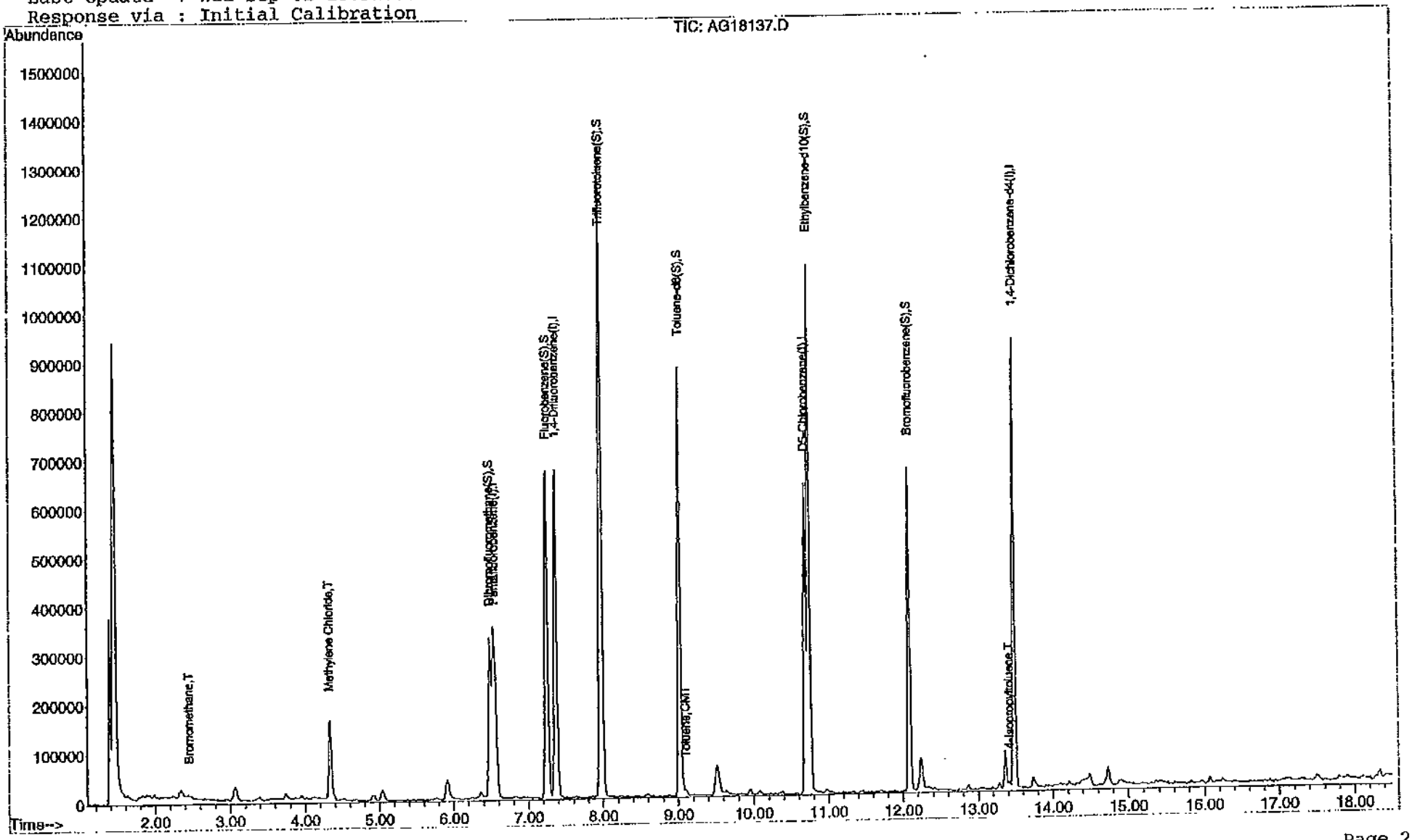
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18137.D
Acq On : 16 Sep 2004 6:05 pm
Sample : 123627-01 voa908
Misc : soil #5.249
MS Integration Params: RTEINT.P
Quant Time: Sep 17 9:08 2004

Vial: 21
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

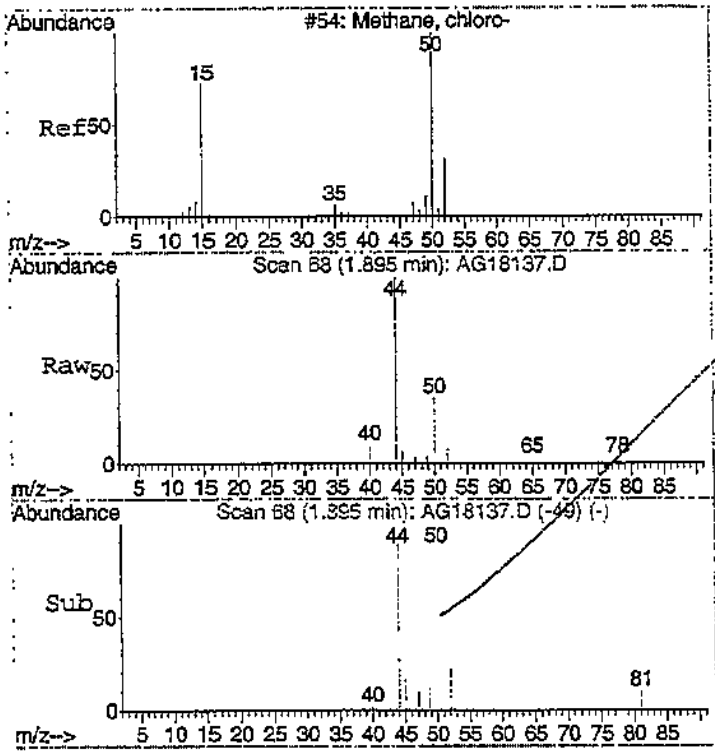
Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG18137.D 09012004_LOWSOIL_8260.M Fri Sep 17 09:08:12 2004

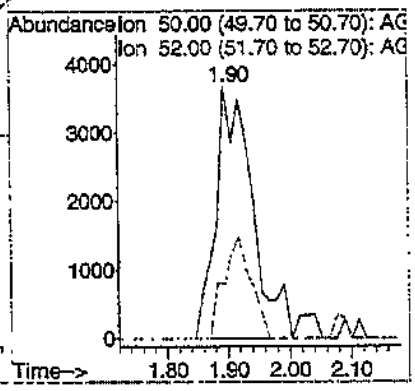
59000

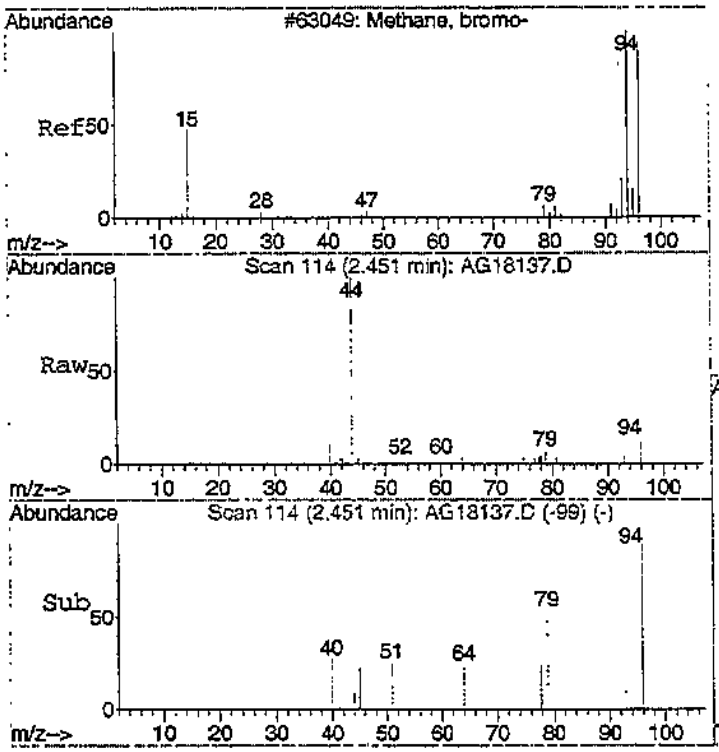


#3
Chloromethane
Concen: Below Cal
RT: 1.90 min Scan# 68
Delta R.T. -0.01 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion: 50 Resp: 15897

Ion	Ratio	Lower	Upper
50	100		
52	29.3	2.1	62.1

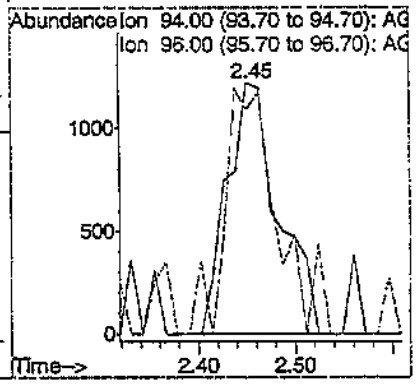




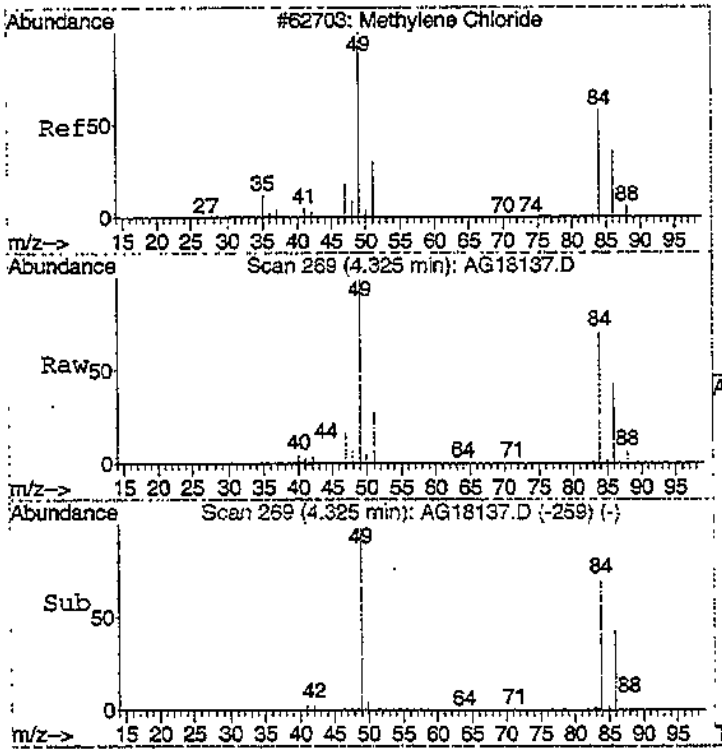
#5
Bromomethane
Concen: 0.69 ug/Kg
RT: 2.45 min Scan# 114
Delta R.T. 0.00 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion: 94 Resp: 4456

Ion	Ratio	Lower	Upper
94	100		
96	101.0	74.5	134.5



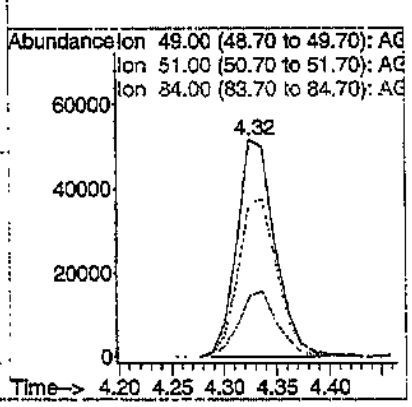
000066

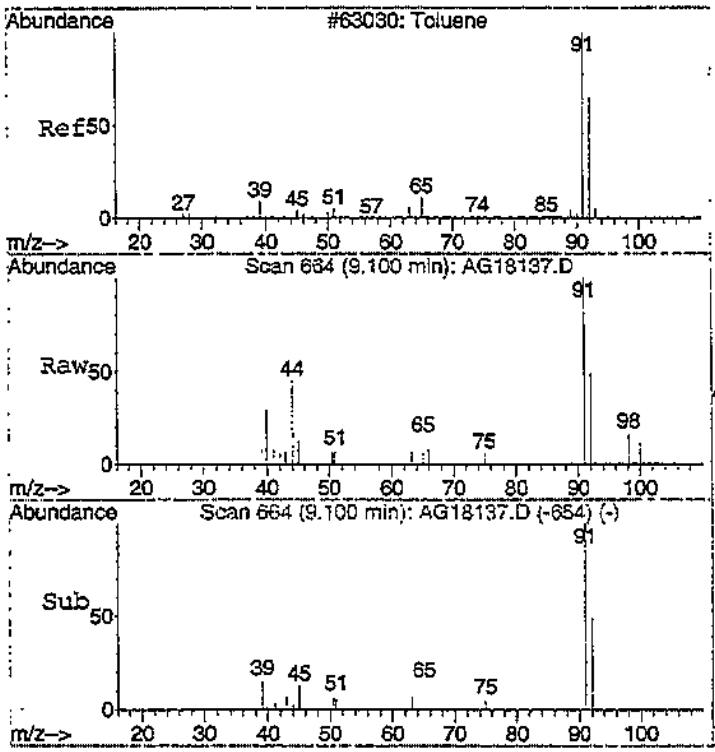


#15
Methylene Chloride
Concen: 3.29 ug/Kg
RT: 4.32 min Scan# 269
Delta R.T. 0.00 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion: 49 Resp: 130997

Ion	Ratio	Lower	Upper
49	100		
51	30.4	0.0	59.6
84	75.3	43.6	103.6

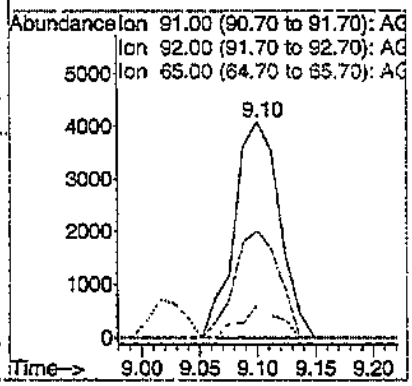




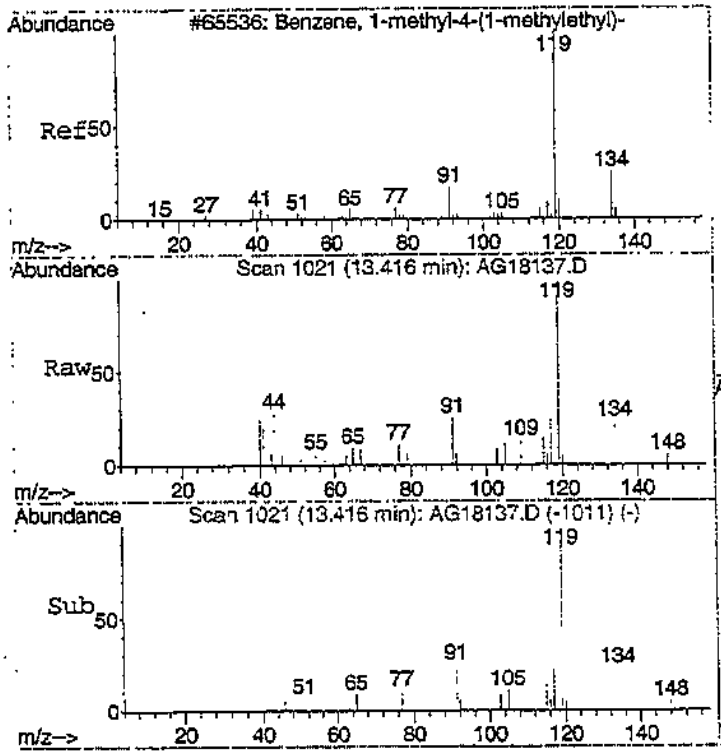
#51
Toluene
Concen: 0.10 ug/Kg
RT: 9.10 min Scan# 664
Delta R.T. 0.00 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion: 91 Resp: 11003

Ion	Ratio	Lower	Upper
91	100		
92	48.7	27.9	87.9
65	12.6	0.0	40.7



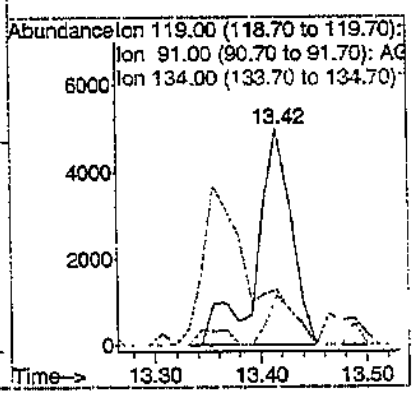
000067

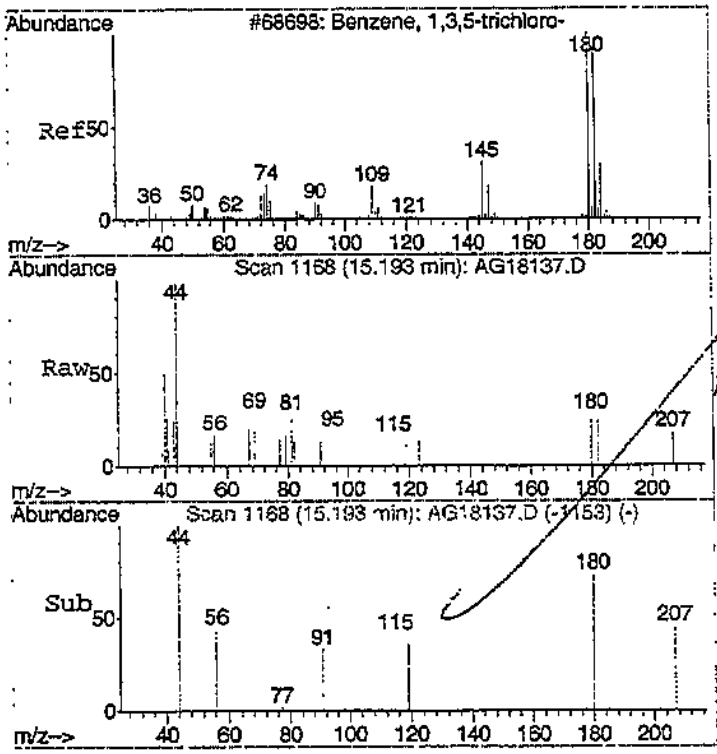


#80
4-Isopropyltoluene
Concen: 0.13 ug/Kg
RT: 13.42 min Scan# 1021
Delta R.T. 0.00 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion:119 Resp: 11517

Ion	Ratio	Lower	Upper
119	100		
91	8.1	0.0	52.0
134	18.1	0.0	57.0

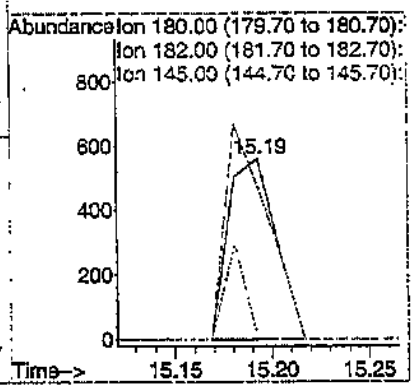




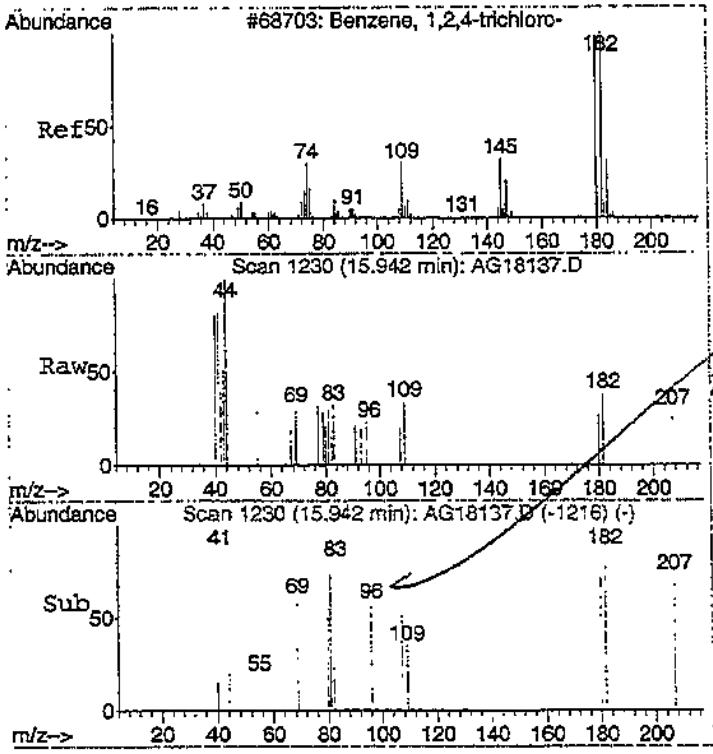
#87
1,3,5-Trichlorobenzene
Concen: Below Cal
RT: 15.19 min Scan# 1168
Delta R.T. 0.00 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion:180 Resp: 957

Ion	Ratio	Lower	Upper
180	100		
182	106.1	64.4	124.4
145	22.3	0.0	56.8



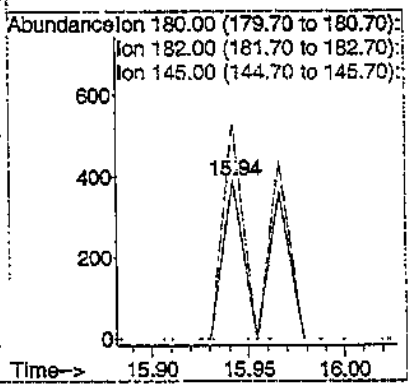
00068

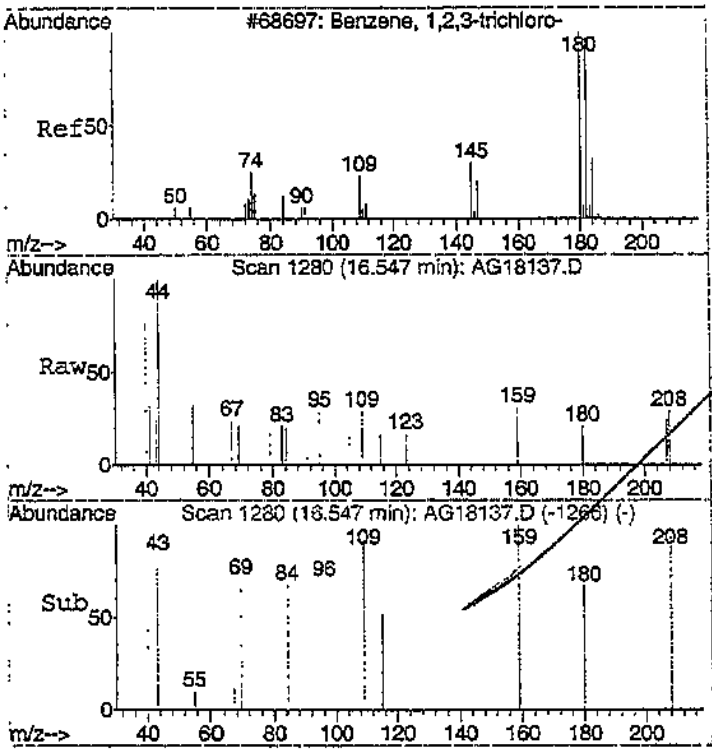


#88
1,2,4-Trichlorobenzene
Concen: Below Cal
RT: 15.94 min Scan# 1230
Delta R.T. -0.01 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion:180 Resp: 547

Ion	Ratio	Lower	Upper
180	100		
182	128.7	62.7	122.7#
145	0.0	0.0	58.7

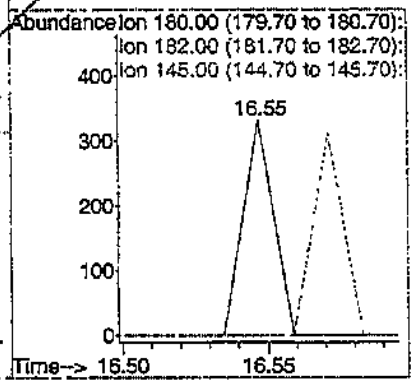




#91
1,2,3-Trichlorobenzene
Concen: Below Cal
RT: 16.55 min Scan# 1280
Delta R.T. -0.01 min
Lab File: AG18137.D
Acq: 16 Sep 2004 6:05 pm

Tgt Ion:180 Resp: 241

Ion	Ratio	Lower	Upper
180	100		
182	0.0	64.6	124.6#
145	94.2	1.6	61.6#



00069

INITIAL CALIBRATION

The following conditions apply to initial calibration 09012004_lowsoil_8260 for direct soil purge analysis:

9/7/2004

1. All standards and QC samples are prepared in 5 grams Ottawa sand. Calibration is based on 5gram sample size.
2. The upper quantitation limit for Bromochloromethane is 20 ug/L.
3. The upper quantitation limit for Bromomethane is 40 ug/L.
4. The upper quantitation limit for n-Propylbenzene, sec-Butylbenzene, Chlorobenzene, and Ethylbenzene is 100 ug/L.
5. A 200 ug/Kg calibration standard was added to extend calibration range.

Sequence Log

ectory : g:\DATA\09012004

(4) 9/7/2004

Filename	Sample Name	Date/Time
ag17977.d	bfb tune	09/01/04 10:18
ag17978.d	bfb tune	09/01/04 10:43
ag17979.d	prime	09/01/04 11:08
ag17980.d	0.4 ug/Kg MDL / Initial calibration	09/01/04 11:33
ag17981.d	0.8 ug/Kg Initial calibration	09/01/04 11:58
ag17982.d	2.0 ug/Kg Initial calibration	09/01/04 12:24
ag17983.d	4.0 ug/Kg Initial calibration	09/01/04 12:49
ag17984.d	10 ug/Kg Initial calibration	09/01/04 13:14
ag17985.d	20 ug/Kg Initial calibration	09/01/04 13:40
ag17986.d	40 ug/Kg Initial calibration	09/01/04 14:05
ag17987.d	100 ug/Kg Initial calibration	09/01/04 14:31
ag17988.d	200 ug/Kg Initial calibration	09/01/04 14:56
ag17989.d	rinse	09/01/04 15:21
ag17990.d	bfb tune	09/01/04 15:46
ag17991.d	bfb tune	09/01/04 16:12
ag17992.d	4.0 ug/Kg ccal	09/01/04 16:37
ag17993.d	4.0 ug/Kg ICV/bs voa882	09/01/04 17:03
ag17994.d	4.0 ug/Kg ICV/bsd voa882	09/01/04 17:28
ag17995.d	4.0 ug/Kg bs voa883	09/01/04 17:53
ag17996.d	4.0 ug/Kg bsd voa883	09/01/04 18:18
ag17997.d	Instr. blank	09/01/04 18:43
ag17998.d	Reagent MB voa882	09/01/04 19:08
ag17999.d	Reagent MB voa883	09/01/04 19:34
ag18000.d	123106-13 voa883	09/01/04 19:59
ag18001.d	123111-01 voa882	09/01/04 20:24
ag18002.d	123111-01 dup voa882	09/01/04 20:50
ag18003.d	123111-01 ms voa882	09/01/04 21:14
ag18004.d	123106-07 voa883	09/01/04 21:40
ag18005.d	123106-08 voa883	09/01/04 22:05
ag18006.d	123106-09 voa883	09/01/04 22:30

Response Factor Report VOAInst#3

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration

Calibration Files
0.4 =AG17980.D 0.8 =AG17981.D 2.0 =AG17982.D
4.0 =AG17983.D 10 =AG17984.D 20 =AG17985.D

		Compound	0.4	0.8	2.0	4.0	10	20	Avg	%RSD
1)	I	Pentafluorobenzene(I)	----------ISTD----------							
2)	T	Dichlorodifluor	0.807	0.721	0.572	0.771	0.663	0.605	0.660	13.14
3)	TP	Chloromethane	2.668	1.689	1.015	1.025	0.811	0.703	1.111	59.96
4)	CT	Vinyl Chloride		0.691	0.579	0.765	0.722	0.679	0.657	11.88
5)	T	Bromomethane	0.200	0.118	0.105	0.203	0.228	0.289	0.214	41.30
6)	T	Chloroethane	0.413	0.405	0.335	0.422	0.383	0.380	0.385	7.34
7)	T	Trichlorofluoro	1.007	0.875	0.779	1.049	0.937	0.901	0.919	8.40
8)	T	Acrolein	0.033	0.032	0.029	0.034	0.034	0.028	0.028#	19.59
9)	T	Ethyl ether	0.382	0.342	0.342	0.384	0.397	0.378	0.362	7.20
10)	CMT	1,1-Dichloroeth	0.535	0.453	0.450	0.536	0.511	0.489	0.489	6.81
11)	T	1,1,2-Trichloro	0.558	0.469	0.454	0.556	0.479	0.452	0.489	8.41
12)	T	Carbon Disulfid	1.791	1.539	1.507	1.997	1.965	1.954	1.855	11.00
13)	T	Acetone	0.247	0.208	0.161	0.175	0.181	0.152	0.180	16.60
14)	t	tert-Butyl alco	0.268	0.222	0.212	0.267	0.279	0.280	0.262	9.87
15)	T	Methylene Chlor	2.505	1.529	0.945	0.943	0.772	0.710	1.041	59.16
16)	T	Methyl tert-But	1.093	1.027	0.902	1.109	1.172	1.124	1.073	7.21
17)	T	trans-1,2-Dichl	0.616	0.552	0.508	0.635	0.592	0.564	0.570	7.19
18)	T	Acrylonitrile	0.126	0.117	0.094	0.111	0.125	0.115	0.113	8.63
19)	T	Hexane	0.729	0.513	0.457	0.593	0.410	0.385	0.491	22.25
20)	t	Diisopropyl eth	1.802	1.542	1.440	1.804	1.855	1.825	1.720	8.18
21)	TP	1,1-Dichloroeth	1.010	0.944	0.889	1.059	1.025	0.987	0.976	5.55
22)	T	Vinyl Acetate	0.790	0.711	0.565	0.566	0.781	0.837	0.701	14.79
23)	t	Ethyl tert-buty	0.498	0.446	0.414	0.537	0.574	0.565	0.523	11.08
24)	T	2,2-Dichloropro	0.970	0.699	0.705	0.779	0.765	0.755	0.762	11.00
25)	T	cis-1,2-Dichlor	0.587	0.575	0.532	0.660	0.621	0.607	0.593	6.32
26)	T	2-Butanone	0.016	0.020	0.016	0.017	0.019	0.017	0.017#	10.10
27)	T	Ethyl acetate	0.045	0.045	0.037	0.042	0.048	0.044	0.043#	7.53
28)	T	Bromochlorometh	0.475	0.377	0.357	0.440	0.401	0.349	0.400	12.36
29)	CT	Chloroform	0.662	0.597	0.586	0.668	0.644	0.625	0.619	5.34
30)	T	1,1,1-Trichloro	0.867	0.795	0.822	0.923	0.902	0.866	0.846	6.16
31)	T	Cyclohexane	1.644	1.226	1.071	1.240	1.147	1.079	1.183	15.78
32)	S	Dibromofluorome	0.646	0.500	0.489	0.557	0.546	0.523	0.528	9.89
33)	T	Carbon Tetrachl	0.697	0.620	0.613	0.751	0.719	0.699	0.681	6.84
34)	T	1,1-Dichloropro	0.799	0.662	0.676	0.804	0.740	0.716	0.722	7.52
35)	t	tert-Amyl methy	0.967	0.947	0.865	1.084	1.143	1.120	1.055	9.69
36)	MT	Benzene	2.441	2.146	2.016	2.427	2.337	2.252	2.202	8.99
37)	T	iso-Butyl alcoh	0.010	0.009	0.010	0.010	0.013	0.012	0.011#	11.70
38)	T	1,2-Dichloroeth	0.667	0.584	0.585	0.649	0.660	0.622	0.612	6.54
39)	S	Fluorobenzene(S	2.522	2.117	2.050	2.438	2.287	2.221	2.265	7.41
40)	I	1,4-Difluorobenzene(I	----------ISTD----------							
41)	S	Trifluorotoluen	0.625	0.518	0.528	0.657	0.558	0.538	0.571	8.62
42)	MT	Trichloroethene	0.394	0.346	0.339	0.488	0.389	0.380	0.385	11.48
43)	T	n-Butyl alcohol	0.003	0.002	0.002	0.002	0.004	0.003	0.003#	14.62
44)	T	Methylcyclohexa	0.543	0.456	0.477	0.610	0.494	0.462	0.506	9.80
45)	CT	1,2-Dichloropro	0.337	0.297	0.305	0.358	0.345	0.339	0.331	6.27
46)	T	Dibromomethane	0.166	0.140	0.155	0.173	0.176	0.169	0.162	8.99
47)	T	Bromodichlorome	0.413	0.331	0.351	0.414	0.415	0.403	0.389	8.13
48)	T	cis-1,3-Dichlor	0.404	0.393	0.387	0.468	0.469	0.466	0.443	8.53
49)	T	4-Methyl-2-pent	0.030	0.027	0.029	0.032	0.035	0.031	0.031#	7.99
50)	S	Toluene-d8(S)	1.440	1.143	1.125	1.338	1.270	1.236	1.214	13.15
51)	CMT	Toluene	1.678	1.388	1.326	1.621	1.530	1.492	1.453	11.87
52)	T	trans-1,3-Dichl	0.363	0.303	0.314	0.383	0.379	0.382	0.364	9.06
53)	T	1,1,2-Trichloro	0.339	0.267	0.225	0.254	0.248	0.231	0.249	14.99
54)	T	Tetrachloroethe	0.354	0.262	0.258	0.342	0.294	0.281	0.297	11.10
55)	T	1,3-Dichloropro	0.398	0.364	0.361	0.415	0.410	0.395	0.386	5.54
56)	T	2-Hexanone	0.014	0.013	0.013	0.015	0.015	0.014	0.014#	6.89

(#) = Out of Range ### Number of calibration levels exceeded format ###

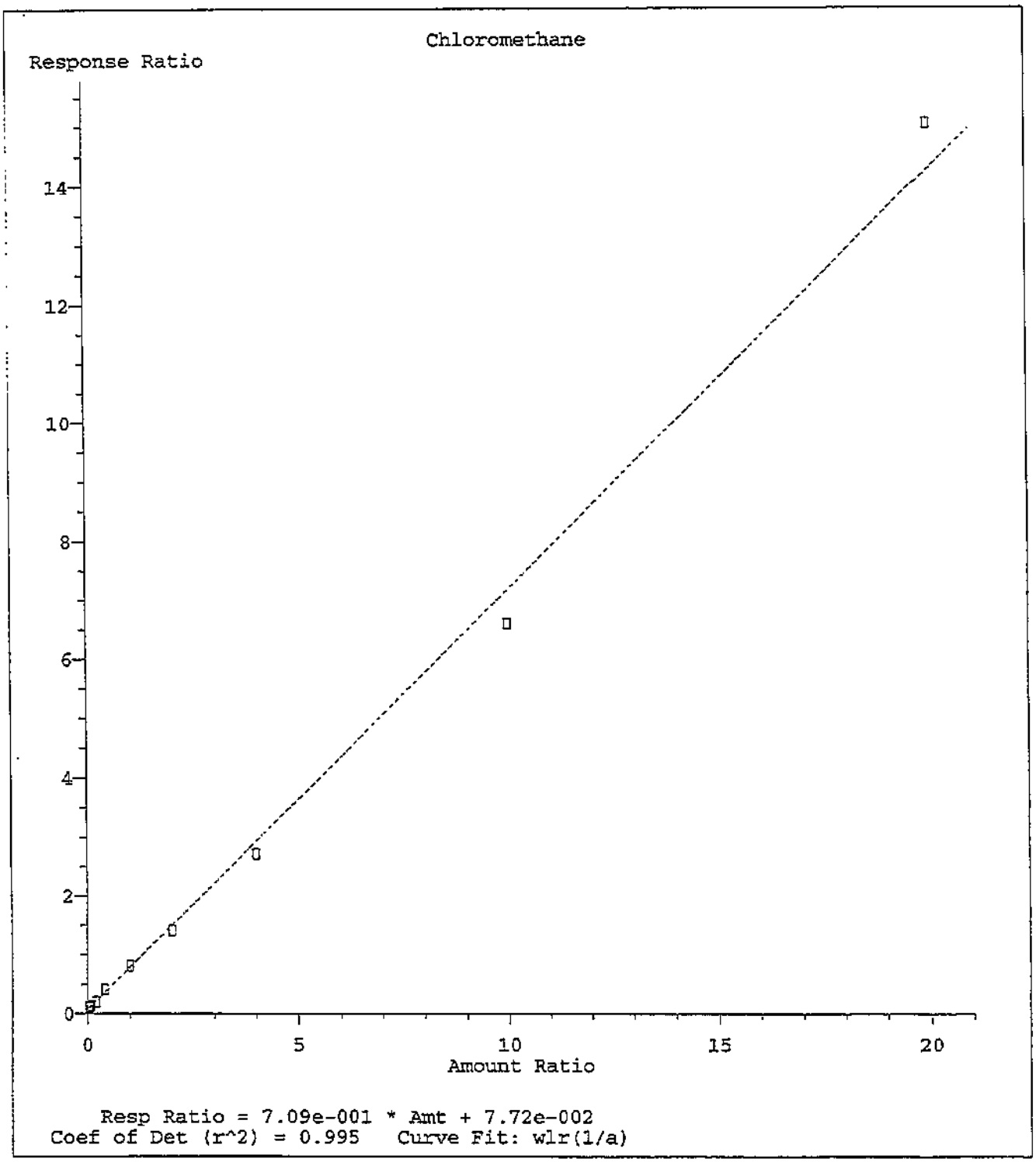
Response Factor Report VOAInst#3

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration

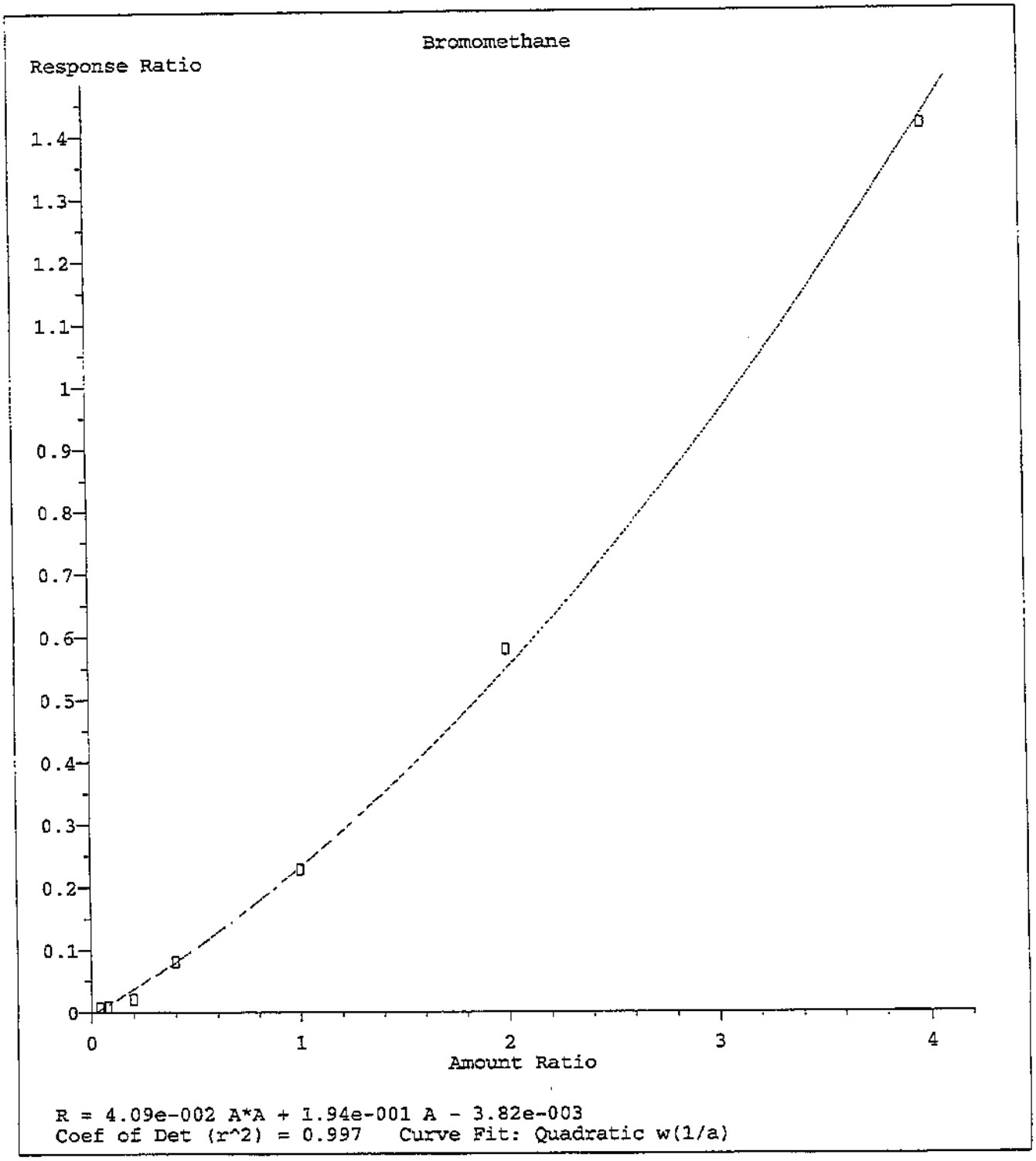
Calibration Files
0.4 =AG17980.D 0.8 =AG17981.D 2.0 =AG17982.D
4.0 =AG17983.D 10 =AG17984.D 20 =AG17985.D

		Compound	0.4	0.8	2.0	4.0	10	20	Avg		%RSD
57)	T	Dibromochlorome	0.259	0.212	0.218	0.267	0.273	0.269	0.257		9.71
58)	T	1,2-Dibromoetha	0.223	0.206	0.215	0.236	0.240	0.231	0.226		4.92
59)	I	D5-Chlorobenzene(I)	----------ISTD----------								
60)	S	Ethylbenzene-d1	8.658	6.796	6.495	7.830	7.693	7.445	7.468		9.48
61)	MTP	Chlorobenzene	4.923	4.196	4.006	4.895	4.664	4.507	4.384		9.23
62)	T	1,1,1,2-Tetrach	1.400	1.153	1.165	1.394	1.420	1.426	1.344		8.17
63)	CT	Ethylbenzene	8.438	6.733	6.747	8.412	8.094	7.791	7.658		9.26
64)	T	m,p-Xylene	3.139	2.507	2.671	3.192	3.108	3.002	2.866		10.98
65)	T	o-Xylene	6.024	4.807	5.108	6.267	6.226	6.052	5.638		11.82
66)	T	Styrene	3.869	3.419	3.611	4.610	4.683	4.643	4.227		11.91
67)	TP	Bromoform	0.675	0.572	0.584	0.644	0.718	0.728	0.682		9.98
68)	T	Isopropylbenzen	7.518	6.297	6.315	7.971	7.757	7.537	7.007		14.52
69)	S	Bromofluorobenz	2.100	1.571	1.541	1.903	1.784	1.718	1.719		11.22
70)	T	Bromobenzene	1.819	1.476	1.545	1.850	1.777	1.740	1.682		7.68
71)	TP	1,1,2,2-Tetrach	2.567	2.273	1.949	1.882	2.111	2.010	2.025		12.85
72)	T	1,2,3-Trichloro	0.467	0.388	0.386	0.390	0.413	0.359	0.374		13.33
73)	T	n-Propylbenzene	0.984	0.828	0.819	1.040	0.961	0.914	0.916	E1	9.37
74)	T	2-Chlorotoluene	1.795	1.453	1.528	1.960	1.830	1.761	1.720		9.21
75)	T	4-Chlorotoluene	1.992	1.560	1.609	1.979	1.856	1.772	1.774		8.69
76)	T	1,3,5-Trimethyl	5.907	4.793	5.089	6.581	6.162	5.966	5.651		13.03
77)	T	t-Butylbenzene	5.647	4.592	4.507	5.600	5.486	5.421	5.178		9.31
78)	T	1,2,4-Trimethyl	6.432	5.176	5.204	6.569	6.091	5.873	5.734		11.58
79)	T	sec-Butylbenzen	7.979	6.872	6.892	8.819	7.978	7.696	7.728		8.92
80)	T	4-Isopropyltolu	6.519	5.392	5.621	7.400	6.546	6.212	6.123		13.96
81)	T	1,3-Dichloroben	3.565	3.081	3.063	3.778	3.381	3.225	3.254		8.61
82)	I	1,4-Dichlorobenzene-d	----------ISTD----------								
83)	T	1,4-Dichloroben	1.979	1.391	1.407	1.833	1.524	1.427	1.548		13.60
84)	T	n-Butylbenzene	0.872	0.679	0.623	0.893	0.700	0.644	0.733		12.83
85)	T	1,2-Dichloroben	1.655	1.321	1.264	1.594	1.437	1.336	1.411		9.30
86)	T	1,2-Dibromo-3-c	0.130	0.093	0.081	0.080	0.090	0.084	0.092#		16.58
87)	T	1,3,5-Trichloro	1.625	1.111	1.103	1.439	1.086	0.987	1.179		17.78
88)	T	1,2,4-Trichloro	1.426	0.928	0.947	1.235	0.918	0.850	1.005		19.15
89)	T	Hexachlorobutad	0.858	0.566	0.559	0.789	0.580	0.530	0.631		18.15
90)	T	Naphthalene	2.840	1.958	1.665	2.055	1.814	1.712	1.917		19.24
91)	T	1,2,3-Trichloro	1.333	0.896	0.806	1.089	0.844	0.794	0.918		19.56

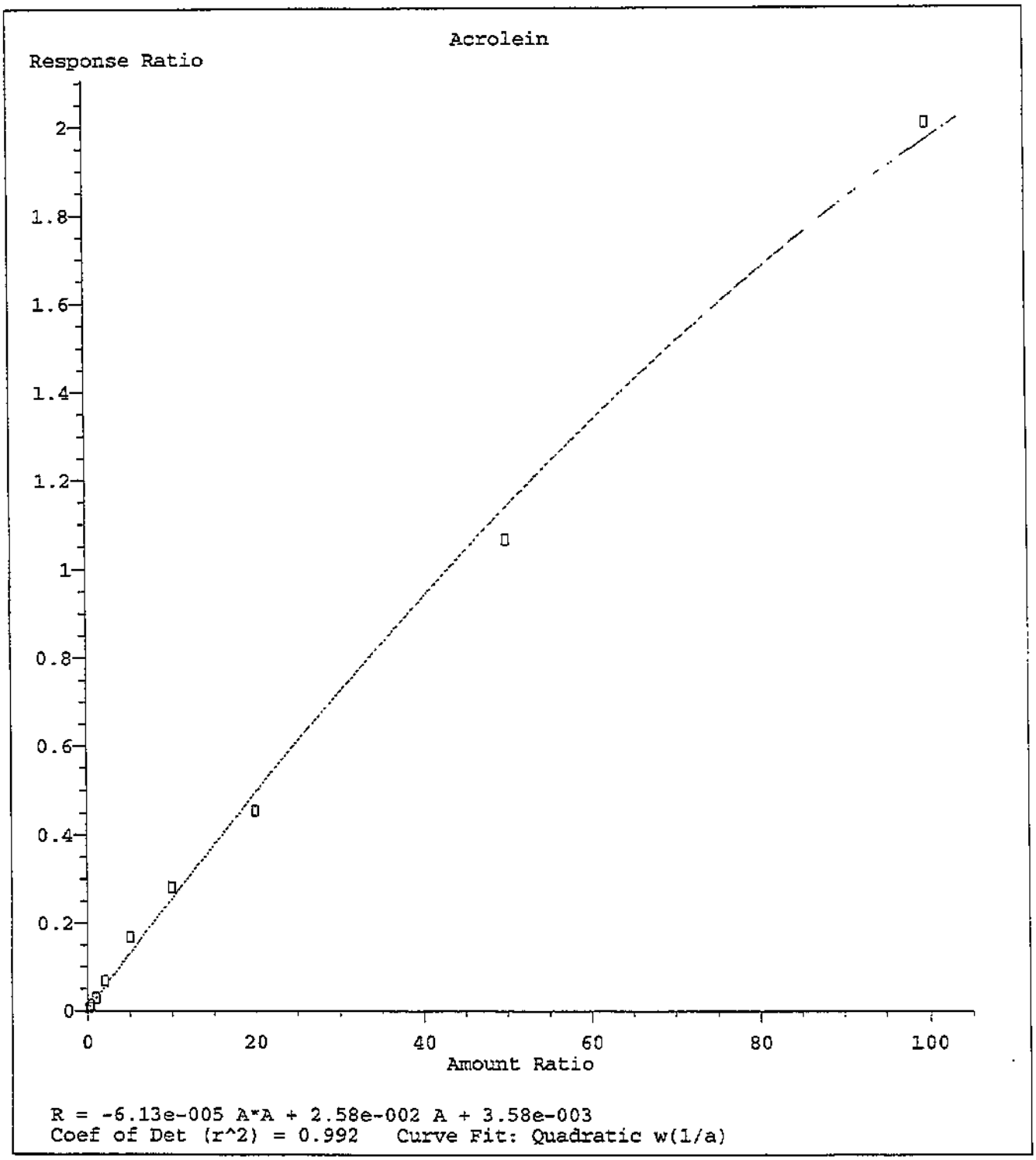
(#) = Out of Range ### Number of calibration levels exceeded format ###



Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004

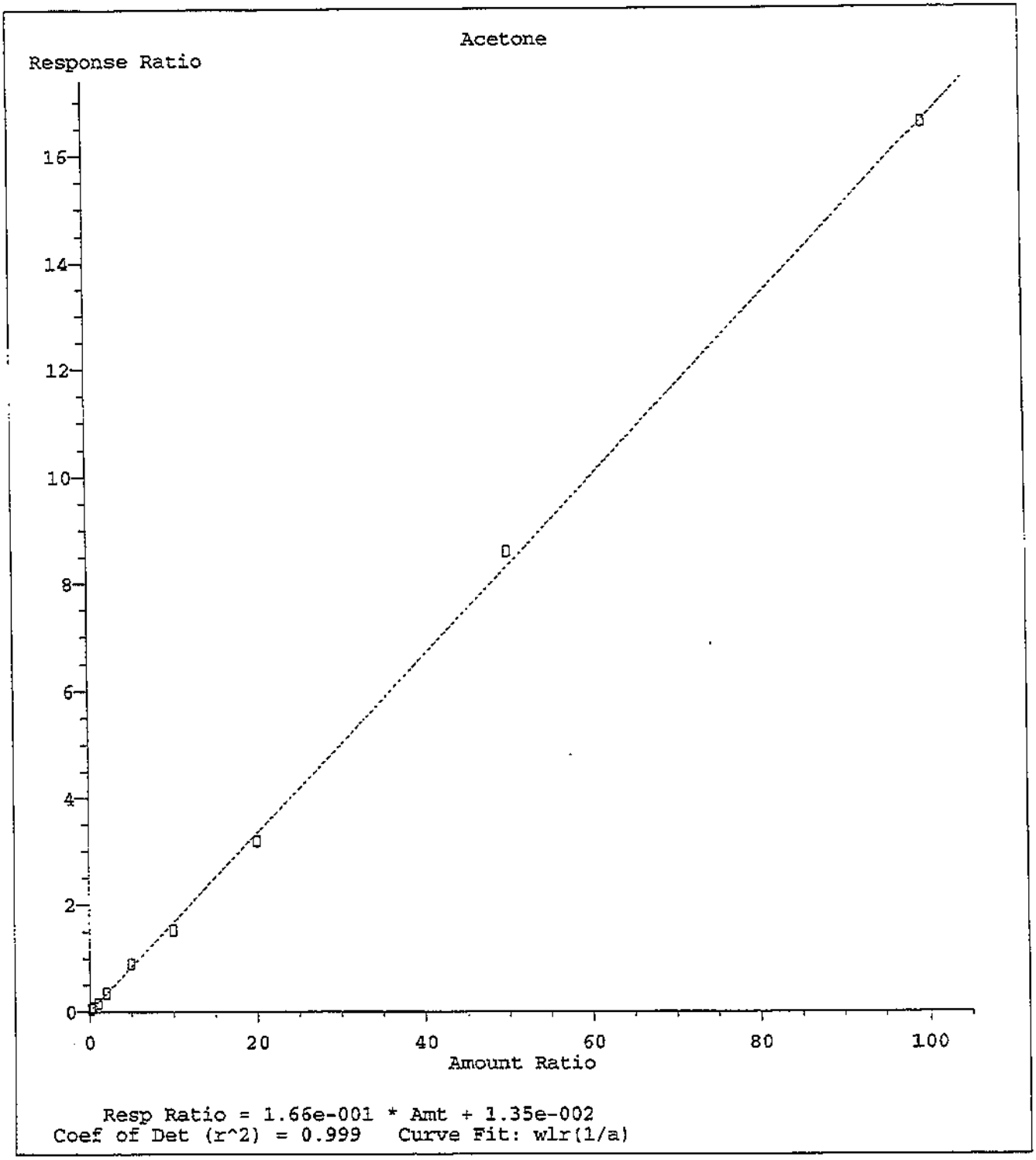


Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004

000077



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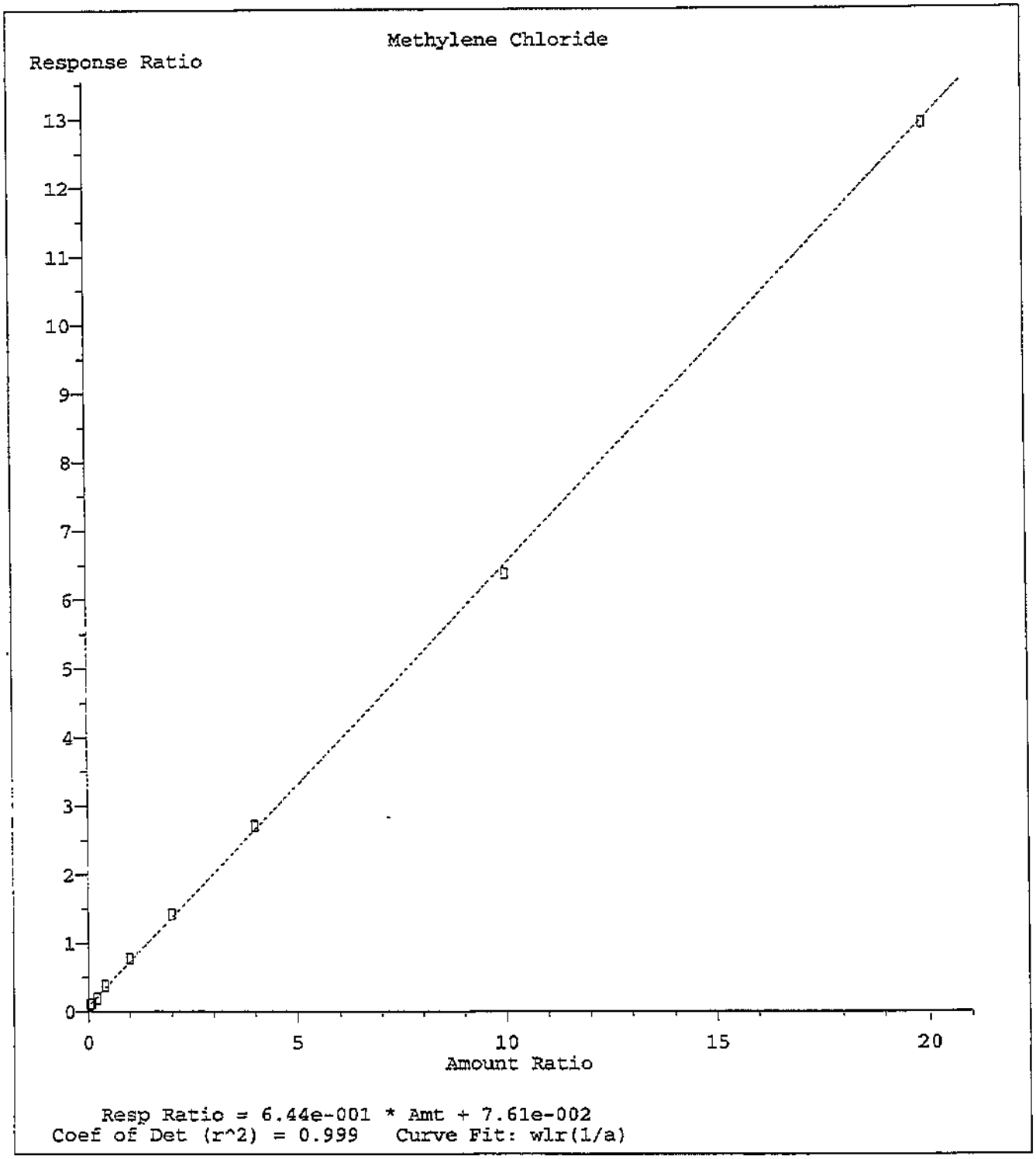
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



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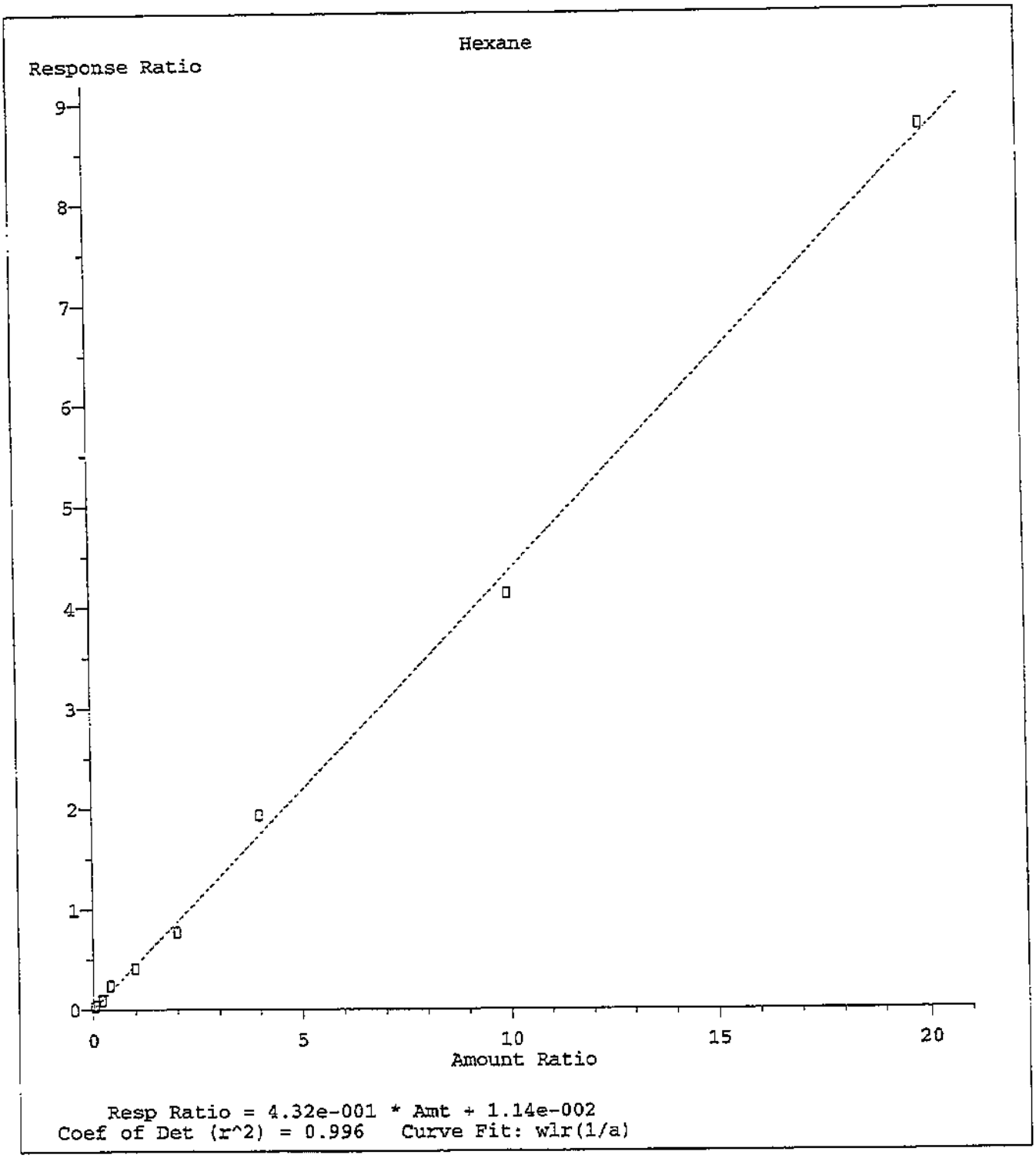
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



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Calibration Table Last Updated: Wed Sep 01 18:31:03 2004

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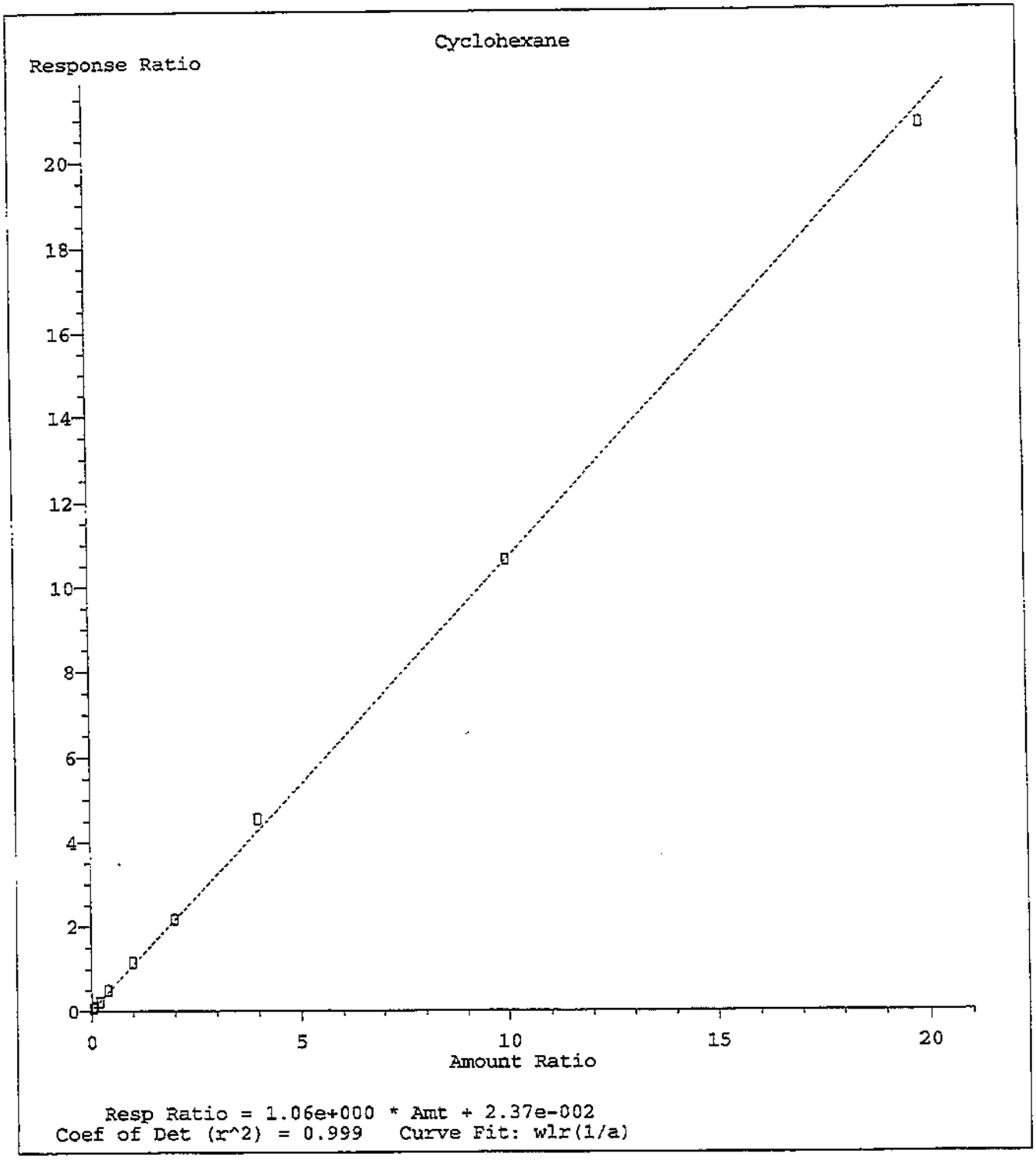

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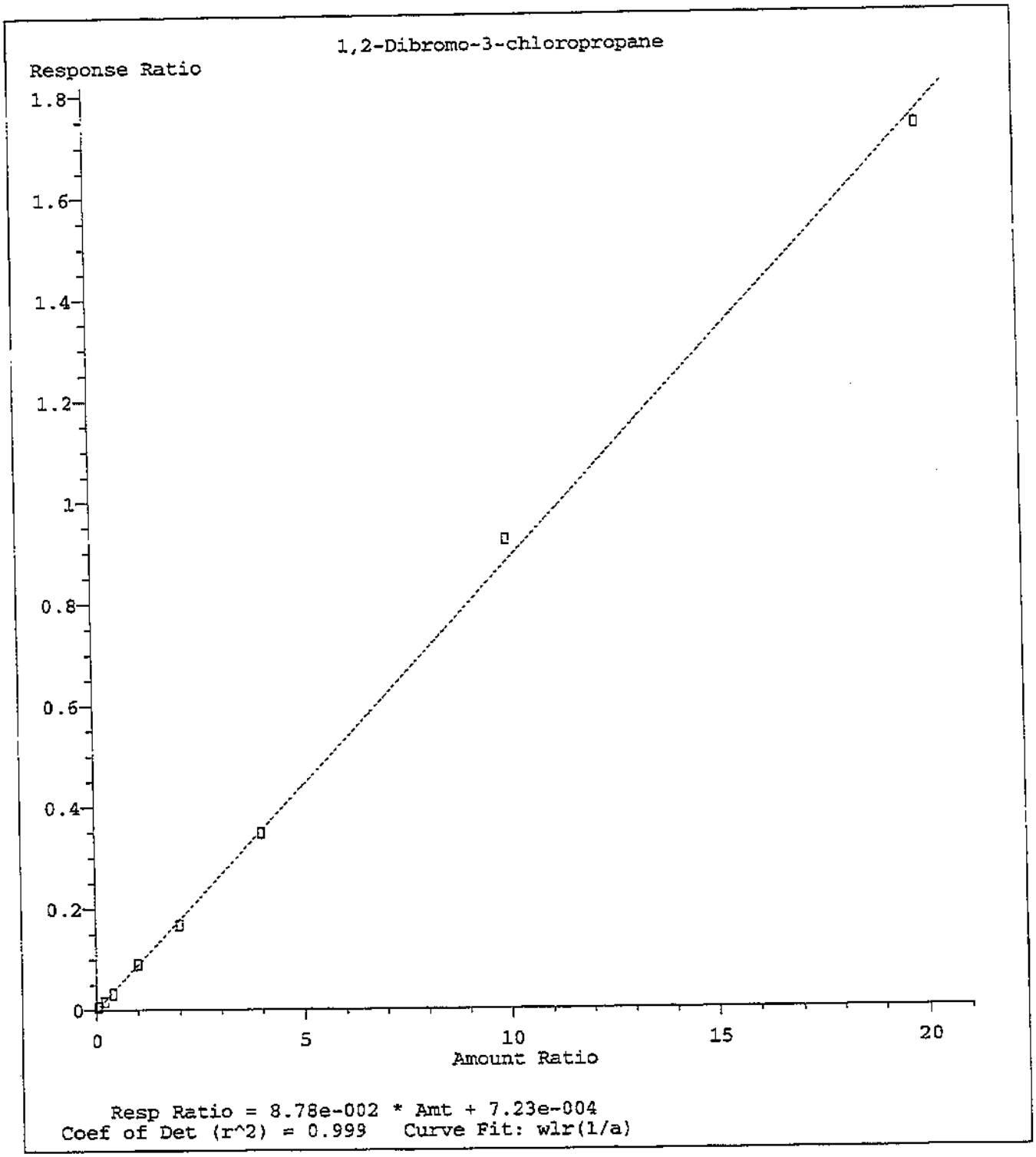
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



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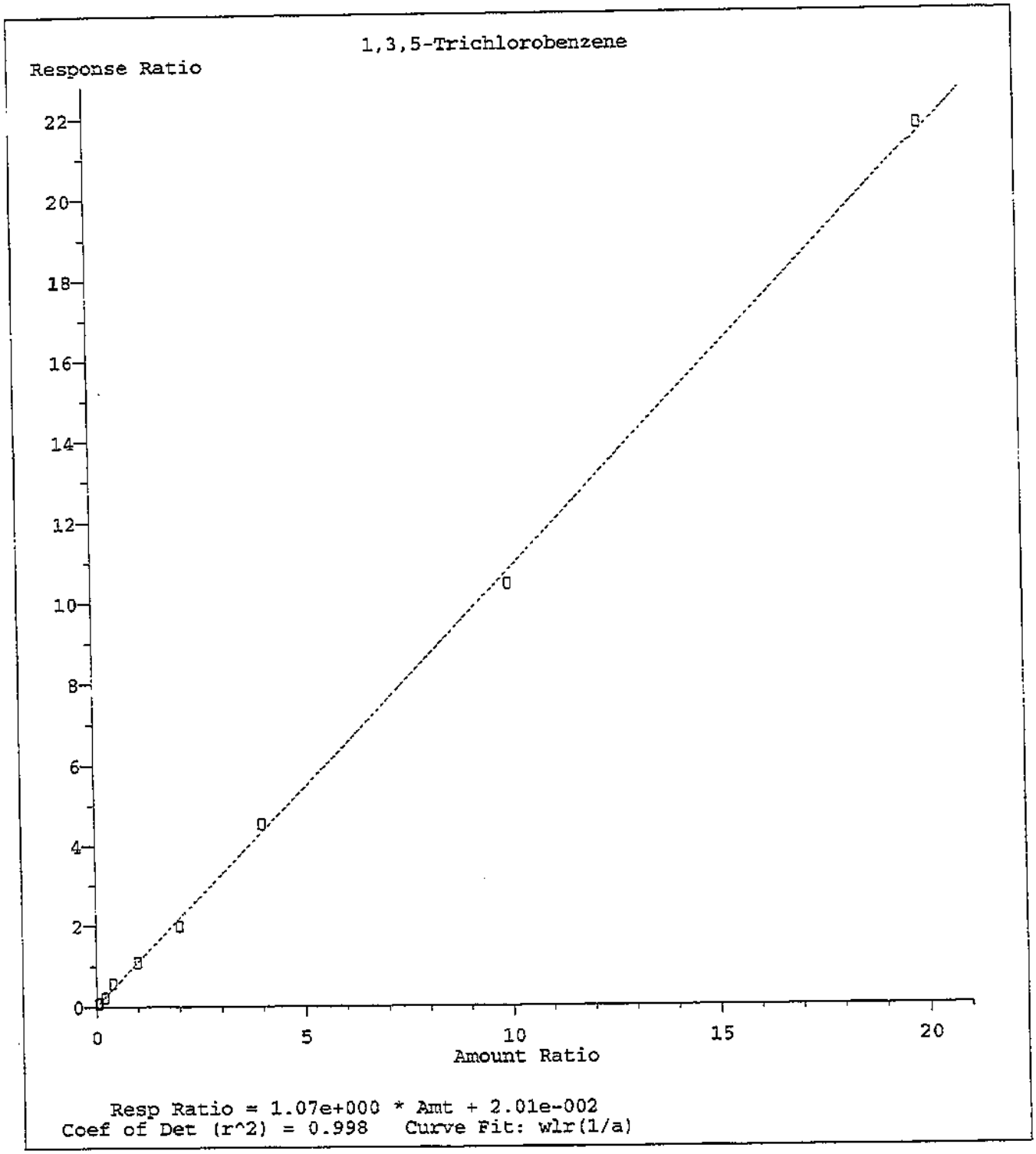
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



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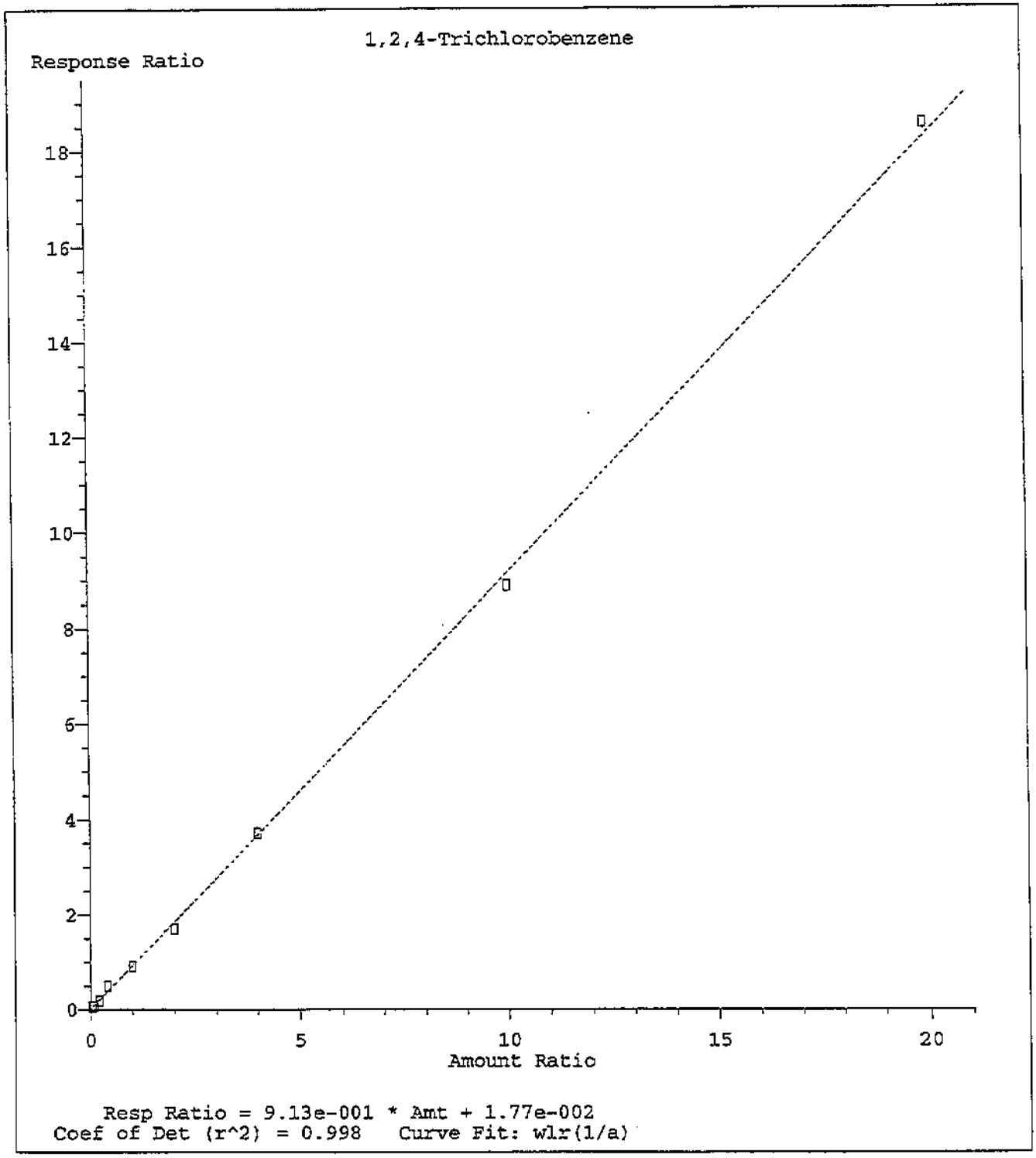
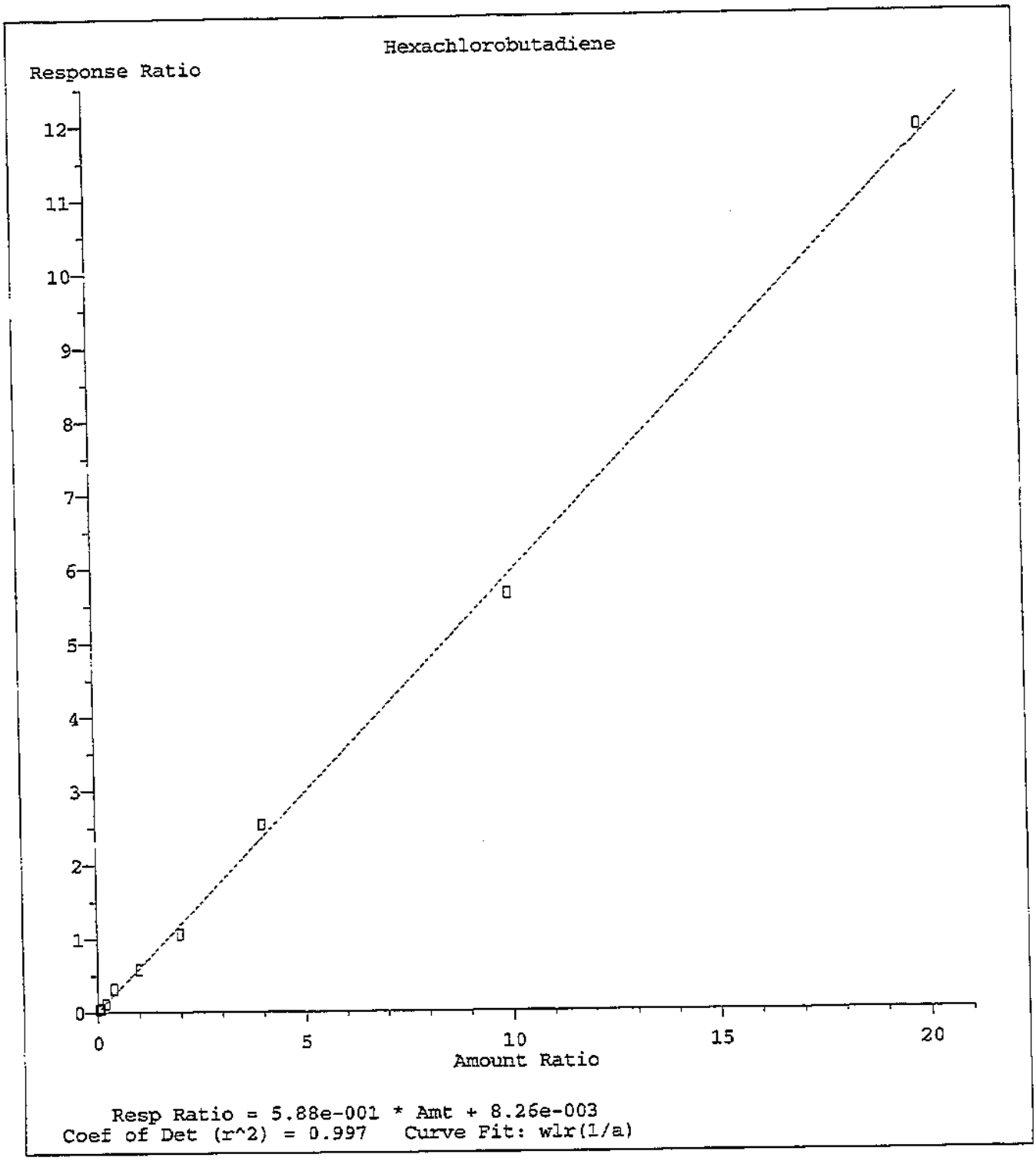
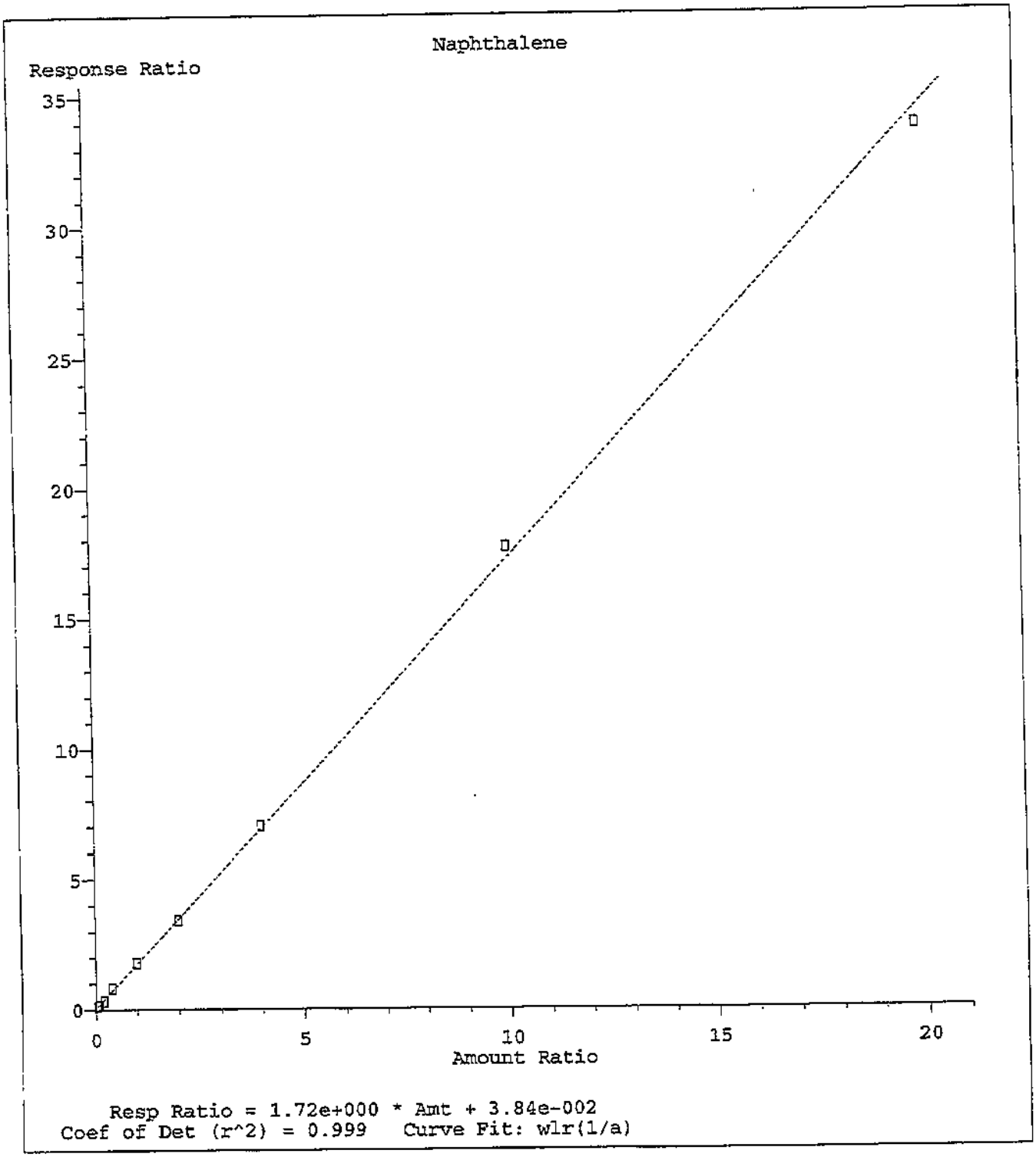
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



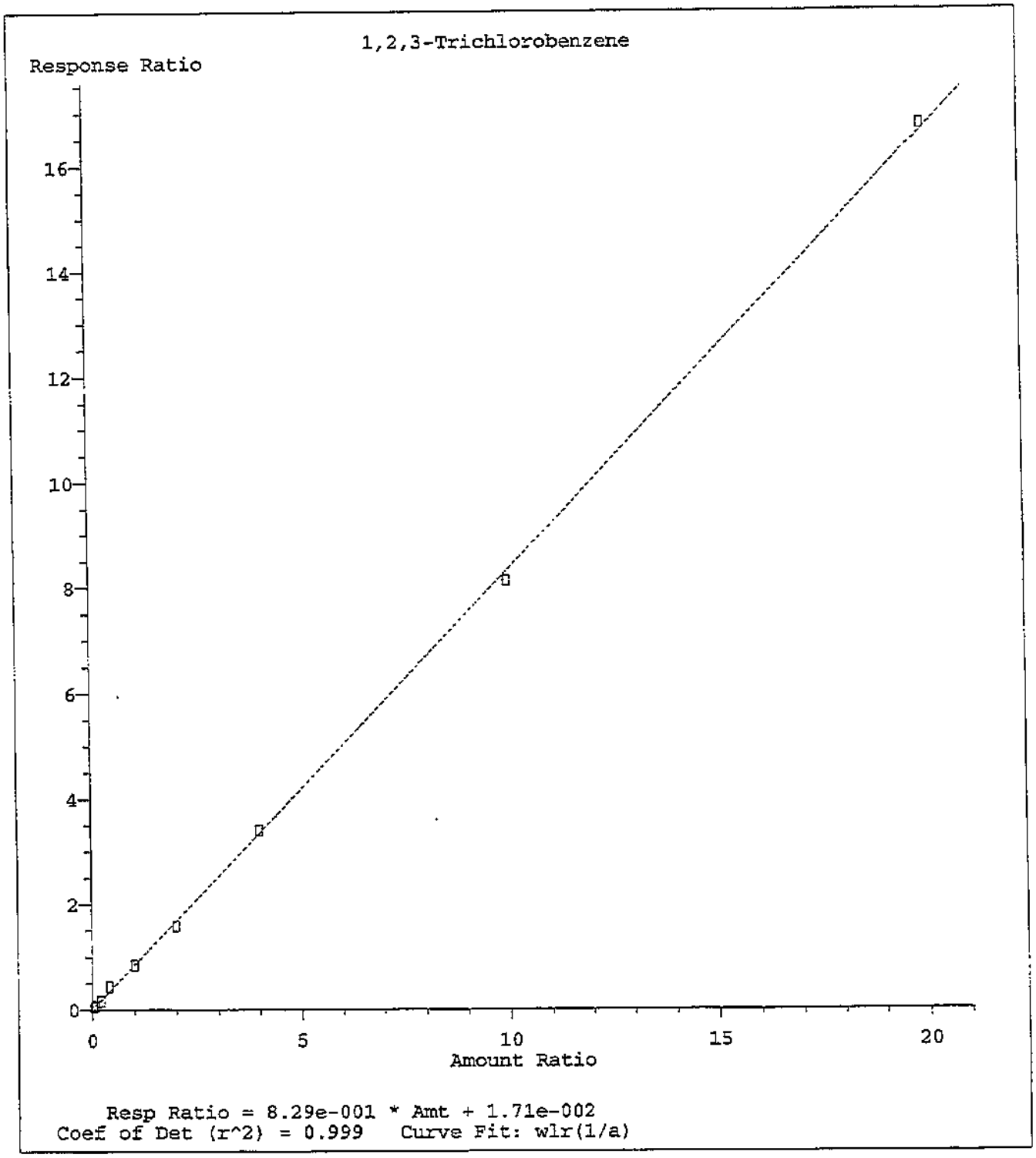
Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004



Method Name: E:\METHODS\09012004_LOWSOIL_8260.M
Calibration Table Last Updated: Wed Sep 01 18:31:03 2004

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17980.D
Acq On : 1 Sep 2004 11:33 am
Sample : 0.4 ug/Kg MDL / Initial calibration
Misc : soil #5.000 12493903
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:02 2004

Vial: 4
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.54	168	625981	10.00	ug/Kg	-0.01
40) 1,4-Difluorobenzene(I)	7.37	114	1036776	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	219040	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	456844	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	40409	1.22	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	=	12.20%#	
39) Fluorobenzene(S)	7.25	96	157873	1.11	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	11.10%#	
41) Trifluorotoluene(S)	7.98	146	64771	1.09	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	=	5.45%#	
50) Toluene-d8(S)	9.03	98	149263	1.19	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	11.90%#	
60) Ethylbenzene-d10(S)	10.74	98	189652	1.16	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery	=	11.60%#	
69) Bromofluorobenzene(S)	12.09	174	46001	1.22	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	=	12.20%#	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	20214	0.49	ug/Kg#	64
3) Chloromethane	1.91	50	66798	0.42	ug/Kg	99
4) Vinyl Chloride	2.02	62	21441	0.52	ug/Kg	97
5) Bromomethane	2.45	94	5011	0.60	ug/Kg	77
7) Trichlorofluoromethane	2.95	101	25202	0.44	ug/Kg	96
9) Ethyl ether	3.36	59	47784	2.11	ug/Kg	97
10) 1,1-Dichloroethene	3.67	96	13391	0.44	ug/Kg	91
11) 1,1,2-Trichlorotrifluoroet	3.67	151	13962	0.46	ug/Kg	97
12) Carbon Disulfide	3.95	76	44845	0.39	ug/Kg	93
14) tert-Butyl alcohol	5.73	59	33533	2.05	ug/Kg#	91
15) Methylene Chloride	4.34	49	62725	0.37	ug/Kg	92
16) Methyl tert-Butyl ether	4.69	73	27374	0.41	ug/Kg	97
17) trans-1,2-Dichloroethene	4.69	96	15424	0.43	ug/Kg	94
18) Acrylonitrile	4.65	53	15721	2.22	ug/Kg	93
19) Hexane	5.04	56	18266	0.41	ug/Kg	95
20) Diisopropyl ether	5.30	45	45112	0.42	ug/Kg	96
21) 1,1-Dichloroethane	5.21	63	25289	0.41	ug/Kg	96
22) Vinyl Acetate	5.28	43	98895	2.25	ug/Kg#	97
23) Ethyl tert-butyl ether	5.73	87	12458	0.38	ug/Kg#	81
24) 2,2-Dichloropropane	5.90	77	24296	0.51	ug/Kg	84
25) cis-1,2-Dichloroethene	5.92	96	14705	0.40	ug/Kg#	66
26) 2-Butanone	5.92	57	2060	1.95	ug/Kg#	51
27) Ethyl acetate	6.01	45	5684	2.12	ug/Kg	94
28) Bromochloromethane	6.20	49	11898	0.48	ug/Kg	78
29) Chloroform	6.30	85	16578	0.43	ug/Kg	95
30) 1,1,1-Trichloroethane	6.49	97	21697	0.41	ug/Kg#	14
31) Cyclohexane	6.55	56	41160	0.40	ug/Kg	90
33) Carbon Tetrachloride	6.69	119	17444	0.41	ug/Kg	88
35) tert-Amyl methyl ether	7.03	73	24214	0.37	ug/Kg#	84
36) Benzene	6.92	78	61119	0.44	ug/Kg	98
37) iso-Butyl alcohol	6.86	43	25374	36.81	ug/Kg	90
38) 1,2-Dichloroethane	6.95	62	16703	0.44	ug/Kg	91
42) Trichloroethene	7.66	130	16350	0.41	ug/Kg	91
43) n-Butyl alcohol	7.60	41	13730	44.64	ug/Kg	95
44) Methylcyclohexane	7.85	55	22515	0.43	ug/Kg#	74
45) 1,2-Dichloropropane	7.90	63	13974	0.41	ug/Kg	92

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

00088

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17980.D
Acq On : 1 Sep 2004 11:33 am
Sample : 0.4 ug/Kg MDL / Initial calibration
Misc : soil #5.000 12493903
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:02 2004

Vial: 4
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

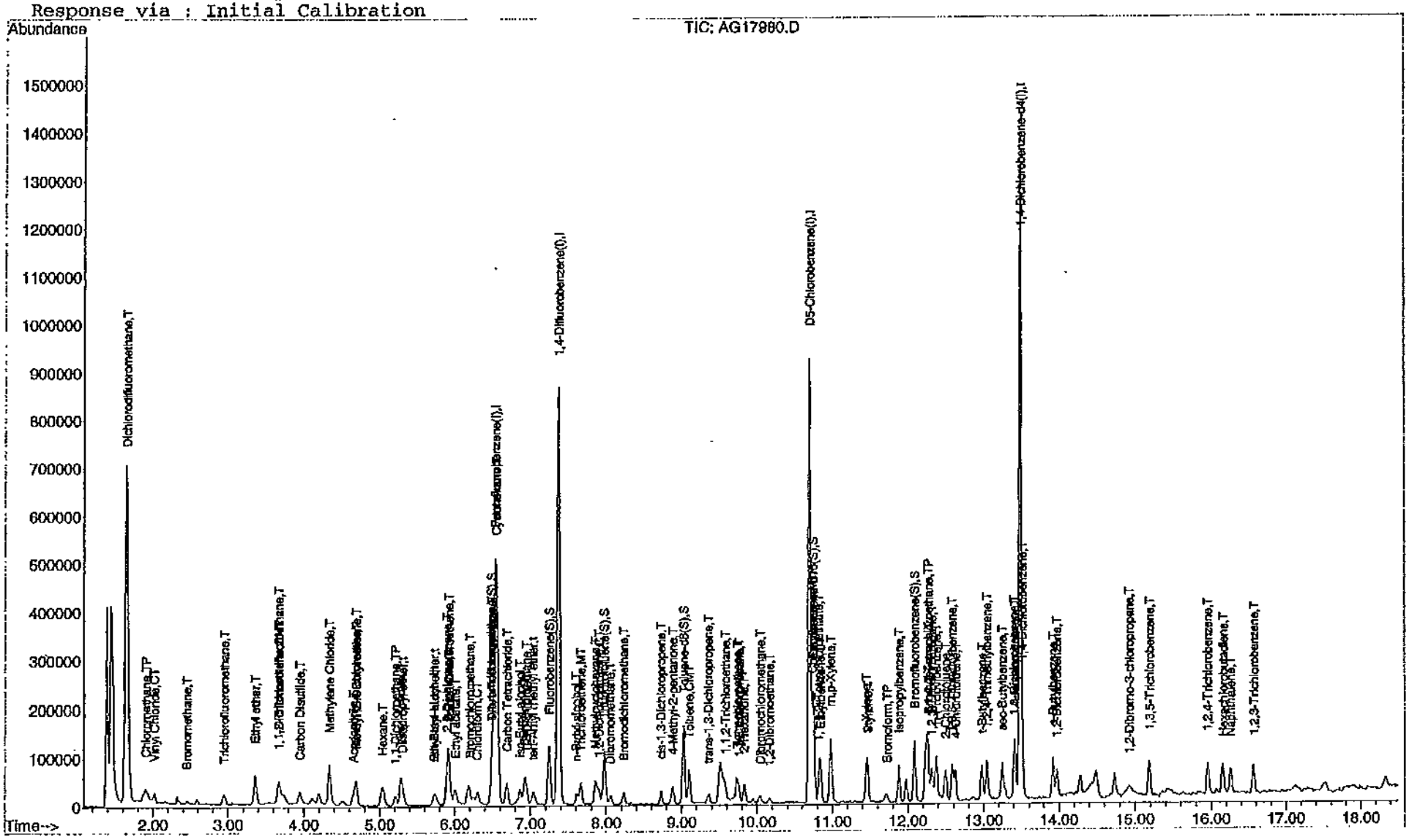
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Dibromomethane	8.05	174	6874	0.41 ug/Kg	97
47)	Bromodichloromethane	8.23	83	17129	0.42 ug/Kg	90
48)	cis-1,3-Dichloropropene	8.73	75	16764	0.36 ug/Kg	91
49)	4-Methyl-2-pentanone	8.88	85	6147	1.93 ug/Kg#	88
51)	Toluene	9.10	91	69594	0.46 ug/Kg	99
52)	trans-1,3-Dichloropropene	9.35	75	15064	0.40 ug/Kg	82
53)	1,1,2-Trichloroethane	9.58	97	14072	0.54 ug/Kg	72
54)	Tetrachloroethene	9.74	164	14689	0.48 ug/Kg	96
55)	1,3-Dichloropropane	9.76	76	16500	0.41 ug/Kg	89
56)	2-Hexanone	9.83	85	2889	2.01 ug/Kg#	82
57)	Dibromochloromethane	10.04	129	10727	0.40 ug/Kg	87
58)	1,2-Dibromoethane	10.16	107	9247	0.39 ug/Kg	98
61)	Chlorobenzene	10.73	112	43134	0.45 ug/Kg	81
62)	1,1,1,2-Tetrachloroethane	10.82	131	12262	0.42 ug/Kg	90
63)	Ethylbenzene	10.84	91	73934	0.44 ug/Kg	95
64)	m,p-Xylene	10.97	106	55014	0.88 ug/Kg	99
65)	o-Xylene	11.45	91	52779	0.43 ug/Kg	95
66)	Styrene	11.47	104	33901	0.37 ug/Kg	91
67)	Bromoform	11.72	173	5914	0.40 ug/Kg#	73
68)	Isopropylbenzene	11.88	105	65869	0.43 ug/Kg	96
70)	Bromobenzene	12.27	156	15940	0.43 ug/Kg#	77
71)	1,1,2,2-Tetrachloroethane	12.27	83	22493+	0.51 ug/Kg	92
72)	1,2,3-Trichloropropane	12.32	110	4089	0.50 ug/Kg#	58
73)	n-Propylbenzene	12.38	91	86174	0.43 ug/Kg	96
74)	2-Chlorotoluene	12.50	126	15730	0.42 ug/Kg	93
75)	4-Chlorotoluene	12.63	126	17453	0.45 ug/Kg#	70
76)	1,3,5-Trimethylbenzene	12.58	105	51755	0.42 ug/Kg	98
77)	t-Butylbenzene	12.98	119	49477	0.44 ug/Kg	97
78)	1,2,4-Trimethylbenzene	13.04	105	56358	0.45 ug/Kg	96
79)	sec-Butylbenzene	13.25	105	69906	0.41 ug/Kg	97
80)	4-Isopropyltoluene	13.42	119	57119	0.43 ug/Kg	94
81)	1,3-Dichlorobenzene	13.40	146	31239	0.44 ug/Kg	97
83)	1,4-Dichlorobenzene	13.51	146	36169	0.51 ug/Kg	89
84)	n-Butylbenzene	13.92	134	15930	0.48 ug/Kg	94
85)	1,2-Dichlorobenzene	13.97	146	30238	0.47 ug/Kg	97
86)	1,2-Dibromo-3-chloropropan	14.93	75	2381	0.51 ug/Kg#	82
87)	1,3,5-Trichlorobenzene	15.19	180	29702	0.42 ug/Kg	100
88)	1,2,4-Trichlorobenzene	15.95	180	26060	0.43 ug/Kg	97
89)	Hexachlorobutadiene	16.16	225	15687	0.44 ug/Kg	90
90)	Naphthalene	16.26	128	51900	0.44 ug/Kg	97
91)	1,2,3-Trichlorobenzene	16.57	180	24367	0.44 ug/Kg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

00089

Data File : E:\DATA\09012004\AG17980.D Vial: 4
Acq On : 1 Sep 2004 11:33 am Operator: frz
Sample : 0.4 ug/Kg MDL / Initial calibration Inst : VOAInst#3
Misc : soil #5.000 12493903 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004 Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17981.D
Acq On : 1 Sep 2004 11:58 am
Sample : 0.8 ug/Kg Initial calibration
Misc : soil #5.000 12493924
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:10 2004

Vial: 5
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.54	168	601221	10.00	ug/Kg	-0.01
40) 1,4-Difluorobenzene(I)	7.37	114	1009147	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	212648	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	458979	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	60145	1.90	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	=	19.00%#	
39) Fluorobenzene(S)	7.25	96	254509	1.87	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	18.70%#	
41) Trifluorotoluene(S)	7.98	146	104552	1.81	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	=	9.05%#	
50) Toluene-d8(S)	9.03	98	230596	1.88	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	18.80%#	
60) Ethylbenzene-d10(S)	10.74	98	289028	1.82	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery	=	18.20%#	
69) Bromofluorobenzene(S)	12.09	174	66818	1.83	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	=	18.30%#	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	34655	0.87	ug/Kg	84
3) Chloromethane	1.91	50	81254	0.82	ug/Kg	99
4) Vinyl Chloride	2.02	62	33254	0.84	ug/Kg	85
5) Bromomethane	2.45	94	5689	0.67	ug/Kg	95
6) Chloroethane	2.58	64	19487	0.84	ug/Kg	93
7) Trichlorofluoromethane	2.93	101	42080	0.76	ug/Kg	93
8) Acrolein	3.53	56	7663	3.56	ug/Kg	84
9) Ethyl ether	3.36	59	82228	3.78	ug/Kg	99
10) 1,1-Dichloroethene	3.67	96	21797	0.74	ug/Kg	94
11) 1,1,2-Trichlorotrifluoroet	3.68	151	22552	0.77	ug/Kg	94
12) Carbon Disulfide	3.95	76	74031	0.66	ug/Kg	92
13) Acetone	3.73	43	50053	4.20	ug/Kg	92
14) tert-Butyl alcohol	5.73	59	53423	3.39	ug/Kg#	92
15) Methylene Chloride	4.32	49	73554	0.72	ug/Kg	92
16) Methyl tert-Butyl ether	4.68	73	49410	0.77	ug/Kg	96
17) trans-1,2-Dichloroethene	4.69	96	26534	0.77	ug/Kg	98
18) Acrylonitrile	4.65	53	28114	4.14	ug/Kg	96
19) Hexane	5.05	56	24665	0.69	ug/Kg	78
20) Diisopropyl ether	5.29	45	74146	0.72	ug/Kg	98
21) 1,1-Dichloroethane	5.21	63	45410	0.77	ug/Kg	97
22) Vinyl Acetate	5.28	43	170977	4.06	ug/Kg#	97
23) Ethyl tert-butyl ether	5.73	87	21451	0.68	ug/Kg#	92
24) 2,2-Dichloropropane	5.91	77	33621	0.73	ug/Kg	93
25) cis-1,2-Dichloroethene	5.92	96	27677	0.78	ug/Kg	95
26) 2-Butanone	5.92	57	4797	4.73	ug/Kg#	67
27) Ethyl acetate	6.01	45	10846	4.20	ug/Kg	99
28) Bromochloromethane	6.20	49	18149	0.75	ug/Kg	94
29) Chloroform	6.30	85	28702	0.77	ug/Kg	96
30) 1,1,1-Trichloroethane	6.49	97	38216	0.75	ug/Kg#	55
31) Cyclohexane	6.55	56	58957	0.70	ug/Kg	90
33) Carbon Tetrachloride	6.69	119	29817	0.73	ug/Kg	94
35) tert-Amyl methyl ether	7.04	73	45538	0.72	ug/Kg	94
36) Benzene	6.92	78	103201	0.78	ug/Kg	98
37) iso-Butyl alcohol	6.86	43	45430	68.62	ug/Kg	91
38) 1,2-Dichloroethane	6.95	62	28099	0.76	ug/Kg	92
42) Trichloroethene	7.66	130	27969	0.72	ug/Kg	93

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17981.D
Acq On : 1 Sep 2004 11:58 am
Sample : 0.8 ug/Kg Initial calibration
Misc : soil #5.000 12493924
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:10 2004

Vial: 5
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00
Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) n-Butyl alcohol	7.60	41	19041	63.60 ug/Kg	88
44) Methylcyclohexane	7.85	55	36804	0.72 ug/Kg#	78
45) 1,2-Dichloropropane	7.90	63	23980	0.72 ug/Kg	85
46) Dibromomethane	8.05	174	11322	0.69 ug/Kg	93
47) Bromodichloromethane	8.23	83	26726	0.68 ug/Kg	97
48) cis-1,3-Dichloropropene	8.73	75	31738	0.71 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	10914	3.51 ug/Kg#	69
51) Toluene	9.10	91	112062	0.76 ug/Kg	100
52) trans-1,3-Dichloropropene	9.35	75	24434	0.67 ug/Kg	83
53) 1,1,2-Trichloroethane	9.57	97	21570	0.86 ug/Kg	86
54) Tetrachloroethene	9.74	164	21160	0.71 ug/Kg	92
55) 1,3-Dichloropropane	9.75	76	29396	0.75 ug/Kg	95
56) 2-Hexanone	9.84	85	5075	3.64 ug/Kg#	81
57) Dibromochloromethane	10.03	129	17111	0.66 ug/Kg	95
58) 1,2-Dibromoethane	10.16	107	16638	0.73 ug/Kg	95
61) Chlorobenzene	10.73	112	71388	0.77 ug/Kg	84
62) 1,1,1,2-Tetrachloroethane	10.82	131	19619	0.69 ug/Kg	96
63) Ethylbenzene	10.84	91	114536	0.70 ug/Kg	97
64) m,p-Xylene	10.97	106	85301	1.40 ug/Kg	90
65) o-Xylene	11.45	91	81775	0.68 ug/Kg	96
66) Styrene	11.47	104	58155	0.65 ug/Kg	87
67) Bromoform	11.71	173	9725	0.67 ug/Kg	80
68) Isopropylbenzene	11.88	105	107125	0.72 ug/Kg	98
70) Bromobenzene	12.27	156	25115	0.70 ug/Kg#	69
71) 1,1,2,2-Tetrachloroethane	12.27	83	38674+	0.90 ug/Kg	96
72) 1,2,3-Trichloropropane	12.32	110	6604	0.83 ug/Kg#	28
73) n-Propylbenzene	12.38	91	140793	0.72 ug/Kg	96
74) 2-Chlorotoluene	12.50	126	24724	0.68 ug/Kg	88
75) 4-Chlorotoluene	12.62	126	26530	0.70 ug/Kg#	69
76) 1,3,5-Trimethylbenzene	12.58	105	81538	0.68 ug/Kg	98
77) t-Butylbenzene	12.98	119	78114	0.71 ug/Kg	99
78) 1,2,4-Trimethylbenzene	13.04	105	88048	0.72 ug/Kg	98
79) sec-Butylbenzene	13.25	105	116908	0.71 ug/Kg	99
80) 4-Isopropyltoluene	13.42	119	91736	0.70 ug/Kg	94
81) 1,3-Dichlorobenzene	13.40	146	52411	0.76 ug/Kg	96
83) 1,4-Dichlorobenzene	13.51	146	51085	0.72 ug/Kg	94
84) n-Butylbenzene	13.92	134	24925	0.74 ug/Kg	96
85) 1,2-Dichlorobenzene	13.97	146	48497	0.75 ug/Kg	91
86) 1,2-Dibromo-3-chloropropan	14.93	75	3422	0.77 ug/Kg	86
87) 1,3,5-Trichlorobenzene	15.19	180	40780	0.64 ug/Kg	96
88) 1,2,4-Trichlorobenzene	15.95	180	34062	0.62 ug/Kg	95
89) Hexachlorobutadiene	16.15	225	20765	0.63 ug/Kg	96
90) Naphthalene	16.26	128	71896	0.69 ug/Kg	100
91) 1,2,3-Trichlorobenzene	16.56	180	32889	0.66 ug/Kg	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

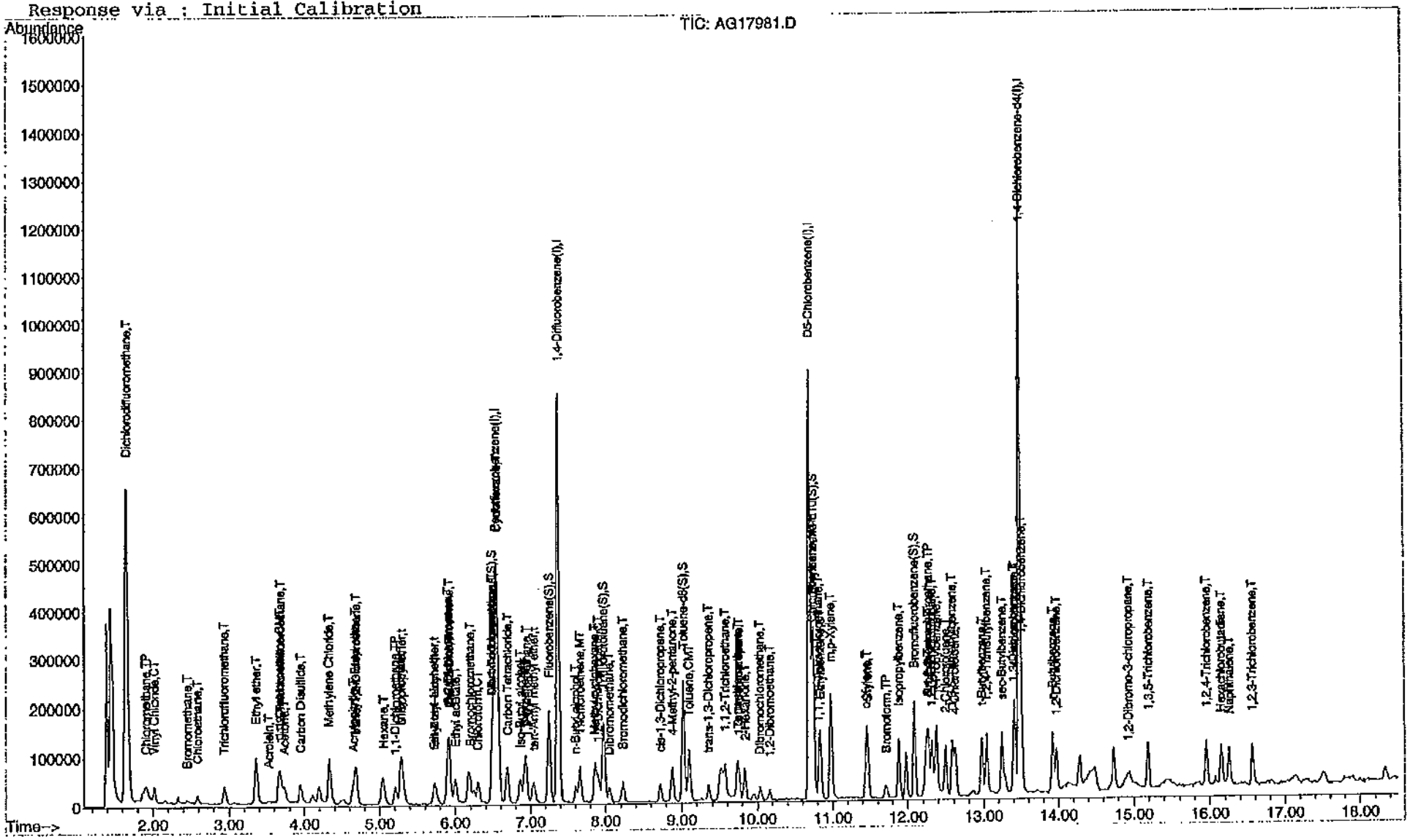
Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17981.D
Acq On : 1 Sep 2004 11:58 am
Sample : 0.8 ug/Kg Initial calibration
Misc : soil #5.000 12493924
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 5
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17982.D
Acq On : 1 Sep 2004 12:24 pm
Sample : 2.0 ug/Kg Initial calibration
Misc : soil #5.000 12493925
IS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:17 2004

Vial: 6
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	637358	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1049838	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	224731	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	484845	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	155720	4.63	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	=	46.30%#	
39) Fluorobenzene(S)	7.25	96	653329	4.53	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	45.30%#	
41) Trifluorotoluene(S)	7.98	146	277058	4.62	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	=	23.10%#	
50) Toluene-d8(S)	9.03	98	590774	4.64	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	=	46.40%#	
60) Ethylbenzene-d10(S)	10.74	98	729820	4.35	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery	=	43.50%#	
69) Bromofluorobenzene(S)	12.09	174	173150	4.48	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	=	44.80%#	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	72977	1.74	ug/Kg	93
3) Chloromethane	1.91	50	129384	1.77	ug/Kg	99
4) Vinyl Chloride	2.02	62	73788	1.76	ug/Kg	93
5) Bromomethane	2.45	94	13339	1.24	ug/Kg	94
6) Chloroethane	2.58	64	42703	1.74	ug/Kg	95
7) Trichlorofluoromethane	2.95	101	99292	1.70	ug/Kg	97
8) Acrolein	3.54	56	18574	9.94	ug/Kg	100
9) Ethyl ether	3.36	59	217988	9.44	ug/Kg	94
10) 1,1-Dichloroethene	3.67	96	57358	1.84	ug/Kg	93
11) 1,1,2-Trichlorotrifluoroet	3.70	151	57813	1.86	ug/Kg	91
12) Carbon Disulfide	3.95	76	192075	1.62	ug/Kg	94
13) Acetone	3.73	43	102442	8.87	ug/Kg	99
14) tert-Butyl alcohol	5.74	59	135407	8.11	ug/Kg#	94
15) Methylene Chloride	4.34	49	120489	1.75	ug/Kg	94
16) Methyl tert-Butyl ether	4.69	73	114927	1.68	ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	64705	1.78	ug/Kg	93
18) Acrylonitrile	4.64	53	59771	8.31	ug/Kg	96
19) Hexane	5.04	56	58196	1.85	ug/Kg#	78
20) Diisopropyl ether	5.30	45	183576	1.67	ug/Kg	95
21) 1,1-Dichloroethane	5.21	63	113306	1.82	ug/Kg	95
22) Vinyl Acetate	5.28	43	359803	8.05	ug/Kg#	96
23) Ethyl tert-butyl ether	5.74	87	52763	1.58	ug/Kg#	90
24) 2,2-Dichloropropane	5.91	77	89898	1.85	ug/Kg	94
25) cis-1,2-Dichloroethene	5.92	96	67792	1.79	ug/Kg	87
26) 2-Butanone	5.92	57	9885	9.20	ug/Kg#	86
27) Ethyl acetate	5.99	45	23315	8.53	ug/Kg	95
28) Bromochloromethane	6.20	49	45557	1.79	ug/Kg	99
29) Chloroform	6.31	85	74702	1.89	ug/Kg	94
30) 1,1,1-Trichloroethane	6.50	97	104814	1.94	ug/Kg	84
31) Cyclohexane	6.55	56	136485	1.80	ug/Kg	94
33) Carbon Tetrachloride	6.69	119	78086	1.80	ug/Kg	93
34) 1,1-Dichloropropene	6.69	75	86221	1.87	ug/Kg	97
35) tert-Amyl methyl ether	7.05	73	110222	1.64	ug/Kg	92
36) Benzene	6.92	78	256922	1.83	ug/Kg	97
37) iso-Butyl alcohol	6.86	43	121960	173.77	ug/Kg	94
38) 1,2-Dichloroethane	6.95	62	74594	1.91	ug/Kg	93

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17982.D
Acq On : 1 Sep 2004 12:24 pm
Sample : 2.0 ug/Kg Initial calibration
Misc : soil #5.000 12493925
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:17 2004

Vial: 6
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	71087	1.76 ug/Kg	95
43) n-Butyl alcohol	7.60	41	50691	162.75 ug/Kg	96
44) Methylcyclohexane	7.87	55	100187	1.89 ug/Kg#	80
45) 1,2-Dichloropropane	7.90	63	64014	1.84 ug/Kg	94
46) Dibromomethane	8.06	174	32575	1.92 ug/Kg	90
47) Bromodichloromethane	8.23	83	73664	1.80 ug/Kg	93
48) cis-1,3-Dichloropropene	8.73	75	81178	1.74 ug/Kg	97
49) 4-Methyl-2-pentanone	8.88	85	30310	9.37 ug/Kg#	87
51) Toluene	9.10	91	278377	1.83 ug/Kg	97
52) trans-1,3-Dichloropropene	9.35	75	65925	1.73 ug/Kg	93
53) 1,1,2-Trichloroethane	9.57	97	47282	1.81 ug/Kg	92
54) Tetrachloroethene	9.73	164	54222	1.74 ug/Kg	88
55) 1,3-Dichloropropane	9.75	76	75694	1.87 ug/Kg	99
56) 2-Hexanone	9.84	85	13216	9.10 ug/Kg	97
57) Dibromochloromethane	10.03	129	45681	1.69 ug/Kg	98
58) 1,2-Dibromoethane	10.16	107	45233	1.91 ug/Kg	97
61) Chlorobenzene	10.73	112	180058	1.83 ug/Kg	87
62) 1,1,1,2-Tetrachloroethane	10.82	131	52380	1.73 ug/Kg	98
63) Ethylbenzene	10.84	91	303248	1.76 ug/Kg	99
64) m,p-Xylene	10.97	106	240142	3.73 ug/Kg	98
65) o-Xylene	11.45	91	229590	1.81 ug/Kg	98
66) Styrene	11.47	104	162314	1.71 ug/Kg	92
67) Bromoform	11.71	173	26242	1.71 ug/Kg	87
68) Isopropylbenzene	11.88	105	283837	1.80 ug/Kg	98
70) Bromobenzene	12.27	156	69456	1.84 ug/Kg#	76
71) 1,1,2,2-Tetrachloroethane	12.27	83	87605+	1.93 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	17344	2.06 ug/Kg	82
73) n-Propylbenzene	12.38	91	367977	1.79 ug/Kg	96
74) 2-Chlorotoluene	12.50	126	68663	1.78 ug/Kg	92
75) 4-Chlorotoluene	12.63	126	72317	1.81 ug/Kg#	62
76) 1,3,5-Trimethylbenzene	12.58	105	228709	1.80 ug/Kg	97
77) t-Butylbenzene	12.98	119	202563	1.74 ug/Kg	96
78) 1,2,4-Trimethylbenzene	13.04	105	233899	1.82 ug/Kg	97
79) sec-Butylbenzene	13.25	105	309767	1.78 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	252625	1.84 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	137663	1.88 ug/Kg	95
83) 1,4-Dichlorobenzene	13.51	146	136387	1.82 ug/Kg	99
84) n-Butylbenzene	13.92	134	60424	1.70 ug/Kg#	84
85) 1,2-Dichlorobenzene	13.97	146	122592	1.79 ug/Kg	98
86) 1,2-Dibromo-3-chloropropan	14.93	75	7891	1.77 ug/Kg	96
87) 1,3,5-Trichlorobenzene	15.18	180	106988	1.87 ug/Kg	96
88) 1,2,4-Trichlorobenzene	15.95	180	91845	1.88 ug/Kg	96
89) Hexachlorobutadiene	16.15	225	54172	1.76 ug/Kg	96
90) Naphthalene	16.26	128	161480	1.72 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	78175	1.74 ug/Kg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

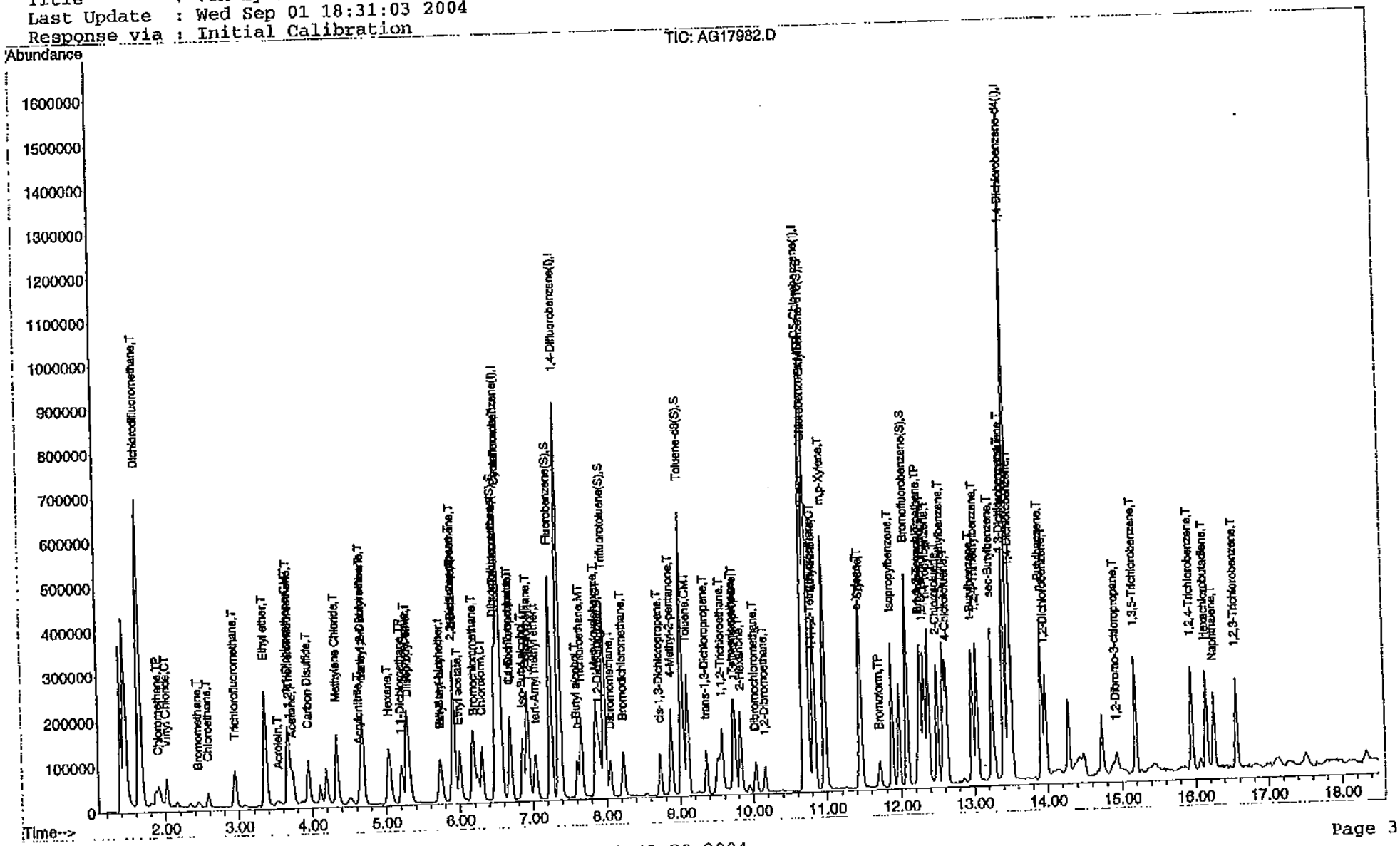
Quantitation Report

Data File : E:\DATA\09012004\AG17982.D
Acq On : 1 Sep 2004 12:24 pm
Sample : 2.0 ug/Kg Initial calibration
Misc : soil #5.000 12493925
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 6
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



96000982.D 09012004_LOWSOIL_8260.M Thu Sep 02 11:43:20 2004

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17983.D
Acq On : 1 Sep 2004 12:49 pm
Sample : 4.0 ug/Kg Initial calibration
Misc : soil #5.000 12493926
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:24 2004

Vial: 7
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	633896	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1044350	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	225602	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	462771	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	353227	10.56	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 105.60%			
39) Fluorobenzene(S)	7.25	96	1545272	10.76	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 107.60%#			
41) Trifluorotoluene(S)	7.98	146	685729	11.50	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 57.50%#			
50) Toluene-d8(S)	9.03	98	1397352	11.03	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 110.30%#			
60) Ethylbenzene-d10(S)	10.74	98	1766495	10.49	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 104.90%			
69) Bromofluorobenzene(S)	12.09	174	429263	11.07	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 110.70%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	195548	4.68	ug/Kg	97
3) Chloromethane	1.91	50	259786	4.69	ug/Kg	99
4) Vinyl Chloride	2.02	62	193877	4.65	ug/Kg	96
5) Bromomethane	2.45	94	51394	4.03	ug/Kg	86
6) Chloroethane	2.58	64	107110	4.39	ug/Kg	100
7) Trichlorofluoromethane	2.95	101	265919	4.57	ug/Kg	94
8) Acrolein	3.54	56	43119	25.16	ug/Kg	89
9) Ethyl ether	3.36	59	486873	21.21	ug/Kg	99
10) 1,1-Dichloroethene	3.67	96	135814	4.38	ug/Kg	95
11) 1,1,2-Trichlorotrifluoroet	3.68	151	140911	4.55	ug/Kg	91
12) Carbon Disulfide	3.95	76	506351	4.31	ug/Kg	97
13) Acetone	3.73	43	221412	20.23	ug/Kg	99
14) tert-Butyl alcohol	5.74	59	339053	20.42	ug/Kg	97
15) Methylene Chloride	4.34	49	239219	4.68	ug/Kg	97
16) Methyl tert-Butyl ether	4.68	73	281114	4.13	ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	161129	4.46	ug/Kg	98
18) Acrylonitrile	4.65	53	140539	19.64	ug/Kg	96
19) Hexane	5.04	56	150401	5.23	ug/Kg#	77
20) Diisopropyl ether	5.30	45	457495	4.20	ug/Kg	98
21) 1,1-Dichloroethane	5.22	63	268504	4.34	ug/Kg	97
22) Vinyl Acetate	5.28	43	717999	16.16	ug/Kg#	99
23) Ethyl tert-butyl ether	5.74	87	136247	4.11	ug/Kg	95
24) 2,2-Dichloropropane	5.91	77	197493	4.09	ug/Kg	97
25) cis-1,2-Dichloroethene	5.92	96	167245	4.45	ug/Kg	94
26) 2-Butanone	5.93	57	22022	20.62	ug/Kg#	91
27) Ethyl acetate	6.01	45	53464	19.66	ug/Kg	95
28) Bromochloromethane	6.20	49	111545	4.40	ug/Kg	91
29) Chloroform	6.31	85	169359	4.31	ug/Kg	98
30) 1,1,1-Trichloroethane	6.50	97	234072	4.36	ug/Kg	89
31) Cyclohexane	6.55	56	314404	4.46	ug/Kg	98
33) Carbon Tetrachloride	6.69	119	190397	4.41	ug/Kg	94
34) 1,1-Dichloropropene	6.69	75	203819	4.45	ug/Kg	99
35) tert-Amyl methyl ether	7.04	73	274799	4.11	ug/Kg	94
36) Benzene	6.92	78	615358	4.41	ug/Kg	98
37) iso-Butyl alcohol	6.86	43	255501	366.02	ug/Kg	95
38) 1,2-Dichloroethane	6.95	62	164586	4.24	ug/Kg	92

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17983.D
Acq On : 1 Sep 2004 12:49 pm
Sample : 4.0 ug/Kg Initial calibration
Misc : soil #5.000 12493926
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:24 2004

Vial: 7
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	203927	5.07 ug/Kg	96
43) n-Butyl alcohol	7.60	41	103755	334.86 ug/Kg	96
44) Methylcyclohexane	7.87	55	254746	4.82 ug/Kg	85
45) 1,2-Dichloropropane	7.90	63	149359	4.33 ug/Kg	93
46) Dibromomethane	8.06	174	72133	4.27 ug/Kg	95
47) Bromodichloromethane	8.24	83	172971	4.25 ug/Kg	99
48) cis-1,3-Dichloropropene	8.73	75	195641	4.23 ug/Kg	98
49) 4-Methyl-2-pentanone	8.88	85	66476	20.67 ug/Kg#	86
51) Toluene	9.10	91	677211	4.46 ug/Kg	99
52) trans-1,3-Dichloropropene	9.35	75	159896	4.21 ug/Kg	96
53) 1,1,2-Trichloroethane	9.57	97	106044	4.07 ug/Kg	95
54) Tetrachloroethene	9.74	164	142909	4.61 ug/Kg	95
55) 1,3-Dichloropropane	9.76	76	173310	4.29 ug/Kg	99
56) 2-Hexanone	9.84	85	30445	21.07 ug/Kg#	89
57) Dibromochloromethane	10.03	129	111428	4.15 ug/Kg	94
58) 1,2-Dibromoethane	10.16	107	98614	4.18 ug/Kg	97
61) Chlorobenzene	10.73	112	441733	4.47 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	125836	4.15 ug/Kg	98
63) Ethylbenzene	10.84	91	759078	4.39 ug/Kg	98
64) m,p-Xylene	10.97	106	576127	8.91 ug/Kg	97
65) o-Xylene	11.45	91	565580	4.45 ug/Kg	97
66) Styrene	11.47	104	416039	4.36 ug/Kg	92
67) Bromoform	11.72	173	58099	3.78 ug/Kg	96
68) Isopropylbenzene	11.88	105	719329	4.55 ug/Kg	98
70) Bromobenzene	12.27	156	166921	4.40 ug/Kg#	79
71) 1,1,2,2-Tetrachloroethane	12.27	83	169875+	3.72 ug/Kg	98
72) 1,2,3-Trichloropropane	12.32	110	35175	4.17 ug/Kg	93
73) n-Propylbenzene	12.38	91	938721	4.54 ug/Kg	97
74) 2-Chlorotoluene	12.50	126	176889	4.56 ug/Kg	98
75) 4-Chlorotoluene	12.63	126	178609	4.46 ug/Kg#	60
76) 1,3,5-Trimethylbenzene	12.58	105	593906	4.66 ug/Kg	98
77) t-Butylbenzene	12.98	119	505388	4.33 ug/Kg	95
78) 1,2,4-Trimethylbenzene	13.04	105	592791	4.58 ug/Kg	97
79) sec-Butylbenzene	13.25	105	795821	4.56 ug/Kg	97
80) 4-Isopropyltoluene	13.42	119	667788	4.83 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	340915	4.64 ug/Kg	97
83) 1,4-Dichlorobenzene	13.51	146	339285	4.74 ug/Kg	99
84) n-Butylbenzene	13.92	134	165289	4.87 ug/Kg	91
85) 1,2-Dichlorobenzene	13.97	146	295070	4.52 ug/Kg	95
86) 1,2-Dibromo-3-chloropropan	14.94	75	14884	3.58 ug/Kg	99
87) 1,3,5-Trichlorobenzene	15.19	180	266418	5.17 ug/Kg	96
88) 1,2,4-Trichlorobenzene	15.95	180	228684	5.22 ug/Kg	96
89) Hexachlorobutadiene	16.15	225	146079	5.23 ug/Kg	97
90) Naphthalene	16.26	128	380323	4.56 ug/Kg	98
91) 1,2,3-Trichlorobenzene	16.56	180	201544	5.05 ug/Kg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

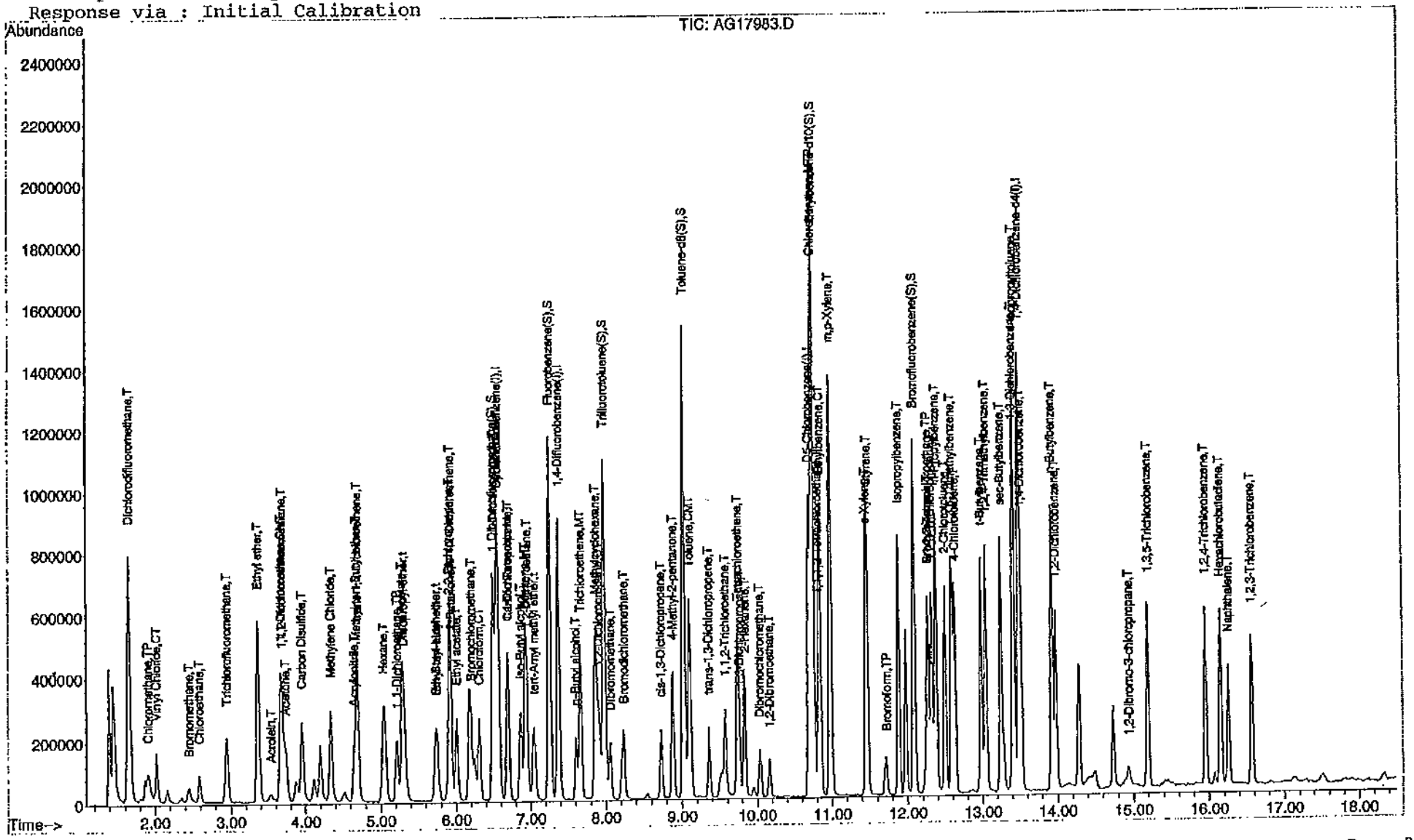
Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17983.D
Acq On : 1 Sep 2004 12:49 pm
Sample : 4.0 ug/Kg Initial calibration
Misc : soil #5.000 12493926
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 7
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

ata File : E:\DATA\09012004\AG17984.D
cq On : 1 Sep 2004 1:14 pm
ample : 10 ug/Kg Initial calibration
isc : soil #5.000 12493927
S Integration Params: RTEINT.P
uant Time: Sep 02 11:43:32 2004

Vial: 8
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	648481	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1069180	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	221485	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	485504	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	885562	25.87	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 258.70%#			
39) Fluorobenzene(S)	7.25	96	3707622	25.25	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 252.50%#			
41) Trifluorotoluene(S)	7.98	146	1490755	24.41	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 122.05%#			
50) Toluene-d8(S)	9.03	98	3393682	26.16	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 261.60%#			
60) Ethylbenzene-d10(S)	10.74	98	4259652	25.75	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 257.50%#			
69) Bromofluorobenzene(S)	12.09	174	987715	25.95	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 259.50%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	429821	10.05	ug/Kg	99
3) Chloromethane	1.92	50	526134	10.36	ug/Kg	100
4) Vinyl Chloride	2.02	62	468063	10.98	ug/Kg	96
5) Bromomethane	2.44	94	147871	9.88	ug/Kg	86
6) Chloroethane	2.58	64	248599	9.95	ug/Kg	95
7) Trichlorofluoromethane	2.95	101	607324	10.19	ug/Kg	95
8) Acrolein	3.53	56	108797	64.73	ug/Kg	86
9) Ethyl ether	3.36	59	1287826	54.83	ug/Kg	99
10) 1,1-Dichloroethene	3.67	96	331265	10.44	ug/Kg	94
11) 1,1,2-Trichlorotrifluoroet	3.70	151	310394	9.79	ug/Kg	93
12) Carbon Disulfide	3.95	76	1274062	10.59	ug/Kg	97
13) Acetone	3.73	43	585760	53.62	ug/Kg	96
14) tert-Butyl alcohol	5.74	59	905173	53.30	ug/Kg	98
15) Methylene Chloride	4.34	49	500889	10.81	ug/Kg	96
16) Methyl tert-Butyl ether	4.68	73	759901	10.92	ug/Kg	99
17) trans-1,2-Dichloroethene	4.69	96	383798	10.39	ug/Kg	98
18) Acrylonitrile	4.64	53	405096	55.34	ug/Kg	97
19) Hexane	5.04	56	266120	9.24	ug/Kg	80
20) Diisopropyl ether	5.30	45	1202982	10.79	ug/Kg	99
21) 1,1-Dichloroethane	5.21	63	664407	10.50	ug/Kg	97
22) Vinyl Acetate	5.28	43	2532845	55.72	ug/Kg#	99
23) Ethyl tert-butyl ether	5.74	87	372330	10.97	ug/Kg	99
24) 2,2-Dichloropropane	5.91	77	496111	10.04	ug/Kg	95
25) cis-1,2-Dichloroethene	5.92	96	402757	10.47	ug/Kg	92
26) 2-Butanone	5.92	57	61071	55.89	ug/Kg#	81
27) Ethyl acetate	6.01	45	154430	55.51	ug/Kg	96
28) Bromochloromethane	6.20	49	259838	10.02	ug/Kg	93
29) Chloroform	6.31	85	417884	10.40	ug/Kg	98
30) 1,1,1-Trichloroethane	6.50	97	585155	10.66	ug/Kg	95
31) Cyclohexane	6.56	56	743506	10.60	ug/Kg	98
33) Carbon Tetrachloride	6.69	119	466521	10.57	ug/Kg	94
34) 1,1-Dichloropropene	6.69	75	480140	10.25	ug/Kg	99
35) tert-Amyl methyl ether	7.05	73	741397	10.84	ug/Kg	96
36) Benzene	6.92	78	1515244	10.61	ug/Kg	97
37) iso-Butyl alcohol	6.86	43	863218	1208.81	ug/Kg	97
38) 1,2-Dichloroethane	6.95	62	428201	10.79	ug/Kg	95

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

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09012004\AG17984.D
cq On : 1 Sep 2004 1:14 pm
ample : 10 ug/Kg Initial calibration
isc : soil #5.000 12493927
S Integration Params: RTEINT.P
uant Time: Sep 02 11:43:32 2004

Vial: 8
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	416415	10.11 ug/Kg	94
43) n-Butyl alcohol	7.60	41	379301	1195.73 ug/Kg	98
44) Methylcyclohexane	7.87	55	527703	9.75 ug/Kg#	83
45) 1,2-Dichloropropane	7.90	63	368780	10.43 ug/Kg	96
46) Dibromomethane	8.06	174	188134	10.88 ug/Kg	94
47) Bromodichloromethane	8.23	83	443391	10.65 ug/Kg	98
48) cis-1,3-Dichloropropene	8.73	75	501653	10.59 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	188980	57.39 ug/Kg#	87
51) Toluene	9.10	91	1636006	10.53 ug/Kg	98
52) trans-1,3-Dichloropropene	9.35	75	404706	10.41 ug/Kg	98
53) 1,1,2-Trichloroethane	9.57	97	265566	9.96 ug/Kg	97
54) Tetrachloroethene	9.74	164	314212	9.90 ug/Kg	96
55) 1,3-Dichloropropane	9.77	76	438844	10.62 ug/Kg	99
56) 2-Hexanone	9.83	85	81461	55.07 ug/Kg	99
57) Dibromochloromethane	10.04	129	291531	10.60 ug/Kg	97
58) 1,2-Dibromoethane	10.16	107	256132	10.61 ug/Kg	96
61) Chlorobenzene	10.73	112	1033094	10.64 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	314586	10.57 ug/Kg	99
63) Ethylbenzene	10.84	91	1792759	10.57 ug/Kg	99
64) m,p-Xylene	10.97	106	1376544	21.69 ug/Kg	99
65) o-Xylene	11.45	91	1379001	11.04 ug/Kg	96
66) Styrene	11.47	104	1037241	11.08 ug/Kg	91
67) Bromoform	11.72	173	159136	10.54 ug/Kg	98
68) Isopropylbenzene	11.88	105	1718034	11.07 ug/Kg	98
70) Bromobenzene	12.27	156	393559	10.57 ug/Kg	94
71) 1,1,2,2-Tetrachloroethane	12.27	83	467525+	10.42 ug/Kg	100
72) 1,2,3-Trichloropropane	12.32	110	91542	11.04 ug/Kg	86
73) n-Propylbenzene	12.38	91	2127679	10.49 ug/Kg	96
74) 2-Chlorotoluene	12.50	126	405207	10.64 ug/Kg	96
75) 4-Chlorotoluene	12.63	126	411163	10.46 ug/Kg#	63
76) 1,3,5-Trimethylbenzene	12.58	105	1364797	10.90 ug/Kg	99
77) t-Butylbenzene	12.98	119	1215012	10.59 ug/Kg	96
78) 1,2,4-Trimethylbenzene	13.04	105	1349172	10.62 ug/Kg	98
79) sec-Butylbenzene	13.25	105	1766951	10.32 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	1449919	10.69 ug/Kg	97
81) 1,3-Dichlorobenzene	13.40	146	748875	10.39 ug/Kg	95
83) 1,4-Dichlorobenzene	13.51	146	739728	9.84 ug/Kg	98
84) n-Butylbenzene	13.92	134	339721	9.54 ug/Kg	92
85) 1,2-Dichlorobenzene	13.97	146	697702	10.19 ug/Kg	99
86) 1,2-Dibromo-3-chloropropan	14.94	75	43648	10.15 ug/Kg	99
87) 1,3,5-Trichlorobenzene	15.19	180	527402	9.92 ug/Kg	98
88) 1,2,4-Trichlorobenzene	15.95	180	445635	9.86 ug/Kg	96
89) Hexachlorobutadiene	16.15	225	281656	9.73 ug/Kg	98
90) Naphthalene	16.26	128	880841	10.34 ug/Kg	100
91) 1,2,3-Trichlorobenzene	16.56	180	409931	9.98 ug/Kg	99

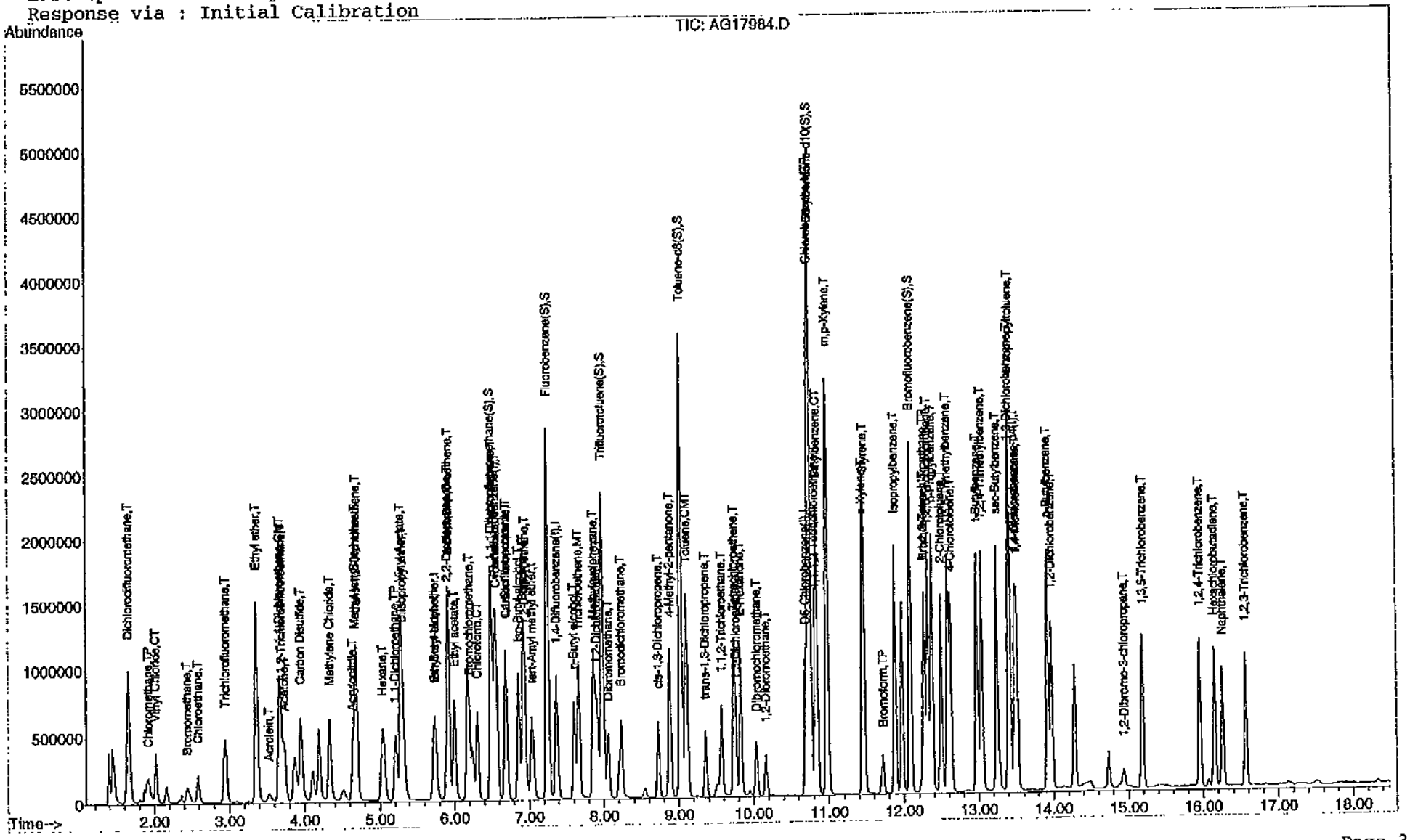
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09012004\AG17984.D
Acq On : 1 Sep 2004 1:14 pm
Sample : 10 ug/Kg Initial calibration
Misc : soil #5.000 12493927
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 8
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17985.D
Acq On : 1 Sep 2004 1:40 pm
Sample : 20 ug/Kg Initial calibration
Misc : soil #5.000 12493928
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:41 2004

Vial: 9
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	657890	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1082137	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	225465	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	501835	10.00	ug/Kg	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	1719332	49.52	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 495.20%#			
39) Fluorobenzene(S)	7.25	96	7305435	49.04	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 490.40%#			
41) Trifluorotoluene(S)	7.98	146	2910712	47.09	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 235.45%#			
50) Toluene-d8(S)	9.03	98	6689427	50.94	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 509.40%#			
60) Ethylbenzene-d10(S)	10.74	98	8392801	49.85	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 498.50%#			
69) Bromofluorobenzene(S)	12.09	174	1936845	49.98	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 499.80%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	795480	18.33	ug/Kg	98
3) Chloromethane	1.92	50	925377	18.75	ug/Kg	99
4) Vinyl Chloride	2.02	62	893021	20.65	ug/Kg	96
5) Bromomethane	2.43	94	380911	20.85	ug/Kg	88
6) Chloroethane	2.58	64	500544	19.75	ug/Kg	97
7) Trichlorofluoromethane	2.95	101	1185128	19.61	ug/Kg	94
8) Acrolein	3.53	56	185160	110.77	ug/Kg	83
9) Ethyl ether	3.36	59	2484307	104.26	ug/Kg	98
10) 1,1-Dichloroethene	3.67	96	643638	19.99	ug/Kg	95
11) 1,1,2-Trichlorotrifluoroet	3.68	151	594623	18.49	ug/Kg	94
12) Carbon Disulfide	3.95	76	2571438	21.07	ug/Kg	97
13) Acetone	3.73	43	1002215	90.98	ug/Kg	99
14) tert-Butyl alcohol	5.73	59	1843830	107.01	ug/Kg	98
15) Methylene Chloride	4.32	49	934464	20.87	ug/Kg	95
16) Methyl tert-Butyl ether	4.68	73	1478873	20.96	ug/Kg	99
17) trans-1,2-Dichloroethene	4.69	96	742641	19.82	ug/Kg	95
18) Acrylonitrile	4.64	53	758094	102.07	ug/Kg	97
19) Hexane	5.04	56	507173	17.58	ug/Kg#	78
20) Diisopropyl ether	5.30	45	2400962	21.22	ug/Kg	98
21) 1,1-Dichloroethane	5.21	63	1298672	20.23	ug/Kg	97
22) Vinyl Acetate	5.28	43	5507901	119.44	ug/Kg#	100
23) Ethyl tert-butyl ether	5.74	87	743307	21.60	ug/Kg	97
24) 2,2-Dichloropropane	5.91	77	993972	19.82	ug/Kg	96
25) cis-1,2-Dichloroethene	5.92	96	799100	20.47	ug/Kg	94
26) 2-Butanone	5.92	57	110159	99.36	ug/Kg#	79
27) Ethyl acetate	5.99	45	287546	101.87	ug/Kg	99
28) Bromochloromethane	6.20	49	458758	17.44	ug/Kg	92
29) Chloroform	6.31	85	822396	20.18	ug/Kg	98
30) 1,1,1-Trichloroethane	6.50	97	1139417	20.47	ug/Kg	96
31) Cyclohexane	6.55	56	1420271	20.15	ug/Kg	98
33) Carbon Tetrachloride	6.69	119	919863	20.53	ug/Kg	91
34) 1,1-Dichloropropene	6.69	75	941752	19.82	ug/Kg	98
35) tert-Amyl methyl ether	7.04	73	1473055	21.22	ug/Kg	97
36) Benzene	6.92	78	2963126	20.46	ug/Kg	98
37) iso-Butyl alcohol	6.85	43	1543060	2129.93	ug/Kg	96
38) 1,2-Dichloroethane	6.95	62	819027	20.34	ug/Kg	95

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

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09012004\AG17985.D
cq On : 1 Sep 2004 1:40 pm
ample : 20 ug/Kg Initial calibration
isc : soil #5.000 12493928
S Integration Params: RTEINT.P
uant Time: Sep 02 11:43:41 2004

Vial: 9
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	822774	19.74 ug/Kg	96
43) n-Butyl alcohol	7.60	41	672359	2094.20 ug/Kg	99
44) Methylcyclohexane	7.87	55	1000286	18.27 ug/Kg#	82
45) 1,2-Dichloropropane	7.90	63	734006	20.51 ug/Kg	96
46) Dibromomethane	8.06	174	364821	20.84 ug/Kg	94
47) Bromodichloromethane	8.23	83	872099	20.70 ug/Kg	99
48) cis-1,3-Dichloropropene	8.73	75	1008274	21.02 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	337955	101.41 ug/Kg#	78
51) Toluene	9.10	91	3228093	20.53 ug/Kg	98
52) trans-1,3-Dichloropropene	9.35	75	827414	21.02 ug/Kg	97
53) 1,1,2-Trichloroethane	9.57	97	499186	18.51 ug/Kg	96
54) Tetrachloroethene	9.73	164	609006	18.96 ug/Kg	96
55) 1,3-Dichloropropane	9.76	76	855954	20.47 ug/Kg	97
56) 2-Hexanone	9.83	85	148710	99.33 ug/Kg	98
57) Dibromochloromethane	10.03	129	581707	20.89 ug/Kg	98
58) 1,2-Dibromoethane	10.16	107	499726	20.44 ug/Kg	98
61) Chlorobenzene	10.73	112	2032403	20.56 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	642986	21.22 ug/Kg	97
63) Ethylbenzene	10.84	91	3513103	20.35 ug/Kg	100
64) m,p-Xylene	10.97	106	2707695	41.91 ug/Kg	98
65) o-Xylene	11.45	91	2729207	21.47 ug/Kg	96
66) Styrene	11.47	104	2093637	21.97 ug/Kg	92
67) Bromoform	11.71	173	328374	21.36 ug/Kg	96
68) Isopropylbenzene	11.88	105	3398725	21.51 ug/Kg	98
70) Bromobenzene	12.27	156	784399	20.69 ug/Kg	96
71) 1,1,2,2-Tetrachloroethane	12.27	83	906460+	19.86 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	161933	19.19 ug/Kg	94
73) n-Propylbenzene	12.38	91	4120206	19.95 ug/Kg	97
74) 2-Chlorotoluene	12.50	126	794190	20.48 ug/Kg	97
75) 4-Chlorotoluene	12.63	126	798831	19.97 ug/Kg#	65
76) 1,3,5-Trimethylbenzene	12.58	105	2690160	21.11 ug/Kg	99
77) t-Butylbenzene	12.98	119	2444460	20.94 ug/Kg	96
78) 1,2,4-Trimethylbenzene	13.04	105	2648233	20.48 ug/Kg	98
79) sec-Butylbenzene	13.25	105	3470538	19.92 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	2801354	20.29 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	1454111	19.82 ug/Kg	97
83) 1,4-Dichlorobenzene	13.51	146	1431763	18.43 ug/Kg	97
84) n-Butylbenzene	13.92	134	645926	17.55 ug/Kg	91
85) 1,2-Dichlorobenzene	13.97	146	1341397	18.95 ug/Kg	97
86) 1,2-Dibromo-3-chloropropan	14.94	75	83883	18.95 ug/Kg	97
87) 1,3,5-Trichlorobenzene	15.19	180	990306	18.18 ug/Kg	98
88) 1,2,4-Trichlorobenzene	15.95	180	853055	18.42 ug/Kg	98
89) Hexachlorobutadiene	16.15	225	531748	17.90 ug/Kg	98
90) Naphthalene	16.26	128	1718619	19.72 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	796539	18.95 ug/Kg	99

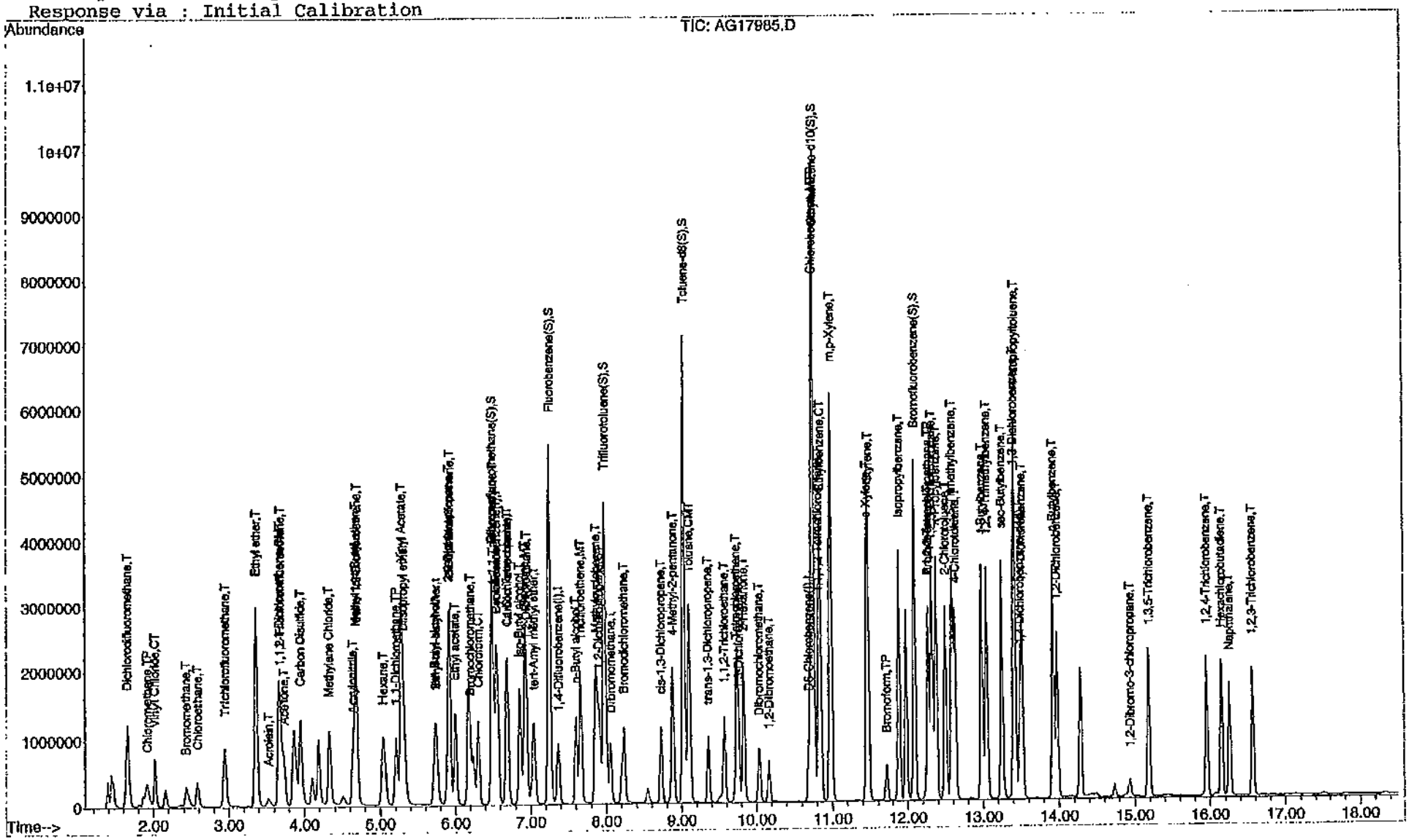
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09012004\AG17985.D
Acq On : 1 Sep 2004 1:40 pm
Sample : 20 ug/Kg Initial calibration
Misc : soil #5.000 12493928
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 9
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17986.D
Acq On : 1 Sep 2004 2:05 pm
Sample : 40 ug/Kg Initial calibration
Misc : soil #5.000 12493929
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:48 2004

Vial: 10
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	680932	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1097288	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	231981	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	498984	10.00	ug/Kg	0.00

System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	3586334	99.79	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 997.90%#			
39) Fluorobenzene(S)	7.25	96	15098201	97.91	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 979.10%#			
41) Trifluorotoluene(S)	7.98	146	6509729	103.87	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 519.35%#			
50) Toluene-d8(S)	9.03	98	13709520	102.95	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 1029.50%#			
60) Ethylbenzene-d10(S)	10.74	98	17066915	98.52	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 985.20%#			
69) Bromofluorobenzene(S)	12.09	174	4043817	101.42	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 1014.20%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	1678448	37.37	ug/Kg	98
3) Chloromethane	1.92	50	1842040	37.07	ug/Kg	99
4) Vinyl Chloride	2.02	62	1870218	41.77	ug/Kg	96
5) Bromomethane	2.41	94	962852	39.74	ug/Kg	91
6) Chloroethane	2.57	64	1028462	39.21	ug/Kg	97
7) Trichlorofluoromethane	2.95	101	2511410	40.15	ug/Kg	94
8) Acrolein	3.53	56	309331	182.89	ug/Kg	79
9) Ethyl ether	3.36	59	5011835	203.22	ug/Kg	98
10) 1,1-Dichloroethene	3.67	96	1364271	40.94	ug/Kg	95
11) 1,1,2-Trichlorotrifluoroet	3.68	151	1364224	40.99	ug/Kg	94
12) Carbon Disulfide	3.95	76	5647399	44.71	ug/Kg	97
13) Acetone	3.73	43	2164176	190.70	ug/Kg	98
14) tert-Butyl alcohol	5.73	59	3725064	208.88	ug/Kg	98
15) Methylene Chloride	4.32	49	1846420	40.92	ug/Kg	96
16) Methyl tert-Butyl ether	4.68	73	2974461	40.72	ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	1590927	41.02	ug/Kg	98
18) Acrylonitrile	4.64	53	1498611	194.95	ug/Kg	97
19) Hexane	5.04	56	1315295	44.45	ug/Kg#	79
20) Diisopropyl ether	5.30	45	4831657	41.26	ug/Kg	98
21) 1,1-Dichloroethane	5.21	63	2730511	41.09	ug/Kg	96
22) Vinyl Acetate	5.28	43	9895116	207.31	ug/Kg#	100
23) Ethyl tert-butyl ether	5.74	87	1502953	42.19	ug/Kg	96
24) 2,2-Dichloropropane	5.91	77	2085960	40.18	ug/Kg	95
25) cis-1,2-Dichloroethene	5.92	96	1683866	41.68	ug/Kg	95
26) 2-Butanone	5.92	57	218800	190.68	ug/Kg#	85
27) Ethyl acetate	5.99	45	570047	195.12	ug/Kg	98
28) Bromochloromethane	6.20	49	784540	28.81	ug/Kg	94
29) Chloroform	6.31	85	1691654	40.11	ug/Kg	98
30) 1,1,1-Trichloroethane	6.50	97	2370490	41.14	ug/Kg	98
31) Cyclohexane	6.55	56	3093886	42.66	ug/Kg	99
33) Carbon Tetrachloride	6.69	119	1936789	41.77	ug/Kg	91
34) 1,1-Dichloropropene	6.69	75	2034711	41.38	ug/Kg	98
35) tert-Amyl methyl ether	7.04	73	2996718	41.71	ug/Kg	98
36) Benzene	6.92	78	6112493	40.77	ug/Kg	98
37) iso-Butyl alcohol	6.85	43	3156822	4210.00	ug/Kg	97
38) 1,2-Dichloroethane	6.95	62	1645366	39.48	ug/Kg	94

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17986.D
Acq On : 1 Sep 2004 2:05 pm
Sample : 40 ug/Kg Initial calibration
Misc : soil #5.000 12493929
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:48 2004

Vial: 10
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	1734688	41.05 ug/Kg	94
43) n-Butyl alcohol	7.60	41	1369557	4206.87 ug/Kg	98
44) Methylcyclohexane	7.87	55	2371887	42.72 ug/Kg#	84
45) 1,2-Dichloropropane	7.90	63	1530295	42.18 ug/Kg	96
46) Dibromomethane	8.06	174	754266	42.50 ug/Kg	93
47) Bromodichloromethane	8.23	83	1815229	42.49 ug/Kg	99
48) cis-1,3-Dichloropropene	8.73	75	2110137	43.39 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	691741	204.70 ug/Kg#	82
51) Toluene	9.10	91	6615259	41.50 ug/Kg	98
52) trans-1,3-Dichloropropene	9.35	75	1699368	42.57 ug/Kg	98
53) 1,1,2-Trichloroethane	9.57	97	1025135	37.48 ug/Kg	97
54) Tetrachloroethene	9.74	164	1351673	41.49 ug/Kg	96
55) 1,3-Dichloropropane	9.76	76	1712747	40.39 ug/Kg	98
56) 2-Hexanone	9.83	85	305731	201.39 ug/Kg	99
57) Dibromochloromethane	10.04	129	1207469	42.76 ug/Kg	99
58) 1,2-Dibromoethane	10.16	107	1014323	40.92 ug/Kg	98
61) Chlorobenzene	10.73	112	4119874	40.51 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	1337396	42.90 ug/Kg	97
63) Ethylbenzene	10.84	91	7402334	41.67 ug/Kg	99
64) m,p-Xylene	10.97	106	5726256	86.14 ug/Kg	99
65) o-Xylene	11.45	91	5691459	43.51 ug/Kg	96
66) Styrene	11.47	104	4376838	44.63 ug/Kg	92
67) Bromoform	11.72	173	666257	42.13 ug/Kg	98
68) Isopropylbenzene	11.88	105	7229886	44.48 ug/Kg	98
70) Bromobenzene	12.27	156	1593560	40.85 ug/Kg	95
71) 1,1,2,2-Tetrachloroethane	12.27	83	1758866+	37.44 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	311033	35.83 ug/Kg	93
73) n-Propylbenzene	12.38	91	8957702	42.16 ug/Kg	97
74) 2-Chlorotoluene	12.50	126	1688633	42.32 ug/Kg	97
75) 4-Chlorotoluene	12.63	126	1704162	41.40 ug/Kg#	64
76) 1,3,5-Trimethylbenzene	12.58	105	5816938	44.37 ug/Kg	99
77) t-Butylbenzene	12.98	119	5169364	43.03 ug/Kg	96
78) 1,2,4-Trimethylbenzene	13.04	105	5661267	42.56 ug/Kg	98
79) sec-Butylbenzene	13.25	105	7729409	43.11 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	6337832	44.62 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	3035500	40.21 ug/Kg	97
83) 1,4-Dichlorobenzene	13.51	146	3000404	38.84 ug/Kg	98
84) n-Butylbenzene	13.92	134	1524614	41.67 ug/Kg	92
85) 1,2-Dichlorobenzene	13.97	146	2784700	39.56 ug/Kg	98
86) 1,2-Dibromo-3-chloropropan	14.93	75	173465	39.49 ug/Kg	98
87) 1,3,5-Trichlorobenzene	15.19	180	2254625	41.86 ug/Kg	99
88) 1,2,4-Trichlorobenzene	15.95	180	1851448	40.44 ug/Kg	97
89) Hexachlorobutadiene	16.15	225	1264522	42.99 ug/Kg	97
90) Naphthalene	16.26	128	3503322	40.65 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	1697120	40.83 ug/Kg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

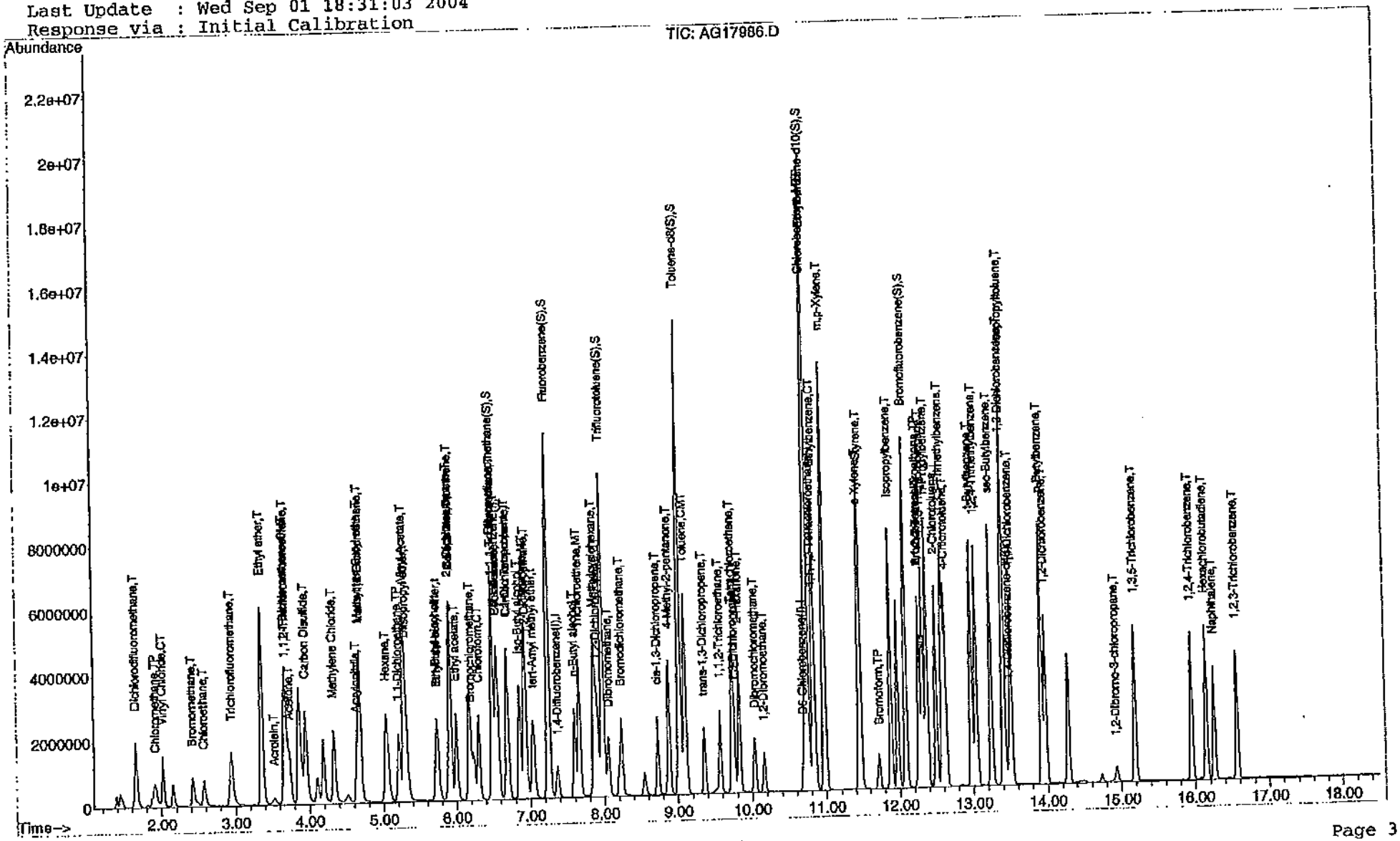
00102

Data File : E:\DATA\09012004\AG17986.D
Acq On : 1 Sep 2004 2:05 pm
Sample : 40 ug/Kg Initial calibration
Misc : soil #5.000 12493929
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 10
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG17986.D 09012004_LOWSOIL_8260.M Thu Sep 02 11:43:52 2004

00100

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09012004\AG17987.D
cq On : 1 Sep 2004 2:31 pm
ample : 100 ug/Kg Initial calibration
isc : soil #5.000 12493930
IS Integration Params: RTEINT.P
uant Time: Sep 02 11:43:57 2004

Vial: 11
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	731324	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1179007	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	255533	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	534782	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	8939316	231.60 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	= 2316.00%#	
39) Fluorobenzene(S)	7.24	96	28789183	173.84 ug/Kg	-0.01
Spiked Amount 10.000	Range 92 - 107		Recovery	= 1738.40%#	
41) Trifluorotoluene(S)	7.98	146	16306009	242.14 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	= 1210.70%#	
50) Toluene-d8(S)	9.02	98	26741940	186.91 ug/Kg	-0.01
Spiked Amount 10.000	Range 92 - 107		Recovery	= 1869.10%#	
60) Ethylbenzene-d10(S)	10.73	98	27424706	143.72 ug/Kg	-0.01
Spiked Amount 10.000	Range 89 - 109		Recovery	= 1437.20%#	
69) Bromofluorobenzene(S)	12.09	174	10275844	233.97 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	= 2339.70%#	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.65	85	4247093	88.03 ug/Kg	97
3) Chloromethane	1.92	50	4825310	91.99 ug/Kg	100
4) Vinyl Chloride	2.02	62	4433186	92.20 ug/Kg	97
5) Bromomethane	2.41	94	760482	32.07 ug/Kg	76
6) Chloroethane	2.55	64	2665218	94.62 ug/Kg	98
7) Trichlorofluoromethane	2.93	101	6501433	96.77 ug/Kg	94
8) Acrolein	3.53	56	779619	463.49 ug/Kg	80
9) Ethyl ether	3.36	59	12850947	485.17 ug/Kg	97
10) 1,1-Dichloroethene	3.67	96	3365117	94.02 ug/Kg	94
11) 1,1,2-Trichlorotrifluoroet	3.68	151	3387560	94.77 ug/Kg	94
12) Carbon Disulfide	3.95	76	14525588	107.06 ug/Kg	97
13) Acetone	3.73	43	6286089	517.12 ug/Kg	99
14) tert-Butyl alcohol	5.74	59	10254499	535.39 ug/Kg	97
15) Methylene Chloride	4.32	49	4664728	97.84 ug/Kg	96
16) Methyl tert-Butyl ether	4.68	73	8036464	102.44 ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	3939535	94.57 ug/Kg	98
18) Acrylonitrile	4.64	53	4136007	500.98 ug/Kg	97
19) Hexane	5.05	56	3021543	95.37 ug/Kg#	77
20) Diisopropyl ether	5.30	45	12808575	101.84 ug/Kg	97
21) 1,1-Dichloroethane	5.21	63	6776420	94.94 ug/Kg	96
22) Vinyl Acetate	5.28	43	23076384	450.15 ug/Kg#	100
23) Ethyl tert-butyl ether	5.74	87	4138106	108.16 ug/Kg	96
24) 2,2-Dichloropropane	5.91	77	5247230	94.12 ug/Kg	96
25) cis-1,2-Dichloroethene	5.92	96	4179694	96.32 ug/Kg	94
26) 2-Butanone	5.92	57	602187	488.63 ug/Kg#	82
27) Ethyl acetate	6.01	45	1591105	507.09 ug/Kg	99
28) Bromochloromethane	6.20	49	1698159	58.07 ug/Kg	93
29) Chloroform	6.31	85	4277731	94.43 ug/Kg	99
30) 1,1,1-Trichloroethane	6.50	97	5877705	94.98 ug/Kg	99
31) Cyclohexane	6.55	56	7768941	100.03 ug/Kg	98
33) Carbon Tetrachloride	6.69	119	4890884	98.22 ug/Kg	92
34) 1,1-Dichloropropene	6.69	75	5050783	95.64 ug/Kg	98
35) tert-Amyl methyl ether	7.04	73	8377459	108.58 ug/Kg	97
36) Benzene	6.92	78	15538977	96.51 ug/Kg	98
37) iso-Butyl alcohol	6.86	43	8733709	10844.88 ug/Kg	97
38) 1,2-Dichloroethane	6.95	62	4270464	95.41 ug/Kg	94

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17987.D
Acq On : 1 Sep 2004 2:31 pm
Sample : 100 ug/Kg Initial calibration
Misc : soil #5.000 12493930
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:43:57 2004

Vial: 11
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	4502691	99.17 ug/Kg	95
43) n-Butyl alcohol	7.60	41	3815306	10907.19 ug/Kg	98
44) Methylcyclohexane	7.87	55	5828671	97.69 ug/Kg#	85
45) 1,2-Dichloropropane	7.90	63	3923251	100.64 ug/Kg	95
46) Dibromomethane	8.06	174	1993413	104.54 ug/Kg	93
47) Bromodichloromethane	8.23	83	4678530	101.92 ug/Kg	98
48) cis-1,3-Dichloropropene	8.73	75	5590120	106.99 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	1926824	530.67 ug/Kg#	83
51) Toluene	9.10	91	16947745	98.95 ug/Kg	98
52) trans-1,3-Dichloropropene	9.35	75	4659124	108.63 ug/Kg	98
53) 1,1,2-Trichloroethane	9.57	97	2722343	92.63 ug/Kg	97
54) Tetrachloroethene	9.74	164	3429929	97.99 ug/Kg	96
55) 1,3-Dichloropropane	9.76	76	4568357	100.27 ug/Kg	97
56) 2-Hexanone	9.83	85	874943	536.40 ug/Kg#	94
57) Dibromochloromethane	10.04	129	3306993	108.99 ug/Kg	99
58) 1,2-Dibromoethane	10.16	107	2755317	103.46 ug/Kg	98
61) Chlorobenzene	10.73	112	10328007	92.20 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	3477437	101.28 ug/Kg	97
63) Ethylbenzene	10.84	91	18070656	92.34 ug/Kg	99
64) m,p-Xylene	10.97	106	14194049	193.83 ug/Kg	84
65) o-Xylene	11.45	91	14344295	99.56 ug/Kg	95
66) Styrene	11.47	104	11414193	105.67 ug/Kg	93
67) Bromoform	11.72	173	1930410	110.81 ug/Kg	98
68) Isopropylbenzene	11.88	105	17942666	100.21 ug/Kg	99
70) Bromobenzene	12.27	156	4127389	96.04 ug/Kg	97
71) 1,1,2,2-Tetrachloroethane	12.27	83	4606739+	89.03 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	844657	88.33 ug/Kg	93
73) n-Propylbenzene	12.38	91	20871601	89.19 ug/Kg	100
74) 2-Chlorotoluene	12.50	126	4270626	97.16 ug/Kg	97
75) 4-Chlorotoluene	12.63	126	4270620	94.18 ug/Kg#	65
76) 1,3,5-Trimethylbenzene	12.58	105	14593473	101.06 ug/Kg	99
77) t-Butylbenzene	12.98	119	13297674	100.49 ug/Kg	98
78) 1,2,4-Trimethylbenzene	13.04	105	14401193	98.28 ug/Kg	98
79) sec-Butylbenzene	13.25	105	18554217	93.95 ug/Kg	99
80) 4-Isopropyltoluene	13.42	119	15500741	99.07 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	7656447	92.07 ug/Kg	96
83) 1,4-Dichlorobenzene	13.51	146	7672413	92.67 ug/Kg	97
84) n-Butylbenzene	13.92	134	3796235	96.82 ug/Kg	93
85) 1,2-Dichlorobenzene	13.97	146	7248224	96.09 ug/Kg	99
86) 1,2-Dibromo-3-chloropropan	14.93	75	493330	104.94 ug/Kg	99
87) 1,3,5-Trichlorobenzene	15.19	180	5587624	97.03 ug/Kg	99
88) 1,2,4-Trichlorobenzene	15.95	180	4756311	97.21 ug/Kg	98
89) Hexachlorobutadiene	16.15	225	3018344	95.93 ug/Kg	98
90) Naphthalene	16.26	128	9460937	102.78 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	4343385	97.80 ug/Kg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

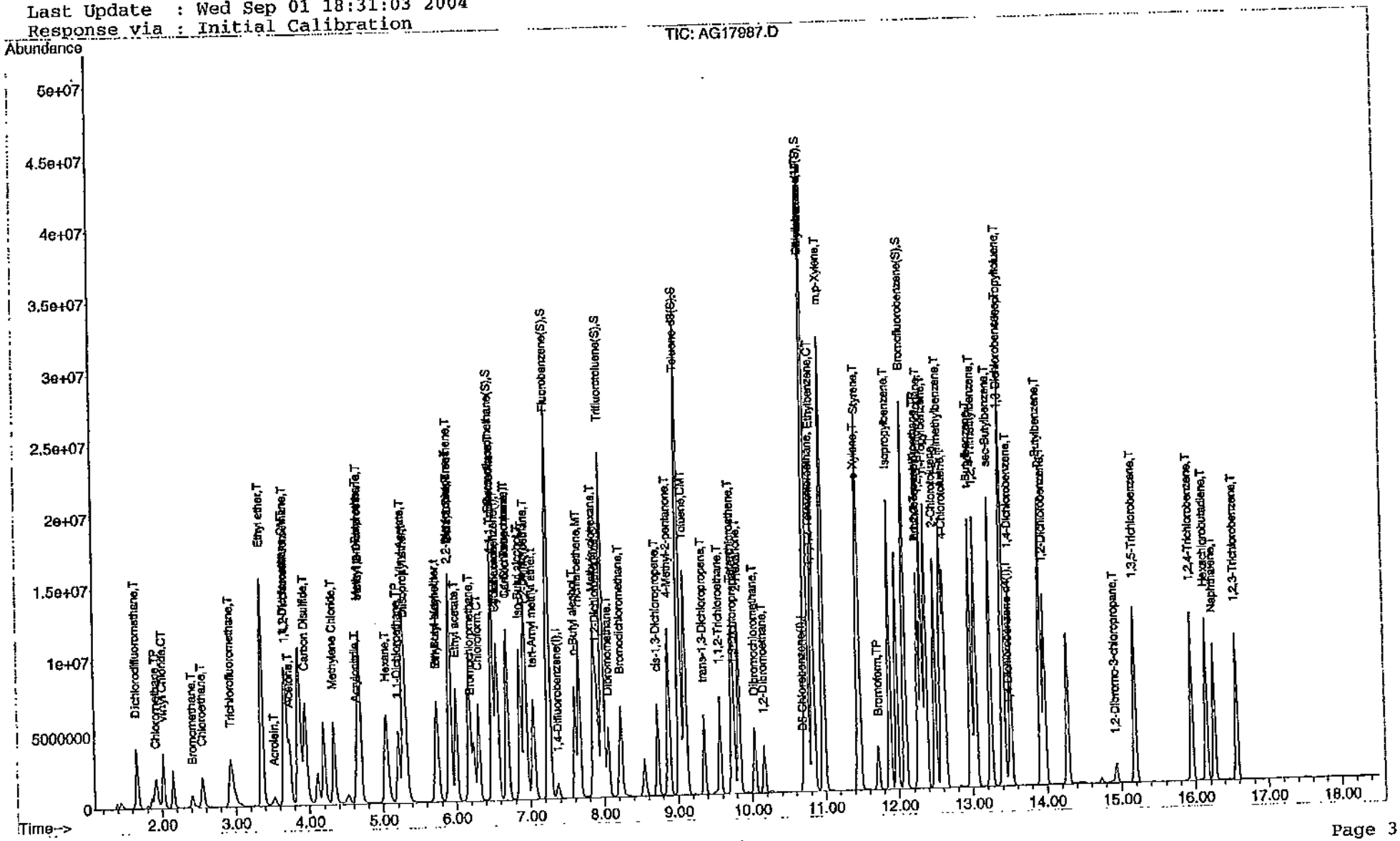
Quantitation Report

Data File : E:\DATA\09012004\AG17987.D
Acq On : 1 Sep 2004 2:31 pm
Sample : 100 ug/Kg Initial calibration
Misc : soil #5.000 12493930
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:43 2004

Vial: 11
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



III00987.D 09012004_LOWSOIL_8260.M Thu Sep 02 11:44:00 2004

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17988.D
Acq On : 1 Sep 2004 2:56 pm
Sample : 200 ug/Kg Initial calibration
Misc : soil #5.000 12493931
IS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:04 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	736175	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1223653	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	257382	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	546306	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	17440893	448.89 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	= 4488.90%#	
39) Fluorobenzene(S)	7.23	96	35848376	215.04 ug/Kg	-0.02
Spiked Amount 10.000	Range 92 - 107		Recovery	= 2150.40%#	
41) Trifluorotoluene(S)	7.98	146	28435526	406.86 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	= 2034.30%#	
50) Toluene-d8(S)	0.00	98	0	0.00 ug/Kg	
Spiked Amount 10.000	Range 92 - 107		Recovery	= 0.00%#	
60) Ethylbenzene-d10(S)	10.73	98	31880987	165.87 ug/Kg	-0.01
Spiked Amount 10.000	Range 89 - 109		Recovery	= 1658.70%#	
69) Bromofluorobenzene(S)	12.09	174	19303417	436.37 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	= 4363.70%#	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.65	85	8852209	182.28 ug/Kg	98
3) Chloromethane	1.92	50	11084531	211.32 ug/Kg	85
4) Vinyl Chloride	2.02	62	7827130	161.71 ug/Kg	97
5) Bromomethane	2.40	94	1495696	50.68 ug/Kg	89
6) Chloroethane	2.55	64	1657229	58.44 ug/Kg	97
7) Trichlorofluoromethane	2.91	101	13408768	198.27 ug/Kg	94
8) Acrolein	3.53	56	1477151	1029.67 ug/Kg	89
9) Ethyl ether	3.36	59	23243909	871.77 ug/Kg	99
10) 1,1-Dichloroethene	3.65	96	6921243	192.10 ug/Kg	94
11) 1,1,2-Trichlorotrifluoroet	3.67	151	6900915	191.78 ug/Kg	94
12) Carbon Disulfide	3.93	76	27740647	203.12 ug/Kg	95
13) Acetone	3.74	43	12175810	995.78 ug/Kg	99
14) tert-Butyl alcohol	5.73	59	20158665	1045.55 ug/Kg	97
15) Methylene Chloride	4.32	49	9503474	199.24 ug/Kg	95
16) Methyl tert-Butyl ether	4.68	73	15263048	193.28 ug/Kg	97
17) trans-1,2-Dichloroethene	4.68	96	7906260	188.53 ug/Kg	98
18) Acrylonitrile	4.64	53	7772310	935.23 ug/Kg	97
19) Hexane	5.04	56	6445869	202.40 ug/Kg#	79
20) Diisopropyl ether	5.30	45	24810832	195.97 ug/Kg	98
21) 1,1-Dichloroethane	5.21	63	13859113	192.89 ug/Kg	96
22) Vinyl Acetate	5.27	43	33643403	651.96 ug/Kg#	92
23) Ethyl tert-butyl ether	5.74	87	8201219	212.94 ug/Kg	97
24) 2,2-Dichloropropane	5.90	77	10363394	184.66 ug/Kg	96
25) cis-1,2-Dichloroethene	5.92	96	8361353	191.42 ug/Kg	95
26) 2-Butanone	5.92	57	1050471	846.76 ug/Kg#	85
27) Ethyl acetate	6.01	45	2957897	936.49 ug/Kg	99
28) Bromochloromethane	6.20	49	3390995	115.20 ug/Kg	93
29) Chloroform	6.31	85	8633464	189.34 ug/Kg	99
30) 1,1,1-Trichloroethane	6.49	97	11294266	181.30 ug/Kg	100
31) Cyclohexane	6.55	56	15338681	196.41 ug/Kg	98
33) Carbon Tetrachloride	6.68	119	9566656	190.85 ug/Kg	92
34) 1,1-Dichloropropene	6.68	75	9776121	183.91 ug/Kg	97
35) tert-Amyl methyl ether	7.04	73	16557493	213.18 ug/Kg	96
36) Benzene	6.92	78	26920044	166.09 ug/Kg	94
37) iso-Butyl alcohol	6.88	43	16656920	20547.04 ug/Kg	97
38) 1,2-Dichloroethane	6.95	62	8126550	180.36 ug/Kg	94

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17988.D
Acq On : 1 Sep 2004 2:56 pm
Sample : 200 ug/Kg Initial calibration
Misc : soil #5.000 12493931
IS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:04 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	8607976	182.67 ug/Kg	96
43) n-Butyl alcohol	7.61	41	7645628	21059.83 ug/Kg	98
44) Methylcyclohexane	7.87	55	11700121	188.95 ug/Kg#	86
45) 1,2-Dichloropropane	7.90	63	7682564	189.88 ug/Kg	95
46) Dibromomethane	8.06	174	3336866	168.61 ug/Kg	92
47) Bromodichloromethane	8.23	83	8985904	188.61 ug/Kg	99
48) cis-1,3-Dichloropropene	8.73	75	10919291	201.36 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	3548936	941.75 ug/Kg#	85
51) Toluene	9.09	91	26806315	150.79 ug/Kg	79
52) trans-1,3-Dichloropropene	9.35	75	9010258	202.42 ug/Kg	99
53) 1,1,2-Trichloroethane	9.57	97	5248972	172.08 ug/Kg	97
54) Tetrachloroethene	9.74	164	6878644	189.35 ug/Kg	95
55) 1,3-Dichloropropane	9.76	76	8730828	184.65 ug/Kg	97
56) 2-Hexanone	9.83	85	1601782	946.17 ug/Kg#	90
57) Dibromochloromethane	10.04	129	6465554	205.32 ug/Kg	100
58) 1,2-Dibromoethane	10.16	107	5315061	192.29 ug/Kg	97
61) Chlorobenzene	10.73	112	19453813	172.42 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.82	131	6859147	198.33 ug/Kg	97
63) Ethylbenzene	10.83	91	25215967	127.93 ug/Kg	77
64) m,p-Xylene	10.97	106	23763679	322.19 ug/Kg#	59
65) o-Xylene	11.45	91	23221650	160.02 ug/Kg	81
66) Styrene	11.47	104	20727157	190.50 ug/Kg	87
67) Bromoform	11.72	173	3816744	217.51 ug/Kg	98
68) Isopropylbenzene	11.87	105	24974160	138.48 ug/Kg	79
70) Bromobenzene	12.27	156	8215869	189.81 ug/Kg	99
71) 1,1,2,2-Tetrachloroethane	12.27	83	8916769+	171.09 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	1541224	160.01 ug/Kg	93
73) n-Propylbenzene	12.36	91	27203601	115.41 ug/Kg	76
74) 2-Chlorotoluene	12.50	126	8557051	193.29 ug/Kg	87
75) 4-Chlorotoluene	12.63	126	8724787	191.03 ug/Kg	93
76) 1,3,5-Trimethylbenzene	12.58	105	22566168	155.14 ug/Kg	80
77) t-Butylbenzene	12.97	119	23567981	176.83 ug/Kg	90
78) 1,2,4-Trimethylbenzene	13.04	105	23296838	157.85 ug/Kg	86
79) sec-Butylbenzene	13.23	105	25096574	126.17 ug/Kg	80
80) 4-Isopropyltoluene	13.42	119	23255759	147.57 ug/Kg	82
81) 1,3-Dichlorobenzene	13.40	146	15072108	179.95 ug/Kg	96
83) 1,4-Dichlorobenzene	13.51	146	15679152	185.39 ug/Kg	97
84) n-Butylbenzene	13.92	134	7814378	195.09 ug/Kg#	74
85) 1,2-Dichlorobenzene	13.97	146	14611786	189.61 ug/Kg	98
86) 1,2-Dibromo-3-chloropropan	14.93	75	945977	197.05 ug/Kg	97
87) 1,3,5-Trichlorobenzene	15.19	180	11877688	202.12 ug/Kg	98
88) 1,2,4-Trichlorobenzene	15.95	180	10141314	203.11 ug/Kg	98
89) Hexachlorobutadiene	16.15	225	6506549	202.58 ug/Kg	97
90) Naphthalene	16.26	128	18440100	196.30 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	9143389	201.75 ug/Kg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

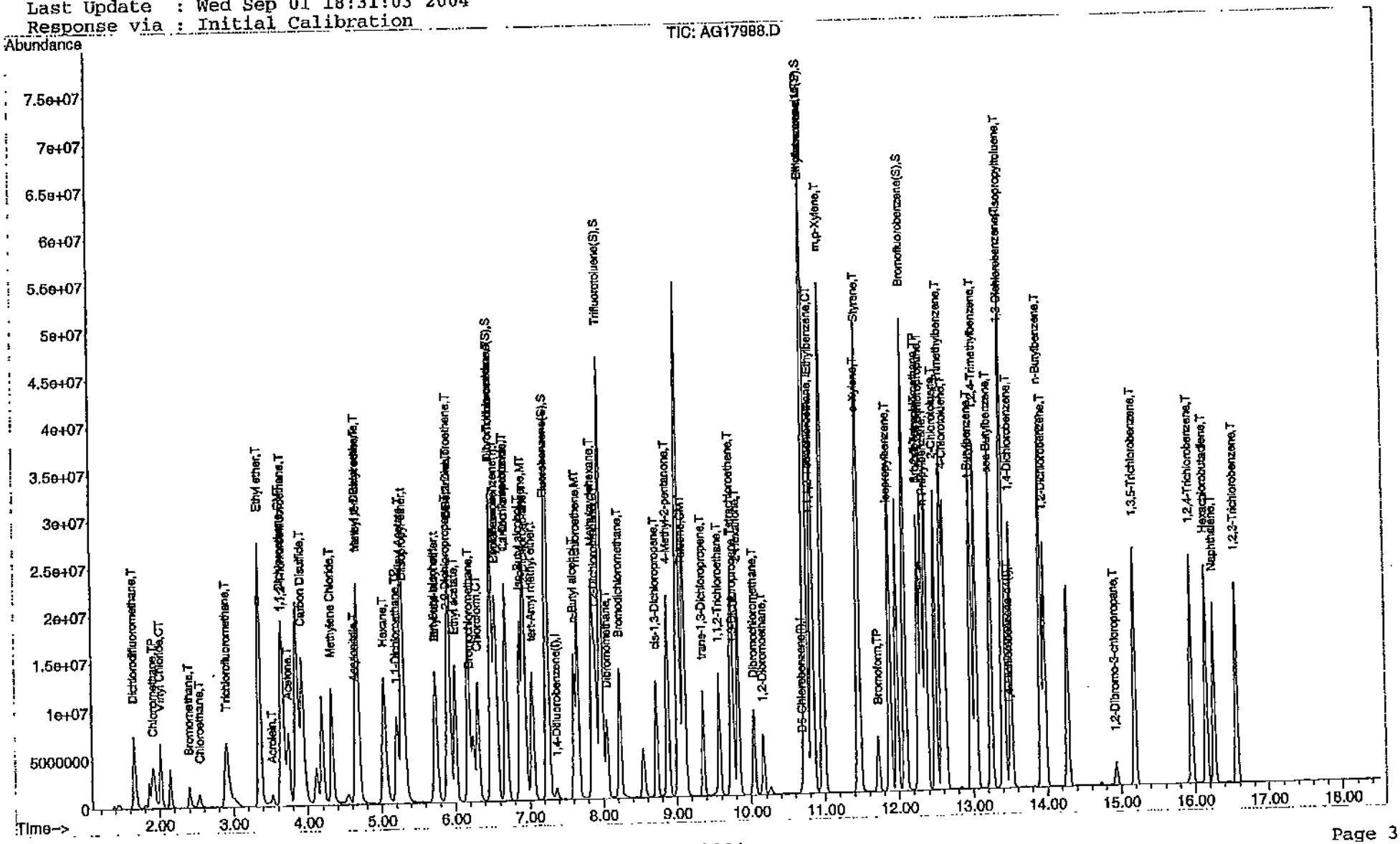
Quantitation Report

Data File : E:\DATA\09012004\AG17988.D
Acq On : 1 Sep 2004 2:56 pm
Sample : 200 ug/Kg Initial calibration
Misc : soil #5.000 12493931
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:44 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:12 2004

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	745861	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1173906	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	221832	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	479231	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	315510	8.02 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	= 80.20%#	
39) Fluorobenzene(S)	7.25	96	1348297	7.98 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	= 79.80%#	
41) Trifluorotoluene(S)	7.98	146	1197498	17.86 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	= 89.30%	
50) Toluene-d8(S)	9.03	98	1245167	8.74 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	= 87.40%#	
60) Ethylbenzene-d10(S)	10.74	98	1605796	9.69 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery	= 96.90%	
69) Bromofluorobenzene(S)	12.09	174	373575	9.80 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	= 98.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.65	85	167416	3.40 ug/Kg	98
3) Chloromethane	1.91	50	281097	4.23 ug/Kg	99
4) Vinyl Chloride	2.02	62	185751	3.79 ug/Kg	94
5) Bromomethane	2.45	94	51369	3.49 ug/Kg	97
6) Chloroethane	2.58	64	102608	3.57 ug/Kg	99
7) Trichlorofluoromethane	2.95	101	220294	3.22 ug/Kg	94
8) Acrolein	3.54	56	33099	15.89 ug/Kg	76
9) Ethyl ether	3.36	59	529570	19.60 ug/Kg	98
10) 1,1-Dichloroethene	3.67	96	142701	3.91 ug/Kg	93
11) 1,1,2-Trichlorotrifluoroet	3.70	151	103930	2.85 ug/Kg	92
12) Carbon Disulfide	3.95	76	1736708	12.55 ug/Kg	97
13) Acetone	3.73	43	108665	7.97 ug/Kg	100
14) tert-Butyl alcohol	5.74	59	363790	18.62 ug/Kg	97
15) Methylene Chloride	4.34	49	245899	3.94 ug/Kg	97
16) Methyl tert-Butyl ether	4.68	73	301072	3.76 ug/Kg	99
17) trans-1,2-Dichloroethene	4.69	96	158168	3.72 ug/Kg	97
18) Acrylonitrile	4.64	53	156485	18.58 ug/Kg	97
19) Hexane	5.04	56	86063	2.41 ug/Kg#	77
20) Diisopropyl ether	5.30	45	479413	3.74 ug/Kg	96
21) 1,1-Dichloroethane	5.21	63	265872	3.65 ug/Kg	97
22) Vinyl Acetate	5.29	43	448718	8.58 ug/Kg#	97
23) Ethyl tert-butyl ether	5.74	87	144626	3.71 ug/Kg	94
24) 2,2-Dichloropropane	5.91	77	212755	3.74 ug/Kg	95
25) cis-1,2-Dichloroethene	5.92	96	168024	3.80 ug/Kg	93
26) 2-Butanone	5.93	57	13296	10.58 ug/Kg#	90
27) Ethyl acetate	6.01	45	25667	8.02 ug/Kg	98
28) Bromochloromethane	6.20	49	110270	3.70 ug/Kg	95
29) Chloroform	6.31	85	172817	3.74 ug/Kg	98
30) 1,1,1-Trichloroethane	6.50	97	241278	3.82 ug/Kg	90
31) Cyclohexane	6.56	56	279671	3.32 ug/Kg	98
33) Carbon Tetrachloride	6.69	119	188732	3.72 ug/Kg	90
34) 1,1-Dichloropropene	6.69	75	199399	3.70 ug/Kg	97
35) tert-Amyl methyl ether	7.04	73	298187	3.79 ug/Kg	94
36) Benzene	6.92	78	635787	3.87 ug/Kg	98
37) iso-Butyl alcohol	6.86	43	306206	372.81 ug/Kg	96
38) 1,2-Dichloroethane	6.95	62	161084	3.53 ug/Kg	92

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:12 2004

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
42) Trichloroethene	7.66	130	186593	4.13	ug/Kg	96
43) n-Butyl alcohol	7.60	41	134094	385.01	ug/Kg	97
44) Methylcyclohexane	7.87	55	176845	2.98	ug/Kg#	79
45) 1,2-Dichloropropane	7.90	63	150279	3.87	ug/Kg	95
46) Dibromomethane	8.06	174	78355	4.13	ug/Kg	94
47) Bromodichloromethane	8.23	83	180189	3.94	ug/Kg	97
48) cis-1,3-Dichloropropene	8.73	75	201505	3.87	ug/Kg	98
49) 4-Methyl-2-pentanone	8.88	85	64928	17.96	ug/Kg#	70
51) Toluene	9.10	91	664691	3.90	ug/Kg	98
52) trans-1,3-Dichloropropene	9.35	75	156269	3.66	ug/Kg	96
53) 1,1,2-Trichloroethane	9.57	97	105145	3.59	ug/Kg	97
54) Tetrachloroethene	9.74	164	128832	3.70	ug/Kg	94
55) 1,3-Dichloropropane	9.76	76	179452	3.96	ug/Kg	98
56) 2-Hexanone	9.84	85	23140	14.25	ug/Kg	97
57) Dibromochloromethane	10.04	129	109034	3.61	ug/Kg	99
58) 1,2-Dibromoethane	10.16	107	107322	4.05	ug/Kg	98
61) Chlorobenzene	10.73	112	426442	4.39	ug/Kg	93
62) 1,1,1,2-Tetrachloroethane	10.82	131	127224	4.27	ug/Kg	98
63) Ethylbenzene	10.84	91	728205	4.29	ug/Kg	100
64) m,p-Xylene	10.97	106	563255	8.86	ug/Kg	99
65) o-Xylene	11.45	91	561788	4.49	ug/Kg	97
66) Styrene	11.47	104	389442	4.15	ug/Kg	89
67) Bromoform	11.72	173	59906	3.96	ug/Kg	94
68) Isopropylbenzene	11.88	105	647495	4.17	ug/Kg	98
70) Bromobenzene	12.27	156	160903	4.31	ug/Kg	94
71) 1,1,2,2-Tetrachloroethane	12.27	83	170058+	3.79	ug/Kg	98
72) 1,2,3-Trichloropropane	12.32	110	35542	4.28	ug/Kg	89
73) n-Propylbenzene	12.38	91	856777	4.22	ug/Kg	97
74) 2-Chlorotoluene	12.50	126	161859	4.24	ug/Kg	92
75) 4-Chlorotoluene	12.63	126	165018	4.19	ug/Kg#	63
76) 1,3,5-Trimethylbenzene	12.58	105	551451	4.40	ug/Kg	99
77) t-Butylbenzene	12.98	119	504511	4.39	ug/Kg	97
78) 1,2,4-Trimethylbenzene	13.04	105	572832	4.50	ug/Kg	98
79) sec-Butylbenzene	13.25	105	757258	4.42	ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	576042	4.24	ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	298910	4.14	ug/Kg	97
83) 1,4-Dichlorobenzene	13.51	146	294457	3.97	ug/Kg	98
84) n-Butylbenzene	13.92	134	141721	4.03	ug/Kg	94
85) 1,2-Dichlorobenzene	13.97	146	274475	4.06	ug/Kg	98
86) 1,2-Dibromo-3-chloropropan	14.93	75	15648	3.63	ug/Kg	91
87) 1,3,5-Trichlorobenzene	15.19	180	173783	3.19	ug/Kg	99
88) 1,2,4-Trichlorobenzene	15.95	180	175531	3.82	ug/Kg	95
89) Hexachlorobutadiene	16.15	225	121348	4.17	ug/Kg	98
90) Naphthalene	16.26	128	393724	4.56	ug/Kg	100
91) 1,2,3-Trichlorobenzene	16.56	180	174444	4.19	ug/Kg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

STL-Seattle

Instrument:	ITS-40/HP5973N
Method:	5035/8260b
Matrix:	solid
Analyst:	frz/st
Date Prepared:	3/24/2003
Date Analyzed:	
Units:	ug/Kg

its_40_h	
5035_826	
solid	
frz_st	
0	
its_40_h.xls	
e:\msd\solid\5035_826	

5ml spike factor = 2

Parameter Name	Spiked Amt.	Data stdev	Data ave %R	Mean of Spk Amount	+3 Sigma UAL	+2 Sigma UWL	-2 Sigma LWL	-3 Sigma LAL	Percent Recovery xxxxxx	RESULTS fail xxxxxx	Datafile
Dichlorodifluoromethane	4	0.86	85.59	3.43	149.91	128.50	42.88	21.48	85.07	pass	3.4026
Chloromethane	4	0.62	101.15	4.05	147.51	132.06	70.25	54.80	105.69	pass	4.2277
Vinyl chloride	4	0.56	96.87	3.87	138.75	124.79	68.96	55.00	94.70	pass	3.7879
Bromomethane ⊕	4	1.05	96.11	3.92	176.77	150.55	45.67	19.45	87.17	pass	3.4866
Chloroethane	4	0.41	92.39	3.70	123.05	112.83	71.95	61.73	89.29	pass	3.5716
Trichlorofluoromethane	4	0.48	87.08	3.48	123.20	111.16	62.99	50.95	80.38	pass	3.215
1,1-Dichloroethene	4	0.46	98.17	3.93	132.93	121.34	75.00	63.42	97.73	pass	3.9093
1,1,2-Trichlorotrifluoroethane	4	0.40	92.38	3.70	122.62	112.54	72.23	62.15	71.27	pass	2.8508
Acrolein ⊕	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	79.47	#DIV/0!	15.8945
Carbon disulfide	20	2.09	80.61	16.12	111.98	101.52	59.70	49.24	62.76	pass	12.5511
Acetone ⊕	20	10.21	65.66	13.13	218.87	167.80	-35.48	-87.55	39.83	pass	7.9663
Iodomethane	20	2.64	53.42	10.68	93.01	79.82	27.03	13.84	0.00	fail	
Methylene chloride	4	1.33	101.43	4.06	201.54	168.19	34.78	1.42	98.42	pass	3.9367
Methyl tert-butyl ether	4	0.60	124.88	5.00	169.52	154.64	95.11	80.23	94.06	pass	3.7631
trans-1,2-Dichloroethene	4	0.42	97.33	3.89	128.74	118.27	76.40	65.93	93.07	pass	3.7227
Acrylonitrile	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	92.93	#DIV/0!	18.585
Hexane	4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	60.19	#DIV/0!	2.4075
1,1-Dichloroethane	4	0.42	98.61	3.94	130.09	119.60	77.61	67.12	91.31	pass	3.6524
Vinyl acetate	20	9.96	73.92	14.78	223.63	173.72	-25.89	-75.79	42.91	pass	8.5825
2,2-Dichloropropane	4	0.43	101.90	4.08	134.21	123.44	80.36	69.58	93.54	pass	3.7417
2-Butanone	20	4.37	66.95	13.39	132.57	110.70	23.21	1.33	52.89	pass	10.5785
cis-1,2-Dichloroethane	4	0.40	97.62	3.90	127.37	117.45	77.78	67.86	94.92	pass	3.7967
Tetrahydrofuran	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Bromochloromethane	4	0.53	109.13	4.37	148.51	135.38	82.88	69.75	92.44	pass	3.6974
Methacrylonitrile	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Chloroform	4	0.40	97.01	3.88	126.92	116.95	77.08	67.11	93.52	pass	3.7407
1,1,1-Trichloroethane	4	0.43	99.62	3.98	131.88	121.13	78.10	67.35	95.57	pass	3.8228
Carbon Tetrachloride	4	0.44	97.62	3.90	130.42	119.48	75.75	64.82	92.91	pass	3.7162
1,1-Dichloropropene	4	0.38	95.73	3.83	123.97	114.56	76.91	67.49	92.56	pass	3.7023
Benzene	4	0.36	99.70	3.99	126.57	117.61	81.79	72.84	96.79	pass	3.8717
1,2-Dichloroethane	4	0.41	99.68	3.99	130.14	119.99	79.38	69.22	88.22	pass	3.5287
Trichloroethene	4	0.48	100.30	4.01	136.12	124.18	76.42	64.48	103.19	pass	4.1275
1,2-Dichloropropane	4	0.65	105.93	4.24	154.86	138.55	73.30	56.99	96.79	pass	3.8717
1,4-Dioxane ⊕	40	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Dibromomethane	4	0.33	103.73	4.15	128.45	120.21	87.25	79.01	103.18	pass	4.127
Bromodichloromethane	4	0.36	103.06	4.12	129.88	120.94	85.18	76.24	98.56	pass	3.9423
2-Chloroethyl vinyl ether ⊕	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
cis-1,3-Dichloropropene	4	0.26	97.91	3.92	117.62	111.05	84.77	78.20	96.84	pass	3.8734
4-Methyl-2-pentanone	20	4.21	100.76	20.16	164.00	142.92	58.64	37.57	89.80	pass	17.9596
Toluene	4	0.34	99.37	3.97	125.18	116.58	82.17	73.57	97.44	pass	3.8976
trans-1,3-Dichloropropene	4	0.27	92.45	3.70	112.65	105.92	78.98	72.25	91.49	pass	3.6594
1,1,2-Trichloroethane	4	0.32	101.17	4.05	125.22	117.20	85.14	77.12	89.83	pass	3.5931
Tetrachloroethene	4	0.36	97.08	3.88	123.95	115.00	79.17	70.21	92.42	pass	3.6967
1,3-Dichloropropane	4	0.33	101.84	4.07	126.75	118.45	85.22	76.92	98.90	pass	3.956
2-Hexanone	20	5.05	79.29	15.86	155.15	129.87	28.71	3.43	71.24	pass	14.2461
Dibromochloromethane	4	0.34	94.50	3.78	120.10	111.57	77.43	68.89	90.23	pass	3.6092
1,2-Dibromoethane	4	0.36	102.98	4.12	131.28	121.84	84.12	74.68	101.18	pass	4.0473
Chlorobenzene	4	0.31	101.16	4.05	124.21	116.53	85.80	78.11	109.63	pass	4.3853
Ethylbenzene	4	0.36	101.80	4.07	126.93	119.88	83.71	74.66	107.17	pass	4.2866
1,1,1,2-Tetrachloroethane	4	0.27	101.10	4.04	121.06	114.41	87.79	81.13	106.70	pass	4.2681
m,p-Xylene	8	0.79	99.92	7.99	129.38	119.56	80.27	70.45	110.76	pass	8.8604
o-Xylene	4	0.35	100.55	4.02	126.63	117.94	83.16	74.46	112.29	pass	4.4917
Styrene	4	0.47	97.43	3.90	132.92	121.09	73.77	61.94	103.82	pass	4.1529
Bromoform	4	0.35	99.62	3.98	126.03	117.23	82.02	73.22	99.03	pass	3.961
Isopropylbenzene	4	0.38	92.78	3.71	121.54	111.95	73.60	64.01	104.15	pass	4.1658
cis-1,4-Dichloro-2-butene	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Bromobenzene	4	0.36	101.09	4.04	127.75	118.86	83.33	74.44	107.83	pass	4.313
n-Propylbenzene	4	0.43	100.48	4.02	132.50	121.83	79.13	68.45	105.43	pass	4.2173
1,1,2,2-Tetrachloroethane	4	0.78	105.39	4.22	163.52	144.15	66.63	47.25	94.65	pass	3.786
trans-1,4-Dichloro-2-butene	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
1,2,3-Trichloropropane	4	0.69	107.32	4.29	159.35	142.01	72.63	55.28	107.03	pass	4.2813
2-Chlorotoluene	4	0.39	100.76	4.03	130.15	120.35	81.17	71.37	106.05	pass	4.242

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STL-Seattle

1,3,5-Trimethylbenzene	4	0.45	96.89	3.96	132.30	121.16	76.62	65.48	109.97	pass	4.3988
4-Chlorotoluene	4	0.47	97.91	3.92	133.37	121.55	74.28	62.46	104.80	pass	4.1921
t-Butylbenzene	4	0.41	98.31	3.93	128.97	118.75	77.87	67.65	109.80	pass	4.3919
1,2,4-Trimethylbenzene	4	0.48	103.52	4.14	139.67	127.62	79.43	67.38	112.58	pass	4.5033
sec-Butylbenzene	4	0.51	102.07	4.08	140.36	127.60	76.55	63.79	110.43	pass	4.4171
1,3-Dichlorobenzene	4	0.49	98.68	3.95	135.27	123.08	74.28	62.09	103.52	pass	4.1406
4-Isopropyltoluene	4	0.51	94.19	3.77	132.22	119.54	68.83	56.15	106.03	pass	4.2411
1,4-Dichlorobenzene	4	0.47	101.48	4.06	136.65	124.92	78.03	66.31	99.22	pass	3.9689
Benzyl chloride	4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.83	#DIV/0!	4.0333
n-Butylbenzene	4	0.58	97.52	3.90	141.21	126.65	68.39	53.82	101.51	pass	4.0603
1,2-Dichlorobenzene	4	0.38	99.81	3.99	128.35	118.83	80.79	71.28	90.87	pass	3.6349
1,2-Dibromo-3-chloropropane	4	0.88	105.17	4.21	171.19	149.19	61.16	39.15	79.69	pass	3.1876
1,3,5-Trichlorobenzene	4	0.73	103.78	4.15	158.81	140.47	67.09	48.74	95.43	pass	3.8173
1,2,4-Trichlorobenzene	4	0.59	101.18	4.05	145.79	130.92	71.45	56.58	104.65	pass	4.1859
Hexachlorobutadiene	4	0.57	99.79	3.99	142.62	128.34	71.25	56.97	104.23	pass	4.1693
Naphthalene	4	0.63	111.60	4.46	158.55	142.91	80.28	64.53	114.00	pass	4.5601
1,2,3-Trichlorobenzene	4	0.47	102.60	4.10	137.98	125.19	79.02	67.22	82.89	pass	3.3154

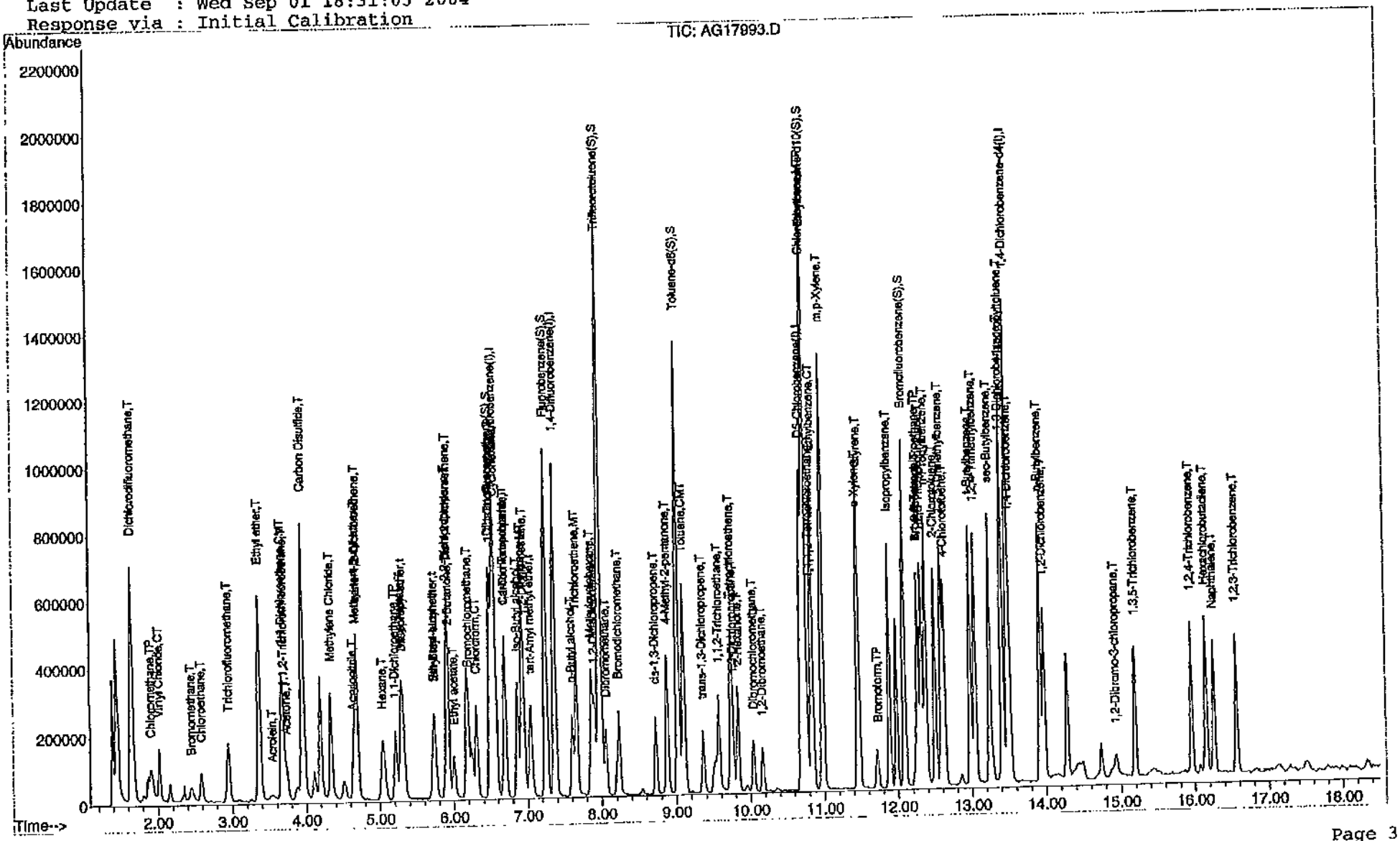
Quantitation Report

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:44 2004

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	10.000	10.000	0.0	118	0.00
2	T	Dichlorodifluoromethane	4.000	3.403	14.9	86	0.00
3	TP	Chloromethane	4.000	4.228	-5.7	108	0.00
4	CT	Vinyl Chloride	4.000	3.788	5.3	96	0.00
5	T	Bromomethane	4.000	3.487	12.8	100	0.00
6	T	Chloroethane	4.000	3.572	10.7	96	0.00
7	T	Trichlorofluoromethane	4.000	3.215	19.6	83	0.00
8	T	Acrolein	20.000	15.894	20.5#	77	0.00
9	T	Ethyl ether	20.000	19.604	2.0	109	0.00
10	CMT	1,1-Dichloroethene	4.000	3.909	2.3	105	0.01
11	T	1,1,2-Trichlorotrifluoroeth	4.000	2.851	28.7#	74	0.01
12	T	Carbon Disulfide	4.000	12.551	-213.8#	343	0.00
13	T	Acetone	20.000	7.966	60.2#	49	-0.01
14	t	tert-Butyl alcohol	20.000	18.623	6.9	107	0.01
15	T	Methylene Chloride	4.000	3.937	1.6	103	0.01
16	T	Methyl tert-Butyl ether	4.000	3.763	5.9	107	0.00
17	T	trans-1,2-Dichloroethene	4.000	3.723	6.9	98	0.00
18	T	Acrylonitrile	20.000	18.585	7.1	111	0.00
19	T	Hexane	4.000	2.408	39.8#	57	0.01
20	t	Diisopropyl ether	4.000	3.738	6.6	105	0.00
21	TP	1,1-Dichloroethane	4.000	3.652	8.7	99	0.00
22	T	Vinyl Acetate	20.000	8.583	57.1#	62	0.01
23	t	Ethyl tert-butyl ether	4.000	3.706	7.4	106	0.00
24	T	2,2-Dichloropropane	4.000	3.742	6.5	108	0.00
25	T	cis-1,2-Dichloroethene	4.000	3.797	5.1	100	0.00
26	T	2-Butanone	20.000	10.578	47.1#	60	0.01
27	T	Ethyl acetate	20.000	8.021	59.9#	48	0.01
28	T	Bromochloromethane	4.000	3.697	7.6	99	0.00
29	CT	Chloroform	4.000	3.741	6.5	102	0.00
30	T	1,1,1-Trichloroethane	4.000	3.823	4.4	103	0.00
31	T	Cyclohexane	4.000	3.315	17.1	89	0.01
32	S	Dibromofluoromethane(S)	10.000	8.015	19.8	89	0.00
33	T	Carbon Tetrachloride	4.000	3.716	7.1	99	0.01
34	T	1,1-Dichloropropene	4.000	3.702	7.5	98	0.01
35	t	tert-Amyl methyl ether	4.000	3.789	5.3	109	0.01
36	MT	Benzene	4.000	3.872	3.2	103	0.00
37	T	iso-Butyl alcohol	400.000	372.813	6.8	120	0.00
38	T	1,2-Dichloroethane	4.000	3.529	11.8	98	0.00
39	S	Fluorobenzene(S)	10.000	7.983	20.2#	87	0.00
40	I	1,4-Difluorobenzene(I)	10.000	10.000	0.0	112	0.00
41	S	Trifluorotoluene(S)	10.000	17.860	-78.6#	175	0.00
42	MT	Trichloroethene	4.000	4.127	-3.2	91	0.00
43	T	n-Butyl alcohol	400.000	385.014	3.7	129	0.00
44	T	Methylcyclohexane	4.000	2.977	25.6#	69	0.01
45	CT	1,2-Dichloropropane	4.000	3.872	3.2	101	0.00
46	T	Dibromomethane	4.000	4.127	-3.2	109	0.01
47	T	Bromodichloromethane	4.000	3.942	1.4	104	0.00
48	T	cis-1,3-Dichloropropene	4.000	3.873	3.2	103	0.00
49	T	4-Methyl-2-pentanone	20.000	17.960	10.2	98	0.00
50	S	Toluene-d8(S)	10.000	8.741	12.6	89	0.00
51	CMT	Toluene	4.000	3.898	2.5	98	0.00
52	T	trans-1,3-Dichloropropene	4.000	3.659	8.5	98	0.00
53	T	1,1,2-Trichloroethane	4.000	3.593	10.2	99	0.00
54	T	Tetrachloroethene	4.000	3.697	7.6	90	0.01

(#) = Out of Range

00120

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
5	T	1,3-Dichloropropane	4.000	3.956	1.1	104	0.01
6	T	2-Hexanone	20.000	14.248	28.8#	76	0.01
7	T	Dibromochloromethane	4.000	3.609	9.8	98	0.01
8	T	1,2-Dibromoethane	4.000	4.047	-1.2	109	0.00
9	I	D5-Chlorobenzene(I)	10.000	10.000	0.0	98	0.00
0	S	Ethylbenzene-d10(S)	10.000	9.693	3.1	91	0.00
1	MTP	Chlorobenzene	4.000	4.385	-9.6	97	0.00
2	T	1,1,1,2-Tetrachloroethane	4.000	4.268	-6.7	101	0.00
3	CT	Ethylbenzene	4.000	4.287	-7.2	96	0.00
4	T	m,p-Xylene	8.000	8.860	-10.7	98	0.00
5	T	o-Xylene	4.000	4.492	-12.3	99	0.00
6	T	Styrene	4.000	4.153	-3.8	94	0.00
7	TP	Bromoform	4.000	3.961	1.0	103	0.01
8	T	Isopropylbenzene	4.000	4.166	-4.2	90	0.00
9	S	Bromofluorobenzene(S)	10.000	9.798	2.0	87	0.00
0	T	Bromobenzene	4.000	4.313	-7.8	96	0.00
1	TP	1,1,2,2-Tetrachloroethane	4.000	3.786	5.3	100	0.00
2	T	1,2,3-Trichloropropane	4.000	4.281	-7.0	101	0.00
3	T	n-Propylbenzene	4.000	4.217	-5.4	91	0.00
4	T	2-Chlorotoluene	4.000	4.242	-6.0	92	0.00
5	T	4-Chlorotoluene	4.000	4.192	-4.8	92	0.00
6	T	1,3,5-Trimethylbenzene	4.000	4.399	-10.0	93	0.00
7	T	t-Butylbenzene	4.000	4.392	-9.8	100	0.00
8	T	1,2,4-Trimethylbenzene	4.000	4.503	-12.6	97	0.00
9	T	sec-Butylbenzene	4.000	4.417	-10.4	95	0.00
0	T	4-Isopropyltoluene	4.000	4.241	-6.0	86	0.00
1	T	1,3-Dichlorobenzene	4.000	4.141	-3.5	88	0.00
2	I	1,4-Dichlorobenzene-d4(I)	10.000	10.000	0.0	104	0.00
3	T	1,4-Dichlorobenzene	4.000	3.969	0.8	87	0.00
4	T	n-Butylbenzene	4.000	4.033	-0.8	86	0.00
5	T	1,2-Dichlorobenzene	4.000	4.060	-1.5	93	0.00
6	T	1,2-Dibromo-3-chloropropane	4.000	3.635	9.1	105	-0.01
7	T	1,3,5-Trichlorobenzene	4.000	3.188	20.3#	65	0.00
8	T	1,2,4-Trichlorobenzene	4.000	3.817	4.6	77	0.00
9	T	Hexachlorobutadiene	4.000	4.169	-4.2	83	0.00
0	T	Naphthalene	4.000	4.560	-14.0	104	0.00
1	T	1,2,3-Trichlorobenzene	4.000	4.186	-4.6	87	0.00

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

00121

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	1.000	1.000	0.0	118	0.00
2	T	Dichlorodifluoromethane	0.660	0.561	15.0	86	0.00
3	TP	Chloromethane	1.111	0.942	15.2	108	0.00
4	CT	Vinyl Chloride	0.657	0.623	5.2	96	0.00
5	T	Bromomethane	0.214	0.172	19.6	100	0.00
6	T	Chloroethane	0.385	0.344	10.6	96	0.00
7	T	Trichlorofluoromethane	0.919	0.738	19.7	83	0.00
8	T	Acrolein	0.028	0.022#	21.4#	77	0.00
9	T	Ethyl ether	0.362	0.355	1.9	109	0.00
10	CMT	1,1-Dichloroethene	0.489	0.478	2.2	105	0.01
11	T	1,1,2-Trichlorotrifluoroeth	0.489	0.348	28.8#	74	0.01
12	T	Carbon Disulfide	1.855	5.821	-213.8#	343#	0.00
13	T	Acetone	0.180	0.073#	59.4#	49#	-0.01
14	t	tert-Butyl alcohol	0.262	0.244	6.9	107	0.01
15	T	Methylene Chloride	1.041	0.824	20.8#	103	0.01
16	T	Methyl tert-Butyl ether	1.073	1.009	6.0	107	0.00
17	T	trans-1,2-Dichloroethene	0.570	0.530	7.0	98	0.00
18	T	Acrylonitrile	0.113	0.105	7.1	111	0.00
19	T	Hexane	0.491	0.288	41.3#	57	0.01
20	t	Diisopropyl ether	1.720	1.607	6.6	105	0.00
21	TP	1,1-Dichloroethane	0.976	0.891	8.7	99	0.00
22	T	Vinyl Acetate	0.701	0.301	57.1#	62	0.01
23	t	Ethyl tert-butyl ether	0.523	0.485	7.3	106	0.00
24	T	2,2-Dichloropropane	0.762	0.713	6.4	108	0.00
25	T	cis-1,2-Dichloroethene	0.593	0.563	5.1	100	0.00
26	T	2-Butanone	0.017	0.009#	47.1#	60	0.01
27	T	Ethyl acetate	0.043	0.017#	60.5#	48#	0.01
28	T	Bromochloromethane	0.400	0.370	7.5	99	0.00
29	CT	Chloroform	0.619	0.579	6.5	102	0.00
30	T	1,1,1-Trichloroethane	0.846	0.809	4.4	103	0.00
31	T	Cyclohexane	1.183	0.937	20.8#	89	0.01
32	S	Dibromofluoromethane(S)	0.528	0.423	19.9	89	0.00
33	T	Carbon Tetrachloride	0.681	0.633	7.0	99	0.01
34	T	1,1-Dichloropropene	0.722	0.668	7.5	98	0.01
35	t	tert-Amyl methyl ether	1.055	0.999	5.3	109	0.01
36	MT	Benzene	2.202	2.131	3.2	103	0.00
37	T	iso-Butyl alcohol	0.011	0.010#	9.1	120	0.00
38	T	1,2-Dichloroethane	0.612	0.540	11.8	98	0.00
39	S	Fluorobenzene(S)	2.265	1.808	20.2#	87	0.00
40	I	1,4-Difluorobenzene(I)	1.000	1.000	0.0	112	0.00
41	S	Trifluorotoluene(S)	0.571	1.020	-78.6#	175	0.00
42	MT	Trichloroethene	0.385	0.397	-3.1	91	0.00
43	T	n-Butyl alcohol	0.003	0.003#	0.0	129	0.00
44	T	Methylcyclohexane	0.506	0.377	25.5#	69	0.01
45	CT	1,2-Dichloropropane	0.331	0.320	3.3	101	0.00
46	T	Dibromomethane	0.162	0.167	-3.1	109	0.01
47	T	Bromodichloromethane	0.389	0.384	1.3	104	0.00
48	T	cis-1,3-Dichloropropene	0.443	0.429	3.2	103	0.00
49	T	4-Methyl-2-pentanone	0.031	0.028#	9.7	98	0.00
50	S	Toluene-d8(S)	1.214	1.061	12.6	89	0.00
51	CMT	Toluene	1.453	1.416	2.5	98	0.00
52	T	trans-1,3-Dichloropropene	0.364	0.333	8.5	98	0.00
53	T	1,1,2-Trichloroethane	0.249	0.224	10.0	99	0.00
54	T	Tetrachloroethene	0.297	0.274	7.7	90	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17993.D
Acq On : 1 Sep 2004 5:03 pm
Sample : 4.0 ug/Kg ICV/bs voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 17
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
5	T	1,3-Dichloropropane	0.386	0.382	1.0	104	0.01
6	T	2-Hexanone	0.014	0.010#	28.6#	76	0.01
7	T	Dibromochloromethane	0.257	0.232	9.7	98	0.01
8	T	1,2-Dibromoethane	0.226	0.229	-1.3	109	0.00
9	I	D5-Chlorobenzene(I)	1.000	1.000	0.0	98	0.00
0	S	Ethylbenzene-d10(S)	7.468	7.239	3.1	91	0.00
1	MTP	Chlorobenzene	4.384	4.806	-9.6	97	0.00
2	T	1,1,1,2-Tetrachloroethane	1.344	1.434	-6.7	101	0.00
3	CT	Ethylbenzene	7.658	8.207	-7.2	96	0.00
4	T	m,p-Xylene	2.866	3.174	-10.7	98	0.00
5	T	o-Xylene	5.638	6.331	-12.3	99	0.00
6	T	Styrene	4.227	4.389	-3.8	94	0.00
7	TP	Bromoform	0.682	0.675	1.0	103	0.01
8	T	Isopropylbenzene	7.007	7.297	-4.1	90	0.00
9	S	Bromofluorobenzene(S)	1.719	1.684	2.0	87	0.00
0	T	Bromobenzene	1.682	1.813	-7.8	96	0.00
1	TP	1,1,2,2-Tetrachloroethane	2.025	1.917	5.3	100	0.00
2	T	1,2,3-Trichloropropane	0.374	0.401	-7.2	101	0.00
3	T	n-Propylbenzene	9.158	9.656	-5.4	91	0.00
4	T	2-Chlorotoluene	1.720	1.824	-6.0	92	0.00
5	T	4-Chlorotoluene	1.774	1.860	-4.8	92	0.00
6	T	1,3,5-Trimethylbenzene	5.651	6.215	-10.0	93	0.00
7	T	t-Butylbenzene	5.178	5.686	-9.8	100	0.00
8	T	1,2,4-Trimethylbenzene	5.734	6.456	-12.6	97	0.00
9	T	sec-Butylbenzene	7.728	8.534	-10.4	95	0.00
0	T	4-Isopropyltoluene	6.123	6.492	-6.0	86	0.00
1	T	1,3-Dichlorobenzene	3.254	3.369	-3.5	88	0.00
2	I	1,4-Dichlorobenzene-d4(I)	1.000	1.000	0.0	104	0.00
3	T	1,4-Dichlorobenzene	1.548	1.536	0.8	87	0.00
4	T	n-Butylbenzene	0.733	0.739	-0.8	86	0.00
5	T	1,2-Dichlorobenzene	1.411	1.432	-1.5	93	0.00
6	T	1,2-Dibromo-3-chloropropane	0.092	0.082#	10.9	105	-0.01
7	T	1,3,5-Trichlorobenzene	1.179	0.907	23.1#	65	0.00
8	T	1,2,4-Trichlorobenzene	1.005	0.916	8.9	77	0.00
9	T	Hexachlorobutadiene	0.631	0.633	-0.3	83	0.00
90	T	Naphthalene	1.917	2.054	-7.1	104	0.00
91	T	1,2,3-Trichlorobenzene	0.918	0.910	0.9	87	0.00

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:20 2004

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	736451	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	1158059	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	221194	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	472348	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	322998	8.31 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 83.10%#		
39) Fluorobenzene(S)	7.24	96	1319384	7.91 ug/Kg	-0.01
Spiked Amount 10.000	Range 92 - 107		Recovery = 79.10%#		
41) Trifluorotoluene(S)	7.98	146	1253232	18.95 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 94.75%		
50) Toluene-d8(S)	9.03	98	1222059	8.70 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 87.00%#		
60) Ethylbenzene-d10(S)	10.74	98	1572127	9.52 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 95.20%		
69) Bromofluorobenzene(S)	12.09	174	373821	9.83 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 98.30%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.67	85	143390	2.95 ug/Kg	97
3) Chloromethane	1.91	50	281612	4.31 ug/Kg	98
4) Vinyl Chloride	2.02	62	155717	3.22 ug/Kg	96
5) Bromomethane	2.45	94	64220	4.30 ug/Kg	86
6) Chloroethane	2.58	64	108749	3.83 ug/Kg	97
7) Trichlorofluoromethane	2.93	101	217380	3.21 ug/Kg	91
8) Acrolein	3.54	56	38256	18.86 ug/Kg	87
9) Ethyl ether	3.36	59	561435	21.05 ug/Kg	97
10) 1,1-Dichloroethene	3.66	96	146512	4.06 ug/Kg	95
11) 1,1,2-Trichlorotrifluoroet	3.68	151	80320	2.23 ug/Kg	93
12) Carbon Disulfide	3.95	76	1662411	12.17 ug/Kg	97
13) Acetone	3.73	43	110858	8.26 ug/Kg	97
14) tert-Butyl alcohol	5.74	59	374667	19.43 ug/Kg	97
15) Methylene Chloride	4.32	49	250661	4.10 ug/Kg	95
16) Methyl tert-Butyl ether	4.68	73	305859	3.87 ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	160527	3.83 ug/Kg	96
18) Acrylonitrile	4.64	53	171068	20.58 ug/Kg	96
19) Hexane	5.04	56	42542	1.07 ug/Kg#	74
20) Diisopropyl ether	5.30	45	476143	3.76 ug/Kg	98
21) 1,1-Dichloroethane	5.21	63	276443	3.85 ug/Kg	97
22) Vinyl Acetate	5.29	43	328206	6.36 ug/Kg#	97
23) Ethyl tert-butyl ether	5.74	87	152401	3.96 ug/Kg	98
24) 2,2-Dichloropropane	5.90	77	207808	3.70 ug/Kg	94
25) cis-1,2-Dichloroethene	5.92	96	174058	3.98 ug/Kg	94
26) 2-Butanone	5.92	57	16525	13.32 ug/Kg#	83
27) Ethyl acetate	6.01	45	25085	7.94 ug/Kg	94
28) Bromochloromethane	6.20	49	119339	4.05 ug/Kg	94
29) Chloroform	6.31	85	178466	3.91 ug/Kg	97
30) 1,1,1-Trichloroethane	6.49	97	239640	3.85 ug/Kg	89
31) Cyclohexane	6.55	56	251554	3.00 ug/Kg	98
33) Carbon Tetrachloride	6.69	119	190284	3.79 ug/Kg	94
34) 1,1-Dichloropropene	6.68	75	197038	3.71 ug/Kg	97
35) tert-Amyl methyl ether	7.04	73	304107	3.91 ug/Kg	94
36) Benzene	6.92	78	638876	3.94 ug/Kg	98
37) iso-Butyl alcohol	6.86	43	330420	407.43 ug/Kg	95
38) 1,2-Dichloroethane	6.95	62	173308	3.85 ug/Kg	92

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 02 11:44:20 2004

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	203312	4.56 ug/Kg	94
43) n-Butyl alcohol	7.60	41	148482	432.16 ug/Kg	96
44) Methylcyclohexane	7.87	55	123199	2.10 ug/Kg#	70
45) 1,2-Dichloropropane	7.90	63	154926	4.05 ug/Kg	95
46) Dibromomethane	8.05	174	76449	4.08 ug/Kg	98
47) Bromodichloromethane	8.23	83	184046	4.08 ug/Kg	98
48) cis-1,3-Dichloropropene	8.73	75	197334	3.85 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	71781	20.13 ug/Kg#	83
51) Toluene	9.10	91	672880	4.00 ug/Kg	99
52) trans-1,3-Dichloropropene	9.35	75	151182	3.59 ug/Kg	94
53) 1,1,2-Trichloroethane	9.57	97	104240	3.61 ug/Kg	97
54) Tetrachloroethene	9.74	164	128166	3.73 ug/Kg	95
55) 1,3-Dichloropropane	9.76	76	169590	3.79 ug/Kg	96
56) 2-Hexanone	9.83	85	23794	14.85 ug/Kg#	94
57) Dibromochloromethane	10.03	129	109313	3.67 ug/Kg	99
58) 1,2-Dibromoethane	10.16	107	109175	4.17 ug/Kg	98
61) Chlorobenzene	10.73	112	420218	4.33 ug/Kg	90
62) 1,1,1,2-Tetrachloroethane	10.82	131	128601	4.33 ug/Kg	98
63) Ethylbenzene	10.84	91	730112	4.31 ug/Kg	99
64) m,p-Xylene	10.97	106	567944	8.96 ug/Kg	99
65) o-Xylene	11.45	91	548838	4.40 ug/Kg	95
66) Styrene	11.47	104	391003	4.18 ug/Kg	90
67) Bromoform	11.71	173	57872	3.84 ug/Kg	93
68) Isopropylbenzene	11.88	105	635675	4.10 ug/Kg	98
70) Bromobenzene	12.27	156	161328	4.34 ug/Kg	95
71) 1,1,2,2-Tetrachloroethane	12.27	83	146782+	3.28 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	35859	4.33 ug/Kg	92
73) n-Propylbenzene	12.38	91	849236	4.19 ug/Kg	96
74) 2-Chlorotoluene	12.50	126	161560	4.25 ug/Kg	91
75) 4-Chlorotoluene	12.63	126	162425	4.14 ug/Kg#	63
76) 1,3,5-Trimethylbenzene	12.58	105	555760	4.45 ug/Kg	99
77) t-Butylbenzene	12.98	119	492228	4.30 ug/Kg	96
78) 1,2,4-Trimethylbenzene	13.04	105	569936	4.49 ug/Kg	97
79) sec-Butylbenzene	13.25	105	751982	4.40 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	568391	4.20 ug/Kg	97
81) 1,3-Dichlorobenzene	13.40	146	297391	4.13 ug/Kg	97
83) 1,4-Dichlorobenzene	13.51	146	305705	4.18 ug/Kg	99
84) n-Butylbenzene	13.92	134	141769	4.09 ug/Kg	93
85) 1,2-Dichlorobenzene	13.97	146	272159	4.08 ug/Kg	97
86) 1,2-Dibromo-3-chloropropan	14.94	75	18169	4.30 ug/Kg	92
87) 1,3,5-Trichlorobenzene	15.18	180	131770	2.41 ug/Kg	99
88) 1,2,4-Trichlorobenzene	15.95	180	183564	4.06 ug/Kg	97
89) Hexachlorobutadiene	16.15	225	119425	4.16 ug/Kg	96
90) Naphthalene	16.26	128	409148	4.82 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	175900	4.29 ug/Kg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

STL-Seattle

Instrument:	ITS-40/HP5973N
Method:	5035/8260b
Matrix:	solid
Analyst:	frz/st
Date Prepared:	3/24/2003
Date Analyzed:	
Units:	ug/Kg

its_40_h
5035_826
solid
frz_st
0
its_40_h.xls
e:\md\solid\5035_826

5ml spike factor = 2

Parameter Name	Spiked Amt.	Data stdev	Data ave %R	Mean of Spk Amount	+ 3 Sigma UAL	+ 2 Sigma UWL	- 2 Sigma LWL	- 3 Sigma LAL	Percent Recovery xxxxxx	RESULTS fail	Datafile ag17994 xxxxxx
Dichlorodifluoromethane	4	0.86	85.69	3.49	149.91	128.50	42.88	21.48	73.79	pass	2.9515
Chloromethane	4	0.62	101.15	4.05	147.51	132.06	70.25	54.80	107.64	pass	4.3055
Vinyl chloride	4	0.56	96.87	3.87	138.75	124.79	58.96	55.00	80.40	pass	3.216
Bromomethane @	4	1.05	98.11	3.92	176.77	150.55	45.67	19.45	107.44	pass	4.2974
Chloroethane	4	0.41	92.39	3.70	123.05	112.83	71.95	61.73	95.84	pass	3.8337
Trichlorofluoromethane	4	0.48	87.08	3.48	123.20	111.16	62.99	50.95	80.33	pass	3.213
1,1-Dichloroethene	4	0.46	98.17	3.93	132.93	121.34	76.00	63.42	101.63	pass	4.065
1,1,2-Trichlorotrifluoroethane	4	0.40	92.38	3.70	122.62	112.54	72.23	62.15	55.78	fail	2.2313
Acrolein @	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	94.29	#DIV/0!	18.857
Carbon disulfide	20	2.09	80.61	16.12	111.98	101.52	59.70	49.24	60.84	pass	12.1677
Acetone @	20	10.21	65.66	13.13	218.87	167.80	-36.48	-87.55	41.29	pass	8.2579
Iodomethane	20	2.64	53.42	10.68	93.01	79.82	27.03	13.84	0.00	fail	
Methylene chloride	4	1.33	101.48	4.06	201.54	168.19	34.78	1.42	102.56	pass	4.1025
Methyl tert-butyl ether	4	0.60	124.88	5.00	169.52	154.64	95.11	80.23	96.79	pass	3.8717
trans-1,2-Dichloroethene	4	0.42	97.33	3.89	128.74	118.27	76.40	65.93	95.66	pass	3.8265
Acrylonitrile	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	102.88	#DIV/0!	20.5765
Hexane	4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	26.85	#DIV/0!	1.0739
1,1-Dichloroethane	4	0.42	98.61	3.94	130.09	119.60	77.61	67.12	96.15	pass	3.8461
Vinyl acetate	20	9.98	73.92	14.78	223.63	173.72	-25.89	-75.79	31.79	pass	6.3577
2,2-Dichloropropane	4	0.43	101.90	4.08	134.21	123.44	80.36	69.58	92.54	pass	3.7014
2-Butanone	20	4.37	66.95	13.39	132.57	110.70	23.21	1.33	66.58	pass	13.3155
cis-1,2-Dichloroethene	4	0.40	97.62	3.90	127.37	117.45	77.78	67.86	99.58	pass	3.9833
Tetrahydrofuran	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Bromochloromethane	4	0.53	109.13	4.37	148.51	135.38	82.88	69.75	101.32	pass	4.0526
Methacrylonitrile	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Chloroform	4	0.40	97.01	3.88	126.92	116.95	77.08	67.11	97.81	pass	3.9124
1,1,1-Trichloroethane	4	0.43	99.62	3.98	131.88	121.13	78.10	67.35	96.14	pass	3.8454
Carbon Tetrachloride	4	0.44	97.62	3.90	130.42	119.48	75.75	64.82	94.87	pass	3.7948
1,1-Dichloropropene	4	0.38	95.73	3.83	123.97	114.56	76.91	67.49	92.63	pass	3.7052
Benzene	4	0.36	99.70	3.99	126.57	117.61	81.79	72.84	98.51	pass	3.9402
1,2-Dichloroethane	4	0.41	99.68	3.99	130.14	119.99	79.38	69.22	96.13	pass	3.845
Trichloroethene	4	0.48	100.30	4.01	136.12	124.18	76.42	64.48	113.97	pass	4.5589
1,2-Dichloropropane	4	0.65	105.93	4.24	154.86	138.55	73.30	56.99	101.15	pass	4.0461
1,4-Dioxane @	40	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Dibromomethane	4	0.33	103.73	4.15	128.45	120.21	87.25	79.01	102.04	pass	4.0817
Bromodichloromethane	4	0.36	103.05	4.12	129.88	120.94	85.18	76.24	102.05	pass	4.0818
2-Chloroethyl vinyl ether @	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
cis-1,3-Dichloropropene	4	0.26	97.81	3.92	117.62	111.05	84.77	78.20	96.13	pass	3.8451
4-Methyl-2-pentanone	20	4.21	100.78	20.16	164.00	142.92	58.64	37.57	100.69	pass	20.1269
Toluene	4	0.34	99.37	3.97	125.18	116.58	82.17	73.57	99.99	pass	3.9996
trans-1,3-Dichloropropene	4	0.27	92.45	3.70	112.65	105.92	78.98	72.25	89.72	pass	3.5887
1,1,2-Trichloroethane	4	0.32	101.17	4.05	125.22	117.20	85.14	77.12	90.27	pass	3.6109
Tetrachloroethene	4	0.36	97.08	3.88	123.95	115.00	79.17	70.21	93.20	pass	3.728
1,3-Dichloropropane	4	0.33	101.84	4.07	126.76	118.45	85.22	76.92	94.75	pass	3.7898
2-Hexanone	20	5.05	79.29	15.86	155.15	129.87	28.71	3.43	74.26	pass	14.8512
Dibromochloromethane	4	0.34	94.50	3.78	120.10	111.57	77.43	68.89	91.70	pass	3.6679
1,2-Dibromoethane	4	0.38	102.98	4.12	131.28	121.84	84.12	74.68	104.34	pass	4.1735
Chlorobenzene	4	0.31	101.16	4.05	124.21	116.53	85.80	78.11	108.35	pass	4.3338
Ethylbenzene	4	0.36	101.80	4.07	128.93	119.88	83.71	74.66	107.76	pass	4.3102
1,1,1,2-Tetrachloroethane	4	0.27	101.10	4.04	121.06	114.41	87.79	81.13	108.17	pass	4.3268
m,p-Xylene	8	0.79	99.92	7.99	129.38	119.56	80.27	70.45	112.00	pass	8.9599
o-Xylene	4	0.35	100.55	4.02	126.63	117.94	83.16	74.46	110.02	pass	4.4008
Styrene	4	0.47	97.43	3.90	132.92	121.09	73.77	61.94	104.54	pass	4.1816
Bromoform	4	0.35	99.62	3.98	126.03	117.23	82.02	73.22	95.94	pass	3.8376
Isopropylbenzene	4	0.38	92.78	3.71	121.54	111.95	73.60	64.01	102.54	pass	4.1016
cis-1,4-Dichloro-2-butene	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
Bromobenzene	4	0.36	101.09	4.04	127.75	118.86	83.33	74.44	106.42	pass	4.3369
n-Propylbenzene	4	0.43	100.48	4.02	132.50	121.83	79.13	68.45	104.81	pass	4.1922
1,1,2,2-Tetrachloroethane	4	0.78	105.39	4.22	163.52	144.15	66.63	47.25	81.93	pass	3.2772
trans-1,4-Dichloro-2-butene	20	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!	
1,2,3-Trichloropropane	4	0.69	107.32	4.29	159.35	142.01	72.63	55.28	108.30	pass	4.3319
2-Chlorotoluene	4	0.39	100.76	4.03	130.15	120.35	81.17	71.37	106.16	pass	4.2463

9/7/2004

- see ag17993

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STL-Seattle

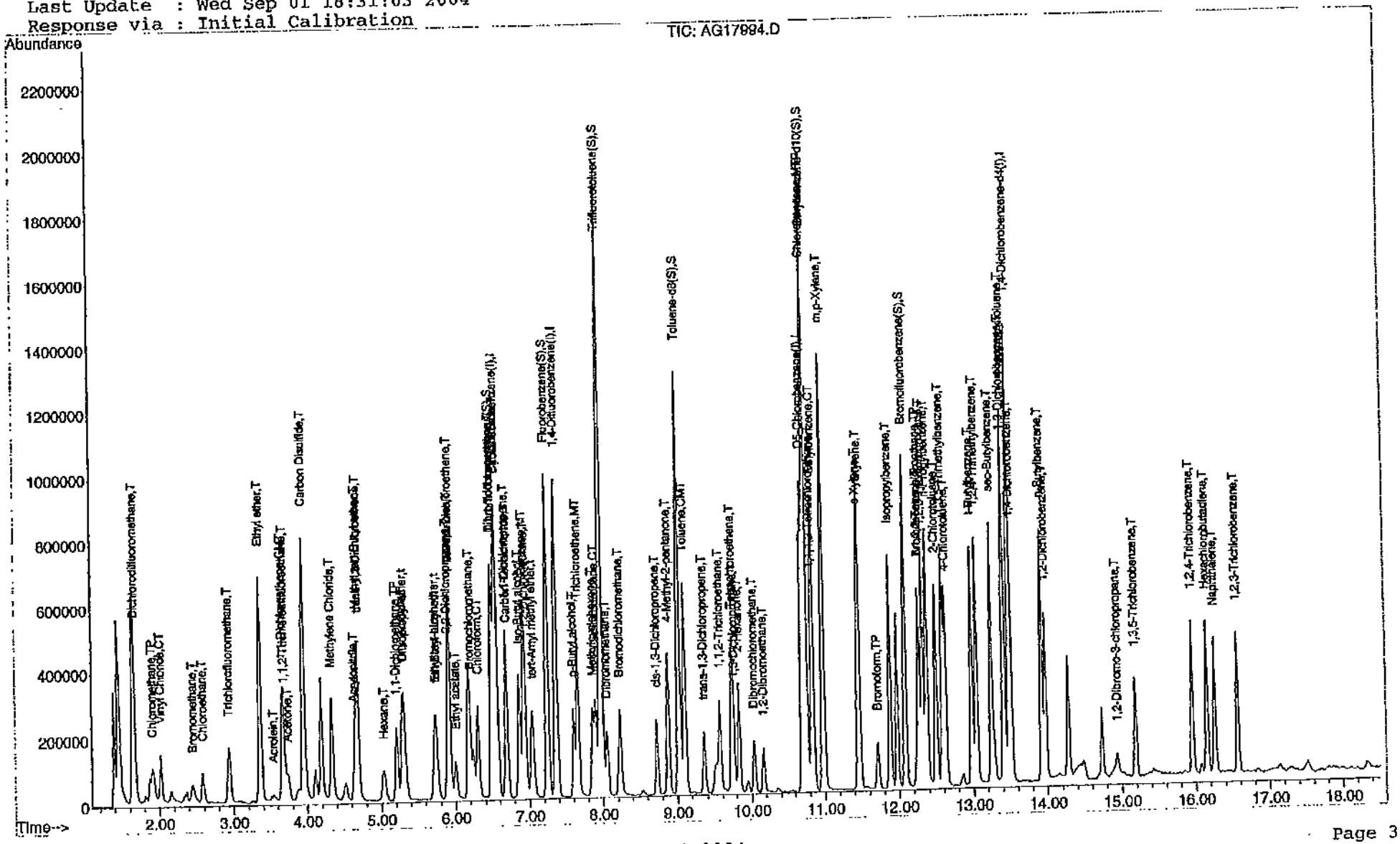
1,3,5-Trimethylbenzene	4	0.45	98.89	3.96	132.30	121.16	76.62	65.48	111.15	pass	4.446
4-Chlorotoluene	4	0.47	97.91	3.92	133.37	121.55	74.28	62.46	109.46	pass	4.1382
t-Butylbenzene	4	0.41	98.31	3.93	128.97	118.75	77.87	67.65	107.43	pass	4.2973
1,2,4-Trimethylbenzene	4	0.48	103.52	4.14	139.57	127.52	79.43	67.38	112.34	pass	4.4934
sec-Butylbenzene	4	0.51	102.07	4.08	140.36	127.50	76.55	63.79	109.97	pass	4.3989
1,3-Dichlorobenzene	4	0.49	98.68	3.95	135.27	123.08	74.28	62.09	103.29	pass	4.1314
4-Isopropyltoluene	4	0.51	94.19	3.77	132.22	119.54	68.83	56.15	104.92	pass	4.1969
1,4-Dichlorobenzene	4	0.47	101.48	4.06	136.65	124.92	78.03	66.31	104.52	pass	4.1806
Benzyl chloride	4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	102.34	#DIV/0!	4.0935
n-Butylbenzene	4	0.58	97.52	3.90	141.21	126.65	68.39	53.82	102.12	pass	4.0847
1,2-Dichlorobenzene	4	0.38	99.81	3.99	128.35	118.83	80.79	71.28	107.42	pass	4.2966
1,2-Dibromo-3-chloropropane	4	0.89	105.17	4.21	171.19	149.19	61.16	39.15	60.29	pass	2.4091
1,3,5-Trichlorobenzene	4	0.73	103.78	4.15	158.81	140.47	67.09	48.74	101.55	pass	4.062
1,2,4-Trichlorobenzene	4	0.59	101.18	4.05	145.79	130.92	71.45	56.58	107.18	pass	4.2871
Hexachlorobutadiene	4	0.57	99.79	3.99	142.62	128.34	71.25	56.97	104.07	pass	4.1628
Naphthalene	4	0.63	111.60	4.46	158.56	142.91	80.28	64.63	120.50	pass	4.82
1,2,3-Trichlorobenzene	4	0.47	102.60	4.10	137.98	126.19	79.02	67.22	75.01	pass	3.0003

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P
Quant Time: Sep 2 11:44 2004

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG17994.D 09012004_LOWSOIL_8260.M Thu Sep 02 11:44:24 2004

00128

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	1.000	1.000	0.0	116	0.00
2	T	Dichlorodifluoromethane	0.660	0.487	26.2#	73	0.01
3	TP	Chloromethane	1.111	0.956	14.0	108	0.00
4	CT	Vinyl Chloride	0.657	0.529	19.5	80	0.00
5	T	Bromomethane	0.214	0.218	-1.9	125	0.00
6	T	Chloroethane	0.385	0.369	4.2	102	0.00
7	T	Trichlorofluoromethane	0.919	0.738	19.7	82	-0.01
8	T	Acrolein	0.028	0.026#	7.1	89	0.00
9	T	Ethyl ether	0.362	0.381	-5.2	115	0.00
10	CMT	1,1-Dichloroethene	0.489	0.497	-1.6	108	0.00
11	T	1,1,2-Trichlorotrifluoroeth	0.489	0.273	44.2#	57	0.00
12	T	Carbon Disulfide	1.855	5.643	-204.2#	328#	0.00
13	T	Acetone	0.180	0.075#	58.3#	50	-0.01
14	t	tert-Butyl alcohol	0.262	0.254	3.1	111	0.01
15	T	Methylene Chloride	1.041	0.851	18.3	105	0.00
16	T	Methyl tert-Butyl ether	1.073	1.038	3.3	109	0.00
17	T	trans-1,2-Dichloroethene	0.570	0.545	4.4	100	0.00
18	T	Acrylonitrile	0.113	0.116	-2.7	122	0.00
19	T	Hexane	0.491	0.144	70.7#	28#	0.01
20	t	Diisopropyl ether	1.720	1.616	6.0	104	0.00
21	TP	1,1-Dichloroethane	0.976	0.938	3.9	103	0.00
22	T	Vinyl Acetate	0.701	0.223	68.2#	46#	0.01
23	t	Ethyl tert-butyl ether	0.523	0.517	1.1	112	0.00
24	T	2,2-Dichloropropane	0.762	0.705	7.5	105	-0.01
25	T	cis-1,2-Dichloroethene	0.593	0.591	0.3	104	0.00
26	T	2-Butanone	0.017	0.011#	35.3#	75	0.00
27	T	Ethyl acetate	0.043	0.017#	60.5#	47#	0.01
28	T	Bromochloromethane	0.400	0.405	-1.3	107	0.00
29	CT	Chloroform	0.619	0.606	2.1	105	0.00
30	T	1,1,1-Trichloroethane	0.846	0.813	3.9	102	-0.01
31	T	Cyclohexane	1.183	0.854	27.8#	80	0.00
32	S	Dibromofluoromethane(S)	0.528	0.439	16.9	91	0.00
33	T	Carbon Tetrachloride	0.681	0.646	5.1	100	0.01
34	T	1,1-Dichloropropene	0.722	0.669	7.3	97	0.00
35	t	tert-Amyl methyl ether	1.055	1.032	2.2	111	0.01
36	MT	Benzene	2.202	2.169	1.5	104	0.00
37	T	iso-Butyl alcohol	0.011	0.011#	0.0	129	0.00
38	T	1,2-Dichloroethane	0.612	0.588	3.9	105	0.00
39	S	Fluorobenzene(S)	2.265	1.792	20.9#	85	-0.01
40	I	1,4-Difluorobenzene(I)	1.000	1.000	0.0	111	0.00
41	S	Trifluorotoluene(S)	0.571	1.082	-89.5#	183	0.00
42	MT	Trichloroethene	0.385	0.439	-14.0	100	0.00
43	T	n-Butyl alcohol	0.003	0.003#	0.0	143	0.00
44	T	Methylcyclohexane	0.506	0.266	47.4#	48#	0.01
45	CT	1,2-Dichloropropane	0.331	0.334	-0.9	104	0.00
46	T	Dibromomethane	0.162	0.165	-1.9	106	0.00
47	T	Bromodichloromethane	0.389	0.397	-2.1	106	0.00
48	T	cis-1,3-Dichloropropene	0.443	0.426	3.8	101	0.00
49	T	4-Methyl-2-pentanone	0.031	0.031#	0.0	108	0.00
50	S	Toluene-d8(S)	1.214	1.055	13.1	87	0.00
51	CMT	Toluene	1.453	1.453	0.0	99	0.00
52	T	trans-1,3-Dichloropropene	0.364	0.326	10.4	95	0.00
53	T	1,1,2-Trichloroethane	0.249	0.225	9.6	98	0.00
54	T	Tetrachloroethene	0.297	0.277	6.7	90	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
	T	1,3-Dichloropropane	0.386	0.366	5.2	98	0.01
	T	2-Hexanone	0.014	0.010#	28.6#	78	0.00
	T	Dibromochloromethane	0.257	0.236	8.2	98	0.00
	T	1,2-Dibromoethane	0.226	0.236	-4.4	111	0.00
	I	D5-Chlorobenzene(I)	1.000	1.000	0.0	98	0.00
	S	Ethylbenzene-d10(S)	7.468	7.107	4.8	89	0.00
	MTP	Chlorobenzene	4.384	4.749	-8.3	95	0.00
	T	1,1,1,2-Tetrachloroethane	1.344	1.453	-8.1	102	0.00
	CT	Ethylbenzene	7.658	8.252	-7.8	96	0.00
	T	m,p-Xylene	2.866	3.210	-12.0	99	0.00
	T	o-Xylene	5.638	6.203	-10.0	97	0.00
	T	Styrene	4.227	4.419	-4.5	94	0.00
	TP	Bromoform	0.682	0.654	4.1	100	0.00
	T	Isopropylbenzene	7.007	7.185	-2.5	88	0.00
	S	Bromofluorobenzene(S)	1.719	1.690	1.7	87	0.00
	T	Bromobenzene	1.682	1.823	-8.4	97	0.00
1	TP	1,1,2,2-Tetrachloroethane	2.025	1.659	18.1	86	0.00
2	T	1,2,3-Trichloropropane	0.374	0.405	-8.3	102	0.00
3	T	n-Propylbenzene	9.158	9.598	-4.8	90	0.00
4	T	2-Chlorotoluene	1.720	1.826	-6.2	91	0.00
5	T	4-Chlorotoluene	1.774	1.836	-3.5	91	0.00
6	T	1,3,5-Trimethylbenzene	5.651	6.281	-11.1	94	0.00
7	T	t-Butylbenzene	5.178	5.563	-7.4	97	0.00
8	T	1,2,4-Trimethylbenzene	5.734	6.442	-12.3	96	0.00
9	T	sec-Butylbenzene	7.728	8.499	-10.0	94	0.00
0	T	4-Isopropyltoluene	6.123	6.424	-4.9	85	0.00
1	T	1,3-Dichlorobenzene	3.254	3.361	-3.3	87	0.00
2	I	1,4-Dichlorobenzene-d4(I)	1.000	1.000	0.0	102	0.00
3	T	1,4-Dichlorobenzene	1.548	1.618	-4.5	90	0.00
4	T	n-Butylbenzene	0.733	0.750	-2.3	86	0.00
5	T	1,2-Dichlorobenzene	1.411	1.440	-2.1	92	0.00
6	T	1,2-Dibromo-3-chloropropane	0.092	0.096#	-4.3	122	0.00
7	T	1,3,5-Trichlorobenzene	1.179	0.697	40.9#	49#	-0.01
8	T	1,2,4-Trichlorobenzene	1.005	0.972	3.3	80	0.00
9	T	Hexachlorobutadiene	0.631	0.632	-0.2	82	0.00
0	T	Naphthalene	1.917	2.166	-13.0	108	0.00
1	T	1,2,3-Trichlorobenzene	0.918	0.931	-1.4	87	0.00

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

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	10.000	10.000	0.0	116	0.00
2	T	Dichlorodifluoromethane	4.000	2.952	26.2#	73	0.01
3	TP	Chloromethane	4.000	4.305	-7.6	108	0.00
4	CT	Vinyl Chloride	4.000	3.216	19.6	80	0.00
5	T	Bromomethane	4.000	4.297	-7.4	125	0.00
6	T	Chloroethane	4.000	3.834	4.1	102	0.00
7	T	Trichlorofluoromethane	4.000	3.213	19.7	82	-0.01
8	T	Acrolein	20.000	18.857	5.7	89	0.00
9	T	Ethyl ether	20.000	21.049	-5.2	115	0.00
10	CMT	1,1-Dichloroethene	4.000	4.065	-1.6	108	0.00
11	T	1,1,2-Trichlorotrifluoroeth	4.000	2.231	44.2#	57	0.00
12	T	Carbon Disulfide	4.000	12.168	-204.2#	328	0.00
13	T	Acetone	20.000	8.258	58.7#	50	-0.01
14	t	tert-Butyl alcohol	20.000	19.425	2.9	111	0.01
15	T	Methylene Chloride	4.000	4.103	-2.6	105	0.00
16	T	Methyl tert-Butyl ether	4.000	3.872	3.2	109	0.00
17	T	trans-1,2-Dichloroethene	4.000	3.827	4.3	100	0.00
18	T	Acrylonitrile	20.000	20.577	-2.9	122	0.00
19	T	Hexane	4.000	1.074	73.2#	28	0.01
20	t	Diisopropyl ether	4.000	3.759	6.0	104	0.00
21	TP	1,1-Dichloroethane	4.000	3.846	3.8	103	0.00
22	T	Vinyl Acetate	20.000	6.358	68.2#	46	0.01
23	t	Ethyl tert-butyl ether	4.000	3.956	1.1	112	0.00
24	T	2,2-Dichloropropane	4.000	3.701	7.5	105	-0.01
25	T	cis-1,2-Dichloroethene	4.000	3.983	0.4	104	0.00
26	T	2-Butanone	20.000	13.315	33.4#	75	0.00
27	T	Ethyl acetate	20.000	7.939	60.3#	47	0.01
28	T	Bromochloromethane	4.000	4.053	-1.3	107	0.00
29	CT	Chloroform	4.000	3.912	2.2	105	0.00
30	T	1,1,1-Trichloroethane	4.000	3.845	3.9	102	-0.01
31	T	Cyclohexane	4.000	3.000	25.0#	80	0.00
32	S	Dibromofluoromethane(S)	10.000	8.310	16.9	91	0.00
33	T	Carbon Tetrachloride	4.000	3.795	5.1	100	0.01
34	T	1,1-Dichloropropene	4.000	3.705	7.4	97	0.00
35	t	tert-Amyl methyl ether	4.000	3.914	2.1	111	0.01
36	MT	Benzene	4.000	3.940	1.5	104	0.00
37	T	iso-Butyl alcohol	400.000	407.435	-1.9	129	0.00
38	T	1,2-Dichloroethane	4.000	3.845	3.9	105	0.00
39	S	Fluorobenzene(S)	10.000	7.911	20.9#	85	-0.01
40	I	1,4-Difluorobenzene(I)	10.000	10.000	0.0	111	0.00
41	S	Trifluorotoluene(S)	10.000	18.947	-89.5#	183	0.00
42	MT	Trichloroethene	4.000	4.559	-14.0	100	0.00
43	T	n-Butyl alcohol	400.000	432.159	-8.0	143	0.00
44	T	Methylcyclohexane	4.000	2.102	47.5#	48	0.01
45	CT	1,2-Dichloropropane	4.000	4.046	-1.2	104	0.00
46	T	Dibromomethane	4.000	4.082	-2.0	106	0.00
47	T	Bromodichloromethane	4.000	4.082	-2.0	106	0.00
48	T	cis-1,3-Dichloropropene	4.000	3.845	3.9	101	0.00
49	T	4-Methyl-2-pentanone	20.000	20.127	-0.6	108	0.00
50	S	Toluene-d8(S)	10.000	8.696	13.0	87	0.00
51	CMT	Toluene	4.000	4.000	0.0	99	0.00
52	T	trans-1,3-Dichloropropene	4.000	3.589	10.3	95	0.00
53	T	1,1,2-Trichloroethane	4.000	3.611	9.7	98	0.00
54	T	Tetrachloroethene	4.000	3.728	6.8	90	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : E:\DATA\09012004\AG17994.D
Acq On : 1 Sep 2004 5:28 pm
Sample : 4.0 ug/Kg ICV/bsd voa882
Misc : soil #5.000 12493932
MS Integration Params: RTEINT.P

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
	T	1,3-Dichloropropane	4.000	3.790	5.2	98	0.01
	T	2-Hexanone	20.000	14.851	25.7#	78	0.00
	T	Dibromochloromethane	4.000	3.668	8.3	98	0.00
	T	1,2-Dibromoethane	4.000	4.173	-4.3	111	0.00
	I	D5-Chlorobenzene(I)	10.000	10.000	0.0	98	0.00
	S	Ethylbenzene-d10(S)	10.000	9.518	4.8	89	0.00
	MTP	Chlorobenzene	4.000	4.334	-8.3	95	0.00
	T	1,1,1,2-Tetrachloroethane	4.000	4.327	-8.2	102	0.00
	CT	Ethylbenzene	4.000	4.310	-7.7	96	0.00
	T	m,p-Xylene	8.000	8.960	-12.0	99	0.00
	T	o-Xylene	4.000	4.401	-10.0	97	0.00
	T	Styrene	4.000	4.182	-4.6	94	0.00
	TP	Bromoform	4.000	3.838	4.0	100	0.00
	T	Isopropylbenzene	4.000	4.102	-2.6	88	0.00
	S	Bromofluorobenzene(S)	10.000	9.833	1.7	87	0.00
	T	Bromobenzene	4.000	4.337	-8.4	97	0.00
	TP	1,1,2,2-Tetrachloroethane	4.000	3.277	18.1	86	0.00
	T	1,2,3-Trichloropropane	4.000	4.332	-8.3	102	0.00
	T	n-Propylbenzene	4.000	4.192	-4.8	90	0.00
	T	2-Chlorotoluene	4.000	4.246	-6.2	91	0.00
	T	4-Chlorotoluene	4.000	4.138	-3.4	91	0.00
	T	1,3,5-Trimethylbenzene	4.000	4.446	-11.1	94	0.00
	T	t-Butylbenzene	4.000	4.297	-7.4	97	0.00
	T	1,2,4-Trimethylbenzene	4.000	4.493	-12.3	96	0.00
	T	sec-Butylbenzene	4.000	4.399	-10.0	94	0.00
	T	4-Isopropyltoluene	4.000	4.197	-4.9	85	0.00
	T	1,3-Dichlorobenzene	4.000	4.131	-3.3	87	0.00
	I	1,4-Dichlorobenzene-d4(I)	10.000	10.000	0.0	102	0.00
	T	1,4-Dichlorobenzene	4.000	4.181	-4.5	90	0.00
	T	n-Butylbenzene	4.000	4.093	-2.3	86	0.00
	T	1,2-Dichlorobenzene	4.000	4.085	-2.1	92	0.00
	T	1,2-Dibromo-3-chloropropane	4.000	4.297	-7.4	122	0.00
	T	1,3,5-Trichlorobenzene	4.000	2.409	39.8#	49	-0.01
	T	1,2,4-Trichlorobenzene	4.000	4.062	-1.6	80	0.00
	T	Hexachlorobutadiene	4.000	4.163	-4.1	82	0.00
	T	Naphthalene	4.000	4.820	-20.5#	108	0.00
	T	1,2,3-Trichlorobenzene	4.000	4.287	-7.2	87	0.00

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

CONTINUING CALIBRATION

Sequence Log

ectory : g:\DATA\09162004

1 9/20/2004

Filename	Sample Name	Date/Time
ag18118.d	5.0 ug/L ccal	09/16/04 10:00
ag18119.d	5.0 ug/L lcs/bs voa907	09/16/04 10:25
ag18120.d	5.0 ug/L lcs/bsd voa907	09/16/04 10:51
ag18122.d	Reagent MB voa907	09/16/04 11:42
ag18123.d	123491-06 voa904	09/16/04 12:07
ag18124.d	123491-07 voa904	09/16/04 12:33
ag18125.d	123491-08 voa904	09/16/04 12:58
ag18126.d	123491-09 voa904	09/16/04 13:24
ag18127.d	bfb tune	09/16/04 13:51
ag18128.d	4.0 ug/Kg ccal	09/16/04 14:16
ag18129.d	4.0 ug/Kg lcs/bs voa908	09/16/04 14:42
ag18131.d	4.0 ug/Kg bs voa909	09/16/04 15:32
ag18132.d	4.0 ug/Kg bsd voa909	09/16/04 15:58
ag18133.d	Instr. blank	09/16/04 16:23
ag18134.d	Reagent MB voa908	09/16/04 16:48
ag18135.d	Reagent MB voa909	09/16/04 17:14
ag18136.d	123528-10 voa909	09/16/04 17:39
ag18137.d	123627-01 voa908	09/16/04 18:05
ag18138.d	123627-01 dup voa908	09/16/04 18:30
ag18139.d	123627-01 ms voa908	09/16/04 18:55
ag18140.d	123539-01 voa908	09/16/04 19:21
ag18141.d	123539-02 voa908	09/16/04 19:46
ag18142.d	123539-03 voa908	09/16/04 20:11
ag18143.d	123539-04 voa908	09/16/04 20:37
ag18144.d	123539-05 voa908	09/16/04 21:02

Sequence Log

ectory : g:\DATA\09162004

Filename	Sample Name	Date/Time
ag18145.d	123539-06 voa908	09/16/04 21:27
ag18146.d	123539-07 voa908	09/16/04 21:52
ag18147.d	123539-08 voa908	09/16/04 22:18
ag18148.d	123539-09 voa908	09/16/04 22:43
ag18149.d	123539-10 voa908	09/16/04 23:08
ag18150.d	123539-11 voa908	09/16/04 23:33
ag18151.d	123539-12 voa908	09/16/04 23:59
ag18152.d	123576-01 voa908	09/17/04 00:24
ag18153.d	123574-01 voa908	09/17/04 00:49
ag18154.d	123577-01 voa908	09/17/04 01:15
ag18155.d	123578-01 voa908	09/17/04 01:40
ag18156.d	123539-02 dup voa908	09/17/04 02:06
ag18157.d	123539-02 ms voa908	09/17/04 02:31
ag18158.d	rinse	09/17/04 02:56
ag18159.d	rinse	09/17/04 03:22

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
IS Integration Params: RTEINT.P
Quant Time: Sep 17 08:26:29 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	426068	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	712866	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	134595	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	309253	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	447721	19.91 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 199.10%#		
39) Fluorobenzene(S)	7.25	96	1783406	18.48 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 184.80%#		
41) Trifluorotoluene(S)	7.98	146	365188	8.97 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 44.85%#		
50) Toluene-d8(S)	9.03	98	1630360	18.85 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 188.50%#		
60) Ethylbenzene-d10(S)	10.74	98	2088003	20.77 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 207.70%#		
69) Bromofluorobenzene(S)	12.09	174	476986	20.62 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 206.20%#		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.67	85	114046	4.06 ug/Kg	98
3) Chloromethane	1.91	50	146316	3.76 ug/Kg	99
4) Vinyl Chloride	2.02	62	118011	4.21 ug/Kg	97
5) Bromomethane	2.44	94	18219	2.29 ug/Kg	98
6) Chloroethane	2.58	64	71110	4.33 ug/Kg	98
7) Trichlorofluoromethane	2.95	101	163438	4.18 ug/Kg	93
8) Acrolein	3.54	56	28723	24.92 ug/Kg	94
9) Ethyl ether	3.36	59	322166	20.88 ug/Kg	100
10) 1,1-Dichloroethene	3.67	96	82622	3.96 ug/Kg	94
11) 1,1,2-Trichlorotrifluoroet	3.68	151	80100	3.85 ug/Kg	85
12) Carbon Disulfide	3.95	76	272686	3.45 ug/Kg	95
13) Acetone	3.73	43	96246	12.80 ug/Kg	97
14) tert-Butyl alcohol	5.74	59	201676	18.07 ug/Kg#	94
15) Methylene Chloride	4.34	49	178559	5.32 ug/Kg	97
16) Methyl tert-Butyl ether	4.68	73	176662	3.87 ug/Kg	97
17) trans-1,2-Dichloroethene	4.69	96	98148	4.04 ug/Kg	94
18) Acrylonitrile	4.64	53	99474	20.68 ug/Kg	96
19) Hexane	5.04	56	74112	3.76 ug/Kg	86
20) Diisopropyl ether	5.30	45	308529	4.21 ug/Kg	96
21) 1,1-Dichloroethane	5.21	63	172356	4.14 ug/Kg	97
22) Vinyl Acetate	5.28	43	787620	26.37 ug/Kg#	95
23) Ethyl tert-butyl ether	5.74	87	80484	3.61 ug/Kg#	92
24) 2,2-Dichloropropane	5.91	77	116265	3.58 ug/Kg	96
25) cis-1,2-Dichloroethene	5.92	96	102633	4.06 ug/Kg	91
26) 2-Butanone	5.92	57	11103	15.46 ug/Kg#	77
27) Ethyl acetate	6.01	45	37239	20.37 ug/Kg	93
28) Bromochloromethane	6.20	49	75618	4.44 ug/Kg	92
29) Chloroform	6.31	85	114679	4.35 ug/Kg	96
30) 1,1,1-Trichloroethane	6.50	97	151549	4.20 ug/Kg	86
31) Cyclohexane	6.55	56	184610	3.87 ug/Kg	99
33) Carbon Tetrachloride	6.69	119	114818	3.96 ug/Kg	94
34) 1,1-Dichloropropene	6.69	75	118244	3.84 ug/Kg	97
35) tert-Amyl methyl ether	7.04	73	163319	3.63 ug/Kg#	85
36) Benzene	6.92	78	386243	4.12 ug/Kg	96
37) iso-Butyl alcohol	6.86	43	158060	336.88 ug/Kg	91
38) 1,2-Dichloroethane	6.95	62	112430	4.31 ug/Kg	93

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:26:29 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	97097	3.54 ug/Kg	92
43) n-Butyl alcohol	7.60	41	70132	331.60 ug/Kg	99
44) Methylcyclohexane	7.87	55	133159	3.69 ug/Kg#	78
45) 1,2-Dichloropropane	7.90	63	99574	4.22 ug/Kg	95
46) Dibromomethane	8.06	174	46567	4.04 ug/Kg	97
47) Bromodichloromethane	8.23	83	110767	3.99 ug/Kg	98
48) cis-1,3-Dichloropropene	8.73	75	112888	3.57 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	32778	14.93 ug/Kg#	58
51) Toluene	9.10	91	421078	4.07 ug/Kg	99
52) trans-1,3-Dichloropropene	9.35	75	89725	3.46 ug/Kg	93
53) 1,1,2-Trichloroethane	9.57	97	66890	3.76 ug/Kg	97
54) Tetrachloroethene	9.73	164	78748	3.72 ug/Kg	99
55) 1,3-Dichloropropane	9.76	76	107786	3.91 ug/Kg	94
56) 2-Hexanone	9.83	85	11306	11.46 ug/Kg#	79
57) Dibromochloromethane	10.03	129	68885	3.75 ug/Kg	98
58) 1,2-Dibromoethane	10.16	107	62987	3.91 ug/Kg	95
61) Chlorobenzene	10.73	112	275282	4.67 ug/Kg	87
62) 1,1,1,2-Tetrachloroethane	10.82	131	78252	4.33 ug/Kg	94
63) Ethylbenzene	10.84	91	442164	4.29 ug/Kg	99
64) m,p-Xylene	10.97	106	333920	8.66 ug/Kg	99
65) o-Xylene	11.45	91	318638	4.20 ug/Kg	97
66) Styrene	11.47	104	228807	4.02 ug/Kg	88
67) Bromoform	11.72	173	34551	3.77 ug/Kg	93
68) Isopropylbenzene	11.88	105	393296	4.17 ug/Kg	97
70) Bromobenzene	12.27	156	99521	4.40 ug/Kg#	78
71) 1,1,2,2-Tetrachloroethane	12.27	83	125474+	4.60 ug/Kg	98
72) 1,2,3-Trichloropropane	12.32	110	20373	4.04 ug/Kg	95
73) n-Propylbenzene	12.38	91	522324	4.24 ug/Kg	96
74) 2-Chlorotoluene	12.50	126	94734	4.09 ug/Kg	87
75) 4-Chlorotoluene	12.63	126	103507	4.33 ug/Kg#	65
76) 1,3,5-Trimethylbenzene	12.58	105	315435	4.15 ug/Kg	98
77) t-Butylbenzene	12.98	119	274281	3.94 ug/Kg	93
78) 1,2,4-Trimethylbenzene	13.04	105	319815	4.14 ug/Kg	98
79) sec-Butylbenzene	13.25	105	436090	4.19 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	389925	4.73 ug/Kg	93
81) 1,3-Dichlorobenzene	13.40	146	189965	4.34 ug/Kg	99
83) 1,4-Dichlorobenzene	13.51	146	191464	4.00 ug/Kg	98
84) n-Butylbenzene	13.92	134	80336	3.54 ug/Kg#	84
85) 1,2-Dichlorobenzene	13.97	146	176823	4.05 ug/Kg	100
86) 1,2-Dibromo-3-chloropropan	14.93	75	10038	3.61 ug/Kg	97
87) 1,3,5-Trichlorobenzene	15.19	180	132416	3.80 ug/Kg	98
88) 1,2,4-Trichlorobenzene	15.95	180	113052	3.81 ug/Kg	97
89) Hexachlorobutadiene	16.15	225	72210	3.83 ug/Kg	93
90) Naphthalene	16.26	128	185585	3.27 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	98220	3.63 ug/Kg	99

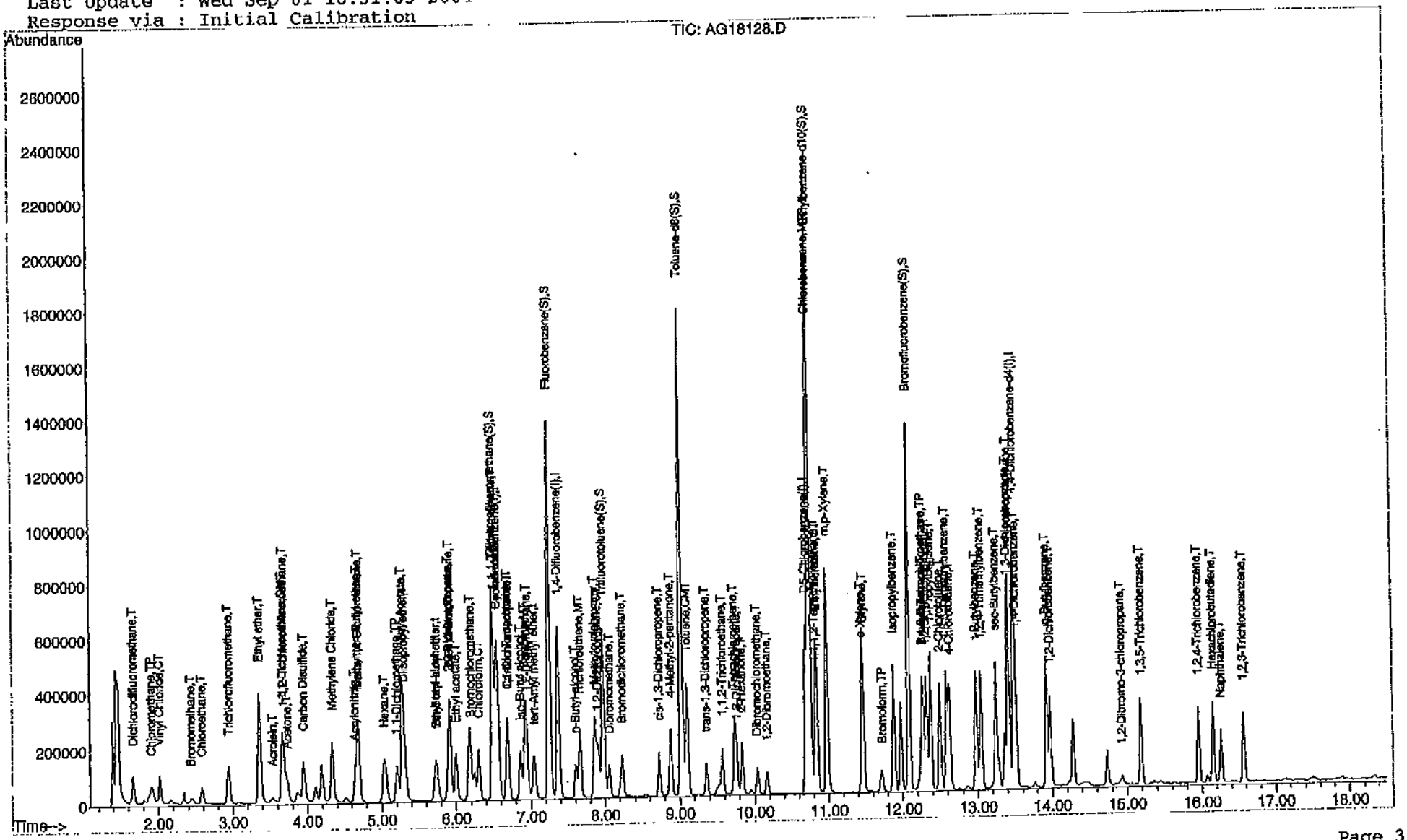
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P
Quant Time: Sep 17 8:26 2004

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG18128.D 09012004_LOWSOIL_8260.M Fri Sep 17 08:30:25 2004

00138

Evaluate Continuing Calibration Report

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	10.000	10.000	0.0	67	0.00
2	T	Dichlorodifluoromethane	4.000	4.058	-1.4	58	0.01
3	TP	Chloromethane	4.000	3.756	6.1	56	0.00
4	CT	Vinyl Chloride	4.000	4.213	-5.3	61	0.00
5	T	Bromomethane	4.000	2.288	42.8#	35	-0.01
6	T	Chloroethane	4.000	4.333	-8.3	66	0.00
7	T	Trichlorofluoromethane	4.000	4.176	-4.4	61	0.00
8	T	Acrolein	20.000	24.924	-24.6#	67	0.00
9	T	Ethyl ether	20.000	20.877	-4.4	66	0.00
.0	CMT	1,1-Dichloroethene	4.000	3.962	0.9	61	0.01
.1	T	1,1,2-Trichlorotrifluoroeth	4.000	3.846	3.8	57	0.00
12	T	Carbon Disulfide	4.000	3.450	13.7	54	0.00
13	T	Acetone	20.000	12.799	36.0#	43	-0.01
14	t	tert-Butyl alcohol	20.000	18.073	9.6	59	0.01
15	T	Methylene Chloride	4.000	5.325	-33.1#	75	0.01
16	T	Methyl tert-Butyl ether	4.000	3.865	3.4	63	0.00
17	T	trans-1,2-Dichloroethene	4.000	4.044	-1.1	61	0.00
18	T	Acrylonitrile	20.000	20.681	-3.4	71	0.00
19	T	Hexane	4.000	3.763	5.9	49	0.01
20	t	Diisopropyl ether	4.000	4.211	-5.3	67	0.00
21	TP	1,1-Dichloroethane	4.000	4.145	-3.6	64	0.00
22	T	Vinyl Acetate	20.000	26.372	-31.9#	110	0.00
23	t	Ethyl tert-butyl ether	4.000	3.611	9.7	59	0.00
24	T	2,2-Dichloropropane	4.000	3.579	10.5	59	0.00
25	T	cis-1,2-Dichloroethene	4.000	4.060	-1.5	61	0.00
26	T	2-Butanone	20.000	15.464	22.7#	50	0.00
27	T	Ethyl acetate	20.000	20.371	-1.9	70	0.01
28	T	Bromochloromethane	4.000	4.439	-11.0	68	0.00
29	CT	Chloroform	4.000	4.345	-8.6	68	0.00
30	T	1,1,1-Trichloroethane	4.000	4.203	-5.1	65	0.00
31	T	Cyclohexane	4.000	3.866	3.3	59	0.00
32	S	Dibromofluoromethane(S)	10.000	19.910	-99.1#	127	0.00
33	T	Carbon Tetrachloride	4.000	3.958	1.0	60	0.01
34	T	1,1-Dichloropropene	4.000	3.843	3.9	58	0.01
35	t	tert-Amyl methyl ether	4.000	3.633	9.2	59	0.01
36	MT	Benzene	4.000	4.117	-2.9	63	0.00
37	T	iso-Butyl alcohol	400.000	336.883	15.8	62	0.00
38	T	1,2-Dichloroethane	4.000	4.311	-7.8	68	0.00
39	S	Fluorobenzene(S)	10.000	18.484	-84.8#	115	0.00
40	I	1,4-Difluorobenzene(I)	10.000	10.000	0.0	68	0.00
41	S	Trifluorotoluene(S)	10.000	8.969	10.3	53	0.00
42	MT	Trichloroethene	4.000	3.537	11.6	48	0.00
43	T	n-Butyl alcohol	400.000	331.595	17.1	68	0.00
44	T	Methylcyclohexane	4.000	3.691	7.7	52	0.01
45	CT	1,2-Dichloropropane	4.000	4.225	-5.6	67	0.00
46	T	Dibromomethane	4.000	4.039	-1.0	65	0.01
47	T	Bromodichloromethane	4.000	3.991	0.2	64	0.00
48	T	cis-1,3-Dichloropropene	4.000	3.573	10.7	58	0.00
49	T	4-Methyl-2-pentanone	20.000	14.930	25.4#	49	0.00
50	S	Toluene-d8(S)	10.000	18.846	-88.5#	117	0.00
51	CMT	Toluene	4.000	4.066	-1.6	62	0.00
52	T	trans-1,3-Dichloropropene	4.000	3.460	13.5	56	0.00
53	T	1,1,2-Trichloroethane	4.000	3.764	5.9	63	0.00
54	T	Tetrachloroethene	4.000	3.721	7.0	55	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	1,3-Dichloropropane	4.000	3.913	2.2	62	0.01
56	T	2-Hexanone	20.000	11.464	42.7#	37	0.00
57	T	Dibromochloromethane	4.000	3.755	6.1	62	0.00
58	T	1,2-Dibromoethane	4.000	3.912	2.2	64	0.00
59	I	D5-Chlorobenzene(I)	10.000	10.000	0.0	60	0.00
60	S	Ethylbenzene-d10(S)	10.000	20.774	-107.7#	118	0.00
61	MTP	Chlorobenzene	4.000	4.666	-16.7	62	0.00
62	T	1,1,1,2-Tetrachloroethane	4.000	4.327	-8.2	62	0.00
63	CT	Ethylbenzene	4.000	4.290	-7.3	58	0.00
64	T	m,p-Xylene	8.000	8.657	-8.2	58	0.00
65	T	o-Xylene	4.000	4.199	-5.0	56	0.00
66	T	Styrene	4.000	4.021	-0.5	55	0.00
67	TP	Bromoform	4.000	3.765	5.9	59	0.01
68	T	Isopropylbenzene	4.000	4.170	-4.2	55	0.00
69	S	Bromofluorobenzene(S)	10.000	20.619	-106.2#	111	0.00
70	T	Bromobenzene	4.000	4.397	-9.9	60	0.00
71	TP	1,1,2,2-Tetrachloroethane	4.000	4.604	-15.1	74	0.00
72	T	1,2,3-Trichloropropane	4.000	4.045	-1.1	58	0.00
73	T	n-Propylbenzene	4.000	4.237	-5.9	56	0.00
74	T	2-Chlorotoluene	4.000	4.092	-2.3	54	0.00
75	T	4-Chlorotoluene	4.000	4.334	-8.3	58	0.00
76	T	1,3,5-Trimethylbenzene	4.000	4.147	-3.7	53	0.00
77	T	t-Butylbenzene	4.000	3.935	1.6	54	0.00
78	T	1,2,4-Trimethylbenzene	4.000	4.144	-3.6	54	0.00
79	T	sec-Butylbenzene	4.000	4.192	-4.8	55	0.00
80	T	4-Isopropyltoluene	4.000	4.732	-18.3	58	0.00
81	T	1,3-Dichlorobenzene	4.000	4.337	-8.4	56	0.00
82	I	1,4-Dichlorobenzene-d4(I)	10.000	10.000	0.0	67	0.00
83	T	1,4-Dichlorobenzene	4.000	3.999	0.0	56	0.00
84	T	n-Butylbenzene	4.000	3.543	11.4	49	0.00
85	T	1,2-Dichlorobenzene	4.000	4.053	-1.3	60	0.00
86	T	1,2-Dibromo-3-chloropropane	4.000	3.613	9.7	67	-0.01
87	T	1,3,5-Trichlorobenzene	4.000	3.798	5.0	50	0.00
88	T	1,2,4-Trichlorobenzene	4.000	3.809	4.8	49	0.00
89	T	Hexachlorobutadiene	4.000	3.834	4.1	49	0.00
90	T	Naphthalene	4.000	3.271	18.2	49	0.00
91	T	1,2,3-Trichlorobenzene	4.000	3.626	9.4	49	0.00

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

Evaluate Continuing Calibration Report

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene(I)	1.000	1.000	0.0	67	0.00
2	T	Dichlorodifluoromethane	0.660	0.669	-1.4	58	0.01
3	TP	Chloromethane	1.111	0.859	22.7#	56	0.00
4	CT	Vinyl Chloride	0.657	0.692	-5.3	61	0.00
5	T	Bromomethane	0.214	0.107	50.0#	35#	-0.01
6	T	Chloroethane	0.385	0.417	-8.3	66	0.00
7	T	Trichlorofluoromethane	0.919	0.959	-4.4	61	0.00
8	T	Acrolein	0.028	0.034#	-21.4#	67	0.00
9	T	Ethyl ether	0.362	0.378	-4.4	66	0.00
0	CMT	1,1-Dichloroethene	0.489	0.485	0.8	61	0.01
1	T	1,1,2-Trichlorotrifluoroeth	0.489	0.470	3.9	57	0.00
2	T	Carbon Disulfide	1.855	1.600	13.7	54	0.00
3	T	Acetone	0.180	0.113	37.2#	43#	-0.01
4	t	tert-Butyl alcohol	0.262	0.237	9.5	59	0.01
5	T	Methylene Chloride	1.041	1.048	-0.7	75	0.01
6	T	Methyl tert-Butyl ether	1.073	1.037	3.4	63	0.00
7	T	trans-1,2-Dichloroethene	0.570	0.576	-1.1	61	0.00
8	T	Acrylonitrile	0.113	0.117	-3.5	71	0.00
9	T	Hexane	0.491	0.435	11.4	49#	0.01
0	t	Diisopropyl ether	1.720	1.810	-5.2	67	0.00
1	TP	1,1-Dichloroethane	0.976	1.011	-3.6	64	0.00
2	T	Vinyl Acetate	0.701	0.924	-31.8#	110	0.00
3	t	Ethyl tert-butyl ether	0.523	0.472	9.8	59	0.00
4	T	2,2-Dichloropropane	0.762	0.682	10.5	59	0.00
5	T	cis-1,2-Dichloroethene	0.593	0.602	-1.5	61	0.00
6	T	2-Butanone	0.017	0.013#	23.5#	50	0.00
7	T	Ethyl acetate	0.043	0.044#	-2.3	70	0.01
8	T	Bromochloromethane	0.400	0.444	-11.0	68	0.00
9	CT	Chloroform	0.619	0.673	-8.7	68	0.00
0	T	1,1,1-Trichloroethane	0.846	0.889	-5.1	65	0.00
1	T	Cyclohexane	1.183	1.083	8.5	59	0.00
2	S	Dibromofluoromethane(S)	0.528	1.051	-99.1#	127	0.00
3	T	Carbon Tetrachloride	0.681	0.674	1.0	60	0.01
4	T	1,1-Dichloropropene	0.722	0.694	3.9	58	0.01
5	t	tert-Amyl methyl ether	1.055	0.958	9.2	59	0.01
6	MT	Benzene	2.202	2.266	-2.9	63	0.00
7	T	iso-Butyl alcohol	0.011	0.009#	18.2	62	0.00
8	T	1,2-Dichloroethane	0.612	0.660	-7.8	68	0.00
9	S	Fluorobenzene(S)	2.265	4.186	-84.8#	115	0.00
0	I	1,4-Difluorobenzene(I)	1.000	1.000	0.0	68	0.00
1	S	Trifluorotoluene(S)	0.571	0.512	10.3	53	0.00
2	MT	Trichloroethene	0.385	0.341	11.4	48#	0.00
3	T	n-Butyl alcohol	0.003	0.002#	33.3#	68	0.00
4	T	Methylcyclohexane	0.506	0.467	7.7	52	0.01
5	CT	1,2-Dichloropropane	0.331	0.349	-5.4	67	0.00
6	T	Dibromomethane	0.162	0.163	-0.6	65	0.01
7	T	Bromodichloromethane	0.389	0.388	0.3	64	0.00
8	T	cis-1,3-Dichloropropene	0.443	0.396	10.6	58	0.00
9	T	4-Methyl-2-pentanone	0.031	0.023#	25.8#	49#	0.00
0	S	Toluene-d8(S)	1.214	2.287	-88.4#	117	0.00
1	CMT	Toluene	1.453	1.477	-1.7	62	0.00
2	T	trans-1,3-Dichloropropene	0.364	0.315	13.5	56	0.00
3	T	1,1,2-Trichloroethane	0.249	0.235	5.6	63	0.00
4	T	Tetrachloroethene	0.297	0.276	7.1	55	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
5 T	1,3-Dichloropropane	0.386	0.378	2.1	62	0.01
6 T	2-Hexanone	0.014	0.008#	42.9#	37#	0.00
7 T	Dibromochloromethane	0.257	0.242	5.8	62	0.00
8 T	1,2-Dibromoethane	0.226	0.221	2.2	64	0.00
9 I	D5-Chlorobenzene(I)	1.000	1.000	0.0	60	0.00
0 S	Ethylbenzene-d10(S)	7.468	15.513	-107.7#	118	0.00
1 MTP	Chlorobenzene	4.384	5.113	-16.6	62	0.00
2 T	1,1,1,2-Tetrachloroethane	1.344	1.453	-8.1	62	0.00
3 CT	Ethylbenzene	7.658	8.213	-7.2	58	0.00
4 T	m,p-Xylene	2.866	3.101	-8.2	58	0.00
5 T	o-Xylene	5.638	5.918	-5.0	56	0.00
6 T	Styrene	4.227	4.250	-0.5	55	0.00
7 TP	Bromoform	0.682	0.642	5.9	59	0.01
8 T	Isopropylbenzene	7.007	7.305	-4.3	55	0.00
9 S	Bromofluorobenzene(S)	1.719	3.544	-106.2#	111	0.00
0 T	Bromobenzene	1.682	1.849	-9.9	60	0.00
1 TP	1,1,2,2-Tetrachloroethane	2.025	2.331	-15.1	74	0.00
2 T	1,2,3-Trichloropropane	0.374	0.378	-1.1	58	0.00
3 T	n-Propylbenzene	9.158	9.702	-5.9	56	0.00
4 T	2-Chlorotoluene	1.720	1.760	-2.3	54	0.00
5 T	4-Chlorotoluene	1.774	1.923	-8.4	58	0.00
6 T	1,3,5-Trimethylbenzene	5.651	5.859	-3.7	53	0.00
7 T	t-Butylbenzene	5.178	5.095	1.6	54	0.00
8 T	1,2,4-Trimethylbenzene	5.734	5.940	-3.6	54	0.00
9 T	sec-Butylbenzene	7.728	8.100	-4.8	55	0.00
0 T	4-Isopropyltoluene	6.123	7.243	-18.3	58	0.00
1 T	1,3-Dichlorobenzene	3.254	3.528	-8.4	56	0.00
2 I	1,4-Dichlorobenzene-d4(I)	1.000	1.000	0.0	67	0.00
3 T	1,4-Dichlorobenzene	1.548	1.548	0.0	56	0.00
4 T	n-Butylbenzene	0.733	0.649	11.5	49#	0.00
5 T	1,2-Dichlorobenzene	1.411	1.429	-1.3	60	0.00
6 T	1,2-Dibromo-3-chloropropane	0.092	0.081#	12.0	67	-0.01
7 T	1,3,5-Trichlorobenzene	1.179	1.070	9.2	50#	0.00
8 T	1,2,4-Trichlorobenzene	1.005	0.914	9.1	49#	0.00
9 T	Hexachlorobutadiene	0.631	0.584	7.4	49#	0.00
0 T	Naphthalene	1.917	1.500	21.8#	49#	0.00
1 T	1,2,3-Trichlorobenzene	0.918	0.794	13.5	49#	0.00

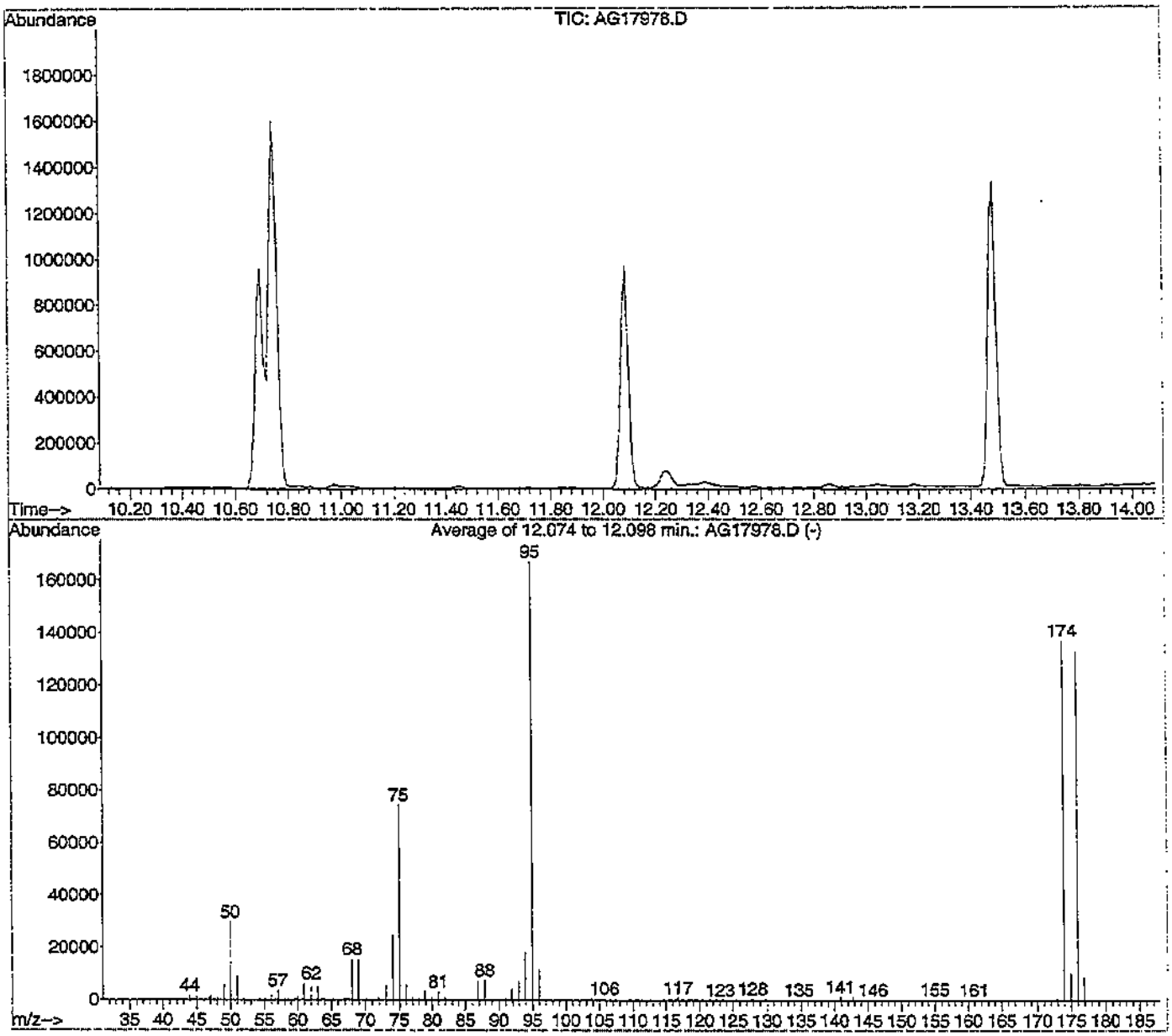
(#) = Out of Range SPCC's out = 0 CCC's out = 0

BFB TUNING

CLPBFB

Data File : E:\DATA\09012004\AG17978.D
Acq On : 1 Sep 2004 10:43 am
Sample : bfb tune
Misc : soil #5.000
MS Integration Params: RTEINT.P
Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge

Vial: 2
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00



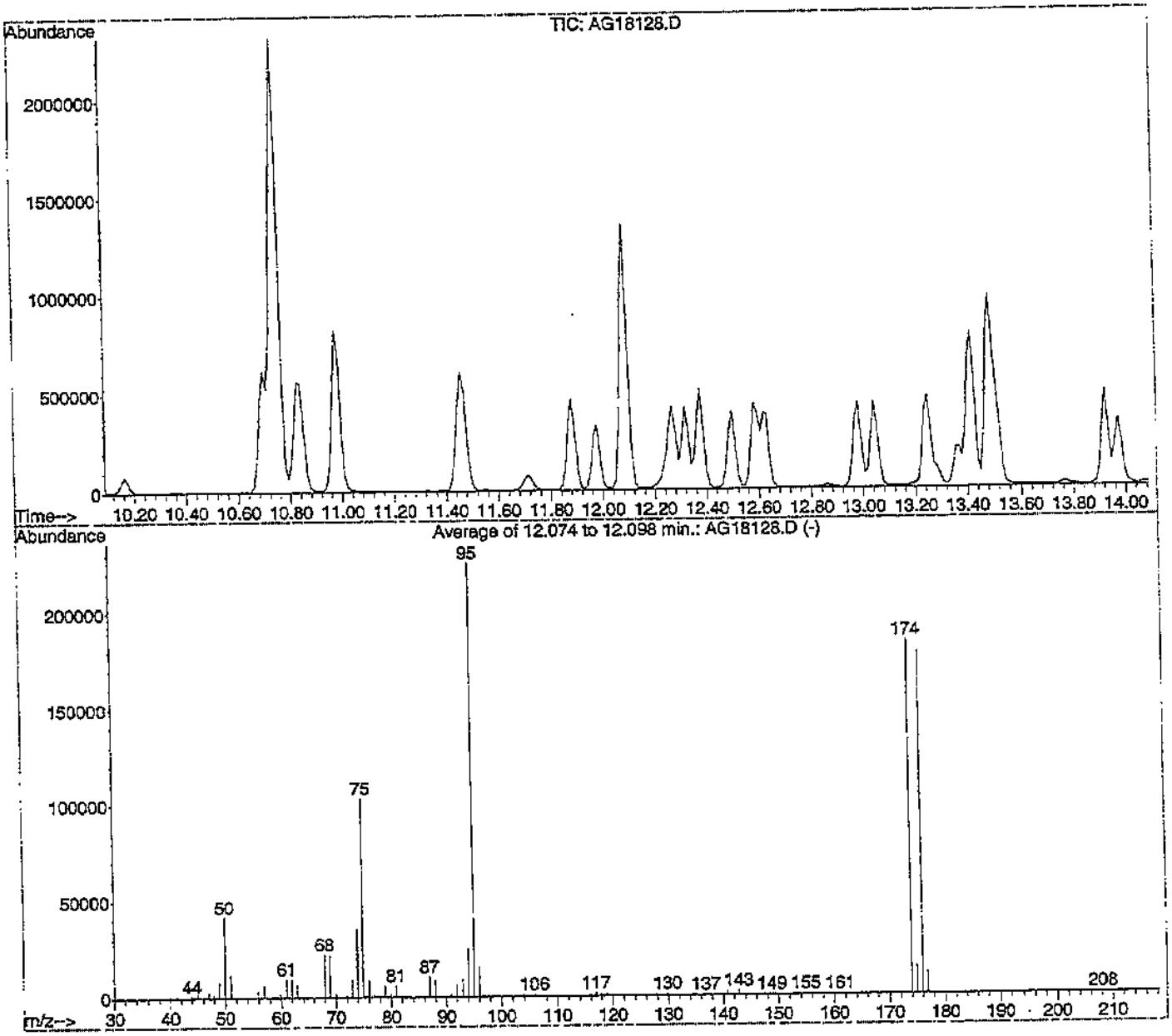
AutoFind: Scans 910, 911, 912; Background Corrected with Scan 904

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	29690	PASS
75	95	30	60	44.6	74538	PASS
95	95	100	100	100.0	166946	PASS
96	95	5	9	7.0	11719	PASS
173	174	0.00	2	0.6	885	PASS
174	95	50	100	82.0	136888	PASS
175	174	5	9	7.3	10061	PASS
176	174	95	101	96.7	132394	PASS
177	176	5	9	6.7	8850	PASS

CLPBFB

Data File : E:\DATA\09162004\AG18128.D
Acq On : 16 Sep 2004 2:16 pm
Sample : 4.0 ug/Kg ccal
Misc : solid #5.000 12494403
MS Integration Params: RTEINT.P
Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge

Vial: 12
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00



AutoFind: Scans 910, 911, 912; Background Corrected with Scan 905

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	41822	PASS
75	95	30	60	45.9	103362	PASS
95	95	100	100	100.0	225344	PASS
96	95	5	9	6.8	15286	PASS
173	174	0.00	2	0.2	385	PASS
174	95	50	100	81.4	183488	PASS
175	174	5	9	7.7	14060	PASS
176	174	95	101	96.6	177194	PASS
177	176	5	9	6.2	11031	PASS

AG18128.D 09012004_LOWSOIL_8260.M Fri Sep 17 08:30:16 2004

METHOD BLANK

Quantitation Report (QT Reviewed)

Data File : E:\DATA\09162004\AG18134.D
Acq On : 16 Sep 2004 4:48 pm
Sample : Reagent MB voa908
Misc : soil #5.000
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:47:05 2004

Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00
Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.54	168	448332	10.00 ug/Kg	-0.01
40) 1,4-Difluorobenzene(I)	7.36	114	781320	10.00 ug/Kg	-0.01
59) D5-Chlorobenzene(I)	10.70	119	145869	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	307124	10.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	242921	10.27 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery	= 102.70%	
39) Fluorobenzene(S)	7.24	96	863277	8.50 ug/Kg	-0.01
Spiked Amount 10.000	Range 92 - 107		Recovery	= 85.00%#	
41) Trifluorotoluene(S)	7.98	146	810304	18.16 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery	= 90.80%	
50) Toluene-d8(S)	9.03	98	808285	8.52 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery	= 85.20%#	
60) Ethylbenzene-d10(S)	10.74	98	1051149	9.65 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery	= 96.50%	
69) Bromofluorobenzene(S)	12.09	174	227576	9.08 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery	= 90.80%	

Target Compounds					Qvalue
3) Chloromethane	1.90	50	19940	Below Cal	91
5) Bromomethane	2.44	94	8295	1.12 ug/Kg	83
8) Acrolein	3.55	56	1167	Below Cal #	36
15) Methylene Chloride	4.32	49	18986	Below Cal	97
18) Acrylonitrile	4.64	53	2507	0.50 ug/Kg	75
19) Hexane	5.03	56	2415	Below Cal #	51
31) Cyclohexane	6.54	56	9780	Below Cal #	36
51) Toluene	9.10	91	5192	0.05 ug/Kg	86
65) o-Xylene	11.45	91	2479	0.03 ug/Kg#	57
87) 1,3,5-Trichlorobenzene	15.18	180	1393	Below Cal	82
88) 1,2,4-Trichlorobenzene	15.94	180	1490	Below Cal	87
89) Hexachlorobutadiene	16.15	225	838	Below Cal #	18
90) Naphthalene	16.26	128	11129	Below Cal	93
91) 1,2,3-Trichlorobenzene	16.56	180	1106	Below Cal #	54

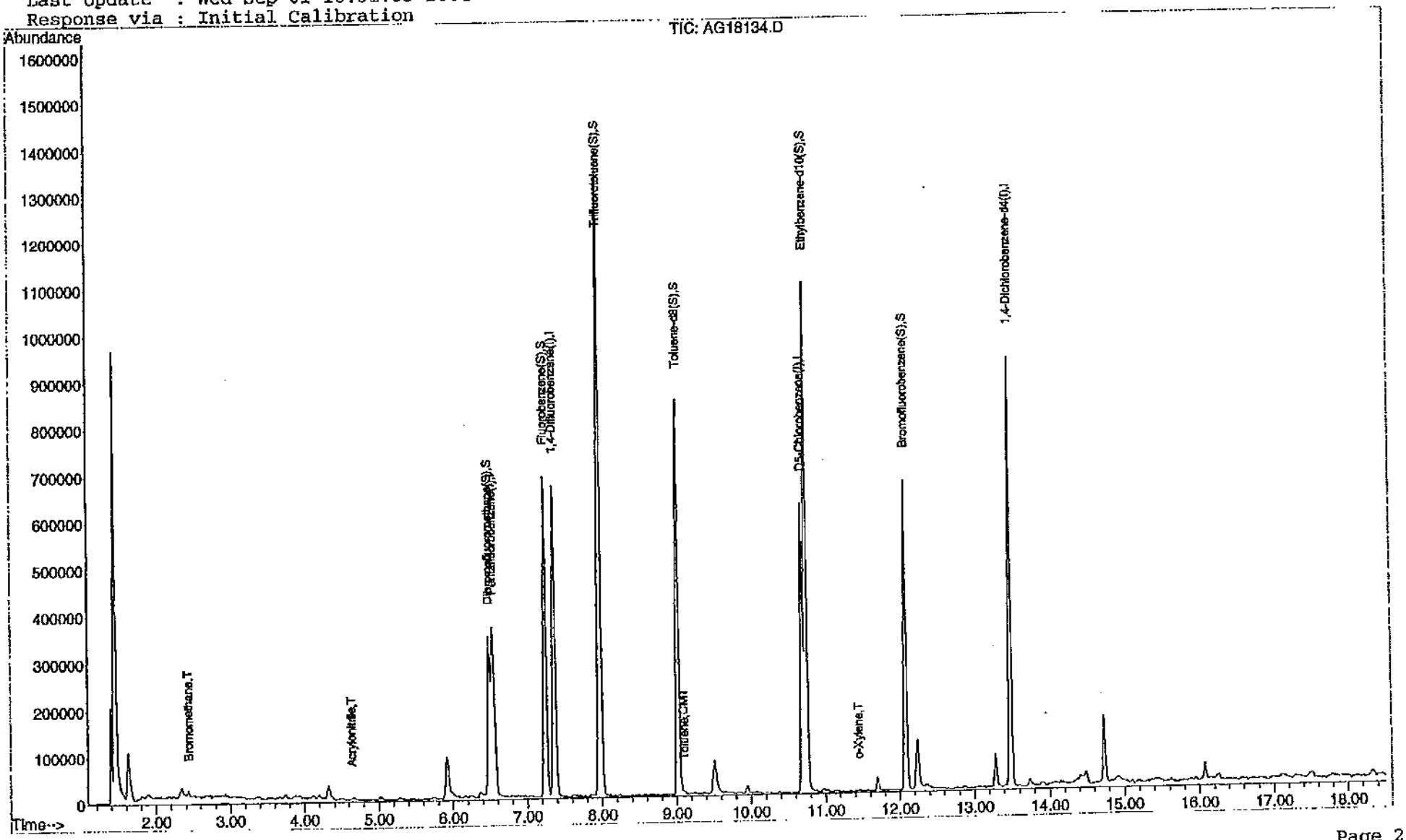
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18134.D
Acq On : 16 Sep 2004 4:48 pm
Sample : Reagent MB voa908
Misc : soil #5.000
MS Integration Params: RTEINT.P
Quant Time: Sep 17 9:06 2004

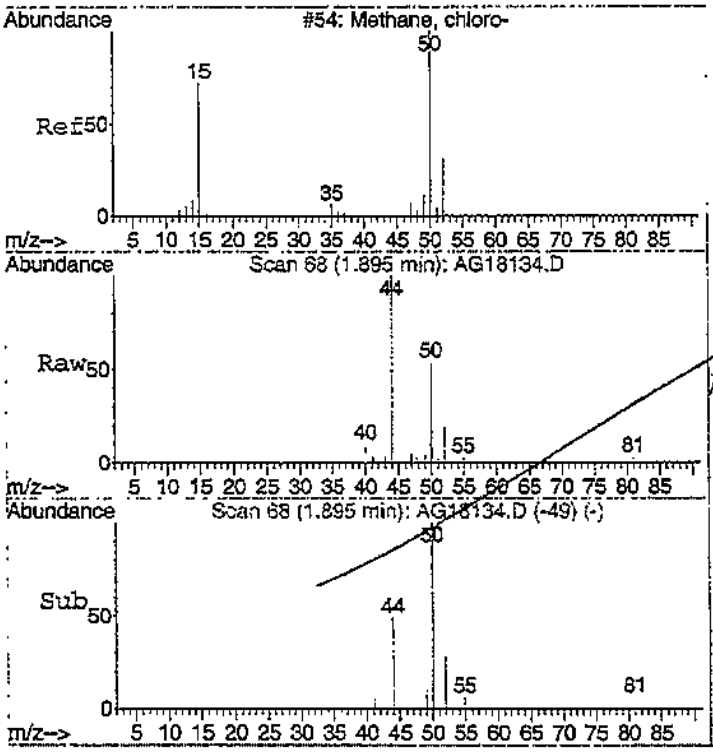
Vial: 18
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



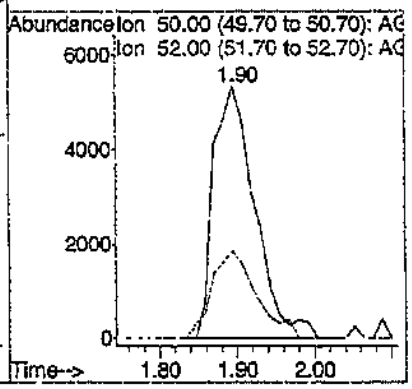
AG18134.D 09012004_LOWSOIL_8260.M Fri Sep 17 09:06:52 2004

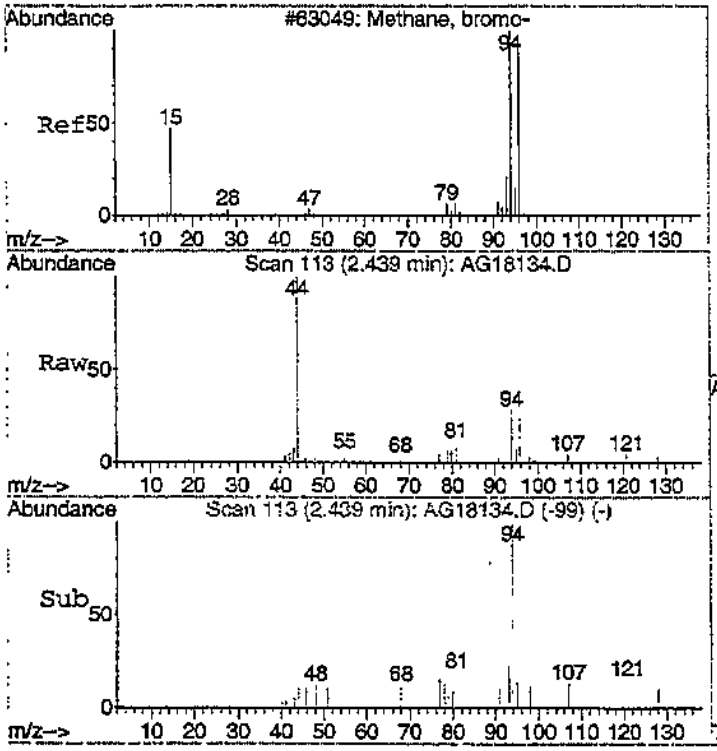


#3
Chloromethane
Concen: Below Cal
RT: 1.90 min Scan# 68
Delta R.T. -0.01 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 50 Resp: 19940

Ion	Ratio	Lower	Upper
50	100		
52	37.1	2.1	62.1

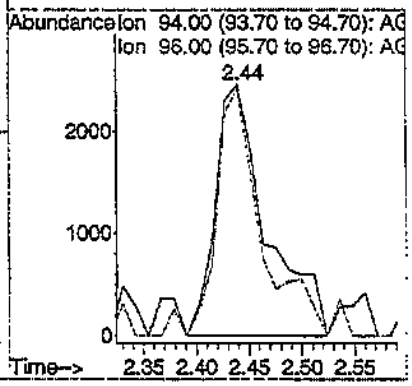




#5
Bromomethane
Concen: 1.12 ug/Kg
RT: 2.44 min Scan# 113
Delta R.T. -0.01 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 94 Resp: 8295

Ion	Ratio	Lower	Upper
94	100		
96	87.4	74.5	134.5



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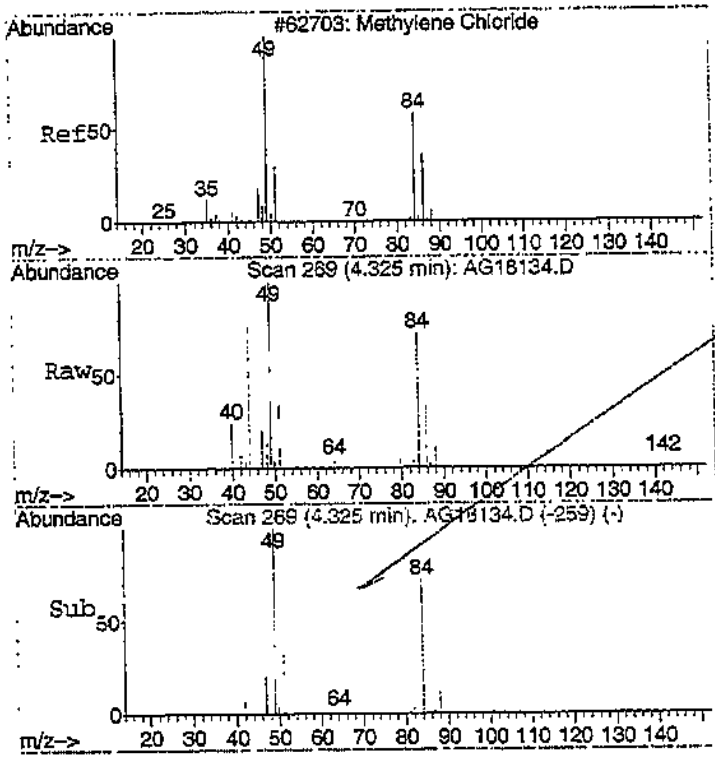
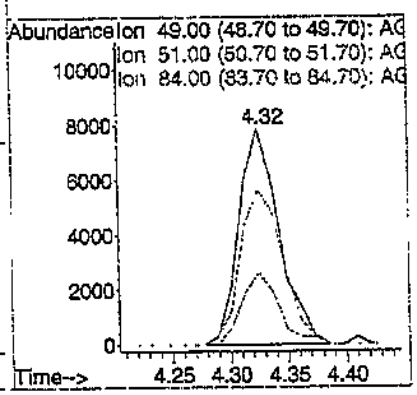
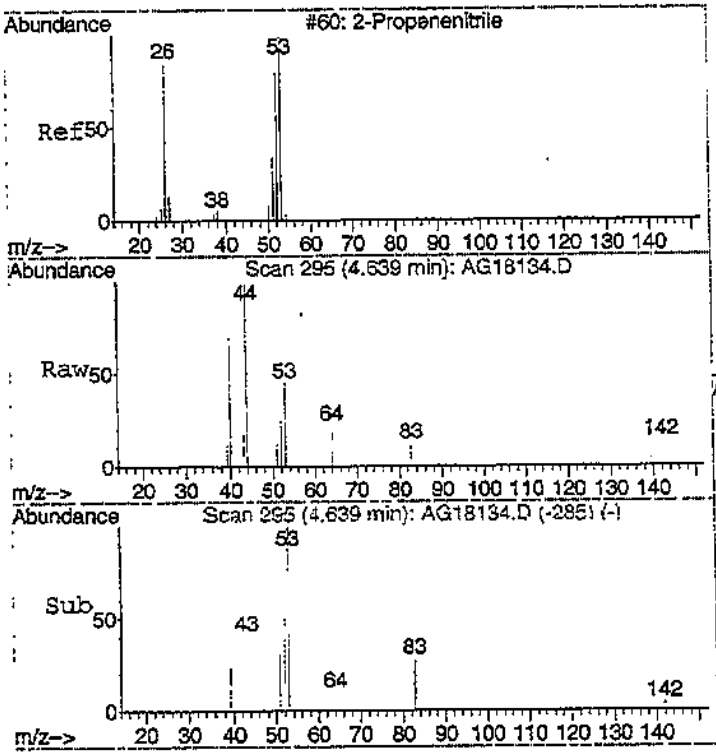


#15
Methylene Chloride
Concen: Below Cal
RT: 4.32 min Scan# 269
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 49 Resp: 18986

Ion	Ratio	Lower	Upper
49	100		
51	31.2	0.0	59.6
84	76.7	43.6	103.6

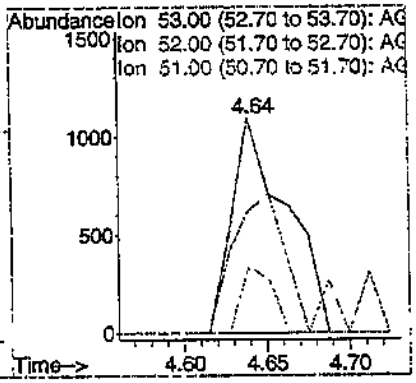




#18
Acrylonitrile
Concen: 0.50 ug/Kg
RT: 4.64 min Scan# 295
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 53 Resp: 2507

Ion	Ratio	Lower	Upper
53	100		
52	60.7	51.9	111.9
51	17.6	3.5	63.5



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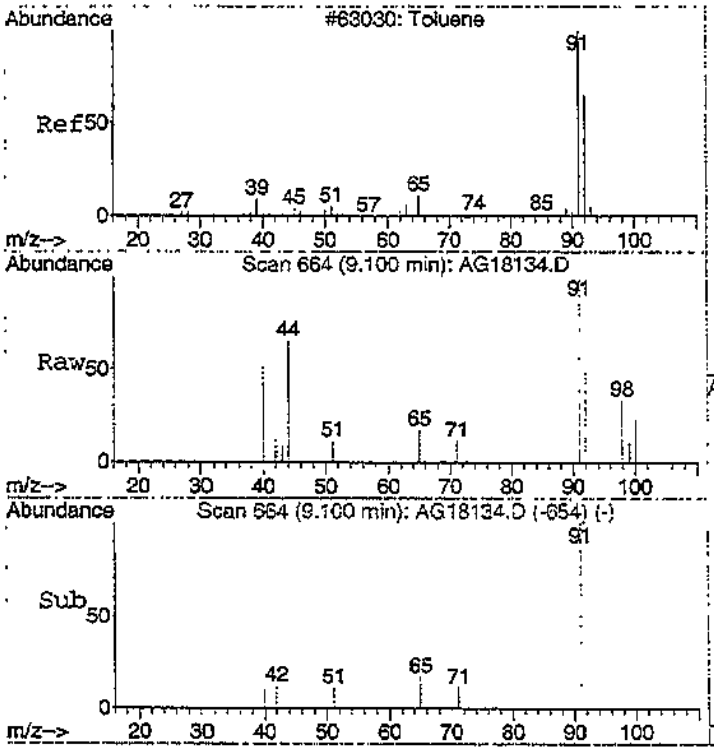
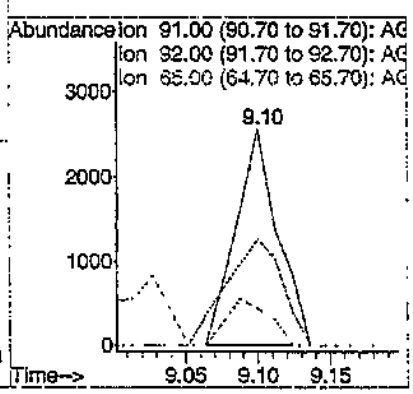
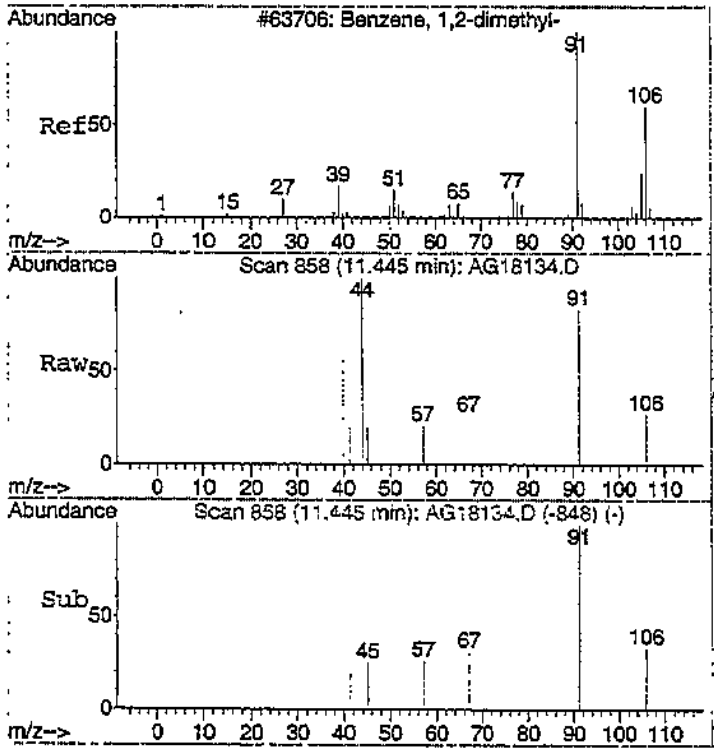


#51
Toluene
Concen: 0.05 ug/Kg
RT: 9.10 min Scan# 664
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 91 Resp: 5192

Ion	Ratio	Lower	Upper
91	100		
92	65.9	27.9	87.9
65	22.0	0.0	40.7

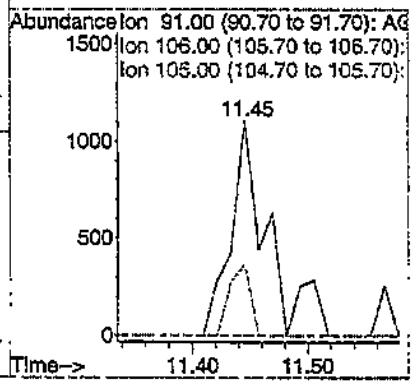




#65
o-Xylene
Concen: 0.03 ug/Kg
RT: 11.45 min Scan# 858
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion: 91 Resp: 2479

Ion	Ratio	Lower	Upper
91	100		
106	18.6	17.5	77.5
105	0.0	0.0	49.9



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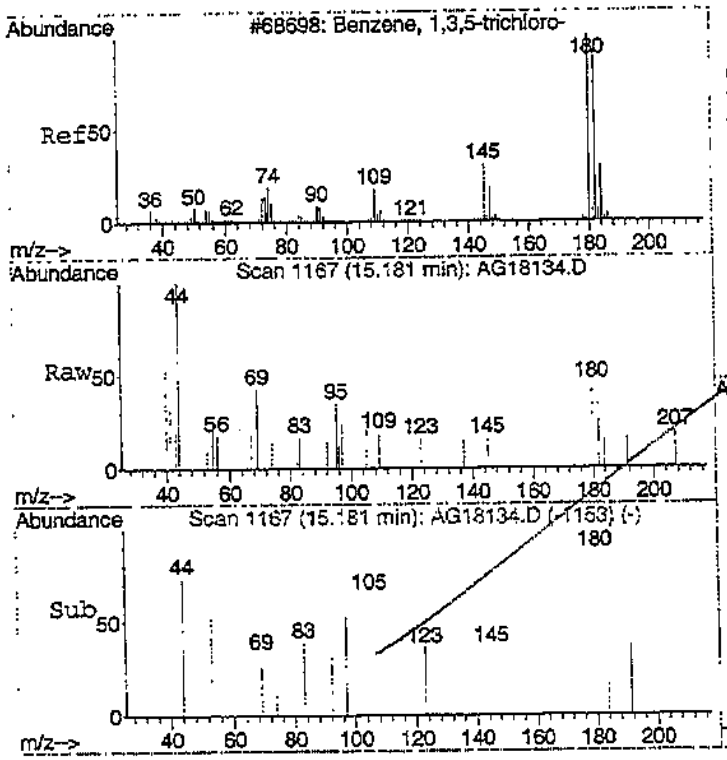
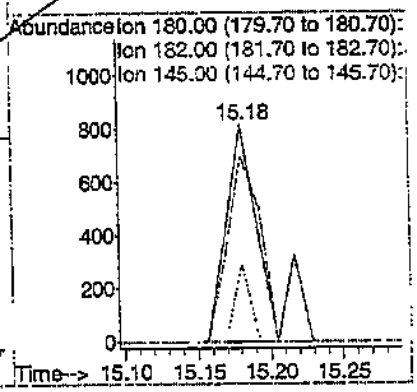
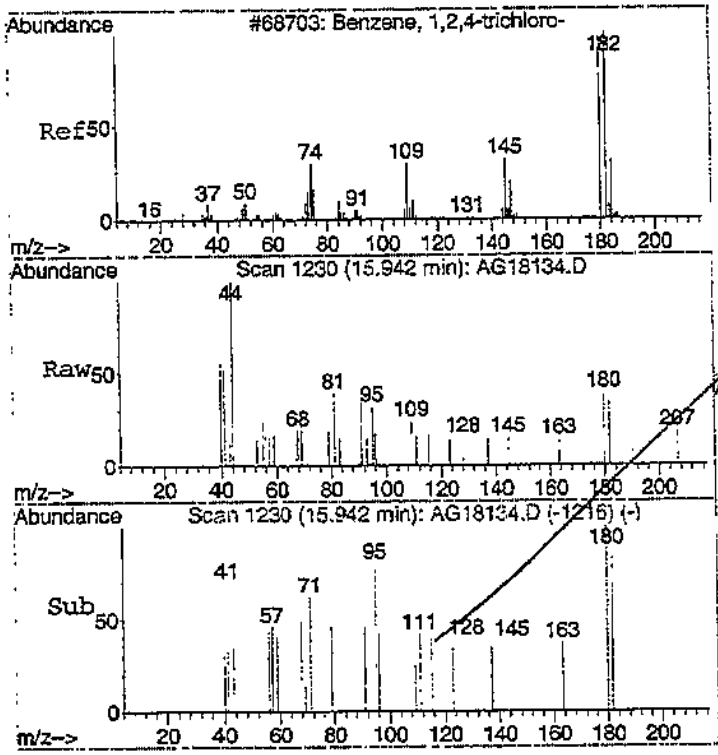


#87
1,3,5-Trichlorobenzene
Concen: Below Cal
RT: 15.18 min Scan# 1167
Delta R.T. -0.01 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion:180 Resp: 1393

Ion	Ratio	Lower	Upper
180	100		
182	78.8	64.4	124.4
145	15.1	0.0	56.8

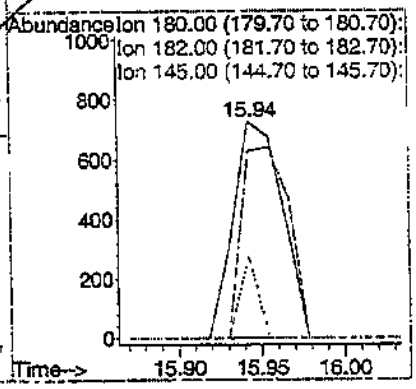




#88
1,2,4-Trichlorobenzene
Concen: Below Cal
RT: 15.94 min Scan# 1230
Delta R.T. -0.01 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion:180 Resp: 1490

Ion	Ratio	Lower	Upper
180	100		
182	84.7	62.7	122.7
145	13.4	0.0	58.7



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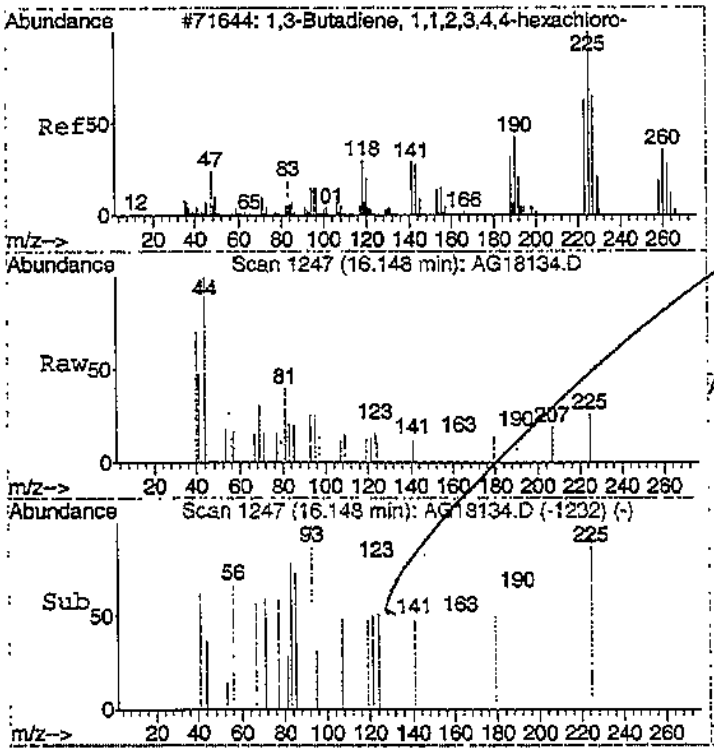
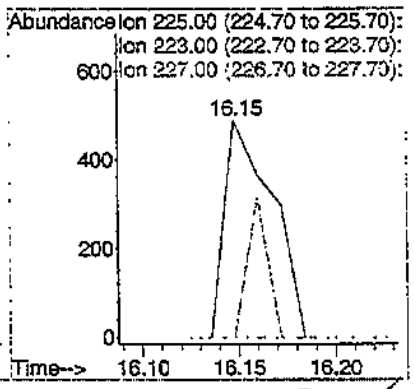
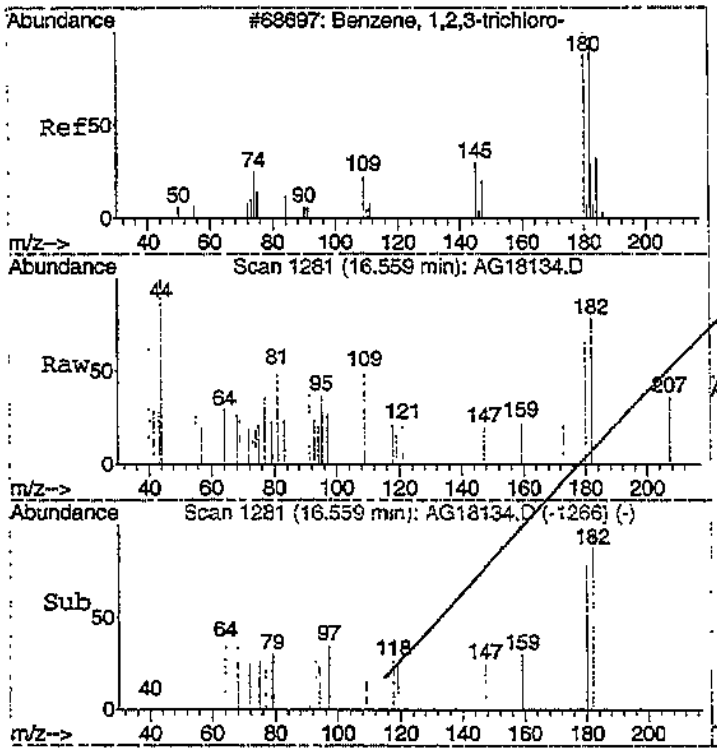


#89
Hexachlorobutadiene
Concen: Below Cal
RT: 16.15 min Scan# 1247
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion:225 Resp: 838

Ion	Ratio	Lower	Upper
225	100		
223	0.0	36.7	96.7#
227	0.0	32.9	92.9#

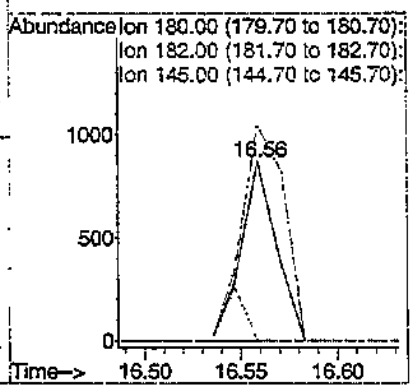




#91
1,2,3-Trichlorobenzene
Concen: Below Cal
RT: 16.56 min Scan# 1281
Delta R.T. 0.00 min
Lab File: AG18134.D
Acq: 16 Sep 2004 4:48 pm

Tgt Ion:180 Resp: 1106

Ion	Ratio	Lower	Upper
180	100		
182	145.4	64.6	124.6#
145	17.2	1.6	61.6



00153

BLANK SPIKE

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09162004\AG18129.D
cq On : 16 Sep 2004 2:42 pm
ample : 4.0 ug/Kg lcs/bs voa908
isc : solid #5.000 12494404
S Integration Params: RTEINT.P
uant Time: Sep 17 08:46:59 2004

Vial: 13
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	448152	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	739421	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	134772	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	315360	10.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	225600	9.54 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 95.40%		
39) Fluorobenzene(S)	7.25	96	851348	8.39 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 83.90%#		
41) Trifluorotoluene(S)	7.98	146	809139	19.16 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 95.80%		
50) Toluene-d8(S)	9.03	98	797595	8.89 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 88.90%#		
60) Ethylbenzene-d10(S)	10.74	98	1008857	10.02 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 100.20%		
69) Bromofluorobenzene(S)	12.09	174	234765	10.14 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 101.40%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.65	85	138732	4.69 ug/Kg	96
3) Chloromethane	1.89	50	165590	4.12 ug/Kg	99
4) Vinyl Chloride	2.02	62	113608	3.86 ug/Kg	95
5) Bromomethane	2.43	94	24528	2.84 ug/Kg	86
6) Chloroethane	2.57	64	50048	2.90 ug/Kg	88
7) Trichlorofluoromethane	2.92	101	187083	4.54 ug/Kg	95
8) Acrolein	3.54	56	27502	22.55 ug/Kg	83
9) Ethyl ether	3.36	59	377764	23.27 ug/Kg	98
10) 1,1-Dichloroethene	3.66	96	101943	4.65 ug/Kg	93
11) 1,1,2-Trichlorotrifluoroet	3.68	151	93927	4.29 ug/Kg	91
12) Carbon Disulfide	3.94	76	1226778	14.76 ug/Kg	96
13) Acetone	3.74	43	74142	9.16 ug/Kg	97
14) tert-Butyl alcohol	5.74	59	216030	18.41 ug/Kg#	92
15) Methylene Chloride	4.32	49	208598	6.04 ug/Kg	98
16) Methyl tert-Butyl ether	4.68	73	197058	4.10 ug/Kg	100
17) trans-1,2-Dichloroethene	4.68	96	112892	4.42 ug/Kg	98
18) Acrylonitrile	4.64	53	115368	22.80 ug/Kg	97
19) Hexane	5.04	56	86420	4.20 ug/Kg	82
20) Diisopropyl ether	5.30	45	309827	4.02 ug/Kg	95
21) 1,1-Dichloroethane	5.21	63	196999	4.50 ug/Kg	94
22) Vinyl Acetate	5.28	43	401956	12.80 ug/Kg#	95
23) Ethyl tert-butyl ether	5.74	87	84197	3.59 ug/Kg#	88
24) 2,2-Dichloropropane	5.90	77	133246	3.90 ug/Kg	94
25) cis-1,2-Dichloroethene	5.92	96	116731	4.39 ug/Kg	93
26) 2-Butanone	5.93	57	11061	14.65 ug/Kg#	66
27) Ethyl acetate	6.01	45	17301	9.00 ug/Kg	91
28) Bromochloromethane	6.20	49	84323	4.71 ug/Kg	92
29) Chloroform	6.31	85	125406	4.52 ug/Kg	95
30) 1,1,1-Trichloroethane	6.49	97	161210	4.25 ug/Kg	84
31) Cyclohexane	6.55	56	207981	4.16 ug/Kg	98
33) Carbon Tetrachloride	6.68	119	125862	4.12 ug/Kg	90
34) 1,1-Dichloropropene	6.68	75	130035	4.02 ug/Kg	99
35) tert-Amyl methyl ether	7.04	73	179605	3.80 ug/Kg#	89
36) Benzene	6.92	78	431791	4.38 ug/Kg	98
37) iso-Butyl alcohol	6.86	43	195773	396.70 ug/Kg	93
38) 1,2-Dichloroethane	6.95	62	125555	4.58 ug/Kg	92

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

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09162004\AG18129.D
Acq On : 16 Sep 2004 2:42 pm
Sample : 4.0 ug/Kg lcs/bs voa908
Misc : solid #5.000 12494404
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:46:59 2004

Vial: 13
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42)	Trichloroethene	7.66	130	109518	3.85 ug/Kg	93
43)	n-Butyl alcohol	7.61	41	85937	391.73 ug/Kg	95
44)	Methylcyclohexane	7.87	55	149958	4.01 ug/Kg#	78
45)	1,2-Dichloropropane	7.90	63	108596	4.44 ug/Kg	95
46)	Dibromomethane	8.06	174	50975	4.26 ug/Kg	97
47)	Bromodichloromethane	8.23	83	121691	4.23 ug/Kg	98
48)	cis-1,3-Dichloropropene	8.73	75	124984	3.81 ug/Kg	98
49)	4-Methyl-2-pentanone	8.88	85	40558	17.81 ug/Kg#	71
51)	Toluene	9.10	91	450758	4.20 ug/Kg	99
52)	trans-1,3-Dichloropropene	9.35	75	91419	3.40 ug/Kg	90
53)	1,1,2-Trichloroethane	9.57	97	69263	3.76 ug/Kg	97
54)	Tetrachloroethene	9.74	164	88483	4.03 ug/Kg	98
55)	1,3-Dichloropropane	9.76	76	117309	4.11 ug/Kg	96
56)	2-Hexanone	9.84	85	12626	12.34 ug/Kg#	91
57)	Dibromochloromethane	10.04	129	66190	3.48 ug/Kg	96
58)	1,2-Dibromoethane	10.16	107	67929	4.07 ug/Kg	96
61)	Chlorobenzene	10.73	112	275685	4.67 ug/Kg	94
62)	1,1,1,2-Tetrachloroethane	10.82	131	78153	4.32 ug/Kg	98
63)	Ethylbenzene	10.84	91	465392	4.51 ug/Kg	99
64)	m,p-Xylene	10.97	106	355752	9.21 ug/Kg	97
65)	o-Xylene	11.45	91	334026	4.40 ug/Kg	97
66)	Styrene	11.47	104	246183	4.32 ug/Kg	91
67)	Bromoform	11.71	173	37024	4.03 ug/Kg	96
68)	Isopropylbenzene	11.88	105	389905	4.13 ug/Kg	97
70)	Bromobenzene	12.27	156	101565	4.48 ug/Kg	94
71)	1,1,2,2-Tetrachloroethane	12.27	83	137035+	5.02 ug/Kg	98
72)	1,2,3-Trichloropropane	12.32	110	21405	4.24 ug/Kg	97
73)	n-Propylbenzene	12.38	91	569036	4.61 ug/Kg	96
74)	2-Chlorotoluene	12.50	126	103124	4.45 ug/Kg	93
75)	4-Chlorotoluene	12.63	126	110923	4.64 ug/Kg#	68
76)	1,3,5-Trimethylbenzene	12.58	105	347168	4.56 ug/Kg	97
77)	t-Butylbenzene	12.98	119	298798	4.28 ug/Kg	95
78)	1,2,4-Trimethylbenzene	13.04	105	359694	4.65 ug/Kg	96
79)	sec-Butylbenzene	13.25	105	472712	4.54 ug/Kg	98
80)	4-Isopropyltoluene	13.42	119	413227	5.01 ug/Kg	97
81)	1,3-Dichlorobenzene	13.40	146	206356	4.71 ug/Kg	94
83)	1,4-Dichlorobenzene	13.51	146	200489	4.11 ug/Kg	98
84)	n-Butylbenzene	13.92	134	88883	3.84 ug/Kg#	83
85)	1,2-Dichlorobenzene	13.97	146	180711	4.06 ug/Kg	99
86)	1,2-Dibromo-3-chloropropan	14.94	75	11419	4.04 ug/Kg	83
87)	1,3,5-Trichlorobenzene	15.19	180	150306	4.25 ug/Kg	98
88)	1,2,4-Trichlorobenzene	15.95	180	120900	4.00 ug/Kg	99
89)	Hexachlorobutadiene	16.15	225	79026	4.12 ug/Kg	92
90)	Naphthalene	16.26	128	235720	4.13 ug/Kg	100
91)	1,2,3-Trichlorobenzene	16.56	180	111189	4.05 ug/Kg	98

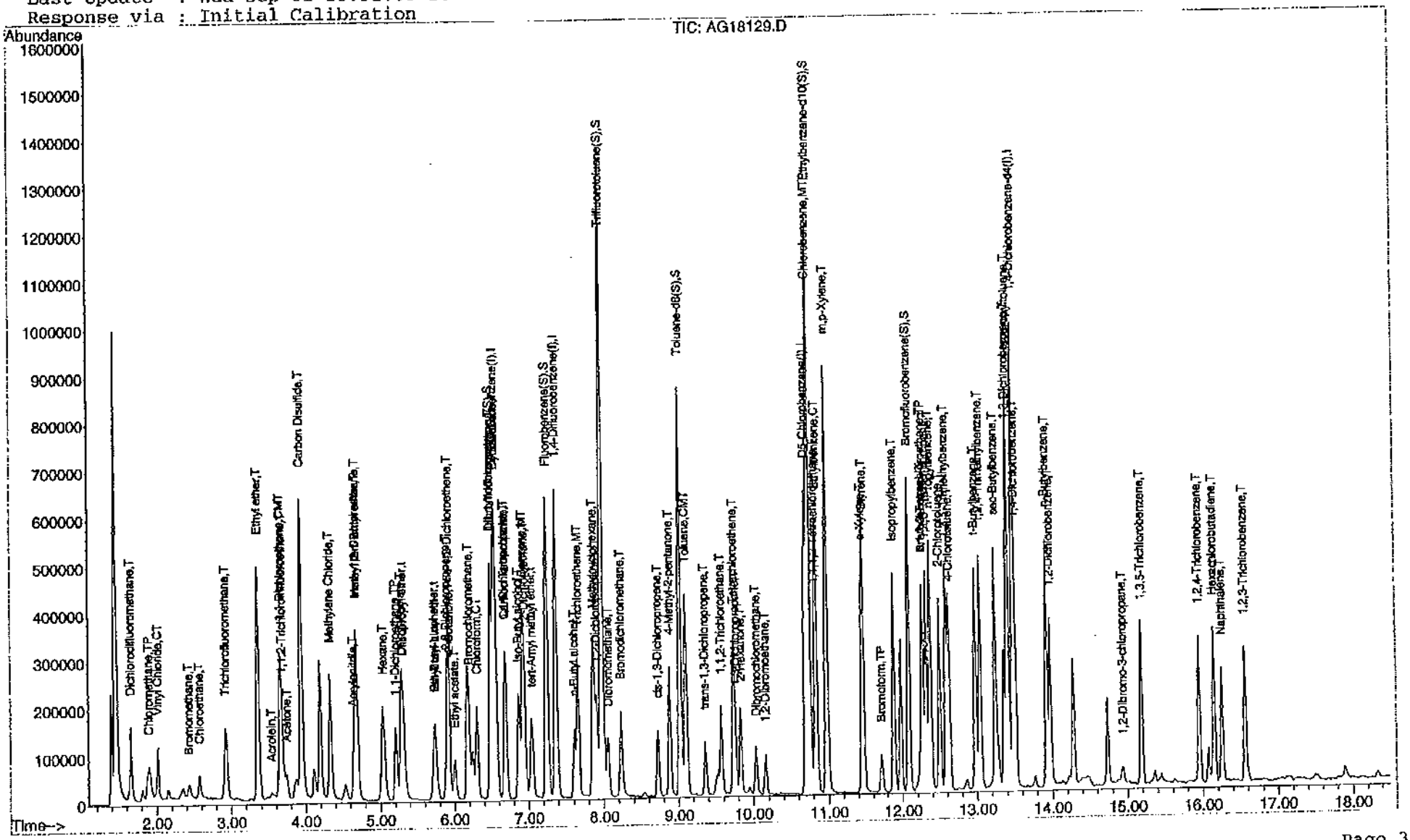
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18129.D
Acq On : 16 Sep 2004 2:42 pm
Sample : 4.0 ug/Kg lcs/bs voa908
Misc : solid #5.000 12494404
MS Integration Params: RTEINT.P
Quant Time: Sep 17 8:47 2004

Vial: 13
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG18129.D 09012004_LOWSOIL_8260.M Fri Sep 17 09:07:11 2004

00157

Quantitation Report (Not Reviewed)

Data File : E:\DATA\09162004\AG18130.D
Acq On : 16 Sep 2004 3:07 pm
Sample : 4.0 ug/Kg lcs/bsd voa908
Misc : solid #5.000 12494404
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:47:00 2004

Vial: 14
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	451792	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	750175	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	142292	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	317466	10.00	ug/Kg	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	224393	9.41	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 94.10%			
39) Fluorobenzene(S)	7.25	96	857836	8.38	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 83.80%#			
41) Trifluorotoluene(S)	7.98	146	839771	19.60	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 98.00%			
50) Toluene-d8(S)	9.03	98	821986	9.03	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 90.30%#			
60) Ethylbenzene-d10(S)	10.74	98	1027189	9.67	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 96.70%			
69) Bromofluorobenzene(S)	12.09	174	232969	9.53	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 95.30%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.65	85	143160	4.80	ug/Kg	99
3) Chloromethane	1.91	50	162543	3.99	ug/Kg	98
4) Vinyl Chloride	2.02	62	115033	3.87	ug/Kg	97
5) Bromomethane	2.44	94	24510	2.82	ug/Kg	90
6) Chloroethane	2.57	64	74625	4.29	ug/Kg	94
7) Trichlorofluoromethane	2.93	101	179203	4.32	ug/Kg	92
8) Acrolein	3.55	56	26223	21.25	ug/Kg	71
9) Ethyl ether	3.36	59	382079	23.35	ug/Kg	97
10) 1,1-Dichloroethene	3.66	96	99241	4.49	ug/Kg	97
11) 1,1,2-Trichlorotrifluoroet	3.68	151	96756	4.38	ug/Kg	91
12) Carbon Disulfide	3.95	76	1214808	14.49	ug/Kg	97
13) Acetone	3.74	43	81251	10.02	ug/Kg	94
14) tert-Butyl alcohol	5.74	59	221171	18.69	ug/Kg#	93
15) Methylene Chloride	4.32	49	202129	5.76	ug/Kg	98
16) Methyl tert-Butyl ether	4.68	73	199631	4.12	ug/Kg	97
17) trans-1,2-Dichloroethene	4.69	96	111154	4.32	ug/Kg	97
18) Acrylonitrile	4.65	53	108531	21.28	ug/Kg	97
19) Hexane	5.04	56	90679	4.38	ug/Kg	84
20) Diisopropyl ether	5.30	45	314415	4.05	ug/Kg	96
21) 1,1-Dichloroethane	5.21	63	194341	4.41	ug/Kg	96
22) Vinyl Acetate	5.28	43	397607	12.55	ug/Kg#	97
23) Ethyl tert-butyl ether	5.74	87	87523	3.70	ug/Kg#	91
24) 2,2-Dichloropropane	5.91	77	138266	4.01	ug/Kg	93
25) cis-1,2-Dichloroethene	5.92	96	113877	4.25	ug/Kg	90
26) 2-Butanone	5.93	57	10007	13.14	ug/Kg#	88
27) Ethyl acetate	6.01	45	16750	8.64	ug/Kg	95
28) Bromochloromethane	6.20	49	83416	4.62	ug/Kg	88
29) Chloroform	6.31	85	125394	4.48	ug/Kg	97
30) 1,1,1-Trichloroethane	6.49	97	156959	4.11	ug/Kg	83
31) Cyclohexane	6.55	56	213129	4.23	ug/Kg	98
33) Carbon Tetrachloride	6.68	119	123880	4.03	ug/Kg	89
34) 1,1-Dichloropropene	6.68	75	132469	4.06	ug/Kg	97
35) tert-Amyl methyl ether	7.04	73	187071	3.92	ug/Kg#	90
36) Benzene	6.92	78	444132	4.47	ug/Kg	99
37) iso-Butyl alcohol	6.86	43	199801	401.60	ug/Kg	93
38) 1,2-Dichloroethane	6.95	62	122563	4.43	ug/Kg	92

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

Quantitation Report (Not Reviewed)

ta File : E:\DATA\09162004\AG18130.D
q On : 16 Sep 2004 3:07 pm
mple : 4.0 ug/Kg lcs/bsd voa908
sc : solid #5.000 12494404
Integration Params: RTEINT.P
ant Time: Sep 17 08:47:00 2004

Vial: 14
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

ant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
tle : VOA by Method 5035/8260B:Direct Soil Purge
st Update : Wed Sep 01 18:31:03 2004
sponse via : Initial Calibration
taAcq Meth : 8260B

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42)	Trichloroethene	7.66	130	115418	4.00 ug/Kg	95
43)	n-Butyl alcohol	7.60	41	84814	381.07 ug/Kg	98
44)	Methylcyclohexane	7.87	55	162669	4.29 ug/Kg#	78
45)	1,2-Dichloropropane	7.90	63	102907	4.15 ug/Kg	93
46)	Dibromomethane	8.06	174	49781	4.10 ug/Kg	96
47)	Bromodichloromethane	8.23	83	126067	4.32 ug/Kg	97
48)	cis-1,3-Dichloropropene	8.73	75	126648	3.81 ug/Kg	99
49)	4-Methyl-2-pentanone	8.88	85	41737	18.07 ug/Kg#	68
51)	Toluene	9.10	91	440946	4.05 ug/Kg	99
52)	trans-1,3-Dichloropropene	9.35	75	92806	3.40 ug/Kg	93
53)	1,1,2-Trichloroethane	9.57	97	72125	3.86 ug/Kg	99
54)	Tetrachloroethene	9.74	164	86410	3.88 ug/Kg	93
55)	1,3-Dichloropropane	9.76	76	115891	4.00 ug/Kg	94
56)	2-Hexanone	9.83	85	13236	12.75 ug/Kg#	93
57)	Dibromochloromethane	10.03	129	70111	3.63 ug/Kg	96
58)	1,2-Dibromoethane	10.16	107	67954	4.01 ug/Kg	99
61)	Chlorobenzene	10.73	112	277637	4.45 ug/Kg	92
62)	1,1,1,2-Tetrachloroethane	10.82	131	82592	4.32 ug/Kg	97
63)	Ethylbenzene	10.84	91	482316	4.43 ug/Kg	97
64)	m,p-Xylene	10.97	106	361620	8.87 ug/Kg	98
65)	o-Xylene	11.45	91	349159	4.35 ug/Kg	97
66)	Styrene	11.47	104	244918	4.07 ug/Kg	89
67)	Bromoform	11.71	173	34781	3.59 ug/Kg	95
68)	Isopropylbenzene	11.88	105	398030	3.99 ug/Kg	97
70)	Bromobenzene	12.27	156	100240	4.19 ug/Kg	92
71)	1,1,2,2-Tetrachloroethane	12.27	83	128840+	4.47 ug/Kg	98
72)	1,2,3-Trichloropropane	12.32	110	24575	4.61 ug/Kg#	68
73)	n-Propylbenzene	12.38	91	574156	4.41 ug/Kg	96
74)	2-Chlorotoluene	12.50	126	104980	4.29 ug/Kg	91
75)	4-Chlorotoluene	12.63	126	108405	4.29 ug/Kg#	61
76)	1,3,5-Trimethylbenzene	12.58	105	352033	4.38 ug/Kg	99
77)	t-Butylbenzene	12.98	119	316100	4.29 ug/Kg	95
78)	1,2,4-Trimethylbenzene	13.04	105	372959	4.57 ug/Kg	96
79)	sec-Butylbenzene	13.25	105	488841	4.45 ug/Kg	98
80)	4-Isopropyltoluene	13.42	119	424829	4.88 ug/Kg	97
81)	1,3-Dichlorobenzene	13.40	146	207507	4.48 ug/Kg	94
83)	1,4-Dichlorobenzene	13.51	146	201432	4.10 ug/Kg	98
84)	n-Butylbenzene	13.92	134	95826	4.12 ug/Kg	90
85)	1,2-Dichlorobenzene	13.97	146	182432	4.07 ug/Kg	97
86)	1,2-Dibromo-3-chloropropan	14.94	75	11856	4.17 ug/Kg	88
87)	1,3,5-Trichlorobenzene	15.19	180	153307	4.31 ug/Kg	99
88)	1,2,4-Trichlorobenzene	15.95	180	119289	3.92 ug/Kg	96
89)	Hexachlorobutadiene	16.15	225	84416	4.39 ug/Kg	94
90)	Naphthalene	16.26	128	232017	4.03 ug/Kg	99
91)	1,2,3-Trichlorobenzene	16.56	180	109621	3.96 ug/Kg	98

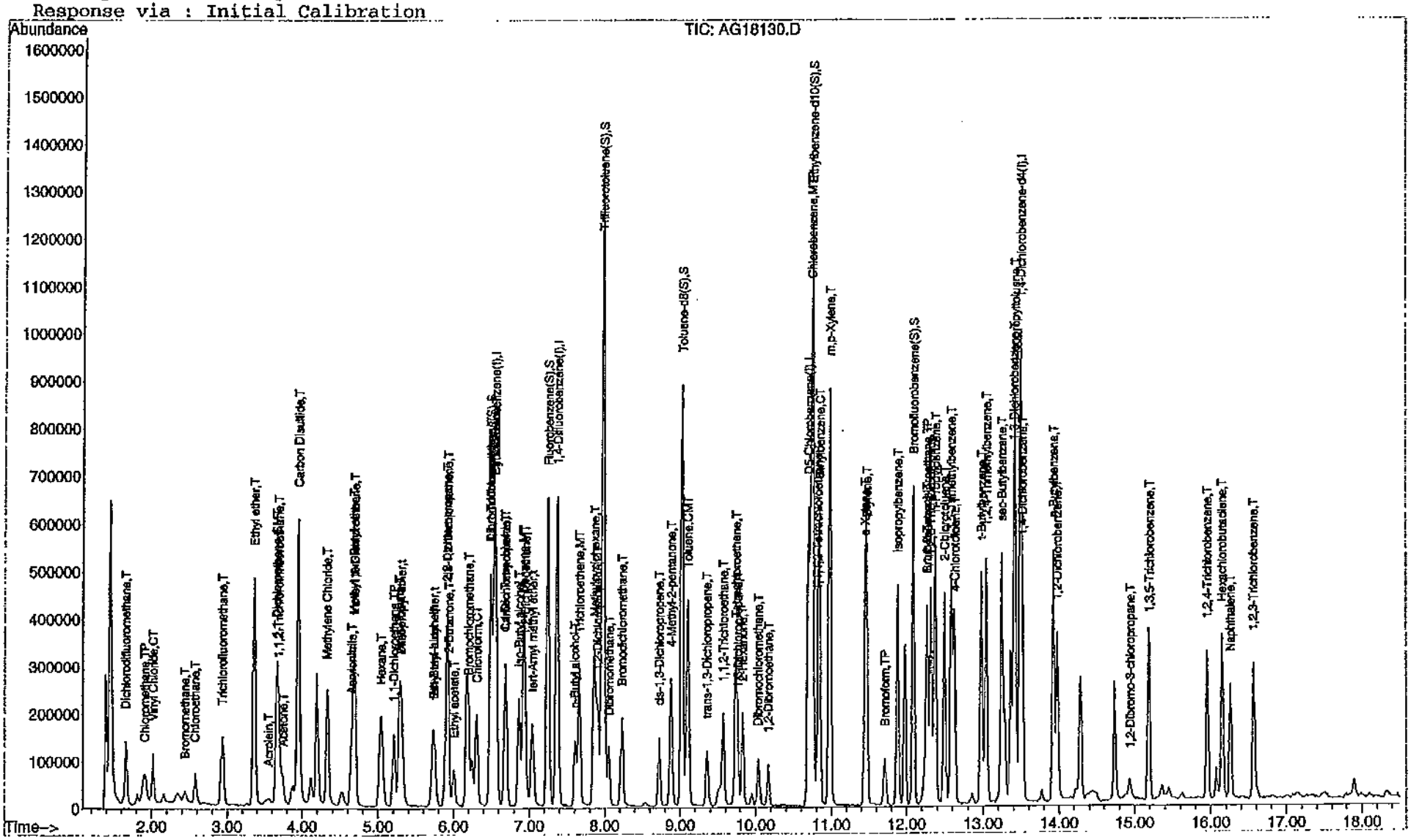
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18130.D
Acq On : 16 Sep 2004 3:07 pm
Sample : 4.0 ug/Kg lcs/bsd voa908
Misc : solid #5.000 12494404
MS Integration Params: RTEINT.P
Quant Time: Sep 17 8:47 2004

Vial: 14
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



MATIX SPIKE / MATRIX SPIKE DUPLICATE

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09162004\AG18139.D
:q On : 16 Sep 2004 6:55 pm
ample : 123627-01 ms voa908
isc : soil #5.444
S Integration Params: RTEINT.P
uant Time: Sep 17 08:47:11 2004

Vial: 23
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00
Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E;\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	470081	10.00	ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	784566	10.00	ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	152025	10.00	ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	333380	10.00	ug/Kg	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	6.49	111	231721	9.34	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 93.40%			
39) Fluorobenzene(S)	7.25	96	893156	8.39	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 83.90%#			
41) Trifluorotoluene(S)	7.98	146	808169	18.03	ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 90.15%			
50) Toluene-d8(S)	9.03	98	858557	9.02	ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 90.20%#			
60) Ethylbenzene-d10(S)	10.74	98	1091413	9.61	ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 96.10%			
69) Bromofluorobenzene(S)	12.09	174	253122	9.69	ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 96.90%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.67	85	128742	4.15	ug/Kg	99
3) Chloromethane	1.92	50	148942	3.38	ug/Kg	100
4) Vinyl Chloride	2.02	62	139237	4.51	ug/Kg	97
5) Bromomethane	2.45	94	24226	2.70	ug/Kg	94
6) Chloroethane	2.58	64	72739	4.02	ug/Kg	95
7) Trichlorofluoromethane	2.95	101	165098	3.82	ug/Kg	95
8) Acrolein	3.56	56	22990	17.67	ug/Kg	78
9) Ethyl ether	3.36	59	392257	23.04	ug/Kg	99
10) 1,1-Dichloroethene	3.67	96	92560	4.02	ug/Kg	93
11) 1,1,2-Trichlorotrifluoroet	3.70	151	85921	3.74	ug/Kg	87
12) Carbon Disulfide	3.95	76	1114046	12.77	ug/Kg	96
13) Acetone	3.74	43	85167	10.10	ug/Kg	98
14) tert-Butyl alcohol	5.74	59	246942	20.06	ug/Kg#	94
15) Methylene Chloride	4.34	49	198950	5.39	ug/Kg	99
16) Methyl tert-Butyl ether	4.68	73	225899	4.48	ug/Kg	98
17) trans-1,2-Dichloroethene	4.69	96	103735	3.87	ug/Kg	92
18) Acrylonitrile	4.64	53	129820	24.46	ug/Kg	97
19) Hexane	5.04	56	79527	3.65	ug/Kg	82
20) Diisopropyl ether	5.30	45	329722	4.08	ug/Kg	96
21) 1,1-Dichloroethane	5.21	63	190920	4.16	ug/Kg	95
22) Vinyl Acetate	5.28	43	395652	12.01	ug/Kg#	97
23) Ethyl tert-butyl ether	5.74	87	99374	4.04	ug/Kg#	93
24) 2,2-Dichloropropane	5.91	77	142804	3.98	ug/Kg	92
25) cis-1,2-Dichloroethene	5.92	96	111216	3.99	ug/Kg	87
26) 2-Butanone	5.93	57	12461	15.73	ug/Kg#	77
27) Ethyl acetate	6.01	45	16557	8.21	ug/Kg	96
28) Bromochloromethane	6.20	49	83200	4.43	ug/Kg	90
29) Chloroform	6.31	85	122153	4.20	ug/Kg	96
30) 1,1,1-Trichloroethane	6.50	97	161237	4.05	ug/Kg	87
31) Cyclohexane	6.55	56	200393	3.80	ug/Kg	99
33) Carbon Tetrachloride	6.69	119	123550	3.86	ug/Kg	93
34) 1,1-Dichloropropene	6.69	75	128584	3.79	ug/Kg	100
35) tert-Amyl methyl ether	7.04	73	202682	4.09	ug/Kg#	88
36) Benzene	6.94	78	440497	4.26	ug/Kg	98
37) iso-Butyl alcohol	6.86	43	245789	474.82	ug/Kg	95
38) 1,2-Dichloroethane	6.95	62	128879	4.48	ug/Kg	94

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

Quantitation Report (Not Reviewed)

ata File : E:\DATA\09162004\AG18139.D
cq On : 16 Sep 2004 6:55 pm
ample : 123627-01 ms voa908
isc : soil #5.444
S Integration Params: RTEINT.P
uant Time: Sep 17 08:47:11 2004

Vial: 23
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

uant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
itle : VOA by Method 5035/8260B:Direct Soil Purge
ast Update : Wed Sep 01 18:31:03 2004
esponse via : Initial Calibration
ataAcq Meth : 8260B

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42) Trichloroethene	7.66	130	107169	3.55 ug/Kg	94
43) n-Butyl alcohol	7.60	41	97142	417.33 ug/Kg	96
44) Methylcyclohexane	7.87	55	141907	3.57 ug/Kg#	78
45) 1,2-Dichloropropane	7.92	63	106266	4.10 ug/Kg	94
46) Dibromomethane	8.06	174	54028	4.26 ug/Kg	99
47) Bromodichloromethane	8.23	83	123580	4.05 ug/Kg	98
48) cis-1,3-Dichloropropene	8.73	75	127920	3.68 ug/Kg	99
49) 4-Methyl-2-pentanone	8.88	85	49315	20.41 ug/Kg#	71
51) Toluene	9.10	91	432936	3.80 ug/Kg	99
52) trans-1,3-Dichloropropene	9.35	75	95123	3.33 ug/Kg	96
53) 1,1,2-Trichloroethane	9.57	97	78948	4.04 ug/Kg	97
54) Tetrachloroethene	9.74	164	79969	3.43 ug/Kg	96
55) 1,3-Dichloropropane	9.76	76	124094	4.09 ug/Kg	94
56) 2-Hexanone	9.84	85	13434	12.38 ug/Kg#	64
57) Dibromochloromethane	10.04	129	73799	3.66 ug/Kg	97
58) 1,2-Dibromoethane	10.16	107	73307	4.14 ug/Kg	96
61) Chlorobenzene	10.73	112	265912	3.99 ug/Kg	92
62) 1,1,1,2-Tetrachloroethane	10.83	131	82900	4.06 ug/Kg	97
63) Ethylbenzene	10.84	91	451313	3.88 ug/Kg	99
64) m,p-Xylene	10.97	106	324875	7.46 ug/Kg	95
65) o-Xylene	11.46	91	324945	3.79 ug/Kg	97
66) Styrene	11.47	104	226850	3.53 ug/Kg	89
67) Bromoform	11.72	173	39260	3.79 ug/Kg	95
68) Isopropylbenzene	11.88	105	358959	3.37 ug/Kg	97
70) Bromobenzene	12.27	156	92077	3.60 ug/Kg	88
71) 1,1,2,2-Tetrachloroethane	12.27	83	154390+	5.02 ug/Kg	99
72) 1,2,3-Trichloropropane	12.32	110	26361	4.63 ug/Kg	94
73) n-Propylbenzene	12.38	91	508082	3.65 ug/Kg	95
74) 2-Chlorotoluene	12.50	126	93010	3.56 ug/Kg	91
75) 4-Chlorotoluene	12.63	126	89630	3.32 ug/Kg#	60
76) 1,3,5-Trimethylbenzene	12.58	105	317615	3.70 ug/Kg	96
77) t-Butylbenzene	12.98	119	277474	3.52 ug/Kg	94
78) 1,2,4-Trimethylbenzene	13.04	105	328764	3.77 ug/Kg	94
79) sec-Butylbenzene	13.25	105	427810	3.64 ug/Kg	97
80) 4-Isopropyltoluene	13.42	119	360537	3.87 ug/Kg	98
81) 1,3-Dichlorobenzene	13.40	146	178878	3.62 ug/Kg	95
83) 1,4-Dichlorobenzene	13.51	146	173625	3.36 ug/Kg	98
84) n-Butylbenzene	13.92	134	68662	2.81 ug/Kg#	79
85) 1,2-Dichlorobenzene	13.97	146	165739	3.52 ug/Kg	98
86) 1,2-Dibromo-3-chloropropan	14.93	75	12614	4.23 ug/Kg	85
87) 1,3,5-Trichlorobenzene	15.19	180	114555	3.01 ug/Kg	97
88) 1,2,4-Trichlorobenzene	15.95	180	91521	2.81 ug/Kg	97
89) Hexachlorobutadiene	16.15	225	65508	3.20 ug/Kg	97
90) Naphthalene	16.26	128	195448	3.19 ug/Kg	99
91) 1,2,3-Trichlorobenzene	16.56	180	92060	3.13 ug/Kg	98

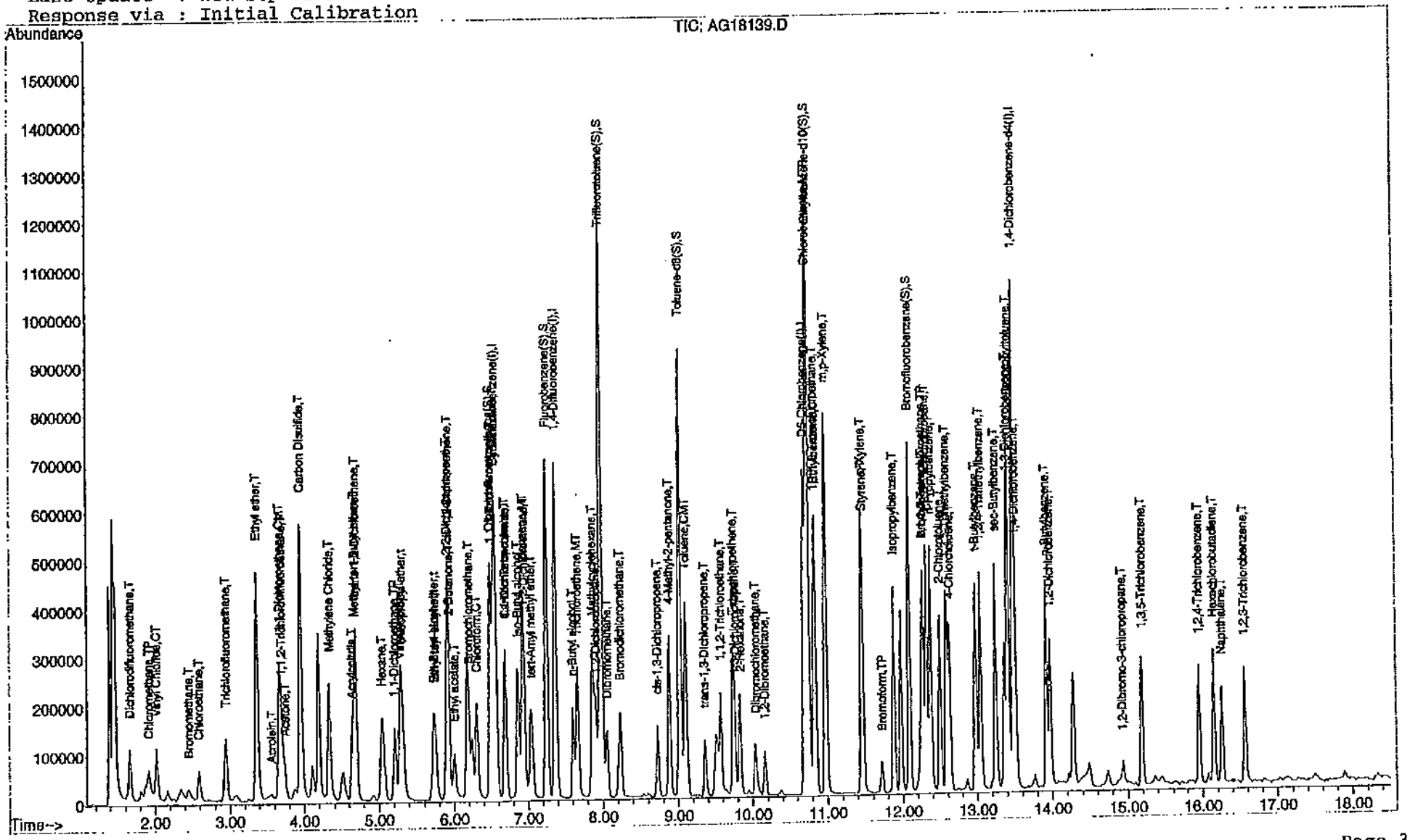
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18139.D
Acq On : 16 Sep 2004 6:55 pm
Sample : 123627-01 ms voa908
Misc : soil #5.444
MS Integration Params: RTEINT.P
Quant Time: Sep 17 8:47 2004

Vial: 23
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG18139.D 09012004_LOWSOIL_8260.M Fri Sep 17 09:09:38 2004

00164

DUPLICATE SAMPLE DATA PACKAGE

Quantitation Report (QT Reviewed)

Data File : E:\DATA\09162004\AG18138.D
Acq On : 16 Sep 2004 6:30 pm
Sample : 123627-01 dup voa908
Misc : soil #5.250
MS Integration Params: RTEINT.P
Quant Time: Sep 17 08:47:10 2004

Vial: 22
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

Quant Results File: 09012004_LOWSOIL_8260.RES

Quant Method : E:\METHODS\0...\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene(I)	6.55	168	432712	10.00 ug/Kg	0.00
40) 1,4-Difluorobenzene(I)	7.37	114	758977	10.00 ug/Kg	0.00
59) D5-Chlorobenzene(I)	10.70	119	142966	10.00 ug/Kg	0.00
82) 1,4-Dichlorobenzene-d4(I)	13.49	152	318770	10.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	6.49	111	219820	9.63 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 111		Recovery = 96.30%		
39) Fluorobenzene(S)	7.25	96	854947	8.73 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 87.30%#		
41) Trifluorotoluene(S)	7.98	146	796608	18.38 ug/Kg	0.00
Spiked Amount 20.000	Range 89 - 120		Recovery = 91.90%		
50) Toluene-d8(S)	9.03	98	798978	8.67 ug/Kg	0.00
Spiked Amount 10.000	Range 92 - 107		Recovery = 86.70%#		
60) Ethylbenzene-d10(S)	10.74	98	1053108	9.86 ug/Kg	0.00
Spiked Amount 10.000	Range 89 - 109		Recovery = 98.60%		
69) Bromofluorobenzene(S)	12.09	174	237111	9.65 ug/Kg	0.00
Spiked Amount 10.000	Range 88 - 110		Recovery = 96.50%		

Target Compounds					Qvalue
3) Chloromethane	1.92	50	12466	Below Cal	93
5) Bromomethane	2.45	94	1873	0.42 ug/Kg#	69
8) Acrolein	3.53	56	417	Below Cal #	11
15) Methylene Chloride	4.34	49	105064	2.59 ug/Kg	94
19) Hexane	5.05	56	11533	0.35 ug/Kg	98
51) Toluene	9.10	91	9918	0.09 ug/Kg	98
80) 4-Isopropyltoluene	13.42	119	28156	0.32 ug/Kg#	72
87) 1,3,5-Trichlorobenzene	15.19	180	759	Below Cal #	48
88) 1,2,4-Trichlorobenzene	15.95	180	338	Below Cal #	1
90) Naphthalene	16.24	128	5299	Below Cal #	89
91) 1,2,3-Trichlorobenzene	16.55	180	218	Below Cal #	41

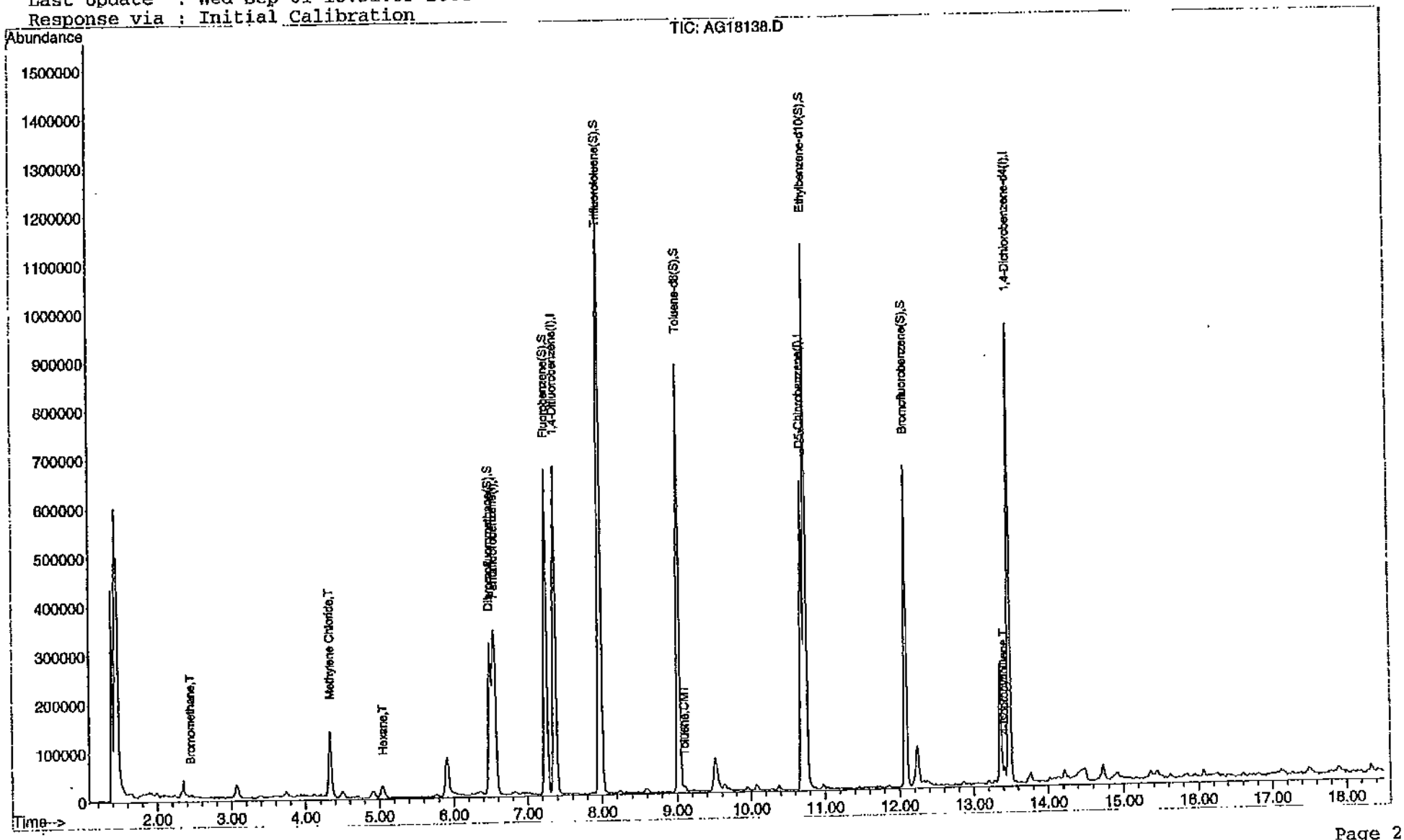
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : E:\DATA\09162004\AG18138.D
Acq On : 16 Sep 2004 6:30 pm
Sample : 123627-01 dup voa908
Misc : soil #5.250
MS Integration Params: RTEINT.P
Quant Time: Sep 17 9:08 2004

Vial: 22
Operator: frz
Inst : VOAInst#3
Multiplr: 1.00

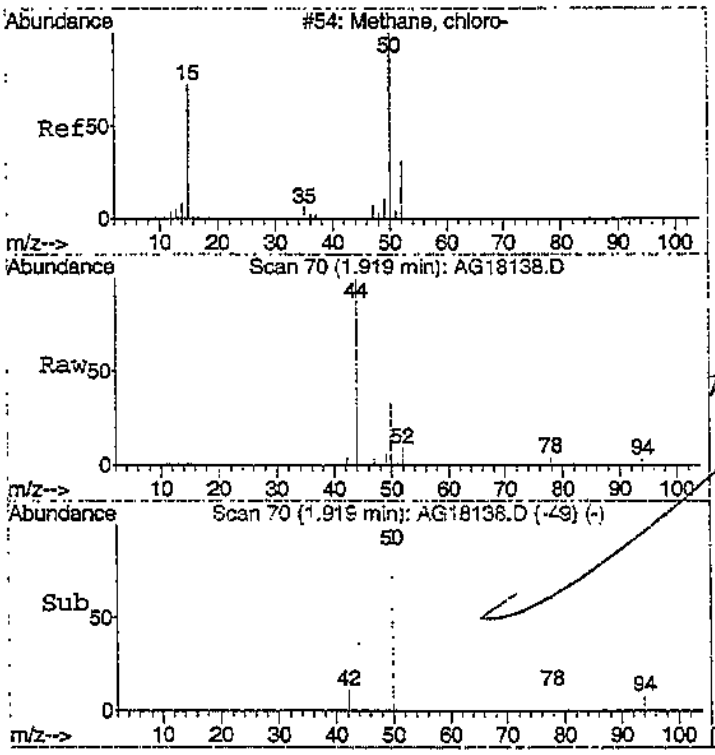
Quant Results File: 09012004_LOWSOIL_8260.RES

Method : E:\METHODS\09012004_LOWSOIL_8260.M (RTE Integrator)
Title : VOA by Method 5035/8260B:Direct Soil Purge
Last Update : Wed Sep 01 18:31:03 2004
Response via : Initial Calibration



AG18138.D 09012004_LOWSOIL_8260.M Fri Sep 17 09:09:17 2004

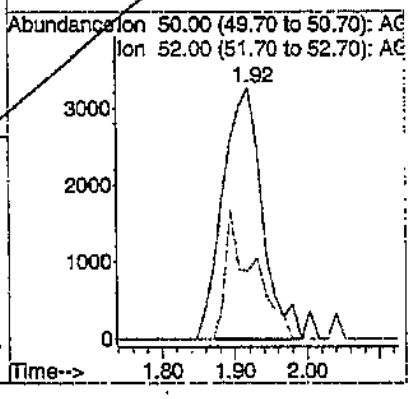
29100

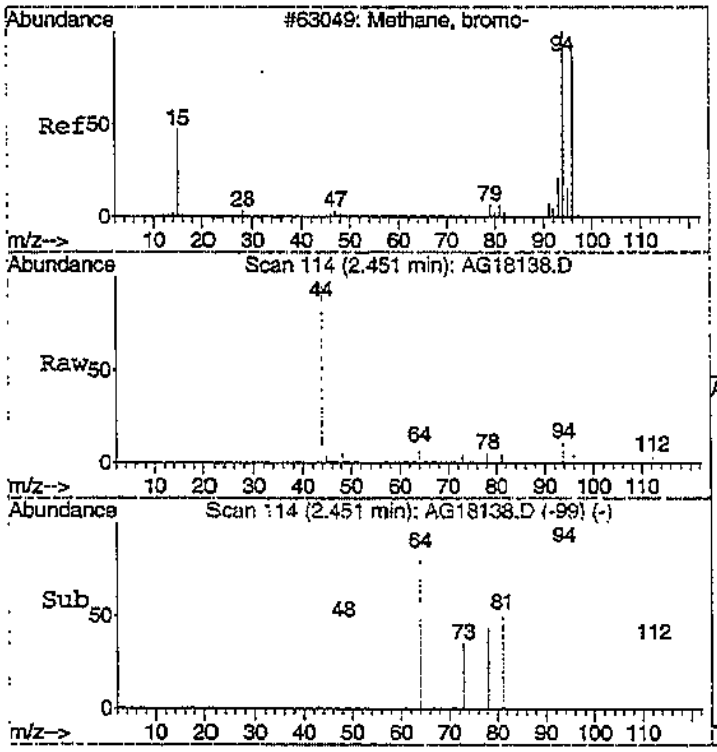


#3
Chloromethane
Concen: Below Cal
RT: 1.92 min Scan# 70
Delta R.T. 0.01 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion: 50 Resp: 12466

Ion	Ratio	Lower	Upper
50	100		
52	36.0	2.1	62.1

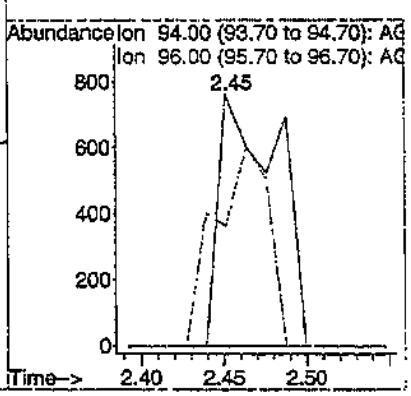




#5
Bromomethane
Concen: 0.42 ug/Kg
RT: 2.45 min Scan# 114
Delta R.T. 0.00 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion: 94 Resp: 1873

Ion	Ratio	Lower	Upper
94	100		
96	72.7	74.5	134.5#



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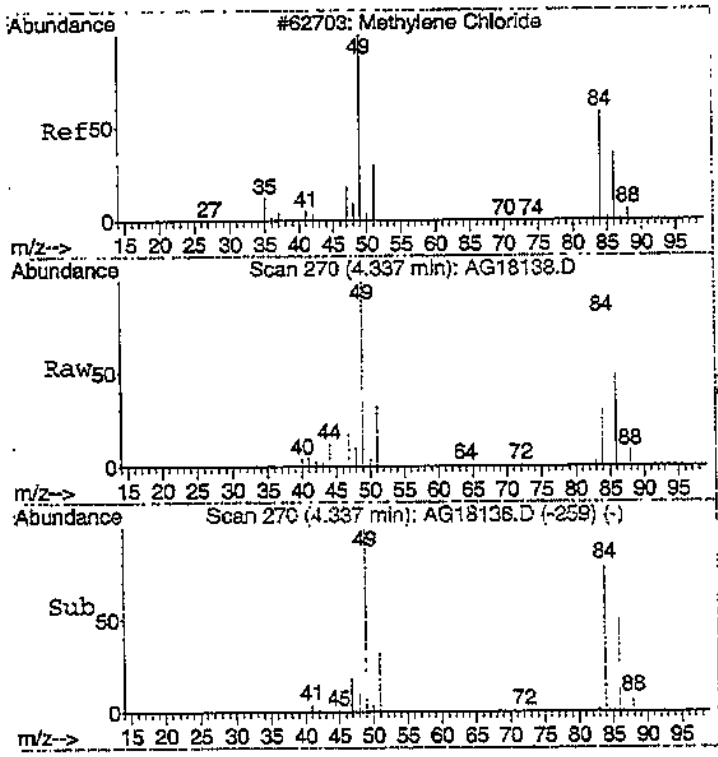
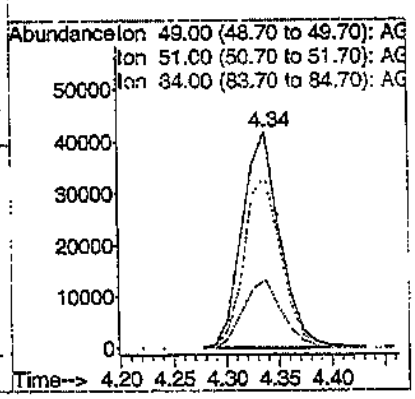
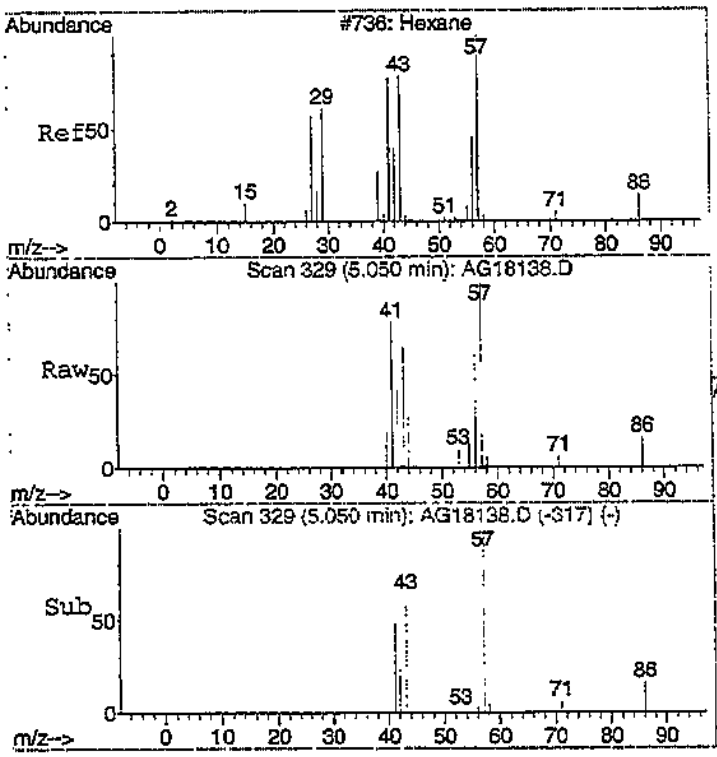


#15
Methylene Chloride
Concen: 2.59 ug/Kg
RT: 4.34 min Scan# 270
Delta R.T. 0.01 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion: 49 Resp: 105064

Ion	Ratio	Lower	Upper
49	100		
51	32.4	0.0	59.6
84	79.1	43.6	103.6

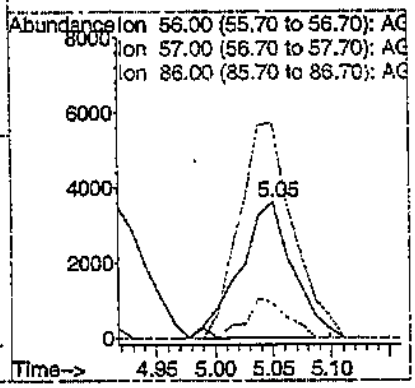




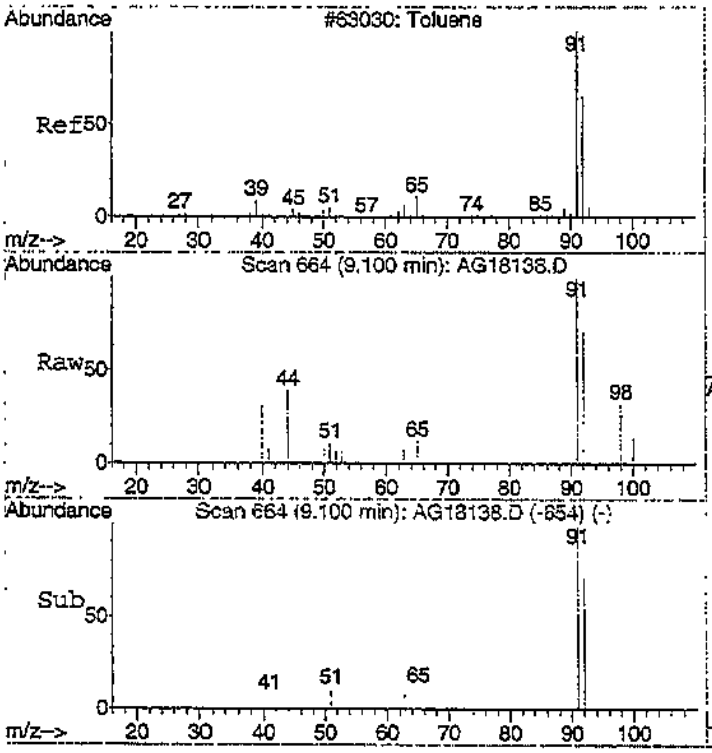
#19
Hexane
Concen: 0.35 ug/Kg
RT: 5.05 min Scan# 329
Delta R.T. 0.03 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion: 56 Resp: 11533

Ion	Ratio	Lower	Upper
56	100		
57	159.6	127.1	187.1
86	24.4	0.0	56.2



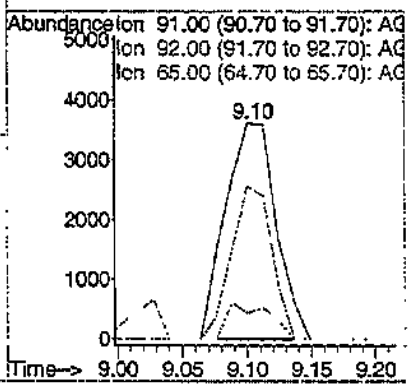
00169

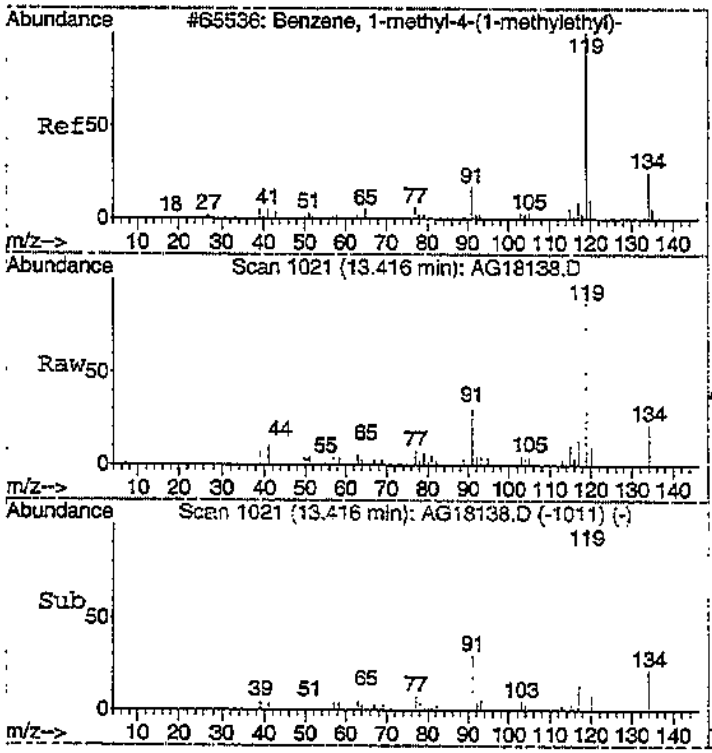


#51
Toluene
Concen: 0.09 ug/Kg
RT: 9.10 min Scan# 664
Delta R.T. 0.00 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion: 91 Resp: 9918

Ion	Ratio	Lower	Upper
91	100		
92	56.8	27.9	87.9
65	13.8	0.0	40.7

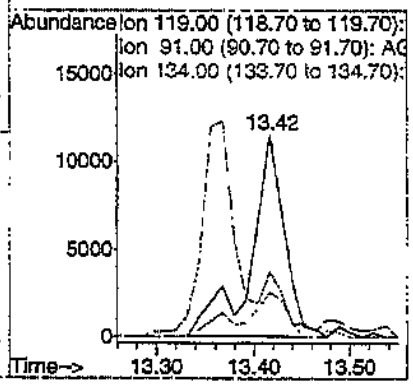


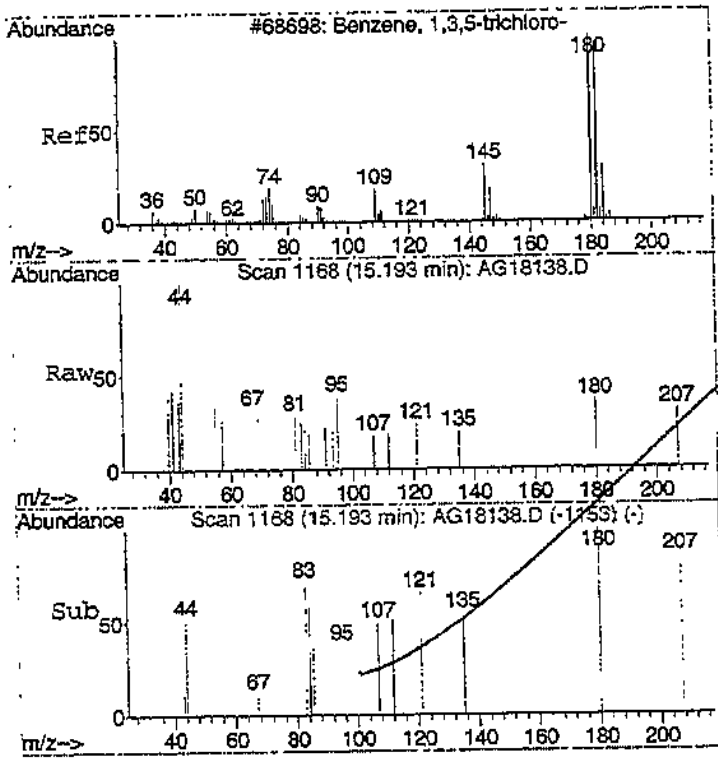


#80
4-Isopropyltoluene
Concen: 0.32 ug/Kg
RT: 13.42 min Scan# 1021
Delta R.T. 0.00 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion:119 Resp: 28156

Ion	Ratio	Lower	Upper
119	100		
91	0.0	0.0	52.0
134	20.5	0.0	57.0

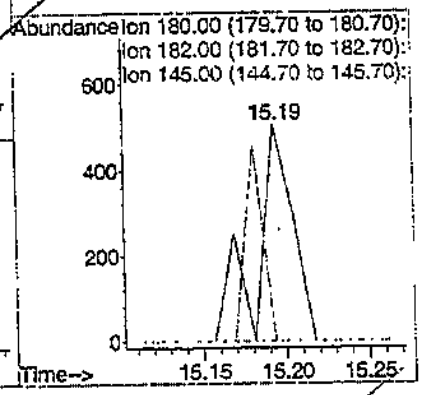


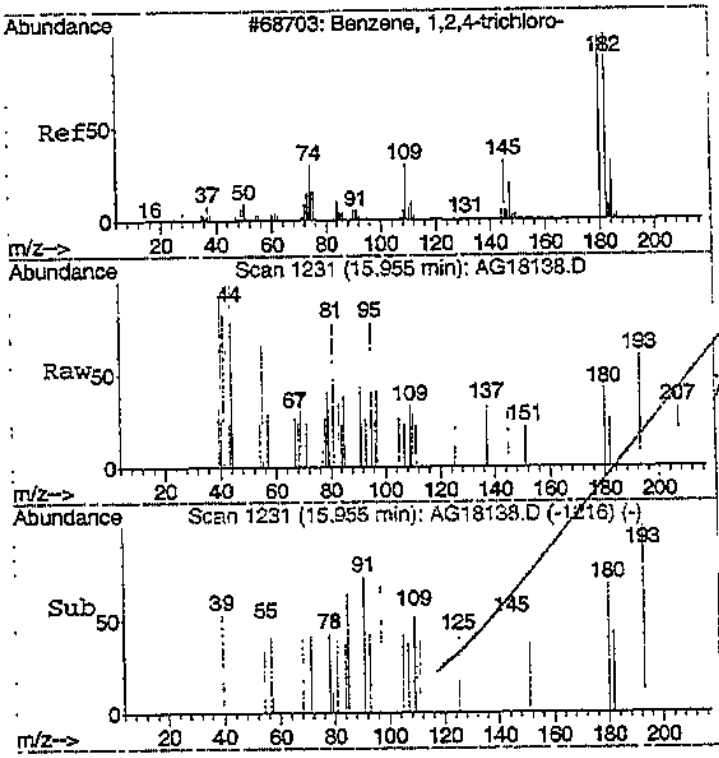


#87
1,3,5-Trichlorobenzene
Concen: Below Cal
RT: 15.19 min Scan# 1168
Delta R.T. 0.00 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion:180 Resp: 759

Ion	Ratio	Lower	Upper
180	100		
182	43.7	64.4	124.4#
145	0.0	0.0	56.8

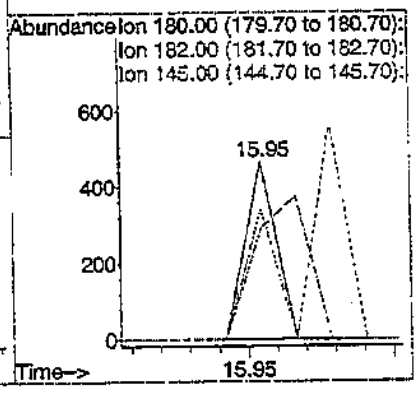




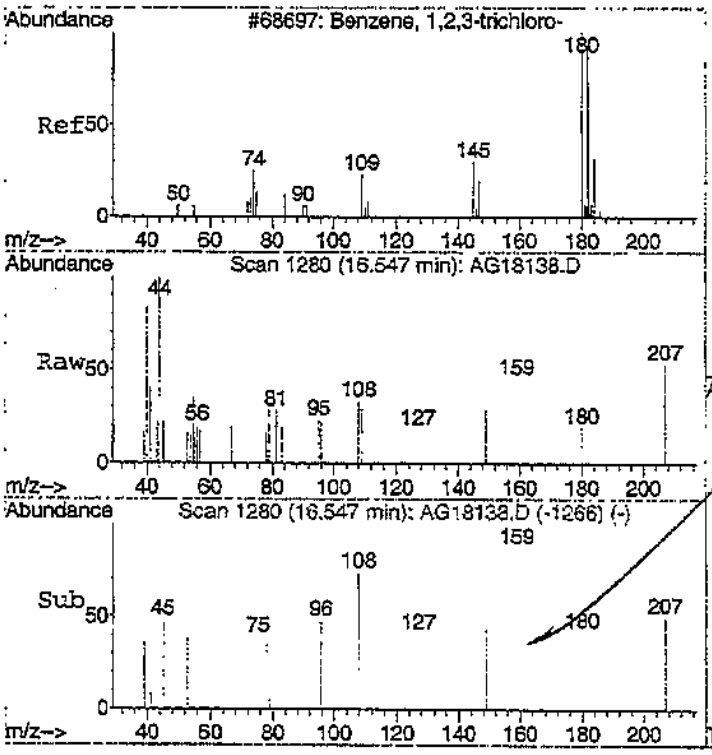
#88
1,2,4-Trichlorobenzene
Concen: Below Cal
RT: 15.95 min Scan# 1231
Delta R.T. 0.00 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion:180 Resp: 338

Ion	Ratio	Lower	Upper
180	100		
182	143.2	62.7	122.7#
145	195.3	0.0	58.7#



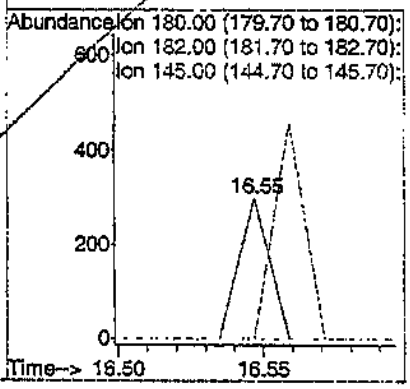
00171



#91
1,2,3-Trichlorobenzene
Concen: Below Cal
RT: 16.55 min Scan# 1280
Delta R.T. -0.01 min
Lab File: AG18138.D
Acq: 16 Sep 2004 6:30 pm

Tgt Ion:180 Resp: 218

Ion	Ratio	Lower	Upper
180	100		
182	152.8	64.6	124.6#
145	0.0	1.6	61.6#



00172

LABORATORY WORKSHEETS

Volatile GCMS Worksheet - total

QC Level:Tier IV	Due: 09/21/04
Matrix:solid	Work Order - 123627
Lloyd & Assoc. Inc.	Proj. Manager:Darla Powell

Special Instructions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

Sample Weight/Volume	5.250	dup	Client Sample ID	040916/GNW/MW
5249	5.4441	ms	Date Received	9/16/2004
			Date Sampled	**9/16/2004 11:20:00 AM**

VOCs - EPA 8260

See attached limits
DP
9-16

Samples are: Low Level ☒ Small Volume ☐ Normal ☐

Analyst _____ Date 9/21/2004

Reviewed by _____ Date 9/22/2004

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00174

VOLATILE EXTRACTION LOG

Date: 9/16/2004 (1)
Analyst:
Spike: STL VOA No.: 1249-35-10; 1249-35-11
Spike Amount (uL): 1.0 ea
LCS No.: 1749-4404
LCS Amount (ug/L): 4.0 ug/kg

QC Batch ID: VOA 908
Methanol Lot No.: -
VOA IS/SMC Std. No.: 1180-90-15
Instrument ID: SE A001
Surrogate No.: 1249-31-17
Surrogate Amount (uL): 2.5

MATRIX:
Aqueous: ____ Leachate: ____ G / BTEX: Soil ____ Water ____

Low Soil: ✓ Medium Soil: ____ 5035 preserved: ____ 5035 non-preserved: ✓ 5035 enhanced detection ____

Sample No.:	Sample Size (g/ml)	Extract Volume (ml)	Extract Used (ul)	Final Volume (ml)	Prep Dil	Inst.Dil	Instr. Loaded By	Comments
Method Blank	5.000						(1)	
Blank Spike	1							
Blank Spike Duplicate	1							
1 173574-01	0.569							
2 173576-01	2.533							
3 173577-01	0.503							
4 173578-01	0.621							
5 173539-01	2.579							
6 -07	2.432							
7 -07 dup	2.427							
8 -07 MS	2.487							
9 -03	2.778							
10 -04	2.284							
11 -05	2.240							
12 -06	2.250							
13 -07	2.305							
14 -08	2.461							
15 -09	2.059							
16 -10	2.722							
17 -11	2.103							
18 -12	2.049							
19 173627-01	5.249							
20 -01 dup	5.250							
21 -01 MS	5.444							
22								
23								

(1) 9/20/2004

SPIKE WITNESSING: (CHECK OFF, SIGN & DATE)

~~Method~~ Special Spiking Instructions

~~Matrix~~ Spike Soln. Amount Spiked

Signature: Julie

Date: 9/16/2004

101

00175

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Related Blank: noblank

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	**voa908**
Client Sample ID	
Date Received	
Date Prepared	**09-16-04**
Date Analyzed	**09-16-04**
Sample matrix type	**solid**
QC sample type	**blank**

Sample weight (g)	**5**	=	0.005 kg	Calc. Factor	1
Extract volume (ml)		=	10 ml	Dry Weight	5 g
Dilution Factor		=	1	Units	ug/kg
% Solids		=	1	Spike Factor	1
Medium Level	**low**	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	10.2664		103	**OK**		
x	Fluorobenzene	8.5031		85	**OK**		
x	Toluene-D8	8.5247		85.2	**OK**		
x	Ethylbenzene-d10	9.6496		96.5	**OK**		
x	Bromofluorobenzene	9.0773		90.8	**OK**		
x	Trifluorotoluene	18.1576		90.8	**OK**		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Bromomethane	1.1229	n		1.12	N	1
	Acrylonitrile	0.4953			0.495	J	5
x	Toluene	0.0457	n		0.0457	J N	1
x	o-Xylene	0.0301	n		0.0301	J N	1

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Related Blank: voa908

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	**voa908**
Client Sample ID	
Date Received	
Date Prepared	**09-16-04**
Date Analyzed	**09-16-04**
Sample matrix type	**solid**
QC sample type	**bs**

Sample weight (g)	5	=	0.005 kg	Calc. Factor	1
Extract volume (ml)		=	10 ml	Dry Weight	5 g
Dilution Factor		=	1	Units	ug/kg
% Solids		=	1	Spike Factor	1
Medium Level	low	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	9.5382		95.4	**OK**		
x	Fluorobenzene	8.3889		83.9	**OK**		
x	Toluene-D8	8.8887		88.9	**OK**		
x	Ethylbenzene-d10	10.024		100	**OK**		
x	Bromofluorobenzene	10.1351		101	**OK**		
x	Trifluorotoluene	19.1589		95.8	**OK**		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Dichlorodifluoromethane	4.6927			4.69		1
x	Chloromethane	4.1235			4.12		1
x	Vinyl chloride	3.8557			3.86		1
x	Bromomethane	2.8443		1.1229	2.84	B1	1
x	Chloroethane	2.8994			2.9		1
x	Trichlorofluoromethane	4.5441			4.54		1
x	1,1-Dichloroethene	4.6479			4.65		1
	1,1,2-Trichlorotrifluoroethane	4.2879			4.29		1
	Acrolein	22.5501			22.6		5
	Carbon disulfide	14.7555			14.8		1
	Acetone	9.1563			9.16		5
x	Methylene chloride	6.0447			6.04		1
	Methyl tert-butyl ether	4.0992			4.1		1
x	trans-1,2-Dichloroethene	4.4222			4.42		1
	Acrylonitrile	22.8038		0.4953	22.8	B2	5
	Hexane	4.2001			4.2		1
x	1,1-Dichloroethane	4.504			4.5		1
	Vinyl acetate	12.7954			12.8		5
x	2,2-Dichloropropane	3.9001			3.9		1
	2-Butanone	14.6463			14.6		5

STL Seattle

x	cis-1,2-Dichloroethene	4.3898		4.39		1
x	Bromochloromethane	4.7056		4.71		1
x	Chloroform	4.5177		4.52		1
x	1,1,1-Trichloroethane	4.251		4.25		1
x	Carbon Tetrachloride	4.1246		4.12		1
x	1,1-Dichloropropene	4.0183		4.02		1
x	Benzene	4.3762		4.38		1
x	1,2-Dichloroethane	4.5775		4.58		1
x	Trichloroethene	3.8461		3.85		1
x	1,2-Dichloropropane	4.4418		4.44		1
x	Dibromomethane	4.2625		4.26		1
x	Bromodichloromethane	4.2269		4.23		1
x	cis-1,3-Dichloropropene	3.8142		3.81		1
	4-Methyl-2-pentanone	17.8107		17.8		5
x	Toluene	4.1962	0.0457	4.2	B2	1
x	trans-1,3-Dichloropropene	3.3987		3.4		1
x	1,1,2-Trichloroethane	3.7577		3.76		1
x	Tetrachloroethene	4.0309		4.03		1
x	1,3-Dichloropropane	4.1057		4.11		1
	2-Hexanone	12.3424		12.3		5
x	Dibromochloromethane	3.4784		3.48		1
x	1,2-Dibromoethane	4.067		4.07		1
x	Chlorobenzene	4.6663		4.67		1
x	Ethylbenzene	4.5093		4.51		1
x	1,1,1,2-Tetrachloroethane	4.3156		4.32		1
x	m,p-Xylene	9.2113		9.21		2
x	o-Xylene	4.3959	0.0301	4.4	B2	1
x	Styrene	4.3211		4.32		1
x	Bromoform	4.0294		4.03		1
x	Isopropylbenzene	4.129		4.13		1
x	Bromobenzene	4.4811		4.48		1
x	n-Propylbenzene	4.6103		4.61		1
x	1,1,2,2-Tetrachloroethane	5.0215		5.02		1
x	1,2,3-Trichloropropane	4.2439		4.24		1
x	2-Chlorotoluene	4.4485		4.45		1
x	1,3,5-Trimethylbenzene	4.5582		4.56		1
x	4-Chlorotoluene	4.6382		4.64		1
x	t-Butylbenzene	4.2813		4.28		1
x	1,2,4-Trimethylbenzene	4.6544		4.65		1
x	sec-Butylbenzene	4.5385		4.54		1
x	1,3-Dichlorobenzene	4.7051		4.71		1
x	4-Isopropyltoluene	5.0077		5.01		1
x	1,4-Dichlorobenzene	4.1066		4.11		1
x	n-Butylbenzene	3.844		3.84		1
x	1,2-Dichlorobenzene	4.0624		4.06		1
x	1,2-Dibromo-3-chloropropane	4.0398		4.04		1
x	1,3,5-Trichlorobenzene	4.2482		4.25		1
x	1,2,4-Trichlorobenzene	4.0045		4		1
x	1,2,3-Trichlorobenzene	4.0479		4.05		1
x	Hexachlorobutadiene	4.1246		4.12		1
x	Naphthalene	4.1286		4.13		1

STL Seattle

Cyclohexane	4.1565	4.16	1
Ethyl Ether	23.2739	23.3	5
Ethyl Acetate	8.998	9	5
iso-Butyl Alcohol	396.7009	397	100
n-Butyl Alcohol	391.7315	392	100
Methylcyclohexane	4.0077	4.01	1
tert-Butyl alcohol	18.4058	18.4	5
Diisopropyl ether	4.02	4.02	1
Ethyl tert-Butyl ether	3.5911	3.59	1
tert-Amyl methyl ether	3.7986	3.8	1

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	voa908
Client Sample ID	
Date Received	
Date Prepared	09-16-04
Date Analyzed	09-16-04
Sample matrix type	solid
QC sample type	bsd

Related Blank: voa908

Sample weight (g)	5	=	0.005 kg	Calc. Factor	1
Extract volume (ml)		=	10 ml	Dry Weight	5 g
Dilution Factor		=	1	Units	ug/kg
% Solids		=	1	Spike Factor	1
Medium Level	low	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	9.4107		94.1	OK		
x	Fluorobenzene	8.3848		83.8	OK		
x	Toluene-D8	9.0292		90.3	OK		
x	Ethylbenzene-d10	9.6667		96.7	OK		
x	Bromofluorobenzene	9.526		95.3	OK		
x	Trifluorotoluene	19.5991		98	OK		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Dichlorodifluoromethane	4.8034			4.8		1
x	Chloromethane	3.9864			3.99		1
x	Vinyl chloride	3.8726			3.87		1
x	Bromomethane	2.8221		1.1229	2.82	B1	1
x	Chloroethane	4.2883			4.29		1
x	Trichlorofluoromethane	4.3176			4.32		1
x	1,1-Dichloroethene	4.4883			4.49		1
	1,1,2-Trichlorotrifluoroethane	4.3815			4.38		1
	Acrolein	21.2458			21.2		5
	Carbon disulfide	14.4938			14.5		1
	Acetone	10.0241			10		5
x	Methylene chloride	5.7642			5.76		1
	Methyl tert-butyl ether	4.1192			4.12		1
x	trans-1,2-Dichloroethene	4.319			4.32		1
	Acrylonitrile	21.2796		0.4953	21.3	B2	5
	Hexane	4.3824			4.38		1
x	1,1-Dichloroethane	4.4074			4.41		1
	Vinyl acetate	12.5549			12.6		5
x	2,2-Dichloropropane	4.0144			4.01		1
	2-Butanone	13.1439			13.1		5

STL Seattle

x	cis-1,2-Dichloroethene	4.248		4.25		1
x	Bromochloromethane	4.6174		4.62		1
x	Chloroform	4.4809		4.48		1
x	1,1,1-Trichloroethane	4.1055		4.11		1
x	Carbon Tetrachloride	4.0269		4.03		1
x	1,1-Dichloropropene	4.0606		4.06		1
x	Benzene	4.465		4.47		1
x	1,2-Dichloroethane	4.4325		4.43		1
x	Trichloroethene	3.9952		4		1
x	1,2-Dichloropropane	4.1488		4.15		1
x	Dibromomethane	4.103		4.1		1
x	Bromodichloromethane	4.3161		4.32		1
x	cis-1,3-Dichloropropene	3.8095		3.81		1
	4-Methyl-2-pentanone	18.0657		18.1		5
x	Toluene	4.046	0.0457	4.05	B2	1
x	trans-1,3-Dichloropropene	3.4008		3.4		1
x	1,1,2-Trichloroethane	3.8569		3.86		1
x	Tetrachloroethene	3.88		3.88		1
x	1,3-Dichloropropane	3.9979		4		1
	2-Hexanone	12.7532		12.8		5
x	Dibromochloromethane	3.6316		3.63		1
x	1,2-Dibromoethane	4.0101		4.01		1
x	Chlorobenzene	4.451		4.45		1
x	Ethylbenzene	4.4263		4.43		1
x	1,1,1,2-Tetrachloroethane	4.3196		4.32		1
x	m,p-Xylene	8.8684		8.87		2
x	o-Xylene	4.3522	0.0301	4.35	B2	1
x	Styrene	4.0717		4.07		1
x	Bromoform	3.5853		3.59		1
x	Isopropylbenzene	3.9923		3.99		1
x	Bromobenzene	4.1889		4.19		1
x	n-Propylbenzene	4.4059		4.41		1
x	1,1,2,2-Tetrachloroethane	4.4717		4.47		1
x	1,2,3-Trichloropropane	4.6149		4.61		1
x	2-Chlorotoluene	4.2892		4.29		1
x	1,3,5-Trimethylbenzene	4.3778		4.38		1
x	4-Chlorotoluene	4.2934		4.29		1
x	t-Butylbenzene	4.2899		4.29		1
x	1,2,4-Trimethylbenzene	4.571		4.57		1
x	sec-Butylbenzene	4.4453		4.45		1
x	1,3-Dichlorobenzene	4.4813		4.48		1
x	4-Isopropyltoluene	4.8762		4.88		1
x	1,4-Dichlorobenzene	4.0985		4.1		1
x	n-Butylbenzene	4.1168		4.12		1
x	1,2-Dichlorobenzene	4.0739		4.07		1
x	1,2-Dibromo-3-chloropropane	4.1692		4.17		1
x	1,3,5-Trichlorobenzene	4.3067		4.31		1
x	1,2,4-Trichlorobenzene	3.9211		3.92		1
x	1,2,3-Trichlorobenzene	3.9601		3.96		1
x	Hexachlorobutadiene	4.3853		4.39		1
x	Naphthalene	4.0319		4.03		1

STL Seattle

Cyclohexane	4.2287	4.23	1
Ethyl Ether	23.35	23.4	5
Ethyl Acetate	8.6412	8.64	5
iso-Butyl Alcohol	401.601	402	100
n-Butyl Alcohol	381.0702	381	100
Methylcyclohexane	4.2851	4.29	1
tert-Butyl alcohol	18.6919	18.7	5
Diisopropyl ether	4.0466	4.05	1
Ethyl tert-Butyl ether	3.7029	3.7	1
tert-Amyl methyl ether	3.9246	3.92	1

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Client Name	Lloyd & Assoc. Inc.
Work Order Number	123627
Sample Number	1
QC Batch Number	voa908
Client Sample ID	040916/GNW/MW
Date Received	09-16-04
Date Prepared	09-16-04
Date Analyzed	09-16-04
Sample matrix type	solid
QC sample type	sample

Related Blank: voa908

Sample weight (g)	5.249	=	0.00525 kg	Calc. Factor	1.108017207
Extract volume (ml)		=	10 ml	Dry Weight	4.5125653 g
Dilution Factor		=	1	Units	ug/kg
% Solids	85.97	=	0.8597	Spike Factor	1.108017207
Medium Level	low	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	9.4462		94.5	OK		
x	Fluorobenzene	8.3098		83.1	OK		
x	Toluene-D8	8.686		86.9	OK		
x	Ethylbenzene-d10	9.4664		94.7	OK		
x	Bromofluorobenzene	8.9324		89.3	OK		
x	Trifluorotoluene	18.2842		91.4	OK		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Bromomethane	0.6909		1.1229	0.766	J B1	1.11
x	Methylene chloride	3.2874			3.64		1.11
x	Toluene	0.0995		0.0457	0.11	J B1	1.11
x	4-Isopropyltoluene	0.1281			0.142	J	1.11

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Client Name	**Lloyd & Assoc. Inc.**
Work Order Number	**123627**
Sample Number	**1**
QC Batch Number	**voa908**
Client Sample ID	**040916/GNW/MW**
Date Received	**09-16-04**
Date Prepared	**09-16-04**
Date Analyzed	**09-16-04**
Sample matrix type	**solid**
QC sample type	**dup**

Related Blank: voa908

Sample weight (g)	**5.25**	=	0.00525 kg	Calc. Factor	1.107806156
Extract volume (ml)		=	10 ml	Dry Weight	4.513425 g
Dilution Factor		=	1	Units	ug/kg
% Solids	**85.97**	=	0.8597	Spike Factor	1.107806156
Medium Level	**low**	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	9.6255		96.3	**OK**		
x	Fluorobenzene	8.725		87.3	**OK**		
x	Toluene-D8	8.6746		86.7	**OK**		
x	Ethylbenzene-d10	9.8639		98.6	**OK**		
x	Bromofluorobenzene	9.6497		96.5	**OK**		
x	Trifluorotoluene	18.3762		91.9	**OK**		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Bromomethane	0.4161		1.1229	0.461	J B1	1.11
x	Methylene chloride	2.5879			2.87		1.11
	Hexane	0.3537			0.392	J	1.11
x	Toluene	0.09		0.0457	0.0997	J B1	1.11
x	4-Isopropyltoluene	0.3217			0.356	J	1.11

STL Seattle

6a **Sample Information** Analyst use only. Do not change! 8260

Client Name	**Lloyd & Assoc. Inc.**
Work Order Number	**123627**
Sample Number	**1**
QC Batch Number	**voa908**
Client Sample ID	**040916/GNW/MW**
Date Received	**09-16-04**
Date Prepared	**09-16-04**
Date Analyzed	**09-16-04**
Sample matrix type	**solid**
QC sample type	**ms**

Related Blank: voa908

Sample weight (g)	**5.444**	=	0.00544 kg	Calc. Factor	1.068328861
Extract volume (ml)		=	10 ml	Dry Weight	4.6802068 g
Dilution Factor		=	1	Units	ug/kg
% Solids	**85.97**	=	0.8597	Spike Factor	1.068328861
Medium Level	**low**	=	5	Rep. Dil. Fact.	1
Report in PPM		=	1	Surr. Factor	1
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	SMC / Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Dibromofluoromethane	9.34		93.4	**OK**		
x	Fluorobenzene	8.3904		83.9	**OK**		
x	Toluene-D8	9.0175		90.2	**OK**		
x	Ethylbenzene-d10	9.6136		96.1	**OK**		
x	Bromofluorobenzene	9.6875		96.9	**OK**		
x	Trifluorotoluene	18.0348		90.2	**OK**		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Dichlorodifluoromethane	4.1516			4.44		1.07
x	Chloromethane	3.3808			3.61		1.07
x	Vinyl chloride	4.5051			4.81		1.07
x	Bromomethane	2.6969		1.1229	2.88	B1	1.07
x	Chloroethane	4.0173			4.29		1.07
x	Trichlorofluoromethane	3.823			4.08		1.07
x	1,1-Dichloroethene	4.0233			4.3		1.07
	1,1,2-Trichlorotrifluoroethane	3.7394			3.99		1.07
	Acrolein	17.6667			18.9		5.34
	Carbon disulfide	12.7745			13.6		1.07
	Acetone	10.1045			10.8		5.34
x	Methylene chloride	5.3889			5.76		1.07
	Methyl tert-butyl ether	4.4799			4.79		1.07
x	trans-1,2-Dichloroethene	3.8739			4.14		1.07
	Acrylonitrile	24.4634		0.4953	26.1	B2	5.34
	Hexane	3.6525			3.9		1.07
x	1,1-Dichloroethane	4.1614			4.45		1.07
	Vinyl acetate	12.0071			12.8		5.34
x	2,2-Dichloropropane	3.9849			4.26		1.07
	2-Butanone	15.7304			16.8		5.34

STL Seattle

x	cis-1,2-Dichloroethene	3.9873		4.26		1.07
x	Bromochloromethane	4.4263		4.73		1.07
x	Chloroform	4.1953		4.48		1.07
x	1,1,1-Trichloroethane	4.0533		4.33		1.07
x	Carbon Tetrachloride	3.8599		4.12		1.07
x	1,1-Dichloropropene	3.7881		4.05		1.07
x	Benzene	4.2562		4.55		1.07
x	1,2-Dichloroethane	4.4795		4.79		1.07
x	Trichloroethene	3.547		3.79		1.07
x	1,2-Dichloropropane	4.0964		4.38		1.07
x	Dibromomethane	4.2578		4.55		1.07
x	Bromodichloromethane	4.0455		4.32		1.07
x	cis-1,3-Dichloropropene	3.6791		3.93		1.07
	4-Methyl-2-pentanone	20.4102		21.8		5.34
x	Toluene	3.7984	0.0457	4.06	B2	1.07
x	trans-1,3-Dichloropropene	3.3329		3.56		1.07
x	1,1,2-Trichloroethane	4.0367		4.31		1.07
x	Tetrachloroethene	3.4334		3.67		1.07
x	1,3-Dichloropropane	4.0932		4.37		1.07
	2-Hexanone	12.3766		13.2		5.34
x	Dibromochloromethane	3.6551		3.9		1.07
x	1,2-Dibromoethane	4.1364		4.42		1.07
x	Chlorobenzene	3.9901		4.26		1.07
x	Ethylbenzene	3.8766		4.14		1.07
x	1,1,1,2-Tetrachloroethane	4.0582		4.34		1.07
x	m,p-Xylene	7.4572		7.97		2.14
x	o-Xylene	3.7911	0.0301	4.05	B2	1.07
x	Styrene	3.5299		3.77		1.07
x	Bromoform	3.7879		4.05		1.07
x	Isopropylbenzene	3.3699		3.6		1.07
x	Bromobenzene	3.6014		3.85		1.07
x	n-Propylbenzene	3.6493		3.9		1.07
x	1,1,2,2-Tetrachloroethane	5.0155		5.36		1.07
x	1,2,3-Trichloropropane	4.6334		4.95		1.07
x	2-Chlorotoluene	3.5569		3.8		1.07
x	1,3,5-Trimethylbenzene	3.6969		3.95		1.07
x	4-Chlorotoluene	3.3225		3.55		1.07
x	t-Butylbenzene	3.5246		3.77		1.07
x	1,2,4-Trimethylbenzene	3.7713		4.03		1.07
x	sec-Butylbenzene	3.6413		3.89		1.07
x	1,3-Dichlorobenzene	3.6157		3.86		1.07
x	4-Isopropyltoluene	3.8733		4.14		1.07
x	1,4-Dichlorobenzene	3.3641		3.59		1.07
x	n-Butylbenzene	2.809		3		1.07
x	1,2-Dichlorobenzene	3.5244		3.77		1.07
x	1,2-Dibromo-3-chloropropane	4.2251		4.51		1.07
x	1,3,5-Trichlorobenzene	3.0107		3.22		1.07
x	1,2,4-Trichlorobenzene	2.8124		3		1.07
x	1,2,3-Trichlorobenzene	3.1256		3.34		1.07
x	Hexachlorobutadiene	3.2039		3.42		1.07
x	Naphthalene	3.1901		3.41		1.07

STL Seattle

Cyclohexane	3.7998	4.06	1.07
Ethyl Ether	23.0394	24.6	5.34
Ethyl Acetate	8.2094	8.77	5.34
iso-Butyl Alcohol	474.8161	507	107
n-Butyl Alcohol	417.3281	446	107
Methylcyclohexane	3.5743	3.82	1.07
tert-Butyl alcohol	20.058	21.4	5.34
Diisopropyl ether	4.0785	4.36	1.07
Ethyl tert-Butyl ether	4.0407	4.32	1.07
tert-Amyl methyl ether	4.0867	4.37	1.07

SEMIVOLATILE DATA PACKAGE

SAMPLE DATA

68100

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07571.D
Acq On : 21 Sep 2004 11:23
Sample : 123627-1 SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:32:24 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.78	152	125596	1000.00 ug/L	0.02
22) Naphthalene - d8 (I)	7.29	136	347113	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.25	162	204503	1000.00 ug/L	0.00
62) Phenanthrene - d10 (I)	10.84	188	433687	1000.00 ug/L	0.02
79) Chrysene - d12 (I)	13.79	240	486169	1000.00 ul/l	0.01
85) Perylene - d12 (I)	16.27	264	480459	1000.00 ug/L	0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.17	112	81695	432.96 ug/L	0.00
7) Phenol - d5 (S)	5.40	99	91942	481.24 ug/L	0.00
23) Nitrobenzene - d5 (S)	6.48	82	66927	422.43 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.52	172	164726	527.22 ug/L	0.04
65) 2,4,6 - Tribromophenol (S)	10.11	330	67725	446.74 ug/L	0.02
78) p - Terphenyl - d14 (S)	12.54	244	248942	475.44 ug/L	0.03
Target Compounds					Qvalue
58) Diethylphthalate	9.75	149	6496	17.46 ug/L	97
74) Di-n-butylphthalate	11.48	149	94123	125.01 ug/L	94
80) Butylbenzylphthalate	13.09	149	26176	62.76 ug/L	68
84) bis(2-Ethylhexyl)phthalate	13.81	149	116409	188.79 ug/L	91

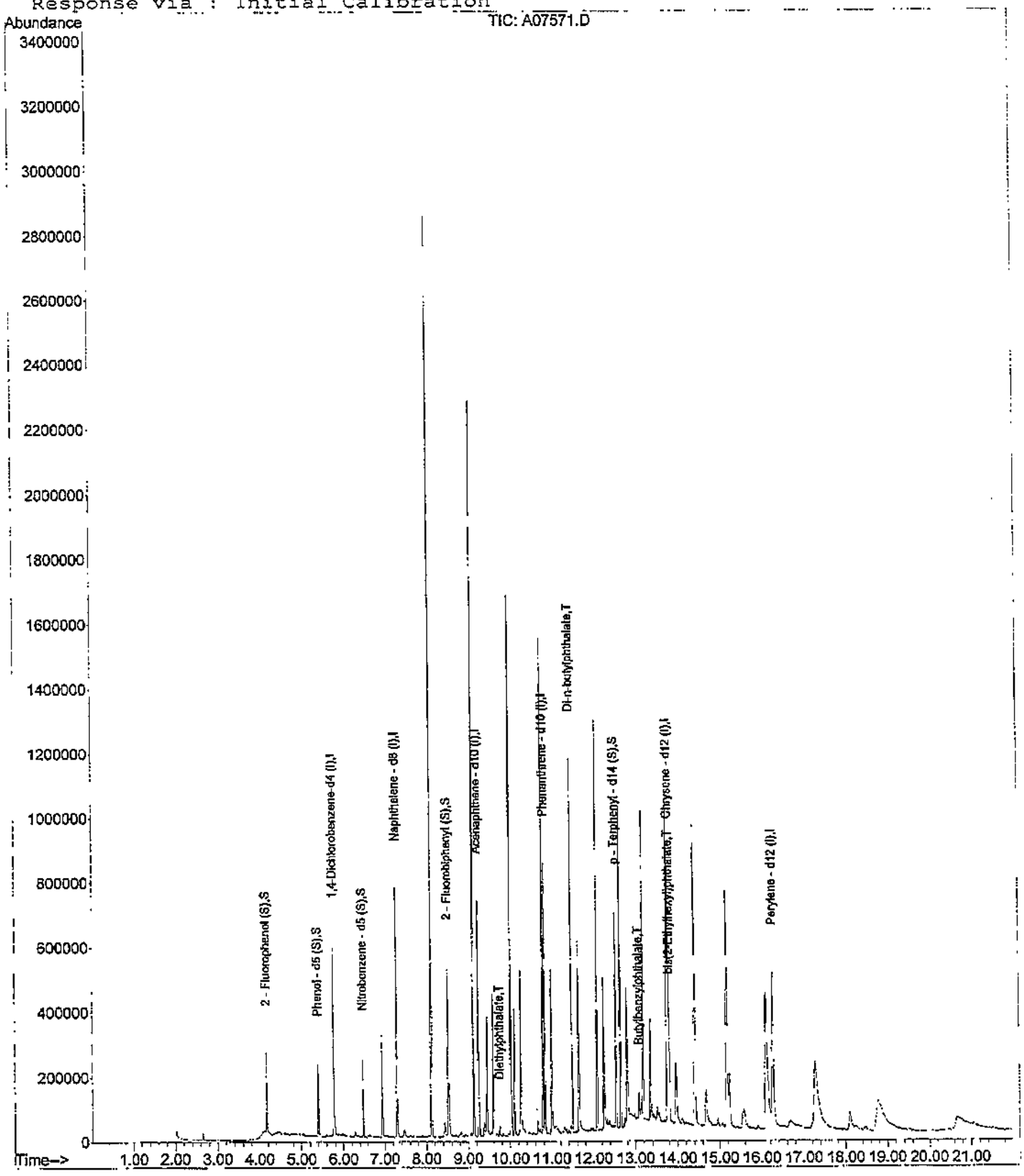
(#) = qualifier out of range (m) = manual integration (+) = signals summed

00190

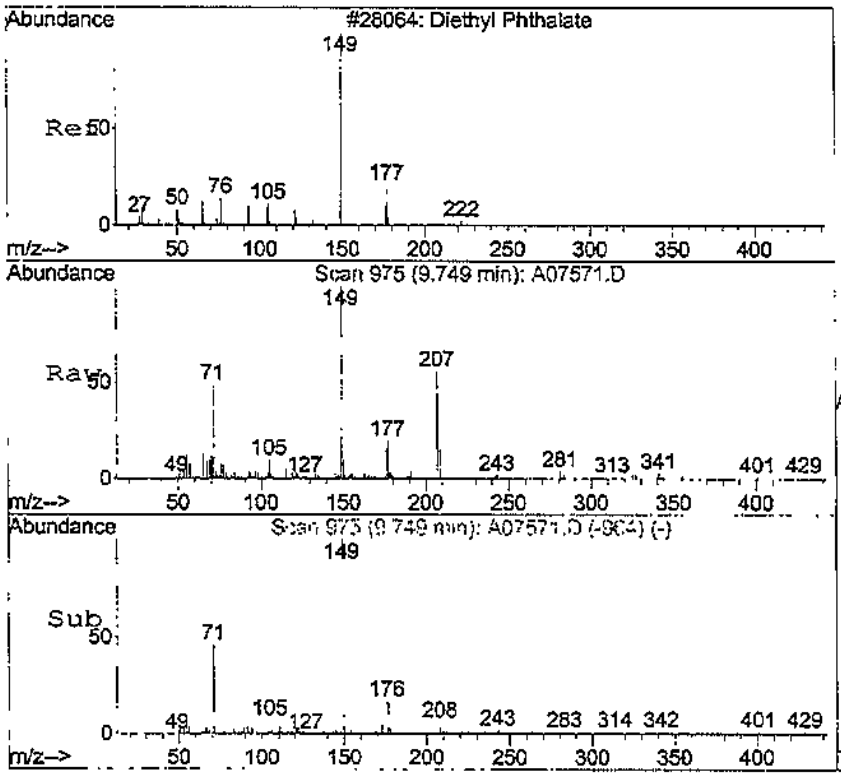
Data File : W:\092104\A07571.D
Acq On : 21 Sep 2004 11:23
Sample : 123627-1 SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:33 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RE

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration



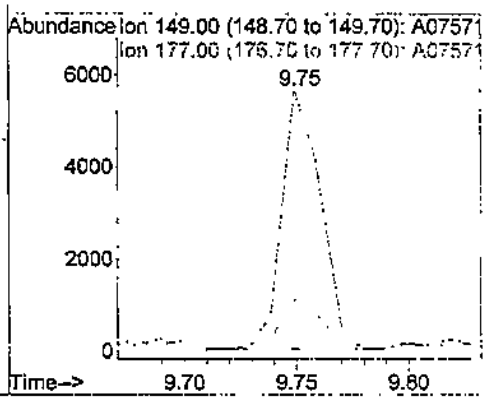
00191

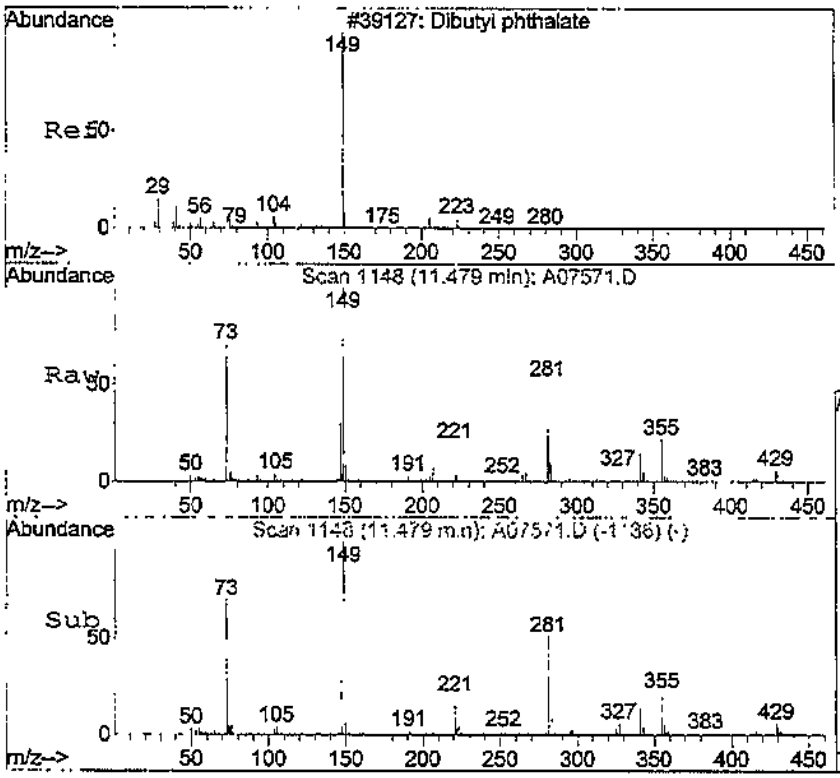


#58
Diethylphthalate
Concen: 17.46 ug/L
RT: 9.75 min Scan# 975
Delta R.T. 0.01 min
Lab File: A07571.D
Acq: 21 Sep 2004 11:23

Tgt Ion:149 Resp: 6496

Ion	Ratio	Lower	Upper
149	100		
177	20.0	0.0	61.2

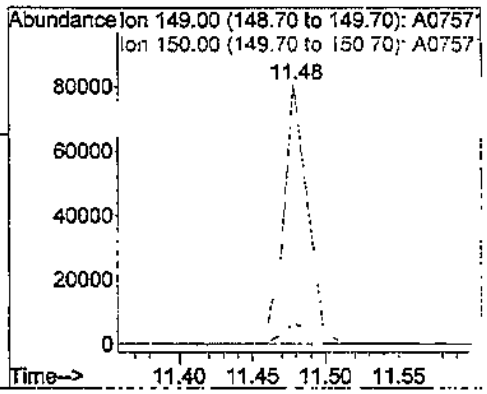




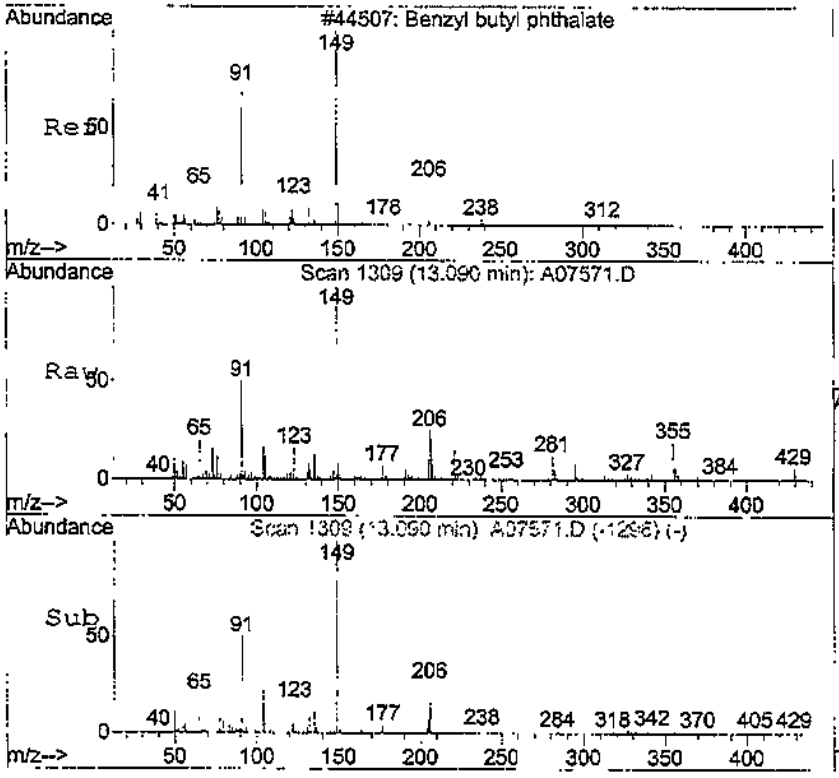
#74
Di-n-butylphthalate
Concen: 125.01 ug/L
RT: 11.48 min Scan# 1148
Delta R.T. 0.01 min
Lab File: A07571.D
Acq: 21 Sep 2004 11:23

Tgt Ion:149 Resp: 94123

Ion	Ratio	Lower	Upper
149	100		
150	9.9	0.0	47.9



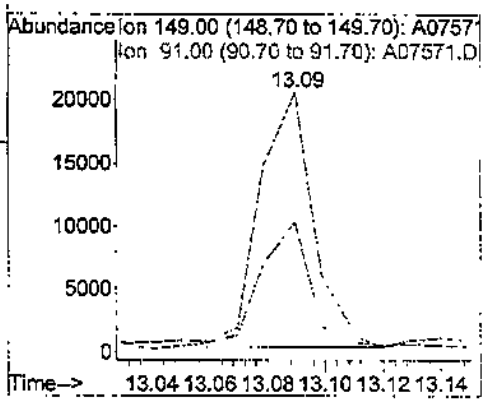
00192

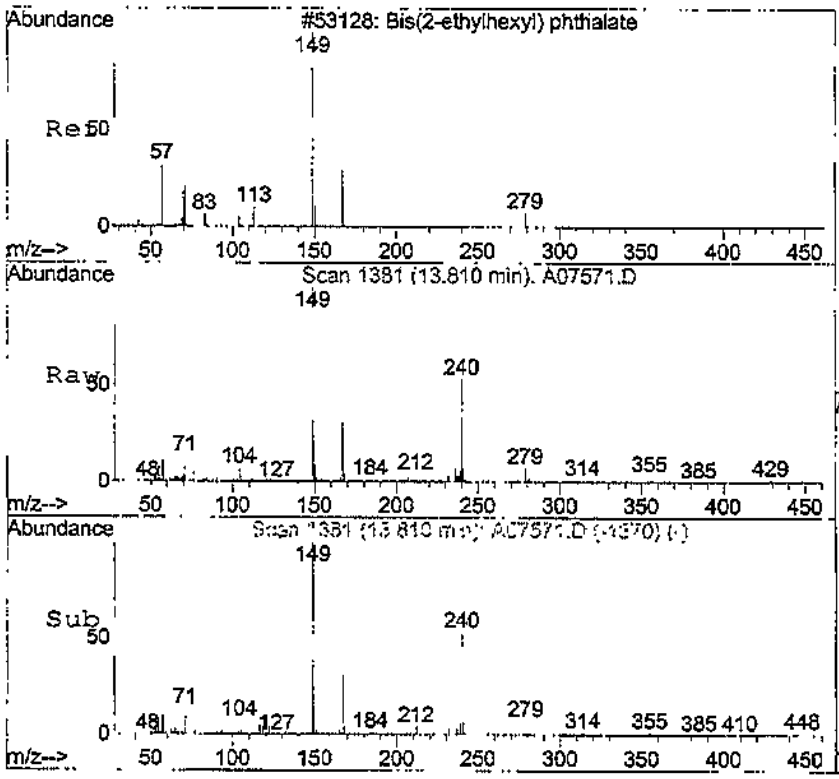


#80
Butylbenzylphthalate
Concen: 62.76 ug/L
RT: 13.09 min Scan# 1309
Delta R.T. 0.03 min
Lab File: A07571.D
Acq: 21 Sep 2004 11:23

Tgt Ion:149 Resp: 26176

Ion	Ratio	Lower	Upper
149	100		
91	45.2	32.2	112.2

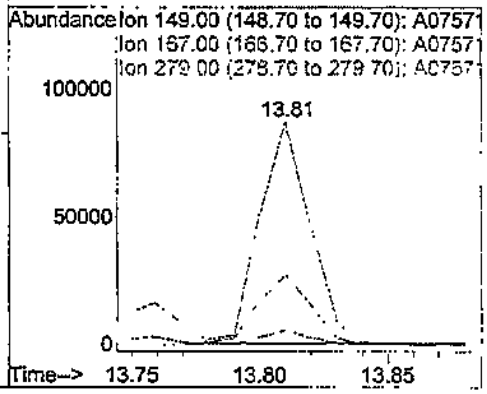




#84
bis(2-Ethylhexyl)phthalate
Concen: 188.79 ug/L
RT: 13.81 min Scan# 1381
Delta R.T. 0.01 min
Lab File: A07571.D
Acq: 21 Sep 2004 11:23

Tgt Ion:149 Resp: 116409

Ion	Ratio	Lower	Upper
149	100		
167	34.2	0.0	68.8
279	6.3	0.0	46.8



00193

Data File : W:\092104\A07572.D
Acq On : 21 Sep 2004 11:49
Sample : 123627-1 MS SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:34:25 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

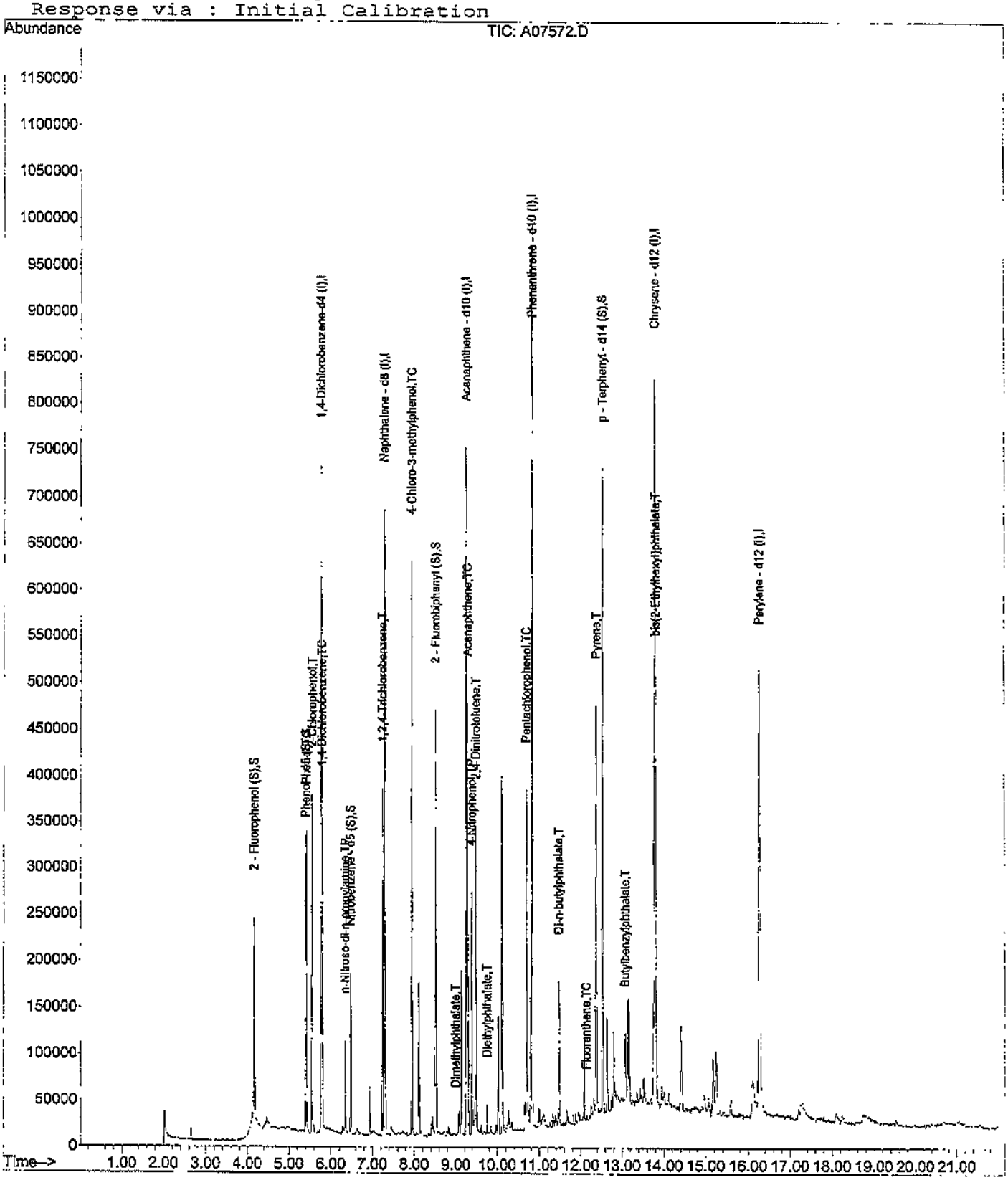
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.78	152	132978	1000.00 ug/L	0.02
22) Naphthalene - d8 (I)	7.29	136	396962	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.26	162	235139	1000.00 ug/L	0.02
62) Phenanthrene - d10 (I)	10.84	188	430108	1000.00 ug/L	0.02
79) Chrysene - d12 (I)	13.79	240	476799	1000.00 ul/l	0.01
85) Perylene - d12 (I)	16.27	264	499066	1000.00 ug/L	0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.17	112	71200	356.39 ug/L	0.00
7) Phenol - d5 (S)	5.41	99	86400	427.13 ug/L	0.02
23) Nitrobenzene - d5 (S)	6.48	82	54858	302.77 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.52	172	138746	386.21 ug/L	0.04
65) 2,4,6 - Tribromophenol (S)	10.11	330	76300	507.49 ug/L	0.02
78) p - Terphenyl - d14 (S)	12.54	244	256228	493.42 ug/L	0.03
Target Compounds					Qvalue
8) Phenol	5.42	94	114506	657.43 ug/L	95
10) 2-Chlorophenol	5.56	128	134417	780.66 ug/L	66
13) 1,4-Dichlorobenzene	5.80	146	90502	408.24 ug/L	92
19) n-Nitroso-di-n-propylamine	6.35	70	42770	480.96 ug/L	98
31) 1,2,4-Trichlorobenzene	7.25	180	75943	471.24 ug/L	80
35) 4-Chloro-3-methylphenol	7.95	107	146680	763.07 ug/L	85
47) Dimethylphthalate	9.00	163	1094	2.07 ug/L	98
51) Acenaphthene	9.29	153	145207	572.71 ug/L	100
53) 4-Nitrophenol	9.39	109	75130	1181.66 ug/L	89
55) 2,4-Dinitrotoluene	9.49	165	87207	448.27 ug/L	70
58) Diethylphthalate	9.76	149	5264	12.31 ug/L	75
69) Pentachlorophenol	10.70	266	62575	582.79 ug/L	81
74) Di-n-butylphthalate	11.49	149	98244	131.57 ug/L	99
75) Fluoranthene	12.15	202	2335	5.51 ug/L	99
76) Pyrene	12.39	202	230723	582.46 ug/L	91
80) Butylbenzylphthalate	13.09	149	22970	56.15 ug/L	83
84) bis(2-Ethylhexyl)phthalate	13.81	149	129898	214.81 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : W:\092104\A07572.D
Acq On : 21 Sep 2004 11:49
Sample : 123627-1 MS SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:34 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RES

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration



00195

INITIAL CALIBRATION

Response Factor Report

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:13:21 2004
Response via : Initial Calibration

Calibration Files
50 =B02808.D 100 =B02809.D 200 =B02810.D
500 =B02811.D 20 =B02807.D 1000 =B02812.D

		Compound	50	100	200	500	20	1000	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------	----------	----------	ISTD	----------	----------		
2)	T	N-Nitrosodimeth		0.372	0.533	0.556		0.502	0.493#	17.30
3)	T	Pyridine		1.390	1.896	1.559		2.005	1.497#	23.52
4)	S	2 - Fluoropheno		1.467	1.754	1.934		1.374	1.592#	12.79
5)	T	Aniline		1.017	1.581	1.457		1.417	1.303#	18.25
6)	S	Phenol - d5 (S)		1.571	2.222	2.077		1.571	1.884#	13.50
7)	TC	Phenol		1.529	1.862	1.538		1.909	1.608#	13.15
8)	T	bis(2-Chloroeth		1.511	1.739	1.448		1.626	1.468#	11.71
9)	T	2-Chlorophenol		1.509	1.515	1.415		1.537	1.402#	8.78
10)	T	Decane		0.738	0.893	0.833		0.912	0.816#	9.57
11)	T	1,3-Dichloroben		1.281	1.566	1.345		1.389	1.331#	9.32
12)	TC	1,4-Dichloroben		1.419	1.613	1.470		1.409	1.396#	9.76
13)	T	Benzyl alcohol		1.505	1.710	1.580		1.729	1.558#	7.99
14)	T	1,2-Dichloroben		1.209	1.509	1.268		1.292	1.218#	13.08
15)	T	2-Methylphenol		0.957	0.950	0.975		1.057	0.955#	7.34
16)	T	bis(2-chloroiso		1.592	1.597	1.531		1.465	1.417#	11.81
17)	T	3-&4-Methylphen		1.025	1.175	1.036		1.048	1.034#	8.19
18)	TP	n-Nitroso-di-n-		0.947	0.997	0.848		0.930	0.869	13.05
19)	T	Hexachloroethan		0.674	0.866	0.638		0.696	0.644#	18.70
20)	I	Naphthalene - d8 (I)	----------	----------	----------	ISTD	----------	----------		
21)	S	Nitrobenzene -		0.521	0.441	0.560	0.645	0.319	0.466#	22.20
22)	T	Nitrobenzene		0.434	0.361	0.382		0.289	0.343#	15.10
23)	T	Isophorone		0.636	0.493	0.614		0.451	0.551#	11.99
24)	TC	2-Nitrophenol		0.116	0.155	0.204		0.146	0.162#	16.69
25)	T	2,4-Dimethylphe		0.344	0.302	0.322		0.334	0.323#	5.90
26)	T	bis(2-Chloroeth		0.144	0.217	0.212		0.162	0.199#	16.93
27)	T	Benzoic Acid		0.132	0.131	0.211		0.186	0.192#	23.51
28)	TC	2,4-Dichlorophe		0.313	0.275	0.296		0.261	0.303#	11.38
29)	T	1,2,4-Trichloro		0.307	0.317	0.311		0.256	0.281#	10.30
30)	T	Naphthalene	1.019	0.978	0.964	1.128		0.856	0.975#	7.93
31)	T	4-Chloroaniline		0.247	0.266	0.349		0.306	0.308#	12.27
32)	TC	Hexachlorobutad		0.232	0.174	0.217		0.165	0.184#	15.98
33)	TC	4-Chloro-3-meth		0.562	0.576	0.747		0.535	0.595#	12.54
34)	T	2-Methylnaphtha		0.523	0.499	0.558	0.568	0.473	0.514#	8.90
35)	T	1-Methylnaphtha		0.518	0.457	0.526	0.608	0.415	0.496#	11.64
36)	I	Acenaphthene - d10 (I	----------	----------	----------	ISTD	----------	----------		
37)	TP	Hexachlorocyclo		0.591	0.673	0.567		0.560	0.578	8.73
38)	T	2,3-Dichloroani		0.564	0.580	0.668		0.738	0.712#	16.43
39)	TC	2,4,6-Trichloro		0.331	0.284	0.294		0.263	0.259#	19.04
40)	T	2,4,5-Trichloro		0.421	0.341	0.326		0.380	0.374#	9.22
41)	S	2 - Fluorobiphe		1.276	1.193	1.511	1.503	1.058	1.301#	11.75
42)	T	2-Chloronaphtha		1.020	0.885	0.895	0.889	0.774	0.846#	10.94
43)	T	Biphenyl		1.323	1.282	1.221		1.239	1.311#	6.32
44)	T	2-Nitroaniline		0.294	0.276	0.309		0.342	0.319#	12.35
45)	T	Dimethylphthala		1.294	1.243	1.223		1.555	1.335#	8.38
46)	T	Acenaphthylene		1.525	1.590	1.545	2.039	1.491	1.568#	13.04
47)	T	2,6-Dinitrotolu		0.202	0.249	0.241		0.215	0.203#	18.04
48)	T	3-Nitroaniline		0.294	0.276	0.309		0.342	0.319#	12.35
49)	TC	Acenaphthene		1.043	1.019	0.926		0.962	0.949#	6.40
50)	TP	2,4-Dinitrophen		0.224	0.252	0.249		0.274	0.247	6.39
51)	TP	4-Nitrophenol		0.176	0.219	0.175		0.141	0.140	37.91
52)	T	Dibenzofuran		1.321	1.349	1.066		1.125	1.165#	10.15
53)	T	2,4-Dinitrotolu		0.304	0.303	0.322		0.357	0.324#	6.87

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:13:21 2004
Response via : Initial Calibration

Calibration Files
50 =B02808.D 100 =B02809.D 200 =B02810.D
500 =B02811.D 20 =B02807.D 1000 =B02812.D

		Compound	50	100	200	500	20	1000	Avg	%RSD
54)	T	2,3,4,6-Tetrach		0.287	0.342	0.321		0.326	0.313#	6.66
55)	T	2,3,5,6-Tetrach		0.345	0.366	0.398		0.376	0.362#	6.54
56)	T	Diethylphthalat		1.251	1.272	1.124		1.064	1.038#	18.24
57)	T	Fluorene		0.993	1.027	1.010	1.172	1.147	1.141#	12.03
58)	T	4-Chlorophenylp		0.742	0.720	0.650		0.656	0.655#	8.61
59)	T	4-Nitroaniline		0.294	0.276	0.309		0.342	0.319#	12.35
60)	I	Phenanthrene - d10 (I	----------	----------	----------	ISTD	----------	----------	----------	
61)	T	4,6-Dinitro-2-m		0.185	0.172	0.185		0.188	0.193#	8.54
62)	T	n-Nitrosodiphen		0.473	0.494	0.538		0.514	0.529#	7.23
63)	S	2,4,6 - Tribrom		0.275	0.267	0.336		0.232	0.281#	12.71
64)	T	1,2-Diphenylhyd		0.189	0.195	0.194		0.194	0.207#	9.31
65)	T	4-Bromophenylph		0.362	0.429	0.367		0.358	0.376#	8.72
66)	T	Hexachlorobenze		0.318	0.306	0.291		0.231	0.279#	12.00
67)	TC	Pentachlorophen		0.178	0.196	0.188		0.193	0.194#	5.53
68)	T	Phenanthrene		0.881	1.041	0.853	1.026	0.876	0.915#	8.25
69)	T	Anthracene		0.837	0.957	0.816	0.926	0.853	0.913#	7.39
70)	T	Octadecane		0.401	0.434	0.385		0.404	0.390#	7.31
71)	T	Carbazole		0.877	0.856	0.880		0.863	0.892#	5.22
72)	T	Di-n-butylphtha		1.509	1.292	1.171		1.097	1.147#	17.39
73)	TC	Fluoranthene		1.179	1.296	1.154	1.289	1.131	1.180#	6.47
74)	T	Pyrene		1.157	1.388	1.133	1.149	1.034	1.135#	9.81
75)	T	Benzidine		0.435	0.515	0.552		0.624	0.591#	17.15
76)	S	p - Terphenyl -		1.447	1.485	1.466	1.313	0.984	1.358#	11.98
77)	I	Chrysene - d12 (I)	----------	----------	----------	ISTD	----------	----------	----------	
78)	T	Butylbenzylphth		0.499	0.523	0.403		0.405	0.415#	16.83
79)	T	Benzo(a)anthrac		0.829	0.824	0.790	0.731	0.839	0.793#	5.55
80)	T	3,3'-Dichlorobe		0.269	0.283	0.314		0.349	0.325#	11.43
81)	T	Chrysene		0.775	0.737	0.787	0.690	0.727	0.723#	5.87
82)	T	bis(2-Ethylhexy		0.841	0.813	0.616		0.629	0.642#	21.05
83)	I	Perylene - d12 (I)	----------	----------	----------	ISTD	----------	----------	----------	
84)	TC	Di-n-octylphtha		1.192	1.151	1.150		1.018	1.061#	9.54
85)	T	Benzofluoranthe		0.813	0.788	0.796	0.800	0.781	0.792#	1.51
86)	TC	Benzo(a)pyrene		0.783	0.765	0.767	0.666	0.727	0.744#	4.94
87)	T	Indeno(1,2,3-cd		0.876	0.996	1.000	0.870	0.959	0.951#	5.30
88)	T	Dibenz(a,h)anth		0.805	0.816	0.842	0.698	0.808	0.806#	5.68
89)	T	Benzo(g,h,i)per		0.727	0.793	0.807	0.688	0.781	0.768#	5.24

(#) = Out of Range ### Number of calibration levels exceeded format ###

001198

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02807.D
Acq On : 11 Aug 2004 14:53
Sample : 20 UG/L 8270 ICAL STD NO 0980-88-1
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:03:11 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:03:06 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	73061	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.30	136	242461	1000.00 ug/L	-0.01
37) Acenaphthene - d10 (I)	10.31	162	133421	1000.00 ug/L	-0.02
61) Phenanthrene - d10 (I)	11.90	188	213840	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.82	240	323683+	1000.00 ul/l	0.00
84) Perylene - d12 (I)	17.06	264	343196+	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.38	112	1728	16.84 ug/L	0.05
7) Phenol - d5 (S)	6.22	99	2498	21.17 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.43	82	3126	29.47 ug/L	-0.03
42) 2 - Fluorobiphenyl (S)	9.58	172	4011	25.81 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.17	330	1031	15.51 ug/L	-0.01
77) p - Terphenyl - d14 (S)	13.62	244	5616	20.21 ug/L	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.21	74	2006	48.93 ug/L #	1
3) Pyridine	2.24	79	1770+	17.24 ug/L	99
5) Cyclohexanone	4.78	55	2197	45.97 ul/l #	33
6) Aniline	6.21	93	1451	16.24 ug/L	100
8) Phenol	6.24	94	2544	22.96 ug/L #	33
9) bis(2-Chloroethyl)ether	6.33	63	1891	16.83 ug/L	41
10) 2-Chlorophenol	6.35	128	1955	18.41 ug/L	78
11) Decane	6.47	57	1866	30.14 ug/L	91
12) 1,3-Dichlorobenzene	6.55	146	1864	18.34 ug/L	82
13) 1,4-Dichlorobenzene	6.63	146	1633	15.21 ug/L #	17
14) Benzyl alcohol	6.89	79	2371	21.27 ug/L	94
15) 1,2-Dichlorobenzene	6.90	146	1540	16.73 ug/L #	1
16) 2-Methylphenol	7.10	108	2026	26.83 ug/L	95
17) bis(2-chloroisopropyl)ethe	7.13	45	2059	19.35 ug/L #	11
18) 3-&4-Methylphenol	7.30	108	3517	39.69 ug/L	86
19) n-Nitroso-di-n-propylamine	7.24	70	1020	14.25 ug/L	99
20) Hexachloroethane	7.32	117	1464	34.66 ug/L	79
23) Nitrobenzene	7.45	77	2391	31.71 ug/L	90
24) Isophorone	7.78	82	3140	23.49 ug/L	100
25) 2-Nitrophenol	7.87	139	673	16.03 ug/L #	1
26) 2,4-Dimethylphenol	7.97	107	1607	19.15 ug/L	84
27) bis(2-Chloroethoxy)methane	8.08	93	1159	19.55 ug/L #	25
28) Benzoic Acid	8.04	105	3616	77.48 ug/L	100
29) 2,4-Dichlorophenol	8.16	162	1294	17.39 ug/L	65
30) 1,2,4-Trichlorobenzene	8.26	180	1630	21.65 ug/L	100
31) Naphthalene	8.33	128	5845	23.34 ug/L	75
32) 4-Chloroaniline	8.44	127	1531	20.29 ug/L	100
33) Hexachlorobutadiene	8.57	225	1142	20.35 ug/L #	34
34) 4-Chloro-3-methylphenol	9.02	107	2800+	18.89 ug/L	81
35) 2-Methylnaphthalene	9.14	141	2752	20.01 ug/L	90
36) 1-Methylnaphthalene	9.26	141	2947	23.06 ul/l	91
38) Hexachlorocyclopentadiene	9.40	237	1631	22.55 ug/L #	10
39) 2,3-Dichloroaniline	9.50	161	1899	22.65 ug/L	89
40) 2,4,6-Trichlorophenol	9.50	196	769	18.11 ug/L #	1
41) 2,4,5-Trichlorophenol	9.53	196	966	21.08 ug/L #	40
43) 2-Chloronaphthalene	9.68	162	2373	20.77 ug/L	60
44) Biphenyl	9.68	154	3925	24.00 ug/L	78
45) 2-Nitroaniline	9.84	138	1286	34.01 ug/L #	12

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02807.D
Acq On : 11 Aug 2004 14:53
Sample : 20 UG/L 8270 ICAL STD NO 0980-88-1
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:03:11 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:03:06 2004
Response via : Initial Calibration
DataAcq Meth :

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46) Dimethylphthalate	10.08	163	3539	21.50 ug/L	100
47) Acenaphthylene	10.15	152	5440	28.12 ug/L	75
48) 2,6-Dinitrotoluene	10.14	165	1393	47.69 ug/L	52
49) 3-Nitroaniline	9.84	138	1286	34.01 ug/L #	39
50) Acenaphthene	10.35	153	3468	27.59 ug/L	100
51) 2,4-Dinitrophenol	10.40	184	3350+	101.32 ug/L	95
52) 4-Nitrophenol	10.46	109	3008	159.88 ug/L	97
53) Dibenzofuran	10.52	168	3355	21.90 ug/L	69
54) 2,4-Dinitrotoluene	10.57	165	1512	33.24 ug/L	72
55) 2,3,4,6-Tetrachlorophenol	10.65	232	762	17.13 ug/L	37
56) 2,3,5,6-Tetrachlorophenol	10.65	232	762	16.07 ul/l	59
57) Diethylphthalate	10.84	149	4208	30.69 ug/L	88
58) Fluorene	10.89	166	3127	21.13 ug/L	81
59) 4-Chlorophenylphenylether	10.90	204	2113	22.01 ug/L	88
60) 4-Nitroaniline	9.84	138	1286	33.95 ug/L #	12
62) 4,6-Dinitro-2-methylphenol	11.00	198	3535	82.11 ug/L	56
63) n-Nitrosodiphenylamine	11.03	169	2105	16.44 ug/L	84
65) 1,2-Diphenylhydrazine	11.07	182	716	13.96 ug/L #	24
66) 4-Bromophenylphenylether	11.41	248	1437	17.15 ug/L #	40
67) Hexachlorobenzene	11.57	284	1376	19.67 ug/L	75
68) Pentachlorophenol	11.76	266	942	19.34 ug/L	100
69) Phenanthrene	11.92	178	4386	21.53 ug/L	72
70) Anthracene	11.97	178	3960	19.35 ug/L	55
71) Octadecane	11.77	57	3469	39.43 ug/L	69
72) Carbazole	12.14	167	4022	21.26 ug/L	89
73) Di-n-butylphthalate	12.56	149	10599	40.13 ug/L	94
74) Fluoranthene	13.20	202	5513	21.61 ug/L	90
75) Pyrene	13.44	202	4915	19.21 ug/L	76
76) Benzidine	13.34	184	5527	20.99 ug/L	100
79) Butylbenzylphthalate	14.18	149	3319	19.40 ug/L	96
80) Benzo(a)anthracene	14.80	228	4733	18.26 ug/L	45
81) 3,3'-Dichlorobenzidine	14.78	252	1985	19.61 ug/L	98
82) Chrysene	14.86	228	4465	19.17 ug/L	72
83) bis(2-Ethylhexyl)phthalate	14.88	149	17137	84.19 ug/L	95
85) Di-n-octylphthalate	15.72	149	9649	25.02 ug/L	74
86) Benzofluoranthenes	16.40	252	10980	40.55 ug/L	92
87) Benzo(a)pyrene	16.96	252	4568	17.34 ug/L	100
88) Indeno(1,2,3-cd)pyrene	19.56	276	5975	19.77 ug/L	78
89) Dibenz(a,h)anthracene	19.61	278	4788	17.63 ug/L	88
90) Benzo(g,h,i)perylene	20.29	276	4725	18.08 ug/L	56

(#) = qualifier out of range (m) = manual integration (+) = signals summed

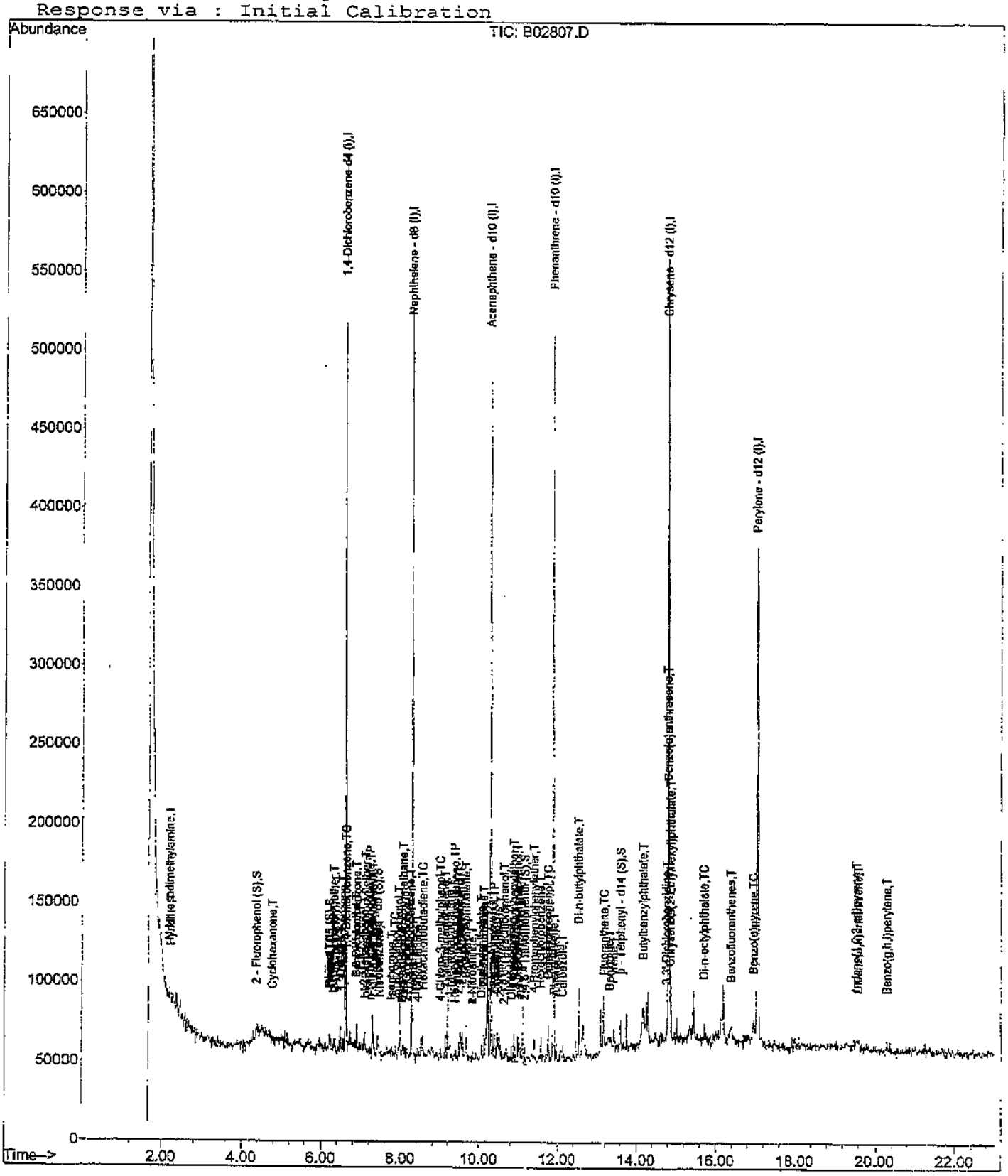
00200

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02807.D
Acq On : 11 Aug 2004 14:53
Sample : 20 UG/L 8270 ICAL STD NO 0980-88-1
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:03 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00201

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02808.D
Acq On : 11 Aug 2004 15:21
Sample : 50 UG/L 8270 ICAL STD NO 0980-95-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11:01 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\C81104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:53 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.60	152	55160	1000.00	ug/L	0.00
21) Naphthalene - d8 (I)	8.30	136	231587	1000.00	ug/L	0.00
37) Acenaphthene - d10 (I)	10.31	162	124495	1000.00	ug/L	-0.02
61) Phenanthrene - d10 (I)	11.89	188	189921	1000.00	ug/L	-0.02
78) Chrysene - d12 (I)	14.80	240	281824+	1000.00	ul/l	0.00
84) Perylene - d12 (I)	17.03	264	320036+	1000.00	ug/L	-0.03
System Monitoring Compounds						
4) 2 - Fluorophenol (S)	4.34	112	3542	41.67	ug/L	0.00
7) Phenol - d5 (S)	6.21	99	5037	51.34	ug/L	-0.02
22) Nitrobenzene - d5 (S)	7.43	82	3962	36.53	ug/L	-0.03
42) 2 - Fluorobiphenyl (S)	9.58	172	5952	38.38	ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.17	330	2262	42.76	ug/L	-0.01
77) p - Terphenyl - d14 (S)	13.61	244	10587	42.87	ug/L	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	2.20	74	5645	134.94	ug/L	43
3) Pyridine	2.20	79	1238+	9.14	ug/L	95
5) Cyclohexanone	4.80	55	2058	55.45	ul/l	86
6) Aniline	6.19	93	2211	30.13	ug/L	100
8) Phenol	6.23	94	5239	58.28	ug/L	51
9) bis(2-Chloroethyl)ether	6.31	63	4270	51.32	ug/L #	56
10) 2-Chlorophenol	6.33	128	4678	58.26	ug/L	75
11) Decane	6.47	57	3225	69.29	ug/L	82
12) 1,3-Dichlorobenzene	6.54	146	3828	51.19	ug/L	81
13) 1,4-Dichlorobenzene	6.62	146	4312	54.70	ug/L	43
14) Benzyl alcohol	6.88	79	5150	58.91	ug/L	87
15) 1,2-Dichlorobenzene	6.89	146	3413	49.40	ug/L	54
16) 2-Methylphenol	7.09	108	3458	64.40	ug/L	90
17) bis(2-chloroisopropyl)ethe	7.11	45	4220	52.68	ug/L	53
18) 3-&4-Methylphenol	7.30	108	6360	94.04	ug/L	85
19) n-Nitroso-di-n-propylamine	7.30	70	2541	51.18	ug/L #	40
20) Hexachloroethane	7.31	117	1925	52.23	ug/L	92
23) Nitrobenzene	7.40	77	607	7.48	ug/L	53
24) Isophorone	7.77	82	6725	52.87	ug/L	100
25) 2-Nitrophenol	7.87	139	1606	42.56	ug/L	87
26) 2,4-Dimethylphenol	7.96	107	5089	66.88	ug/L	85
27) bis(2-Chloroethoxy)methane	8.08	93	3058	64.61	ug/L #	1
28) Benzoic Acid	8.04	105	7182	167.06	ug/L	100
29) 2,4-Dichlorophenol	8.16	162	3210	45.82	ug/L	83
30) 1,2,4-Trichlorobenzene	8.26	180	3056	44.97	ug/L	100
31) Naphthalene	8.32	128	11801	45.55	ug/L	95
32) 4-Chloroaniline	8.44	127	2260	31.46	ug/L	100
33) Hexachlorobutadiene	8.56	225	2163	46.78	ug/L	87
34) 4-Chloro-3-methylphenol	9.01	107	6066+	44.52	ug/L	77
35) 2-Methylnaphthalene	9.14	141	6486	53.90	ug/L	82
36) 1-Methylnaphthalene	9.26	141	5989	51.64	ul/l	87
38) Hexachlorocyclopentadiene	9.40	237	4301	59.26	ug/L	82
39) 2,3-Dichloroaniline	9.50	161	3438	41.73	ug/L	91
40) 2,4,6-Trichlorophenol	9.49	196	2465	68.84	ug/L	89
41) 2,4,5-Trichlorophenol	9.53	196	2279	50.01	ug/L	89
43) 2-Chloronaphthalene	9.68	162	6603	62.79	ug/L	49
44) Biphenyl	9.68	154	8310	52.41	ug/L	88
45) 2-Nitroaniline	9.83	138	2093	56.28	ug/L	79

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02808.D
Acq On : 11 Aug 2004 15:21
Sample : 50 UG/L 8270 ICAL STD NO 0980-95-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11:01 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:53 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	Dimethylphthalate	10.07	163	8024	49.51 ug/L		100
47)	Acenaphthylene	10.15	152	9539	48.74 ug/L		93
48)	2,6-Dinitrotoluene	10.15	165	1729	63.01 ug/L		83
49)	3-Nitroaniline	9.83	138	2093	56.28 ug/L		81
50)	Acenaphthene	10.35	153	6938	58.40 ug/L		100
51)	2,4-Dinitrophenol	10.40	184	8810+	284.28 ug/L		92
52)	4-Nitrophenol	10.47	109	6568	344.55 ug/L		95
53)	Dibenzofuran	10.52	168	8107	55.24 ug/L		87
54)	2,4-Dinitrotoluene	10.56	165	1992	48.50 ug/L		71
55)	2,3,4,6-Tetrachlorophenol	10.65	232	1898	47.45 ug/L		52
56)	2,3,5,6-Tetrachlorophenol	10.70	232	1960	43.16 ug/L		89
57)	Diethylphthalate	10.83	149	7330	55.34 ug/L		99
58)	Fluorene	10.89	166	6832	49.43 ug/L		86
59)	4-Chlorophenylphenylether	10.90	204	4591	54.29 ug/L		85
60)	4-Nitroaniline	9.83	138	2093	56.34 ug/L		86
62)	4,6-Dinitro-2-methylphenol	10.99	198	10527	284.26 ug/L		92
63)	n-Nitrosodiphenylamine	11.03	169	4513	44.17 ug/L		92
65)	1,2-Diphenylhydrazine	11.06	182	2182	55.35 ug/L		89
66)	4-Bromophenylphenylether	11.42	248	3865	54.54 ug/L		82
67)	Hexachlorobenzene	11.57	284	2930	53.76 ug/L		90
68)	Pentachlorophenol	11.76	266	1659	44.46 ug/L		100
69)	Phenanthrene	11.92	178	8685	49.64 ug/L		84
70)	Anthracene	11.97	178	10098	59.45 ug/L		59
71)	Octadecane	11.77	57	5150	68.35 ug/L	#	61
72)	Carbazole	12.14	167	9423	56.92 ug/L		80
73)	Di-n-butylphthalate	12.56	149	15261	68.38 ug/L		100
74)	Fluoranthene	13.20	202	11094	49.47 ug/L		91
75)	Pyrene	13.44	202	10422	48.11 ug/L		88
76)	Benzidine	13.34	184	18423	75.63 ug/L		100
79)	Butylbenzylphthalate	14.17	149	6851	56.64 ug/L		98
80)	Benzo(a)anthracene	14.78	228	11987	54.05 ug/L		88
81)	3,3'-Dichlorobenzidine	14.76	252	4481	50.51 ug/L		96
82)	Chrysene	14.83	228	10232	50.49 ug/L		92
83)	bis(2-Ethylhexyl)phthalate	14.86	149	19936	106.49 ug/L		100
85)	Di-n-octylphthalate	15.69	149	20374	59.07 ug/L		97
86)	Benzofluoranthenes	16.36	252	25235	100.22 ug/L		99
87)	Benzo(a)pyrene	16.92	252	13051	55.01 ug/L		100
88)	Indeno(1,2,3-cd)pyrene	19.52	276	13914	47.53 ug/L		91
89)	Dibenz(a,h)anthracene	19.57	278	11365	44.41 ug/L		87
90)	Benzo(g,h,i)perylene	20.26	276	12191	49.93 ug/L		60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

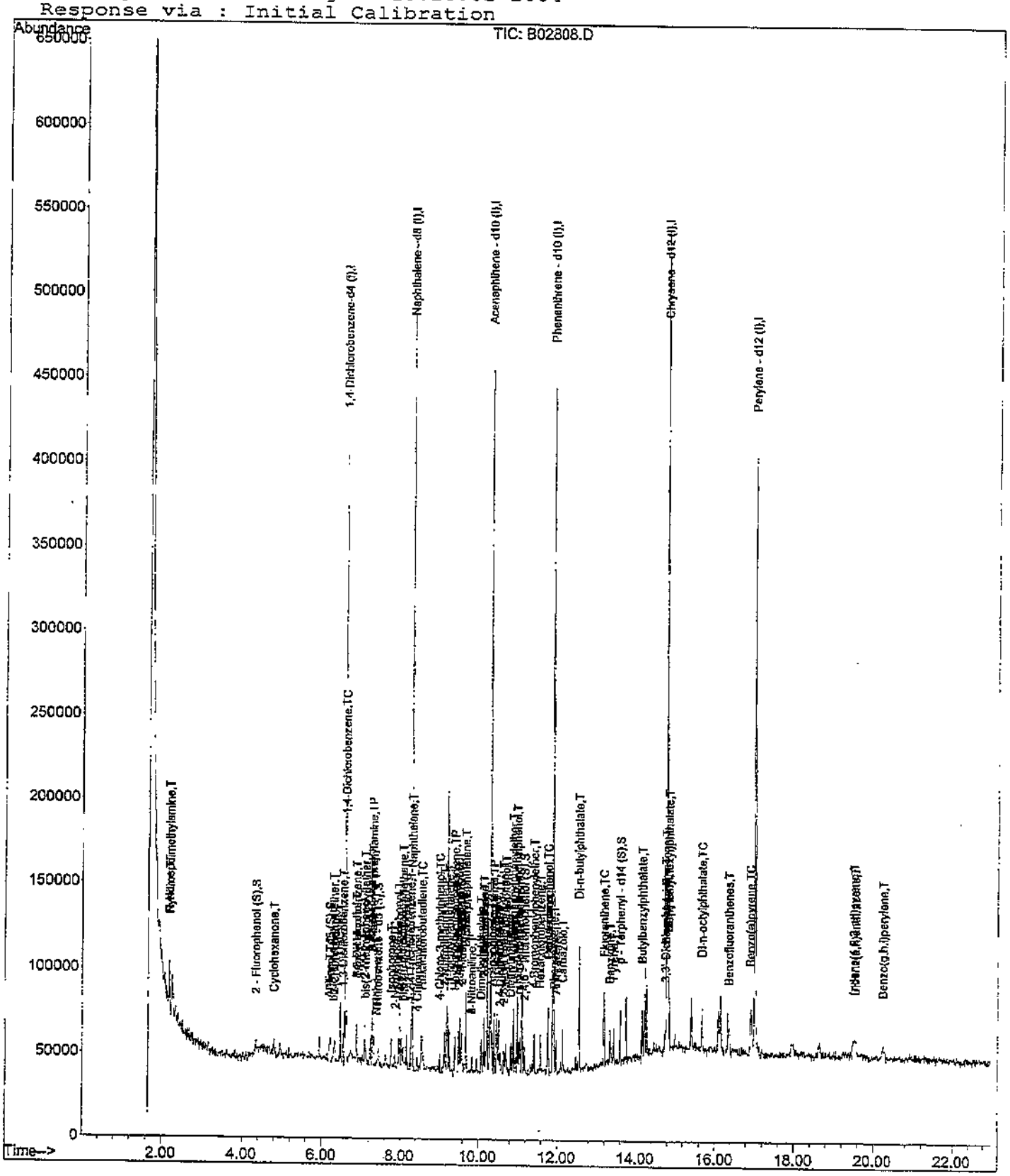
Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02808.D
Acq On : 11 Aug 2004 15:21
Sample : 50 UG/L 8270 ICAL STD NO 0980-95-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00204

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02809.D
Acq On : 11 Aug 2004 15:49
Sample : 100 UG/L 8270 ICAL STD NO 0980-88-2
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10:43 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:28 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	59393	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.32	136	202679	1000.00 ug/L	0.01
37) Acenaphthene - d10 (I)	10.33	162	120755	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	186015	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.82	240	279034+	1000.00 ul/l	0.02
84) Perylene - d12 (I)	17.05	264	289454+	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.34	112	8715	95.23 ug/L	0.00
7) Phenol - d5 (S)	6.22	99	9328	88.31 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.44	82	10564	111.30 ug/L	-0.02
42) 2 - Fluorobiphenyl (S)	9.60	172	15409	102.44 ug/L	0.01
64) 2,4,6 - Tribromophenol (S)	11.19	330	5108	98.59 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.63	244	26919	111.29 ug/L	0.02
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.19	74	11059	245.52 ug/L	48
3) Pyridine	2.25	79	41278+	283.05 ug/L	97
5) Cyclohexanone	4.79	55	5439	136.09 ul/l	70
6) Aniline	6.20	93	6041	76.45 ug/L	100
8) Phenol	6.24	94	9082	93.83 ug/L	96
9) bis(2-Chloroethyl)ether	6.33	63	8972	100.14 ug/L	92
10) 2-Chlorophenol	6.35	128	8961	103.65 ug/L	80
11) Decane	6.48	57	4381	87.42 ug/L	64
12) 1,3-Dichlorobenzene	6.55	146	7606	94.46 ug/L	67
13) 1,4-Dichlorobenzene	6.64	146	8426	99.27 ug/L	71
14) Benzyl alcohol	6.90	79	8938	94.95 ug/L	88
15) 1,2-Dichlorobenzene	6.90	146	7182	96.55 ug/L	70
16) 2-Methylphenol	7.10	108	5682	98.28 ug/L	90
17) bis(2-chloroisopropyl)ethe	7.13	45	9454	109.61 ug/L	96
18) 3-&4-Methylphenol	7.31	108	12172	167.15 ug/L	84
19) n-Nitroso-di-n-propylamine	7.31	70	5624	105.20 ug/L	98
20) Hexachloroethane	7.33	117	4002	100.84 ug/L	96
23) Nitrobenzene	7.46	77	8791	123.76 ug/L	85
24) Isophorone	7.79	82	12897	115.85 ug/L	100
25) 2-Nitrophenol	7.88	139	2359	71.43 ug/L	57
26) 2,4-Dimethylphenol	7.98	107	6963	104.56 ug/L	81
27) bis(2-Chloroethoxy)methane	8.09	93	2913	70.33 ug/L #	39
28) Benzoic Acid	8.06	105	13406	356.32 ug/L	100
29) 2,4-Dichlorophenol	8.18	162	6351	103.58 ug/L	89
30) 1,2,4-Trichlorobenzene	8.27	180	6218	104.54 ug/L	100
31) Naphthalene	8.34	128	19821	87.42 ug/L	91
32) 4-Chloroaniline	8.46	127	5008	79.66 ug/L	100
33) Hexachlorobutadiene	8.58	225	4702	116.20 ug/L	99
34) 4-Chloro-3-methylphenol	9.03	107	11400+	95.60 ug/L	76
35) 2-Methylnaphthalene	9.16	141	10603	100.68 ug/L	94
36) 1-Methylnaphthalene	9.28	141	10504	103.48 ul/l	87
38) Hexachlorocyclopentadiene	9.42	237	7138	101.39 ug/L	91
39) 2,3-Dichloroaniline	9.52	161	6814	85.27 ug/L	99
40) 2,4,6-Trichlorophenol	9.51	196	3997	115.07 ug/L	94
41) 2,4,5-Trichlorophenol	9.55	196	5083	120.78 ug/L	95
43) 2-Chloronaphthalene	9.70	162	12318	120.76 ug/L	73
44) Biphenyl	9.69	154	15977	103.89 ug/L	95
45) 2-Nitroaniline	9.85	138	3556	98.59 ug/L	84

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02809.D
Acq On : 11 Aug 2004 15:49
Sample : 100 UG/L 8270 ICAL STD NO 0980-88-2
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10:43 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:28 2004
Response via : Initial Calibration
DataAcq Meth :

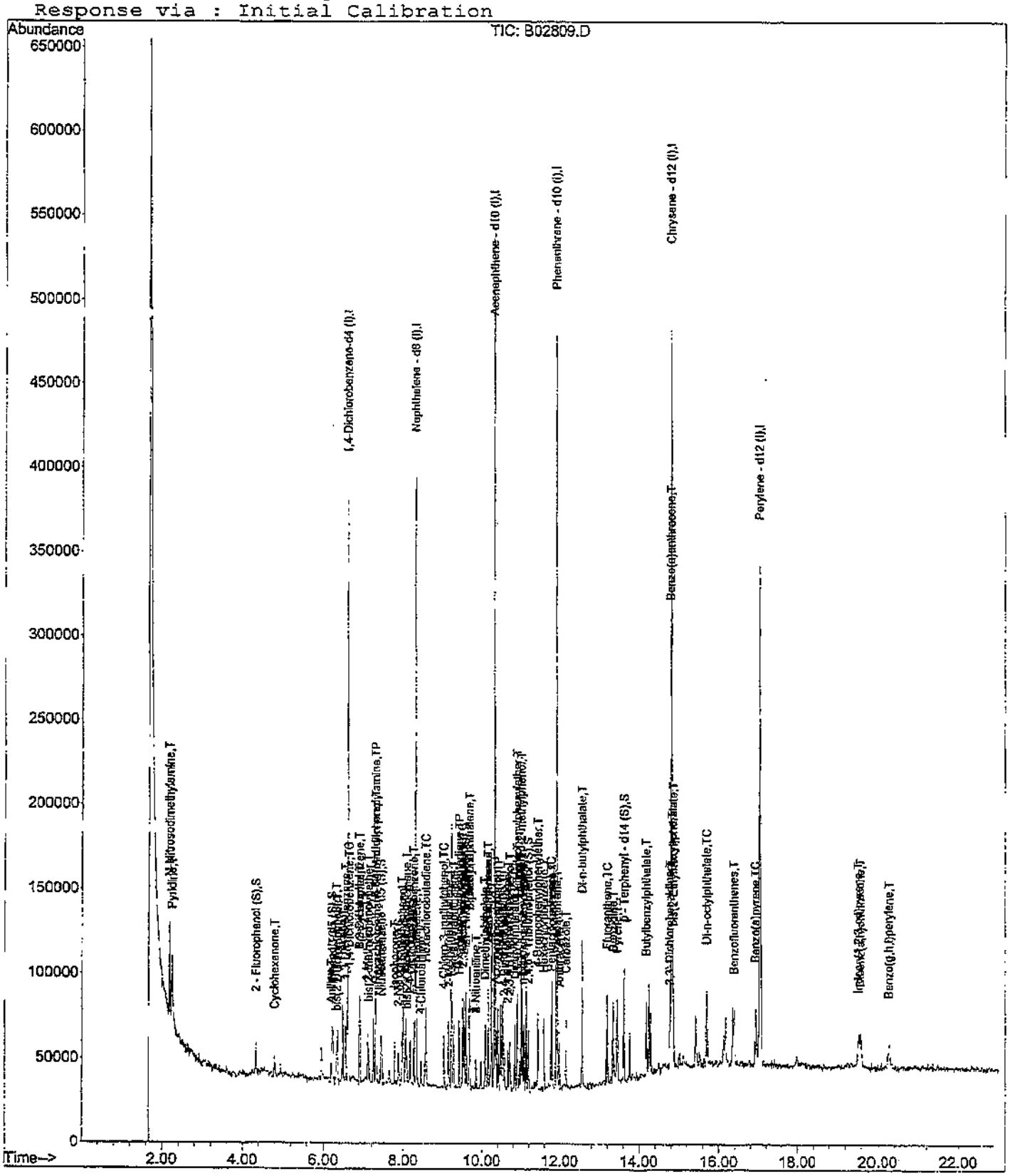
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46) Dimethylphthalate	10.09	163	15623	99.39 ug/L	100
47) Acenaphthylene	10.16	152	18414	97.00 ug/L	99
48) 2,6-Dinitrotoluene	10.16	165	2439	91.64 ug/L	64
49) 3-Nitroaniline	9.85	138	3556	98.59 ug/L	90
50) Acenaphthene	10.37	153	12595	109.30 ug/L	100
51) 2,4-Dinitrophenol	10.42	184	13510+	449.44 ug/L	94
52) 4-Nitrophenol	10.48	109	10605	573.56 ug/L	92
53) Dibenzofuran	10.54	168	15953	112.08 ug/L	81
54) 2,4-Dinitrotoluene	10.58	165	3665	92.00 ug/L	79
55) 2,3,4,6-Tetrachlorophenol	10.67	232	3461	89.20 ug/L	94
56) 2,3,5,6-Tetrachlorophenol	10.72	232	4171	94.69 ul/l	96
57) Diethylphthalate	10.85	149	15104	117.56 ug/L	93
58) Fluorene	10.91	166	11993	89.46 ug/L	96
59) 4-Chlorophenylphenylether	10.91	204	8955	109.18 ug/L	96
60) 4-Nitroaniline	9.85	138	3556	98.69 ug/L	84
62) 4,6-Dinitro-2-methylphenol	11.01	198	17179	473.62 ug/L	88
63) n-Nitrosodiphenylamine	11.05	169	8790	87.84 ug/L	94
65) 1,2-Diphenylhydrazine	11.08	182	3511	90.94 ug/L	70
66) 4-Bromophenylphenylether	11.43	248	6725	96.90 ug/L	87
67) Hexachlorobenzene	11.59	284	5921	110.92 ug/L	89
68) Pentachlorophenol	11.78	266	3308	90.51 ug/L	100
69) Phenanthrene	11.94	178	16393	95.66 ug/L	77
70) Anthracene	11.99	178	15578	93.65 ug/L	57
71) Octadecane	11.79	57	7455	101.02 ug/L	94
72) Carbazole	12.16	167	16319	100.64 ug/L	96
73) Di-n-butylphthalate	12.58	149	28071	128.42 ug/L	96
74) Fluoranthene	13.21	202	21927	99.84 ug/L	84
75) Pyrene	13.46	202	21526	101.46 ug/L	76
76) Benzidine	13.36	184	40453	169.55 ug/L	100
79) Butylbenzylphthalate	14.19	149	13922	116.26 ug/L	75
80) Benzo(a)anthracene	14.80	228	23122	105.31 ug/L	91
81) 3,3'-Dichlorobenzidine	14.77	252	7497	85.35 ug/L	92
82) Chrysene	14.85	228	21625	107.78 ug/L	93
83) bis(2-Ethylhexyl)phthalate	14.87	149	23466	126.60 ug/L	91
85) Di-n-octylphthalate	15.71	149	34491	110.57 ug/L	97
86) Benzofluoranthenes	16.38	252	47072	206.70 ug/L	98
87) Benzo(a)pyrene	16.94	252	22655	105.58 ug/L	100
88) Indeno(1,2,3-cd)pyrene	19.54	276	25363	95.79 ug/L	98
89) Dibenz(a,h)anthracene	19.59	278	23307	100.69 ug/L	89
90) Benzo(g,h,i)perylene	20.27	276	21046	95.30 ug/L	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02809.D Vial: 0
Acq On : 11 Aug 2004 15:49 Operator: CLZ
Sample : 100 UG/L 8270 ICAL STD NO 0980-88-2 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10 2004 Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00207

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02810.D
Acq On : 11 Aug 2004 16:17
Sample : 200 UG/L 8270 ICAL STD NO 0980-88-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10:15 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:06 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	46764	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.31	136	192303	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.33	162	108082	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	169954	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.82	240	268389+	1000.00 ul/l	0.02
84) Perylene - d12 (I)	17.05	264	283233+	1000.00 ug/L	-0.01
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.33	112	16406	227.68 ug/L	0.00
7) Phenol - d5 (S)	6.22	99	20781	249.86 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.44	82	16951	188.23 ug/L	-0.02
42) 2 - Fluorobiphenyl (S)	9.59	172	25793	191.58 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.19	330	9064	191.47 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.62	244	50478	228.41 ug/L	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.18	74	24927	702.86 ug/L	90
3) Pyridine	2.22	79	88646+	772.01 ug/L	98
5) Cyclohexanone	4.78	55	8507	270.34 ul/l	70
6) Aniline	6.20	93	14791	237.73 ug/L	100
8) Phenol	6.23	94	17419	228.57 ug/L	81
9) bis(2-Chloroethyl)ether	6.34	63	16268	230.62 ug/L	98
10) 2-Chlorophenol	6.34	128	14172	208.20 ug/L	83
11) Decane	6.48	57	8353	211.70 ug/L	94
12) 1,3-Dichlorobenzene	6.55	146	14647	231.03 ug/L	64
13) 1,4-Dichlorobenzene	6.63	146	15085	225.73 ug/L	67
14) Benzyl alcohol	6.89	79	15994	215.80 ug/L	89
15) 1,2-Dichlorobenzene	6.90	146	14118	241.04 ug/L	73
16) 2-Methylphenol	7.10	108	8882	195.11 ug/L	90
17) bis(2-chloroisopropyl)ethe	7.12	45	14939	219.98 ug/L	88
18) 3-&4-Methylphenol	7.31	108	21985	383.44 ug/L	93
19) n-Nitroso-di-n-propylamine	7.31	70	9329	221.64 ug/L	95
20) Hexachloroethane	7.32	117	8099	259.20 ug/L	96
23) Nitrobenzene	7.46	77	13882	205.98 ug/L	97
24) Isophorone	7.78	82	18960	179.50 ug/L	100
25) 2-Nitrophenol	7.88	139	5955	190.03 ug/L	97
26) 2,4-Dimethylphenol	7.97	107	11600	183.59 ug/L	88
27) bis(2-Chloroethoxy)methane	8.09	93	8342	212.27 ug/L #	10
28) Benzoic Acid	8.07	105	25110	703.42 ug/L	100
29) 2,4-Dichlorophenol	8.17	162	10570	181.70 ug/L	88
30) 1,2,4-Trichlorobenzene	8.27	180	12177	215.78 ug/L	100
31) Naphthalene	8.34	128	37091	172.42 ug/L	92
32) 4-Chloroaniline	8.45	127	10228	171.46 ug/L	100
33) Hexachlorobutadiene	8.58	225	6708	174.72 ug/L	98
34) 4-Chloro-3-methylphenol	9.03	107	22159-	195.86 ug/L	84
35) 2-Methylnaphthalene	9.15	141	19201	192.16 ug/L	94
36) 1-Methylnaphthalene	9.27	141	17581	182.54 ul/l	98
38) Hexachlorocyclopentadiene	9.41	237	14556	231.01 ug/L	95
39) 2,3-Dichloroaniline	9.51	161	12530	175.19 ug/L	94
40) 2,4,6-Trichlorophenol	9.51	196	6143	197.59 ug/L	79
41) 2,4,5-Trichlorophenol	9.54	196	7365	197.36 ug/L	84
43) 2-Chloronaphthalene	9.69	162	19121	209.43 ug/L	65
44) Biphenyl	9.69	154	27722	201.40 ug/L	88
45) 2-Nitroaniline	9.85	138	5974	185.05 ug/L	73

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

00208

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02810.D
Acq On : 11 Aug 2004 16:17
Sample : 200 UG/L 8270 ICAL STD NO 0980-88-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10:15 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:10:06 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Dimethylphthalate	10.09	163	26879	191.05 ug/L	100
47)	Acenaphthylene	10.16	152	34380	202.33 ug/L	93
48)	2,6-Dinitrotoluene	10.16	165	5391	226.31 ug/L	73
49)	3-Nitroaniline	9.85	138	5974	185.05 ug/L	79
50)	Acenaphthene	10.36	153	22020	213.50 ug/L	100
51)	2,4-Dinitrophenol	10.41	184	27195÷	1010.78 ug/L	98
52)	4-Nitrophenol	10.48	109	23649	1429.00 ug/L	93
53)	Dibenzofuran	10.54	168	29150	228.80 ug/L	85
54)	2,4-Dinitrotoluene	10.58	165	6550	183.71 ug/L	81
55)	2,3,4,6-Tetrachlorophenol	10.67	232	7399	213.04 ug/L	89
56)	2,3,5,6-Tetrachlorophenol	10.72	232	7919	200.85 ul/l	89
57)	Diethylphthalate	10.85	149	27498	239.11 ug/L	87
58)	Fluorene	10.91	166	22195	184.97 ug/L	88
59)	4-Chlorophenylphenylether	10.91	204	15556	211.90 ug/L	97
60)	4-Nitroaniline	9.85	138	5974	185.23 ug/L	73
62)	4,6-Dinitro-2-methylphenol	11.01	198	29179	880.48 ug/L	82
63)	n-Nitrosodiphenylamine	11.04	169	16794	183.69 ug/L	95
65)	1,2-Diphenylhydrazine	11.08	182	6612	187.43 ug/L	75
66)	4-Bromophenylphenylether	11.43	248	14582	229.97 ug/L	86
67)	Hexachlorobenzene	11.59	284	10397	213.17 ug/L	92
68)	Pentachlorophenol	11.77	266	6670	199.74 ug/L	100
69)	Phenanthrene	11.93	178	35369	225.91 ug/L	99
70)	Anthracene	11.98	178	32529	214.02 ug/L	56
71)	Octadecane	11.79	57	14768	219.02 ug/L	83
72)	Carbazole	12.16	167	29102	196.44 ug/L	100
73)	Di-n-butylphthalate	12.58	149	43933	219.97 ug/L	98
74)	Fluoranthene	13.21	202	44049	219.52 ug/L	82
75)	Pyrene	13.46	202	47163	243.32 ug/L	83
76)	Benzidine	13.35	184	87508	401.43 ug/L	100
79)	Butylbenzylphthalate	14.19	149	28066	243.67 ug/L	84
80)	Benzo(a)anthracene	14.80	228	44204	209.31 ug/L	95
81)	3,3'-Dichlorobenzidine	14.78	252	15214	180.08 ug/L	92
82)	Chrysene	14.85	228	39551	204.95 ug/L	99
83)	bis(2-Ethylhexyl)phthalate	14.88	149	43616	244.65 ug/L	96
85)	Di-n-octylphthalate	15.71	149	65195	213.59 ug/L	100
86)	Benzofluoranthenes	16.39	252	89297	400.72 ug/L	97
87)	Benzo(a)pyrene	16.95	252	43357	206.49 ug/L	100
88)	Indeno(1,2,3-cd)pyrene	19.54	276	56442	217.85 ug/L	94
89)	Dibenz(a,h)anthracene	19.60	278	46219	204.07 ug/L	95
90)	Benzo(g,h,i)perylene	20.29	276	44913	207.85 ug/L	78

(#) = qualifier out of range (m) = manual integration (+) = signals summed

00209

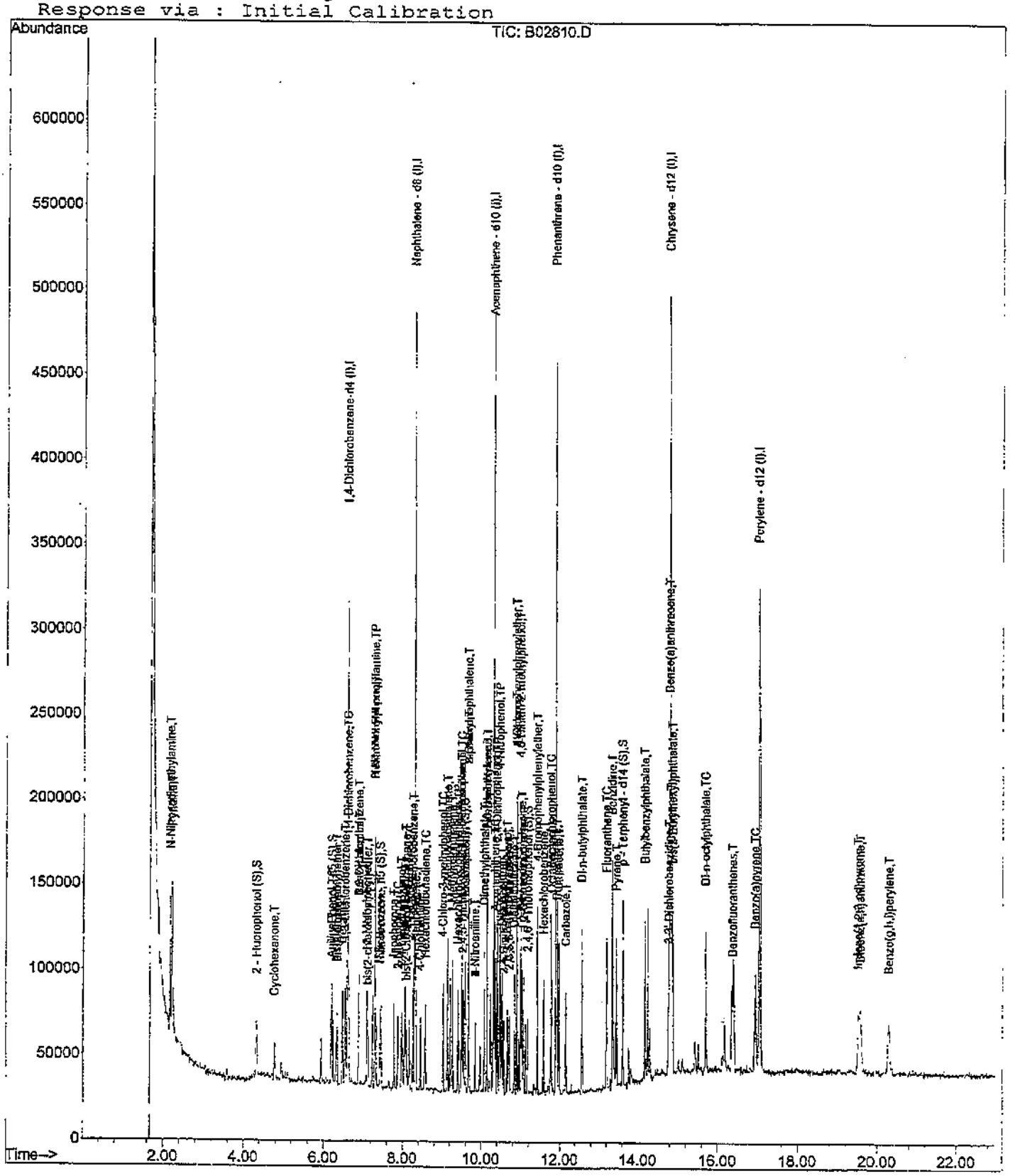
Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02810.D
Acq On : 11 Aug 2004 16:17
Sample : 200 UG/L 8270 ICAL STD NO 0980-88-3
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:10 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00210

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02811.D
Acq On : 11 Aug 2004 16:45
Sample : 500 UG/L 8270 ICAL STD NO 0980-88-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09:50 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:09:30 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	52456	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.31	136	169498	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.33	162	115202	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	190328	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.82	240	274427+	1000.00 ul/l	0.02
84) Perylene - d12 (I)	17.06	264	282526+	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.35	112	50713	627.43 ug/L	0.02
7) Phenol - d5 (S)	6.22	99	54465	583.80 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.44	82	47487	598.27 ug/L	-0.02
42) 2 - Fluorobiphenyl (S)	9.60	172	87013	606.34 ug/L	0.01
64) 2,4,6 - Tribromophenol (S)	11.19	330	31976	603.18 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.63	244	139481	563.57 ug/L	0.02
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.18	74	72945	1833.62 ug/L	97
3) Pyridine	2.22	79	204468+	1587.46 ug/L	98
5) Cyclohexanone	4.79	55	16348	463.14 ul/l	75
6) Aniline	6.20	93	38224	547.71 ug/L	100
8) Phenol	6.24	94	40340	471.90 ug/L	98
9) bis(2-Chloroethyl)ether	6.33	63	37983	480.02 ug/L	90
10) 2-Chlorophenol	6.35	128	37121	486.17 ug/L	80
11) Decane	6.48	57	21853	493.74 ug/L	81
12) 1,3-Dichlorobenzene	6.55	146	35271	495.96 ug/L	75
13) 1,4-Dichlorobenzene	6.64	146	38544	514.18 ug/L	83
14) Benzyl alcohol	6.89	79	41429	498.32 ug/L	87
15) 1,2-Dichlorobenzene	6.90	146	33266	506.34 ug/L	82
16) 2-Methylphenol	7.10	108	25579	500.93 ug/L	93
17) bis(2-chloroisopropyl)ethe	7.12	45	40151	527.08 ug/L	98
18) 3-&4-Methylphenol	7.31	108	54367	845.32 ug/L	85
19) n-Nitroso-di-n-propylamine	7.31	70	22254	471.34 ug/L	87
20) Hexachloroethane	7.33	117	16721	477.06 ug/L	96
23) Nitrobenzene	7.46	77	32372	544.97 ug/L	95
24) Isophorone	7.78	82	52051	559.09 ug/L	100
25) 2-Nitrophenol	7.88	139	17271	625.30 ug/L	98
26) 2,4-Dimethylphenol	7.98	107	27308	490.35 ug/L	93
27) bis(2-Chloroethoxy)methane	8.09	93	17982	519.13 ug/L #	9
28) Benzoic Acid	8.10	105	89432	2842.37 ug/L	100
29) 2,4-Dichlorophenol	8.17	162	25081	489.15 ug/L	93
30) 1,2,4-Trichlorobenzene	8.27	180	26319	529.12 ug/L	100
31) Naphthalene	8.34	128	95599	504.19 ug/L	94
32) 4-Chloroaniline	8.45	127	29599	562.96 ug/L	100
33) Hexachlorobutadiene	8.58	225	18423	544.41 ug/L	88
34) 4-Chloro-3-methylphenol	9.03	107	63344+	635.22 ug/L	81
35) 2-Methylnaphthalene	9.15	141	47287	536.91 ug/L	99
36) 1-Methylnaphthalene	9.27	141	44571	525.04 ul/l	90
38) Hexachlorocyclopentadiene	9.42	237	32686	486.67 ug/L	97
39) 2,3-Dichloroaniline	9.51	161	38460	504.49 ug/L	100
40) 2,4,6-Trichlorophenol	9.51	196	16952	511.57 ug/L	87
41) 2,4,5-Trichlorophenol	9.55	196	18806	470.47 ug/L	83
43) 2-Chloronaphthalene	9.69	162	51548	529.70 ug/L	73
44) Biphenyl	9.69	154	70347	479.48 ug/L	96
45) 2-Nitroaniline	9.85	138	17816	517.75 ug/L	72

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02811.D
Acq On : 11 Aug 2004 16:45
Sample : 500 UG/L 8270 ICAL STD NO 0980-88-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09:50 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:09:30 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Dimethylphthalate	10.09	163	70434	469.70 ug/L	100
47)	Acenaphthylene	10.16	152	89022	491.53 ug/L	90
48)	2,6-Dinitrotoluene	10.16	165	13860	545.86 ug/L	61
49)	3-Nitroaniline	9.85	138	17816	517.75 ug/L	83
50)	Acenaphthene	10.36	153	53354	485.34 ug/L	100
51)	2,4-Dinitrophenol	10.41	184	71701+	2500.28 ug/L	98
52)	4-Nitrophenol	10.48	109	50479	2861.70 ug/L	92
53)	Dibenzofuran	10.54	168	61394	452.11 ug/L	83
54)	2,4-Dinitrotoluene	10.58	165	18531	487.62 ug/L	85
55)	2,3,4,6-Tetrachlorophenol	10.67	232	18491	499.52 ug/L	88
56)	2,3,5,6-Tetrachlorophenol	10.72	232	22922	545.44 ul/l	94
57)	Diethylphthalate	10.85	149	64759	528.32 ug/L	98
58)	Fluorene	10.91	166	58188	454.96 ug/L	96
59)	4-Chlorophenylphenylether	10.91	204	37428	478.32 ug/L	94
60)	4-Nitroaniline	9.85	138	17816	518.27 ug/L	72
62)	4,6-Dinitro-2-methylphenol	11.01	198	87892	2368.25 ug/L	86
63)	n-Nitrosodiphenylamine	11.04	169	51159	499.68 ug/L	83
65)	1,2-Diphenylhydrazine	11.08	182	18507	468.47 ug/L	74
66)	4-Bromophenylphenylether	11.43	248	34898	491.44 ug/L	86
67)	Hexachlorobenzene	11.59	284	27673	506.65 ug/L	96
68)	Pentachlorophenol	11.77	266	17873	477.94 ug/L	100
69)	Phenanthrene	11.93	178	81174	462.97 ug/L	96
70)	Anthracene	11.98	178	77644	456.17 ug/L	55
71)	Octadecane	11.79	57	36643	485.26 ug/L	77
72)	Carbazole	12.15	167	83739	504.72 ug/L	96
73)	Di-n-butylphthalate	12.58	149	111473	498.40 ug/L	95
74)	Fluoranthene	13.21	202	109826	488.73 ug/L	80
75)	Pyrene	13.46	202	107852	496.85 ug/L	74
76)	Benzidine	13.35	184	262760	1076.33 ug/L	100
79)	Butylbenzylphthalate	14.19	149	55360	469.66 ug/L	85
80)	Benzo(a)anthracene	14.80	228	108407	501.19 ug/L	96
81)	3,3'-Dichlorobenzidine	14.78	252	43070	497.60 ug/L	99
82)	Chrysene	14.80	228	107989	550.96 ug/L	91
83)	bis(2-Ethylhexyl)phthalate	14.88	149	84498	461.86 ug/L	96
85)	Di-n-octylphthalate	15.72	149	162440	533.52 ug/L	97
86)	Benzofluoranthenes	16.39	252	224759	1011.13 ug/L	95
87)	Benzo(a)pyrene	16.95	252	108307	517.12 ug/L	100
88)	Indeno(1,2,3-cd)pyrene	19.55	276	141207	546.39 ug/L	96
89)	Dibenz(a,h)anthracene	19.60	278	118905	526.31 ug/L	96
90)	Benzo(g,h,i)perylene	20.30	276	113985	528.82 ug/L	89

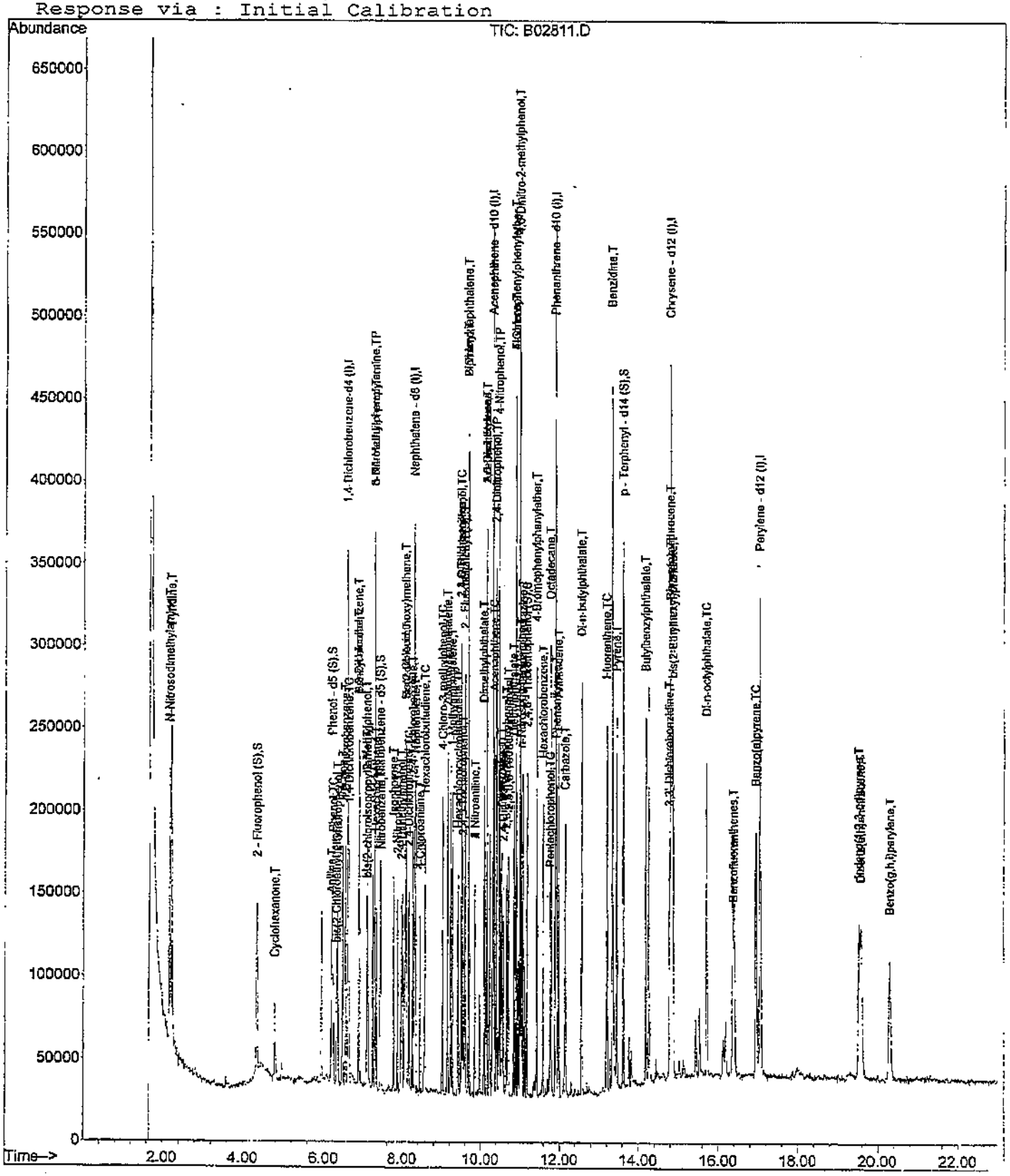
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02811.D
Acq On : 11 Aug 2004 16:45
Sample : 500 UG/L 8270 ICAL STD NO 0980-88-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00213

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02812.D
Acq On : 11 Aug 2004 17:14
Sample : 1000 UG/L 8270 ICAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09:20 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:09:05 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	48252	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.31	136	204386	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.33	162	115230	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	192890	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.81	240	269224+	1000.00 ul/l	0.01
84) Perylene - d12 (I)	17.04	264	296753+	1000.00 ug/L	-0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.35	112	66293	891.65 ug/L	0.02
7) Phenol - d5 (S)	6.22	99	75811	883.40 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.43	82	65135	680.53 ug/L	-0.03
42) 2 - Fluorobiphenyl (S)	9.59	172	121956	849.63 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.18	330	44824	834.30 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.62	244	189898	757.09 ug/L	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.18	74	121065	3308.35 ug/L	83
3) Pyridine	2.20	79	483809+	4083.49 ug/L	92
5) Cyclohexanone	4.78	55	19620	604.27 ul/l	83
6) Aniline	6.19	93	68375	1065.10 ug/L	100
8) Phenol	6.23	94	92094	1171.19 ug/L	96
9) bis(2-Chloroethyl)ether	6.32	63	78441	1077.70 ug/L	97
10) 2-Chlorophenol	6.34	128	74177	1056.12 ug/L	77
11) Decane	6.48	57	43982	1080.29 ug/L	69
12) 1,3-Dichlorobenzene	6.55	146	67004	1024.26 ug/L	69
13) 1,4-Dichlorobenzene	6.63	146	67997	986.11 ug/L	80
14) Benzyl alcohol	6.89	79	83451	1091.23 ug/L	99
15) 1,2-Dichlorobenzene	6.90	146	62321	1031.23 ug/L	68
16) 2-Methylphenol	7.10	108	50988	1085.52 ug/L	97
17) bis(2-chloroisopropyl)ethe	7.12	45	70677	1008.65 ug/L	100
18) 3-&4-Methylphenol	7.31	108	101109	1709.04 ug/L	89
19) n-Nitroso-di-n-propylamine	7.31	70	44886	1033.51 ug/L	94
20) Hexachloroethane	7.32	117	33581	1041.57 ug/L	78
23) Nitrobenzene	7.46	77	59115	825.31 ug/L	97
24) Isophorone	7.78	82	92131	820.68 ug/L	100
25) 2-Nitrophenol	7.88	139	29887	897.36 ug/L	97
26) 2,4-Dimethylphenol	7.97	107	68343	1017.71 ug/L	82
27) bis(2-Chloroethoxy)methane	8.09	93	33063	791.58 ug/L #	22
28) Benzoic Acid	8.13	105	190133	5011.39 ug/L	100
29) 2,4-Dichlorophenol	8.17	162	53326	862.47 ug/L	93
30) 1,2,4-Trichlorobenzene	8.27	180	52387	873.42 ug/L	100
31) Naphthalene	8.33	128	174929	765.10 ug/L	90
32) 4-Chloroaniline	8.45	127	62625	987.79 ug/L	100
33) Hexachlorobutadiene	8.57	225	33727	826.53 ug/L	92
34) 4-Chloro-3-methylphenol	9.03	107	109288+	908.88 ug/L	80
35) 2-Methylnaphthalene	9.15	141	96762	911.12 ug/L	96
36) 1-Methylnaphthalene	9.27	141	84811	828.53 ul/l	87
38) Hexachlorocyclopentadiene	9.41	237	64472	959.71 ug/L	98
39) 2,3-Dichloroaniline	9.51	161	85078	1115.72 ug/L	97
40) 2,4,6-Trichlorophenol	9.50	196	30255	912.80 ug/L	78
41) 2,4,5-Trichlorophenol	9.54	196	43782	1173.47 ug/L	89
43) 2-Chloronaphthalene	9.69	162	89135	915.72 ug/L	80
44) Biphenyl	9.69	154	142810	973.14 ug/L	81
45) 2-Nitroaniline	9.85	138	39465	1146.62 ug/L	62

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02812.D
Acq On : 11 Aug 2004 17:14
Sample : 1000 UG/L 8270 ICAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09:20 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:09:05 2004
Response via : Initial Calibration
DataAcq Meth :

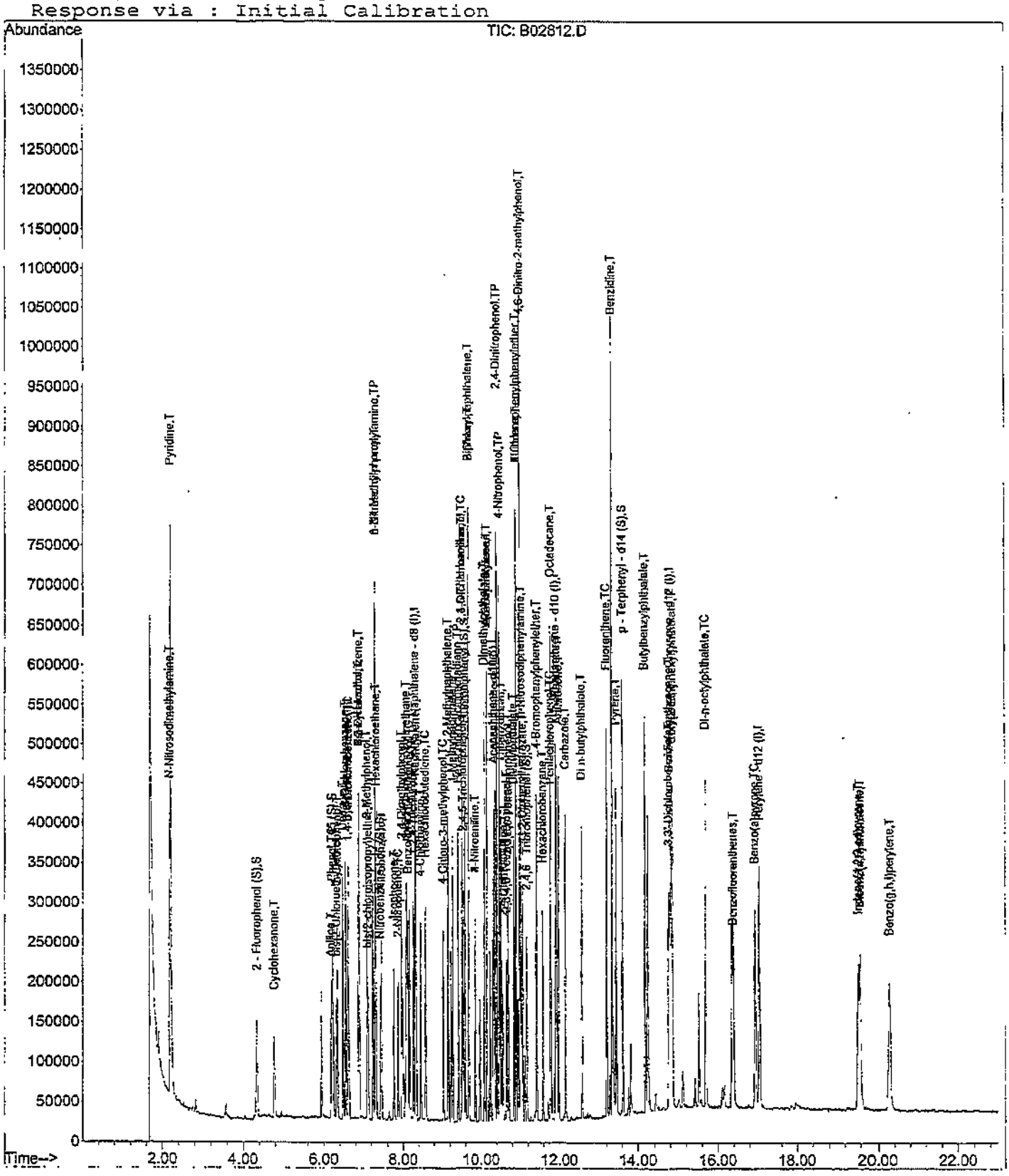
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dimethylphthalate	10.09	163	179212	1194.81	ug/L		100
47)	Acenaphthylene	10.16	152	171759	948.14	ug/L		87
48)	2,6-Dinitrotoluene	10.16	165	24723	973.45	ug/L		44
49)	3-Nitroaniline	9.85	138	39465	1146.62	ug/L		76
50)	Acenaphthene	10.36	153	110864	1008.24	ug/L		100
51)	2,4-Dinitrophenol	10.41	184	157678+	5497.04	ug/L		93
52)	4-Nitrophenol	10.48	109	81313	4608.59	ug/L	#	68
53)	Dibenzofuran	10.53	168	129656	954.56	ug/L		81
54)	2,4-Dinitrotoluene	10.58	165	41104	1081.34	ug/L		76
55)	2,3,4,6-Tetrachlorophenol	10.67	232	37511	1013.08	ug/L		88
56)	2,3,5,6-Tetrachlorophenol	10.71	232	43289	1029.84	ul/l		90
57)	Diethylphthalate	10.85	149	122548	999.53	ug/L		76
58)	Fluorene	10.91	166	132191	1033.33	ug/L		78
59)	4-Chlorophenylphenylether	10.91	204	75561	965.41	ug/L		97
60)	4-Nitroaniline	9.85	138	39465	1147.77	ug/L		61
62)	4,6-Dinitro-2-methylphenol	11.01	198	181687	4830.53	ug/L		92
63)	n-Nitrosodiphenylamine	11.04	169	99207	956.11	ug/L		86
65)	1,2-Diphenylhydrazine	11.08	182	37404	934.24	ug/L		93
66)	4-Bromophenylphenylether	11.43	248	69078	959.86	ug/L		86
67)	Hexachlorobenzene	11.58	284	44563	805.05	ug/L		92
68)	Pentachlorophenol	11.77	266	37175	980.89	ug/L		100
69)	Phenanthrene	11.93	178	168976	950.93	ug/L		99
70)	Anthracene	11.98	178	164443	953.30	ug/L		50
71)	Octadecane	11.78	57	77871	1017.55	ug/L		82
72)	Carbazole	12.15	167	166422	989.76	ug/L		98
73)	Di-n-butylphthalate	12.57	149	211651	933.74	ug/L		100
74)	Fluoranthene	13.21	202	218143	957.85	ug/L		81
75)	Pyrene	13.45	202	199409	906.43	ug/L		89
76)	Benzidine	13.35	184	601648	2431.76	ug/L		100
79)	Butylbenzylphthalate	14.18	149	109147	943.87	ug/L		89
80)	Benzo(a)anthracene	14.79	228	225975	1064.92	ug/L		98
81)	3,3'-Dichlorobenzidine	14.77	252	93922	1106.08	ug/L		99
82)	Chrysene	14.85	228	195774	1018.13	ug/L		94
83)	bis(2-Ethylhexyl)phthalate	14.87	149	169321	943.37	ug/L		93
85)	Di-n-octylphthalate	15.70	149	302002	944.35	ug/L		99
86)	Benzofluoranthenes	16.38	252	463383	1984.69	ug/L		95
87)	Benzo(a)pyrene	16.93	252	215707	980.52	ug/L		100
88)	Indeno(1,2,3-cd)pyrene	19.54	276	284594	1048.42	ug/L		93
89)	Dibenz(a,h)anthracene	19.58	278	239682	1010.04	ug/L		99
90)	Benzo(g,h,i)perylene	20.28	276	231623	1023.08	ug/L		83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02812.D Vial: 0
Acq On : 11 Aug 2004 17:14 Operator: CLZ
Sample : 1000 UG/L 8270 ICAL STD NO 0980-95-4 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:09 2004 Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00216

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02813.D
Acq On : 11 Aug 2004 17:42
Sample : 1500 UG/L 8270 ICAL STD NO 0980-88-6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:08:35 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:08:30 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	53589	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.31	136	187721	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.33	162	109968	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	172974	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.81	240	257250+	1000.00 ul/l	0.01
84) Perylene - d12 (I)	17.04	264	256183+	1000.00 ug/L	-0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.35	112	116211	1486.01 ug/L	0.02
7) Phenol - d5 (S)	6.22	99	141302	1577.78 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.44	82	114934	1353.51 ug/L	-0.02
42) 2 - Fluorobiphenyl (S)	9.59	172	203328	1569.57 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.19	330	64280	1348.32 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.62	244	344531	1628.16 ug/L	0.00

Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.19	74	156490	3737.51 ug/L	68
3) Pyridine	2.21	79	529026+	4105.52 ug/L	94
5) Cyclohexanone	4.77	55	44824	1251.61 ul/l	90
6) Aniline	6.19	93	105104	1471.17 ug/L	100
8) Phenol	6.24	94	104080	1194.01 ug/L	97
9) bis(2-Chloroethyl)ether	6.32	63	100006	1234.91 ug/L	71
10) 2-Chlorophenol	6.34	128	101562	1320.60 ug/L	74
11) Decane	6.48	57	69086	1575.92 ug/L	70
12) 1,3-Dichlorobenzene	6.55	146	94901	1311.65 ug/L	78
13) 1,4-Dichlorobenzene	6.63	146	94091	1209.72 ug/L	89
14) Benzyl alcohol	6.89	79	117495	1417.77 ug/L	100
15) 1,2-Dichlorobenzene	6.90	146	83816	1256.38 ug/L	69
16) 2-Methylphenol	7.10	108	65828	1248.18 ug/L	91
17) bis(2-chloroisopropyl)ethe	7.12	45	102895	1346.73 ug/L	99
18) 3-&4-Methylphenol	7.31	108	143351	2170.08 ug/L	85
19) n-Nitroso-di-n-propylamine	7.31	70	53231	1073.02 ug/L	86
20) Hexachloroethane	7.32	117	47986	1357.33 ug/L	87
23) Nitrobenzene	7.46	77	85418	1316.99 ug/L	91
24) Isophorone	7.78	82	151861	1505.10 ug/L	100
25) 2-Nitrophenol	7.88	139	48738	1616.34 ug/L	98
26) 2,4-Dimethylphenol	7.97	107	84059	1360.40 ug/L	92
27) bis(2-Chloroethoxy)methane	8.09	93	59306	1503.14 ug/L #	1
28) Benzoic Acid	8.15	105	298692	8713.88 ug/L	100
29) 2,4-Dichlorophenol	8.17	162	81966	1466.24 ug/L	95
30) 1,2,4-Trichlorobenzene	8.27	180	70407	1254.48 ug/L	100
31) Naphthalene	8.33	128	269769	1320.86 ug/L	93
32) 4-Chloroaniline	8.45	127	91318	1568.01 ug/L	100
33) Hexachlorobutadiene	8.57	225	49678	1299.00 ug/L	88
34) 4-Chloro-3-methylphenol	9.03	107	148288+	1348.39 ug/L	82
35) 2-Methylnaphthalene	9.15	141	123684	1248.59 ug/L	97
36) 1-Methylnaphthalene	9.27	141	131317	1418.01 ul/l	81
38) Hexachlorocyclopentadiene	9.41	237	98885	1575.58 ug/L	99
39) 2,3-Dichloroaniline	9.51	161	124063	1762.90 ug/L	96
40) 2,4,6-Trichlorophenol	9.50	196	39656	1198.54 ug/L	85
41) 2,4,5-Trichlorophenol	9.54	196	61060	1777.22 ug/L	97
43) 2-Chloronaphthalene	9.69	162	127334	1384.99 ug/L	86
44) Biphenyl	9.69	154	211153	1538.57 ug/L	97
45) 2-Nitroaniline	9.85	138	48365	1488.85 ug/L	67

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02813.D
Acq On : 11 Aug 2004 17:42
Sample : 1500 UG/L 8270 ICAL STD NO 0980-88-6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:08:35 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:08:30 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Dimethylphthalate	10.09	163	216613	1570.78 ug/L	100
47)	Acenaphthylene	10.16	152	232588	1358.04 ug/L	83
48)	2,6-Dinitrotoluene	10.16	165	30931	1259.06 ug/L	48
49)	3-Nitroaniline	9.85	138	48365	1488.85 ug/L	82
50)	Acenaphthene	10.36	153	148816	1449.45 ug/L	100
51)	2,4-Dinitrophenol	10.41	184	197135+	7205.36 ug/L	89
52)	4-Nitrophenol	10.48	109	94050	5652.67 ug/L	67
53)	Dibenzofuran	10.53	168	178486	1386.26 ug/L	78
54)	2,4-Dinitrotoluene	10.58	165	54911	1545.90 ug/L	78
55)	2,3,4,6-Tetrachlorophenol	10.67	232	47152	1306.12 ug/L	87
56)	2,3,5,6-Tetrachlorophenol	10.72	232	55343	1384.13 ul/l	87
57)	Diethylphthalate	10.85	149	145160	1257.47 ug/L	59
58)	Fluorene	10.91	166	186403	1532.00 ug/L	75
59)	4-Chlorophenylphenylether	10.91	204	101358	1359.74 ug/L	92
60)	4-Nitroaniline	9.85	138	48365	1483.57 ug/L	67
62)	4,6-Dinitro-2-methylphenol	11.01	198	259657	7697.33 ug/L	85
63)	n-Nitrosodiphenylamine	11.04	169	141845	1519.98 ug/L	76
65)	1,2-Diphenylhydrazine	11.08	182	55984	1549.59 ug/L	92
66)	4-Bromophenylphenylether	11.43	248	92101	1450.96 ug/L	88
67)	Hexachlorobenzene	11.59	284	63904	1265.07 ug/L	92
68)	Pentachlorophenol	11.77	266	49262	1421.60 ug/L	100
69)	Phenanthrene	11.93	178	220669	1410.16 ug/L	95
70)	Anthracene	11.98	178	256177	1706.89 ug/L	50
71)	Octadecane	11.78	57	99483	1480.99 ug/L	90
72)	Carbazole	12.15	167	223853	1527.97 ug/L	97
73)	Di-n-butylphthalate	12.58	149	264213	1317.82 ug/L	99
74)	Fluoranthene	13.21	202	284010	1419.02 ug/L	79
75)	Pyrene	13.45	202	271643	1405.33 ug/L	88
76)	Benzidine	13.35	184	788872	3642.96 ug/L	100
79)	Butylbenzylphthalate	14.17	149	133989	1196.27 ug/L	97
80)	Benzo(a)anthracene	14.79	228	281355	1403.67 ug/L	100
81)	3,3'-Dichlorobenzidine	14.76	252	133154	1663.57 ug/L	93
82)	Chrysene	14.84	228	261303	1449.37 ug/L	94
83)	bis(2-Ethylhexyl)phthalate	14.86	149	214655	1285.12 ug/L	95
85)	Di-n-octylphthalate	15.69	149	392610	1460.04 ug/L	100
86)	Benzofluoranthenes	16.37	252	609099	3086.27 ug/L	93
87)	Benzo(a)pyrene	16.93	252	289832	1554.33 ug/L	100
88)	Indeno(1,2,3-cd)pyrene	19.53	276	371117	1659.89 ug/L	92
89)	Dibenz(a,h)anthracene	19.58	278	321097	1599.78 ug/L	96
90)	Benzo(g,h,i)perylene	20.27	276	307078	1607.68 ug/L	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

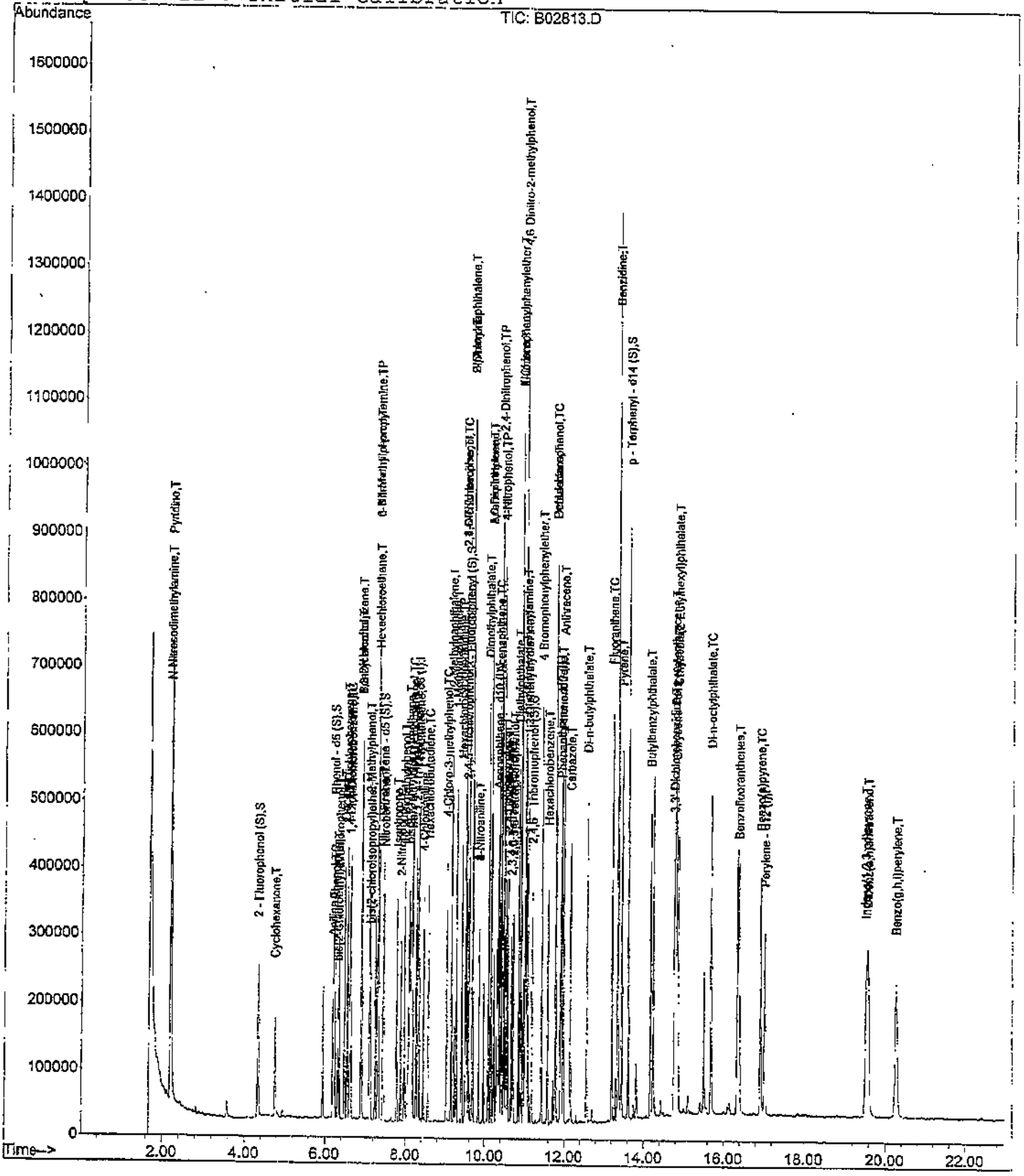
Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02813.D
Acq On : 11 Aug 2004 17:42
Sample : 1500 UG/L 8270 ICAL STD NO 0980-88-6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:08 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02814.D
Acq On : 11 Aug 2004 18:10
Sample : 2000 UG/L 8270 ICAL STD NO 0980-88-7
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11:52 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:11:47 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.61	152	52646	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.31	136	181787	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.33	162	115276	1000.00 ug/L	0.00
61) Phenanthrene - d10 (I)	11.91	188	173098	1000.00 ug/L	0.00
78) Chrysene - d12 (I)	14.81	240	256312+	1000.00 ul/l	0.01
84) Perylene - d12 (I)	17.04	264	273690+	1000.00 ug/L	-0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.36	112	156107	1924.41 ug/L	0.03
7) Phenol - d5 (S)	6.22	99	211180	2255.41 ug/L	0.00
22) Nitrobenzene - d5 (S)	7.44	82	146539	1721.37 ug/L	-0.02
42) 2 - Fluorobiphenyl (S)	9.59	172	295595	2058.49 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.19	330	105985	2198.24 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.62	244	496331	2205.04 ug/L	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.20	74	259848	6508.22 ug/L	53
3) Pyridine	2.21	79	686880+	5313.60 ug/L	90
5) Cyclohexanone	4.78	55	57793	1631.38 ul/l	93
6) Aniline	6.20	93	147835	2110.66 ug/L	100
8) Phenol	6.24	94	163914	1910.57 ug/L	87
9) bis(2-Chloroethyl)ether	6.32	63	141402	1780.57 ug/L	83
10) 2-Chlorophenol	6.35	128	131542	1716.57 ug/L	70
11) Decane	6.48	57	74937	1686.99 ug/L	70
12) 1,3-Dichlorobenzene	6.55	146	130646	1830.44 ug/L	81
13) 1,4-Dichlorobenzene	6.64	146	138247	1837.56 ug/L	93
14) Benzyl alcohol	6.89	79	160884	1928.19 ug/L	82
15) 1,2-Dichlorobenzene	6.90	146	112859	1711.61 ug/L	86
16) 2-Methylphenol	7.10	108	101269	1976.04 ug/L	97
17) bis(2-chloroisopropyl)ethe	7.12	45	128635	1682.57 ug/L	95
18) 3-&4-Methylphenol	7.31	108	209820	3250.58 ug/L	82
19) n-Nitroso-di-n-propylamine	7.31	70	83217	1756.16 ug/L	99
20) Hexachloroethane	7.33	117	55929	1589.94 ug/L	96
23) Nitrobenzene	7.46	77	116481	1828.35 ug/L	94
24) Isophorone	7.78	82	194875	1951.71 ug/L	100
25) 2-Nitrophenol	7.88	139	61819	2086.87 ug/L	95
26) 2,4-Dimethylphenol	7.98	107	113819	1905.60 ug/L	90
27) bis(2-Chloroethoxy)methane	8.09	93	76866	2069.08 ug/L #	1
28) Benzoic Acid	8.17	105	419851	12441.84 ug/L	100
29) 2,4-Dichlorophenol	8.17	162	115402	2098.50 ug/L	95
30) 1,2,4-Trichlorobenzene	8.27	180	93447	1751.67 ug/L	100
31) Naphthalene	8.34	128	339742	1897.70 ug/L	88
32) 4-Chloroaniline	8.45	127	121432	2153.47 ug/L	100
33) Hexachlorobutadiene	8.58	225	55531	1530.04 ug/L	96
34) 4-Chloro-3-methylphenol	9.03	107	220372+	2060.52 ug/L	79
35) 2-Methylnaphthalene	9.15	141	179262	1897.79 ug/L	92
36) 1-Methylnaphthalene	9.27	141	183708	2017.77 ul/l	84
38) Hexachlorocyclopentadiene	9.41	237	123125	1832.07 ug/L	97
39) 2,3-Dichloroaniline	9.51	161	182979	2398.64 ug/L	96
40) 2,4,6-Trichlorophenol	9.51	196	50291	1516.69 ug/L	79
41) 2,4,5-Trichlorophenol	9.54	196	85314	2022.03 ug/L	96
43) 2-Chloronaphthalene	9.69	162	175916	1806.53 ug/L	85
44) Biphenyl	9.69	154	316520	2155.99 ug/L	100
45) 2-Nitroaniline	9.85	138	75040	2179.34 ug/L	55

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

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02814.D Vial: 0
Acq On : 11 Aug 2004 18:10 Operator: CLZ
Sample : 2000 UG/L 8270 ICAL STD NO 0980-88-7 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11:52 2004 Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:11:47 2004
Response via : Initial Calibration
DataAcq Meth :

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46) Dimethylphthalate	10.09	163	305269	2034.42 ug/L	100
47) Acenaphthylene	10.16	152	316927	1748.79 ug/L	85
48) 2,6-Dinitrotoluene	10.16	165	32236	1268.77 ug/L	96
49) 3-Nitroaniline	9.85	138	75040	2179.34 ug/L	74
50) Acenaphthene	10.36	153	207056	1882.29 ug/L	100
51) 2,4-Dinitrophenol	10.41	184	273274+	9523.19 ug/L	80
52) 4-Nitrophenol	10.49	109	91256	5170.07 ug/L #	26
53) Dibenzofuran	10.54	168	259801	1911.96 ug/L	76
54) 2,4-Dinitrotoluene	10.58	165	69690	1832.63 ug/L	80
55) 2,3,4,6-Tetrachlorophenol	10.67	232	73970	1996.95 ug/L	97
56) 2,3,5,6-Tetrachlorophenol	10.72	232	77485	1842.62 ul/l	89
57) Diethylphthalate	10.86	149	190415	1552.45 ug/L	52
58) Fluorene	10.91	166	287072	2243.14 ug/L	71
59) 4-Chlorophenylphenylether	10.91	204	139218	1778.02 ug/L	96
60) 4-Nitroaniline	9.85	138	75040	2181.53 ug/L	55
62) 4,6-Dinitro-2-methylphenol	11.01	198	386049	11437.49 ug/L	79
63) n-Nitrosodiphenylamine	11.04	169	203277	2183.08 ug/L	79
65) 1,2-Diphenylhydrazine	11.08	182	83826	2333.11 ug/L	75
66) 4-Bromophenylphenylether	11.43	248	144251	2233.59 ug/L	90
67) Hexachlorobenzene	11.59	284	105110	2115.97 ug/L	96
68) Pentachlorophenol	11.77	266	73814	2170.33 ug/L	100
69) Phenanthrene	11.93	178	315918	1981.15 ug/L	96
70) Anthracene	11.98	178	335499	2167.31 ug/L	47
71) Octadecane	11.78	57	131589	1916.10 ug/L	90
72) Carbazole	12.15	167	342850	2272.17 ug/L	94
73) Di-n-butylphthalate	12.58	149	348369	1712.62 ug/L	98
74) Fluoranthene	13.21	202	412299	2017.38 ug/L	78
75) Pyrene	13.45	202	374278	1895.84 ug/L	91
76) Benzidine	13.35	184	1119609	5042.69 ug/L	100
79) Butylbenzylphthalate	14.18	149	189455	1722.33 ug/L	100
80) Benzo(a)anthracene	14.79	228	422355	2094.15 ug/L	99
81) 3,3'-Dichlorobenzidine	14.77	252	187656	2325.79 ug/L	97
82) Chrysene	14.85	228	366254	1987.32 ug/L	90
83) bis(2-Ethylhexyl)phthalate	14.87	149	286592	1683.31 ug/L	97
85) Di-n-octylphthalate	15.70	149	521538	1768.26 ug/L	99
86) Benzofluoranthenes	16.38	252	864267	4013.63 ug/L	87
87) Benzo(a)pyrene	16.94	252	414800	2044.42 ug/L	100
88) Indeno(1,2,3-cd)pyrene	19.54	276	537599	2147.36 ug/L	85
89) Dibenz(a,h)anthracene	19.60	278	448111	2047.51 ug/L	99
90) Benzo(g,h,i)perylene	20.29	276	423937	2030.32 ug/L	86

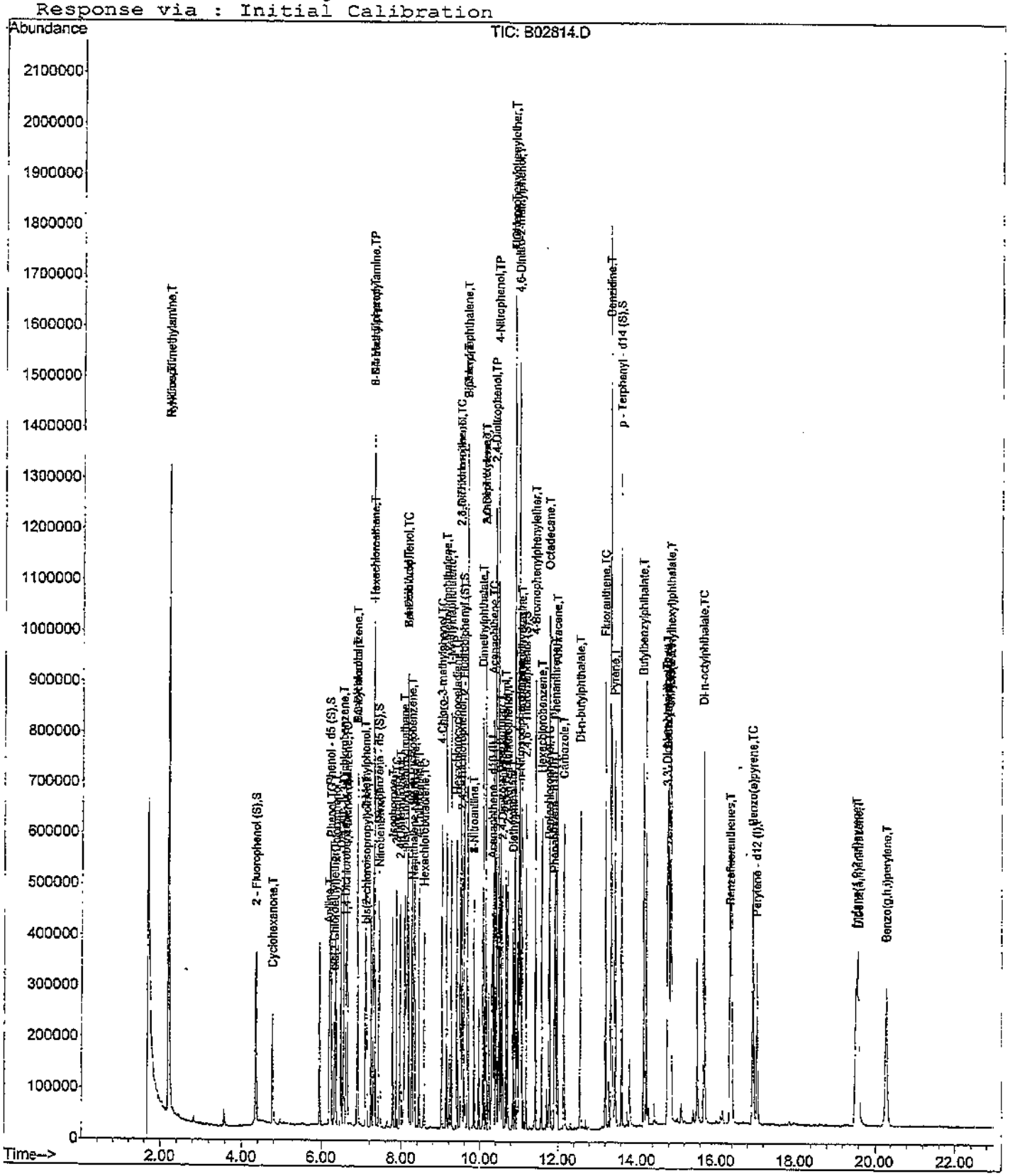
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02814.D
Acq On : 11 Aug 2004 18:10
Sample : 2000 UG/L 8270 ICAL STD NO 0980-88-7
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:11 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00222

Quantitation Report (QT Reviewed)

Data File : U:\DATA\081104\B02815.D Vial: 0
Acq On : 11 Aug 2004 18:38 Operator: CLZ
Sample : 2500 UG/L 8270 ICAL STD NO 0980-88-8 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:12:44 2004 Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:12:40 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.60	152	48683	1000.00 ug/L	0.00
21) Naphthalene - d8 (I)	8.30	136	166471	1000.00 ug/L	0.00
37) Acenaphthene - d10 (I)	10.32	162	104507	1000.00 ug/L	-0.01
61) Phenanthrene - d10 (I)	11.90	188	181121	1000.00 ug/L	-0.01
78) Chrysene - d12 (I)	14.82	240	267306+	1000.00 ul/l	0.02
84) Perylene - d12 (I)	17.06	264	278567+	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.34	112	205450	2677.42 ug/L	0.00
7) Phenol - d5 (S)	6.21	99	241538	2657.04 ug/L	-0.02
22) Nitrobenzene - d5 (S)	7.43	82	178672	2278.87 ug/L	-0.03
42) 2 - Fluorobiphenyl (S)	9.58	172	353608	2615.35 ug/L	0.00
64) 2,4,6 - Tribromophenol (S)	11.18	330	135873	2703.38 ug/L	0.00
77) p - Terphenyl - d14 (S)	13.62	244	635317	2594.24 ug/L	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.19	74	368642	10478.23 ug/L	42
3) Pyridine	2.20	79	611998+	5018.05 ug/L	90
5) Cyclohexanone	4.77	55	33700	1048.37 ul/l	71
6) Aniline	6.18	93	114201	1719.68 ug/L	100
8) Phenol	6.23	94	190991	2429.25 ug/L	99
9) bis(2-Chloroethyl)ether	6.31	63	165952	2295.28 ug/L	99
10) 2-Chlorophenol	6.33	128	161389	2342.99 ug/L	67
11) Decane	6.47	57	93457	2328.52 ug/L	70
12) 1,3-Dichlorobenzene	6.54	146	159849	2462.14 ug/L	77
13) 1,4-Dichlorobenzene	6.62	146	167367	2457.43 ug/L	91
14) Benzyl alcohol	6.88	79	169591	2196.99 ug/L	77
15) 1,2-Dichlorobenzene	6.89	146	137870	2298.32 ug/L	80
16) 2-Methylphenol	7.09	108	117301	2527.87 ug/L	94
17) bis(2-chloroisopropyl)ethe	7.11	45	150381	2133.67 ug/L	94
18) 3-&4-Methylphenol	7.30	108	259737	4447.97 ug/L	79
19) n-Nitroso-di-n-propylamine	7.30	70	110356	2627.88 ug/L	91
20) Hexachloroethane	7.32	117	61525	1895.03 ug/L	95
23) Nitrobenzene	7.45	77	129300	2230.20 ug/L	94
24) Isophorone	7.77	82	243207	2681.02 ug/L	100
25) 2-Nitrophenol	7.87	139	71149	2659.14 ug/L	95
26) 2,4-Dimethylphenol	7.97	107	143409	2701.45 ug/L	99
27) bis(2-Chloroethoxy)methane	8.08	93	99530	3101.57 ug/L #	1
28) Benzoic Acid	8.16	105	505778	16525.94 ug/L	100
29) 2,4-Dichlorophenol	8.16	162	152588	3136.31 ug/L	94
30) 1,2,4-Trichlorobenzene	8.26	180	112988	2399.27 ug/L	100
31) Naphthalene	8.32	128	399759	2458.31 ug/L	92
32) 4-Chloroaniline	8.44	127	136963	2701.97 ug/L	100
33) Hexachlorobutadiene	8.56	225	69829	2251.23 ug/L	93
34) 4-Chloro-3-methylphenol	9.02	107	255758+	2594.09 ug/L	79
35) 2-Methylnaphthalene	9.14	141	231943	2744.56 ug/L	99
36) 1-Methylnaphthalene	9.26	141	197796	2379.32 ul/l	86
38) Hexachlorocyclopentadiene	9.40	237	136332	2220.48 ug/L	95
39) 2,3-Dichloroaniline	9.50	161	232676	3261.56 ug/L	97
40) 2,4,6-Trichlorophenol	9.49	196	48237	1698.41 ug/L #	55
41) 2,4,5-Trichlorophenol	9.53	196	107896	2805.13 ug/L	89
43) 2-Chloronaphthalene	9.68	162	200497	2239.24 ug/L	96
44) Biphenyl	9.68	154	381504	2837.50 ug/L	98
45) 2-Nitroaniline	9.84	138	102828	3206.18 ug/L #	53

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

00223

Quantitation Report (QT Reviewed)

Data File : U:\DATA\081104\B02815.D
Acq On : 11 Aug 2004 18:38
Sample : 2500 UG/L 8270 ICAL STD NO 0980-88-8
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:12:44 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 10:12:40 2004
Response via : Initial Calibration
DataAcq Meth :

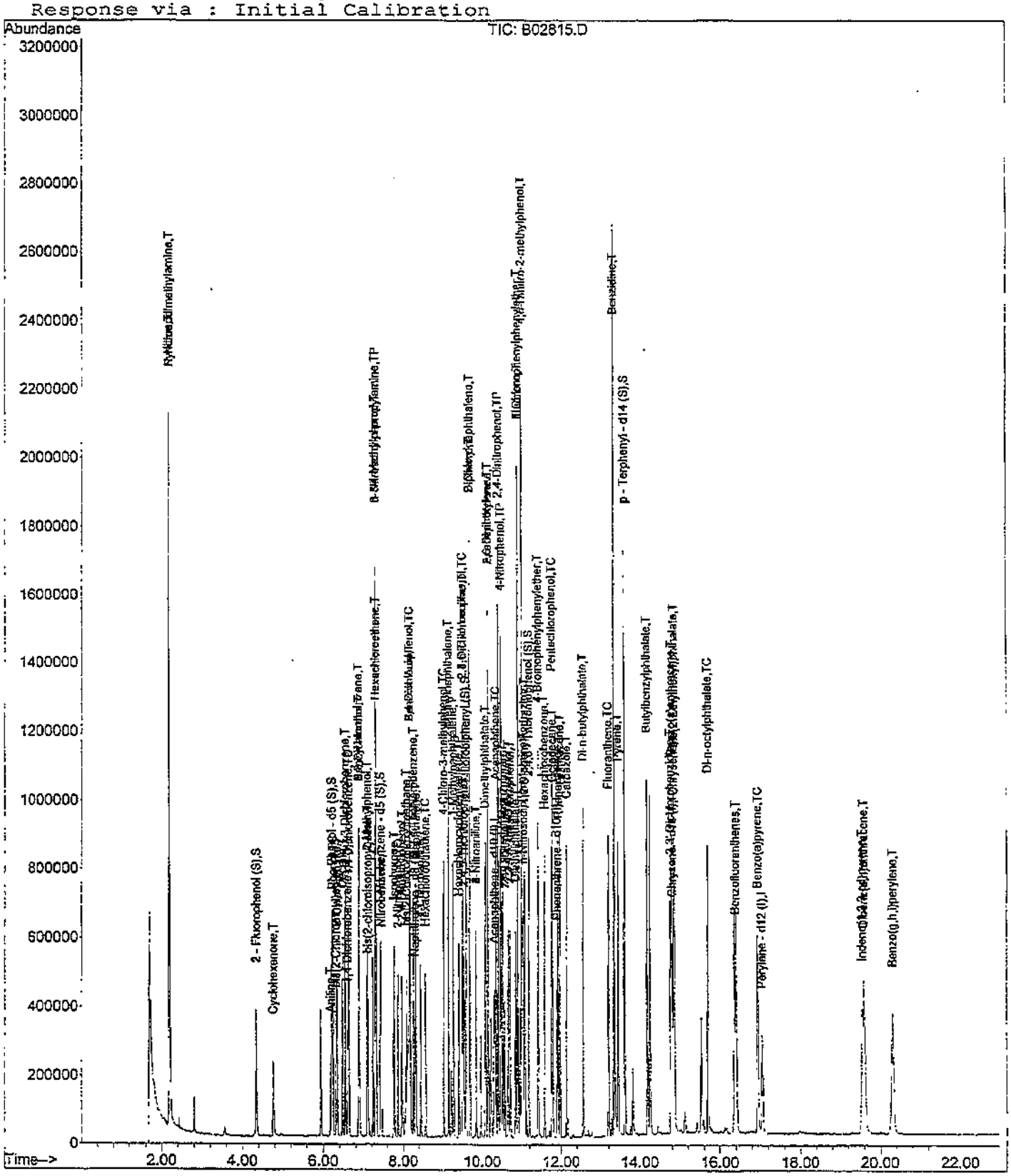
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Dimethylphthalate	10.08	163	363875	2626.95 ug/L	100
47)	Acenaphthylene	10.15	152	409958	2502.05 ug/L	76
48)	2,6-Dinitrotoluene	10.15	165	49782	2316.35 ug/L	95
49)	3-Nitroaniline	9.84	138	102828	3206.18 ug/L #	67
50)	Acenaphthene	10.35	153	233731	2333.61 ug/L	100
51)	2,4-Dinitrophenol	10.41	184	332491+	12949.78 ug/L	78
52)	4-Nitrophenol	10.47	109	101688	6457.78 ug/L #	26
53)	Dibenzofuran	10.53	168	283983	2306.24 ug/L	82
54)	2,4-Dinitrotoluene	10.57	165	90402	2703.07 ug/L	80
55)	2,3,4,6-Tetrachlorophenol	10.66	232	80381	2451.92 ug/L	86
56)	2,3,5,6-Tetrachlorophenol	10.71	232	98463	2620.81 ul/l	86
57)	Diethylphthalate	10.85	149	221106	1978.35 ug/L	31
58)	Fluorene	10.90	166	366133	3174.89 ug/L	70
59)	4-Chlorophenylphenylether	10.90	204	156581	2255.85 ug/L	89
60)	4-Nitroaniline	9.84	138	102828	3206.18 ug/L #	53
62)	4,6-Dinitro-2-methylphenol	11.01	198	453601	13023.08 ug/L	78
63)	n-Nitrosodiphenylamine	11.04	169	246698	2589.83 ug/L	79
65)	1,2-Diphenylhydrazine	11.07	182	97440	2622.56 ug/L	66
66)	4-Bromophenylphenylether	11.42	248	155805	2254.78 ug/L	87
67)	Hexachlorobenzene	11.58	284	116757	2278.74 ug/L	92
68)	Pentachlorophenol	11.77	266	88738	2536.82 ug/L	100
69)	Phenanthrene	11.93	178	394783	2367.60 ug/L	94
70)	Anthracene	11.97	178	430243	2618.20 ug/L	48
71)	Octadecane	11.78	57	154147	2136.80 ug/L	92
72)	Carbazole	12.15	167	410841	2551.40 ug/L	95
73)	Di-n-butylphthalate	12.57	149	419774	1958.37 ug/L	99
74)	Fluoranthene	13.20	202	499158	2312.96 ug/L	75
75)	Pyrene	13.45	202	491389	2375.32 ug/L	96
76)	Benzidine	13.35	184	1697968	6967.10 ug/L	100
79)	Butylbenzylphthalate	14.18	149	236874	2087.13 ug/L	95
80)	Benzo(a)anthracene	14.80	228	518129	2437.84 ug/L	99
81)	3,3'-Dichlorobenzidine	14.77	252	233504	2721.32 ug/L	96
82)	Chrysene	14.85	228	451052	2312.70 ug/L	91
83)	bis(2-Ethylhexyl)phthalate	14.87	149	321526	1798.14 ug/L	97
85)	Di-n-octylphthalate	15.71	149	658432	2187.01 ug/L	99
86)	Benzofluoranthenes	16.39	252	1077658	4871.02 ug/L	90
87)	Benzo(a)pyrene	16.95	252	507800	2444.88 ug/L	100
88)	Indeno(1,2,3-cd)pyrene	19.57	276	664691	2511.83 ug/L	88
89)	Dibenz(a,h)anthracene	19.61	278	577466	2580.94 ug/L	99
90)	Benzo(g,h,i)perylene	20.31	276	536725	2511.87 ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : U:\DATA\081104\B02815.D Vial: 0
Acq On : 11 Aug 2004 18:38 Operator: CLZ
Sample : 2500 UG/L 8270 ICAL STD NO 0980-88-8 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 10:12 2004 Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:20:02 2004
Response via : Initial Calibration



00225

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02816.D Vial: 0
Acq On : 11 Aug 2004 19:06 Operator: CLZ
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 13 13:24:00 2004 Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.60	152	45307	1000.00 ug/L	0.00
20) Naphthalene - d8 (I)	8.30	136	164213	1000.00 ug/L	0.00
36) Acenaphthene - d10 (I)	10.32	162	98993	1000.00 ug/L	-0.01
60) Phenanthrene - d10 (I)	11.90	188	179125	1000.00 ug/L	-0.01
77) Chrysene - d12 (I)	14.80	240	243499+	1000.00 ul/l	0.00
83) Perylene - d12 (I)	17.03	264	264584+	1000.00 ug/L	-0.03
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	0.00	112	0	0.00 ug/L	
6) Phenol - d5 (S)	0.00	99	0	0.00 ug/L	
21) Nitrobenzene - d5 (S)	0.00	82	0	0.00 ug/L	
41) 2 - Fluorobiphenyl (S)	0.00	172	0	0.00 ug/L	
63) 2,4,6 - Tribromophenol (S)	0.00	330	0	0.00 ug/L	
76) p - Terphenyl - d14 (S)	0.00	244	0	0.00 ug/L	
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.18	74	79541	3559.82 ug/L	90
3) Pyridine	2.20	79	305248+	4501.52 ug/L	99
5) Aniline	6.19	93	66794	1131.20 ug/L	100
7) Phenol	6.23	94	65846	903.57 ug/L	99
8) bis(2-Chloroethyl)ether	6.34	63	65052	978.22 ug/L	83
9) 2-Chlorophenol	6.34	128	64674	1018.01 ug/L	79
10) Decane	6.48	57	32187	870.24 ug/L	70
11) 1,3-Dichlorobenzene	6.54	146	59809	992.02 ug/L	58
12) 1,4-Dichlorobenzene	6.63	146	66420	1050.46 ug/L	87
13) Benzyl alcohol	6.88	79	70602	1000.09 ug/L	98
14) 1,2-Dichlorobenzene	6.89	146	52923	959.03 ug/L	67
15) 2-Methylphenol	7.09	108	50735	1172.96 ug/L	98
16) bis(2-chloroisopropyl)ethe	7.12	45	64254	1000.54 ug/L	87
17) 3-&4-Methylphenol	7.30	108	43920	937.35 ug/L	92
18) n-Nitroso-di-n-propylamine	7.30	70	41474	1053.50 ug/L	94
19) Hexachloroethane	7.32	117	29096	997.44 ug/L #	41
22) Nitrobenzene	7.45	77	56652	1006.10 ug/L	93
23) Isophorone	7.77	82	87739	970.46 ug/L	100
24) 2-Nitrophenol	7.87	139	28786	1080.82 ug/L	99
25) 2,4-Dimethylphenol	7.97	107	66848	1262.03 ug/L	89
26) bis(2-Chloroethoxy)methane	8.08	93	32667	997.68 ug/L #	11
27) Benzoic Acid	8.11	105	119573	3786.47 ug/L	100
28) 2,4-Dichlorophenol	8.16	162	53689	1079.45 ug/L	99
29) 1,2,4-Trichlorobenzene	8.26	180	45074	975.91 ug/L	100
30) Naphthalene	8.33	128	169663	1059.89 ug/L	86
31) 4-Chloroaniline	8.44	127	62615	1237.95 ug/L	100
32) Hexachlorobutadiene	8.57	225	28956	960.00 ug/L	88
33) 4-Chloro-3-methylphenol	9.02	107	96258+	984.45 ug/L	78
34) 2-Methylnaphthalene	9.14	141	84882	1005.91 ug/L	93
35) 1-Methylnaphthalene	9.27	141	81083	994.78 ul/l	88
37) Hexachlorocyclopentadiene	9.41	237	54501	952.33 ug/L	99
38) 2,3-Dichloroaniline	9.50	161	68942	977.68 ug/L	96
39) 2,4,6-Trichlorophenol	9.50	196	25570	996.08 ug/L	91
40) 2,4,5-Trichlorophenol	9.54	196	33859	913.39 ug/L	98
42) 2-Chloronaphthalene	9.69	162	87580	1046.26 ug/L	82
43) Biphenyl	9.68	154	129816	1000.02 ug/L	95
44) 2-Nitroaniline	9.84	138	37062	1172.64 ug/L	65
45) Dimethylphthalate	10.08	163	137145	1037.72 ug/L	100

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

00226

Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02816.D
Acq On : 11 Aug 2004 19:06
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 13:24:00 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Acenaphthylene	10.15	152	138545	892.57 ug/L	86
47)	2,6-Dinitrotoluene	10.15	165	22467	1115.32 ug/L	83
48)	3-Nitroaniline	9.84	138	37062	1172.64 ug/L	84
49)	Acenaphthene	10.36	153	96257	1024.32 ug/L	100
50)	2,4-Dinitrophenol	10.41	184	147688+	6041.46 ug/L	97
51)	4-Nitrophenol	10.48	109	72324	5208.49 ug/L	70
52)	Dibenzofuran	10.53	168	117266	1016.63 ug/L	81
53)	2,4-Dinitrotoluene	10.57	165	40684	1269.50 ug/L	75
54)	2,3,4,6-Tetrachlorophenol	10.66	232	35154	1135.18 ug/L	94
55)	2,3,5,6-Tetrachlorophenol	10.71	232	37266	1039.99 ul/l	92
56)	Diethylphthalate	10.84	149	95036	925.28 ug/L	80
57)	Fluorene	10.90	166	109461	969.34 ug/L	81
58)	4-Chlorophenylphenylether	10.90	204	69325	1069.31 ug/L	89
59)	4-Nitroaniline	9.84	138	37062	1172.64 ug/L	65
61)	4,6-Dinitro-2-methylphenol	11.00	198	164968	4760.62 ug/L	91
62)	n-Nitrosodiphenylamine	11.04	169	94003	992.74 ug/L	81
64)	1,2-Diphenylhydrazine	11.07	182	30862	834.05 ug/L	95
65)	4-Bromophenylphenylether	11.42	248	58254	864.55 ug/L	87
66)	Hexachlorobenzene	11.58	284	50626	1011.87 ug/L	94
67)	Pentachlorophenol	11.77	266	34962	1008.50 ug/L	100
68)	Phenanthrene	11.93	178	141524	863.93 ug/L	97
69)	Anthracene	11.97	178	156880	959.64 ug/L	54
70)	Octadecane	11.78	57	64225	919.29 ug/L	85
71)	Carbazole	12.15	167	159446	998.29 ug/L	99
72)	Di-n-butylphthalate	12.57	149	191924	934.28 ug/L	97
73)	Fluoranthene	13.20	202	192886	912.27 ug/L	81
74)	Pyrene	13.44	202	193491	951.67 ug/L	85
75)	Benzidine	13.34	184	231410	2187.37 ug/L	100
78)	Butylbenzylphthalate	14.17	149	101544	1005.93 ug/L	90
79)	Benzo(a)anthracene	14.78	228	203942	1056.67 ug/L	100
80)	3,3'-Dichlorobenzidine	14.76	252	198137	2503.25 ug/L	95
81)	Chrysene	14.83	228	172266	978.79 ug/L	99
82)	bis(2-Ethylhexyl)phthalate	14.85	149	160321	1025.38 ug/L	93
84)	Di-n-octylphthalate	15.68	149	261091	929.68 ug/L	96
85)	Benzofluoranthenes	16.36	252	411806	1966.07 ug/L	95
86)	Benzo(a)pyrene	16.92	252	191321	972.50 ug/L	100
87)	Indeno(1,2,3-cd)pyrene	19.52	276	254704	1012.78 ug/L	92
88)	Dibenz(a,h)anthracene	19.57	278	216929	1016.67 ug/L	96
89)	Benzo(g,h,i)perylene	20.27	276	210531	1036.74 ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

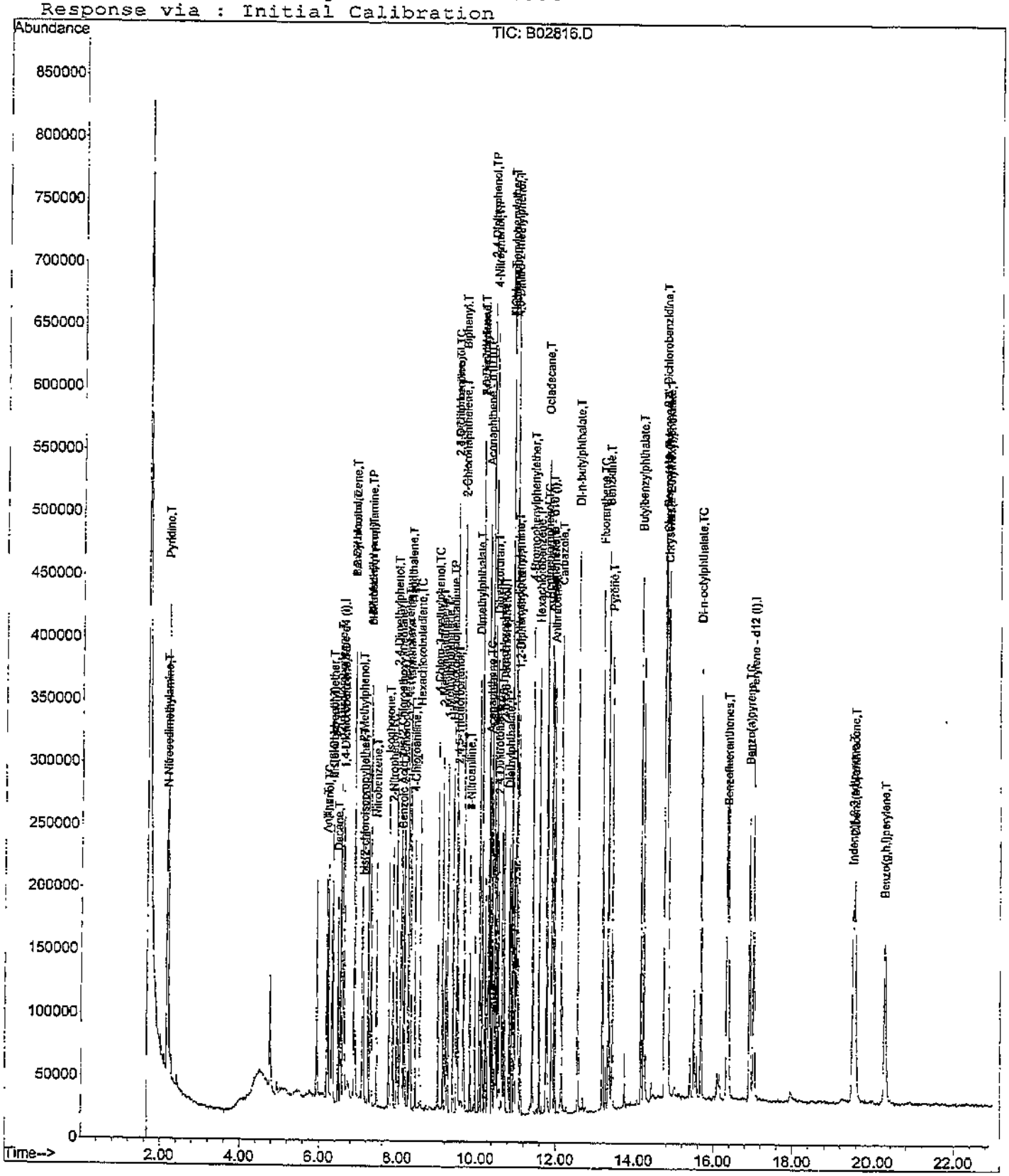
Quantitation Report (Not Reviewed)

Data File : U:\DATA\081104\B02816.D
Acq On : 11 Aug 2004 19:06
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6
Misc :
MS Integration Params: RTEINT.P
Quant Time: Aug 13 13:24 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : U:\DATA\081104\B02816.D
Acq On : 11 Aug 2004 19:06
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	94	0.00
2	T	N-Nitrosodimethylamine	0.493	0.351#	28.8#	66	0.00
3	T	Pyridine	1.497	1.347#	10.0	63	-0.02
4	S	2 - Fluorophenol (S)	1.592	0.000#	100.0#	0#	-4.33#
5	T	Aniline	1.303	1.474#	-13.1	98	-0.02
6	S	Phenol - d5 (S)	1.884	0.000#	100.0#	0#	-6.23#
7	TC	Phenol	1.608	1.453#	9.6	71	-0.02
8	T	bis(2-Chloroethyl)ether	1.468	1.436#	2.2	83	0.01
9	T	2-Chlorophenol	1.402	1.427#	-1.8	87	-0.01
10	T	Decane	0.816	0.710#	13.0	73	0.00
11	T	1,3-Dichlorobenzene	1.331	1.320#	0.8	89	0.00
12	TC	1,4-Dichlorobenzene	1.396	1.466#	-5.0	98	0.00
13	T	Benzyl alcohol	1.558	1.558#	0.0	85	0.00
14	T	1,2-Dichlorobenzene	1.218	1.168#	4.1	85	0.00
15	T	2-Methylphenol	0.955	1.120#	-17.3	100	0.00
16	T	bis(2-chloroisopropyl)ether	1.417	1.418#	-0.1	91	0.01
17	T	3-&4-Methylphenol	1.034	0.485#	53.1#	43#	0.02
18	TP	n-Nitroso-di-n-propylamine	0.869	0.915	-5.3	92	0.00
19	T	Hexachloroethane	0.644	0.642#	0.3	87	0.00
20	I	Naphthalene - d8 (I)	1.000	1.000	0.0	80	0.00
21	S	Nitrobenzene - d5 (S)	0.466	0.000#	100.0#	0#	-7.46#
22	T	Nitrobenzene	0.343	0.345#	-0.6	96	0.02
23	T	Isophorone	0.551	0.534#	3.1	95	0.00
24	TC	2-Nitrophenol	0.162	0.175#	-8.0	96	0.02
25	T	2,4-Dimethylphenol	0.323	0.407#	-26.0#	98	0.03
26	T	bis(2-Chloroethoxy)methane	0.199	0.199#	0.0	99	-0.01
27	T	Benzoic Acid	0.192	0.146#	24.0#	63	-0.02
28	TC	2,4-Dichlorophenol	0.303	0.327#	-7.9	101	0.00
29	T	1,2,4-Trichlorobenzene	0.281	0.274#	2.5	86	0.00
30	T	Naphthalene	0.975	1.033#	-5.9	97	0.00
31	T	4-Chloroaniline	0.308	0.381#	-23.7#	100	0.00
32	TC	Hexachlorobutadiene	0.184	0.176#	4.3	86	0.00
33	TC	4-Chloro-3-methylphenol	0.595	0.586#	1.5	88	0.00
34	T	2-Methylnaphthalene	0.514	0.517#	-0.6	88	-0.01
35	T	1-Methylnaphthalene	0.496	0.494#	0.4	96	0.00
36	I	Acenaphthene - d10 (I)	1.000	1.000	0.0	86	-0.01
37	TP	Hexachlorocyclopentadiene	0.578	0.551	4.7	85	-0.01
38	T	2,3-Dichloroaniline	0.712	0.696#	2.2	81	-0.02
39	TC	2,4,6-Trichlorophenol	0.259	0.258#	0.4	85	0.00
40	T	2,4,5-Trichlorophenol	0.374	0.342#	8.6	77	0.00
41	S	2 - Fluorobiphenyl (S)	1.301	0.000#	100.0#	0#	-9.59#
42	T	2-Chloronaphthalene	0.846	0.885#	-4.6	98	-0.03
43	T	Biphenyl	1.311	1.311#	0.0	91	-0.02
44	T	2-Nitroaniline	0.319	0.374#	-17.2	94	-0.01
45	T	Dimethylphthalate	1.335	1.385#	-3.7	77	0.00
46	T	Acenaphthylene	1.568	1.400#	10.7	81	-0.03
47	T	2,6-Dinitrotoluene	0.203	0.227#	-11.8	91	-0.01
48	T	3-Nitroaniline	0.319	0.374#	-17.2	94	-0.01
49	TC	Acenaphthene	0.949	0.972#	-2.4	87	0.00
50	TP	2,4-Dinitrophenol	0.247	0.298	-20.6#	94	0.00
51	TP	4-Nitrophenol	0.140	0.146	-4.3	89	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : U:\DATA\081104\B02816.D Vial: 0
Acq On : 11 Aug 2004 19:06 Operator: CLZ
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	T	Dibenzofuran	1.165	1.185#	-1.7	90	-0.01
53	T	2,4-Dinitrotoluene	0.324	0.411#	-26.9#	99	-0.01
54	T	2,3,4,6-Tetrachlorophenol	0.313	0.355#	-13.4	94	0.00
55	T	2,3,5,6-Tetrachlorophenol	0.362	0.376#	-3.9	86	-0.01
56	T	Diethylphthalate	1.038	0.960#	7.5	78	-0.01
57	T	Fluorene	1.141	1.106#	3.1	83	-0.04
58	T	4-Chlorophenylphenylether	0.655	0.700#	-6.9	92	-0.03
59	T	4-Nitroaniline	0.319	0.374#	-17.2	94	-0.02
60	I	Phenanthrene - d10 (I)	1.000	1.000	0.0	93	-0.01
61	T	4,6-Dinitro-2-methylphenol	0.193	0.184#	4.7	91	0.00
62	T	n-Nitrosodiphenylamine	0.529	0.525#	0.8	95	0.00
63	S	2,4,6 - Tribromophenol (S)	0.281	0.000#	100.0#	0#	-11.18#
64	T	1,2-Diphenylhydrazine	0.207	0.172#	16.9	83	0.00
65	T	4-Bromophenylphenylether	0.376	0.325#	13.6	84	0.00
66	T	Hexachlorobenzene	0.279	0.283#	-1.4	114	-0.01
67	TC	Pentachlorophenol	0.194	0.195#	-0.5	94	-0.04
68	T	Phenanthrene	0.915	0.790#	13.7	84	0.00
69	T	Anthracene	0.913	0.876#	4.1	95	-0.01
70	T	Octadecane	0.390	0.359#	7.9	82	0.00
71	T	Carbazole	0.892	0.890#	0.2	96	-0.04
72	T	Di-n-butylphthalate	1.147	1.071#	6.6	91	0.00
73	TC	Fluoranthene	1.180	1.077#	8.7	88	-0.02
74	T	Pyrene	1.135	1.080#	4.8	97	-0.01
75	T	Benzidine	0.591	0.258#	56.3#	38#	-0.01
76	S	p - Terphenyl - d14 (S)	1.358	0.000#	100.0#	0#	-13.61#
77	I	Chrysene - d12 (I)	1.000	1.000	0.0	90	0.00
78	T	Butylbenzylphthalate	0.415	0.417#	-0.5	93	0.00
79	T	Benzo(a)anthracene	0.793	0.838#	-5.7	90	0.00
80	T	3,3'-Dichlorobenzidine	0.325	0.814#	-150.5#	211#	-0.03
81	T	Chrysene	0.723	0.707#	2.2	88	0.00
82	T	bis(2-Ethylhexyl)phthalate	0.642	0.658#	-2.5	95	0.00
83	I	Perylene - d12 (I)	1.000	1.000	0.0	89	-0.03
84	TC	Di-n-octylphthalate	1.061	0.987#	7.0	86	0.06
85	T	Benzofluoranthenes	0.792	0.778#	1.8	89	-0.02
86	TC	Benzo(a)pyrene	0.744	0.723#	2.8	89	-0.03
87	T	Indeno(1,2,3-cd)pyrene	0.951	0.963#	-1.3	89	-0.09
88	T	Dibenz(a,h)anthracene	0.806	0.820#	-1.7	91	0.00
89	T	Benzo(g,h,i)perylene	0.768	0.796#	-3.6	91	-0.03

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

00230

Evaluate Continuing Calibration Report

Data File : U:\DATA\081104\B02816.D
Acq On : 11 Aug 2004 19:06
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1000.000	1000.000	0.0	94	0.00
2	T	N-Nitrosodimethylamine	5000.000	3559.821	28.8#	66	0.00
3	T	Pyridine	5000.000	4501.515	10.0	63	-0.02
4	S	2 - Fluorophenol (S)	1000.000	0.000	100.0#	0	-4.33#
5	T	Aniline	1000.000	1131.196	-13.1	98	-0.02
6	S	Phenol - d5 (S)	1000.000	0.000	100.0#	0	-6.23#
7	TC	Phenol	1000.000	903.568	9.6	71	-0.02
8	T	bis(2-Chloroethyl)ether	1000.000	978.219	2.2	83	0.01
9	T	2-Chlorophenol	1000.000	1018.011	-1.8	87	-0.01
10	T	Decane	1000.000	870.236	13.0	73	0.00
11	T	1,3-Dichlorobenzene	1000.000	992.024	0.8	89	0.00
12	TC	1,4-Dichlorobenzene	1000.000	1050.462	-5.0	98	0.00
13	T	Benzyl alcohol	1000.000	1000.092	-0.0	85	0.00
14	T	1,2-Dichlorobenzene	1000.000	959.029	4.1	85	0.00
15	T	2-Methylphenol	1000.000	1172.955	-17.3	100	0.00
16	T	bis(2-chloroisopropyl)ether	1000.000	1000.540	-0.1	91	0.01
17	T	3-&4-Methylphenol	2000.000	937.348	53.1#	43	0.02
18	TP	n-Nitroso-di-n-propylamine	1000.000	1053.501	-5.4	92	0.00
19	T	Hexachloroethane	1000.000	997.444	0.3	87	0.00
20	I	Naphthalene - d8 (I)	1000.000	1000.000	0.0	80	0.00
21	S	Nitrobenzene - d5 (S)	1000.000	0.000	100.0#	0	-7.46#
22	T	Nitrobenzene	1000.000	1006.097	-0.6	96	0.02
23	T	Isophorone	1000.000	970.461	3.0	95	0.00
24	TC	2-Nitrophenol	1000.000	1080.821	-8.1	96	0.02
25	T	2,4-Dimethylphenol	1000.000	1262.028	-26.2#	98	0.03
26	T	bis(2-Chloroethoxy)methane	1000.000	997.677	0.2	99	-0.01
27	T	Benzoic Acid	5000.000	3786.468	24.3#	63	-0.02
28	TC	2,4-Dichlorophenol	1000.000	1079.454	-7.9	101	0.00
29	T	1,2,4-Trichlorobenzene	1000.000	975.911	2.4	86	0.00
30	T	Naphthalene	1000.000	1059.894	-6.0	97	0.00
31	T	4-Chloroaniline	1000.000	1237.952	-23.8#	100	0.00
32	TC	Hexachlorobutadiene	1000.000	960.001	4.0	86	0.00
33	TC	4-Chloro-3-methylphenol	1000.000	984.451	1.6	88	0.00
34	T	2-Methylnaphthalene	1000.000	1005.913	-0.6	88	-0.01
35	T	1-Methylnaphthalene	1000.000	994.776	0.5	96	0.00
36	I	Acenaphthene - d10 (I)	1000.000	1000.000	0.0	86	-0.01
37	TP	Hexachlorocyclopentadiene	1000.000	952.331	4.8	85	-0.01
38	T	2,3-Dichloroaniline	1000.000	977.685	2.2	81	-0.02
39	TC	2,4,6-Trichlorophenol	1000.000	996.085	0.4	85	0.00
40	T	2,4,5-Trichlorophenol	1000.000	913.389	8.7	77	0.00
41	S	2 - Fluorobiphenyl (S)	1000.000	0.000	100.0#	0	-9.59#
42	T	2-Chloronaphthalene	1000.000	1046.257	-4.6	98	-0.03
43	T	Biphenyl	1000.000	1000.023	-0.0	91	-0.02
44	T	2-Nitroaniline	1000.000	1172.642	-17.3	94	-0.01
45	T	Dimethylphthalate	1000.000	1037.723	-3.8	77	0.00
46	T	Acenaphthylene	1000.000	892.574	10.7	81	-0.03
47	T	2,6-Dinitrotoluene	1000.000	1115.320	-11.5	91	-0.01
48	T	3-Nitroaniline	1000.000	1172.642	-17.3	94	-0.01
49	TC	Acenaphthene	1000.000	1024.318	-2.4	87	0.00
50	TP	2,4-Dinitrophenol	5000.000	6041.460	-20.8#	94	0.00
51	TP	4-Nitrophenol	5000.000	5208.494	-4.2	89	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : U:\DATA\081104\B02816.D Vial: 0
Acq On : 11 Aug 2004 19:06 Operator: CLZ
Sample : 1000 UG/L 8270 OCS STD NO 0980-89-6 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Fri Aug 13 13:23:56 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	T	Dibenzofuran	1000.000	1016.625	-1.7	90	-0.01
53	T	2,4-Dinitrotoluene	1000.000	1269.503	-27.0#	99	-0.01
54	T	2,3,4,6-Tetrachlorophenol	1000.000	1135.178	-13.5	94	0.00
55	T	2,3,5,6-Tetrachlorophenol	1000.000	1039.988	-4.0	86	-0.01
56	T	Diethylphthalate	1000.000	925.281	7.5	78	-0.01
57	T	Fluorene	1000.000	969.342	3.1	83	-0.04
58	T	4-Chlorophenylphenylether	1000.000	1069.310	-6.9	92	-0.03
59	T	4-Nitroaniline	1000.000	1172.642	-17.3	94	-0.02
60	I	Phenanthrene - d10 (I)	1000.000	1000.000	0.0	93	-0.01
61	T	4,6-Dinitro-2-methylphenol	5000.000	4760.620	4.8	91	0.00
62	T	n-Nitrosodiphenylamine	1000.000	992.741	0.7	95	0.00
63	S	2,4,6 - Tribromophenol (S)	1000.000	0.000	100.0#	0	-11.18#
64	T	1,2-Diphenylhydrazine	1000.000	834.053	16.6	83	0.00
65	T	4-Bromophenylphenylether	1000.000	864.549	13.5	84	0.00
66	T	Hexachlorobenzene	1000.000	1011.868	-1.2	114	-0.01
67	TC	Pentachlorophenol	1000.000	1008.500	-0.9	94	-0.04
68	T	Phenanthrene	1000.000	863.929	13.6	84	0.00
69	T	Anthracene	1000.000	959.642	4.0	95	-0.01
70	T	Octadecane	1000.000	919.294	8.1	82	0.00
71	T	Carbazole	1000.000	998.291	0.2	96	-0.04
72	T	Di-n-butylphthalate	1000.000	934.277	6.6	91	0.00
73	TC	Fluoranthene	1000.000	912.270	8.8	88	-0.02
74	T	Pyrene	1000.000	951.671	4.8	97	-0.01
75	T	Benzidine	5000.000	2187.371	56.3#	38	-0.01
76	S	p - Terphenyl - d14 (S)	1000.000	0.000	100.0#	0	-13.61#
77	I	Chrysene - d12 (I)	1000.000	1000.000	0.0	90	0.00
78	T	Butylbenzylphthalate	1000.000	1005.927	-0.6	93	0.00
79	T	Benzo(a)anthracene	1000.000	1056.665	-5.7	90	0.00
80	T	3,3'-Dichlorobenzidine	1000.000	2503.255	-150.3#	211	-0.03
81	T	Chrysene	1000.000	978.790	2.1	88	0.00
82	T	bis(2-Ethylhexyl)phthalate	1000.000	1025.383	-2.5	95	0.00
83	I	Perylene - d12 (I)	1000.000	1000.000	0.0	89	-0.03
84	TC	Di-n-octylphthalate	1000.000	929.685	7.0	86	0.06
85	T	Benzofluoranthenes	2000.000	1966.075	1.7	89	-0.02
86	TC	Benzo(a)pyrene	1000.000	972.504	2.7	89	-0.03
87	T	Indeno(1,2,3-cd)pyrene	1000.000	1012.781	-1.3	89	-0.09
88	I	Dibenz(a,h)anthracene	1000.000	1016.673	-1.7	91	0.00
89	T	Benzo(g,h,i)perylene	1000.000	1036.741	-3.7	91	-0.03

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

CONTINUING CALIBRATION

Injection Log

Directory: u:\DATA\092004

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		B02976.d	1.	DFTPP 9/20/04		20 Sep 2004 26:13
2		B02977.d	1.	1000 UG/L 8270 CCAL STD N...		20 Sep 2004 27:08
3		B02978.d	1.	SS1197 MB #20.0000 &2.0 ...		20 Sep 2004 27:36
4		B02979.d	1.	SS1197 BS #20.0000 &2.0 ...		20 Sep 2004 28:04
5		B02980.d	1.	SS1197 BSD #20.0000 &2.0 ...		20 Sep 2004 28:32
6		B02981.d	1.	123627-1 SS1197 &2.0 ...		20 Sep 2004 29:00
7		B02982.d	1.	123627-1 MS SS1197 &2.0 ...		20 Sep 2004 29:29
8		B02983.d	1.	123627-1 MSD SS1197 &2.0 ...		20 Sep 2004 29:57
9		B02984.d	1.	SW0985 MB #1000 &10 WATER		20 Sep 2004 30:25
10		B02985.d	1.	SW0985 BS #1000 &10 WATER		20 Sep 2004 30:53
11		B02986.d	1.	SW0985 BSD #1000 &10 WATER		20 Sep 2004 31:21
12		B02987.d	1.	123540-1 SW0985 &10 WATE...		20 Sep 2004 31:49
13		B02988.d	1.	123540-1 SW0985 &10 WATE...		20 Sep 2004 32:18

Quantitation Report (QT Reviewed)

Data File : U:\DATA\092004\B02977.D Vial: 0
Acq On : 20 Sep 2004 15:08 Operator: CLZ
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 08:17:12 2004 Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	6.73	152	83010	1000.00 ug/L	0.00
20) Naphthalene - d8 (I)	8.42	136	337606	1000.00 ug/L	0.00
36) Acenaphthene - d10 (I)	10.43	162	200404	1000.00 ug/L	0.00
60) Phenanthrene - d10 (I)	12.01	188	280421	1000.00 ug/L	0.00
77) Chrysene - d12 (I)	14.96	240	388666+	1000.00 ul/l	0.00
83) Perylene - d12 (I)	17.28	264	412676+	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.59	112	18642	141.05 ug/L	0.00
6) Phenol - d5 (S)	6.34	99	132842	849.40 ug/L	0.00
21) Nitrobenzene - d5 (S)	7.55	82	120252	764.74 ug/L	-0.01
41) 2 - Fluorobiphenyl (S)	9.69	172	211333	810.43 ug/L	0.00
63) 2,4,6 - Tribromophenol (S)	11.29	330	74027	940.38 ug/L	0.01
76) p - Terphenyl - d14 (S)	13.73	244	288695	757.84 ug/L	0.00

Target Compounds					Qvalue
2) N-Nitrosodimethylamine	2.30	74	55954	1366.79 ug/L	94
3) Pyridine	2.32	79	120828+	972.54 ug/L	82
5) Aniline	6.32	93	112905	1043.63 ug/L	100
7) Phenol	6.36	94	143912	1077.86 ug/L	49
8) bis(2-Chloroethyl)ether	6.47	63	146692	1203.97 ug/L	74
9) 2-Chlorophenol	6.47	128	122509	1052.51 ug/L	73
10) Decane	6.60	57	51118	754.34 ug/L	65
11) 1,3-Dichlorobenzene	6.67	146	118365	1071.55 ug/L	80
12) 1,4-Dichlorobenzene	6.76	146	126735	1093.99 ug/L	98
13) Benzyl alcohol	7.00	79	154434	1193.99 ug/L	79
14) 1,2-Dichlorobenzene	7.02	146	126169	1247.89 ug/L	88
15) 2-Methylphenol	7.21	108	81547	1029.00 ug/L	78
16) bis(2-chloroisopropyl)ethe	7.23	45	127372	1082.54 ug/L	99
17) 3-&4-Methylphenol	7.41	108	141570	1649.09 ug/L	82
18) n-Nitroso-di-n-propylamine	7.41	70	88050	1220.74 ug/L	100
19) Hexachloroethane	7.44	117	66204	1238.72 ug/L	88
22) Nitrobenzene	7.57	77	108326	935.74 ug/L	83
23) Isophorone	7.88	82	165451	890.13 ug/L	100
24) 2-Nitrophenol	7.98	139	57740	1054.50 ug/L	96
25) 2,4-Dimethylphenol	8.07	107	111216	1021.28 ug/L	96
26) bis(2-Chloroethoxy)methane	8.19	93	57247	850.41 ug/L #	15
27) Benzoic Acid	8.22	105	338554	5214.67 ug/L	100
28) 2,4-Dichlorophenol	8.27	162	92175	901.42 ug/L	84
29) 1,2,4-Trichlorobenzene	8.37	180	89043	937.74 ug/L	100
30) Naphthalene	8.44	128	343702	1044.37 ug/L	89
31) 4-Chloroaniline	8.55	127	102588	986.55 ug/L	100
32) Hexachlorobutadiene	8.67	225	61872	997.76 ug/L	92
33) 4-Chloro-3-methylphenol	9.12	107	200572+	997.76 ug/L	83
34) 2-Methylnaphthalene	9.25	141	164001	945.34 ug/L	99
35) 1-Methylnaphthalene	9.37	141	167652	1000.46 ul/l	86
37) Hexachlorocyclopentadiene	9.52	237	118939	1026.61 ug/L	95
38) 2,3-Dichloroaniline	9.61	161	141236	989.37 ug/L	94
39) 2,4,6-Trichlorophenol	9.60	196	57145	1099.62 ug/L	90
40) 2,4,5-Trichlorophenol	9.64	196	73609	980.87 ug/L	99
42) 2-Chloronaphthalene	9.80	162	166872	984.73 ug/L	75
43) Biphenyl	9.79	154	288717	1098.63 ug/L	91
44) 2-Nitroaniline	9.95	138	61050	954.16 ug/L	57
45) Dimethylphthalate	10.18	163	280920	1049.98 ug/L	100

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

00235

Quantitation Report (QT Reviewed)

Data File : U:\DATA\092004\B02977.D Vial: 0
Acq On : 20 Sep 2004 15:08 Operator: CLZ
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 08:17:12 2004 Quant Results File: 081104.RES

Quant Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Acenaphthylene	10.26	152	289426	921.06 ug/L	63
47)	2,6-Dinitrotoluene	10.25	165	47345	1160.98 ug/L	84
48)	3-Nitroaniline	9.95	138	61050	954.16 ug/L	80
49)	Acenaphthene	10.46	153	191515	1006.71 ug/L	100
50)	2,4-Dinitrophenol	10.51	184	221525+	4476.28 ug/L	90
51)	4-Nitrophenol	10.57	109	128758	4580.39 ug/L	81
52)	Dibenzofuran	10.64	168	210433	901.16 ug/L	82
53)	2,4-Dinitrotoluene	10.67	165	67064	1033.71 ug/L	77
54)	2,3,4,6-Tetrachlorophenol	10.77	232	65512	1044.98 ug/L	100
55)	2,3,5,6-Tetrachlorophenol	10.81	232	66084	910.98 ul/l	63
56)	Diethylphthalate	10.94	149	190038	913.95 ug/L	85
57)	Fluorene	11.01	166	230300	1007.42 ug/L	78
58)	4-Chlorophenylphenylether	11.01	204	127623	972.39 ug/L	88
59)	4-Nitroaniline	9.95	138	61050	954.16 ug/L	57
61)	4,6-Dinitro-2-methylphenol	11.11	198	266238	4907.72 ug/L	93
62)	n-Nitrosodiphenylamine	11.14	169	171282	1155.45 ug/L	83
64)	1,2-Diphenylhydrazine	11.18	182	67132	1158.90 ug/L	83
65)	4-Bromophenylphenylether	11.53	248	107058	1014.91 ug/L	88
66)	Hexachlorobenzene	11.69	284	90838	1159.75 ug/L	95
67)	Pentachlorophenol	11.87	266	57829	1065.54 ug/L	100
68)	Phenanthrene	12.04	178	264005	1029.45 ug/L	74
69)	Anthracene	12.08	178	289256	1130.24 ug/L	96
70)	Octadecane	11.88	57	112682	1030.27 ug/L	91
71)	Carbazole	12.26	167	236942	947.61 ug/L	96
72)	Di-n-butylphthalate	12.67	149	335122	1042.07 ug/L	99
73)	Fluoranthene	13.32	202	331627	1001.89 ug/L	77
74)	Pyrene	13.57	202	314142	986.96 ug/L	90
75)	Benzidine	13.46	184	836423	5050.24 ug/L	100
78)	Butylbenzylphthalate	14.29	149	163344	1013.76 ug/L	90
79)	Benzo(a)anthracene	14.93	228	318351	1033.37 ug/L	97
80)	3,3'-Dichlorobenzidine	14.90	252	134213	1062.32 ug/L	94
81)	Chrysene	14.99	228	276830	985.43 ug/L	95
82)	bis(2-Ethylhexyl)phthalate	15.00	149	243152	974.30 ug/L	36
84)	Di-n-octylphthalate	15.86	149	438163	1000.31 ug/L	100
85)	Benzofluoranthenes	16.59	252	679072	2078.63 ug/L	99
86)	Benzo(a)pyrene	17.17	252	327403	1067.00 ug/L	100
87)	Indeno(1,2,3-cd)pyrene	19.91	276	324409	827.04 ug/L	100
88)	Dibenz(a,h)anthracene	19.95	278	333858	1003.18 ug/L	85
89)	Benzo(g,h,i)perylene	20.68	276	336664	1062.93 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

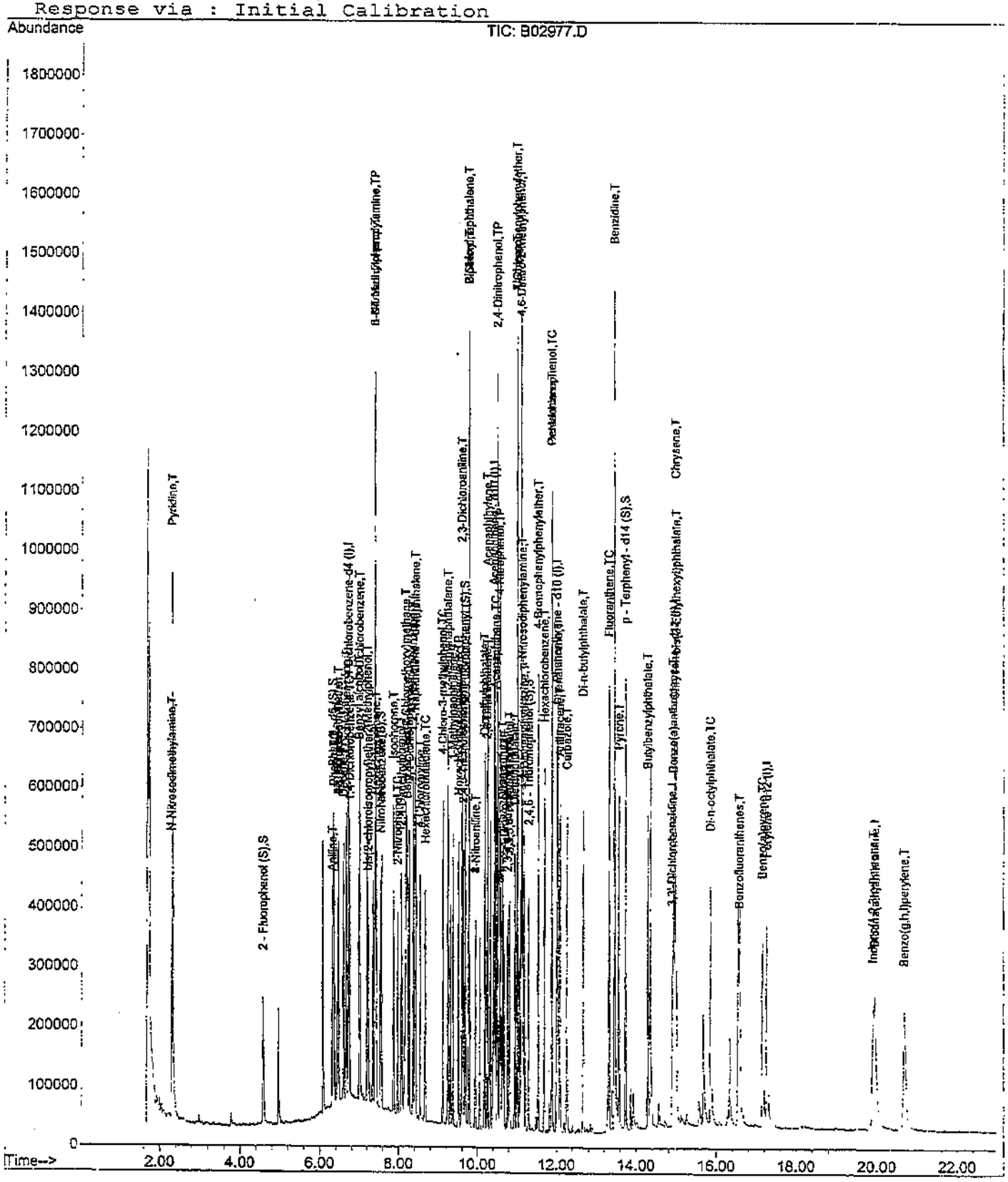
00236

Quantitation Report (QT Reviewed)

Data File : U:\DATA\092004\B02977.D
Acq On : 20 Sep 2004 15:08
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 8:17 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: 081104.RES

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Initial Calibration



00237

Evaluate Continuing Calibration Report

Data File : U:\DATA\092004\B02977.D
Acq On : 20 Sep 2004 15:08
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	172	0.00
2	T	N-Nitrosodimethylamine	0.493	0.135#	72.6#	46#	0.00
3	T	Pyridine	1.497	0.291#	80.6#	25#	0.00
4	S	2 - Fluorophenol (S)	1.592	0.225#	85.9#	28#	0.00
5	T	Aniline	1.303	1.360#	-4.4	165	0.00
6	S	Phenol - d5 (S)	1.884	1.600#	15.1	175	0.00
7	TC	Phenol	1.608	1.734#	-7.8	156	0.00
8	T	bis(2-Chloroethyl)ether	1.468	1.767#	-20.4#	187	0.02
9	T	2-Chlorophenol	1.402	1.476#	-5.3	165	0.00
10	T	Decane	0.816	0.616#	24.5#	116	0.00
11	T	1,3-Dichlorobenzene	1.331	1.426#	-7.1	177	0.00
12	TC	1,4-Dichlorobenzene	1.396	1.527#	-9.4	186	0.00
13	T	Benzyl alcohol	1.558	1.860#	-19.4	185	0.00
14	T	1,2-Dichlorobenzene	1.218	1.520#	-24.8#	202#	0.00
15	T	2-Methylphenol	0.955	0.982#	-2.8	160	-0.02
16	T	bis(2-chloroisopropyl)ether	1.417	1.534#	-8.3	180	0.00
17	T	3-&4-Methylphenol	1.034	0.853#	17.5	140	-0.07
18	TP	n-Nitroso-di-n-propylamine	0.869	1.061	-22.1#	196	-0.02
19	T	Hexachloroethane	0.644	0.798#	-23.9#	197	0.00
20	I	Naphthalene - d8 (I)	1.000	1.000	0.0	165	0.00
21	S	Nitrobenzene - d5 (S)	0.466	0.356#	23.6#	185	-0.01
22	T	Nitrobenzene	0.343	0.321#	6.4	183	0.04
23	T	Isophorone	0.551	0.490#	11.1	180	0.00
24	TC	2-Nitrophenol	0.162	0.171#	-5.6	193	0.03
25	T	2,4-Dimethylphenol	0.323	0.329#	-1.9	163	-0.02
26	T	bis(2-Chloroethoxy)methane	0.199	0.170#	14.6	173	-0.01
27	T	Benzoic Acid	0.192	0.201#	-4.7	178	-0.02
28	TC	2,4-Dichlorophenol	0.303	0.273#	9.9	173	0.00
29	T	1,2,4-Trichlorobenzene	0.281	0.264#	6.0	170	0.00
30	T	Naphthalene	0.975	1.018#	-4.4	196	0.00
31	T	4-Chloroaniline	0.308	0.304#	1.3	164	-0.01
32	TC	Hexachlorobutadiene	0.184	0.183#	0.5	183	-0.01
33	TC	4-Chloro-3-methylphenol	0.595	0.594#	0.2	184	-0.02
34	T	2-Methylnaphthalene	0.514	0.486#	5.4	169	-0.02
35	T	1-Methylnaphthalene	0.496	0.497#	-0.2	198	-0.02
36	I	Acenaphthene - d10 (I)	1.000	1.000	0.0	174	0.00
37	TP	Hexachlorocyclopentadiene	0.578	0.593	-2.6	184	0.00
38	T	2,3-Dichloroaniline	0.712	0.705#	1.0	166	0.00
39	TC	2,4,6-Trichlorophenol	0.259	0.285#	-10.0	189	0.00
40	T	2,4,5-Trichlorophenol	0.374	0.367#	1.9	168	0.00
41	S	2 - Fluorobiphenyl (S)	1.301	1.055#	18.9	173	0.00
42	T	2-Chloronaphthalene	0.846	0.833#	1.5	187	-0.01
43	T	Biphenyl	1.311	1.441#	-9.9	202#	0.00
44	T	2-Nitroaniline	0.319	0.305#	4.4	155	0.00
45	T	Dimethylphthalate	1.335	1.402#	-5.0	157	0.00
46	T	Acenaphthylene	1.568	1.444#	7.9	169	-0.05
47	T	2,6-Dinitrotoluene	0.203	0.236#	-16.3	192	0.00
48	T	3-Nitroaniline	0.319	0.305#	4.4	155	0.00
49	TC	Acenaphthene	0.949	0.956#	-0.7	173	0.00
50	TP	2,4-Dinitrophenol	0.247	0.221	10.5	140	0.00
51	TP	4-Nitrophenol	0.140	0.128	8.6	158	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : U:\DATA\092004\B02977.D
Acq On : 20 Sep 2004 15:08
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	T	Dibenzofuran	1.165	1.050#	9.9	162	0.00
53	T	2,4-Dinitrotoluene	0.324	0.335#	-3.4	163	-0.01
54	T	2,3,4,6-Tetrachlorophenol	0.313	0.327#	-4.5	175	0.00
55	T	2,3,5,6-Tetrachlorophenol	0.362	0.330#	8.8	153	0.00
56	T	Diethylphthalate	1.038	0.948#	8.7	155	-0.01
57	T	Fluorene	1.141	1.149#	-0.7	174	-0.03
58	T	4-Chlorophenylphenylether	0.655	0.637#	2.7	169	-0.03
59	T	4-Nitroaniline	0.319	0.305#	4.4	155	0.00
60	I	Phenanthrene - d10 (I)	1.000	1.000	0.0	145	0.00
61	T	4,6-Dinitro-2-methylphenol	0.193	0.190#	1.6	147	0.00
62	T	n-Nitrosodiphenylamine	0.529	0.611#	-15.5	173	0.00
63	S	2,4,6 - Tribromophenol (S)	0.281	0.264#	6.0	165	0.01
64	T	1,2-Diphenylhydrazine	0.207	0.239#	-15.5	179	0.00
65	T	4-Bromophenylphenylether	0.376	0.382#	-1.6	155	0.00
66	T	Hexachlorobenzene	0.279	0.324#	-16.1	204#	0.00
67	TC	Pentachlorophenol	0.194	0.206#	-6.2	156	0.00
68	T	Phenanthrene	0.915	0.941#	-2.8	156	0.00
69	T	Anthracene	0.913	1.032#	-13.0	176	0.00
70	T	Octadecane	0.390	0.402#	-3.1	145	0.00
71	T	Carbazole	0.892	0.845#	5.3	142	-0.03
72	T	Di-n-butylphthalate	1.147	1.195#	-4.2	158	-0.02
73	TC	Fluoranthene	1.180	1.183#	-0.3	152	-0.01
74	T	Pyrene	1.135	1.120#	1.3	158	0.00
75	T	Benzidine	0.591	0.597#	-1.0	139	0.00
76	S	p - Terphenyl - d14 (S)	1.358	1.030#	24.2#	152	0.00
77	I	Chrysene - d12 (I)	1.000	1.000	0.0	144	0.00
78	T	Butylbenzylphthalate	0.415	0.420#	-1.2	150	-0.03
79	T	Benzo(a)anthracene	0.793	0.819#	-3.3	141	0.02
80	T	3,3'-Dichlorobenzidine	0.325	0.345#	-6.2	143	-0.02
81	T	Chrysene	0.723	0.712#	1.5	141	0.03
82	T	bis(2-Ethylhexyl)phthalate	0.642	0.626#	2.5	144	0.00
83	I	Perylene - d12 (I)	1.000	1.000	0.0	139	0.00
84	TC	Di-n-octylphthalate	1.061	1.062#	-0.1	145	-0.06
85	T	Benzofluoranthenes	0.792	0.823#	-3.9	147	-0.03
86	TC	Benzo(a)pyrene	0.744	0.793#	-6.6	152	-0.01
87	T	Indeno(1,2,3-cd)pyrene	0.951	0.786#	17.4	114	0.11
88	T	Dibenz(a,h)anthracene	0.806	0.809#	-0.4	139	0.09
89	T	Benzo(g,h,i)perylene	0.768	0.816#	-6.2	145	0.00

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

00239

Evaluate Continuing Calibration Report

Data File : U:\DATA\092004\B02977.D
Acq On : 20 Sep 2004 15:08
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1000.000	1000.000	0.0	172	0.00
2	T	N-Nitrosodimethylamine	5000.000	1366.794	72.7#	46	0.00
3	T	Pyridine	5000.000	972.542	80.5#	25	0.00
4	S	2 - Fluorophenol (S)	1000.000	141.049	85.9#	28	0.00
5	T	Aniline	1000.000	1043.634	-4.4	165	0.00
6	S	Phenol - d5 (S)	1000.000	849.405	15.1	175	0.00
7	TC	Phenol	1000.000	1077.862	-7.8	156	0.00
8	T	bis(2-Chloroethyl)ether	1000.000	1203.973	-20.4#	187	0.02
9	T	2-Chlorophenol	1000.000	1052.508	-5.3	165	0.00
10	T	Decane	1000.000	754.337	24.6#	116	0.00
11	T	1,3-Dichlorobenzene	1000.000	1071.554	-7.2	177	0.00
12	TC	1,4-Dichlorobenzene	1000.000	1093.989	-9.4	186	0.00
13	T	Benzyl alcohol	1000.000	1193.990	-19.4	185	0.00
14	T	1,2-Dichlorobenzene	1000.000	1247.885	-24.8#	202	0.00
15	T	2-Methylphenol	1000.000	1029.003	-2.9	160	-0.02
16	T	bis(2-chloroisopropyl)ether	1000.000	1082.538	-8.3	180	0.00
17	T	3-&4-Methylphenol	2000.000	1649.091	17.5	140	-0.07
18	TP	n-Nitroso-di-n-propylamine	1000.000	1220.740	-22.1#	196	-0.02
19	T	Hexachloroethane	1000.000	1238.724	-23.9#	197	0.00
20	I	Naphthalene - d8 (I)	1000.000	1000.000	0.0	165	0.00
21	S	Nitrobenzene - d5 (S)	1000.000	764.737	23.5#	185	-0.01
22	T	Nitrobenzene	1000.000	935.739	6.4	183	0.04
23	T	Isophorone	1000.000	890.127	11.0	180	0.00
24	TC	2-Nitrophenol	1000.000	1054.500	-5.5	193	0.03
25	T	2,4-Dimethylphenol	1000.000	1021.281	-2.1	163	-0.02
26	T	bis(2-Chloroethoxy)methane	1000.000	850.415	15.0	173	-0.01
27	T	Benzoic Acid	5000.000	5214.667	-4.3	178	-0.02
28	TC	2,4-Dichlorophenol	1000.000	901.424	9.9	173	0.00
29	T	1,2,4-Trichlorobenzene	1000.000	937.738	6.2	170	0.00
30	T	Naphthalene	1000.000	1044.371	-4.4	196	0.00
31	T	4-Chloroaniline	1000.000	986.550	1.3	164	-0.01
32	TC	Hexachlorobutadiene	1000.000	997.757	0.2	183	-0.01
33	TC	4-Chloro-3-methylphenol	1000.000	997.758	0.2	184	-0.02
34	T	2-Methylnaphthalene	1000.000	945.341	5.5	169	-0.02
35	T	1-Methylnaphthalene	1000.000	1000.464	-0.0	198	-0.02
36	I	Acenaphthene - d10 (I)	1000.000	1000.000	0.0	174	0.00
37	TC	Hexachlorocyclopentadiene	1000.000	1026.610	-2.7	184	0.00
38	T	2,3-Dichloroaniline	1000.000	989.369	1.1	166	0.00
39	TC	2,4,6-Trichlorophenol	1000.000	1099.618	-10.0	189	0.00
40	T	2,4,5-Trichlorophenol	1000.000	980.868	1.9	168	0.00
41	S	2 - Fluorobiphenyl (S)	1000.000	810.433	19.0	173	0.00
42	T	2-Chloronaphthalene	1000.000	984.725	1.5	187	-0.01
43	T	Biphenyl	1000.000	1098.632	-9.9	202	0.00
44	T	2-Nitroaniline	1000.000	954.158	4.6	155	0.00
45	T	Dimethylphthalate	1000.000	1049.983	-5.0	157	0.00
46	T	Acenaphthylene	1000.000	921.062	7.9	169	-0.05
47	T	2,6-Dinitrotoluene	1000.000	1160.985	-16.1	192	0.00
48	T	3-Nitroaniline	1000.000	954.158	4.6	155	0.00
49	TC	Acenaphthene	1000.000	1006.708	-0.7	173	0.00
50	TP	2,4-Dinitrophenol	5000.000	4476.283	10.5	140	0.00
51	TP	4-Nitrophenol	5000.000	4580.386	8.4	158	-0.01

(#) = Out of Range

00240

Evaluate Continuing Calibration Report

Data File : U:\DATA\092004\B02977.D
Acq On : 20 Sep 2004 15:08
Sample : 1000 UG/L 8270 CCAL STD NO 0980-95-4
Misc :
MS Integration Params: RTEINT.P

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Method : U:\METHODS\081104.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 08:16:59 2004
Response via : Multiple Level Calibration

Min. RRF : 2.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

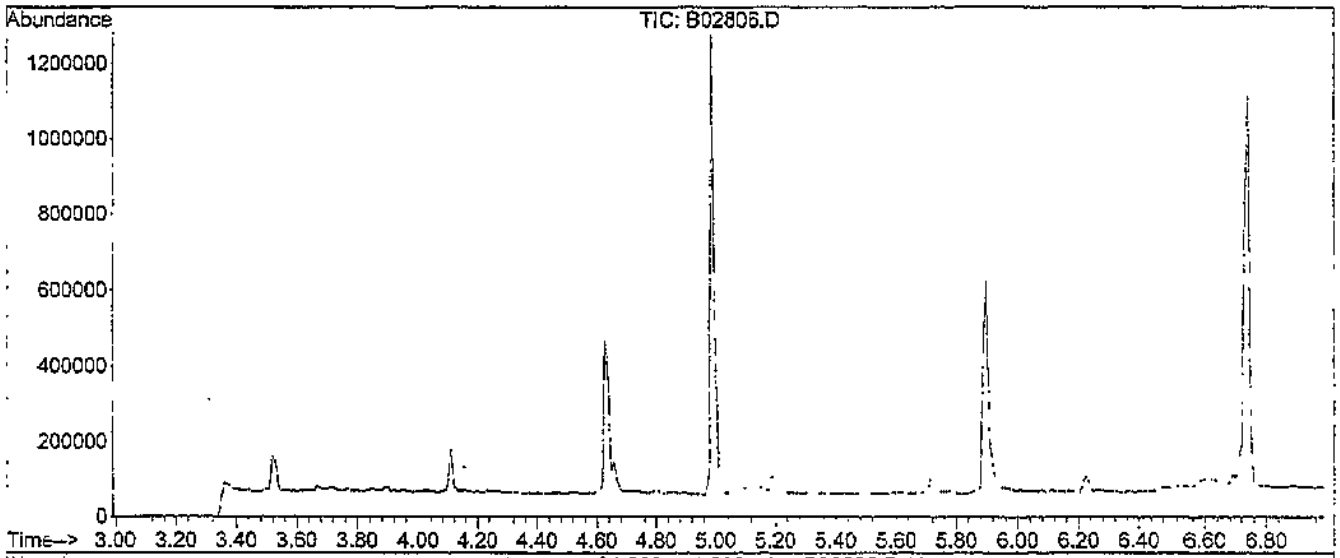
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	T	Dibenzofuran	1000.000	901.158	9.9	162	0.00
53	T	2,4-Dinitrotoluene	1000.000	1033.708	-3.4	163	-0.01
54	T	2,3,4,6-Tetrachlorophenol	1000.000	1044.980	-4.5	175	0.00
55	T	2,3,5,6-Tetrachlorophenol	1000.000	910.983	8.9	153	0.00
56	T	Diethylphthalate	1000.000	913.953	8.6	155	-0.01
57	T	Fluorene	1000.000	1007.417	-0.7	174	-0.03
58	T	4-Chlorophenylphenylether	1000.000	972.390	2.8	169	-0.03
59	T	4-Nitroaniline	1000.000	954.158	4.6	155	0.00
60	I	Phenanthrene - d10 (I)	1000.000	1000.000	0.0	145	0.00
61	T	4,6-Dinitro-2-methylphenol	5000.000	4907.717	1.8	147	0.00
62	T	n-Nitrosodiphenylamine	1000.000	1155.451	-15.5	173	0.00
63	S	2,4,6 - Tribromophenol (S)	1000.000	940.381	6.0	165	0.01
64	T	1,2-Diphenylhydrazine	1000.000	1158.897	-15.9	179	0.00
65	T	4-Bromophenylphenylether	1000.000	1014.913	-1.5	155	0.00
66	T	Hexachlorobenzene	1000.000	1159.748	-16.0	204	0.00
67	TC	Pentachlorophenol	1000.000	1065.543	-6.6	156	0.00
68	T	Phenanthrene	1000.000	1029.451	-2.9	156	0.00
69	T	Anthracene	1000.000	1130.238	-13.0	176	0.00
70	T	Octadecane	1000.000	1030.268	-3.0	145	0.00
71	T	Carbazole	1000.000	947.613	5.2	142	-0.03
72	T	Di-n-butylphthalate	1000.000	1042.065	-4.2	158	-0.02
73	TC	Fluoranthene	1000.000	1001.886	-0.2	152	-0.01
74	T	Pyrene	1000.000	986.955	1.3	158	0.00
75	T	Benzidine	5000.000	5050.239	-1.0	139	0.00
76	S	p - Terphenyl - d14 (S)	1000.000	757.836	24.2#	152	0.00
77	I	Chrysene - d12 (I)	1000.000	1000.000	0.0	144	0.00
78	T	Butylbenzylphthalate	1000.000	1013.762	-1.4	150	-0.03
79	T	Benzo(a)anthracene	1000.000	1033.374	-3.3	141	0.02
80	T	3,3'-Dichlorobenzidine	1000.000	1062.318	-6.2	143	-0.02
81	T	Chrysene	1000.000	985.426	1.5	141	0.03
82	T	bis(2-Ethylhexyl)phthalate	1000.000	974.303	2.6	144	0.00
83	I	Perylene - d12 (I)	1000.000	1000.000	0.0	139	0.00
84	TC	Di-n-octylphthalate	1000.000	1000.308	-0.0	145	-0.06
85	T	Benzofluoranthenes	2000.000	2078.632	-3.9	147	-0.03
86	TC	Benzo(a)pyrene	1000.000	1067.004	-6.7	152	-0.01
87	T	Indeno(1,2,3-cd)pyrene	1000.000	827.041	17.3	114	0.11
88	T	Dibenz(a,h)anthracene	1000.000	1003.182	-0.3	139	0.09
89	T	Benzo(g,h,i)perylene	1000.000	1062.932	-6.3	145	0.00

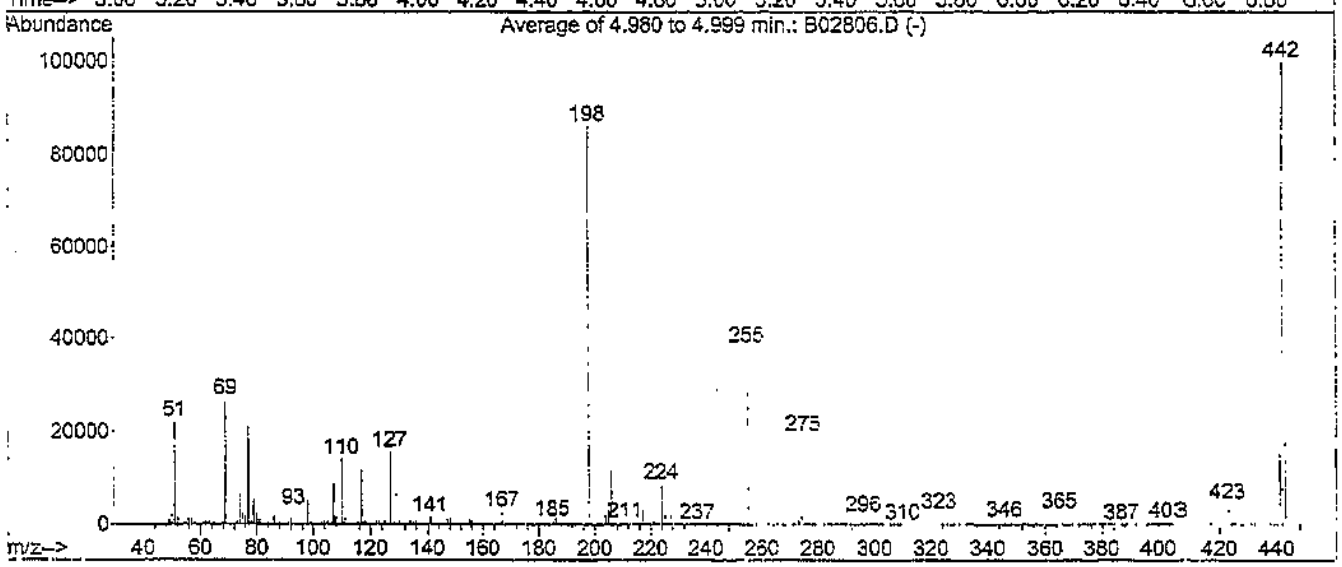
DFTPP TUNING

DFTPP

Data File : U:\DATA\081104\B02806.D
Acq On : 11 Aug 2004 14:23
Sample : DFTPP 8/11/04
Misc :
MS Integration Params: rteint.p
Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00





AutoFind: Scans 498, 499, 500; Background Corrected with Scan 493

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	22.0	22064	PASS
68	69	0.00	2	1.9	503	PASS
69	198	0.00	100	31.1	26823	PASS
70	69	0.00	2	0.0	0	PASS
127	442	10	80	15.6	15601	PASS
197	198	0.00	1	0.1	125	PASS
198	198	100	100	100.0	86191	PASS
199	198	5	9	5.5	4718	PASS
275	442	10	60	19.1	19119	PASS
365	198	1	100	2.9	2504	PASS
441	443	0.01	100	81.5	15386	PASS
442	442	50	100	100.0	100093	PASS
443	442	15	24	18.9	18889	PASS

275.00	19119	296.00	1752	323.00	2405	348.00	222
276.00	1480	297.00	606	324.00	92	350.00	24
277.00	1191	303.00	635	328.00	43	351.00	19

verage of 4.980 to 4.999 min.: B02806.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
FTPP 8/11/04	79	58.00	216	72.00	122	83.00	239
odified:subtracted		59.00	239	73.00	967	84.00	444
352.00	534	371.00	185	422.00	416	87.00	73
353.00	924	372.00	262	423.00	4571	88.00	370
354.00	988	373.00	103	424.00	489	90.00	19
355.00	217	374.00	130	438.00	481	91.00	704
357.00	246	376.00	24	440.00	185	92.00	1282
358.00	21	387.00	21	441.00	15386	93.00	3253
359.00	38	402.00	153	442.00	100093	94.00	358
360.00	166	403.00	481	443.00	18889	95.00	26
365.00	2504	404.00	129	444.00	1270		
367.00	27	415.00	24				
370.00	35	421.00	136				

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	191	108.00	1839	123.00	724	134.00	809
98.00	5029	109.00	7	124.00	353	135.00	682
99.00	1502	110.00	14039	125.00	944	136.00	691
100.00	233	111.00	1387	126.00	471	137.00	1084
101.00	185	112.00	375	127.00	15601	141.00	1583
102.00	78	115.00	274	128.00	608	142.00	165
103.00	544	116.00	503	129.00	6826	143.00	291
104.00	627	117.00	11860	130.00	788	146.00	139
105.00	876	118.00	795	131.00	398	147.00	1258
106.00	434	119.00	94	132.00	39	148.00	1579
107.00	8652	122.00	745	133.00	106	150.00	393

verage of 4.980 to 4.999 min.: B02806.D
FTPP 8/11/04
odified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
151.00	76	167.00	2765	180.00	171	196.00	1049
152.00	198	168.00	516	181.00	402	197.00	125
153.00	286	169.00	358	184.00	208	198.00	86191
155.00	1053	170.00	104	185.00	835	199.00	4718
156.00	906	172.00	284	186.00	5386	200.00	240
158.00	296	173.00	91	187.00	1589	202.00	98
159.00	92	175.00	1185	188.00	42	203.00	151
160.00	203	176.00	394	189.00	660	204.00	1990
161.00	295	177.00	854	192.00	313	205.00	3091
165.00	818	178.00	58	193.00	187	206.00	12644
166.00	326	179.00	1395	195.00	297	207.00	1304

verage of 4.980 to 4.999 min.: B02806.D
FTPP 8/11/04
odified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
208.00	189	219.00	147	234.00	166	252.00	7
209.00	111	221.00	514	236.00	112	253.00	414
210.00	217	222.00	581	237.00	107	254.00	163
211.00	424	223.00	756	243.00	660	255.00	38200
212.00	35	224.00	8757	244.00	4735	256.00	5751
213.00	29	225.00	1992	245.00	527	257.00	178
214.00	124	227.00	2038	246.00	960	258.00	1490
215.00	128	228.00	525	247.00	111	259.00	141
216.00	60	229.00	267	248.00	21	260.00	27
217.00	3618	230.00	205	249.00	709	261.00	92
218.00	437	231.00	148	251.00	96	262.00	92

verage of 4.980 to 4.999 min.: B02806.D
FTPP 8/11/04
odified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.00	32	278.00	202	307.00	222	331.00	19
265.00	1158	282.00	73	310.00	40	332.00	78
266.00	231	284.00	117	313.00	125	333.00	365
269.00	229	285.00	85	314.00	380	334.00	1071
271.00	234	290.00	118	315.00	372	335.00	277
272.00	49	293.00	195	316.00	130	342.00	32
273.00	1290	294.00	24	317.00	38	346.00	629
274.00	2794	295.00	170	320.00	29	347.00	311

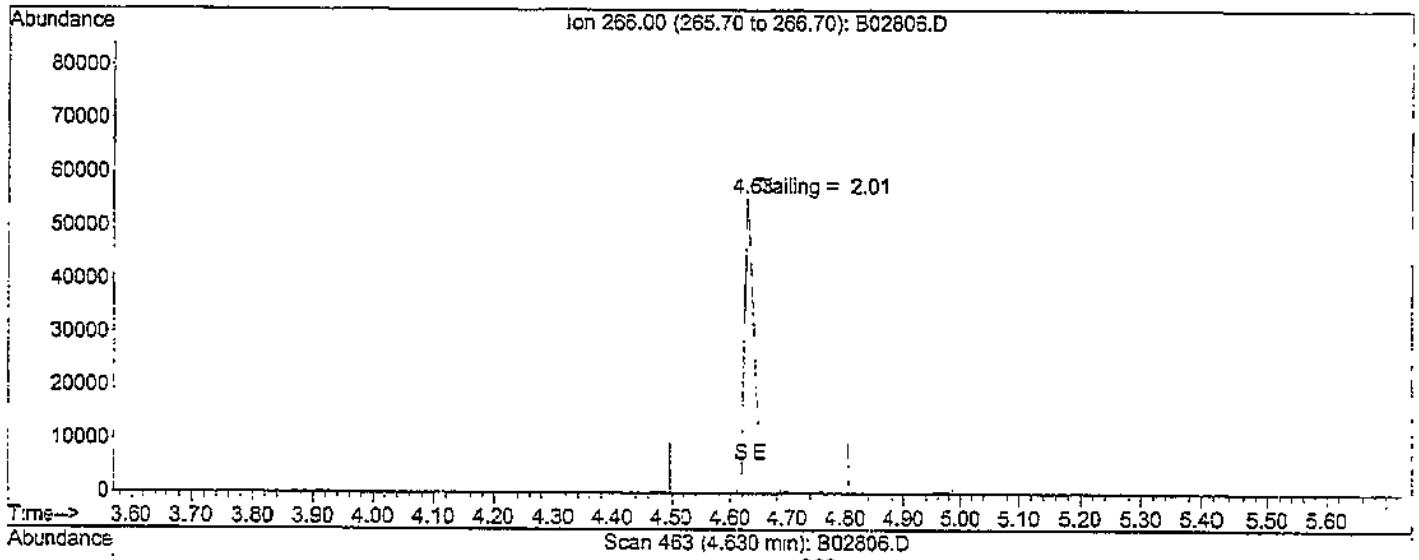
Quantitation Report (Qedit)

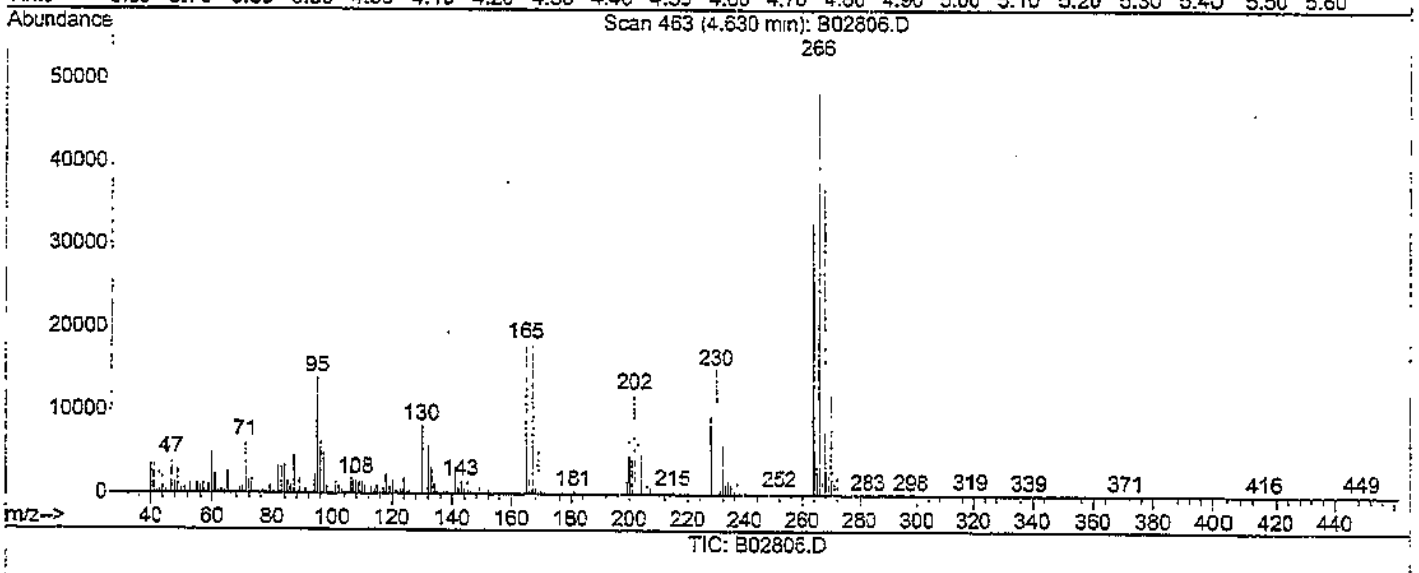
Data File : U:\DATA\081104\B02806.D
Acq On : 11 Aug 2004 14:23
Sample : DFTPP 8/11/04
Misc :
MS Integration Params: rteint.p
Quant Time: Aug 13 13:25 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00

Quant Results File: temp.res

Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation
Last Update : Fri Aug 13 13:25:40 2004
Response via : Single Level Calibration





(1) Pentachlorophenol (T)

4.63min 0.07

response 55408

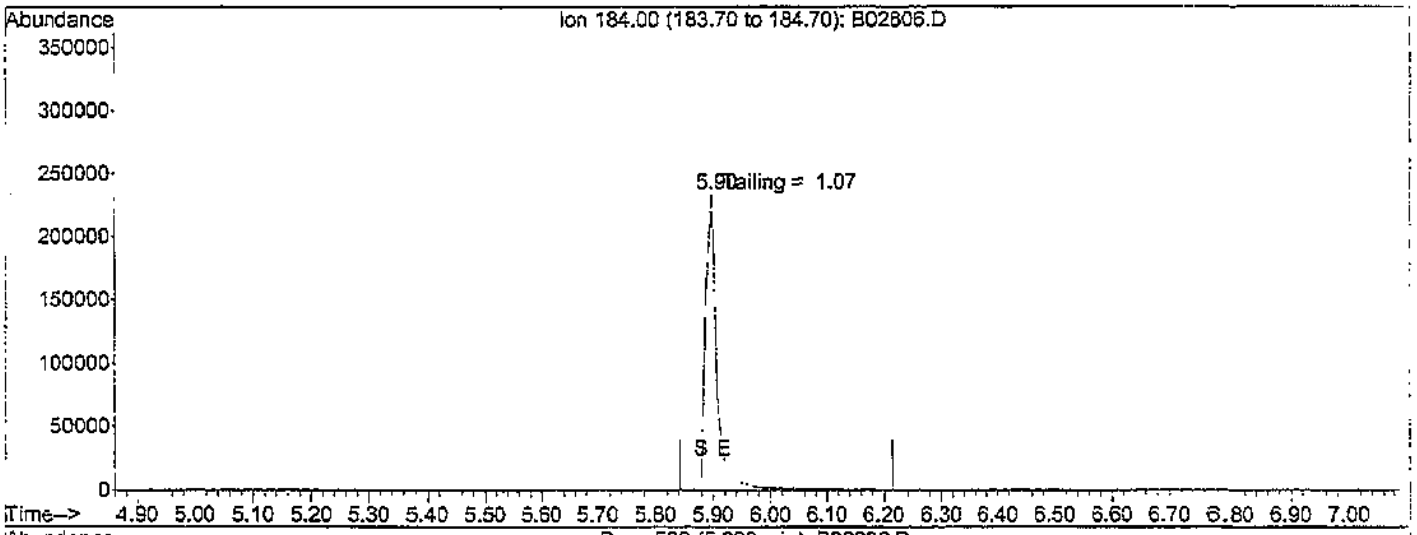
Ion	Exp%	Act%
266.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

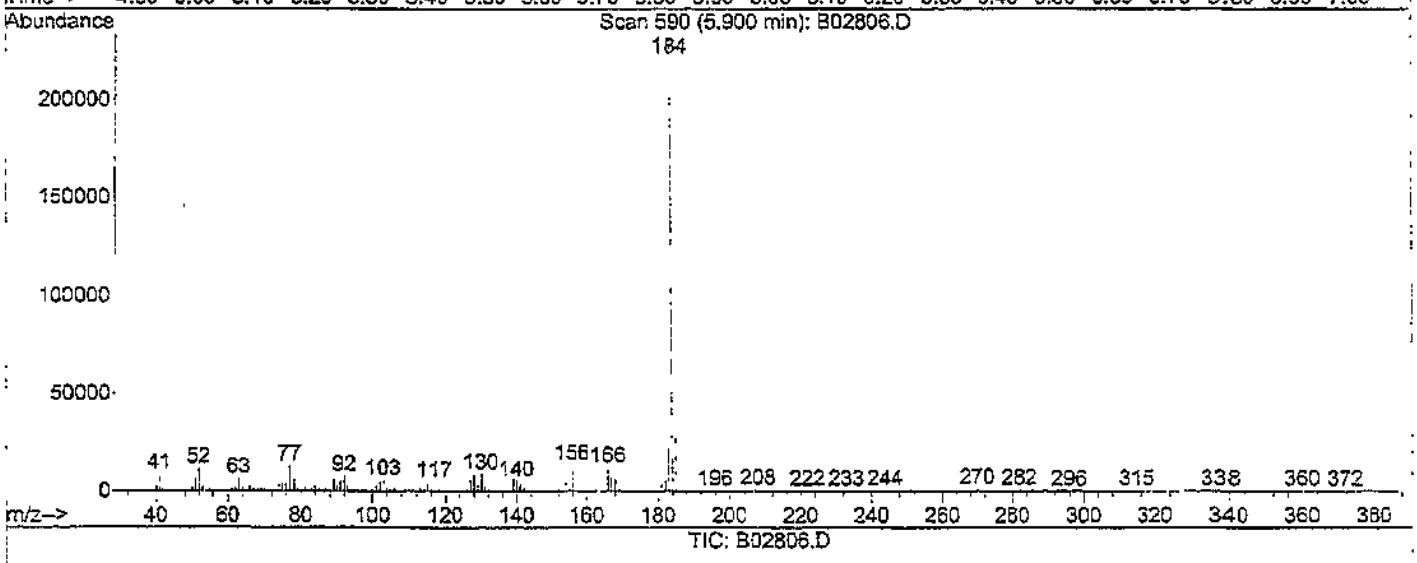
Quantitation Report (Qedit)

Data File : U:\DATA\081104\B02806.D
Acq On : 11 Aug 2004 14:23
Sample : DFTPP 8/11/04
Misc :
MS Integration Params: rteint.p
Quant Time: Aug 13 13:25 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: temp.res

Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation
Last Update : Fri Aug 13 13:25:40 2004
Response via : Single Level Calibration





(3) Benzidine (T)

5.90min 0.11

response 233664

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File Name **B02806.D**
Data File Path **U:\DATA\081104**
Operator **CLZ**

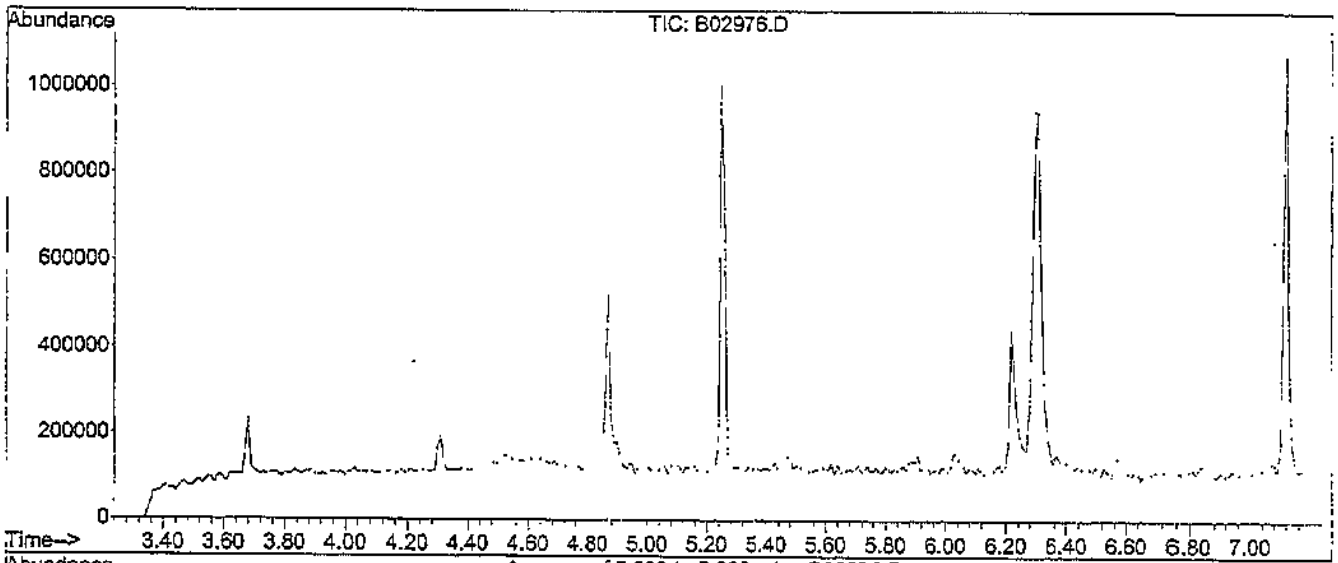
Sample Name **DFTPP 8/11/04**

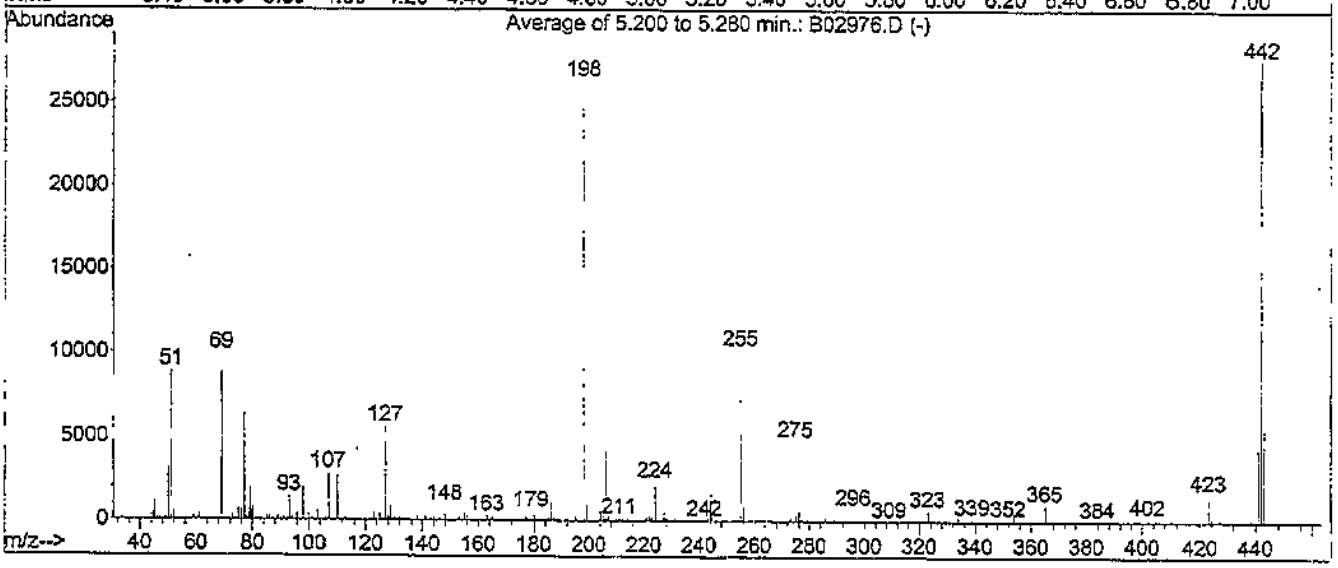
#	Name	Ret Time	Target Response	Percent Breakdown
4)	DDT	6.74	249646	1.27%
5)	DDD	6.26	84	Pass
6)	DDE	6.48	3137	
		SUM	252867	

DFTPP

Data File : U:\DATA\092004\B02976.D
Acq On : 20 Sep 2004 14:13
Sample : DFTPP 9/20/04
Misc :
MS Integration Params: rteint.p
Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00





Spectrum Information: Average of 5.200 to 5.280 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	32.2	8910	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.7	9929	PASS
70	69	0.00	2	1.4	135	PASS
127	442	10	80	20.3	5607	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	26320	PASS
199	198	5	9	5.4	1409	PASS
275	442	10	60	17.3	4793	PASS
365	198	1	100	3.8	1003	PASS
441	443	0.01	100	79.6	4383	PASS
442	442	50	100	100.0	27681	PASS
443	442	15	24	19.9	5503	PASS

322.00	6	335.00	12	352.00	98	368.00	49
323.00	660	339.00	182	353.00	11	371.00	81
325.00	107	340.00	8	354.00	514	372.00	82

Average of 5.200 to 5.280 min.: B02976.D

DFTPP 9/20/04	448	62.00	47	80.00	852	99.00	916
Modified:subtracted		64.00	57	82.00	11	100.00	514
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
373.00	34	393.00	15	409.00	11	427.00	109
374.00	19	396.00	9	412.00	12	430.00	19
378.00	17	397.00	10	414.00	9	433.00	52
380.00	26	398.00	13	415.00	11	435.00	27
382.00	51	399.00	31	416.00	20	438.00	132
384.00	55	401.00	15	418.00	15	439.00	132
385.00	9	402.00	194	421.00	49	440.00	60
388.00	10	403.00	155	422.00	61	441.00	4383
390.00	65	405.00	109	423.00	1675	442.00	27681
391.00	28	406.00	10	424.00	244	443.00	5503
392.00	18	408.00	31	426.00	10	444.00	309

Average of 5.200 to 5.280 min.: B02976.D

DFTPP 9/20/04	105	131.00	41	153.00	180	169.00	102
Modified:subtracted		132.00	137	155.00	467	170.00	35
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
445.00	33	138.00	270	160.00	47	173.00	54
448.00	28	141.00	475	161.00	7	174.00	58
450.00	8	143.00	342	162.00	38	175.00	42
125.00	407	144.00	189	163.00	301	176.00	67
127.00	5607	146.00	159	165.00	230	177.00	252
128.00	245	148.00	926	166.00	27	179.00	553
129.00	977	150.00	64	167.00	144	180.00	367
130.00	219	152.00	151	168.00	407	182.00	14

Average of 5.200 to 5.280 min.: B02976.D
DFTPP 9/20/04
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
184.00	64	199.00	1409	214.00	74	228.00	303
185.00	174	200.00	49	215.00	47	229.00	131
186.00	1381	202.00	329	216.00	99	230.00	22
187.00	252	204.00	621	217.00	1556	231.00	190
188.00	118	205.00	806	218.00	124	232.00	57
189.00	224	206.00	4171	221.00	242	235.00	26
190.00	8	207.00	398	222.00	310	237.00	13
192.00	91	209.00	95	223.00	208	240.00	23
195.00	298	210.00	62	224.00	2366	241.00	56
196.00	204	211.00	173	225.00	374	242.00	69
198.00	26320	212.00	131	227.00	1470	243.00	199

Average of 5.200 to 5.280 min.: B02976.D
DFTPP 9/20/04
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
244.00	1703	258.00	6	275.00	4793	294.00	9
245.00	355	259.00	322	276.00	621	296.00	732
246.00	328	260.00	10	277.00	387	297.00	126
248.00	32	261.00	27	279.00	129	298.00	71
249.00	59	263.00	71	280.00	19	299.00	35
250.00	137	264.00	25	281.00	58	300.00	8
252.00	25	265.00	128	286.00	170	303.00	121
253.00	5	271.00	7	288.00	12	304.00	6
255.00	10238	272.00	25	289.00	108	305.00	43
256.00	848	273.00	206	290.00	13	307.00	43
257.00	24	274.00	683	291.00	74	308.00	7

Average of 5.200 to 5.280 min.: B02976.D
DFTPP 9/20/04
Modified:subtracted

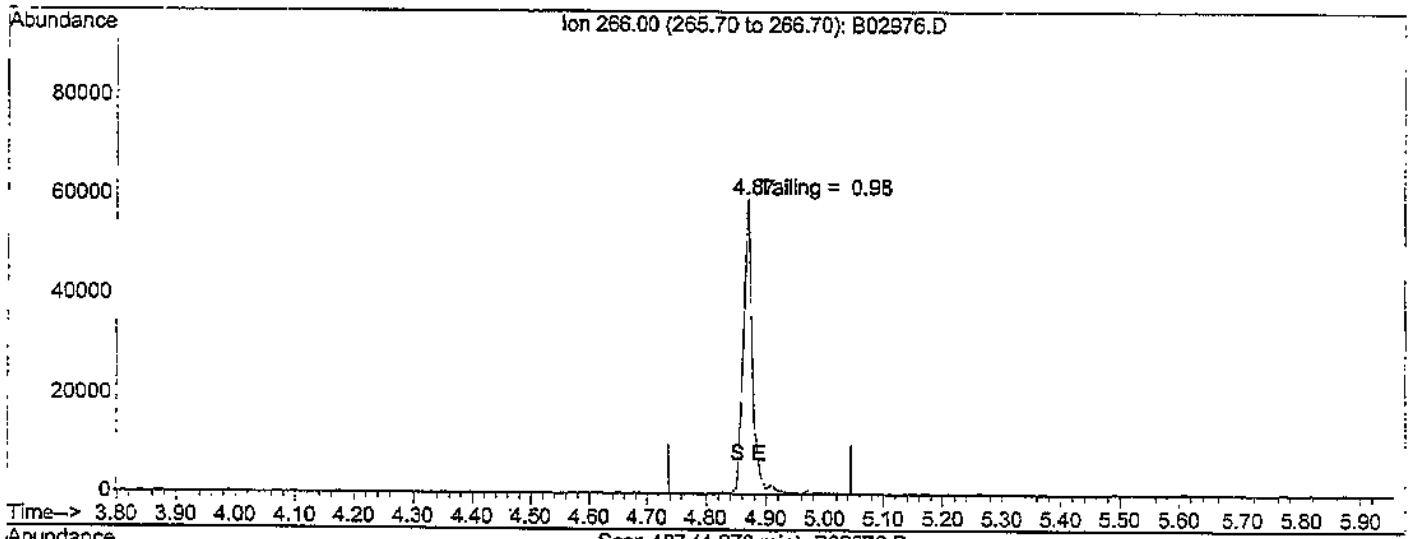
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
309.00	19	326.00	20	341.00	68	355.00	85
311.00	21	327.00	181	342.00	42	356.00	44
314.00	11	328.00	38	343.00	5	357.00	26
315.00	110	329.00	83	344.00	26	359.00	21
316.00	34	330.00	21	346.00	44	362.00	50
318.00	16	331.00	6	347.00	17	363.00	43
319.00	26	333.00	25	349.00	9	365.00	1003
321.00	6	334.00	356	351.00	64	366.00	75

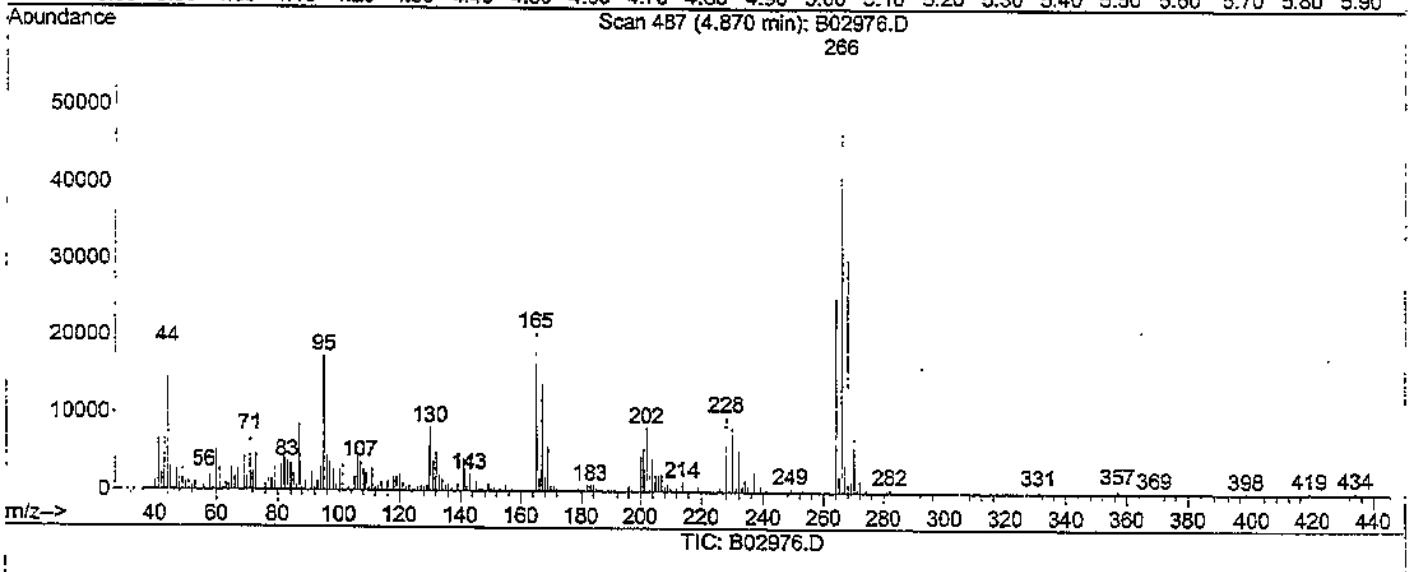
Quantitation Report (Qedit)

Data File : U:\DATA\092004\B02976.D
Acq On : 20 Sep 2004 14:13
Sample : DFTPP 9/20/04
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 21 8:24 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: temp.res

Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation
Last Update : Tue Sep 21 08:24:13 2004
Response via : Single Level Calibration





(1) Pentachlorophenol (T)

4.87min 0.07

response 59416

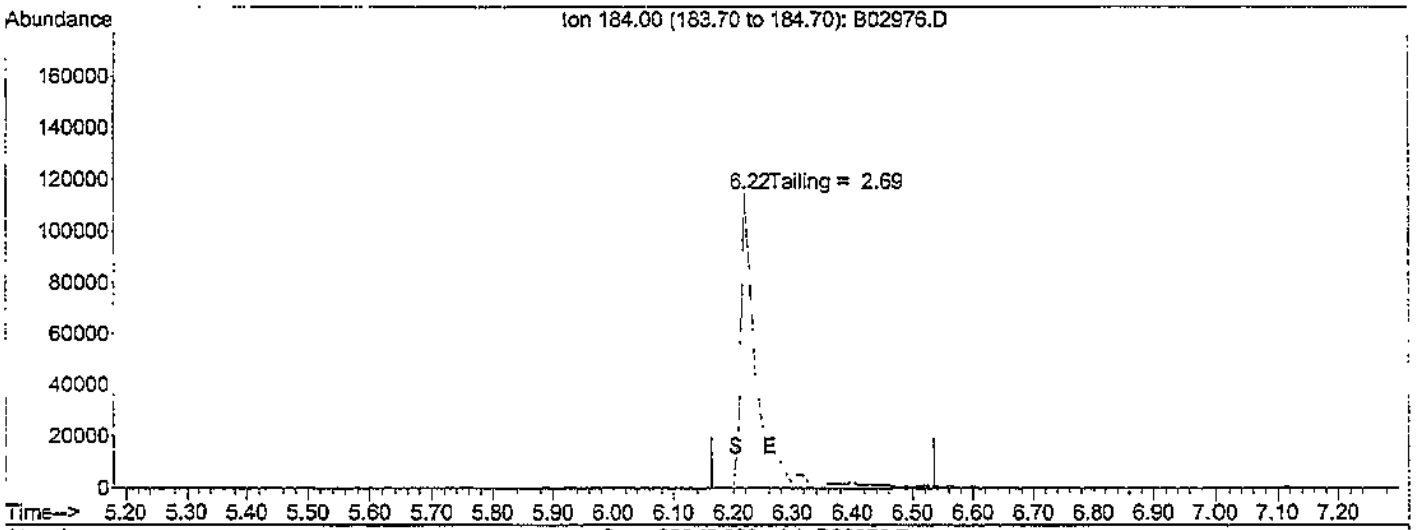
Ion	Exp%	Act%
266.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

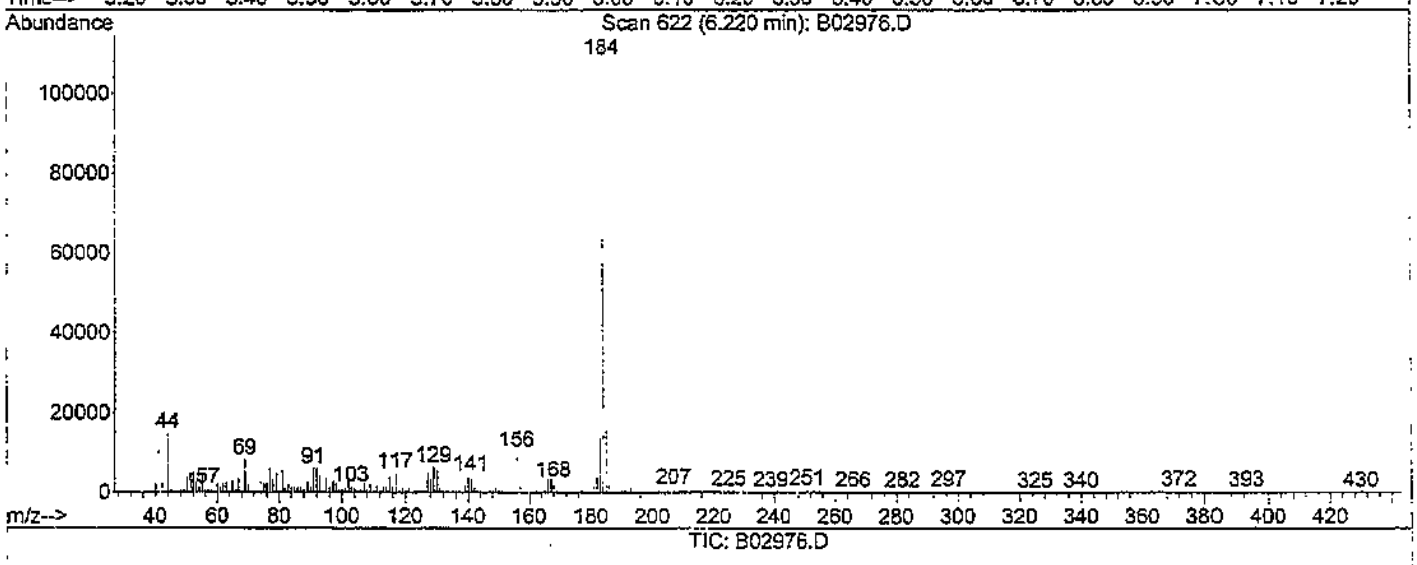
Quantitation Report (Qedit)

Data File : U:\DATA\092004\B02976.D
Acq On : 20 Sep 2004 14:13
Sample : DFTPP 9/20/04
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 21 8:24 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: temp.res

Method : U:\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP8270; PCP; Benzidine and DDT evaluation
Last Update : Tue Sep 21 08:24:13 2004
Response via : Single Level Calibration





(3) Benzidine (T)

6.22min 0.05 m

response 114560

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File Name **B02976.D**
Data File Path **U:\DATA\092004**
Operator **CLZ**

Sample Name **DFTPP 9/20/04**

#	Name	Ret Time	Target Response	Percent Breakdown
4)	DDT	7.12	208801	1.89%
5)	DDD	6.69	191	Pass
6)	DDE	6.85	3840	
		SUM	212832	

00252

METHOD BLANK

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07568.D Vial: 0
Acq On : 21 Sep 2004 10:03 Operator: CLZ
Sample : SW01197 MB #20.0000 &2.0 SOIL Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:44:49 2004 Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 14:44:46 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.77	152	118949	1000.00 ug/L	0.01
22) Naphthalene - d8 (I)	7.28	136	360102	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.24	162	224802	1000.00 ug/L	0.00
62) Phenanthrene - d10 (I)	10.82	188	413400	1000.00 ug/L	0.00
79) Chrysene - d12 (I)	13.78	240	413971	1000.00 ul/l	0.00
85) Perylene - d12 (I)	16.25	264	430922	1000.00 ug/L	0.00
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.17	112	115610	646.94 ug/L	0.00
7) Phenol - d5 (S)	5.40	99	109278	603.94 ug/L	0.00
23) Nitrobenzene - d5 (S)	6.47	82	102790	625.39 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.51	172	236052	687.29 ug/L	0.00
65) 2,4,6 - Tribromophenol (S)	10.10	330	88682	613.69 ug/L	0.00
78) p - Terphenyl - d14 (S)	12.53	244	275182	551.34 ug/L	0.02
Target Compounds					Qvalue
29) Benzoic Acid	7.05	105	4035	28.65 ug/L	100
58) Diethylphthalate	9.74	149	1488	3.64 ug/L	24
74) Di-n-butylphthalate	11.46	149	33999	47.37 ug/L	82
80) Butylbenzylphthalate	13.07	149	11616	32.71 ug/L	61
84) bis(2-Ethylhexyl)phthalate	13.80	149	16746	31.90 ug/L	92

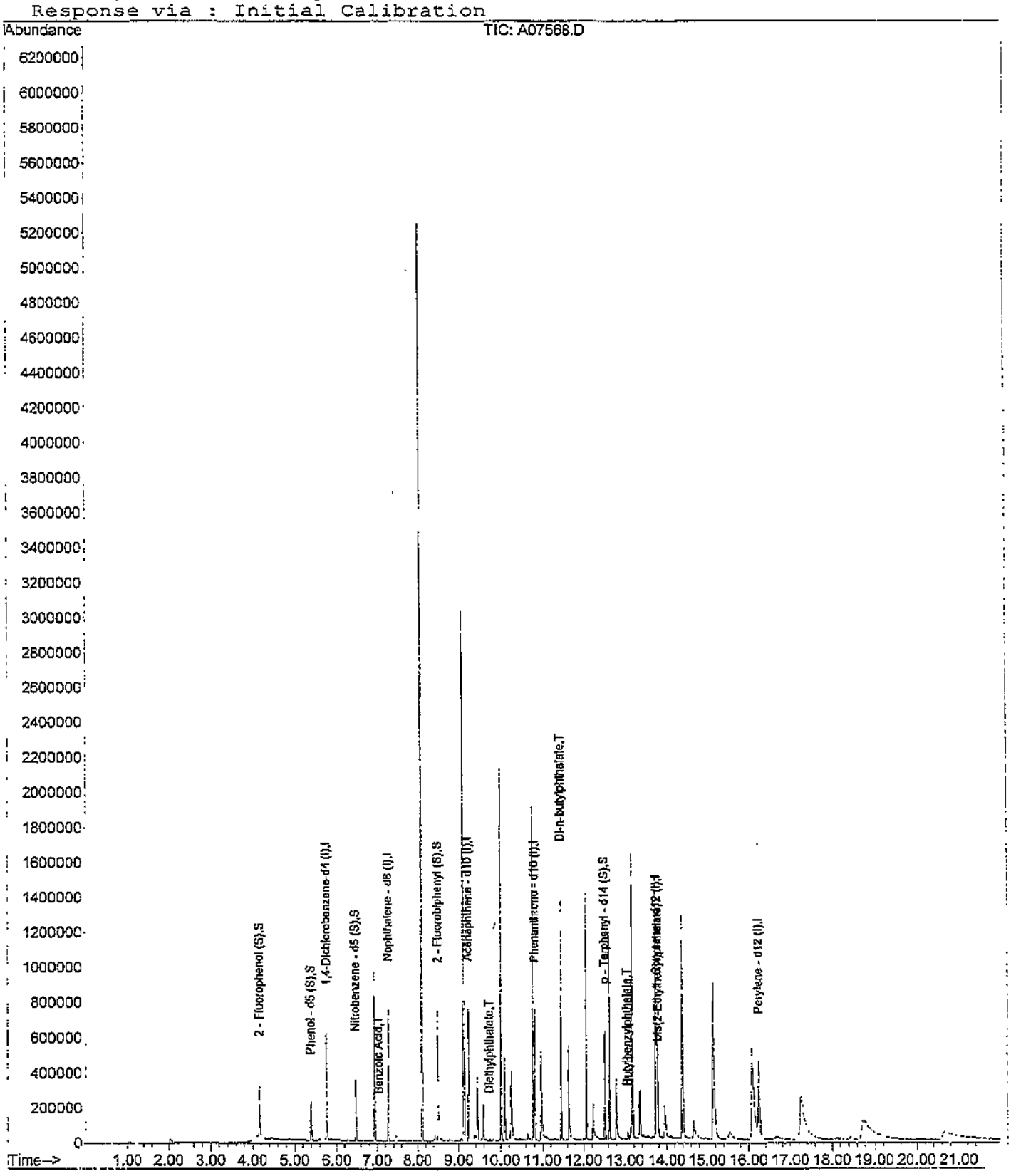
(#) = qualifier out of range (m) = manual integration (+) = signals summed

00254

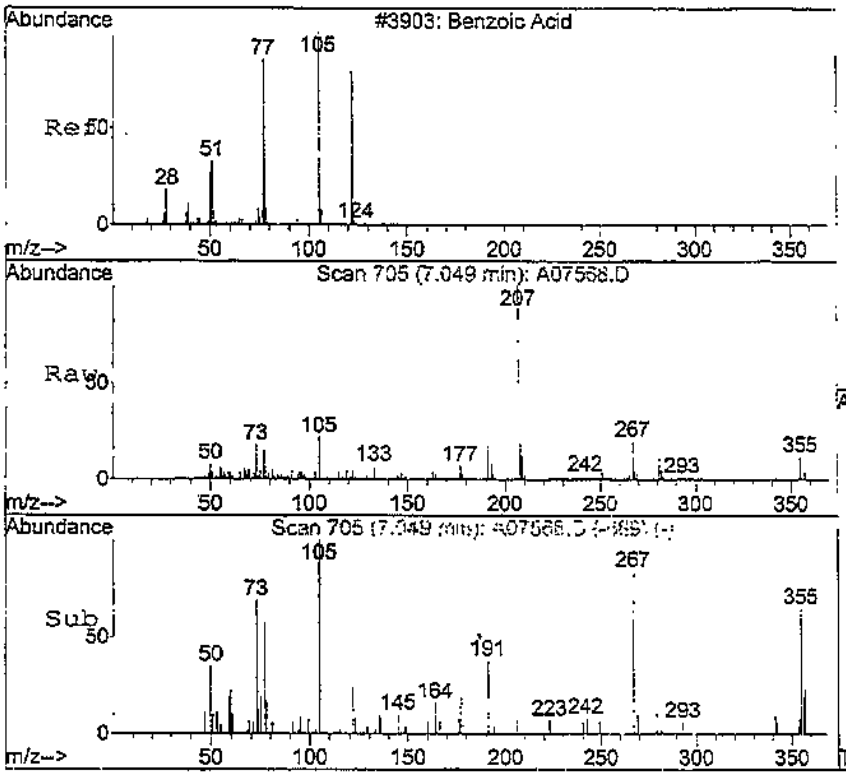
Quantitation Report (QT Reviewed)

Data File : W:\092104\A07568.D Vial: 0
Acq On : 21 Sep 2004 10:03 Operator: CLZ
Sample : SW01197 MB #20.0000 &2.0 SOIL Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:45 2004 Quant Results File: SV5-090704.RE

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 14:44:46 2004
Response via : Initial Calibration

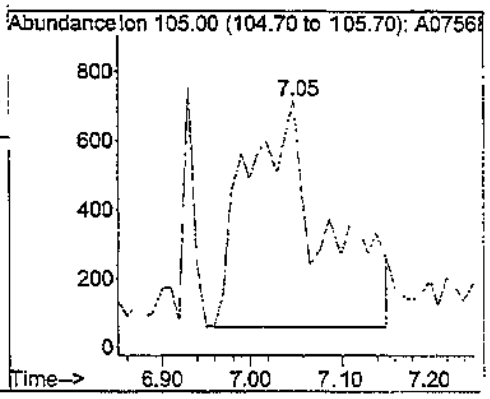


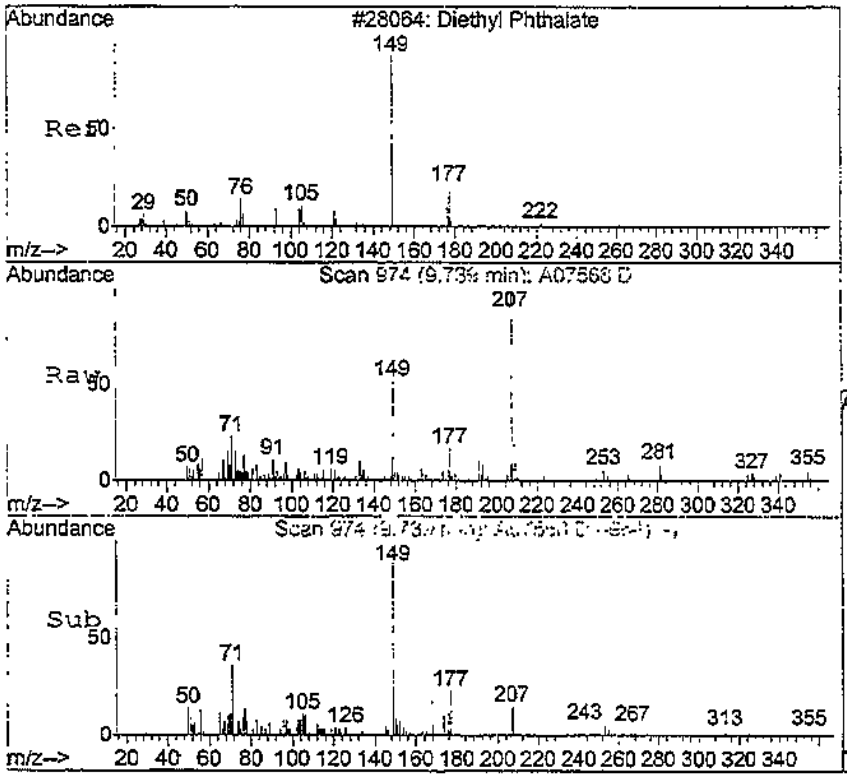
00255



#29
Benzoic Acid
Concen: 28.65 ug/L
RT: 7.05 min Scan# 705
Delta R.T. 0.06 min
Lab File: A07568.D
Acq: 21 Sep 2004 10:03

Tgt Ion:105 Resp: 4035

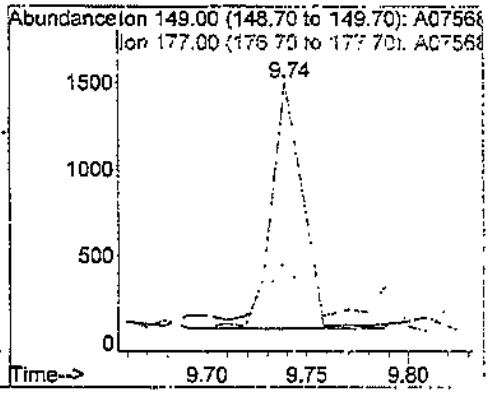




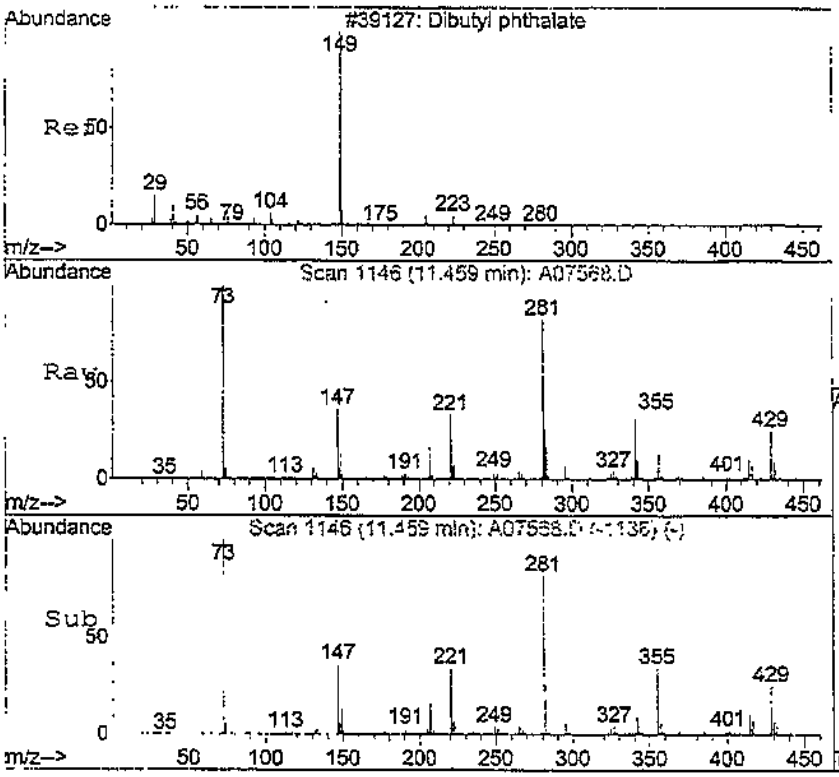
#58
Diethylphthalate
Concen: 3.64 ug/L
RT: 9.74 min Scan# 974
Delta R.T. 0.00 min
Lab File: A07568.D
Acq: 21 Sep 2004 10:03

Tgt Ion:149 Resp: 1488

Ion	Ratio	Lower	Upper
149	100		
177	56.9	0.0	61.2



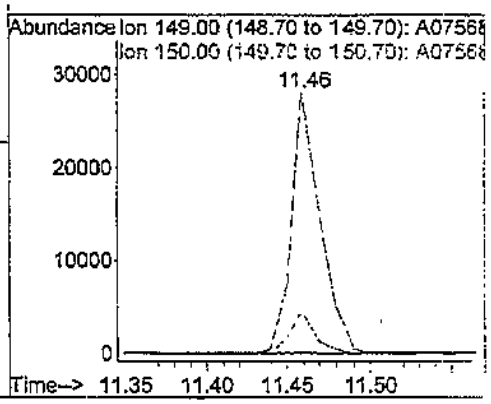
00256

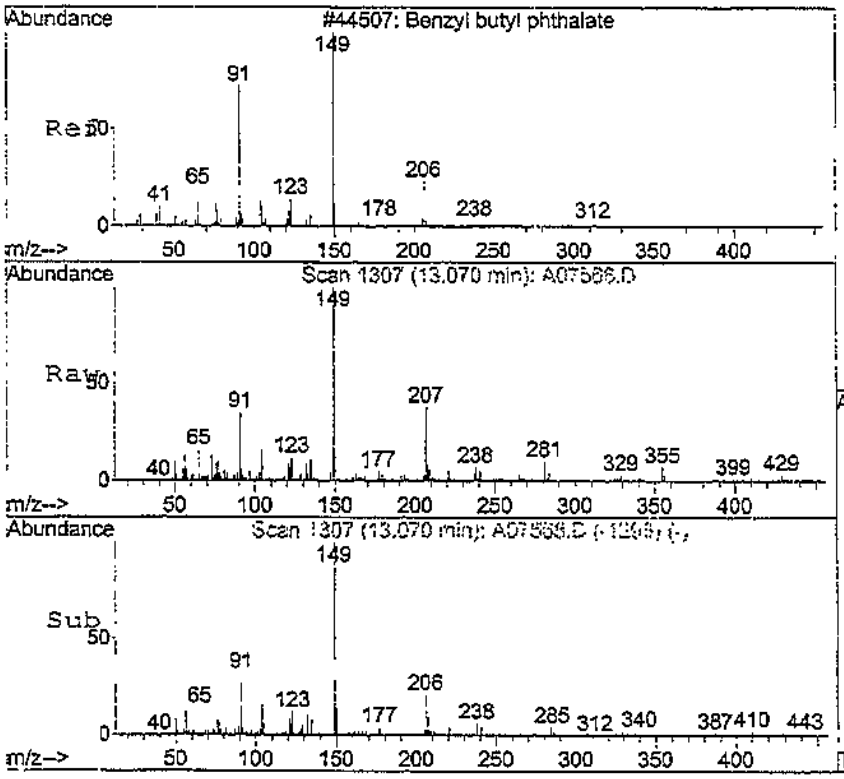


#74
Di-n-butylphthalate
Concen: 47.37 ug/L
RT: 11.46 min Scan# 1146
Delta R.T. -0.00 min
Lab File: A07568.D
Acq: 21 Sep 2004 10:03

Tgt Ion:149 Resp: 33999

Ion	Ratio	Lower	Upper
149	100		
150	14.1	0.0	47.9

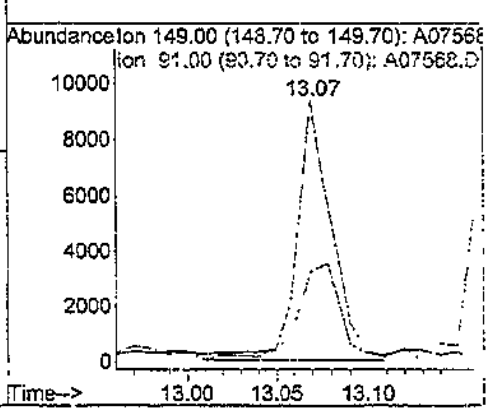


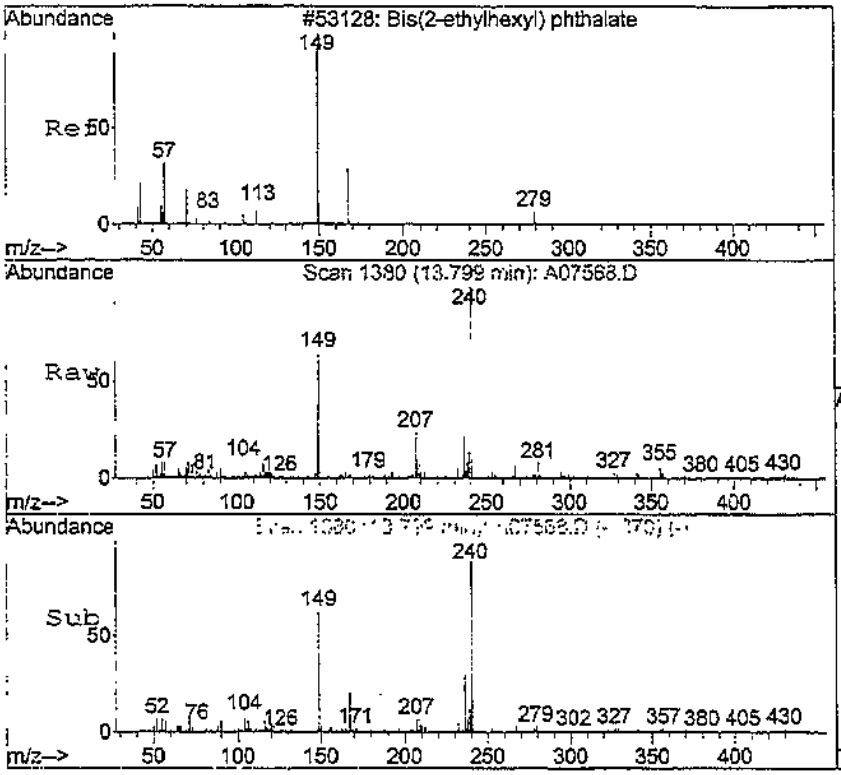


#80
Butylbenzylphthalate
Concen: 32.71 ug/L
RT: 13.07 min Scan# 1307
Delta R.T. 0.01 min
Lab File: A07568.D
Acq: 21 Sep 2004 10:03

Tgt Ion:149 Resp: 11616

Ion	Ratio	Lower	Upper
149	100		
91	40.0	32.2	112.2

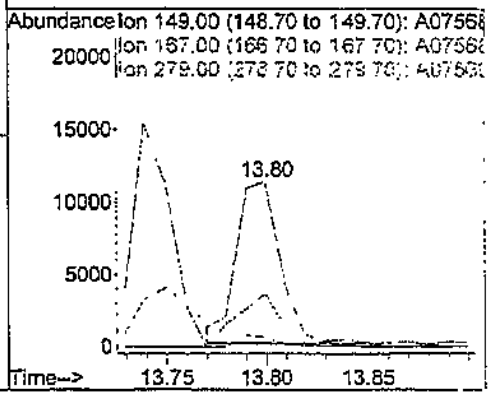




#84
bis(2-Ethylhexyl)phthalate
Concen: 31.90 ug/L
RT: 13.80 min Scan# 1380
Delta R.T. 0.00 min
Lab File: A07568.D
Acq: 21 Sep 2004 10:03

Tgt Ion:149 Resp: 16746

Ion	Ratio	Lower	Upper
149	100		
167	34.2	0.0	68.8
279	6.9	0.0	46.8



00258

BLANK SPIKE

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07569.D Vial: 0
Acq On : 21 Sep 2004 10:30 Operator: CLZ
Sample : SW01197 BS #20.0000 &2.0 SOIL Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:28:20 2004 Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.78	152	130991	1000.00 ug/L	0.02
22) Naphthalene - d8 (I)	7.29	136	387278	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.25	162	243506	1000.00 ug/L	0.01
62) Phenanthrene - d10 (I)	10.84	188	431002	1000.00 ug/L	0.02
79) Chrysene - d12 (I)	13.79	240	497524	1000.00 ul/l	0.01
85) Perylene - d12 (I)	16.27	264	498822	1000.00 ug/L	0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.17	112	131363	667.52 ug/L	0.00
7) Phenol - d5 (S)	5.41	99	127862	641.69 ug/L	0.02
23) Nitrobenzene - d5 (S)	6.48	82	104852	593.17 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.52	172	264383	710.65 ug/L	0.04
65) 2,4,6 - Tribromophenol (S)	10.11	330	99435	660.00 ug/L	0.01
78) p - Terphenyl - d14 (S)	12.54	244	377165	724.81 ug/L	0.03
Target Compounds					Qvalue
8) Phenol	5.42	94	85131	496.19 ug/L	99
10) 2-Chlorophenol	5.56	128	97753	576.34 ug/L	72
13) 1,4-Dichlorobenzene	5.80	146	78165	357.94 ug/L	83
19) n-Nitroso-di-n-propylamine	6.35	70	33283	379.95 ug/L	92
31) 1,2,4-Trichlorobenzene	7.25	180	57865	368.04 ug/L	88
35) 4-Chloro-3-methylphenol	7.95	107	110885	591.28 ug/L	82
51) Acenaphthene	9.29	153	106075	403.99 ug/L	100
53) 4-Nitrophenol	9.38	109	57390	871.62 ug/L	91
55) 2,4-Dinitrotoluene	9.49	165	71230	353.56 ug/L	65
58) Diethylphthalate	9.75	149	3576	8.07 ug/L	98
69) Pentachlorophenol	10.70	266	29936	278.23 ug/L	84
74) Di-n-butylphthalate	11.48	149	38308	51.20 ug/L	96
75) Fluoranthene	12.14	202	2034	4.79 ug/L	96
76) Pyrene	12.38	202	173819	437.90 ug/L	95
77) Benzidine	12.27	184	803	2.17 ug/L	100
80) Butylbenzylphthalate	13.09	149	14786	34.64 ug/L	80
84) bis(2-Ethylhexyl)phthalate	13.81	149	31789	50.38 ug/L	86

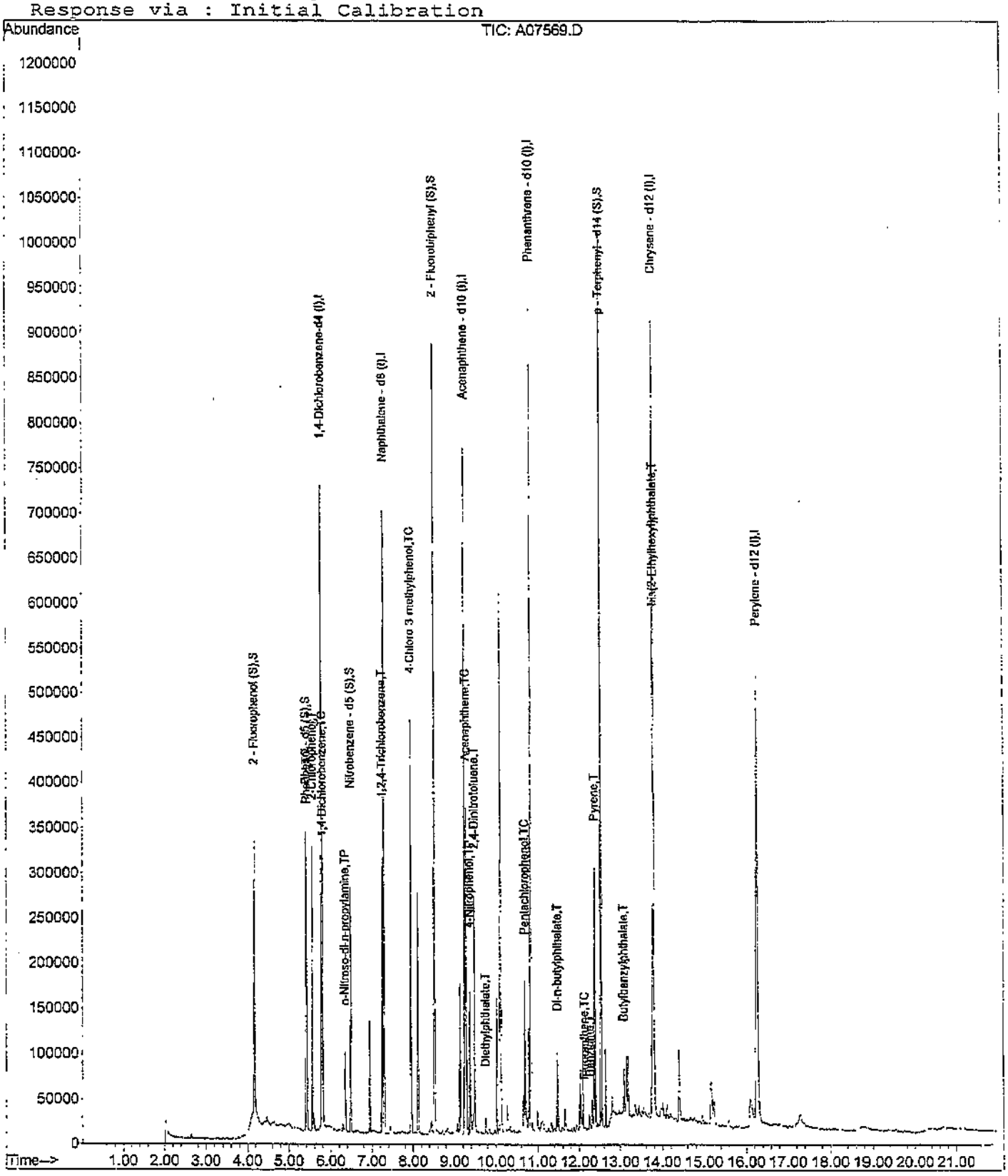
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07569.D
Acq On : 21 Sep 2004 10:30
Sample : SW01197 BS #20.0000 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:28 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RES

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration



00261

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07570.D Vial: 0
Acq On : 21 Sep 2004 10:56 Operator: CLZ
Sample : SW01197 BSD #20.0000 &2.0 SOIL Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:40:06 2004 Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.80	152	128533	1000.00 ug/L	0.04
22) Naphthalene - d8 (I)	7.31	136	355900	1000.00 ug/L	0.03
38) Acenaphthene - d10 (I)	9.26	162	203955	1000.00 ug/L	0.02
62) Phenanthrene - d10 (I)	10.85	188	337052	1000.00 ug/L	0.03
79) Chrysene - d12 (I)	13.80	240	373806	1000.00 ul/l	0.02
85) Perylene - d12 (I)	16.27	264	380938	1000.00 ug/L	0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.20	112	119767	620.23 ug/L	0.02
7) Phenol - d5 (S)	5.43	99	111068	568.06 ug/L	0.04
23) Nitrobenzene - d5 (S)	6.50	82	104098	640.83 ug/L	0.02
43) 2 - Fluorobiphenyl (S)	8.53	172	204753	657.09 ug/L	0.05
65) 2,4,6 - Tribromophenol (S)	10.12	330	85497	725.67 ug/L	0.03
78) p - Terphenyl - d14 (S)	12.55	244	293258	720.65 ug/L	0.04
Target Compounds					Qvalue
8) Phenol	5.44	94	86711	515.06 ug/L	93
10) 2-Chlorophenol	5.58	128	85752	515.25 ug/L	67
13) 1,4-Dichlorobenzene	5.82	146	66565	310.65 ug/L	95
19) n-Nitroso-di-n-propylamine	6.36	70	28949	336.79 ug/L	99
31) 1,2,4-Trichlorobenzene	7.26	180	54535	377.44 ug/L	90
35) 4-Chloro-3-methylphenol	7.96	107	94184	546.50 ug/L	96
51) Acenaphthene	9.30	153	93091	423.30 ug/L	100
53) 4-Nitrophenol	9.39	109	39915	723.78 ug/L	96
55) 2,4-Dinitrotoluene	9.50	165	55613	329.57 ug/L	69
58) Diethylphthalate	9.76	149	3632	9.79 ug/L	68
69) Pentachlorophenol	10.71	266	25002	297.14 ug/L	85
74) Di-n-butylphthalate	11.49	149	32186	55.00 ug/L	94
75) Fluoranthene	12.15	202	1599	4.82 ug/L	97
76) Pyrene	12.39	202	128606	414.30 ug/L	93
80) Butylbenzylphthalate	13.09	149	11388	35.51 ug/L	66
81) Benzo(a)anthracene	13.79	228	813	2.28 ug/L	13
84) bis(2-Ethylhexyl)phthalate	13.82	149	24509	51.70 ug/L	90
86) Di-n-octylphthalate	14.77	149	4644	6.21 ug/L	79

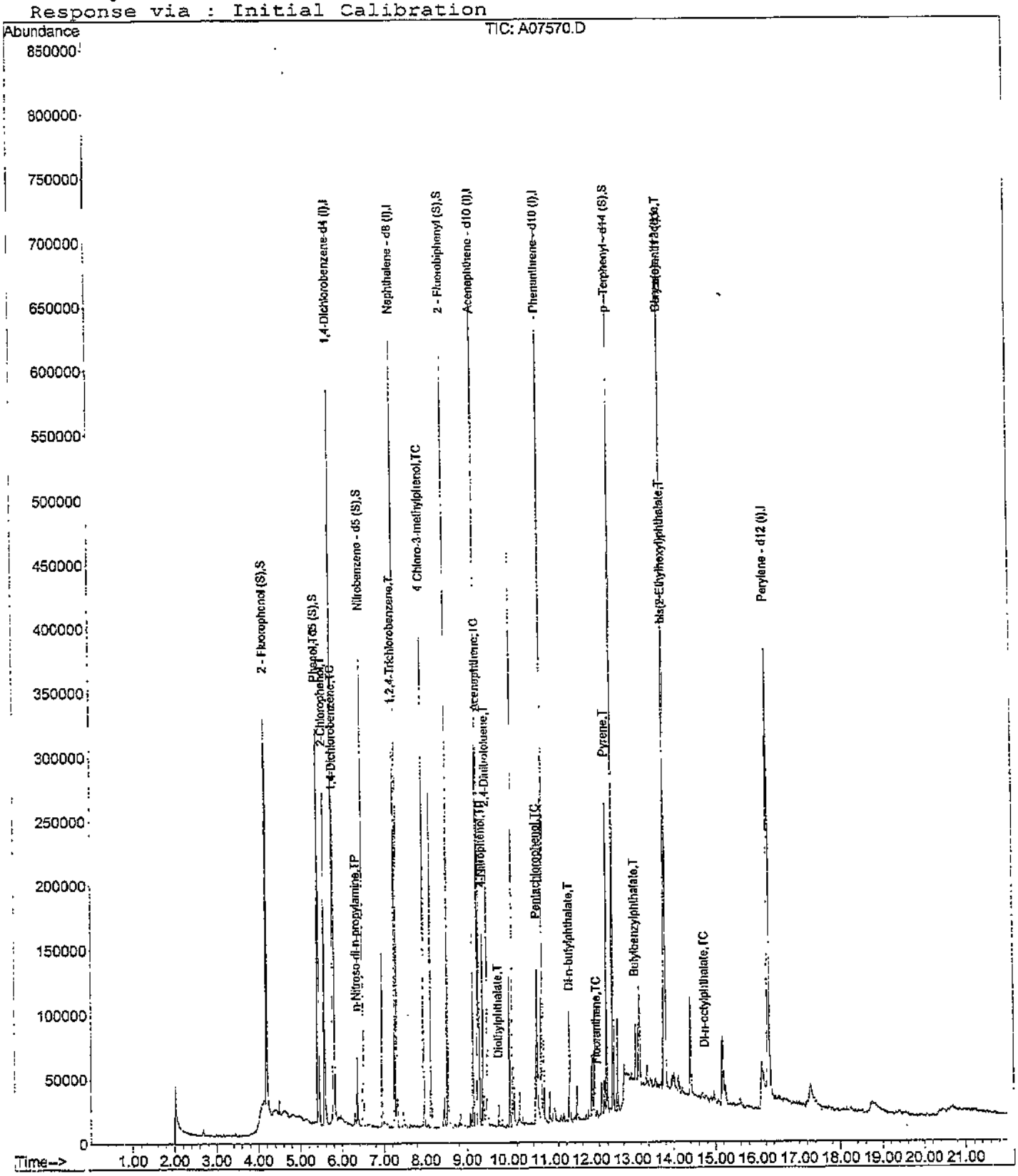
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07570.D
Acq On : 21 Sep 2004 10:56
Sample : SW01197 BSD #20.0000 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:40 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RES

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration



00263

MATIX SPIKE / MATRIX SPIKE DUPLICATE

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07572.D
Acq On : 21 Sep 2004 11:49
Sample : 123627-1 MS SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:34:25 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.78	152	132978	1000.00 ug/L	0.02
22) Naphthalene - d8 (I)	7.29	136	396962	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.26	162	235139	1000.00 ug/L	0.02
62) Phenanthrene - d10 (I)	10.84	188	430108	1000.00 ug/L	0.02
79) Chrysene - d12 (I)	13.79	240	476799	1000.00 ul/l	0.01
85) Perylene - d12 (I)	16.27	264	499066	1000.00 ug/L	0.02
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.17	112	71200	356.39 ug/L	0.00
7) Phenol - d5 (S)	5.41	99	86400	427.13 ug/L	0.02
23) Nitrobenzene - d5 (S)	6.48	82	54858	302.77 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.52	172	138746	386.21 ug/L	0.04
65) 2,4,6 - Tribromophenol (S)	10.11	330	76300	507.49 ug/L	0.02
78) p - Terphenyl - d14 (S)	12.54	244	256228	493.42 ug/L	0.03
Target Compounds					Qvalue
8) Phenol	5.42	94	114506	657.43 ug/L	95
10) 2-Chlorophenol	5.56	128	134417	780.66 ug/L	66
13) 1,4-Dichlorobenzene	5.80	146	90502	408.24 ug/L	92
19) n-Nitroso-di-n-propylamine	6.35	70	42770	480.96 ug/L	98
31) 1,2,4-Trichlorobenzene	7.25	180	75943	471.24 ug/L	80
35) 4-Chloro-3-methylphenol	7.95	107	146680	763.07 ug/L	85
47) Dimethylphthalate	9.00	163	1094	2.07 ug/L	98
51) Acenaphthene	9.29	153	145207	572.71 ug/L	100
53) 4-Nitrophenol	9.39	109	75130	1181.66 ug/L	89
55) 2,4-Dinitrotoluene	9.49	165	87207	448.27 ug/L	70
58) Diethylphthalate	9.76	149	5264	12.31 ug/L	75
69) Pentachlorophenol	10.70	266	62575	582.79 ug/L	81
74) Di-n-butylphthalate	11.49	149	98244	131.57 ug/L	99
75) Fluoranthene	12.15	202	2335	5.51 ug/L	99
76) Pyrene	12.39	202	230723	582.46 ug/L	91
80) Butylbenzylphthalate	13.09	149	22970	56.15 ug/L	83
84) bis(2-Ethylhexyl)phthalate	13.81	149	129898	214.81 ug/L	97

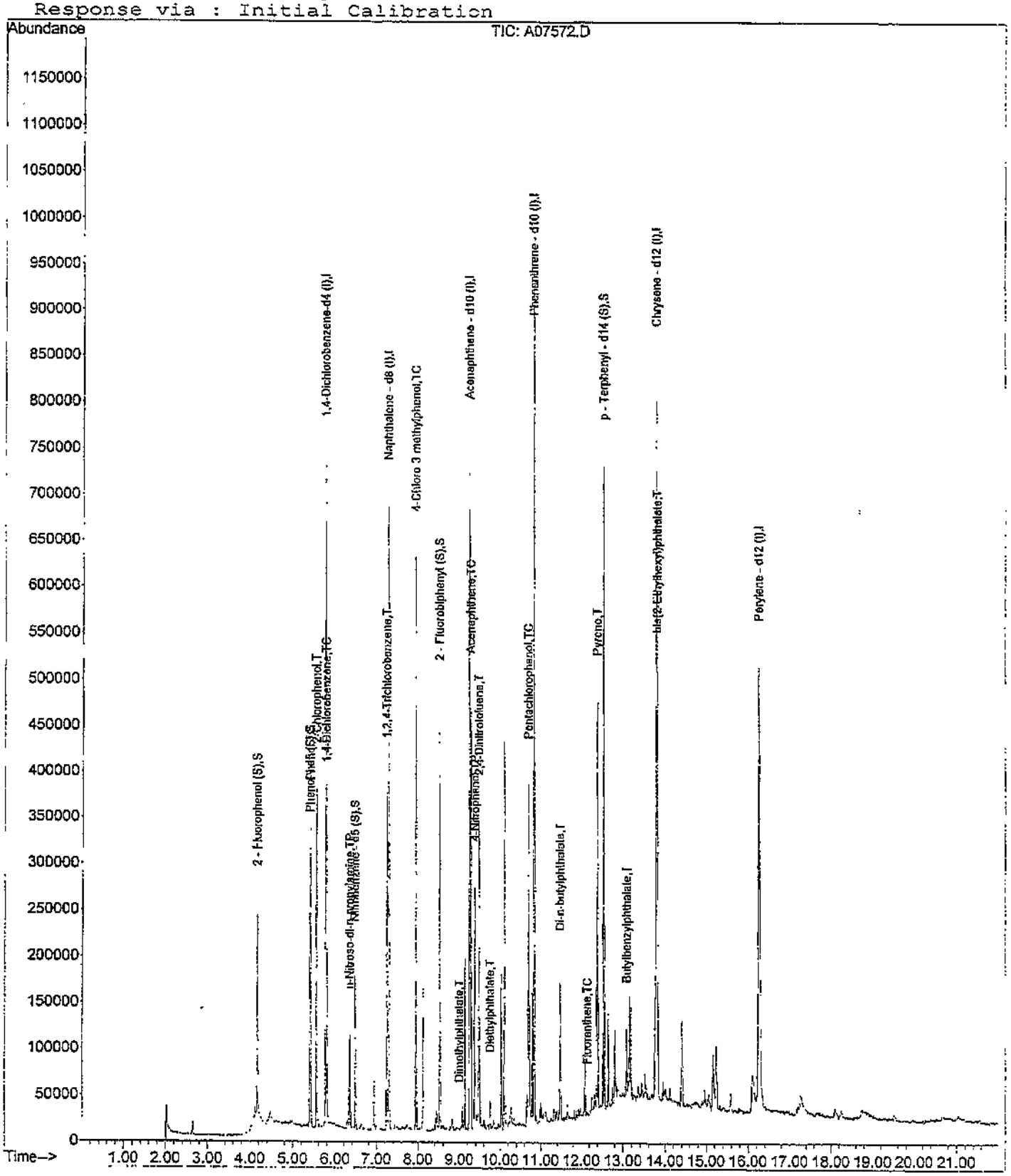
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07572.D
Acq On : 21 Sep 2004 11:49
Sample : 123627-1 MS SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 13:34 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RE

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 14:44:46 2004
Response via : Initial Calibration



00266

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07573.D
Acq On : 21 Sep 2004 13:11
Sample : 123627-1 MSD SS1197 &2.0 SOIL
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:40:45 2004

Vial: 0
Operator: CLZ
Inst :
Multiplr: 1.00
Quant Results File: SV5-090704.RES

Quant Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4 (I)	5.77	152	129182	1000.00 ug/L	0.01
22) Naphthalene - d8 (I)	7.29	136	421316	1000.00 ug/L	0.00
38) Acenaphthene - d10 (I)	9.24	162	253446	1000.00 ug/L	0.00
62) Phenanthrene - d10 (I)	10.83	188	444410	1000.00 ug/L	0.01
79) Chrysene - d12 (I)	13.78	240	505478	1000.00 ul/l	0.00
85) Perylene - d12 (I)	16.26	264	485310	1000.00 ug/L	0.01
System Monitoring Compounds					
4) 2 - Fluorophenol (S)	4.16	112	75518	389.12 ug/L	-0.02
7) Phenol - d5 (S)	5.40	99	90316	459.61 ug/L	0.00
23) Nitrobenzene - d5 (S)	6.47	82	56571	294.18 ug/L	0.00
43) 2 - Fluorobiphenyl (S)	8.51	172	154592	399.24 ug/L	0.03
65) 2,4,6 - Tribromophenol (S)	10.10	330	75494	485.97 ug/L	0.00
78) p - Terphenyl - d14 (S)	12.53	244	275834	514.08 ug/L	0.02
Target Compounds					Qvalue
8) Phenol	5.41	94	121971	720.87 ug/L	98
10) 2-Chlorophenol	5.55	128	113181	676.64 ug/L	75
13) 1,4-Dichlorobenzene	5.79	146	96717	449.10 ug/L	96
19) n-Nitroso-di-n-propylamine	6.34	70	42291	489.54 ug/L	96
20) Acetophenone	6.30	105	1217	3.86 ug/L	52
29) Benzoic Acid	7.02	105	996	6.04 ug/L	100
31) 1,2,4-Trichlorobenzene	7.24	180	69991	409.20 ug/L	90
35) 4-Chloro-3-methylphenol	7.94	107	151377	741.98 ug/L	75
51) Acenaphthene	9.28	153	140995	515.93 ug/L	100
53) 4-Nitrophenol	9.38	109	70951	1035.32 ug/L	89
55) 2,4-Dinitrotoluene	9.48	165	100072	477.24 ug/L	66
58) Diethylphthalate	9.75	149	5061	10.98 ug/L	100
69) Pentachlorophenol	10.69	266	64438	580.82 ug/L	83
74) Di-n-butylphthalate	11.48	149	98066	127.11 ug/L	100
75) Fluoranthene	12.13	202	3204	7.32 ug/L	90
76) Pyrene	12.38	202	227409	555.62 ug/L	99
80) Butylbenzylphthalate	13.05	149	24064	55.49 ug/L	73
84) bis(2-Ethylhexyl)phthalate	13.80	149	124648	194.43 ug/L	91
86) Di-n-octylphthalate	14.93	149	15542	16.30 ug/L	91

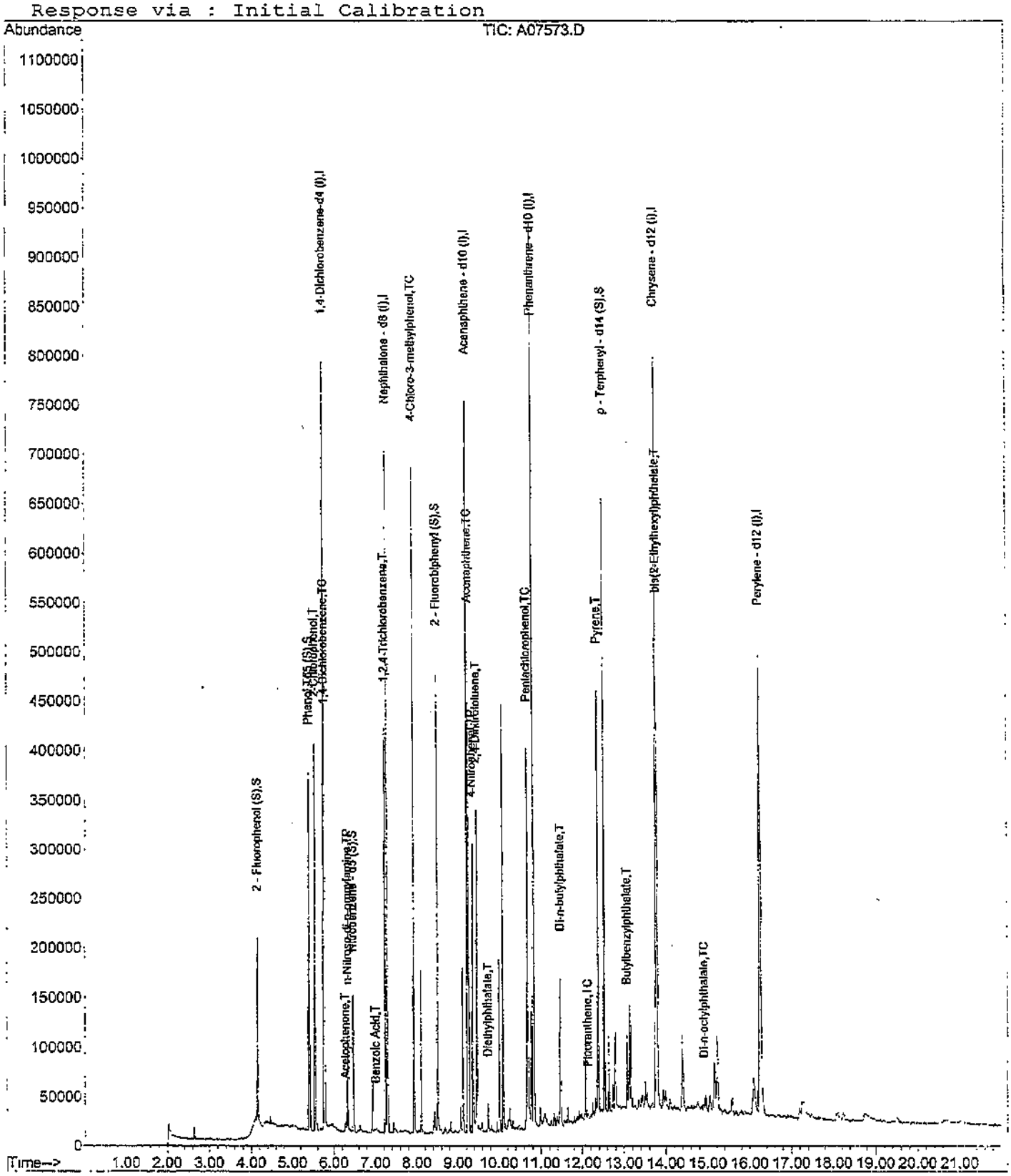
(#) = qualifier out of range (m) = manual integration (+) = signals summed

00267

Quantitation Report (QT Reviewed)

Data File : W:\092104\A07573.D Vial: 0
Acq On : 21 Sep 2004 13:11 Operator: CLZ
Sample : 123627-1 MSD SS1197 &2.0 SOIL Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 21 14:41 2004 Quant Results File: SV5-090704.RES

Method : W:\METHODS\SV5-090704.M (RTE Integrator)
Title : USEPA Method 8270 Calibration
Last Update : Tue Sep 21 13:19:24 2004
Response via : Initial Calibration



00268

LABORATORY WORKSHEETS

00269

Semivolatile GCMS Worksheet - total

QC Level:Tier IV

Matrix:solid

Lloyd & Assoc. Inc.

Due: 09/21/04

Work Order - 123627

Proj. Manager:Darla Powell

Special Instructions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

B1

[redacted]

Sample Weight/Volume

Full 8270

Client Sample ID	040916/GNW/MW
Date Received	9/16/2004
Date Sampled	**9/16/2004 11:20:00 AM**

NB

See attached limits HCBT HCBD by 8081

Samples are: Low Level ☒

Analyst

Reviewed by

Small Volume ☐

Date 9/21/04

Date 9-21-04

Normal ☐

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00270

Printed - 9/17/04

Semivolaile Analysis by USEPA Method 8270

QC Batch ID	ss1197		
Sample Matrix	solid		
Surrogate Std Lot	980-94-1		
Expiration Date	11/6/04	weighed	
8270 Matrix Spike Lot	980-92-4	extracted	
Expiration Date	12/03/04		
Internal Standard Lot	980-89-1		
Expiration Date	11/14/04		
MeCl2 Lot No.	X46E04		
Na2SO4 Lot No.			
Extraction Method	3550M sonication		

Dy 9/17/04

QC Sample Type	QC Identifier	Sample Weight (g)	Final Volume (ml)	Surr Spike (ul)	MS/BS spike amt (ul)
Method Blank	ss1197	20.0000	2	10	NA
Duplicate					NA
Duplicate 2					NA
Blank Spike	bss1197	20.0000	2	10	10
Blank Spike Duplicate	bss1197	20.0000	2	10	10
Matrix Spike	123627s1	20.9177	2	10	10
Matrix Spike Duplicate	123627d1	20.6469	2	10	10
Matrix Spike 2	122747s1				
Matrix Spike Duplicate 2	122747d1				

Sample	Client Sample ID	Sample Weight (g)	Final Volume (ml)	Surr Spike (ul)	Comments
123627-1	040916/GNW/MW	20.8981	2	10	

00271

STL Seattle

6a **Sample Information**

Th Client Name	Lloyd & Assoc. Inc.	
Work Order Number	123627	
Sample Number	1	Related Blank: ss1197
QC Batch Number	ss1197	
Client Sample ID	040916/GNW/MW	
Date Received	09-16-04	
Date Prepared	09-17-04	
Date Analyzed	09-21-04	
Sample matrix type	solid	
QC sample type	sample	

Sample weight (g)	20.8981	=	0.0209 /kg	Calc. Fact.	0.111320786
Extract volume (ml)	2	=	2 ml	Dry Weight	17.96609657 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids	85.97	=	0.8597	Spike Factor	55.66039324
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	432.9624		86.6	OK	2	120
x	Phenol - d5	481.2395		96.2	OK	1	102
x	Nitrobenzene - d5	422.4329		84.5	OK	34	146
x	2 - Fluorobiphenyl	527.22		105	OK	35	143
x	2,4,6 - Tribromophenol	446.74		89.3	OK	29	151
x	p - Terphenyl - d14	475.4354		95.1	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Diethylphthalate	17.464			ND		11.1
x	Di-n-butylphthalate	125.0117		60.5292	13.9	B1	11.1
x	Butylbenzylphthalate	62.7574		39.9308	6.99	J B1	22.3
x	bis(2-Ethylhexyl)phthalate	188.7915		111.157	21	J B1	22.3

STL Seattle

6a Sample Information

Th Client Name	
Work Order Number	
Sample Number	
QC Batch Number	ss1197
Client Sample ID	
Date Received	
Date Prepared	09-17-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	blank

Related Blank: noblank

Sample weight (g)	20	=	0.02 /kg	Calc. Fact.	0.1
Extract volume (ml)	2	=	2 ml	Dry Weight	20 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	50
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	404.8904		81	OK	2	120
x	Phenol - d5	429.3825		85.9	OK	1	102
x	Nitrobenzene - d5	640.114		128	OK	34	146
x	2 - Fluorobiphenyl	669.5517		134	OK	35	143
x	2,4,6 - Tribromophenol	613.69		123	OK	29	151
x	p - Terphenyl - d14	645.0704		129	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Di-n-butylphthalate	60.5292			6.05	J	10
x	Butylbenzylphthalate	39.9308			3.99	J	20
x	bis(2-Ethylhexyl)phthalate	111.1566			11.1	J	20

STL Seattle

6a Sample Information

Th Client Name	
Work Order Number	
Sample Number	Related Blank: ss1197
QC Batch Number	ss1197
Client Sample ID	
Date Received	
Date Prepared	09-17-04
Date Analyzed	09-21-04
Sample matrix type	solid
QC sample type	bs

Sample weight (g)	20	=	0.02 /kg	Calc. Fact.	0.1
Extract volume (ml)	2	=	2 ml	Dry Weight	20 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	50
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	667.5166		134	OK	2	120
x	Phenol - d5	641.6869		128	OK	1	102
x	Nitrobenzene - d5	593.1728		119	OK	34	146
x	2 - Fluorobiphenyl	710.646	N	142	HIGH	35	143
x	2,4,6 - Tribromophenol	660		132	OK	29	151
x	p - Terphenyl - d14	724.8062		145	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Phenol	496.1897			49.6		5
	2-Chlorophenol	576.3368			57.6		5
x	1,4-Dichlorobenzene	357.9425			35.8		5
	N-nitroso-di-n-propylamine	379.9496			38		5
x	1,2,4-Trichlorobenzene	368.0424			36.8		5
	4-Chloro-3-methylphenol	591.2773			59.1		5
x	Acenaphthene	403.9942			40.4		2
	4-Nitrophenol	871.6244			87.2		50
	2,4-Dinitrotoluene	353.5604			35.4		10
x	Diethylphthalate	8.0739			ND		10
x	Pentachlorophenol	278.2273			27.8		10
x	Di-n-butylphthalate	51.1966		60.5292	5.12	J B1	10
x	Fluoranthene	4.7939			ND		2
x	Pyrene	437.8972			43.8		2
x	Butylbenzylphthalate	34.6406		39.9308	3.46	J B1	20
x	bis(2-Ethylhexyl)phthalate	50.3786		111.157	5.04	J B1	20
	Benzidine	2.1674			ND		10

STL Seattle

6a **Sample Information**

Th Client Name	
Work Order Number	
Sample Number	Related Blank: ss1197
QC Batch Number	ss1197
Client Sample ID	
Date Received	
Date Prepared	09-17-04
Date Analyzed	09-21-04
Sample matrix type	solid
QC sample type	bsd

Sample weight (g)	20	=	0.02 /kg	Calc. Fact.	0.1
Extract volume (ml)	2	=	2 ml	Dry Weight	20 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	50
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	620.2304		124	OK	2	120
x	Phenol - d5	568.0643		114	OK	1	102
x	Nitrobenzene - d5	640.8283		128	OK	34	146
x	2 - Fluorobiphenyl	657.0908		131	OK	35	143
x	2,4,6 - Tribromophenol	725.67	N	145	HIGH	29	151
x	p - Terphenyl - d14	720.6473		144	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Phenol	515.0638			51.5		5
	2-Chlorophenol	515.2492			51.5		5
x	1,4-Dichlorobenzene	310.6516			31.1		5
	N-nitroso-di-n-propylamine	336.7937			33.7		5
x	1,2,4-Trichlorobenzene	377.4435			37.7		5
	4-Chloro-3-methylphenol	546.5003			54.7		5
x	Acenaphthene	423.2969			42.3		2
	4-Nitrophenol	723.7767			72.4		50
	2,4-Dinitrotoluene	329.5735			33		10
x	Diethylphthalate	9.7906			ND		10
x	Pentachlorophenol	297.1413			29.7		10
x	Di-n-butylphthalate	55.0049		60.5292	5.5	J B1	10
x	Fluoranthene	4.8192			ND		2
x	Pyrene	414.3035			41.4		2
x	Butylbenzylphthalate	35.51		39.9308	3.55	J B1	20
x	Benzo(a)anthracene	2.279			ND		2
x	bis(2-Ethylhexyl)phthalate	51.6967		111.157	5.17	J B1	20
x	Di-n-octylphthalate	6.2058			ND		20

STL Seattle

6a **Sample Information**

Th Client Name	Lloyd & Assoc. Inc.
Work Order Number	123627
Sample Number	1
QC Batch Number	ss1197
Client Sample ID	040916/GNW/MW
Date Received	09-16-04
Date Prepared	09-17-04
Date Analyzed	09-21-04
Sample matrix type	solid
QC sample type	ms

Related Blank: ss1197

Sample weight (g)	20.9177	=	0.02092 /kg	Calc. Fact.	0.111216478
Extract volume (ml)	2	=	2 ml	Dry Weight	17.98294669 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids	85.97	=	0.8597	Spike Factor	55.60823914
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	356.3943		71.3	OK	2	120
x	Phenol - d5	427.1271		85.4	OK	1	102
x	Nitrobenzene - d5	302.7738		60.6	OK	34	146
x	2 - Fluorobiphenyl	386.2115		77.2	OK	35	143
x	2,4,6 - Tribromophenol	507.42		101	OK	29	151
x	p - Terphenyl - d14	493.4224		98.7	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Phenol	657.4306			73.1		5.56
	2-Chlorophenol	780.6603			86.8		5.56
x	1,4-Dichlorobenzene	408.2449			45.4		5.56
	N-nitroso-di-n-propylamine	480.955			53.5		5.56
x	1,2,4-Trichlorobenzene	471.2415			52.4		5.56
	4-Chloro-3-methylphenol	763.0679			84.9		5.56
x	Dimethylphthalate	2.0656			ND		11.1
x	Acenaphthene	572.7098			63.7		2.22
	4-Nitrophenol	1181.657			131		55.6
	2,4-Dinitrotoluene	448.2672			49.9		11.1
x	Diethylphthalate	12.308			ND		11.1
x	Pentachlorophenol	582.7852			64.8		11.1
x	Di-n-butylphthalate	131.5709		60.5292	14.6	B1	11.1
x	Fluoranthene	5.5148			ND		2.22
x	Pyrene	582.462			64.8		2.22
x	Butylbenzylphthalate	56.1532		39.9308	6.25	J B1	22.2
x	bis(2-Ethylhexyl)phthalate	214.8079		111.157	23.9	B1	22.2

STL Seattle

6a **Sample Information**

Th	Client Name	Lloyd & Assoc. Inc.
	Work Order Number	123627
	Sample Number	1
	QC Batch Number	ss1197
	Client Sample ID	040916/GNW/MW
	Date Received	09-16-04
	Date Prepared	09-17-04
	Date Analyzed	09-21-04
	Sample matrix type	solid
	QC sample type	msd

Related Blank: ss1197

Sample weight (g)	20.6469	=	0.02065 /kg	Calc. Fact.	0.112675168
Extract volume (ml)	2	=	2 ml	Dry Weight	17.75013993 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids	85.97	=	0.8597	Spike Factor	56.33758404
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	2 - Fluorophenol	389.1159		77.8	OK	2	120
x	Phenol - d5	459.6062		91.9	OK	1	102
x	Nitrobenzene - d5	294.18		58.8	OK	34	146
x	2 - Fluorobiphenyl	399.2372		79.8	OK	35	143
x	2,4,6 - Tribromophenol	485.97		97.2	OK	29	151
x	p - Terphenyl - d14	514.0836		103	OK	35	166

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Phenol	720.8685			81.2		5.63
	2-Chlorophenol	676.6424			76.2		5.63
x	1,4-Dichlorobenzene	449.1001			50.6		5.63
	N-nitroso-di-n-propylamine	489.5431			55.2		5.63
x	Benzoic Acid	6.0434			ND		67.6
x	1,2,4-Trichlorobenzene	409.2031			46.1		5.63
	4-Chloro-3-methylphenol	741.9817			83.6		5.63
x	Acenaphthene	515.9291			58.1		2.25
	4-Nitrophenol	1035.323			117		56.3
	2,4-Dinitrotoluene	477.2406			53.8		11.3
x	Diethylphthalate	10.9786			ND		11.3
x	Pentachlorophenol	580.8225			65.4		11.3
x	Di-n-butylphthalate	127.106		60.5292	14.3	B1	11.3
x	Fluoranthene	7.3237			ND		2.25
x	Pyrene	555.6202			62.6		2.25
x	Butylbenzylphthalate	55.49		39.9308	6.25	J B1	22.5
x	bis(2-Ethylhexyl)phthalate	194.4313		111.157	21.9	J B1	22.5
x	Di-n-octylphthalate	16.3023			ND		22.5
	Acetophenone	3.8603			ND		11.3

ORGANOCHLORINE PESTICIDES DATA PACKAGE

SAMPLE DATA

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06464.D\ECD1A.CH Vial: 74
Signal #2 : H:\DATA\091604\ECD06464.D\ECD2B.CH
Acq On : 9-17-2004 08:29:58 PM Operator: SJL/CRF
Sample : 123627-01 PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:36:00 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
		System Monitoring Compounds							
2)	SR	Tetrachloro-m-xy	7.02	6.23	6018750	4556024	16.094	14.634	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					80.47%	73.17%	
4)	SR	Decachlorobiphen	13.50	12.90	6307218	4019125	20.894	19.512	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					104.47%	97.56%	
		Target Compounds							
1)	T	Hexachlorobutadi	0.00	3.17	0	139974	N.D.	0.207	#
3)		alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
4)	T	Hexachlorobenzen	0.00	6.92f	0	125152	N.D.	0.370	#
5)	M	gamma-BHC (Linda	0.00	7.40f	0	162184	N.D.	0.418	#
6)		beta-BHC	8.26	0.00	1916739	0	9.068	N.D.	#
7)		delta-BHC	0.00	7.84f	0	1248325	N.D.	3.392	#
8)	M	Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
9)	M	Aldrin	0.00	8.09f	0	2950137	N.D.	7.734	#
0)		Heptachlor Epoxi	9.75	0.00	226415	0	0.527	N.D.	#
1)		gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
2)		alpha-Chlordane	0.00	9.34	0	157942	N.D.	0.406	#
3)		Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
4)		4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.	
5)	M	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
6)	M	Endrin	10.89f	0.00	404854	0	1.141	N.D.	#
7)		4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.	
8)		Endosulfan II	11.19	10.58	691638	974141	1.845	2.967	#
9)	M	4,4'-DDT	11.48	10.83f	341852	3077816	1.280	14.467	#
0)		Endrin Aldehyde	11.27f	10.83	4066189	3077816	13.504	12.038	
1)		Endosulfan Sulfa	0.00	11.10	0	679195	N.D.	2.250	#
2)		Methoxychlor	12.01f	0.00	260486	0	1.753	N.D.	#
3)		Endrin Ketone	12.05	0.00	419829	0	0.958	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

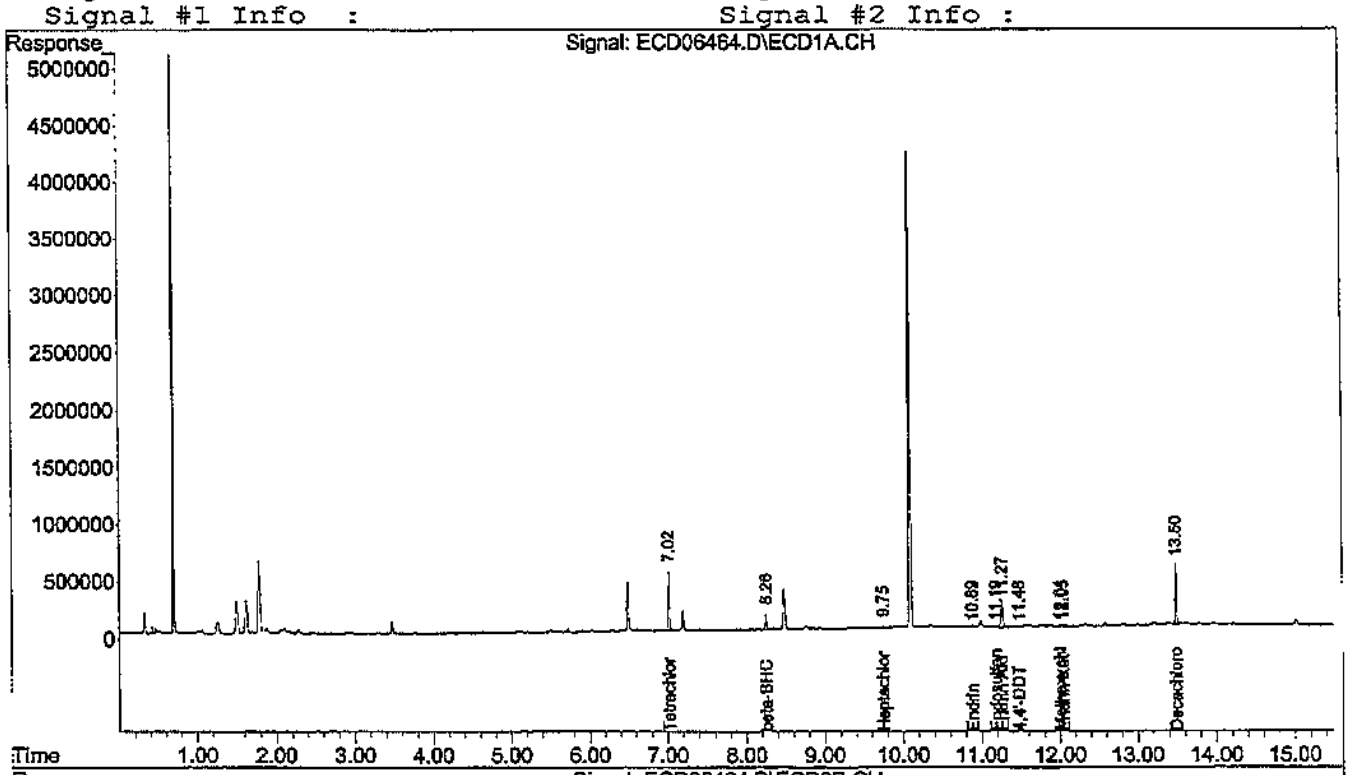
00280

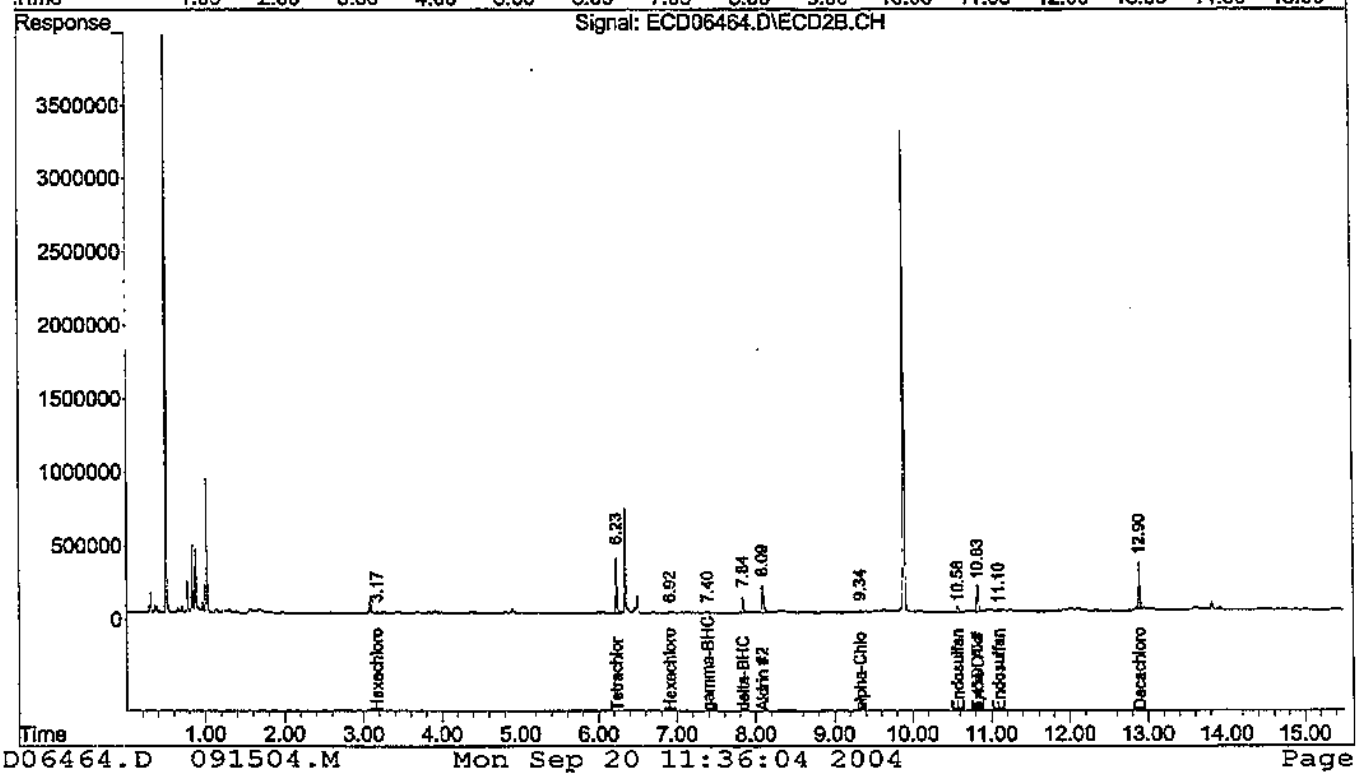
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06464.D\ECD1A.CH Vial: 74
Signal #2 : H:\DATA\091604\ECD06464.D\ECD2B.CH
Acq On : 9-17-2004 08:29:58 PM Operator: SJL/CRF
Sample : 123627-01 PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:36 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00281

Custom Report - Relative Retention Times

Sample Name 123627-01 PE1750

Data File Path H:\DATA\091604\ECD06464.D
Date Acquired 9-17-2004 08:29:58 PM

CCV File Path H:\DATA\091604\ECD06455.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	+/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	0.00	3.17	0.0000	0.2459	0.2965	0.2477	-	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5204	0.4834	0.5205	0.4834	OK	OK
alpha-BHC	0.00	0.00	0.0000	0.0000	0.5569	0.5432	-	-
Hexachlorobenzene	0.00	6.92	0.0000	0.5363	0.5631	0.5324	-	-
gamma-BHC (Lindane)	0.00	7.40	0.0000	0.5740	0.5846	0.5763	-	OK
beta-BHC	8.26	0.00	0.6121	0.0000	0.6113	0.5999	OK	-
delta-BHC	0.00	7.84	0.0000	0.6081	0.6345	0.6055	-	OK
Heptachlor	0.00	0.00	0.0000	0.0000	0.6379	0.6217	-	-
Aldrin	0.00	8.09	0.0000	0.6274	0.6727	0.6305	-	-
Heptachlor Epoxide	9.75	0.00	0.7226	0.0000	0.7215	0.6863	OK	-
gamma-Chlordane	0.00	0.00	0.0000	0.0000	0.7539	0.7139	-	-
alpha-Chlordane	0.00	9.34	0.0000	0.7240	0.7582	0.7252	-	OK
Endosulfan I	0.00	0.00	0.0000	0.0000	0.7603	0.7290	-	-
4,4'-DDE	0.00	0.00	0.0000	0.0000	0.7776	0.7529	-	-
Dieldrin	0.00	0.00	0.0000	0.0000	0.7845	0.7603	-	-
Endrin	10.89	0.00	0.8071	0.0000	0.8043	0.7913	OK	-
4,4'-DDD	0.00	0.00	0.0000	0.0000	0.8237	0.8110	-	-
Endosulfan II	11.19	10.58	0.8293	0.8204	0.8291	0.8184	OK	OK
4,4'-DDT	11.48	10.83	0.8507	0.8402	0.8490	0.8361	OK	-
Endrin Aldehyde	11.27	10.83	0.8348	0.8402	0.8387	0.8406	-	OK
Endosulfan Sulfate	0.00	11.10	0.0000	0.8609	0.8627	0.8590	-	OK
Methoxychlor	12.01	0.00	0.8900	0.0000	0.8874	0.8988	OK	-
Endrin Ketone	12.05	0.00	0.8929	0.0000	0.8944	0.9084	OK	-
Decachlorobiphenyl (S)	13.50	12.90	1.0000	1.0000	1.0000	1.0000	OK	OK

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06477.D\ECD1A.CH Vial: 71
Signal #2 : H:\DATA\092004\ECD06477.D\ECD2B.CH
Acq On : 9-20-2004 01:41:35 PM Operator: SJL/CRF
Sample : 123618-03 PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:52:52 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
		System Monitoring Compounds							
2)	SR	Tetrachloro-m-xy	7.02	6.23	7770640	5987398	20.779	19.232	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					103.90%	96.16%	
4)	SR	Decachlorobiphen	13.49	12.89	7264495	4548074	24.065	22.080	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					120.33%	110.40%	
		Target Compounds							
1)	T	Hexachlorobutadi	0.00	3.17	0	123289	N.D.	0.183	#
3)		alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
4)	T	Hexachlorobenzen	7.60	6.86	289.2E6	164.0E6	541.062	484.496	
5)	M	gamma-BHC (Linda	7.87	7.40f	214900	136943	0.461	0.353	
6)		beta-BHC	8.25	7.75	231115	129565	1.093	0.777	#
7)		delta-BHC	0.00	7.84f	0	1647064	N.D.	4.475	#
8)	M	Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
9)	M	Aldrin	9.06	8.11	2303260	371008	5.330	0.973	#
0)		Heptachlor Epoxi	9.75	8.84	307105	152873	0.715	0.419	#
1)		gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
2)		alpha-Chlordane	0.00	9.34	0	366504	N.D.	0.942	#
3)		Endosulfan I	0.00	9.39	0	206914	N.D.	0.593	#
4)		4,4'-DDE	10.49	9.70	496481	332313	1.143	0.904	
5)	M	Dieldrin	10.61	9.86f	441632	546409	1.102	1.562	#
6)	M	Endrin	10.89f	0.00	269083	0	0.758	N.D.	#
7)		4,4'-DDD	11.11	10.46	273078	-133603	0.783	N.D.	#
8)		Endosulfan II	0.00	10.58	0	622582	N.D.	1.896	#
9)	M	4,4'-DDT	11.46	10.83f	382682	5942684	1.432	27.933	#
0)		Endrin Aldehyde	11.26f	10.83	5837525	5942684	19.387	23.244	
1)		Endosulfan Sulfa	11.63	11.10	230124	252816	0.651	0.838	#
2)		Methoxychlor	12.01f	0.00	571892	0	3.849	N.D.	#
3)		Endrin Ketone	12.04	11.76f	276822	133549	0.632	0.370	#

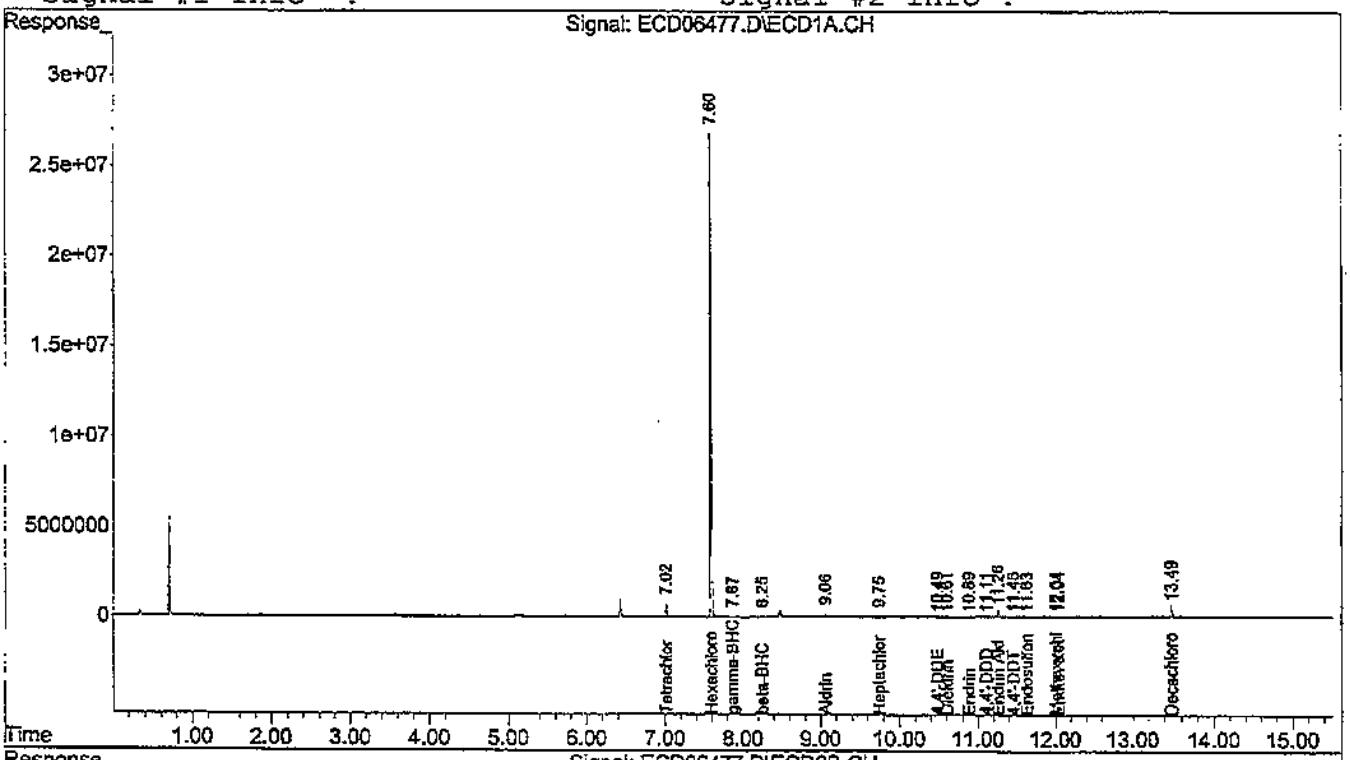
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

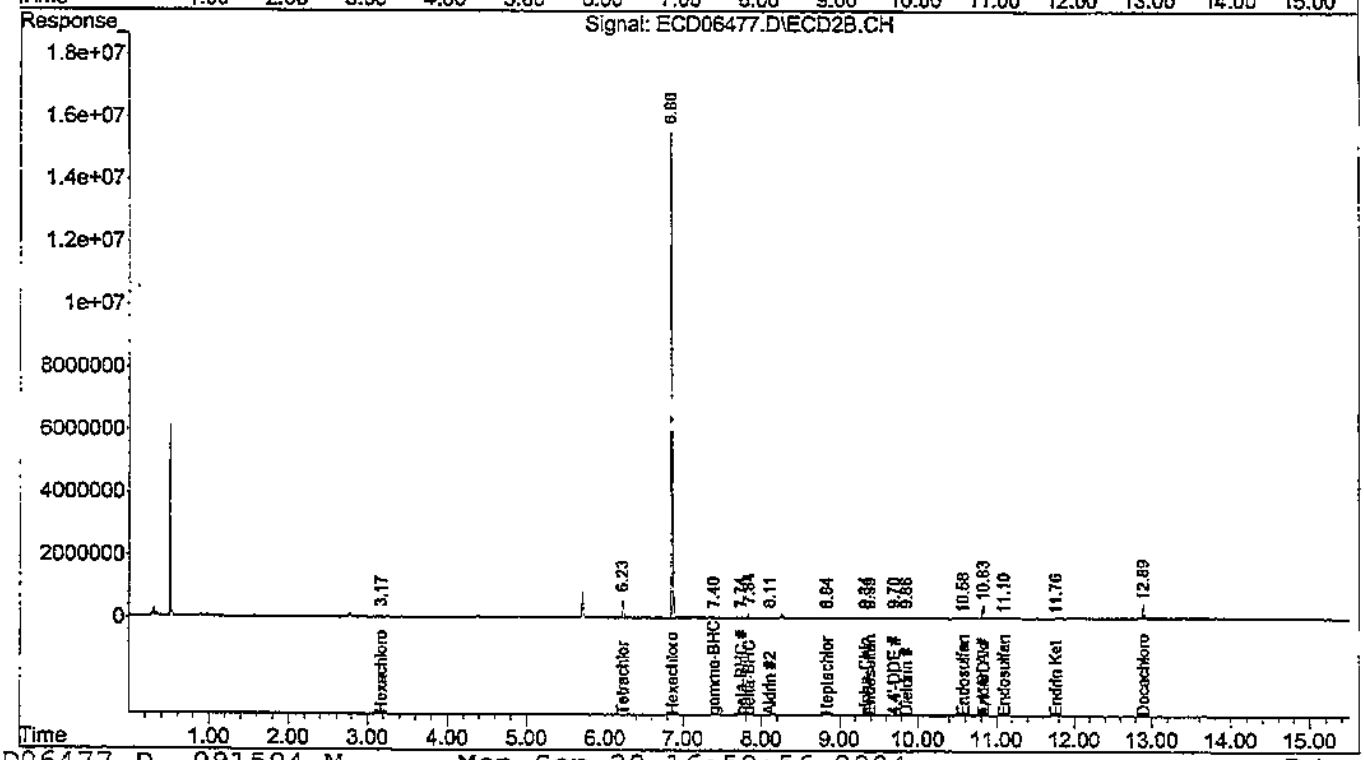
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06477.D\ECD1A.CH Vial: 71
Signal #2 : H:\DATA\092004\ECD06477.D\ECD2B.CH
Acq On : 9-20-2004 01:41:35 PM Operator: SJL/CRF
Sample : 123618-03 PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:52 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





Custom Report - Relative Retention Times

Sample Name 123618-03 PE1750

Data File Path H:\DATA\092004\ECD06477.D
Date Acquired 9-20-2004 01:41:35 PM

CCV File Path H:\DATA\092004\ECD06475.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	0.00	3.17	0.0000	0.2460	0.2966	0.2477	-	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5205	0.4835	0.5206	0.4835	OK	OK
alpha-BHC	0.00	0.00	0.0000	0.0000	0.5570	0.5433	-	-
Hexachlorobenzene	7.60	6.86	0.5631	0.5325	0.5631	0.5325	OK	OK
gamma-BHC (Lindane)	7.87	7.40	0.5832	0.5739	0.5847	0.5764	OK	OK
beta-BHC	8.25	7.75	0.6115	0.6008	0.6113	0.5999	OK	OK
delta-BHC	0.00	7.84	0.0000	0.6082	0.6345	0.6056	-	OK
Heptachlor	0.00	0.00	0.0000	0.0000	0.6379	0.6218	-	-
Aldrin	9.06	8.11	0.6716	0.6293	0.6726	0.6305	OK	OK
Heptachlor Epoxide	9.75	8.84	0.7226	0.6859	0.7214	0.6863	OK	OK
gamma-Chlordane	0.00	0.00	0.0000	0.0000	0.7538	0.7138	-	-
alpha-Chlordane	0.00	9.34	0.0000	0.7241	0.7582	0.7251	-	OK
Endosulfan I	0.00	9.39	0.0000	0.7284	0.7602	0.7290	-	OK
4,4'-DDE	10.49	9.70	0.7775	0.7527	0.7776	0.7528	OK	OK
Dieldrin	10.61	9.86	0.7864	0.7649	0.7845	0.7602	OK	-
Endrin	10.89	0.00	0.8074	0.0000	0.8043	0.7912	-	-
4,4'-DDD	11.11	10.46	0.8236	0.8110	0.8237	0.8110	OK	OK
Endosulfan II	0.00	10.58	0.0000	0.8205	0.8290	0.8183	-	OK
4,4'-DDT	11.46	10.83	0.8493	0.8402	0.8490	0.8361	OK	-
Endrin Aldehyde	11.26	10.83	0.8349	0.8402	0.8387	0.8405	-	OK
Endosulfan Sulfate	11.63	11.10	0.8622	0.8611	0.8627	0.8590	OK	OK
Methoxychlor	12.01	0.00	0.8900	0.0000	0.8874	0.8988	OK	-
Endrin Ketone	12.04	11.76	0.8926	0.9125	0.8945	0.9084	OK	-
Decachlorobiphenyl (S)	13.49	12.89	1.0000	1.0000	1.0000	1.0000	OK	OK

00285

INITIAL CALIBRATION

Response Factor Report Agilent E

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004

Calibration Files
1 =ECD06385.D 2 =ECD06386.D 5 =ECD06387.D
10 =ECD06388.D 20 =ECD06389.D 50 =ECD06390.D

		Compound	1	2	5	10	20	50	Avg		%RSD
1)	T	Hexachlorobutadi	6.977	6.851	7.433	7.250	7.732	7.564	7.301	E5	4.68
2)	SR	Tetrachloro-m-xy	3.891	3.763	3.737	3.632	3.830	3.585	3.740	E5	3.09
3)		alpha-BHC	4.729	4.772	4.874	5.038	5.536	5.479	5.071	E5	6.99
4)	T	Hexachlorobenzen	6.195	5.749	5.252	5.002	5.091	4.778	5.345	E5	9.89
5)	M	gamma-BHC (Linda	4.396	4.499	4.495	4.593	5.000	4.975	4.660	E5	5.61
6)		beta-BHC	2.227	2.313	2.135	2.002	2.037	1.969	2.114	E5	6.43
7)		delta-BHC	3.942	3.865	3.870	4.021	4.343	4.538	4.096	E5	6.82
8)	M	Heptachlor	4.816	4.795	4.636	4.688	5.024	5.056	4.836	E5	3.55
9)	M	Aldrin	4.509	4.252	4.124	4.176	4.398	4.469	4.322	E5	3.70
10)		Heptachlor Epoxi	4.570	4.299	4.168	4.163	4.286	4.274	4.293	E5	3.45
11)		gamma-Chlordane	4.387	4.292	4.233	4.280	4.435	4.534	4.360	E5	2.59
12)		alpha-Chlordane	4.484	4.358	4.371	4.351	4.468	4.499	4.422	E5	1.56
13)		Endosulfan I	4.175	4.032	3.836	3.892	4.001	4.045	3.997	E5	3.00
14)		4,4'-DDE	4.259	4.161	4.233	4.328	4.507	4.574	4.344	E5	3.75
15)	M	Dieldrin	3.881	3.797	3.925	4.036	4.192	4.219	4.008	E5	4.27
16)	M	Endrin	3.407	3.373	3.429	3.574	3.744	3.762	3.548	E5	4.87
17)		4,4'-DDD	3.456	3.352	3.406	3.504	3.572	3.646	3.489	E5	3.10
18)		Endosulfan II	3.835	3.745	3.740	3.715	3.739	3.714	3.748	E5	1.19
19)	M	4,4'-DDT	2.200	2.318	2.520	2.622	3.035	3.335	2.672	E5	16.28
20)		Endrin Aldehyde	3.115	3.050	3.018	2.984	2.949	2.950	3.011	E5	2.14
21)		Endosulfan Sulfa	3.634	3.580	3.551	3.450	3.485	3.494	3.532	E5	1.94
22)		Methoxychlor	1.306	1.372	1.489	1.491	1.608	1.649	1.486	E5	8.88
23)		Endrin Ketone	4.224	4.330	4.453	4.436	4.436	4.409	4.381	E5	2.03
24)	SR	Decachlorobiphen	3.281	3.177	3.082	2.864	2.847	2.861	3.019	E5	6.21

Signal #2 Calibration Files
1 =ECD06385.D 2 =ECD06386.D 5 =ECD06387.D
10 =ECD06388.D 20 =ECD06389.D 50 =ECD06390.D

		Compound	1	2	5	10	20	50	Avg		%RSD
1)	T	Hexachlorobutadi	7.268	6.875	6.804	6.547	6.557	6.474	6.754	E5	4.40
2)	SR	Tetrachloro-m-xy	3.131	3.088	3.272	3.108	3.068	3.012	3.113	E5	2.82
3)		alpha-BHC	4.076	4.042	4.394	4.383	4.471	4.585	4.325	E5	5.06
4)	T	Hexachlorobenzen	3.525	3.458	3.559	3.344	3.232	3.192	3.385	E5	4.53
5)	M	gamma-BHC (Linda	3.689	3.766	3.947	3.888	3.926	4.050	3.878	E5	3.36
6)		beta-BHC	1.902	1.647	1.626	1.649	1.595	1.581	1.667	E5	7.12
7)		delta-BHC	3.836	3.389	3.537	3.700	3.776	3.848	3.681	E5	4.97
8)	M	Heptachlor	3.497	3.365	3.588	3.552	3.561	3.698	3.543	E5	3.10
9)	M	Aldrin	3.871	3.718	3.881	3.785	3.792	3.841	3.815	E5	1.61
10)		Heptachlor Epoxi	3.799	3.688	3.716	3.584	3.551	3.556	3.649	E5	2.76
11)		gamma-Chlordane	3.981	3.796	3.859	3.779	3.784	3.855	3.843	E5	1.99
12)		alpha-Chlordane	4.225	3.926	3.923	3.785	3.714	3.773	3.891	E5	4.75
13)		Endosulfan I	3.726	3.533	3.547	3.407	3.365	3.367	3.491	E5	4.02
14)		4,4'-DDE	3.615	3.531	3.721	3.688	3.736	3.772	3.677	E5	2.42
15)	M	Dieldrin	3.543	3.450	3.581	3.502	3.482	3.429	3.498	E5	1.63
16)	M	Endrin	2.893	2.816	2.897	2.841	2.870	2.852	2.861	E5	1.10
17)		4,4'-DDD	2.821	2.836	3.014	2.938	2.926	2.901	2.906	E5	2.44
18)		Endosulfan II	3.155	3.132	3.848	3.418	3.182	2.968	3.284	E5	9.50
19)	M	4,4'-DDT	1.844	1.864	2.080	2.104	2.350	2.522	2.128	E5	12.57
20)		Endrin Aldehyde	2.979	2.591	2.595	2.494	2.367	2.314	2.557	E5	9.26
21)		Endosulfan Sulfa	3.221	3.086	3.103	2.961	2.907	2.830	3.018	E5	4.77
22)		Methoxychlor	1.080	1.081	1.135	1.082	1.124	1.124	1.104	E5	2.34
23)		Endrin Ketone	3.765	3.689	3.758	3.590	3.487	3.350	3.607	E5	4.56
24)	SR	Decachlorobiphen	2.278	2.200	2.129	1.951	1.921	1.879	2.060	E5	8.01

#) = Out of Range

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06385.D\ECD1A.CH Vial: 3
Signal #2 : H:\DATA\091504\ECD06385.D\ECD2B.CH
Acq On : 15 Sep 2004 11:12 am Operator: SJL/CRF
Sample : 1.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-02 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41:53 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:48 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	778178	626291	2.017	1.994
Spiked Amount			20.000	Range	60 - 150	Recovery	=	10.08%# 9.97%#
4)	SR	Decachlorobiphen	13.50	12.89	1312223	911288	4.755	4.601
Spiked Amount			20.000	Range	60 - 150	Recovery	=	23.77%# 23.00%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.20	697717	726808	0.955	1.064
3)		alpha-BHC	7.52	7.01	472897	407594	0.892	0.930
4)	T	Hexachlorobenzen	7.60	6.87	619495	352524	1.115	1.031
5)	M	gamma-BHC (Linda	7.89	7.43	439630	368944	0.907	0.935
6)		beta-BHC	8.25	7.74	222669	190243	1.034	1.129
7)		delta-BHC	8.56	7.81	394187	383553	0.919	1.034
8)	M	Heptachlor	8.61	8.02	481584	349720	0.960	0.986
9)	M	Aldrin	9.08	8.13	450899	387071	1.022	1.009
0)		Heptachlor Epoxi	9.74	8.85	456981	379853	1.046	1.026
1)		gamma-Chlordane	10.17	9.21	438697	398114	0.985	1.030
2)		alpha-Chlordane	10.23	9.35	448442	422509	0.999	1.087
3)		Endosulfan I	10.26	9.40	417454	372605	1.032	1.059
4)		4,4'-DDE	10.49	9.71	851871	723036	1.942	1.951
5)	M	Dieldrin	10.59	9.80	776219	708626	1.920	2.018
6)	M	Endrin	10.86	10.20	681350	578612	1.823	1.893
7)		4,4'-DDD	11.12	10.46	691234	564174	1.980	1.909
8)		Endosulfan II	11.19	10.55	767017	631026	2.054	1.899
9)	M	4,4'-DDT	11.46	10.78	439902	368895	1.631	1.667
0)		Endrin Aldehyde	11.32	10.84	623001	595884	2.103	2.345
1)		Endosulfan Sulfa	11.64	11.08	726756	644250	2.082	2.123
2)		Methoxychlor	11.98	11.59	1306016	1079971	8.684	9.405
3)		Endrin Ketone	12.07	11.71	844721	752942	1.998	2.121

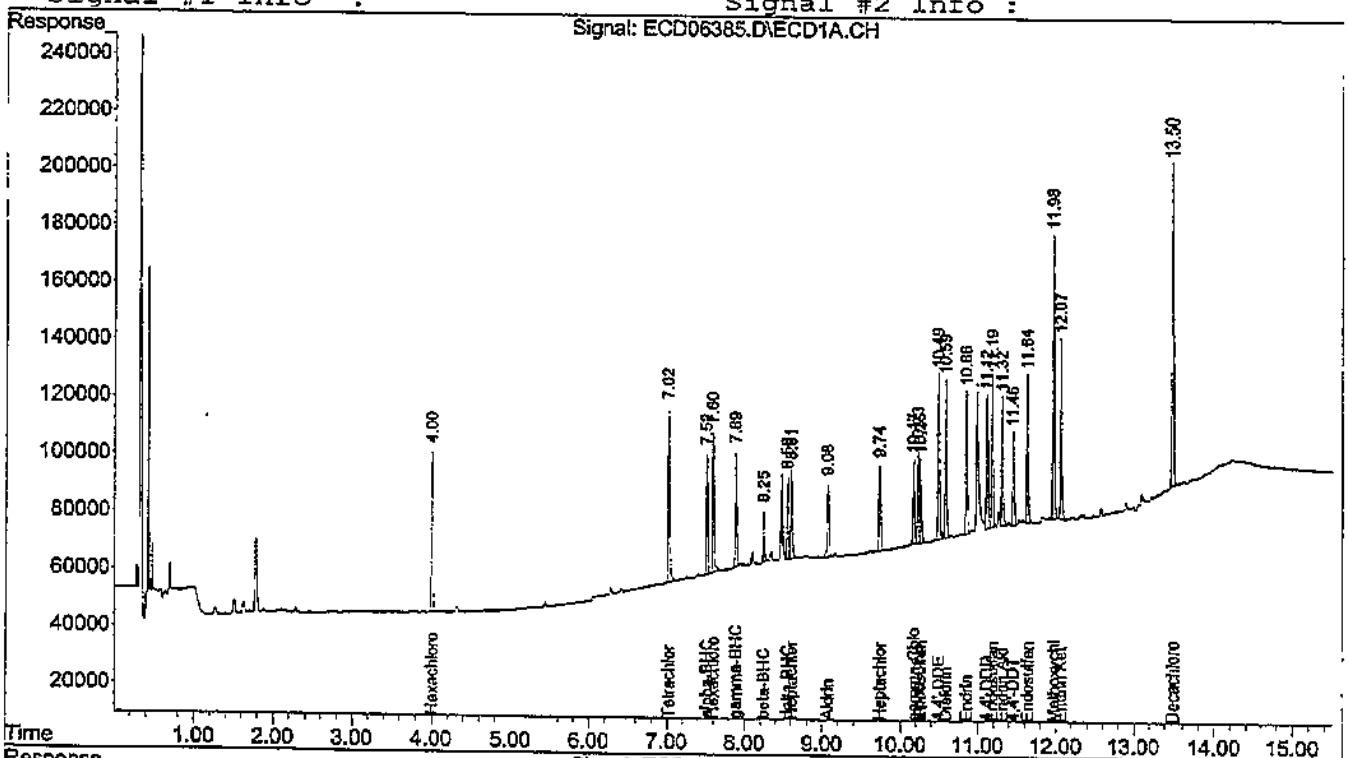
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int

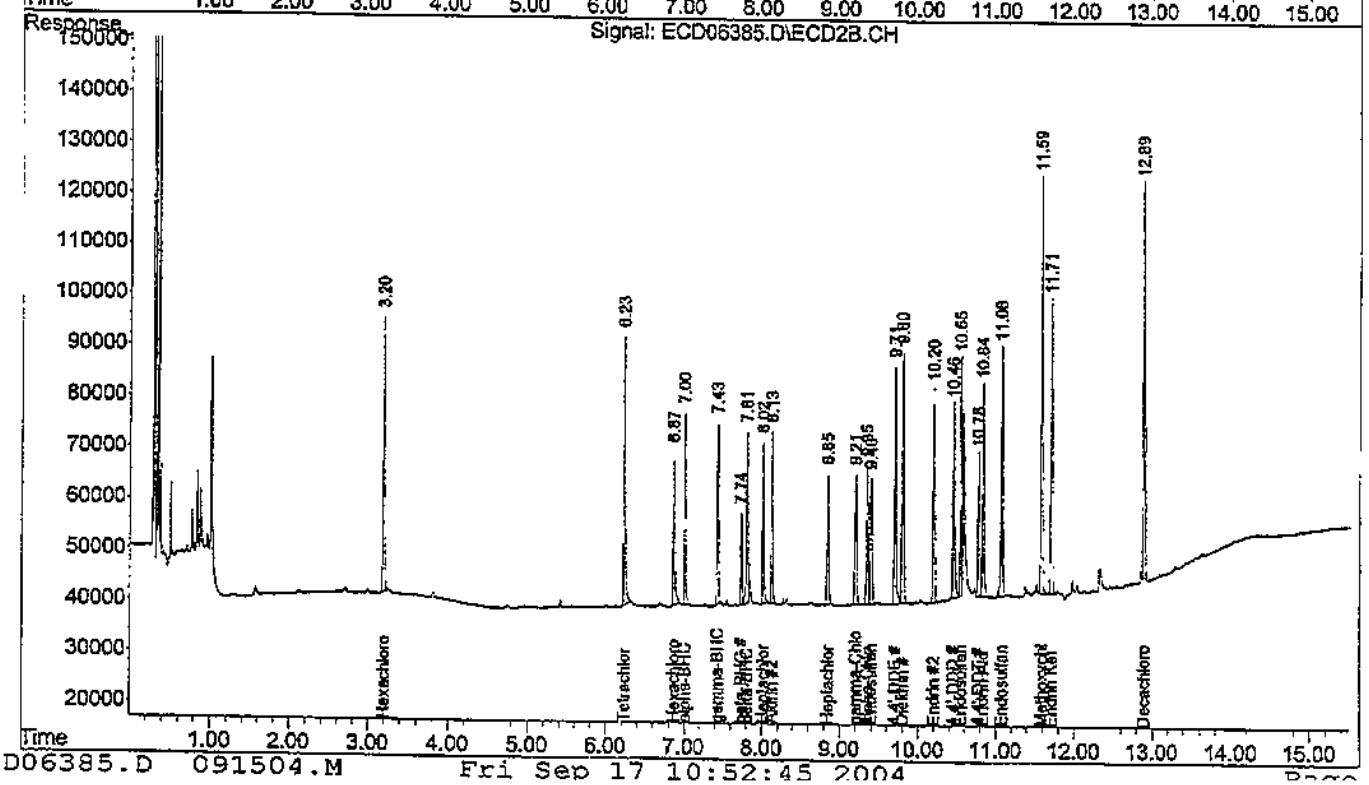
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06385.D\ECD1A.CH Vial: 3
Signal #2 : H:\DATA\091504\ECD06385.D\ECD2B.CH
Acq On : 15 Sep 2004 11:12 am Operator: SJL/CRF
Sample : 1.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-02 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:48 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00289

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06386.D\ECD1A.CH Vial: 4
Signal #2 : H:\DATA\091504\ECD06386.D\ECD2B.CH
Acq On : 15 Sep 2004 11:33 am Operator: SJL/CRF
Sample : 2.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-03 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:29 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	1505246	1235326	3.876	3.919
		Spiked Amount 20.000 Range 60 - 150 Recovery =					19.38%#	19.60%#
:4)	SR	Decachlorobiphen	13.50	12.90	2541425	1760312	9.577	9.042
		Spiked Amount 20.000 Range 60 - 150 Recovery =					47.88%#	45.21%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	1370113	1374900	1.861	2.005
3)		alpha-BHC	7.52	7.01	954497	808374	1.790	1.833
4)	T	Hexachlorobenzen	7.60	6.87	1149862	691653	2.054	2.010
5)	M	gamma-BHC (Linda	7.89	7.43	899787	753281	1.843	1.902
6)		beta-BHC	8.25	7.74	462606	329306	2.151	1.928
7)		delta-BHC	8.56	7.81	772928	677755	1.778	1.806
8)	M	Heptachlor	8.61	8.02	958953	672949	1.898	1.882
9)	M	Aldrin	9.08	8.13	850474	743618	1.923	1.933
.0)		Heptachlor Epoxi	9.74	8.85	859761	737649	1.960	1.982
.1)		gamma-Chlordane	10.17	9.21	858456	759293	1.926	1.954
.2)		alpha-Chlordane	10.23	9.35	871545	785201	1.932	2.011
.3)		Endosulfan I	10.26	9.40	806385	706680	1.998	2.001
.4)		4,4'-DDE	10.49	9.71	1664286	1412217	3.783	3.788
.5)	M	Dieldrin	10.59	9.80	1518941	1379944	3.748	3.920
.6)	M	Endrin	10.85	10.20	1349265	1126264	3.537	3.589
.7)		4,4'-DDD	11.12	10.46	1340639	1134271	3.828	3.821
.8)		Endosulfan II	11.19	10.55	1497856	1252614	4.012	3.758
:9)	M	4,4'-DDT	11.46	10.78	927244	745527	3.401	3.272
:0)		Endrin Aldehyde	11.32	10.84	1220033	1036279	4.135	4.059
:1)		Endosulfan Sulfa	11.64	11.08	1431964	1234396	4.132	4.054
:2)		Methoxychlor	11.98	11.59	2743074	2162142	17.934	18.310
:3)		Endrin Ketone	12.07	11.71	1732071	1475548	4.153	4.179

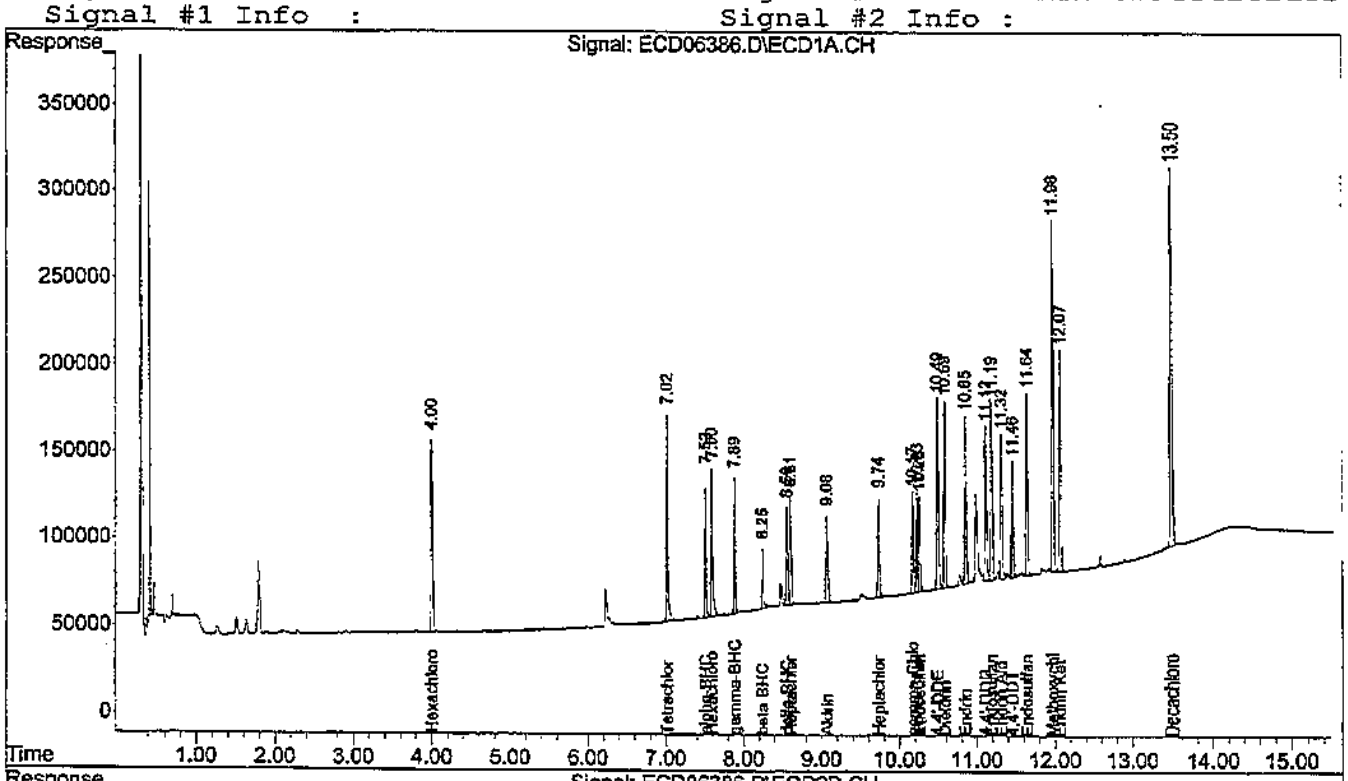
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

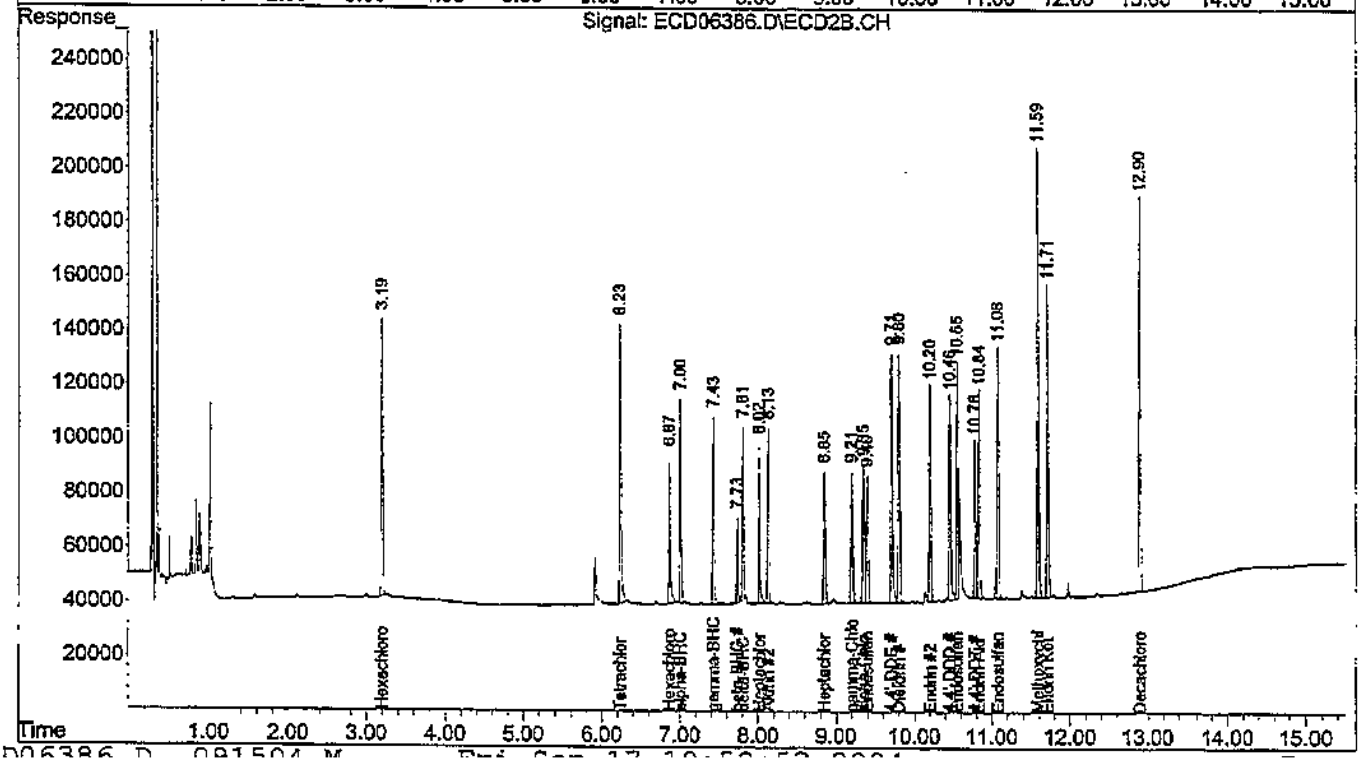
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06386.D\ECD1A.CH Vial: 4
Signal #2 : H:\DATA\091504\ECD06386.D\ECD2B.CH
Acq On : 15 Sep 2004 11:33 am Operator: SJL/CRF
Sample : 2.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-03 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:29 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06387.D\ECD1A.CH Vial: 5
Signal #2 : H:\DATA\091504\ECD06387.D\ECD2B.CH
Acq On : 15 Sep 2004 11:54 am Operator: SJL/CRF
Sample : 5.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-04 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41:17 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:12 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	3736517	3271684	9.509	10.454
Spiked Amount		20.000 Range	60 - 150		Recovery	=	47.55%#	52.27%#
4)	SR	Decachlorobiphen	13.50	12.90	6163790	4258625	24.071	22.256
Spiked Amount		20.000 Range	60 - 150		Recovery	=	120.36%	111.28%
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.20	3716711	3401777	5.054	4.946
3)		alpha-BHC	7.52	7.01	2437036	2197193	4.494	4.977
4)	T	Hexachlorobenzen	7.60	6.87	2625986	1779417	4.606	5.186
5)	M	gamma-BHC (Linda	7.89	7.43	2247450	1973616	4.525	4.965
6)		beta-BHC	8.25	7.74	1067426	812978	4.908	4.710
7)		delta-BHC	8.56	7.81	1935235	1768275	4.355	4.667
8)	M	Heptachlor	8.61	8.02	2318086	1794125	4.511	4.996
9)	M	Aldrin	9.08	8.13	2062165	1940386	4.603	5.049
0)		Heptachlor Epoxi	9.74	8.85	2083860	1857927	4.691	4.975
1)		gamma-Chlordane	10.17	9.21	2116491	1929559	4.707	4.956
2)		alpha-Chlordane	10.23	9.35	2185738	1961620	4.809	5.011
3)		Endosulfan I	10.26	9.40	1918065	1773415	4.703	5.014
4)		4,4'-DDE	10.49	9.71	4232871	3720742	9.538	9.944
5)	M	Dieldrin	10.59	9.80	3925175	3581323	9.612	10.172
6)	M	Endrin	10.86	10.20	3428676	2896793	8.789	9.022
7)		4,4'-DDD	11.12	10.46	3406488	3013688	9.667	10.129
8)		Endosulfan II	11.19	10.55	3739924	3847849	10.003	11.419
9)	M	4,4'-DDT	11.46	10.78	2520182	2080197	9.173	8.980
0)		Endrin Aldehyde	11.32	10.84	3018007	2595048	10.254	10.188
1)		Endosulfan Sulfa	11.64	11.08	3551387	3102560	10.269	10.173
2)		Methoxychlor	11.98	11.59	7446546	5672911	48.232	47.267
3)		Endrin Ketone	12.07	11.71	4453165	3758330	10.814	10.731

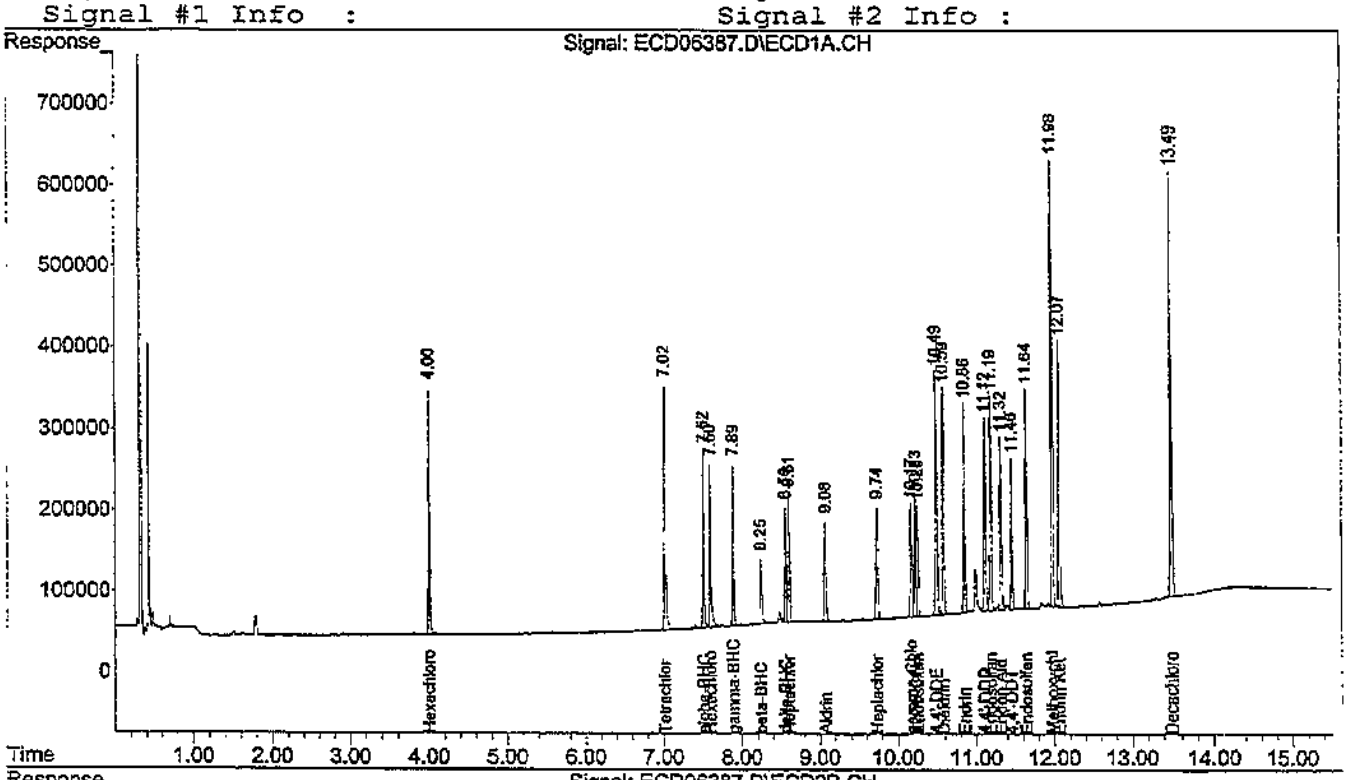
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int

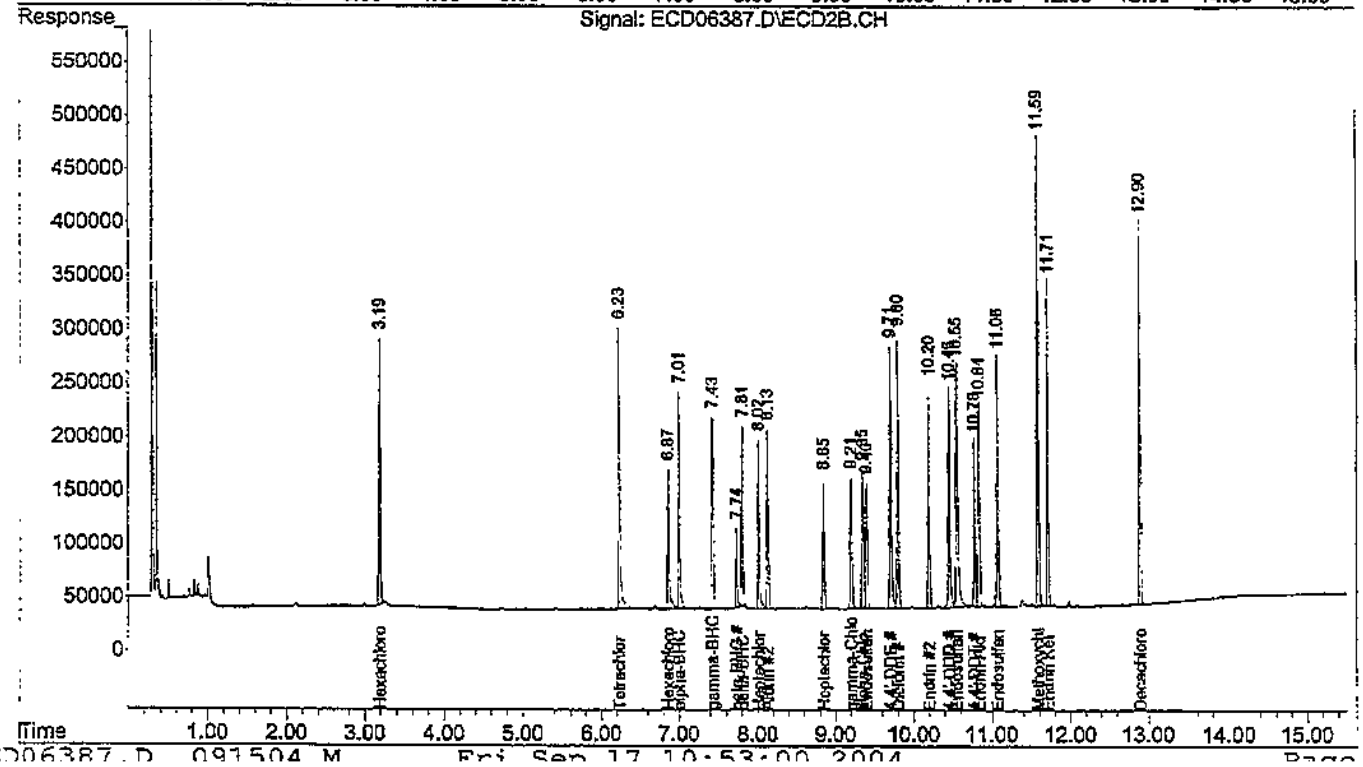
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06387.D\ECD1A.CH Vial: 5
Signal #2 : H:\DATA\091504\ECD06387.D\ECD2B.CH
Acq On : 15 Sep 2004 11:54 am Operator: SJL/CRF
Sample : 5.0UG/L PEST STD Inst : Agilent E
Misc : 1174-25-04 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:41 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:41:12 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





002923

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06388.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091504\ECD06388.D\ECD2B.CH
Acq On : 15 Sep 2004 12:15 pm Operator: SJL/CRF
Sample : 10UG/L PEST STD Inst : Agilent E
Misc : 1174-25-05 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:40:33 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Mon Sep 13 16:47:12 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	7264920	6216166	18.210	19.896
Spiked Amount		20.000 Range	60 - 150		Recovery	=	91.05%	99.48%
4)	SR	Decachlorobiphen	13.50	12.90	11456150	7802654	46.356	41.512
Spiked Amount		20.000 Range	60 - 150		Recovery	=	231.78%#	207.56%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.20	7250298	6547306	9.832	9.478
3)		alpha-BHC	7.52	7.01	5038290	4383487	9.127	9.905
4)	T	Hexachlorobenzen	7.60	6.87	5002214	3344256	8.615	9.748
5)	M	gamma-BHC (Linda	7.89	7.43	4593006	3888269	9.098	9.739
6)		beta-BHC	8.25	7.74	2001866	1649357	9.172	9.511
7)		delta-BHC	8.56	7.81	4020950	3699789	8.922	9.687
8)	M	Heptachlor	8.61	8.02	4688300	3551888	8.983	9.927
9)	M	Aldrin	9.08	8.13	4176395	3785215	9.221	9.837
0)		Heptachlor Epoxi	9.74	8.85	4162998	3584215	9.284	9.572
1)		gamma-Chlordane	10.17	9.21	4279991	3778904	9.461	9.710
2)		alpha-Chlordane	10.23	9.35	4350813	3784528	9.527	9.689
3)		Endosulfan I	10.26	9.40	3892121	3407401	9.481	9.621
4)		4,4'-DDE	10.49	9.71	8655025	7376806	19.406	19.667
5)	M	Dieldrin	10.59	9.80	8072147	7004633	19.699	19.895
6)	M	Endrin	10.86	10.20	7147920	5682095	18.016	17.340
7)		4,4'-DDD	11.12	10.46	7007381	5875759	19.924	19.741
8)		Endosulfan II	11.19	10.55	7429354	6835845	19.906	20.214
9)	M	4,4'-DDT	11.46	10.78	5244339	4208973	19.009	17.952
0)		Endrin Aldehyde	11.32	10.84	5967677	4987564	20.391	19.682
1)		Endosulfan Sulfa	11.64	11.08	6899869	5922847	20.081	19.486
2)		Methoxychlor	11.98	11.59	14906104	10820462	96.223	89.204
3)		Endrin Ketone	12.07	11.71	8872104	7180717	21.937	20.723

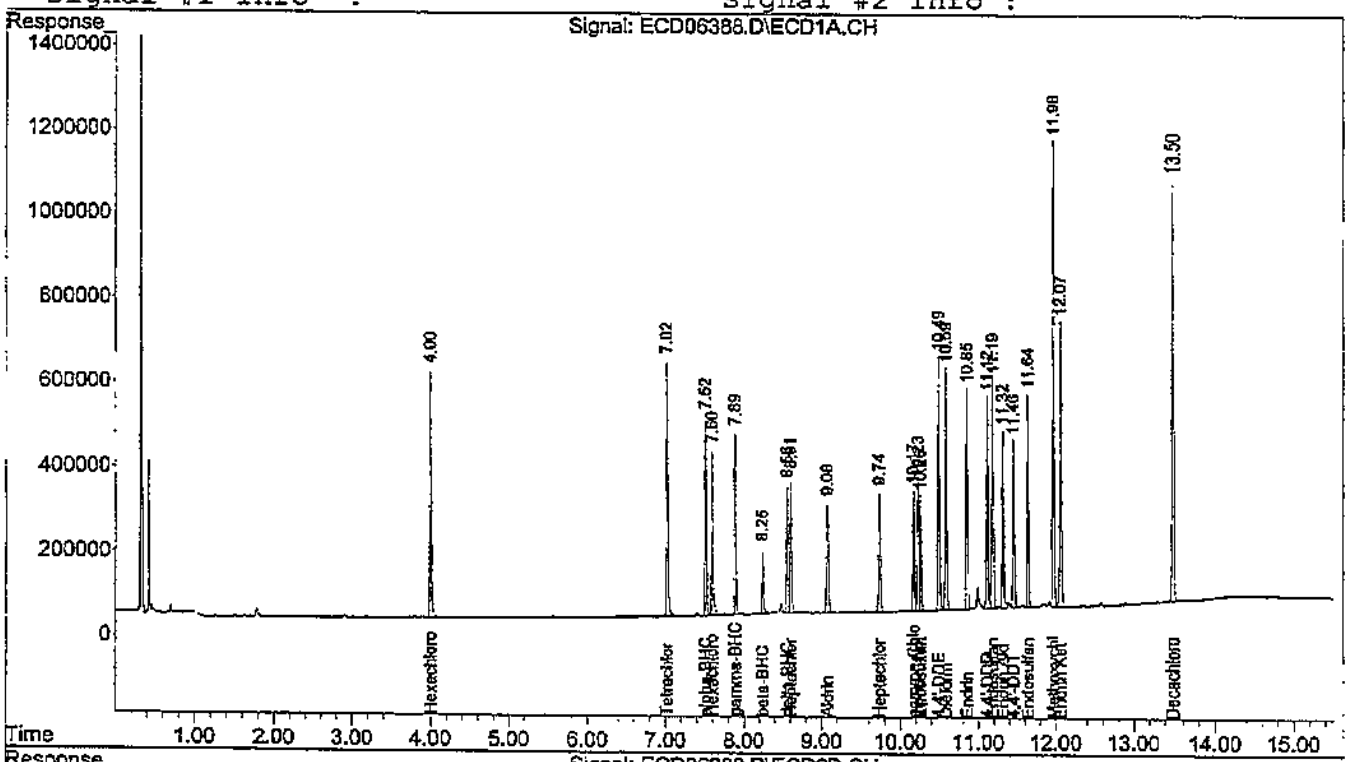
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int

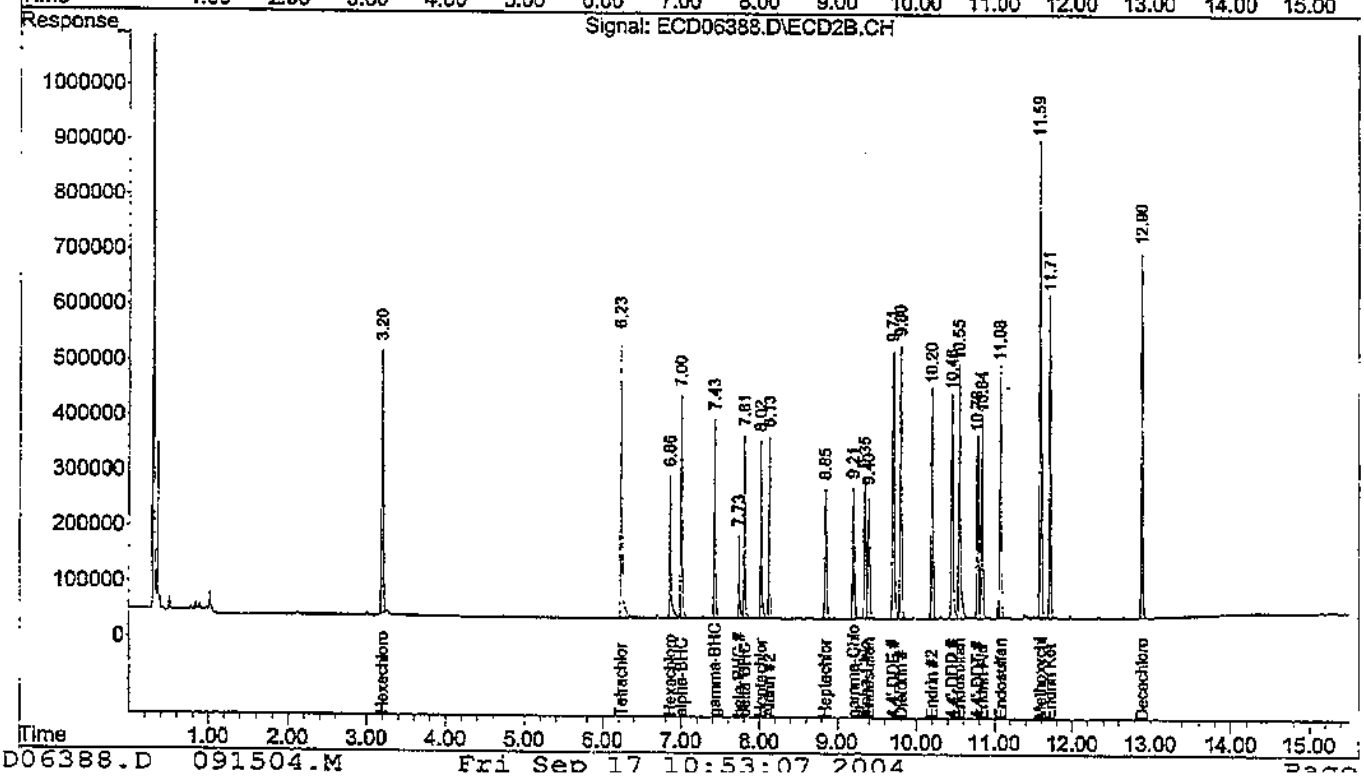
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06388.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091504\ECD06388.D\ECD2B.CH
Acq On : 15 Sep 2004 12:15 pm Operator: SJL/CRF
Sample : 10UG/L PEST STD Inst : Agilent E
Misc : 1174-25-05 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:40 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Mon Sep 13 16:47:12 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06389.D\ECD1A.CH Vial: 7
Signal #2 : H:\DATA\091504\ECD06389.D\ECD2B.CH
Acq On : 15 Sep 2004 12:36 pm Operator: SJL/CRF
Sample : 20UG/L PEST STD Inst : Agilent E
Misc : 1174-25-06 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:54:08 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:42:05 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	15320885	12272651	39.797	39.406
		Spiked Amount 20.000 Range 60 - 150 Recovery =					198.98%#	197.03%#
14)	SR	Decachlorobiphen	13.50	12.90	22779480	15371943	79.129	76.251
		Spiked Amount 20.000 Range 60 - 150 Recovery =					395.65%#	381.26%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	15464942	13113839	21.355	19.245
3)		alpha-BHC	7.52	7.01	11072209	8942134	21.094	20.556
4)	T	Hexachlorobenzen	7.60	6.87	10182089	6463364	18.406	19.075
5)	M	gamma-BHC (Linda	7.89	7.43	9999311	7852374	20.828	20.087
6)		beta-BHC	8.25	7.74	4074067	3190227	19.020	18.948
7)		delta-BHC	8.56	7.81	8685836	7552414	20.430	20.254
8)	M	Heptachlor	8.61	8.02	10047377	7122052	20.183	20.167
9)	M	Aldrin	9.08	8.13	8795868	7583930	19.839	19.795
10)		Heptachlor Epoxi	9.74	8.85	8571648	7102260	19.562	19.322
11)		gamma-Chlordane	10.17	9.21	8869590	7568665	20.019	19.624
12)		alpha-Chlordane	10.23	9.35	8935154	7427390	19.912	19.144
13)		Endosulfan I	10.26	9.40	8001796	6730565	19.697	19.169
14)		4,4'-DDE	10.49	9.71	18027207	14942392	41.020	40.407
15)	M	Dieldrin	10.59	9.80	16767726	13926287	41.368	39.637
16)	M	Endrin	10.85	10.20	14976620	11481016	40.615	38.495
17)		4,4'-DDD	11.12	10.46	14286001	11703876	40.888	40.086
18)		Endosulfan II	11.19	10.55	14957907	12726616	39.820	38.491
19)	M	4,4'-DDT	11.46	10.78	12140441	9400136	45.402	43.452
20)		Endrin Aldehyde	11.32	10.84	11795562	9469514	39.480	37.173
21)		Endosulfan Sulfa	11.64	11.08	13941272	11629238	39.556	38.384
22)		Methoxychlor	11.98	11.59	32165955	22488579	216.922	201.111
23)		Endrin Ketone	12.07	11.71	17744128	13947627	41.448	39.135

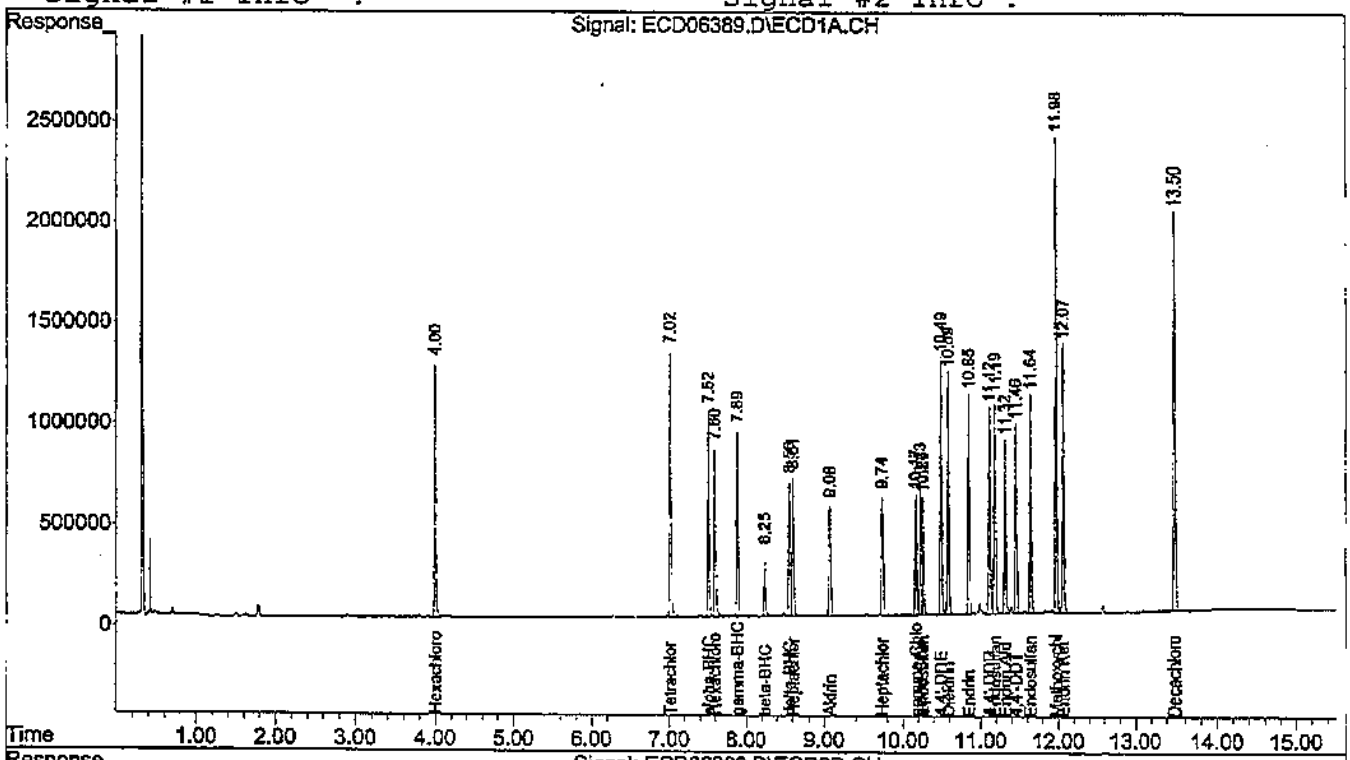
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

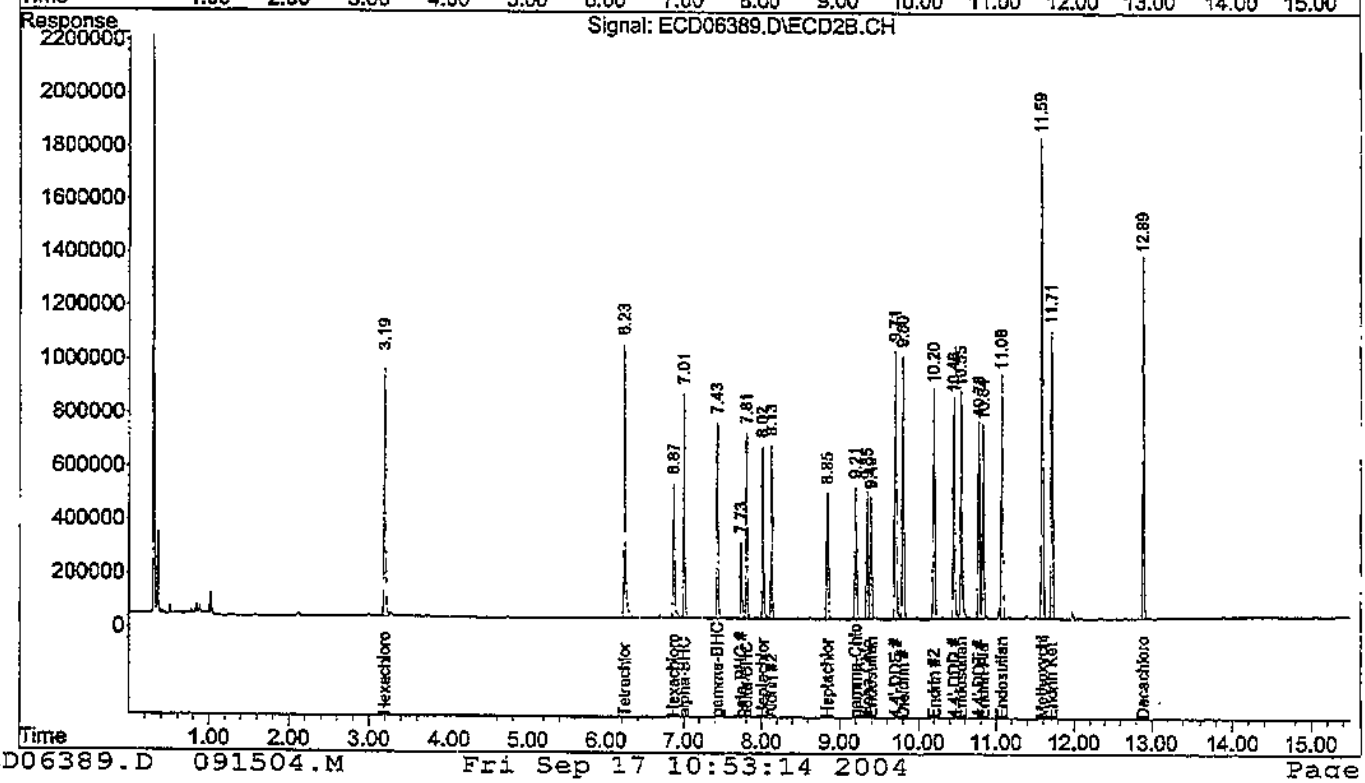
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06389.D\ECD1A.CH Vial: 7
Signal #2 : H:\DATA\091504\ECD06389.D\ECD2B.CH
Acq On : 15 Sep 2004 12:36 pm Operator: SJL/CRF
Sample : 20UG/L PEST STD Inst : Agilent E
Misc : 1174-25-06 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 12:54 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:42:05 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00297

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06390.D\ECD1A.CH Vial: 8
Signal #2 : H:\DATA\091504\ECD06390.D\ECD2B.CH
Acq On : 15 Sep 2004 12:57 pm Operator: SJL/CRF
Sample : 50UG/L PEST STD Inst : Agilent E
Misc : 1174-25-07 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 13:31:05 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:54:29 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	35852818	30115641	93.991	96.805
Spiked Amount			20.000	Range	60 - 150	Recovery	= 469.96%#	484.03%#
4)	SR	Decachlorobiphen	13.50	12.90	57223801	37578571	194.315	184.590
Spiked Amount			20.000	Range	60 - 150	Recovery	= 971.58%#	922.95%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	37821187	32371363	51.916	47.768
3)		alpha-BHC	7.52	7.01	27392704	22924883	52.856	52.942
4)	T	Hexachlorobenzen	7.60	6.87	23889383	15959305	43.789	47.184
5)	M	gamma-BHC (Linda	7.89	7.43	24872582	20248167	52.426	52.137
6)		beta-BHC	8.25	7.74	9845794	7906699	46.054	47.302
7)		delta-BHC	8.56	7.81	22688380	19237655	54.367	52.065
8)	M	Heptachlor	8.61	8.02	25278504	18487571	51.479	52.404
9)	M	Aldrin	9.08	8.13	22346251	19204247	50.958	50.305
0)		Heptachlor Epoxi	9.74	8.85	21367546	17779658	49.238	48.649
1)		gamma-Chlordane	10.17	9.21	22670189	19275799	51.561	50.161
2)		alpha-Chlordane	10.23	9.35	22494716	18864613	50.432	48.652
3)		Endosulfan I	10.26	9.40	20226735	16833280	50.261	48.158
4)		4,4'-DDE	10.49	9.71	45740807	37716657	104.754	102.534
5)	M	Dieldrin	10.59	9.80	42187281	34289513	104.707	98.001
6)	M	Endrin	10.85	10.20	37617149	28520022	104.106	98.061
7)		4,4'-DDD	11.12	10.46	36462121	29011019	104.555	99.832
8)		Endosulfan II	11.19	10.55	37136490	29675277	99.082	90.281
9)	M	4,4'-DDT	11.46	10.78	33351510	25220732	125.355	118.266
0)		Endrin Aldehyde	11.32	10.84	29502526	23138726	98.534	90.863
1)		Endosulfan Sulfa	11.64	11.08	34938626	28304448	99.186	93.832
2)		Methoxychlor	11.98	11.59	82455679	56201107	557.852	508.368
3)		Endrin Ketone	12.07	11.71	44089491	33498538	101.887	93.596

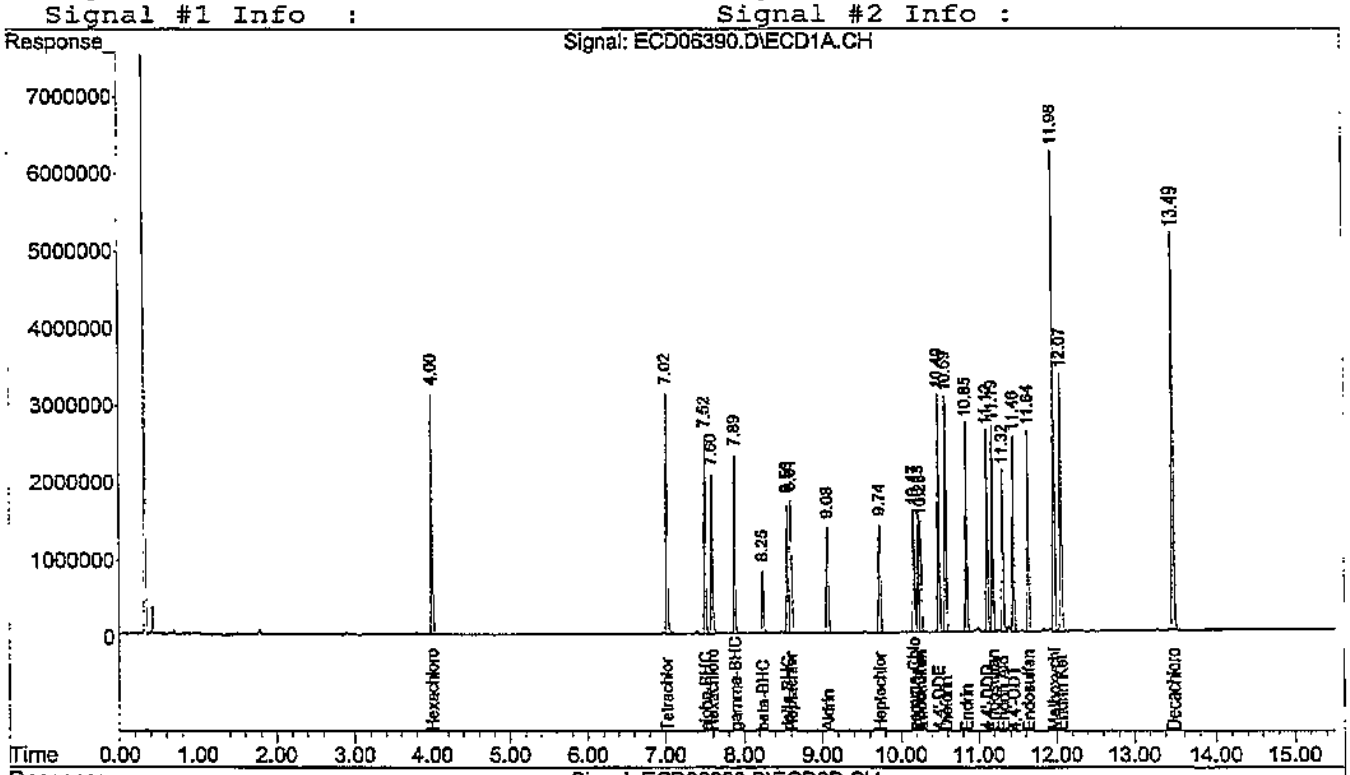
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

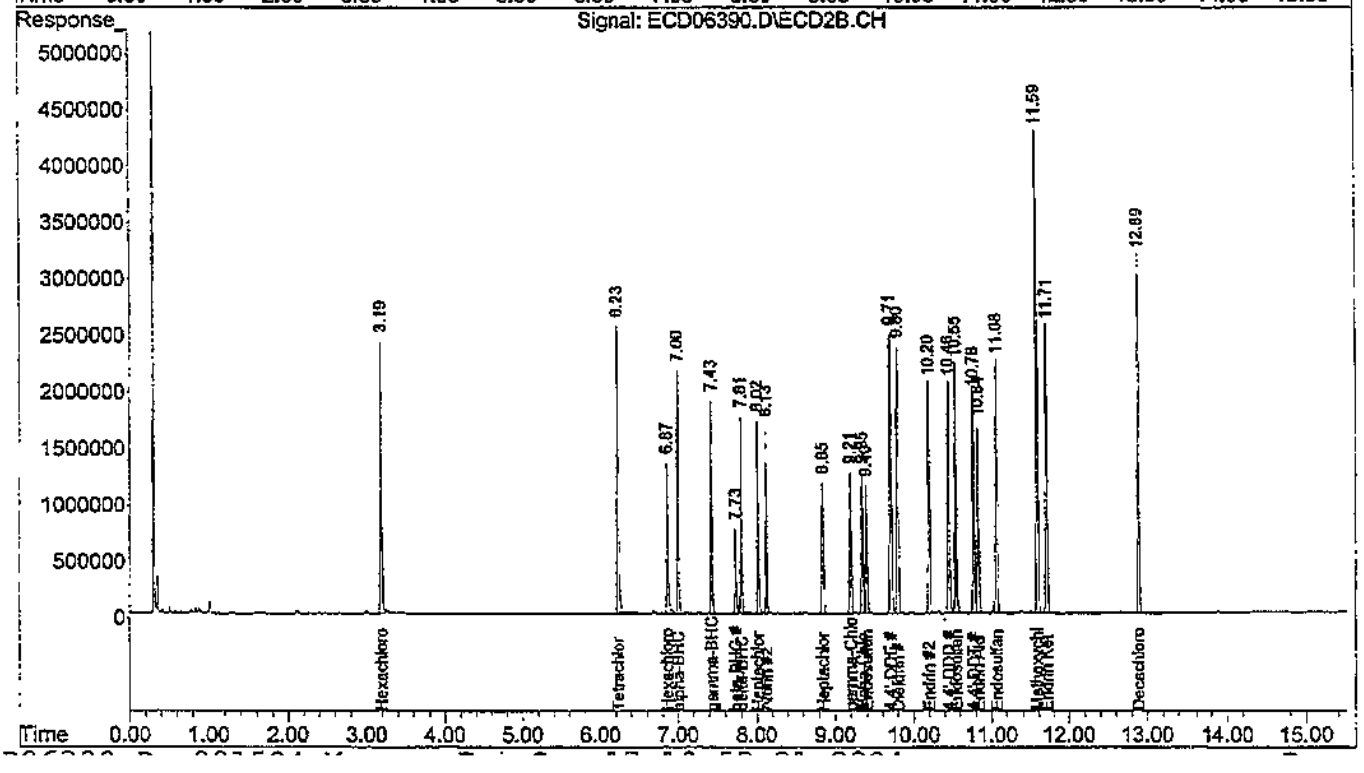
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06390.D\ECD1A.CH Vial: 8
Signal #2 : H:\DATA\091504\ECD06390.D\ECD2B.CH
Acq On : 15 Sep 2004 12:57 pm Operator: SJL/CRF
Sample : 50UG/L PEST STD Inst : Agilent E
Misc : 1174-25-07 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 13:31 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 12:54:29 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00299

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06391.D\ECD1A.CH Vial: 9
Signal #2 : H:\DATA\091504\ECD06391.D\ECD2B.CH
Acq On : 9-15-2004 01:18:28 PM Operator: SJL/CRF
Sample : 10UG/L PEST ICV Inst : Agilent E
Misc : 1174-25-08 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 13:35:37 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

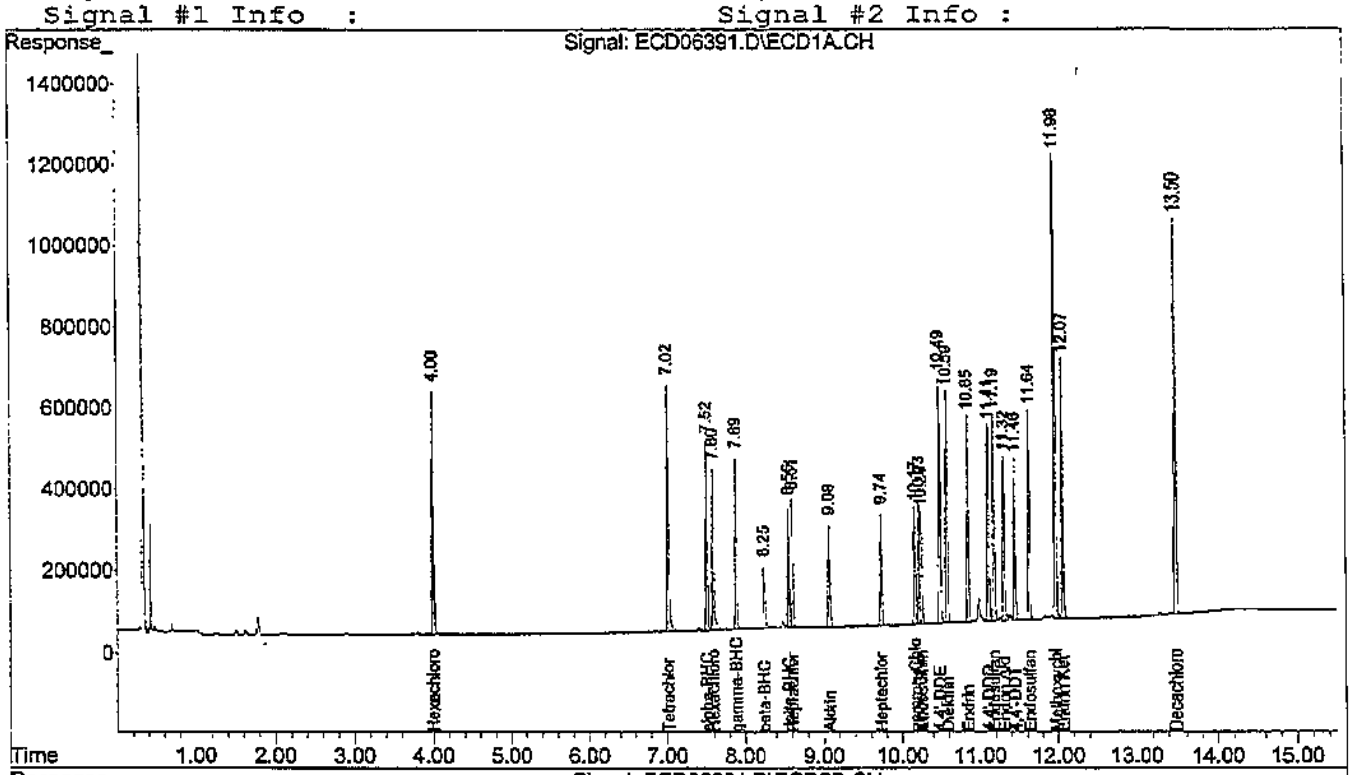
Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
2) SR Tetrachloro-m-xy	7.02	6.23	7395766	6263997	19.776	20.121
Spiked Amount 20.000 Range 60 - 150 Recovery =					98.88%	100.60%
4) SR Decachlorobiphen	13.50	12.89	11387930	7782888	37.725	37.784
Spiked Amount 20.000 Range 60 - 150 Recovery =					188.63%#	188.92%#
Target Compounds						
1) T Hexachlorobutadi	4.00	3.19	7543772	6692915	10.332	9.909
3) alpha-BHC	7.52	7.01	5114192	4446967	10.084	10.281
4) T Hexachlorobenzen	7.60	6.87	5117393	3387599	9.575	10.008
5) M gamma-BHC (Linda	7.89	7.43	4635127	3929320	9.948	10.133
6) beta-BHC	8.25	7.74	2017401	1645443	9.544	9.872
7) delta-BHC	8.56	7.81	3953725	3778253	9.652	10.265
8) M Heptachlor	8.61	8.02	4762186	3484335	9.848	9.833
9) M Aldrin	9.08	8.13	4164672	3785027	9.637	9.922
0) Heptachlor Epoxi	9.74	8.85	4124875	3575619	9.608	9.799
1) gamma-Chlordane	10.17	9.21	4222609	3744714	9.684	9.745
2) alpha-Chlordane	10.23	9.35	4266289	3715732	9.648	9.550
3) Endosulfan I	10.26	9.40	3847466	3373729	9.626	9.664
4) 4,4'-DDE	10.49	9.71	8529617	7263513	19.637	19.754
5) M Dieldrin	10.59	9.80	7949993	6931220	19.833	19.816
6) M Endrin	10.86	10.20	6978945	5625762	19.670	19.660
7) 4,4'-DDD	11.12	10.46	6770843	5735704	19.405	19.738
8) Endosulfan II	11.19	10.55	7211833	6688550	19.242	20.370
9) M 4,4'-DDT	11.46	10.78	5331328	4302634	19.955	20.224
0) Endrin Aldehyde	11.32	10.84	5761696	4817915	19.135	18.844
1) Endosulfan Sulfa	11.64	11.08	6753809	5803619	19.120	19.229
2) Methoxychlor	11.98	11.59	15095614	11129086	101.598	100.775
3) Endrin Ketone	12.07	11.71	8641006	7090852	19.722	19.661

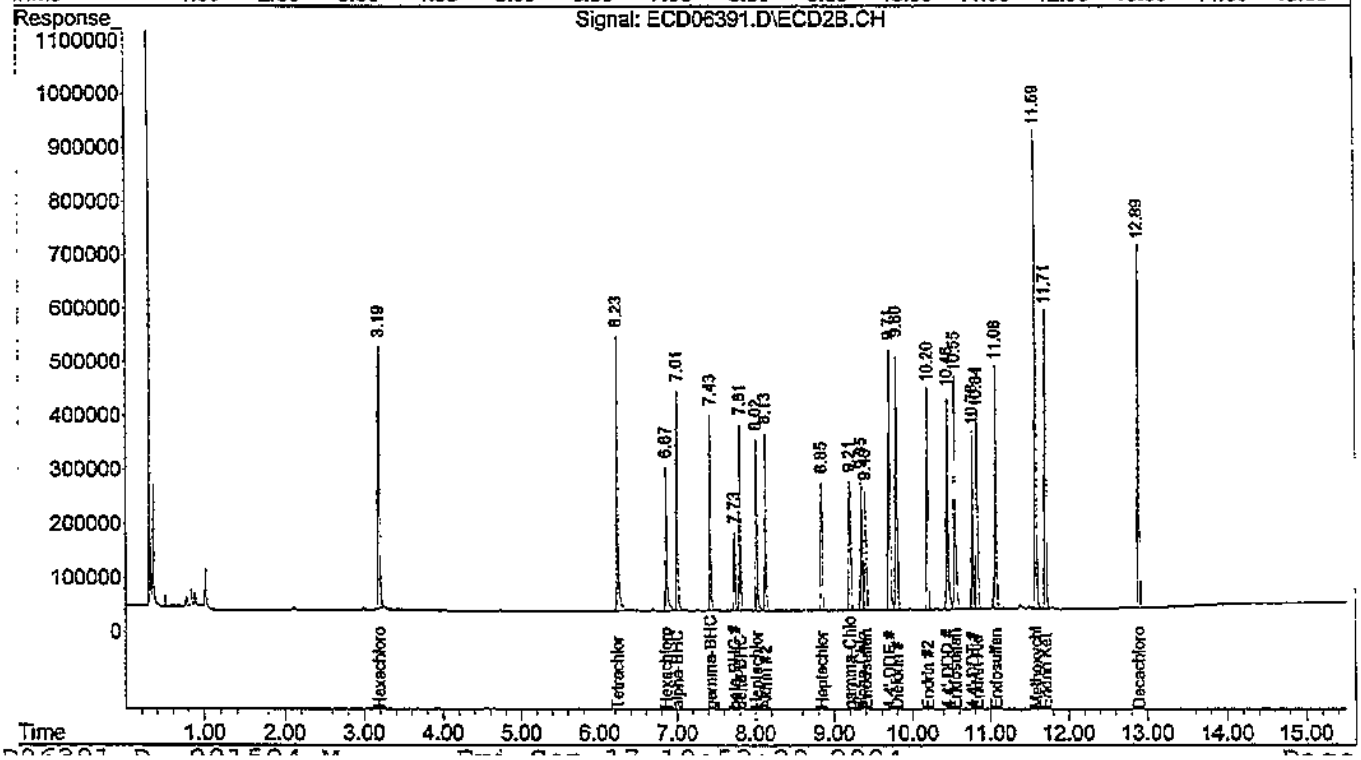
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06391.D\ECD1A.CH Vial: 9
Signal #2 : H:\DATA\091504\ECD06391.D\ECD2B.CH
Acq On : 9-15-2004 01:18:28 PM Operator: SJL/CRF
Sample : 10UG/L PEST ICV Inst : Agilent E
Misc : 1174-25-08 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 15 13:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





Evaluate Continuing Calibration Report

Signal #1 : H:\DATA\091504\ECD06391.D\ECD1A.CH Vial: 9
Signal #2 : H:\DATA\091504\ECD06391.D\ECD2B.CH
Acq On : 9-15-2004 01:18:28 PM Operator: SJL/CRF
Sample : 10UG/L PEST ICV Inst : Agilent E
Misc : 1174-25-08 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Hexachlorobutadiene	10.000	10.332	-3.3	104	0.00
2	SR	Tetrachloro-m-xylene (S)	20.000	19.776	1.1	102	0.00
3		alpha-BHC	10.000	10.084	-0.8	102	0.00
4	T	Hexachlorobenzene	10.000	9.575	4.3	102	0.00
5	M	gamma-BHC (Lindane)	10.000	9.948	0.5	101	0.00
6		beta-BHC	10.000	9.544	4.6	101	0.00
7		delta-BHC	10.000	9.652	3.5	98	0.00
8	M	Heptachlor	10.000	9.848	1.5	102	0.00
9	M	Aldrin	10.000	9.637	3.6	100	0.00
10		Heptachlor Epoxide	10.000	9.608	3.9	99	0.00
11		gamma-Chlordane	10.000	9.684	3.2	99	0.00
12		alpha-Chlordane	10.000	9.648	3.5	98	0.00
13		Endosulfan I	10.000	9.626	3.7	99	0.00
14		4,4'-DDE	20.000	19.637	1.8	99	0.00
15	M	Dieldrin	20.000	19.833	0.8	98	0.00
16	M	Endrin	20.000	19.670	1.6	98	0.00
17		4,4'-DDD	20.000	19.405	3.0	97	0.00
18		Endosulfan II	20.000	19.242	3.8	97	0.00
19	M	4,4'-DDT	20.000	19.955	0.2	102	0.00
20		Endrin Aldehyde	20.000	19.135	4.3	97	0.00
21		Endosulfan Sulfate	20.000	19.120	4.4	98	0.00
22		Methoxychlor	100.000	101.598	-1.6	101	0.00
23		Endrin Ketone	20.000	19.722	1.4	97	0.00
24	SR	Decachlorobiphenyl (S)	40.000	37.725	5.7	99	0.00

Signal #2

1	T	Hexachlorobutadiene	10.000	9.909	0.9	102	0.00
2	SR	Tetrachloro-m-xylene (S)	20.000	20.121	-0.6	101	0.00
3		alpha-BHC	10.000	10.281	-2.8	101	0.00
4	T	Hexachlorobenzene	10.000	10.008	-0.1	101	0.00
5	M	gamma-BHC (Lindane)	10.000	10.133	-1.3	101	0.00
6		beta-BHC	10.000	9.872	1.3	100	0.00
7		delta-BHC	10.000	10.265	-2.7	102	0.00
8	M	Heptachlor	10.000	9.833	1.7	98	0.00
9	M	Aldrin	10.000	9.922	0.8	100	0.00
10		Heptachlor Epoxide	10.000	9.799	2.0	100	0.00
11		gamma-Chlordane	10.000	9.745	2.6	99	0.00
12		alpha-Chlordane	10.000	9.550	4.5	98	0.00
13		Endosulfan I	10.000	9.664	3.4	99	0.00
14		4,4'-DDE	20.000	19.754	1.2	98	0.00
15	M	Dieldrin	20.000	19.816	0.9	99	0.00
16	M	Endrin	20.000	19.660	1.7	99	0.00
17		4,4'-DDD	20.000	19.738	1.3	98	0.00
18		Endosulfan II	20.000	20.370	-1.9	98	0.00
19	M	4,4'-DDT	20.000	20.224	-1.1	102	0.00
20		Endrin Aldehyde	20.000	18.844	5.8	97	0.00
21		Endosulfan Sulfate	20.000	19.229	3.9	98	0.00
22		Methoxychlor	100.000	100.775	-0.8	103	0.00
23		Endrin Ketone	20.000	19.661	1.7	99	0.00
24	SR	Decachlorobiphenyl (S)	40.000	37.784	5.5	100	0.00

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

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : H:\DATA\091504\ECD06391.D\ECD1A.CH Vial: 9
Signal #2 : H:\DATA\091504\ECD06391.D\ECD2B.CH
Acq On : 9-15-2004 01:18:28 PM Operator: SJL/CRF
Sample : 10UG/L PEST ICV Inst : Agilent E
Misc : 1174-25-08 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

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

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06383.D\ECD1A.CH Vial: 1
Signal #2 : H:\DATA\091504\ECD06383.D\ECD2B.CH
Acq On : 15 Sep 2004 10:30 am Operator: SJL/CRF
Sample : DDT/ENDRIN BREAKDOWN Inst : Agilent E
Misc : 1174-21-06 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 16 10:35:44 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

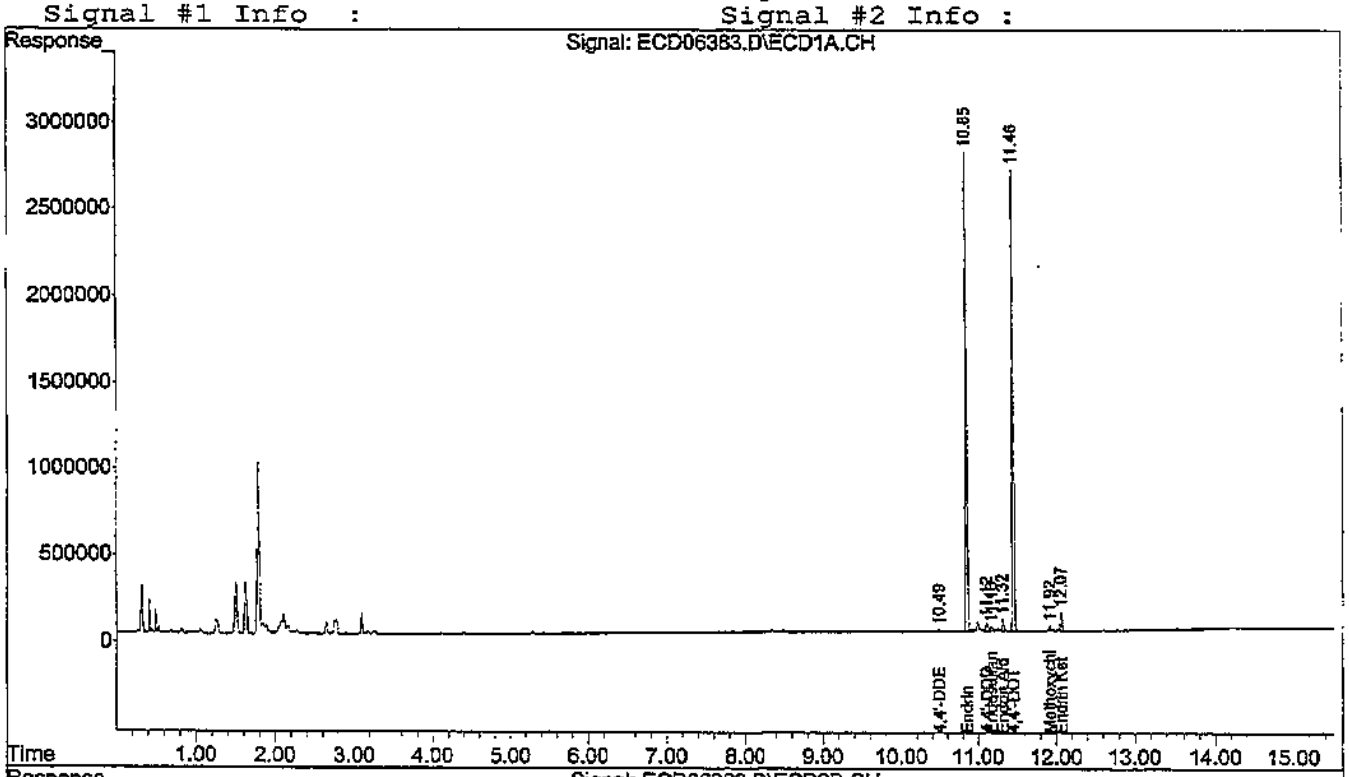
		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
		System Monitoring Compounds							
2)	SR	Tetrachloro-m-xy	0.00	0.00	0	0	N.D.	N.D.	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					0.00%#	0.00%#	
4)	SR	Decachlorobiphen	0.00	0.00	0	0	N.D.	N.D.	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					0.00%#	0.00%#	
		Target Compounds							
1)	T	Hexachlorobutadi	0.00	0.00	0	0	N.D.	N.D.	
3)		alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
4)	T	Hexachlorobenzen	0.00	0.00	0	0	N.D.	N.D.	
5)	M	gamma-BHC (Linda	0.00	0.00	0	0	N.D.	N.D.	
6)		beta-BHC	0.00	7.74	0	98076	N.D.	0.588	#
7)		delta-BHC	0.00	0.00	0	0	N.D.	N.D.	
8)	M	Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
9)	M	Aldrin	0.00	0.00	0	0	N.D.	N.D.	
0)		Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.	
1)		gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
2)		alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
3)		Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
4)		4,4'-DDE	10.50	0.00	158494	0	0.365	N.D.	#
5)	M	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
6)	M	Endrin	10.86	10.20	38637564	28708008	108.897	100.326	
7)		4,4'-DDD	11.12	10.46	920143	850035	2.637	2.925	
8)		Endosulfan II	11.18	10.53	585205	136234	1.561	0.415	#
9)	M	4,4'-DDT	11.46	10.78	35224310	26678452	131.842	125.397	
0)		Endrin Aldehyde	11.32	10.84	1066072	1414310	3.541	5.532	#
1)		Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.	
2)		Methoxychlor	11.92f	0.00	314375	0	2.116	N.D.	#
3)		Endrin Ketone	12.07	11.71	1671272	2013220	3.815	5.582	#

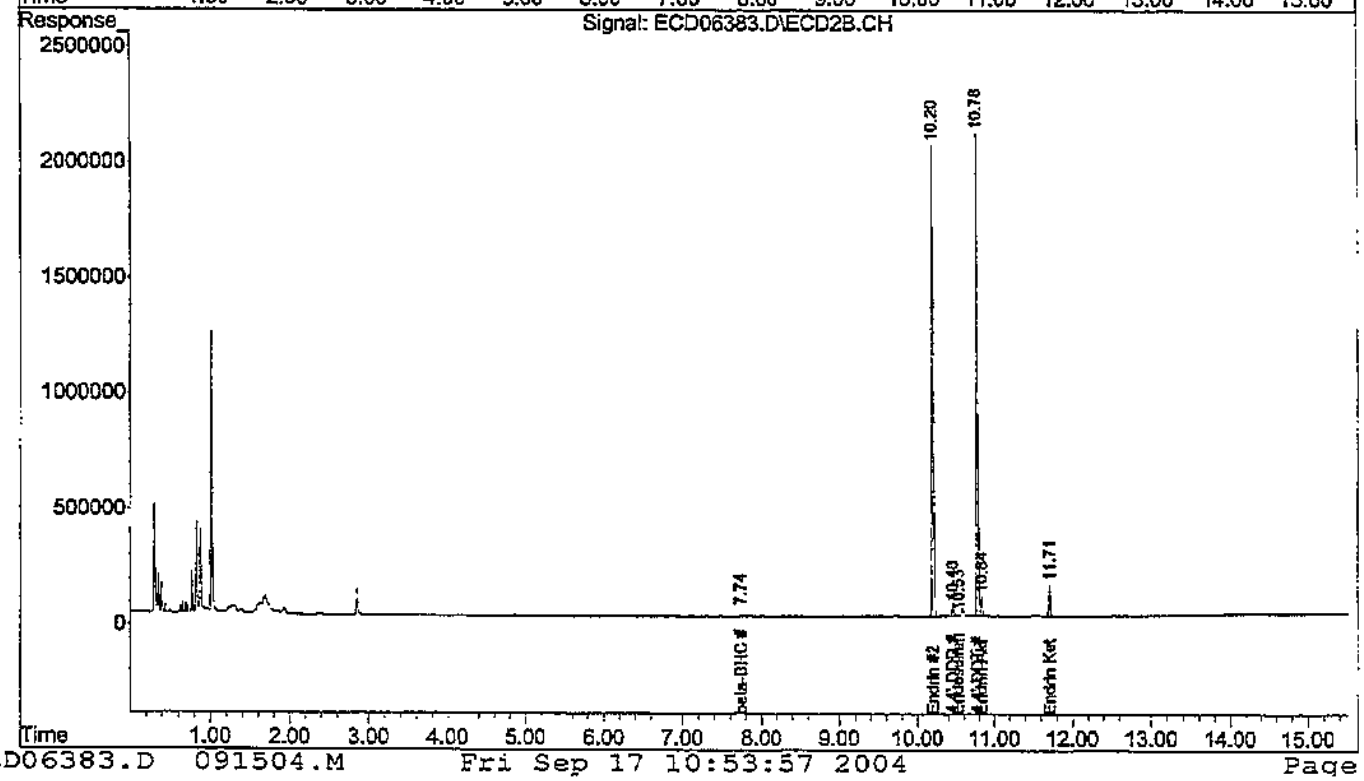
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091504\ECD06383.D\ECD1A.CH Vial: 1
Signal #2 : H:\DATA\091504\ECD06383.D\ECD2B.CH
Acq On : 15 Sep 2004 10:30 am Operator: SJL/CRF
Sample : DDT/ENDRIN BREAKDOWN Inst : Agilent E
Misc : 1174-21-06 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 16 10:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00305

Custom Report - DDT/Endrin Breakdown Evaluation

Sample Name DDT/ENDRIN BREAKDOWN

Data File Name H:\DATA\091504\ECD06383.D
Date Acquired 15 Sep 2004 10:30 am

Compound Name	RT #1	RT #2	Resp. #1	Resp. #2	Amt. #1	Amt. #2	% Breakdown Column #1	% Breakdown Column #2
Endrin	10.86	10.20	38637564	28708008	108.90	100.33	**6.62%**	**10.67%**
Endrin Aldehyde	11.32	10.84	1066072	1414310	3.54	5.53		
Endrin Ketone	12.07	11.71	1671272	2013220	3.81	5.58		
4,4'-DDT	11.46	10.78	35224310	26678452	131.84	125.40	**2.97%**	**3.09%**
4,4'-DDE	10.50	0.00	158494	0	0.36	0.00		
4,4'-DDD	11.12	10.46	920143	850035	2.64	2.93		

CONTINUING CALIBRATION

Sequence Log

irectory : k:\DATA\091604

	Filename	Sample Name	Date/Time
	ecd06454.d	DDT/ENDRIN BREAKDOWN	09/17/04 16:59
	ecd06455.d	10UG/L 8081 CCV 1174-25-05	09/17/04 17:20
	ecd06456.d	RINSE	09/17/04 17:41
	ecd06457.d	MB PE1750	09/17/04 18:02
	ecd06458.d	BS PE1750	09/17/04 18:23
	ecd06459.d	BSD PE1750	09/17/04 18:44
	ecd06460.d	123618-02 PE1750	09/17/04 19:05
	ecd06461.d	123618-03 PE1750	09/17/04 19:26
	ecd06462.d	123618-03 MS PE1750	09/17/04 19:47
0	ecd06463.d	123618-03 MSD PE1750	09/17/04 20:08
1	ecd06464.d	123627-01 PE1750	09/17/04 20:29
2	ecd06465.d	123562-05 PE1749 SULFUR CLEANUP	09/17/04 20:51
3	ecd06466.d	RINSE	09/17/04 21:12
4	ecd06467.d	20UG/L 1174-25-06	09/17/04 21:33

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06454.D\ECD1A.CH Vial: 1
Signal #2 : H:\DATA\091604\ECD06454.D\ECD2B.CH
Acq On : 9-17-2004 04:59:50 PM Operator: SJL/CRF
Sample : DDT/ENDRIN BREAKDOWN Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 17 17:15:31 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
		System Monitoring Compounds							
2)	SR	Tetrachloro-m-xy	0.00	0.00	0	0	N.D.	N.D.	
Spiked Amount			20.000	Range	60 - 150	Recovery	=	0.00%#	0.00%#
4)	SR	Decachlorobiphen	0.00	0.00	0	0	N.D.	N.D.	
Spiked Amount			20.000	Range	60 - 150	Recovery	=	0.00%#	0.00%#
		Target Compounds							
1)	T	Hexachlorobutadi	0.00	0.00	0	0	N.D.	N.D.	
3)		alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
4)	T	Hexachlorobenzen	0.00	0.00	0	0	N.D.	N.D.	
5)	M	gamma-BHC (Linda	0.00	0.00	0	0	N.D.	N.D.	
6)		beta-BHC	0.00	0.00	0	0	N.D.	N.D.	
7)		delta-BHC	0.00	0.00	0	0	N.D.	N.D.	
8)	M	Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
9)	M	Aldrin	0.00	0.00	0	0	N.D.	N.D.	
.0)		Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.	
.1)		gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
.2)		alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
.3)		Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
.4)		4,4'-DDE	10.50	9.71	171306	120931	0.394	0.329	
.5)	M	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
.6)	M	Endrin	10.86	10.20	35307198	28615569	99.511	100.003	
.7)		4,4'-DDD	11.12	10.46	1510548	1286143	4.329	4.426	
.8)		Endosulfan II	11.18	10.58	529074	619500	1.412	1.887	#
.9)	M	4,4'-DDT	11.46	10.78	33202152	26382642	124.273	124.007	
20)		Endrin Aldehyde	11.32	10.84	2326532	1963479	7.727	7.680	
21)		Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.	
22)		Methoxychlor	11.92f	0.00	432177	0	2.909	N.D.	#
23)		Endrin Ketone	12.07	11.71	3318142	2691115	7.573	7.462	

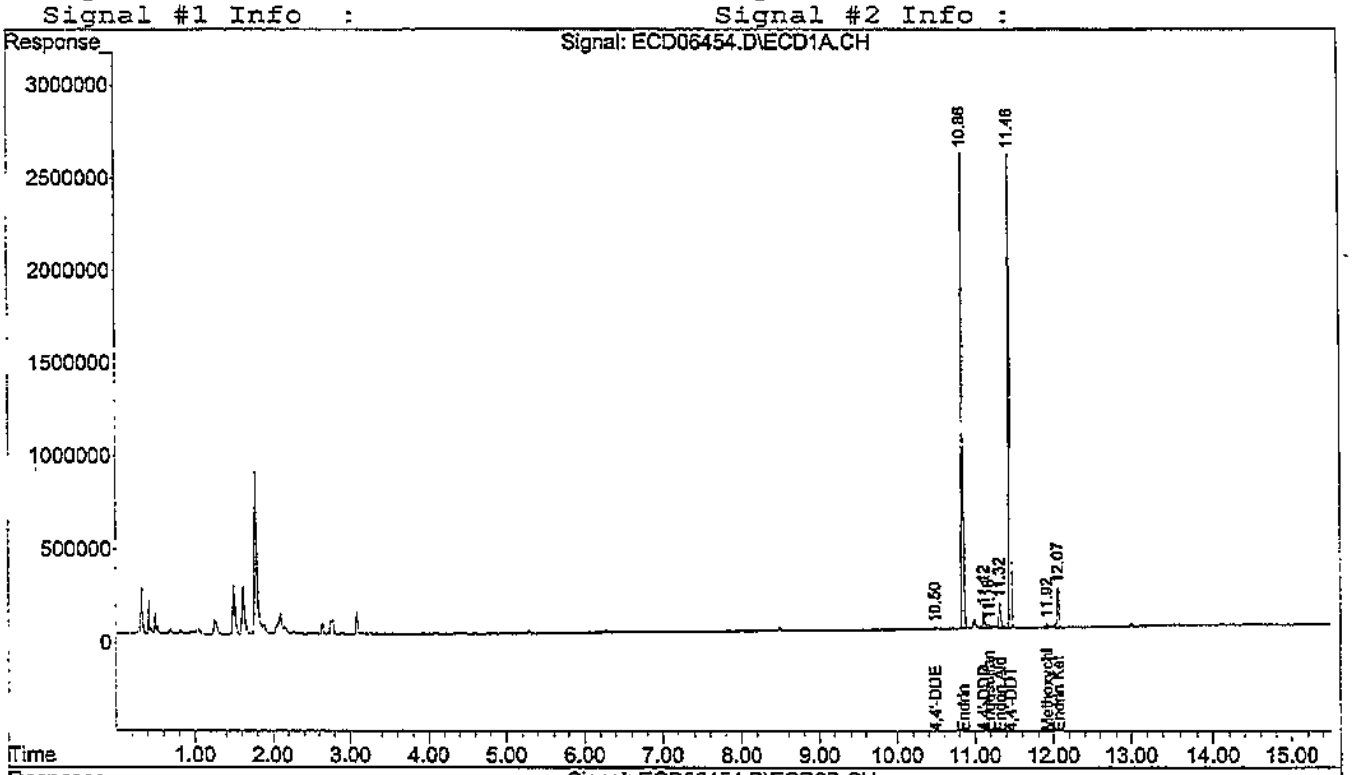
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

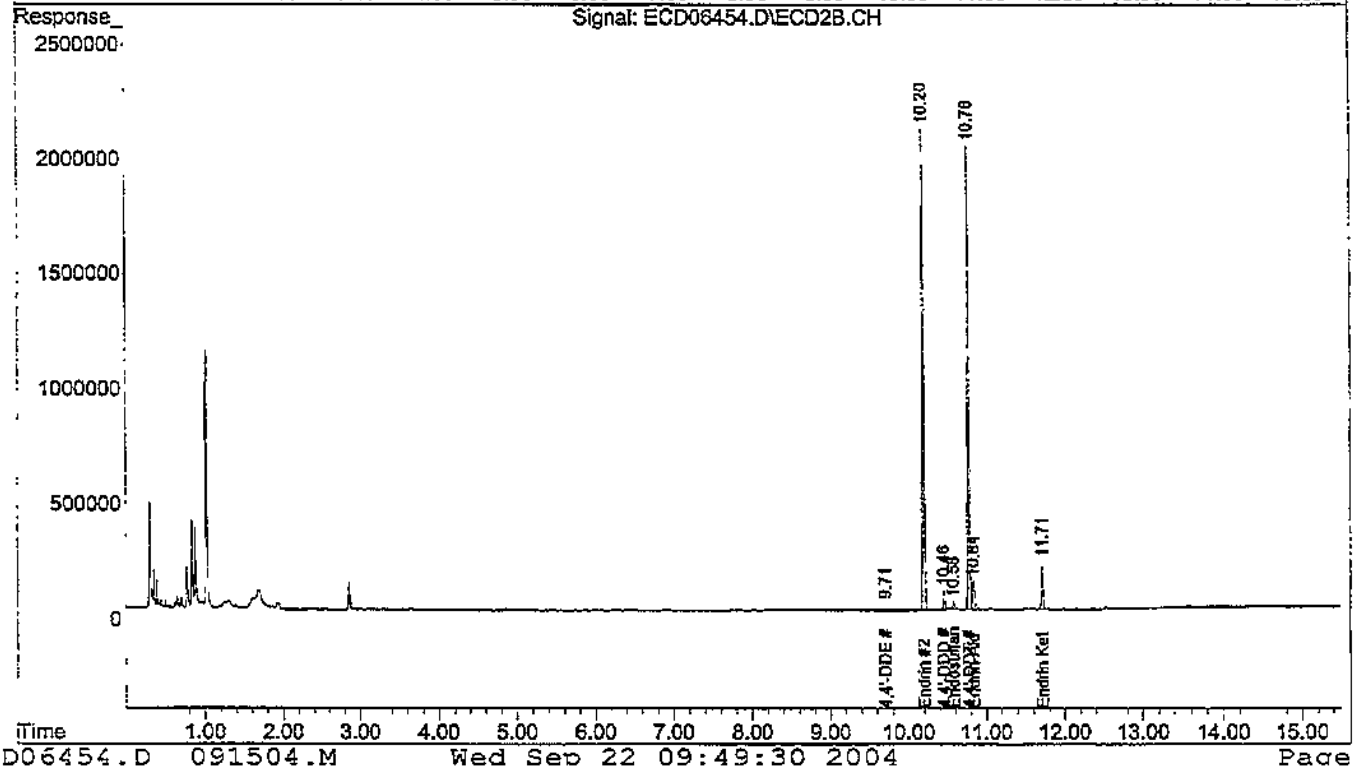
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06454.D\ECD1A.CH Vial: 1
Signal #2 : H:\DATA\091604\ECD06454.D\ECD2B.CH
Acq On : 9-17-2004 04:59:50 PM Operator: SJL/CRF
Sample : DDT/ENDRIN BREAKDOWN Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 17 17:15 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





003510

Custom Report - DDT/Endrin Breakdown Evaluation

Sample Name DDT/ENDRIN BREAKDOWN

Data File Name H:\DATA\091604\ECD06454.D
Date Acquired 9-17-2004 04:59:50 PM

Compound Name	RT #1	RT #2	Resp. #1	Resp. #2	Amt. #1	Amt. #2	% Breakdown Column #1	% Breakdown Column #2
Endrin	10.86	10.20	35307198	28615569	99.51	100.00	**13.78%**	**13.99%**
Endrin Aldehyde	11.32	10.84	2326532	1963479	7.73	7.68		
Endrin Ketone	12.07	11.71	3318142	2691115	7.57	7.46		
4,4'-DDT	11.46	10.78	33202152	26382642	124.27	124.01	**4.82%**	**5.06%**
4,4'-DDE	10.50	9.71	171306	120931	0.39	0.33		
4,4'-DDD	11.12	10.46	1510548	1286143	4.33	4.43		

00311

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06455.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091604\ECD06455.D\ECD2B.CH
Acq On : 9-17-2004 05:20:56 PM Operator: SJL/CRF
Sample : 10UG/L 8081 CCV 1174-25-05 Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 17 17:36:55 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	7928295	6605926	21.200	21.219
		Spiked Amount 20.000 Range 60 - 150 Recovery =					106.00%	106.10%
24)	SR	Decachlorobiphen	13.50	12.90	11429512	8054203	37.863	39.101
		Spiked Amount 20.000 Range 60 - 150 Recovery =					189.32%#	195.51%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	7585967	6930955	10.390	10.262
3)		alpha-BHC	7.52	7.01	5534378	4631699	10.913	10.708
4)	T	Hexachlorobenzen	7.60	6.87	5599958	3553241	10.478	10.497
5)	M	gamma-BHC (Linda	7.89	7.43	4974408	4064166	10.676	10.480
6)		beta-BHC	8.25	7.74	2148889	1607114	10.166	9.642
7)		delta-BHC	8.56	7.81	4346885	3402942	10.611	9.245
8)	M	Heptachlor	8.61	8.02	4540552	3629749	9.390	10.244
9)	M	Aldrin	9.08	8.13	4485767	3993907	10.380	10.470
10)		Heptachlor Epoxi	9.74	8.85	4371626	3730896	10.183	10.224
11)		gamma-Chlordane	10.17	9.21	4494875	3974827	10.309	10.344
12)		alpha-Chlordane	10.23	9.35	4597025	3894099	10.396	10.008
13)		Endosulfan I	10.26	9.40	4046795	3569390	10.125	10.225
14)		4,4'-DDE	10.49	9.71	9135767	7822358	21.033	21.274
15)	M	Dieldrin	10.59	9.80	8421290	7356170	21.009	21.030
16)	M	Endrin	10.86	10.20	6168276	5279707	17.385	18.451
17)		4,4'-DDD	11.12	10.46	7316223	6256140	20.968	21.529
18)		Endosulfan II	11.19	10.55	7686518	7138097	20.509	21.739
19)	M	4,4'-DDT	11.46	10.78	4475831	3841244	16.753	18.055
20)		Endrin Aldehyde	11.32	10.84	6368919	5284781	21.152	20.670
21)		Endosulfan Sulfa	11.64	11.08	7108221	6226105	20.123	20.629
22)		Methoxychlor	11.98	11.59	13213579	10121487	88.932	91.651
23)		Endrin Ketone	12.07	11.71	9553711	7708662	21.806	21.374

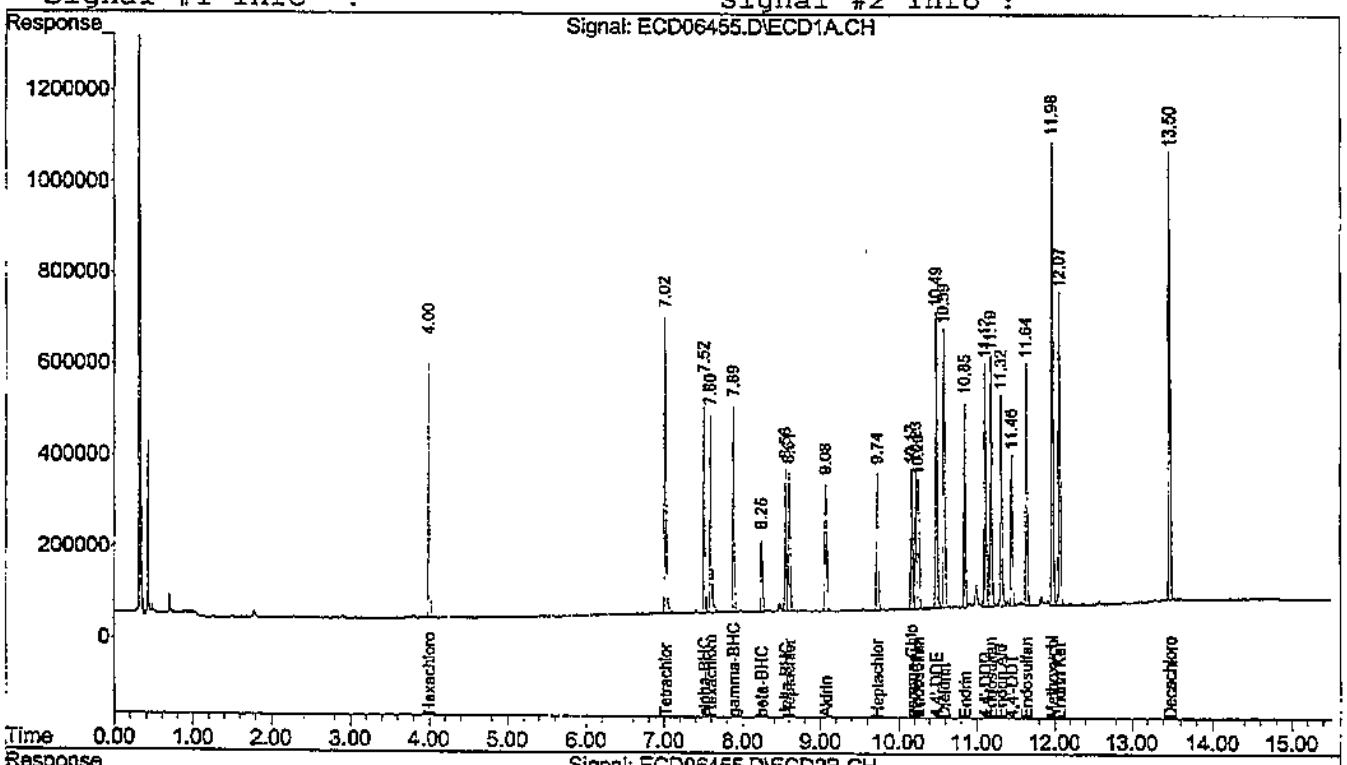
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

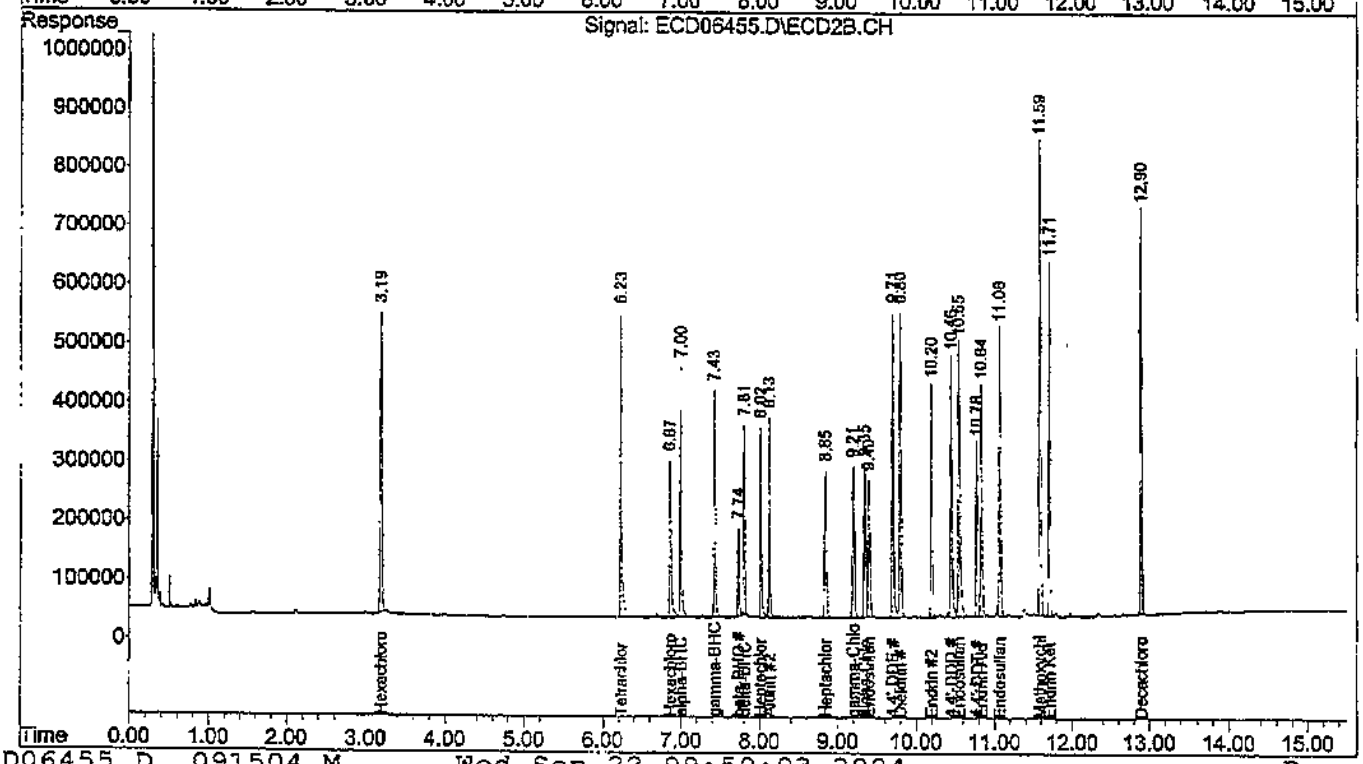
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06455.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091604\ECD06455.D\ECD2B.CH
Acq On : 9-17-2004 05:20:56 PM Operator: SJL/CRF
Sample : 10UG/L 8081 CCV 1174-25-05 Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 17 17:36 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00313

Evaluate Continuing Calibration Report

Signal #1 : H:\DATA\091604\ECD06455.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091604\ECD06455.D\ECD2B.CH
Acq On : 9-17-2004 05:20:56 PM Operator: SJL/CRF
Sample : 10UG/L 8081 CCV 1174-25-05 Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Hexachlorobutadiene	10.000	10.390	-3.9	105	0.00
2	SR	Tetrachloro-m-xylene (S)	20.000	21.200	-6.0	109	0.00
3		alpha-BHC	10.000	10.913	-9.1	110	0.00
4	T	Hexachlorobenzene	10.000	10.478	-4.8	112	0.00
5	M	gamma-BHC (Lindane)	10.000	10.676	-6.8	108	0.00
6		beta-BHC	10.000	10.166	-1.7	107	0.00
7		delta-BHC	10.000	10.611	-6.1	108	0.00
8	M	Heptachlor	10.000	9.390	6.1	97	0.00
9	M	Aldrin	10.000	10.380	-3.8	107	0.00
10		Heptachlor Epoxide	10.000	10.183	-1.8	105	0.00
11		gamma-Chlordane	10.000	10.309	-3.1	105	0.00
12		alpha-Chlordane	10.000	10.396	-4.0	106	0.00
13		Endosulfan I	10.000	10.125	-1.3	104	0.00
14		4,4'-DDE	20.000	21.033	-5.2	106	0.00
15	M	Dieldrin	20.000	21.009	-5.0	104	0.00
16	M	Endrin	20.000	17.385	13.1	86	0.00
17		4,4'-DDD	20.000	20.968	-4.8	104	0.00
18		Endosulfan II	20.000	20.509	-2.5	103	0.00
19	M	4,4'-DDT	20.000	16.753	16.2#	85	0.00
20		Endrin Aldehyde	20.000	21.152	-5.8	107	0.00
21		Endosulfan Sulfate	20.000	20.123	-0.6	103	0.00
22		Methoxychlor	100.000	88.932	11.1	89	0.00
23		Endrin Ketone	20.000	21.806	-9.0	108	0.00
24	SR	Decachlorobiphenyl (S)	40.000	37.863	5.3	100	0.00

Signal #2

1	T	Hexachlorobutadiene	10.000	10.262	-2.6	106	0.00
2	SR	Tetrachloro-m-xylene (S)	20.000	21.219	-6.1	106	0.00
3		alpha-BHC	10.000	10.708	-7.1	106	0.00
4	T	Hexachlorobenzene	10.000	10.497	-5.0	106	0.00
5	M	gamma-BHC (Lindane)	10.000	10.480	-4.8	105	0.00
6		beta-BHC	10.000	9.642	3.6	97	0.00
7		delta-BHC	10.000	9.245	7.6	92	0.00
8	M	Heptachlor	10.000	10.244	-2.4	102	0.00
9	M	Aldrin	10.000	10.470	-4.7	106	0.00
10		Heptachlor Epoxide	10.000	10.224	-2.2	104	0.00
11		gamma-Chlordane	10.000	10.344	-3.4	105	0.00
12		alpha-Chlordane	10.000	10.008	-0.1	103	0.00
13		Endosulfan I	10.000	10.225	-2.2	105	0.00
14		4,4'-DDE	20.000	21.274	-6.4	106	0.00
15	M	Dieldrin	20.000	21.030	-5.2	105	0.00
16	M	Endrin	20.000	18.451	7.7	93	0.00
17		4,4'-DDD	20.000	21.529	-7.6	106	0.00
18		Endosulfan II	20.000	21.739	-8.7	104	0.00
19	M	4,4'-DDT	20.000	18.055	9.7	91	0.00
20		Endrin Aldehyde	20.000	20.670	-3.4	106	0.00
21		Endosulfan Sulfate	20.000	20.629	-3.1	105	0.00
22		Methoxychlor	100.000	91.651	8.3	94	0.00
23		Endrin Ketone	20.000	21.374	-6.9	107	0.00
24	SR	Decachlorobiphenyl (S)	40.000	39.101	2.2	103	0.00

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

Evaluate Continuing Calibration Report - Not Found

Signal #1 : H:\DATA\091604\ECD06455.D\ECD1A.CH Vial: 6
Signal #2 : H:\DATA\091604\ECD06455.D\ECD2B.CH
Acq On : 9-17-2004 05:20:56 PM Operator: SJL/CRF
Sample : 10UG/L 8081 CCV 1174-25-05 Inst : Agilent E
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

Quantitation Report (Not Reviewed)

Data File : H:\DATA\091604\ECD06467.D\ECD1A.CH Vial: 7
Acq On : 9-17-2004 09:33:12 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint1.e

Data File : H:\DATA\091604\ECD06467.D\ECD2B.CH Vial: 7
Acq On : 9-17-2004 09:33:13 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Sep 20 11:33:54 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	16501620	12729926	44.125	40.890
		Spiked Amount 20.000 Range 60 - 150 Recovery =					220.62%#	204.45%#
4)	SR	Decachlorobiphen	13.50	12.90	23046361	15352500	76.347	74.533
		Spiked Amount 20.000 Range 60 - 150 Recovery =					381.73%#	372.67%#
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	15923479	13770106	21.809	20.388
3)		alpha-BHC	7.52	7.01	11973582	9476716	23.610	21.910
4)	T	Hexachlorobenzen	7.60	6.87	11152518	6803630	20.867	20.099
5)	M	gamma-BHC (Linda	7.89	7.43	10670197	8359466	22.900	21.557
6)		beta-BHC	8.25	7.73	4275225	3349325	20.226	20.094
7)		delta-BHC	8.56	7.81	9228389	7552126	22.528	20.518
8)	M	Heptachlor	8.61	8.02	10003848	6899263	20.687	19.471
9)	M	Aldrin	9.08	8.13	9484651	7978182	21.947	20.915
0)		Heptachlor Epoxi	9.74	8.85	9030732	7415715	21.035	20.323
1)		gamma-Chlordane	10.17	9.21	9344016	7850237	21.430	20.430
2)		alpha-Chlordane	10.23	9.35	9405628	7288730	21.271	18.733
3)		Endosulfan I	10.26	9.40	8495876	6884202	21.257	19.720
4)		4,4'-DDE	10.49	9.71	18927333	15471496	43.576	42.076
5)	M	Dieldrin	10.59	9.80	17610780	14540520	43.935	41.570
6)	M	Endrin	10.85	10.20	13589419	10936661	38.301	38.220
7)		4,4'-DDD	11.12	10.46	14728691	12199443	42.211	41.982
8)		Endosulfan II	11.19	10.55	15616919	13164591	41.668	40.092
9)	M	4,4'-DDT	11.46	10.78	10343652	8163200	38.716	38.370
0)		Endrin Aldehyde	11.32	10.84	12348476	9669927	41.011	37.822
1)		Endosulfan Sulfa	11.64	11.08	14407334	11864564	40.787	39.311
2)		Methoxychlor	11.98	11.59	28652543	20184019	192.841	182.768
3)		Endrin Ketone	12.07	11.71	19131991	14731818	43.667	40.848

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : H:\DATA\091604\ECD06467.D\ECD1A.CH
Acq On : 9-17-2004 09:33:12 PM
Sample : 20UG/L 1174-25-06
Misc : SOIL &10
IntFile : autoint1.e

Vial: 7
Operator: SJL/CRF
Inst : Agilent E
Multiplr: 1.00

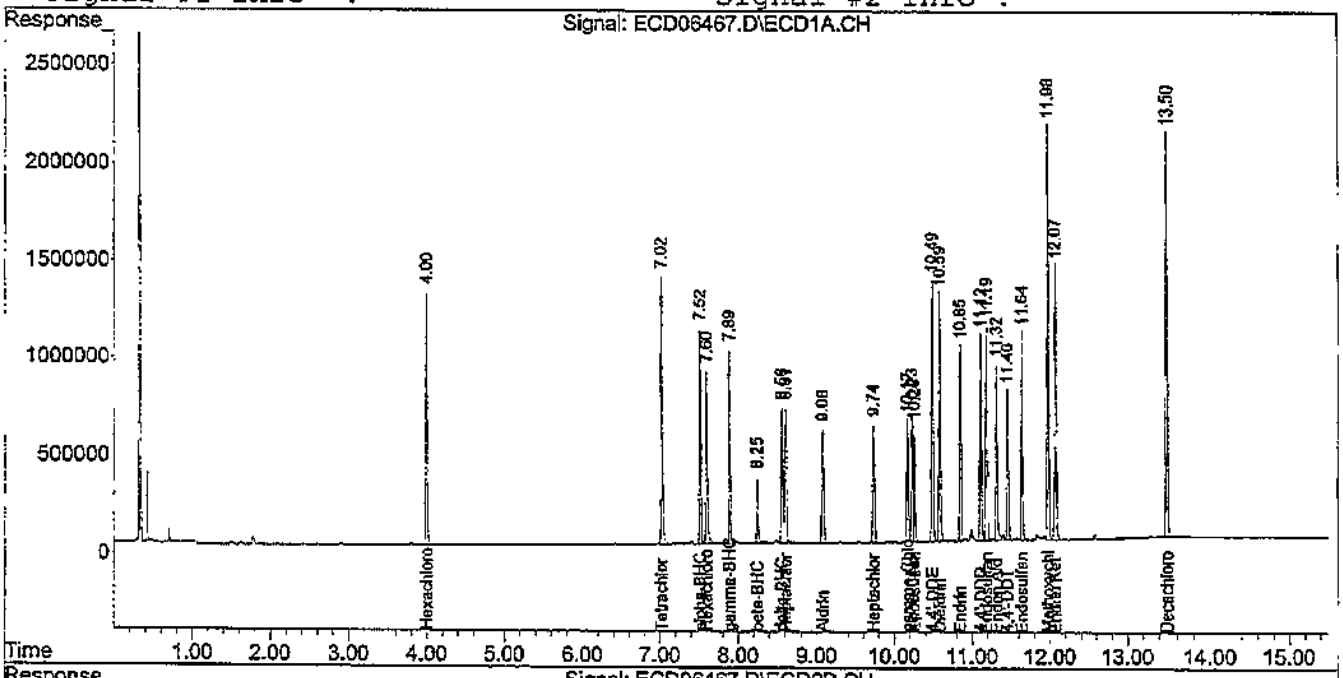
Data File : H:\DATA\091604\ECD06467.D\ECD2B.CH
Acq On : 9-17-2004 09:33:13 PM
Sample : 20UG/L 1174-25-06
Misc : SOIL &10
IntFile : autoint2.e

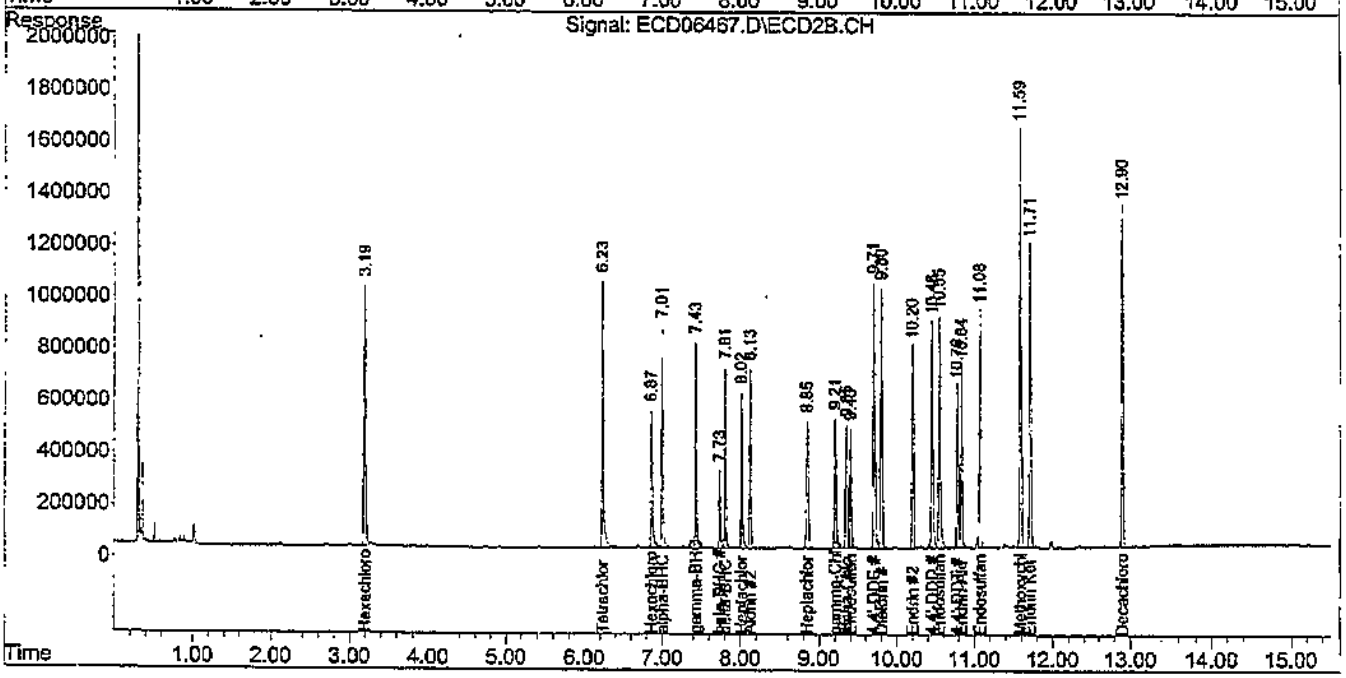
Vial: 7
Operator: SJL/CRF
Inst : Agilent E
Multiplr: 1.00

Quant Time: Sep 20 11:33 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00317

Evaluate Continuing Calibration Report

Data File : H:\DATA\091604\ECD06467.D\ECD1A.CH
Acq On : 9-17-2004 09:33:12 PM
Sample : 20UG/L 1174-25-06
Misc : SOIL &10
IntFile : autoint1.e

Vial: 7
Operator: SJL/CRF
Inst : Agilent E
Multiplr: 1.00

Data File : H:\DATA\091604\ECD06467.D\ECD2B.CH
Acq On : 9-17-2004 09:33:13 PM
Sample : 20UG/L 1174-25-06
Misc : SOIL &10
IntFile : autoint2.e

Vial: 7
Operator: SJL/CRF
Inst : Agilent E
Multiplr: 1.00

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Hexachlorobutadiene	20.000	21.809	-9.0	103	0.00
2	SR	Tetrachloro-m-xylene (S)	40.000	44.125	-10.3	108	0.00
3		alpha-BHC	20.000	23.610	-18.0#	108	0.00
4	T	Hexachlorobenzene	20.000	20.867	-4.3	110	0.00
5	M	gamma-BHC (Lindane)	20.000	22.900	-14.5	107	0.00
6		beta-BHC	20.000	20.226	-1.1	105	0.00
7		delta-BHC	20.000	22.528	-12.6	106	0.00
8	M	Heptachlor	20.000	20.687	-3.4	100	0.00
9	M	Aldrin	20.000	21.947	-9.7	108	0.00
10		Heptachlor Epoxide	20.000	21.035	-5.2	105	0.00
11		gamma-Chlordane	20.000	21.430	-7.1	105	0.00
12		alpha-Chlordane	20.000	21.271	-6.4	105	0.00
13		Endosulfan I	20.000	21.257	-6.3	106	0.00
14		4,4'-DDE	40.000	43.576	-8.9	105	0.00
15	M	Dieldrin	40.000	43.935	-9.8	105	0.00
16	M	Endrin	40.000	38.301	4.2	91	0.00
17		4,4'-DDD	40.000	42.211	-5.5	103	0.00
18		Endosulfan II	40.000	41.668	-4.2	104	0.00
19	M	4,4'-DDT	40.000	38.716	3.2	85	0.00
20		Endrin Aldehyde	40.000	41.011	-2.5	105	0.00
21		Endosulfan Sulfate	40.000	40.787	-2.0	103	0.00
22		Methoxychlor	200.000	192.841	3.6	89	0.00
23		Endrin Ketone	40.000	43.667	-9.2	108	0.00
24	SR	Decachlorobiphenyl (S)	80.000	76.347	4.6	101	0.00

Signal #2

1	T	Hexachlorobutadiene	20.000	20.388	-1.9	105	0.00
2	SR	Tetrachloro-m-xylene (S)	40.000	40.890	-2.2	104	0.00
3		alpha-BHC	20.000	21.910	-9.6	106	0.00
4	T	Hexachlorobenzene	20.000	20.099	-0.5	105	0.00
5	M	gamma-BHC (Lindane)	20.000	21.557	-7.8	106	0.00
6		beta-BHC	20.000	20.094	-0.5	105	0.00
7		delta-BHC	20.000	20.518	-2.6	100	0.00
8	M	Heptachlor	20.000	19.471	2.6	97	0.00
9	M	Aldrin	20.000	20.915	-4.6	105	0.00
10		Heptachlor Epoxide	20.000	20.323	-1.6	104	0.00
11		gamma-Chlordane	20.000	20.430	-2.1	104	0.00
12		alpha-Chlordane	20.000	18.733	6.3	98	0.00
13		Endosulfan I	20.000	19.720	1.4	102	0.00
14		4,4'-DDE	40.000	42.076	-5.2	104	0.00
15	M	Dieldrin	40.000	41.570	-3.9	104	0.00
16	M	Endrin	40.000	38.220	4.5	95	0.00
17		4,4'-DDD	40.000	41.982	-5.0	104	0.00
18		Endosulfan II	40.000	40.092	-0.2	103	0.00
19	M	4,4'-DDT	40.000	38.370	4.1	87	0.00
20		Endrin Aldehyde	40.000	37.822	5.4	102	0.00

(#) = Out of Range

Data File : H:\DATA\091604\ECD06467.D\ECD1A.CH Vial: 7
Acq On : 9-17-2004 09:33:12 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint1.e

Data File : H:\DATA\091604\ECD06467.D\ECD2B.CH Vial: 7
Acq On : 9-17-2004 09:33:13 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
21		Endosulfan Sulfate	40.000	39.311	1.7	102	0.00
22		Methoxychlor	200.000	182.768	8.6	90	0.00
23		Endrin Ketone	40.000	40.848	-2.1	106	0.00
24	SR	Decachlorobiphenyl (S)	80.000	74.533	6.8	100	0.00

Evaluate Continuing Calibration Report - Not Found

Data File : H:\DATA\091604\ECD06467.D\ECD1A.CH Vial: 7
Acq On : 9-17-2004 09:33:12 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint1.e

Data File : H:\DATA\091604\ECD06467.D\ECD2B.CH Vial: 7
Acq On : 9-17-2004 09:33:13 PM Operator: SJL/CRF
Sample : 20UG/L 1174-25-06 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile : autoint2.e

Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration

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

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

00320

PCB DATA PACKAGE

SAMPLE DATA

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1334.D\ADC1A.CH Vial: 6
Signal #2 : Z:\DATA\PB092004\PCB1334.D\ADC1B.CH
Acq On : 20 Sep 2004 1:48 pm Operator: STM
Sample : 123627-1 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:22:38 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
1) S Tetrachloro-m-xy	4.16	5.34	42433894	25387644	16.897	16.500
Spiked Amount 20.000			Recovery	=	84.48%	82.50%
4) S Decachlorobiphen	13.95	15.38	43856835	22055214	16.856	15.632
Spiked Amount 20.000			Recovery	=	84.28%	78.16%
Target Compounds						
2) L3 Aroclor 1242	5.68	5.96	125625	337348	1.909	12.351 #
3) L3 Aroclor 1242 {2}	0.00	0.00	0	0	N.D.	N.D.
4) L3 Aroclor 1242 {3}	7.31	0.00	70702	0	1.524	N.D. #
5) L3 Aroclor 1242 {4}	7.56	7.91	238401	102698	4.032	4.931
6) L3 Aroclor 1242 {5}	7.97	0.00	61562	0	0.659	N.D. #
7) L3 Aroclor 1242 - T	0.00	0.00	496290	440046	1.466m	3.321m#
8) L4 Aroclor 1260	8.99	10.37	378881	39202	2.874	0.587 #
9) L4 Aroclor 1260 {2}	9.23	10.86	315964	124886	2.453	1.036 #
0) L4 Aroclor 1260 {3}	9.56	11.57	405924	59760	1.683	0.690 #
1) L4 Aroclor 1260 {4}	11.23	0.00	305704	0	0.814	N.D. #
2) L4 Aroclor 1260 {5}	11.93	0.00	280860	0	1.103	N.D. #
3) L4 Aroclor 1260 - T	0.00	0.00	1687333	223848	1.490m	0.388m#

Noise - no Aroclor present

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

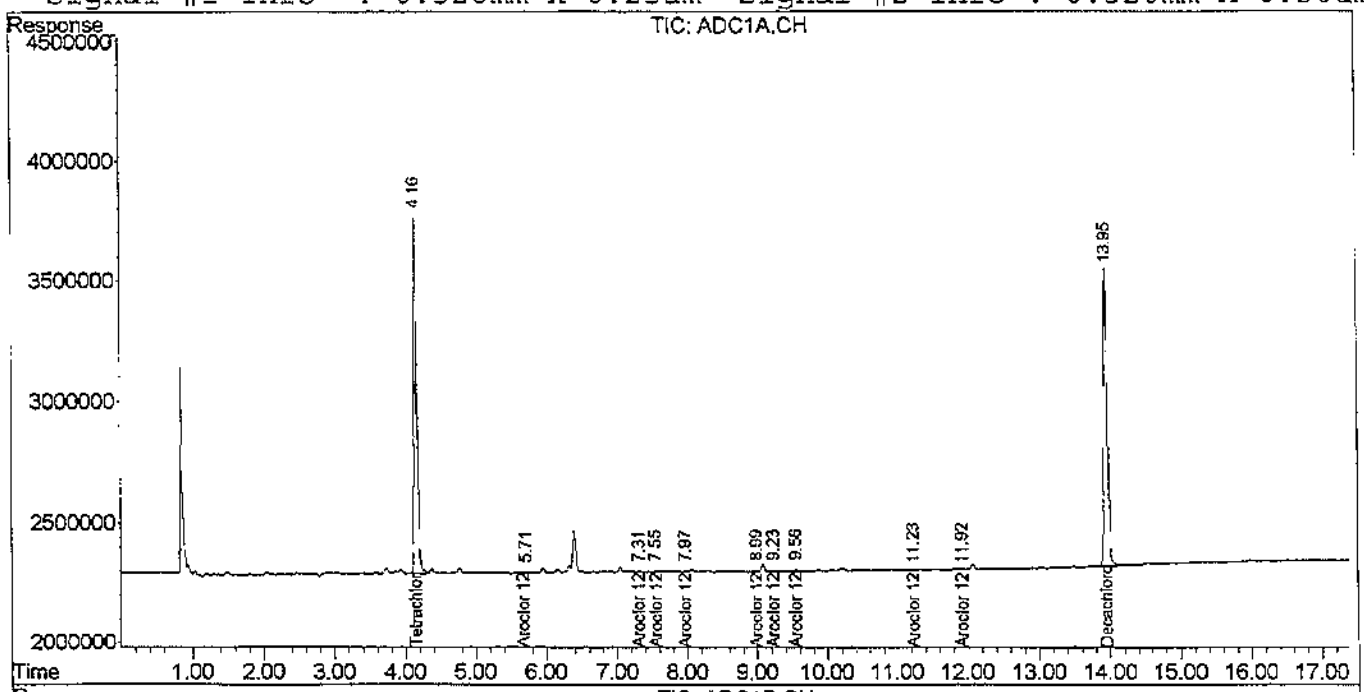
00354

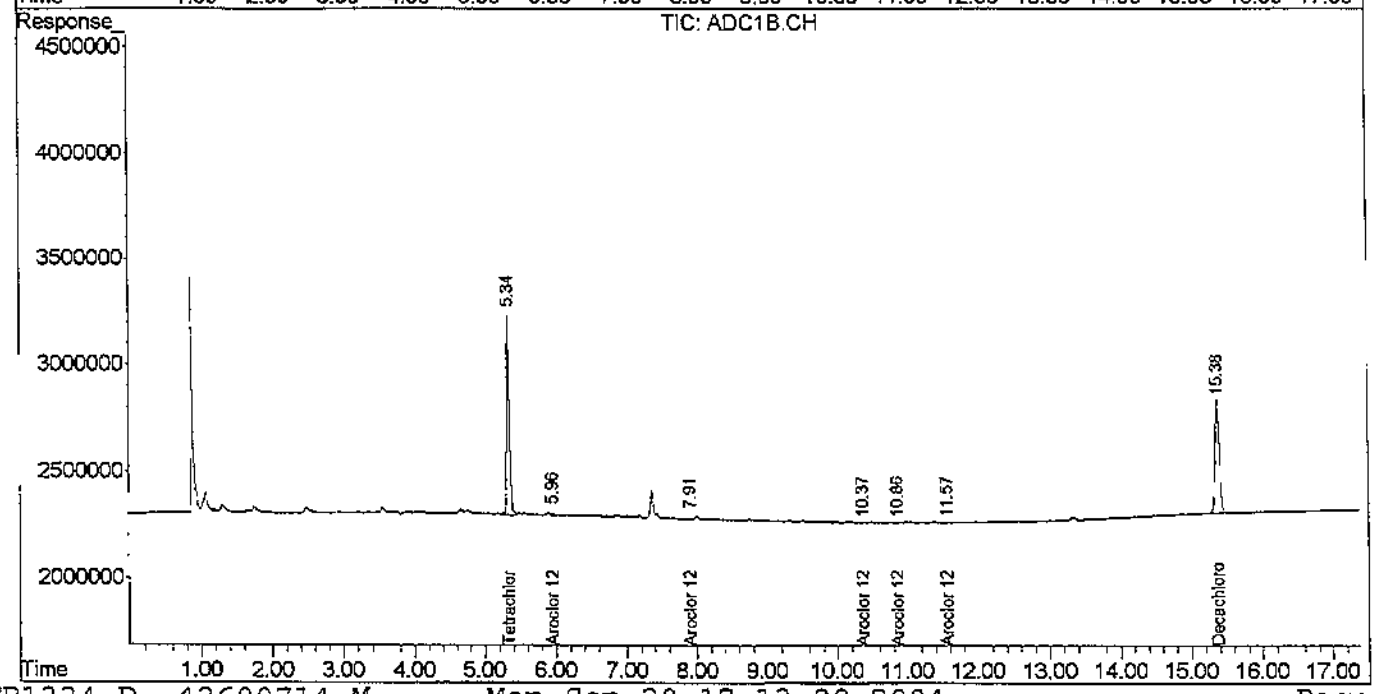
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1334.D\ADC1A.CH Vial: 6
Signal #2 : Z:\DATA\PB092004\PCB1334.D\ADC1B.CH
Acq On : 20 Sep 2004 1:48 pm Operator: STM
Sample : 123627-1 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:22 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00355

INITIAL CALIBRATION

Response Factor Report Dual Colu

Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Wed Jul 21 13:43:53 2004

Calibration Files
10 =PCB9556.D 50 =PCB9557.D 100 =PCB9558.D
250 =PCB9559.D 500 =PCB9560.D

		Compound	10	50	100	250	500	Avg		%RSD
1)	S	Tetrachloro-m-xylene	2.527	2.611	2.375	2.532	2.511	2.511	E6	3.39
2)	L1	Aroclor 1242	7.017	7.599	6.151	6.369	5.770	6.581	E4	11.05
3)	L1	Aroclor 1242 {2}	9.029	8.183	6.873	6.776	6.054	7.383	E4	16.23
4)	L1	Aroclor 1242 {3}	4.112	5.590	4.619	4.687	4.188	4.639	E4	12.70
5)	L1	Aroclor 1242 {4}	7.101	6.249	5.171	6.117	4.923	5.912	E4	14.88
6)	L1	Aroclor 1242 {5}	1.048	1.160	0.829	0.858	0.773	0.934	E5	17.49
7)	L1	Aroclor 1242 - Total	3.774	3.922	3.110	3.253	2.867	3.385	E5	13.22
8)	L2	Aroclor 1260	1.451	1.494	1.225	1.270	1.152	1.318	E5	11.23
9)	L2	Aroclor 1260 {2}	1.476	1.422	1.196	1.220	1.127	1.288	E5	11.82
10)	L2	Aroclor 1260 {3}	2.646	2.700	2.203	2.306	2.205	2.412	E5	10.07
11)	L2	Aroclor 1260 {4}	3.961	4.081	3.423	3.688	3.625	3.756	E5	7.05
12)	L2	Aroclor 1260 {5}	2.800	2.820	2.299	2.462	2.354	2.547	E5	9.70
13)	L2	Aroclor 1260 - Total	1.234	1.252	1.025	1.094	1.046	1.132	E6	9.15
14)	S	Decachlorobiphenyl (S	2.990	2.783	2.404	2.476	2.255	2.602	E6	10.51

Signal #2 Calibration Files
10 =PCB9556.D 50 =PCB9557.D 100 =PCB9558.D
250 =PCB9559.D 500 =PCB9560.D

		Compound	10	50	100	250	500	Avg		%RSD
1)	S	Tetrachloro-m-xylene	1.771	1.699	1.429	1.453	1.340	1.539	E6	12.10
2)	L3	Aroclor 1242	3.469	3.036	2.504	2.422	2.226	2.731	E4	18.66
3)	L3	Aroclor 1242 {2}	2.755	2.571	2.326	2.333	2.096	2.416	E4	10.48
4)	L3	Aroclor 1242 {3}	4.131	4.038	3.260	3.177	2.812	3.483	E4	16.49
5)	L3	Aroclor 1242 {4}	2.177	2.340	2.161	1.995	1.741	2.083	E4	10.89
6)	L3	Aroclor 1242 {5}	2.931	2.739	2.448	2.422	2.146	2.537	E4	11.99
7)	L3	Aroclor 1242 - Total	1.546	1.472	1.270	1.235	1.102	1.325	E5	13.68
8)	L4	Aroclor 1260	7.613	7.550	6.338	6.306	5.589	6.679	E4	13.12
9)	L4	Aroclor 1260 {2}	1.388	1.353	1.141	1.138	1.009	1.206	E5	13.28
10)	L4	Aroclor 1260 {3}	9.320	9.833	8.309	8.388	7.459	8.662	E4	10.73
11)	L4	Aroclor 1260 {4}	2.076	2.118	1.787	1.821	1.652	1.891	E5	10.54
12)	L4	Aroclor 1260 {5}	1.349	1.243	1.072	1.078	0.964	1.141	E5	13.41
13)	L4	Aroclor 1260 - Total	6.507	6.453	5.465	5.506	4.930	5.772	E5	11.87
14)	S	Decachlorobiphenyl (S	1.536	1.568	1.361	1.367	1.222	1.411	E6	10.03

00357

= Out of Range

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9556.D\ADC1A.CH Vial: 1
Signal #2 : Z:\DATA\PB071404\PCB9556.D\ADC1B.CH
Acq On : 14 Jul 2004 3:17 pm Operator: STM
Sample : 10ng/ml 1242/1260 ical 561-146-3 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:47:10 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:46:37 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.43	5.63	2527127	1771420	1.006	1.151
Spiked Amount 20.000			Recovery	=	5.03%	5.76%
) S Decachlorobiphen	14.38	15.92	2989817	1535711	1.149	1.088
Spiked Amount 20.000			Recovery	=	5.75%	5.44%
Target Compounds						
) L3 Aroclor 1242	5.96	6.23	701731	346900	10.663	12.269
) L3 Aroclor 1242 (2)	6.88	6.85	902891	275493	12.229	11.402
) L3 Aroclor 1242 (3)	7.61	8.04	411194	413057	8.863	11.858
) L3 Aroclor 1242 (4)	7.86	8.23	710085	217722	12.011	10.454
) L3 Aroclor 1242 (5)	8.29	8.57	1048377	293095	11.227	11.552
) L3 Aroclor 1242 - T	0.00	0.00	3774278	1546267	11.149m	11.585m
) L4 Aroclor 1260	9.34	10.73	1451360	761311	10.965	11.398
) L4 Aroclor 1260 (2)	9.58	11.24	1476122	1388352	11.459	11.513
) L4 Aroclor 1260 (3)	9.91	11.96	2646290	932021	10.971	10.760
) L4 Aroclor 1260 (4)	11.62	12.98	3961441	2076297	10.548	10.980
) L4 Aroclor 1260 (5)	12.32	13.55	2800259	1349181	10.995	11.822
) L4 Aroclor 1260 - T	0.00	0.00	12335573	6507162	10.891m	11.273m

00358

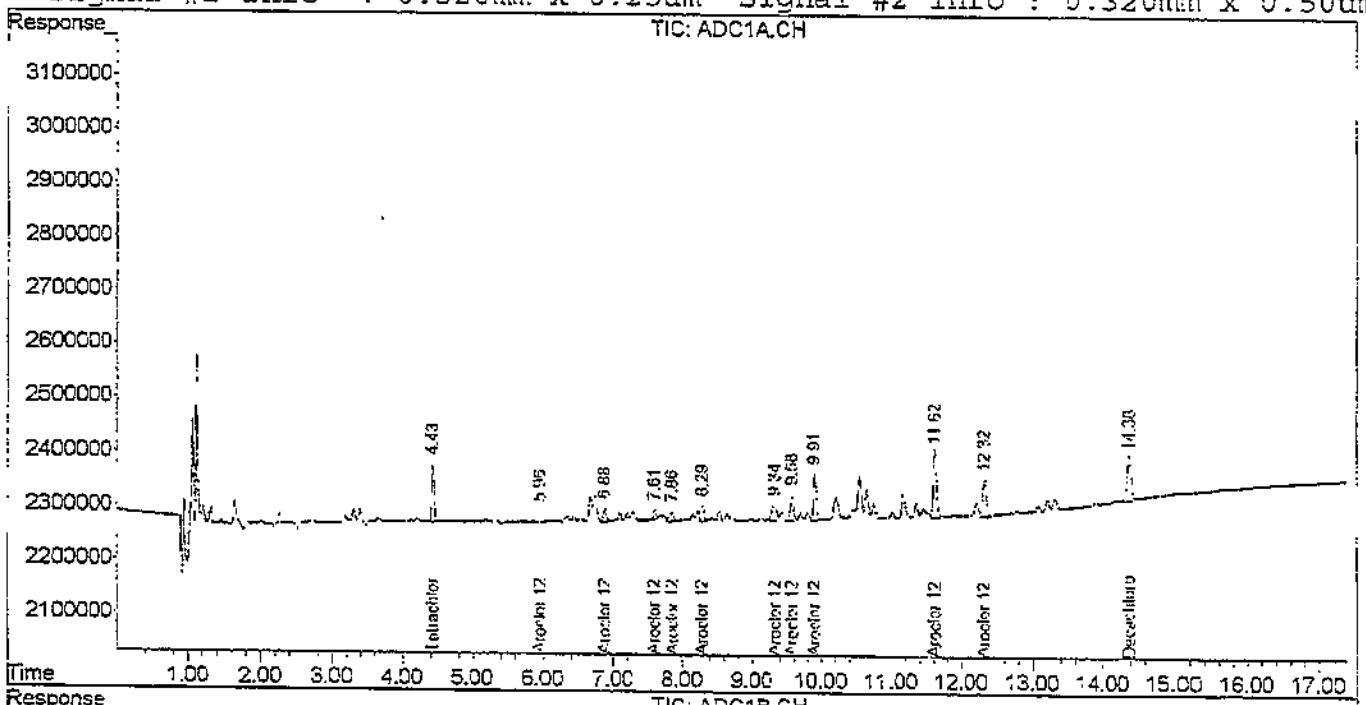
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

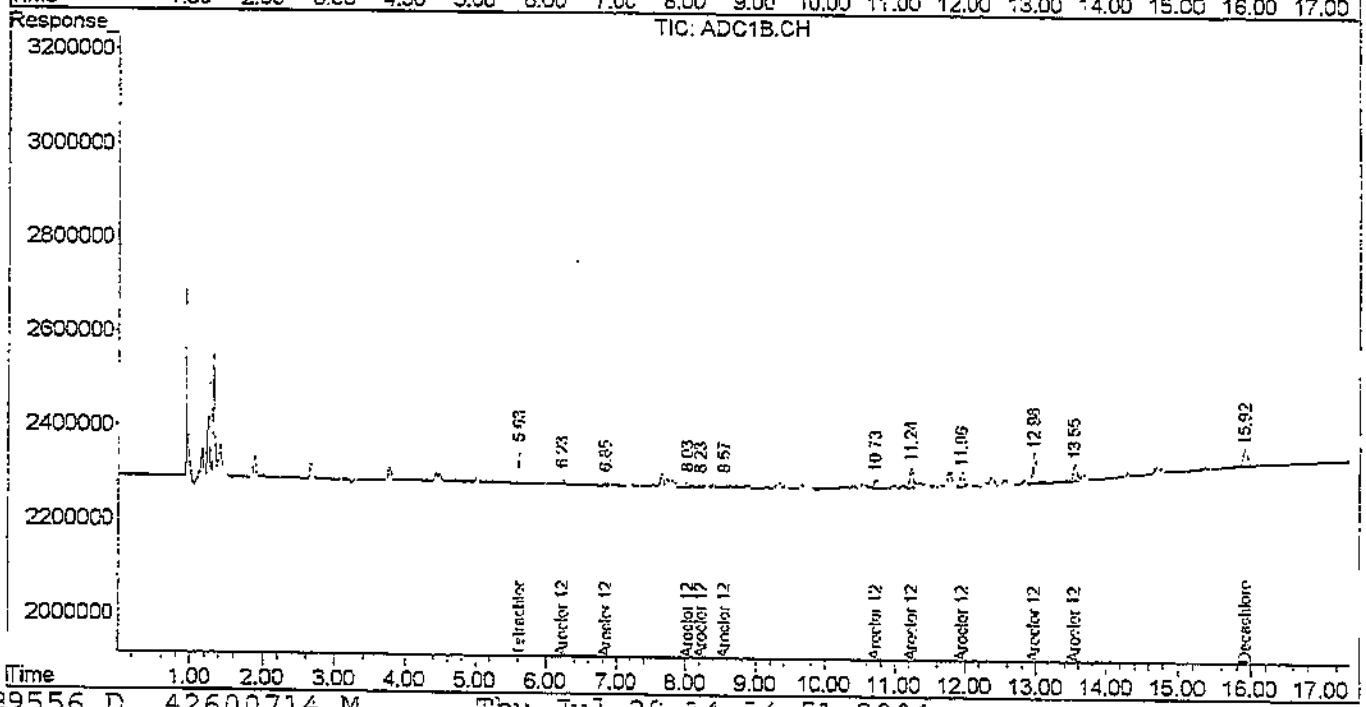
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9556.D\ADC1A.CH Vial: 1
Signal #2 : Z:\DATA\PB071404\PCB9556.D\ADC1B.CH
Acq On : 14 Jul 2004 3:17 pm Operator: STM
Sample : 10ng/ml 1242/1260 ical 561-146-3 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:47 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:46:37 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00359

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9557.D\ADC1A.CH Vial: 2
Signal #2 : Z:\DATA\PB071404\PCB9557.D\ADC1B.CH
Acq On : 14 Jul 2004 3:37 pm Operator: STM
Sample : 50ng/ml 1242/1260 ical 561-146-4 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:47:40 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:47:15 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
	System Monitoring Compounds						
) S	Tetrachloro-m-xy	4.43	5.62	13053182	8496840	5.198	5.522
Spiked Amount	20.000			Recovery	=	25.99%	27.61%
) S	Decachlorobiphen	14.37	15.92	13916523	7840782	5.349	5.557
Spiked Amount	20.000			Recovery	=	26.75%	27.79%
	Target Compounds						
) L3	Aroclor 1242	5.96	6.23	3799438	1517768	57.732	54.499
) L3	Aroclor 1242 {2}	6.88	6.85	4091386	1285523	55.417	53.204
) L3	Aroclor 1242 {3}	7.60	8.03	2795091	2018796	60.247	57.953
) L3	Aroclor 1242 {4}	7.85	8.22	3124583	1169926	52.850	56.175
) L3	Aroclor 1242 {5}	8.28	8.56	5799940	1369256	62.112	53.970
) L3	Aroclor 1242 - T	0.00	0.00	19610438	7361270	57.927m	55.330m
) L4	Aroclor 1260	9.33	10.73	7471962	3775055	56.450	56.518
) L4	Aroclor 1260 {2}	9.57	11.23	7112410	6766163	55.214	56.109
) L4	Aroclor 1260 {3}	9.91	11.95	13500721	4916656	55.974	56.762
) L4	Aroclor 1260 {4}	11.61	12.97	20403577	10591882	54.330	56.014
) L4	Aroclor 1260 {5}	12.32	13.54	14097812	6214497	55.350	54.455
) L4	Aroclor 1260 - T	0.00	0.00	62586482	32264253	55.258m	55.896m

00360

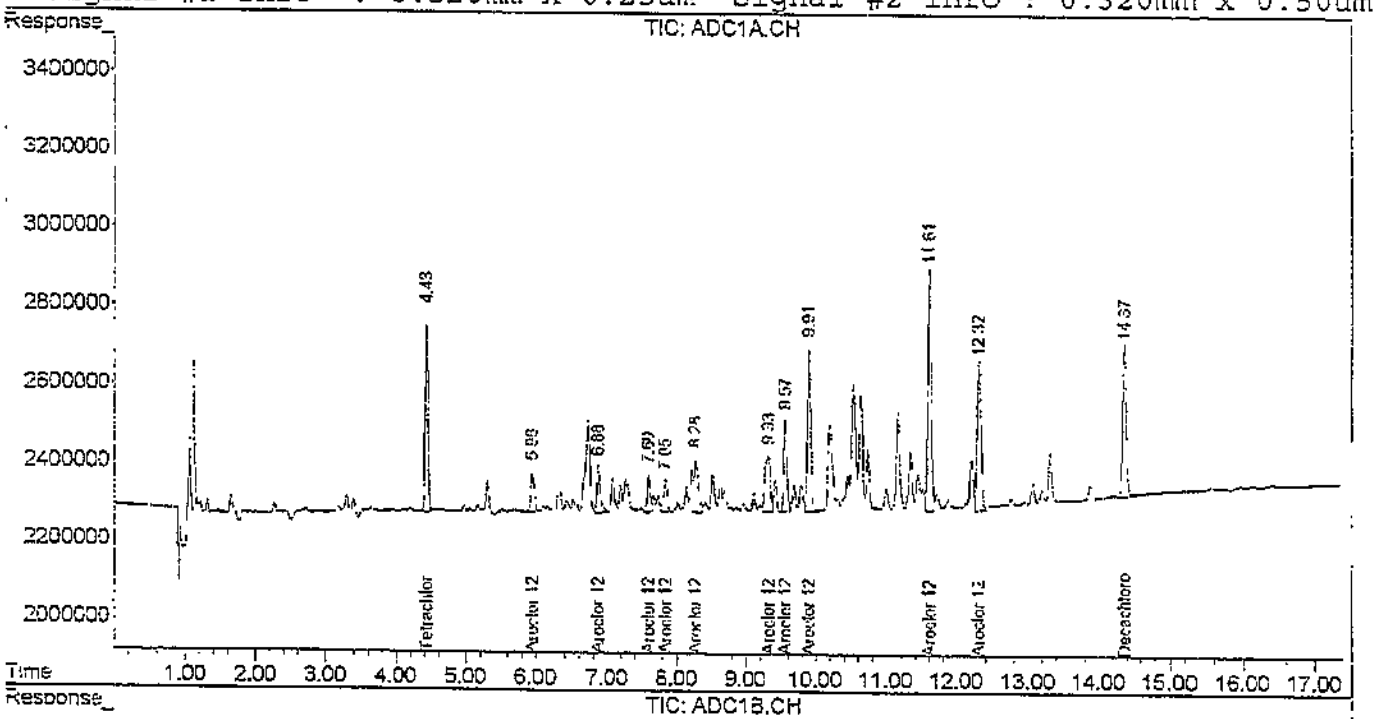
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

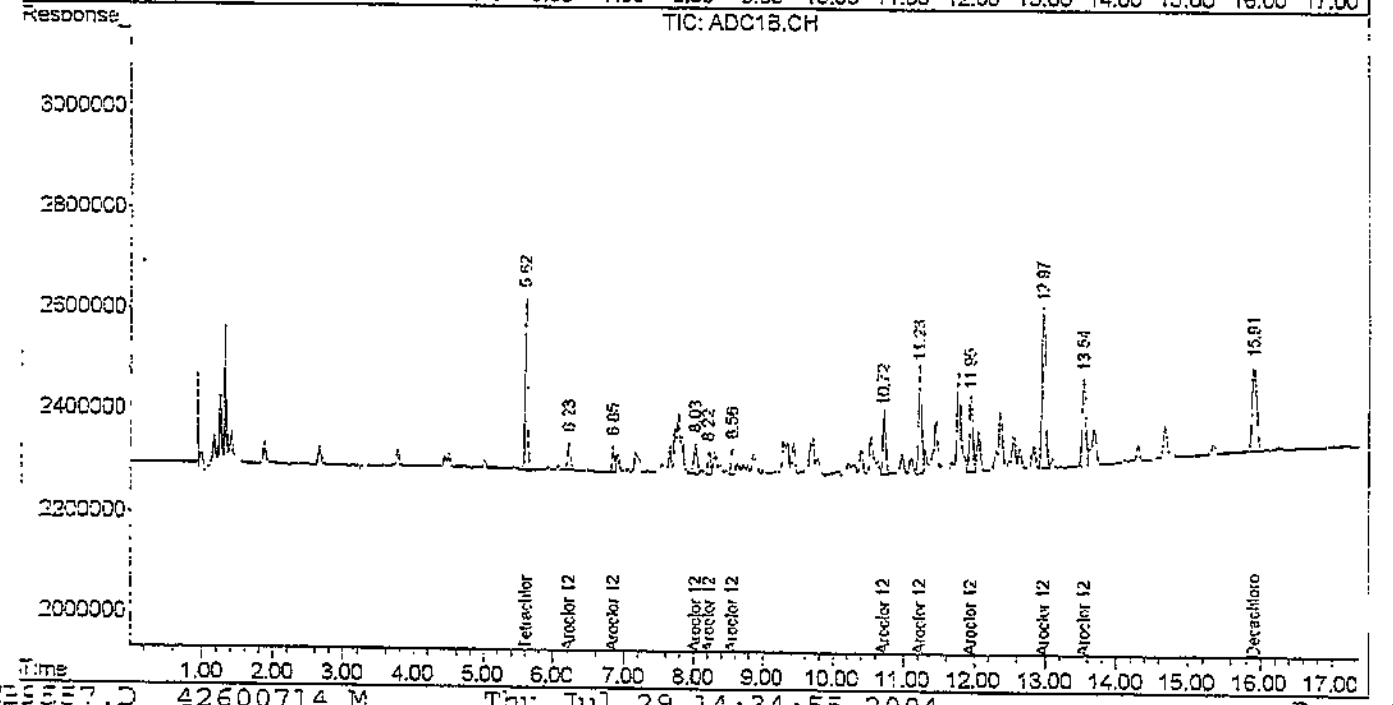
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9557.D\ADC1A.CH Vial: 2
Signal #2 : Z:\DATA\PB071404\PCB9557.D\ADC1B.CH
Acq On : 14 Jul 2004 3:37 pm Operator: STM
Sample : 50ng/ml 1242/1260 ical 561-146-4 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:47 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:47:15 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00361

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9558.D\ADC1A.CH Vial: 3
Signal #2 : Z:\DATA\PB071404\PCB9558.D\ADC1B.CH
Acq On : 14 Jul 2004 3:57 pm Operator: STM
Sample : 100ng/ml 1242/1260 ical 561-146-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48:40 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:47:46 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.43	5.63	23752254	14294539	9.459	9.290
Spiked Amount 20.000			Recovery	=	47.30%	46.45%
) S Decachlorobiphen	14.37	15.92	24043342	13613762	9.241	9.649
Spiked Amount 20.000			Recovery	=	46.20%	48.24%
Target Compounds						
) L3 Aroclor 1242	5.96	6.23	6151133	2504413	93.465	91.689
) L3 Aroclor 1242 {2}	6.88	6.86	6873031	2325701	93.093	96.254
) L3 Aroclor 1242 {3}	7.61	8.03	4619027	3259823	99.561	93.579
) L3 Aroclor 1242 {4}	7.86	8.23	5171236	2160541	87.468	103.741
) L3 Aroclor 1242 {5}	8.29	8.57	8290506	2448273	88.784	96.500
) L3 Aroclor 1242 - T	0.00	0.00	31104932	12698752	91.881m	95.834m
) L4 Aroclor 1260	9.34	10.73	12246535	6338230	92.524	94.892
) L4 Aroclor 1260 {2}	9.58	11.24	11957166	11409750	92.824	94.616
) L4 Aroclor 1260 {3}	9.91	11.96	22027959	8309311	91.327	95.929
) L4 Aroclor 1260 {4}	11.62	12.98	34229168	17871515	91.144	94.512
) L4 Aroclor 1260 {5}	12.32	13.55	22994360	10717870	90.279	93.917
) L4 Aroclor 1260 - T	0.00	0.00	103.536	54646676	91.341m	94.672m

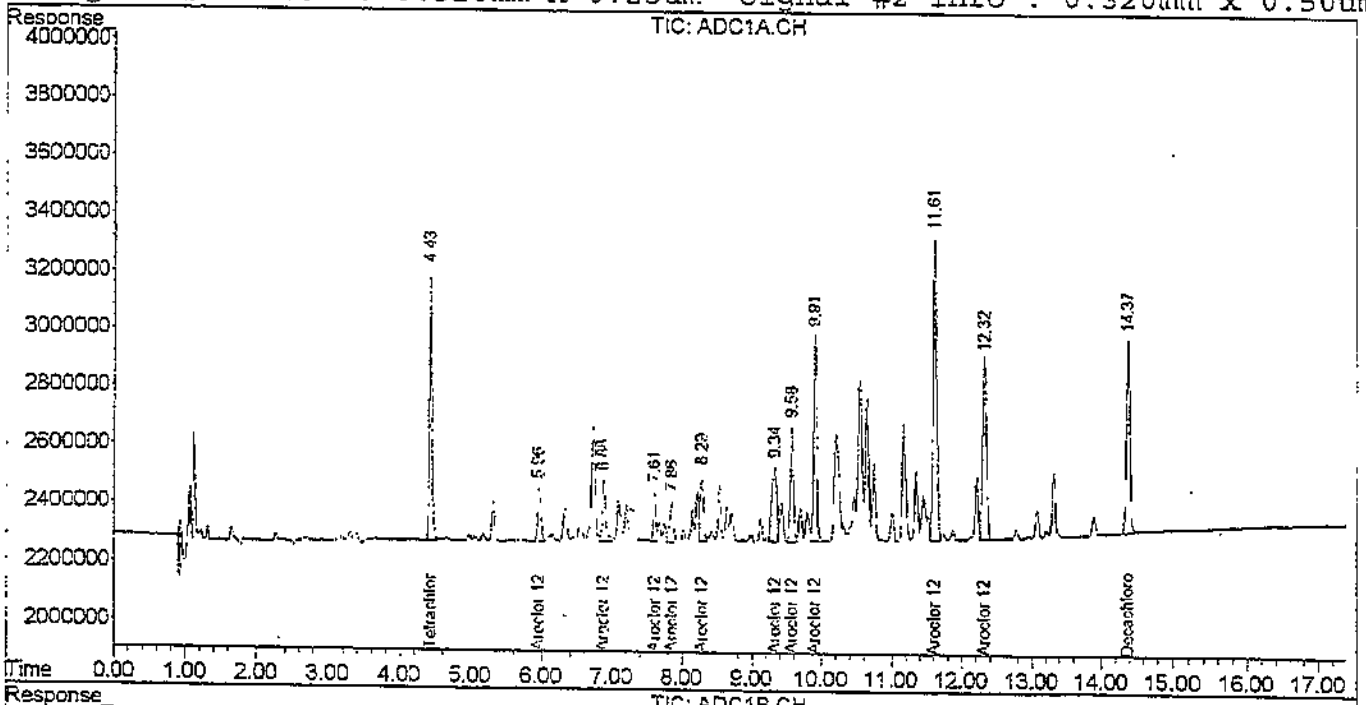
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PCB9558.D 42600714.M Thu Jul 22 14:24:52 2004

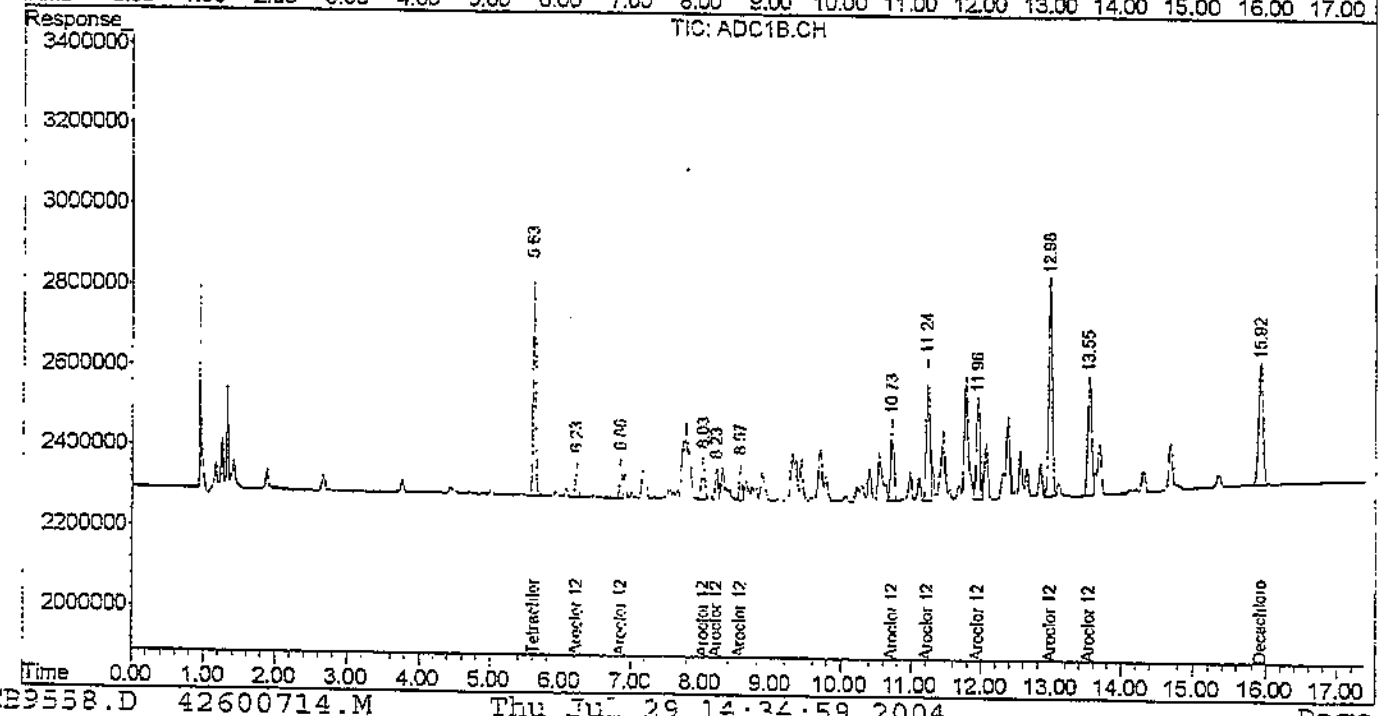
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9558.D\ADC1A.CH Vial: 3
Signal #2 : Z:\DATA\PB071404\PCB9558.D\ADC1B.CH
Acq On : 14 Jul 2004 3:57 pm Operator: STM
Sample : 100ng/ml 1242/1260 ical 561-146-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:47:46 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00363

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9559.D\ADC1A.CH Vial: 4
Signal #2 : Z:\DATA\PB071404\PCB9559.D\ADC1B.CH
Acq On : 14 Jul 2004 4:17 pm Operator: STM
Sample : 250ng/ml 1242/1260 ical 561-146-6 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48:49 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:48:45 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
1) S Tetrachloro-m-xy	4.44	5.64	63299932	36324734	25.206	23.608
Spiked Amount 20.000			Recovery	=	126.03%	118.04%
4) S Decachlorobiphen	14.39	15.93	61910215	34172752	23.795	24.220
Spiked Amount 20.000			Recovery	=	118.98%	121.10%
Target Compounds						
2) L3 Aroclor 1242	5.97	6.24	15921661	6054926	241.927	221.676
3) L3 Aroclor 1242 (2)	6.89	6.86	16939224	5833461	229.437	241.429
4) L3 Aroclor 1242 (3)	7.62	8.04	11718418	7943214	252.585	228.025
5) L3 Aroclor 1242 (4)	7.87	8.24	15292420	4986673	258.660	239.441
6) L3 Aroclor 1242 (5)	8.30	8.58	21452411	6054965	229.736	238.659
7) L3 Aroclor 1242 - T	0.00	0.00	81324134	30873239	240.224m	232.991m
8) L4 Aroclor 1260	9.35	10.74	31741398	15765975	240.769	236.039
9) L4 Aroclor 1260 (2)	9.59	11.25	30497778	28454828	236.757	235.962
10) L4 Aroclor 1260 (3)	9.92	11.97	57642521	20970829	238.984	242.103
11) L4 Aroclor 1260 (4)	11.63	12.99	92188746	45520809	245.477	240.733
12) L4 Aroclor 1260 (5)	12.33	13.56	61547064	26948046	241.641	236.135
13) L4 Aroclor 1260 - T	0.00	0.00	273.6E6	137.7E6	241.690m	238.490m

(E)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

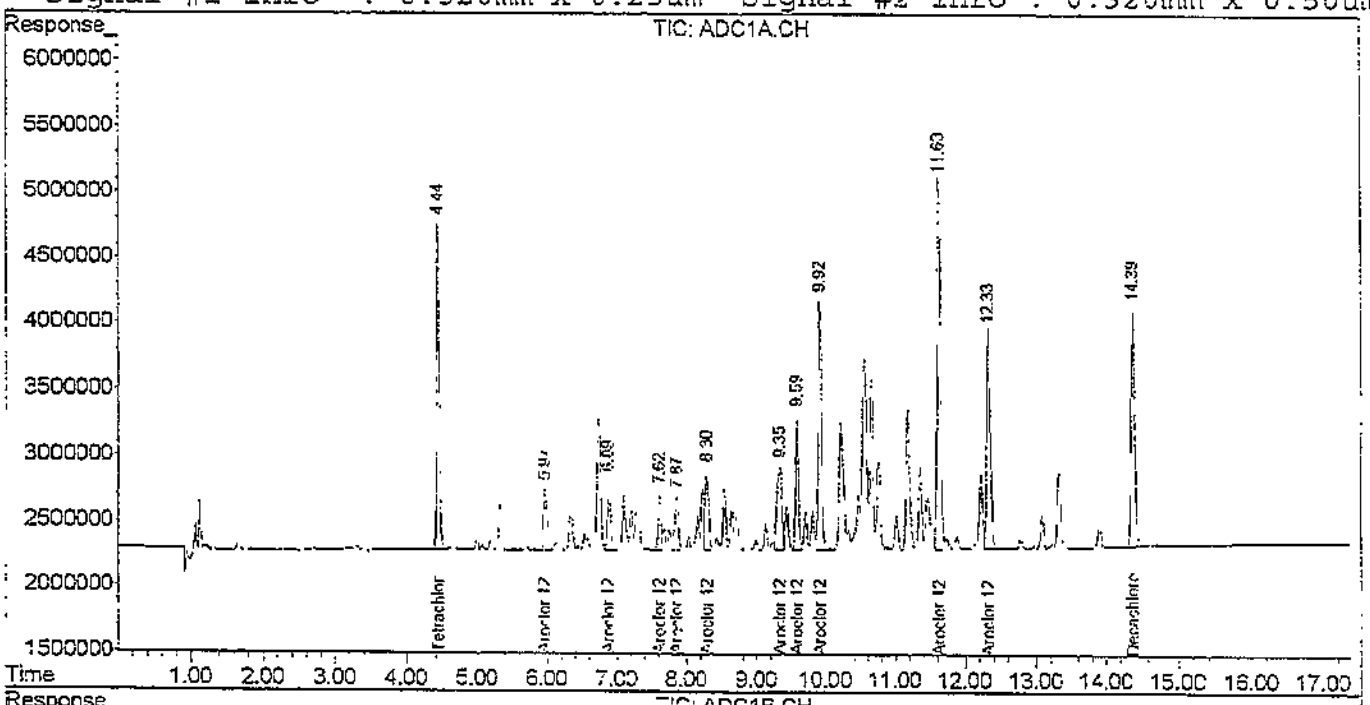
00364

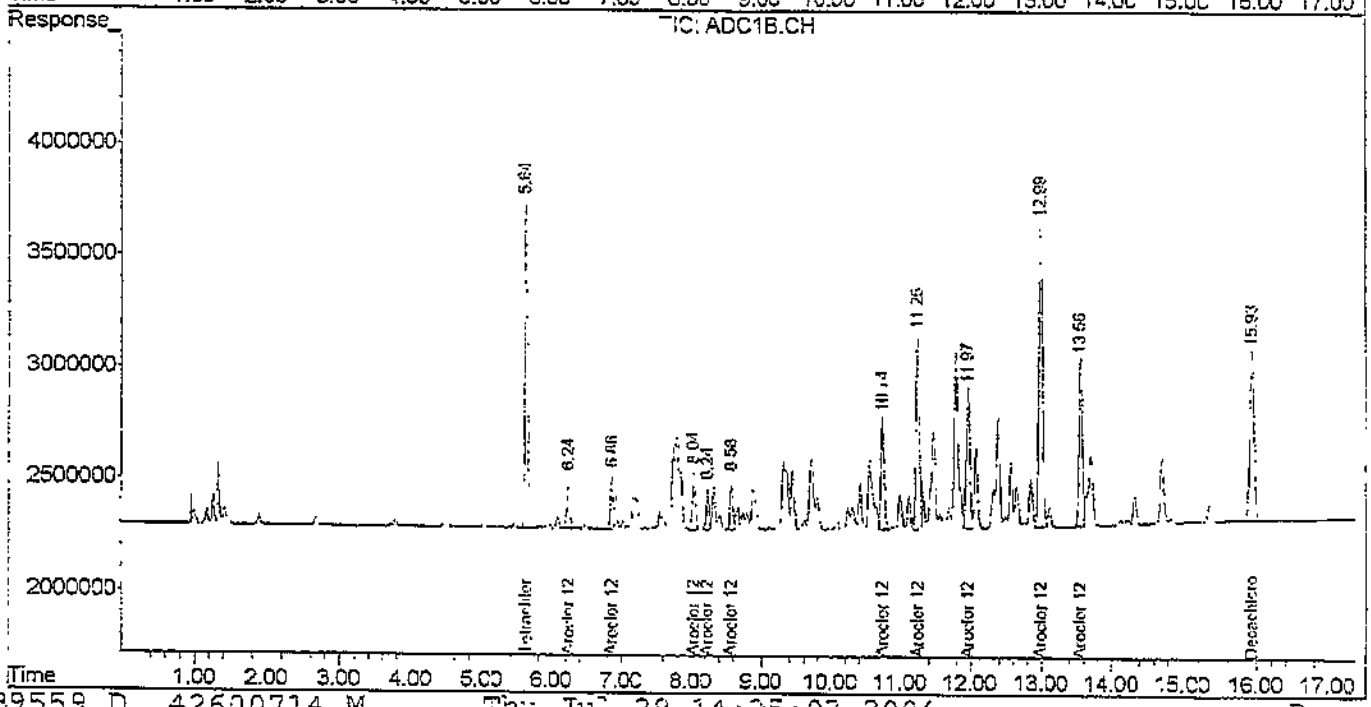
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9559.D\ADC1A.CH Vial: 4
Signal #2 : Z:\DATA\PB071404\PCB9559.D\ADC1B.CH
Acq On : 14 Jul 2004 4:17 pm Operator: STM
Sample : 250ng/ml 1242/1260 ical 561-146-6 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:48:45 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00365

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9560.D\ADC1A.CH Vial: 5
Signal #2 : Z:\DATA\PB071404\PCB9560.D\ADC1B.CH
Acq On : 14 Jul 2004 4:36 pm Operator: STM
Sample : 500ng/ml 1242/1260 ical 561-146-7 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E. IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48:58 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:48:55 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.44	5.63	125.6E6	67010087	50.002	43.550
Spiked Amount 20.000			Recovery	=	250.01%	217.75%
) S Decachlorobiphen	14.38	15.92	117.8E6	61126743	45.263	43.323
Spiked Amount 20.000			Recovery	=	226.32%	216.62%
Target Compounds						
) L3 Aroclor 1242	5.97	6.24	28849878	11131091	438.369	407.519
) L3 Aroclor 1242 {2}	6.88	6.86	30271562	10480116	410.020	433.741
) L3 Aroclor 1242 {3}	7.61	8.04	20942266	14060693	451.401	403.639
) L3 Aroclor 1242 {4}	7.86	8.23	24612940	8704267	416.310	417.946
) L3 Aroclor 1242 {5}	8.29	8.57	38670264	10728388	414.125	422.864
) L3 Aroclor 1242 - T	0.00	0.00	143.3E6	55104556	423.433m	415.857m
) L4 Aroclor 1260	9.34	10.73	57578888	27945648	436.755	418.386
) L4 Aroclor 1260 {2}	9.58	11.24	56325764	50438850	437.261	418.265
) L4 Aroclor 1260 {3}	9.92	11.96	110.2E6	37292708	457.090	430.535
) L4 Aroclor 1260 {4}	11.62	12.98	181.2E6	82599311	482.610	436.819
) L4 Aroclor 1260 {5}	12.32	13.55	117.7E6	48213692	462.098	422.478
) L4 Aroclor 1260 - T	0.00	0.00	523.1E6	246.5E6	462.058m	427.031m

(E)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

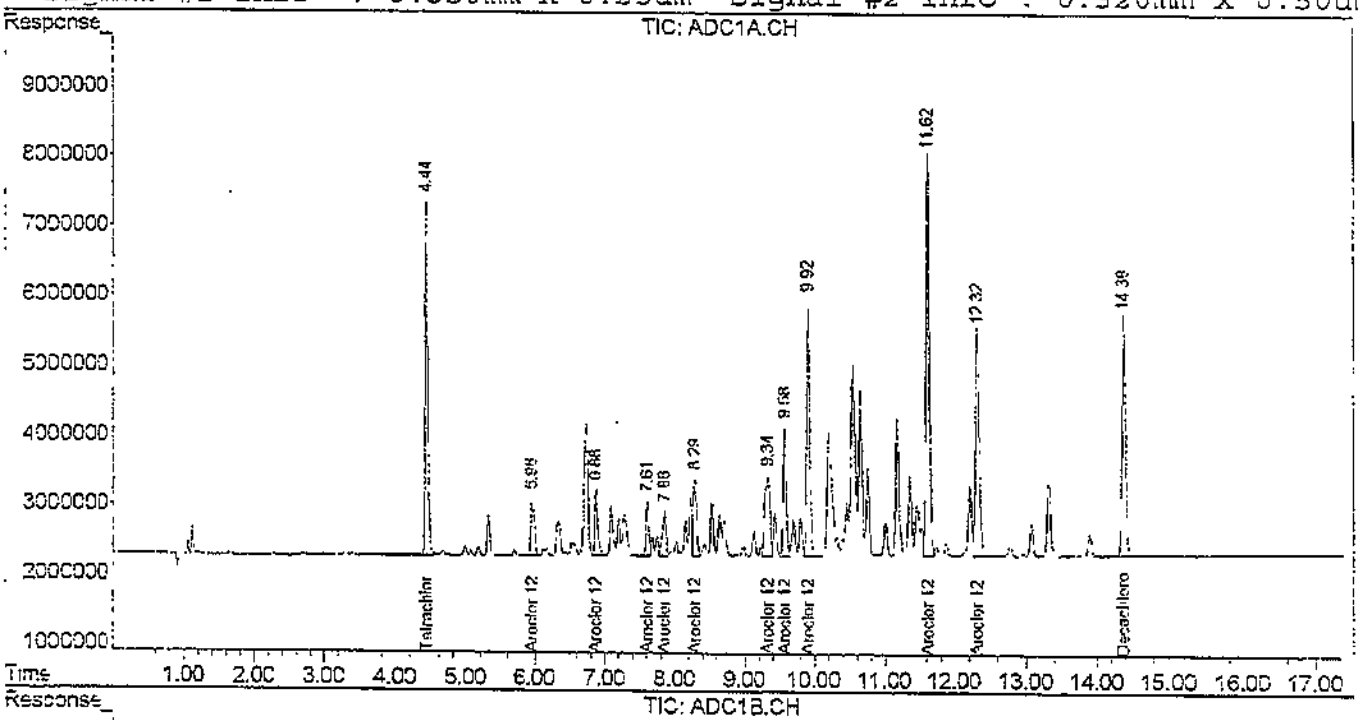
00366

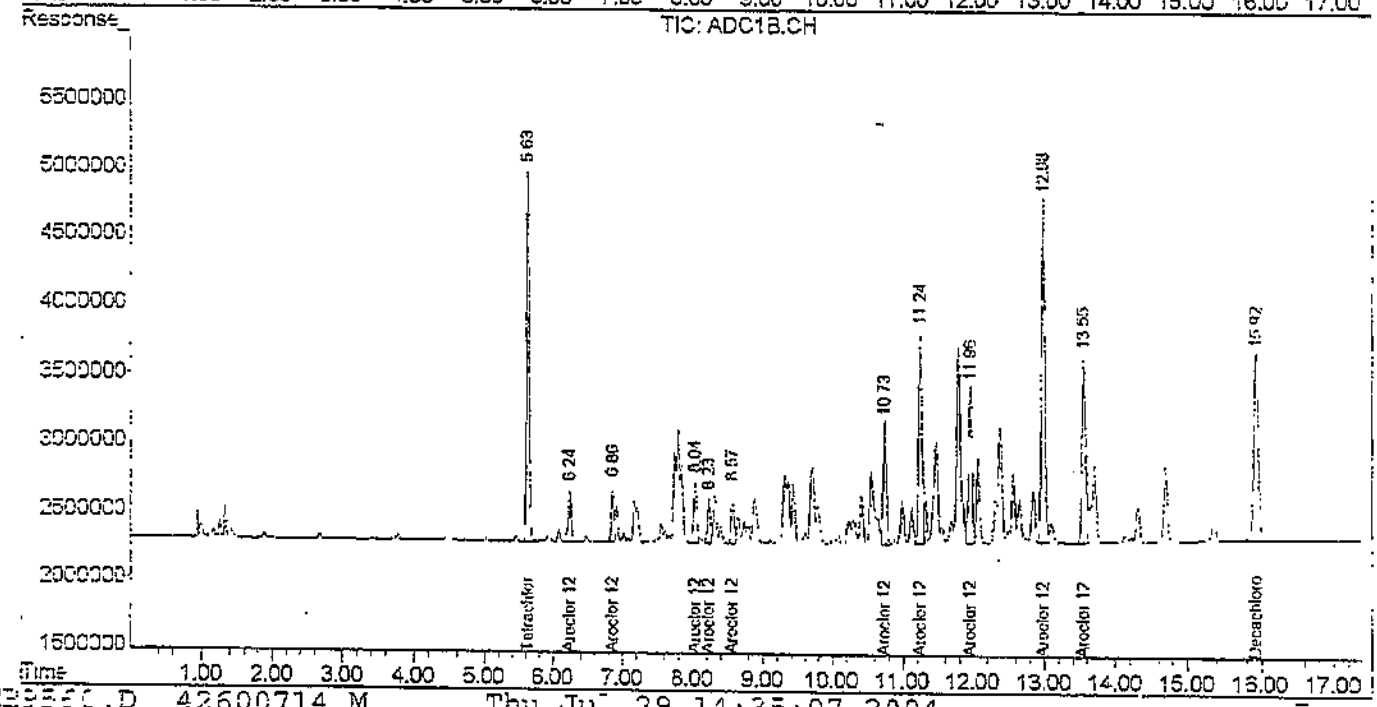
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9560.D\ADC1A.CH Vial: 5
Signal #2 : Z:\DATA\PB071404\PCB9560.D\ADC1B.CH
Acq On : 14 Jul 2004 4:36 pm Operator: STM
Sample : 500ng/ml 1242/1260 ical 561-146-7 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:48 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:48:55 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00367

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9561.D\ADC1A.CH Vial: 6
Signal #2 : Z:\DATA\PB071404\PCB9561.D\ADC1B.CH
Acq On : 14 Jul 2004 4:56 pm Operator: STM
Sample : 100ng/ml 1242/1260 icv 561-146-8 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:49:10 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:49:03 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
	System Monitoring Compounds						
S	Tetrachloro-m-xy	4.44	5.64	24387406	14593974	9.711	9.485
Spiked Amount	20.000			Recovery	=	48.56%	47.42%
S	Decachlorobiphen	14.39	15.94	24663866	13660961	9.479	9.682
Spiked Amount	20.000			Recovery	=	47.39%	48.41%
	Target Compounds						
L3	Aroclor 1242	5.97	6.24	6166572	2464666	93.700	90.234
L3	Aroclor 1242 {2}	6.89	6.87	6046839	2301003	81.903	95.232
L3	Aroclor 1242 {3}	7.62	8.04	4580838	3123007	98.738	89.652
L3	Aroclor 1242 {4}	7.87	8.24	5130897	1936165	86.785	92.967
L3	Aroclor 1242 {5}	8.30	8.58	8048086	2392208	86.188	94.290
L3	Aroclor 1242 - T	0.00	0.00	29973233	12217049	88.538m	92.198m
L4	Aroclor 1260	9.35	10.74	12014083	6288485	91.131	94.148
L4	Aroclor 1260 {2}	9.59	11.25	11756196	11304781	91.264	93.745
L4	Aroclor 1260 {3}	9.92	11.97	21606950	9717040	89.582	112.181
L4	Aroclor 1260 {4}	11.63	12.99	37826260	19827233	100.722	104.854
L4	Aroclor 1260 {5}	12.33	13.56	25331230	11787012	99.454	103.285
L4	Aroclor 1260 - T	0.00	0.00	108.5E6	58924551	95.870m	102.084m

f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
CB9561.D 42600714.M Thu Jul 29 14:27:29 2004

Evaluate Continuing Calibration Report

Signal #1 : Z:\DATA\PB071404\PCB9561.D\ADC1A.CH Vial: 6
Signal #2 : Z:\DATA\PB071404\PCB9561.D\ADC1B.CH
Acq On : 14 Jul 2004 4:56 pm Operator: STM
Sample : 100ng/ml 1242/1260 icv 561-146-8 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Wed Jul 21 13:43:53 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachloro-m-xylene (S)	10.000	9.711	2.9	0	0.18
2	L1	Aroclor 1242	100.000	93.700	6.3	0	0.18
3	L1	Aroclor 1242 (2)	100.000	81.903	18.1#	0	0.19
4	L1	Aroclor 1242 (3)	100.000	98.738	1.3	0	0.20
5	L1	Aroclor 1242 (4)	100.000	86.785	13.2	0	0.20
6	L1	Aroclor 1242 (5)	100.000	86.188	13.8	0	0.22
7	L1	Aroclor 1242 - Total	100.000	88.538	11.5	0	-0.61#
8	L2	Aroclor 1260	100.000	91.131	8.9	0	0.23
9	L2	Aroclor 1260 (2)	100.000	91.264	8.7	0	0.23
10	L2	Aroclor 1260 (3)	100.000	89.582	10.4	0	0.24
11	L2	Aroclor 1260 (4)	100.000	100.722	-0.7	0	0.25
12	L2	Aroclor 1260 (5)	100.000	99.454	0.5	0	0.26
13	L2	Aroclor 1260 - Total	100.000	95.870	4.1	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	9.479	5.2	0	0.28

Signal #2

1	S	Tetrachloro-m-xylene (S)	10.000	9.485	5.2	0	0.17
2	L1	Aroclor 1242	100.000	90.234	9.8	0	0.18
3	L1	Aroclor 1242 (2)	100.000	95.232	4.8	0	0.18
4	L1	Aroclor 1242 (3)	100.000	89.652	10.3	0	0.20
5	L1	Aroclor 1242 (4)	100.000	92.967	7.0	0	0.20
6	L1	Aroclor 1242 (5)	100.000	94.290	5.7	0	0.20
7	L1	Aroclor 1242 - Total	100.000	92.198	7.8	0	-0.61#
8	L2	Aroclor 1260	100.000	94.148	5.9	0	0.23
9	L2	Aroclor 1260 (2)	100.000	93.745	6.3	0	0.23
10	L2	Aroclor 1260 (3)	100.000	112.181	-12.2	0	0.24
11	L2	Aroclor 1260 (4)	100.000	104.854	-4.9	0	0.25
12	L2	Aroclor 1260 (5)	100.000	103.285	-3.3	0	0.26
13	L2	Aroclor 1260 - Total	100.000	102.084	-2.1	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	9.682	3.2	0	0.33

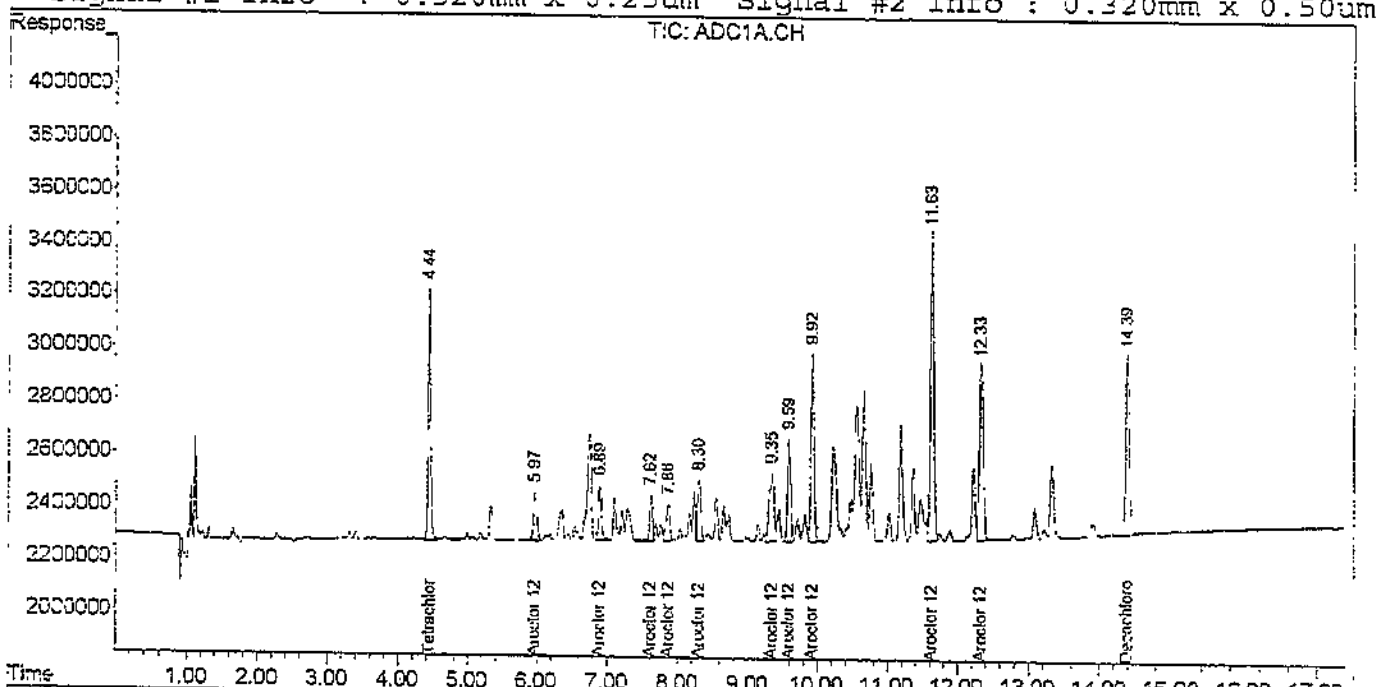
00369

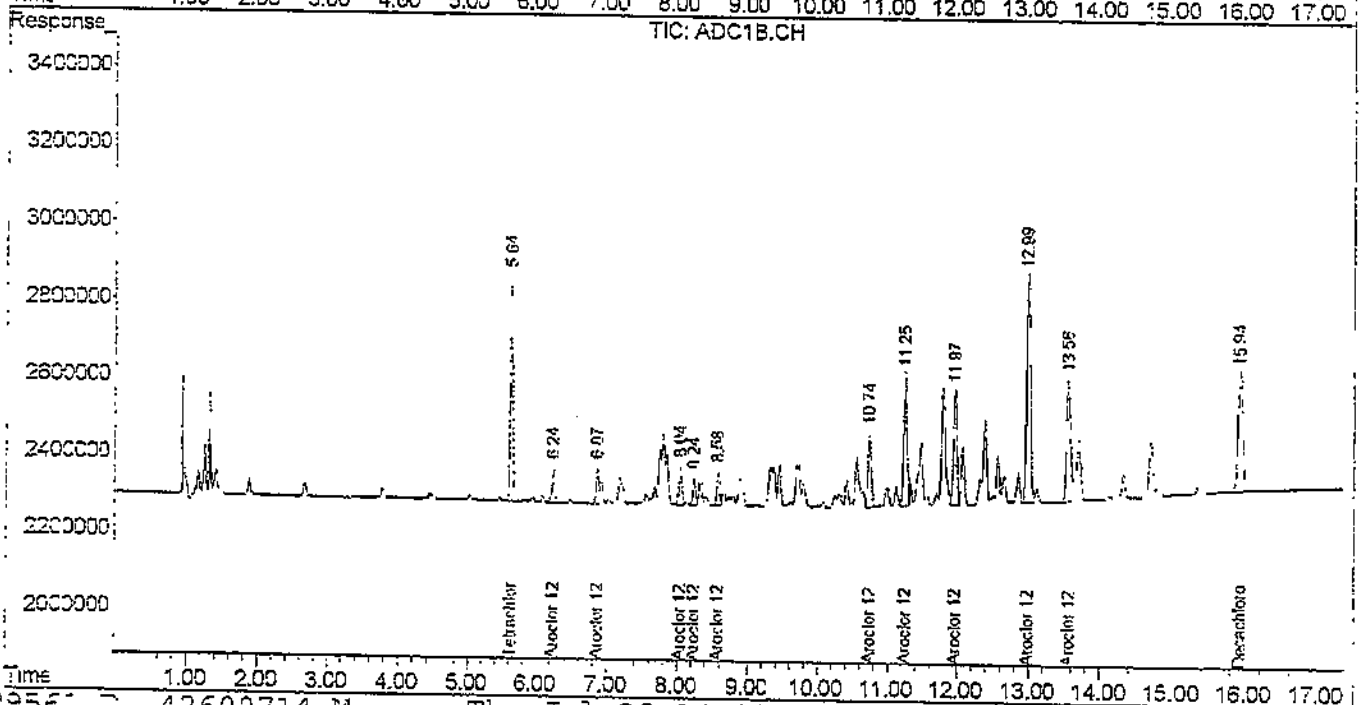
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB071404\PCB9561.D\ADC1A.CH Vial: 6
Signal #2 : Z:\DATA\PB071404\PCB9561.D\ADC1B.CH
Acq On : 14 Jul 2004 4:56 pm Operator: STM
Sample : 100ng/ml 1242/1260 icv 561-146-8 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Jul 15 10:49 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Jul 15 10:49:03 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00170

CONTINUING CALIBRATION

Sequence Log

irectory : z:\Data\PB092004

Filename	Sample Name	Date/Time
pcb1329.d	100ng/ml 1242/1260 ccv 561-151-5	09/20/04 12:09
pcb1331.d	PB0808 mb #10 &10	09/20/04 12:49
pcb1332.d	PB0808 bs #10 &10	09/20/04 13:09
pcb1333.d	PB0808 bsd #10 &10	09/20/04 13:29
pcb1334.d	123627-1 &10	09/20/04 13:48
pcb1335.d	123627-1 ms &10	09/20/04 14:08
pcb1336.d	123627-1 msd &10	09/20/04 14:28
pcb1339.d	100ng/ml 1242/1260 ccv 561-151-5	09/20/04 15:28

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1329.D\ADC1A.CH Vial: 1
Signal #2 : Z:\DATA\PB092004\PCB1329.D\ADC1B.CH
Acq On : 20 Sep 2004 12:09 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 12:29 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
1) S Tetrachloro-m-xy	4.15	5.34	24951099	14933206	9.936	9.705
Spiked Amount 20.000			Recovery	=	49.68%	48.52%
4) S Decachlorobiphen	13.94	15.37	26816269	14054740	10.307	9.961
Spiked Amount 20.000			Recovery	=	51.53%	49.81%
Target Compounds						
2) L3 Aroclor 1242	5.68	5.94	6255754	2495417	95.055	91.359
3) L3 Aroclor 1242 {2}	6.58	6.55	6245053	2326928	84.588	96.305
4) L3 Aroclor 1242 {3}	7.30	7.71	4554191	3098237	98.163	88.941
5) L3 Aroclor 1242 {4}	7.54	7.90	5585197	1898520	94.470	91.160
6) L3 Aroclor 1242 {5}	7.96	8.23	8543686	2356723	91.495	92.891
7) L3 Aroclor 1242 - T	0.00	0.00	31183881	12175825	92.114m	91.887m
8) L4 Aroclor 1260	8.98	10.35	12815072	7165502	97.207	107.278
9) L4 Aroclor 1260 {2}	9.22	10.85	12505599	12915540	97.082	107.102
0) L4 Aroclor 1260 {3}	9.55	11.55	23486059	9384827	97.372	108.346
1) L4 Aroclor 1260 {4}	11.22	12.57	37491117	19579221	99.830	103.543
2) L4 Aroclor 1260 {5}	11.92	13.13	25674351	11587091	100.801	101.533
3) L4 Aroclor 1260 - T	0.00	0.00	112.0E6	60632180	98.907m	105.042m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Evaluate Continuing Calibration Report

Signal #1 : Z:\DATA\PB092004\PCB1329.D\ADC1A.CH Vial: 1
Signal #2 : Z:\DATA\PB092004\PCB1329.D\ADC1B.CH
Acq On : 20 Sep 2004 12:09 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachloro-m-xylene (S)	10.000	9.936	0.6	0	0.00
2	L1	Aroclor 1242	100.000	95.055	4.9	0	0.00
3	L1	Aroclor 1242 {2}	100.000	84.588	15.4#	0	0.00
4	L1	Aroclor 1242 {3}	100.000	98.163	1.8	0	0.00
5	L1	Aroclor 1242 {4}	100.000	94.470	5.5	0	0.00
6	L1	Aroclor 1242 {5}	100.000	91.495	8.5	0	0.00
7	L1	Aroclor 1242 - Total	100.000	92.114	7.9	0	-0.61#
8	L2	Aroclor 1260	100.000	97.207	2.8	0	-0.02
9	L2	Aroclor 1260 {2}	100.000	97.082	2.9	0	0.00
10	L2	Aroclor 1260 {3}	100.000	97.372	2.6	0	0.00
11	L2	Aroclor 1260 {4}	100.000	99.830	0.2	0	0.00
12	L2	Aroclor 1260 {5}	100.000	100.801	-0.8	0	0.00
13	L2	Aroclor 1260 - Total	100.000	98.907	1.1	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	10.307	-3.1	0	0.00

Signal #2

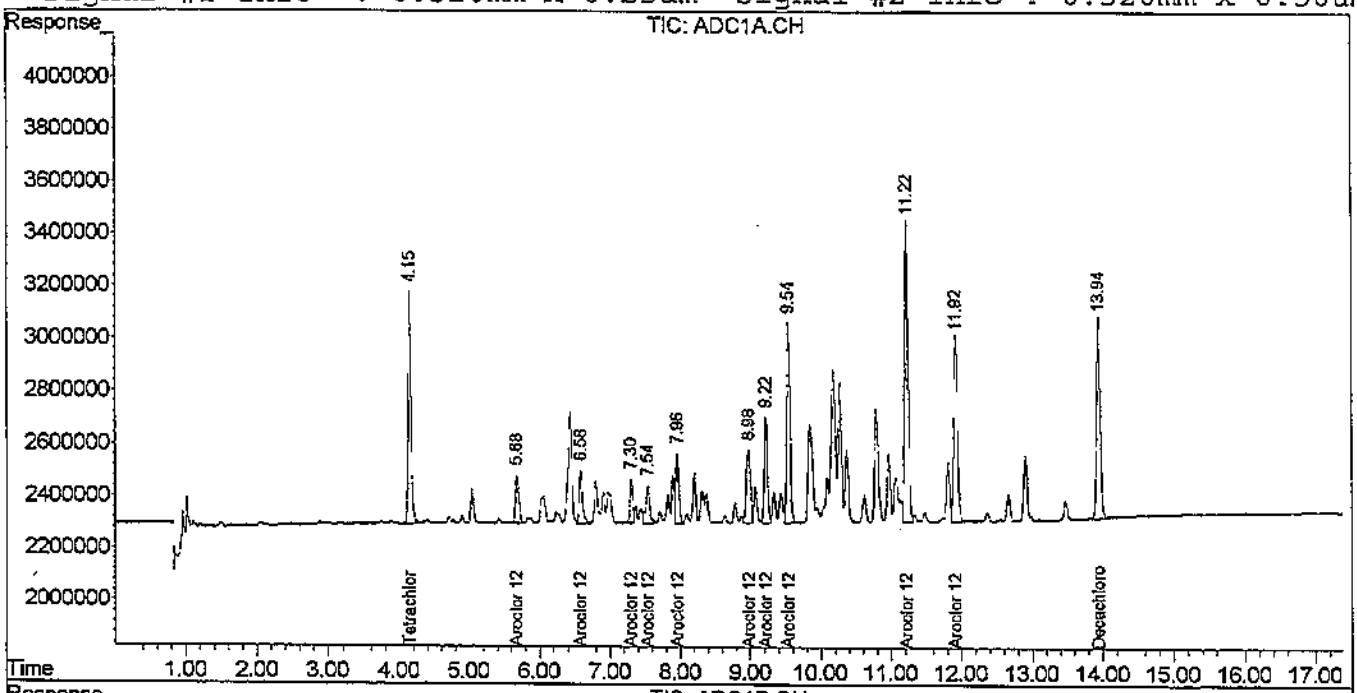
1	S	Tetrachloro-m-xylene (S)	10.000	9.705	2.9	0	-0.01
2	L3	Aroclor 1242	100.000	91.359	8.6	0	-0.01
3	L3	Aroclor 1242 {2}	100.000	96.305	3.7	0	-0.01
4	L3	Aroclor 1242 {3}	100.000	88.941	11.1	0	-0.01
5	L3	Aroclor 1242 {4}	100.000	91.160	8.8	0	-0.01
6	L3	Aroclor 1242 {5}	100.000	92.891	7.1	0	-0.02
7	L3	Aroclor 1242 - Total	100.000	91.887	8.1	0	-0.61#
8	L4	Aroclor 1260	100.000	107.278	-7.3	0	-0.02
9	L4	Aroclor 1260 {2}	100.000	107.102	-7.1	0	-0.02
10	L4	Aroclor 1260 {3}	100.000	108.346	-8.3	0	-0.02
11	L4	Aroclor 1260 {4}	100.000	103.543	-3.5	0	-0.02
12	L4	Aroclor 1260 {5}	100.000	101.533	-1.5	0	-0.02
13	L4	Aroclor 1260 - Total	100.000	105.042	-5.0	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	9.961	0.4	0	-0.02

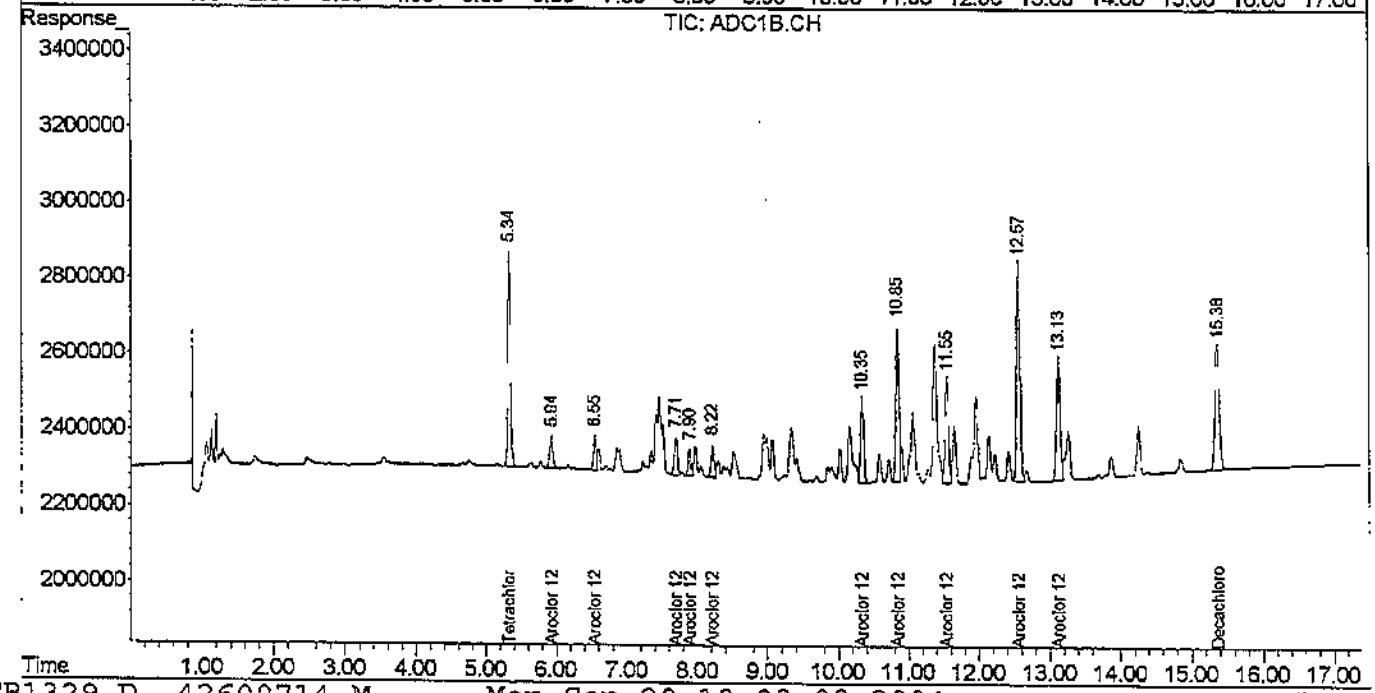
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1329.D\ADC1A.CH Vial: 1
Signal #2 : Z:\DATA\PB092004\PCB1329.D\ADC1B.CH
Acq On : 20 Sep 2004 12:09 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 12:29 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00375

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1339.D\ADC1A.CH Vial: 11
Signal #2 : Z:\DATA\PB092004\PCB1339.D\ADC1B.CH
Acq On : 20 Sep 2004 3:28 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 18:07:45 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
	System Monitoring Compounds						
1) S	Tetrachloro-m-xy	4.15	5.33	24686377	14518829	9.830	9.436
Spiked Amount	20.000			Recovery	=	49.15%	47.18%
4) S	Decachlorobiphen	13.94	15.37	26705786	13831147	10.264	9.803
Spiked Amount	20.000			Recovery	=	51.32%	49.02%
	Target Compounds						
2) L3	Aroclor 1242	5.67	5.93	6180534	2474165	93.912	90.581
3) L3	Aroclor 1242 {2}	6.58	6.54	6151887	2267738	83.326	93.855
4) L3	Aroclor 1242 {3}	7.30	7.70	4526098	2970349	97.558	85.270
5) L3	Aroclor 1242 {4}	7.53	7.89	5232853	1808874	88.510	86.855
6) L3	Aroclor 1242 {5}	7.95	8.22	8337655	2261839	89.289	89.151
7) L3	Aroclor 1242 - T	0.00	0.00	30429027	11782966	89.884m	88.922m
8) L4	Aroclor 1260	8.97	10.34	12561571	6965008	95.284	104.276
9) L4	Aroclor 1260 {2}	9.22	10.84	12253318	13114897	95.123	108.756
0) L4	Aroclor 1260 {3}	9.54	11.55	23126063	9139507	95.880	105.513
1) L4	Aroclor 1260 {4}	11.22	12.56	37032713	19090438	98.609	100.958
2) L4	Aroclor 1260 {5}	11.91	13.12	25482844	11432633	100.049	100.180
3) L4	Aroclor 1260 - T	0.00	0.00	110.5E6	59742483	97.568m	103.501m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

00376

Evaluate Continuing Calibration Report

Signal #1 : Z:\DATA\PB092004\PCB1339.D\ADC1A.CH Vial: 11
Signal #2 : Z:\DATA\PB092004\PCB1339.D\ADC1B.CH
Acq On : 20 Sep 2004 3:28 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	Tetrachloro-m-xylene (S)	10.000	9.830	1.7	0	0.00
2	L1	Aroclor 1242	100.000	93.912	6.1	0	-0.01
3	L1	Aroclor 1242 {2}	100.000	83.326	16.7#	0	-0.01
4	L1	Aroclor 1242 {3}	100.000	97.558	2.4	0	-0.02
5	L1	Aroclor 1242 {4}	100.000	88.510	11.5	0	-0.01
6	L1	Aroclor 1242 {5}	100.000	89.289	10.7	0	-0.02
7	L1	Aroclor 1242 - Total	100.000	89.884	10.1	0	-0.61#
8	L2	Aroclor 1260	100.000	95.284	4.7	0	-0.02
9	L2	Aroclor 1260 {2}	100.000	95.123	4.9	0	-0.01
10	L2	Aroclor 1260 {3}	100.000	95.880	4.1	0	-0.01
11	L2	Aroclor 1260 {4}	100.000	98.609	1.4	0	-0.01
12	L2	Aroclor 1260 {5}	100.000	100.049	-0.0	0	-0.02
13	L2	Aroclor 1260 - Total	100.000	97.568	2.4	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	10.264	-2.6	0	-0.02
		Signal #2					
1	S	Tetrachloro-m-xylene (S)	10.000	9.436	5.6	0	-0.02
2	L3	Aroclor 1242	100.000	90.581	9.4	0	-0.02
3	L3	Aroclor 1242 {2}	100.000	93.855	6.1	0	-0.02
4	L3	Aroclor 1242 {3}	100.000	85.270	14.7	0	-0.02
5	L3	Aroclor 1242 {4}	100.000	86.855	13.1	0	-0.02
6	L3	Aroclor 1242 {5}	100.000	89.151	10.8	0	-0.02
7	L3	Aroclor 1242 - Total	100.000	88.922	11.1	0	-0.61#
8	L4	Aroclor 1260	100.000	104.276	-4.3	0	-0.02
9	L4	Aroclor 1260 {2}	100.000	108.756	-8.8	0	-0.03
10	L4	Aroclor 1260 {3}	100.000	105.513	-5.5	0	-0.03
11	L4	Aroclor 1260 {4}	100.000	100.958	-1.0	0	-0.03
12	L4	Aroclor 1260 {5}	100.000	100.180	-0.2	0	-0.03
13	L4	Aroclor 1260 - Total	100.000	103.501	-3.5	0	-0.61#
14	S	Decachlorobiphenyl (S)	10.000	9.803	2.0	0	-0.03

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

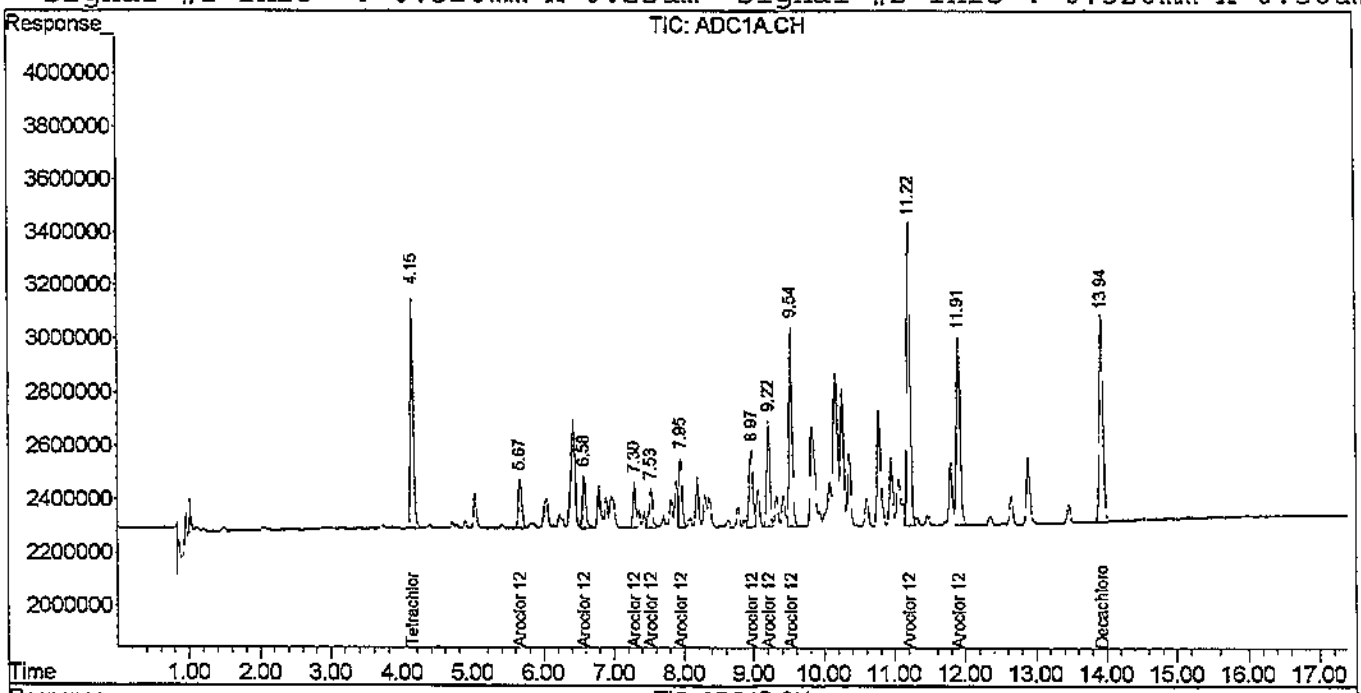
00377

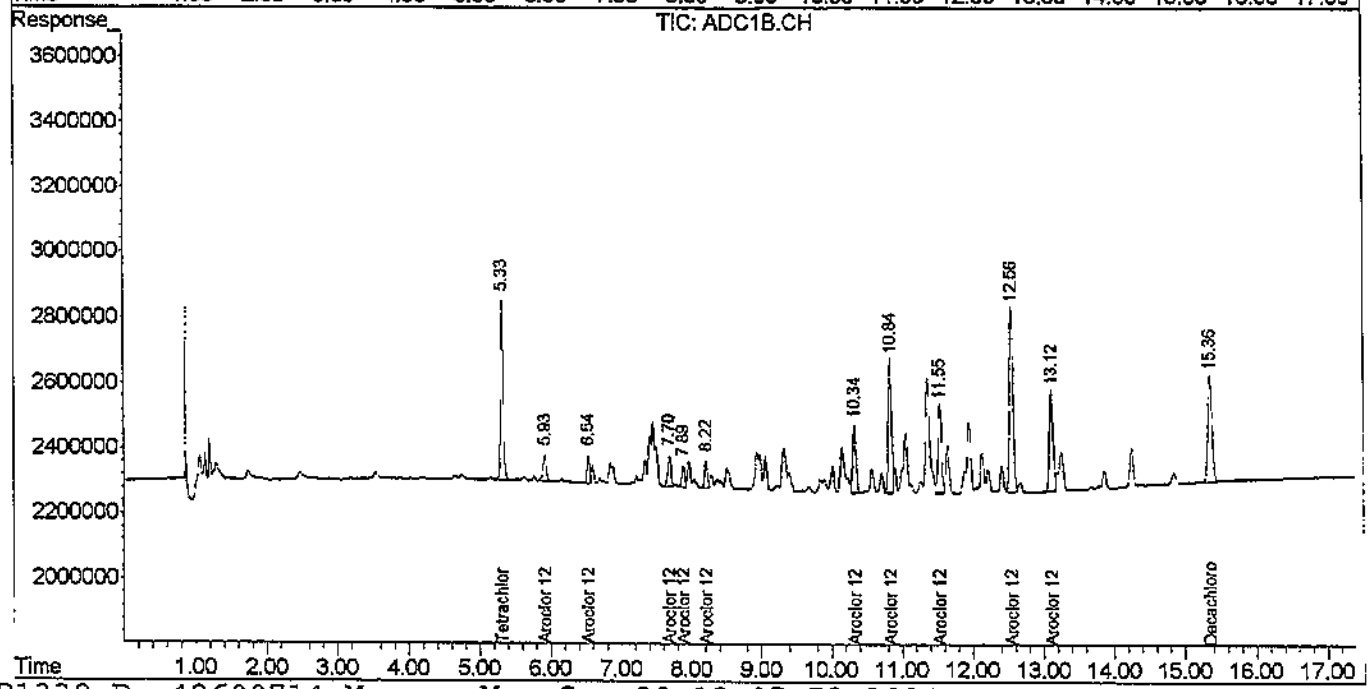
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1339.D\ADC1A.CH Vial: 11
Signal #2 : Z:\DATA\PB092004\PCB1339.D\ADC1B.CH
Acq On : 20 Sep 2004 3:28 pm Operator: STM
Sample : 100ng/ml 1242/1260 ccv 561-151-5 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 18:07 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00378

METHOD BLANK

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1331.D\ADC1A.CH Vial: 3
Signal #2 : Z:\DATA\PB092004\PCB1331.D\ADC1B.CH
Acq On : 20 Sep 2004 12:49 pm Operator: STM
Sample : PB0808 mb #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 13:14 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.15	5.33	42292172	24932674	16.841	16.204
Spiked Amount 20.000			Recovery	=	84.21%	81.02%
) S Decachlorobiphen	13.94	15.37	44299047	22624336	17.026	16.035
Spiked Amount 20.000			Recovery	=	85.13%	80.17%
Target Compounds						
) L3 Aroclor 1242	5.68	5.94	8287	414413	0.126	15.172 #
) L3 Aroclor 1242 {2}	0.00	6.58	0	22148	N.D.	0.917 #
) L3 Aroclor 1242 {3}	7.31	0.00	132151	0	2.848	N.D. #
) L3 Aroclor 1242 {4}	7.56	7.91	35702	63088	0.604	3.029 #
) L3 Aroclor 1242 {5}	7.96	0.00	140476	0	1.504	N.D. #
) L3 Aroclor 1242 - T	0.00	0.00	316617	499649	0.935m	3.771m#
) L4 Aroclor 1260	8.95	0.00	367824	0	2.790	N.D. #
) L4 Aroclor 1260 {2}	9.23	10.84	125337	192180	0.973	1.594 #
) L4 Aroclor 1260 {3}	9.55	0.00	116526	0	0.483	N.D. #
) L4 Aroclor 1260 {4}	11.22	0.00	194523	0	0.518	N.D. #
) L4 Aroclor 1260 {5}	11.92	0.00	365887	0	1.437	N.D. #
) L4 Aroclor 1260 - T	0.00	0.00	1170097	192180	1.034m	0.333m#

Noise - no Aroclor pattern

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PCB1331.D 42600714.M Mon Sep 20 17:13:19 2004 Page 1

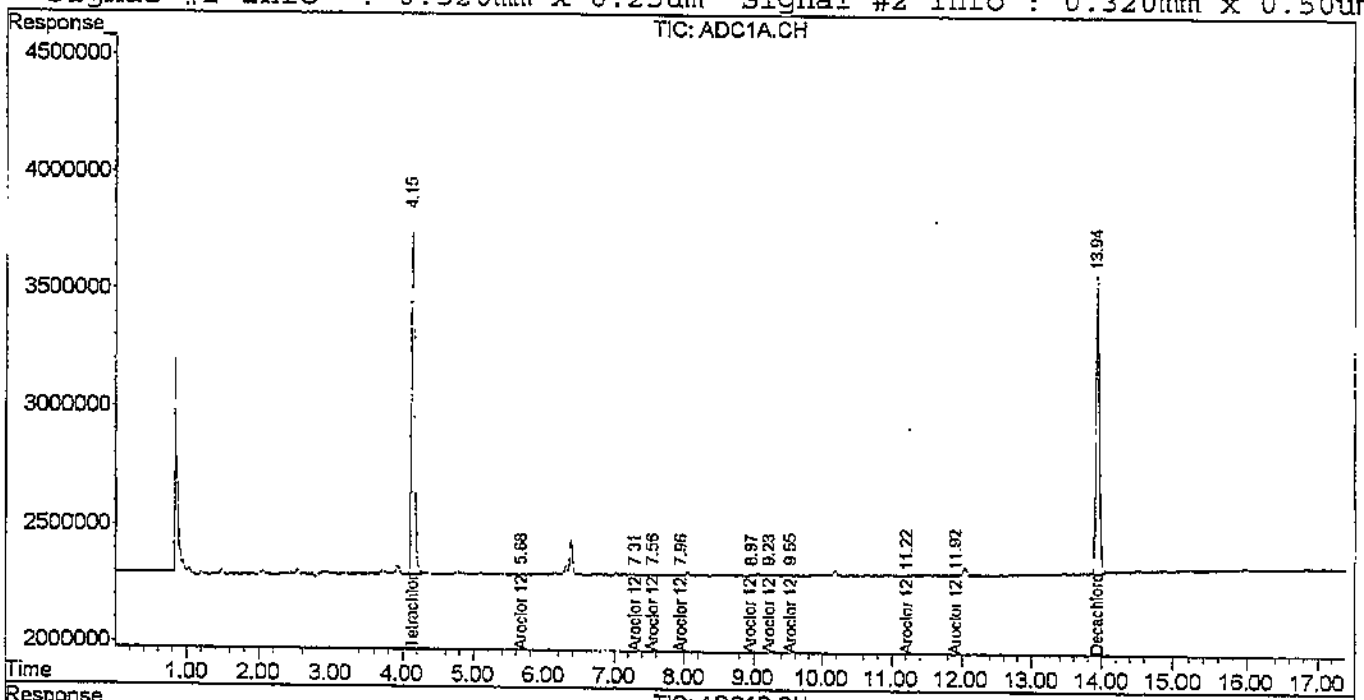
00280

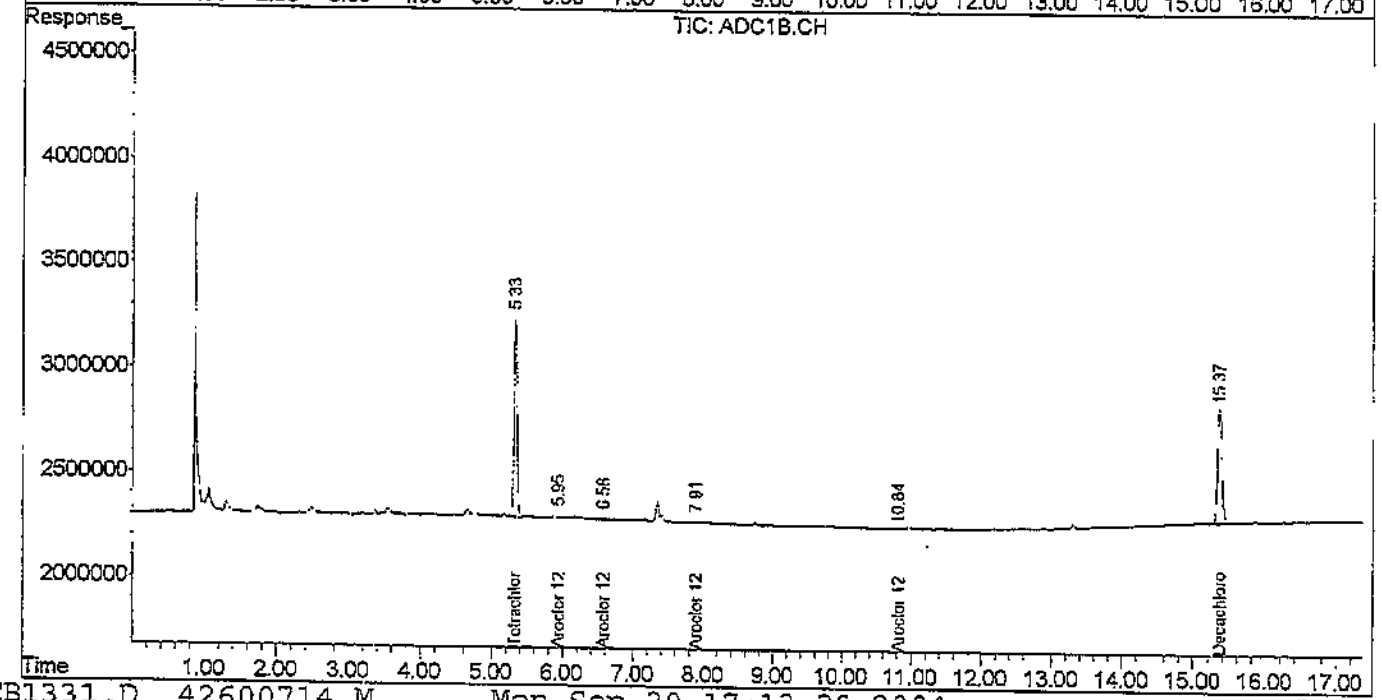
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1331.D\ADC1A.CH Vial: 3
Signal #2 : Z:\DATA\PB092004\PCB1331.D\ADC1B.CH
Acq On : 20 Sep 2004 12:49 pm Operator: STM
Sample : PB0808 mb #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 13:14 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00381

BLANK SPIKE

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1332.D\ADC1A.CH Vial: 4
Signal #2 : Z:\DATA\PB092004\PCB1332.D\ADC1B.CH
Acq On : 20 Sep 2004 1:09 pm Operator: STM
Sample : PB0808 bs #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 13:27 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

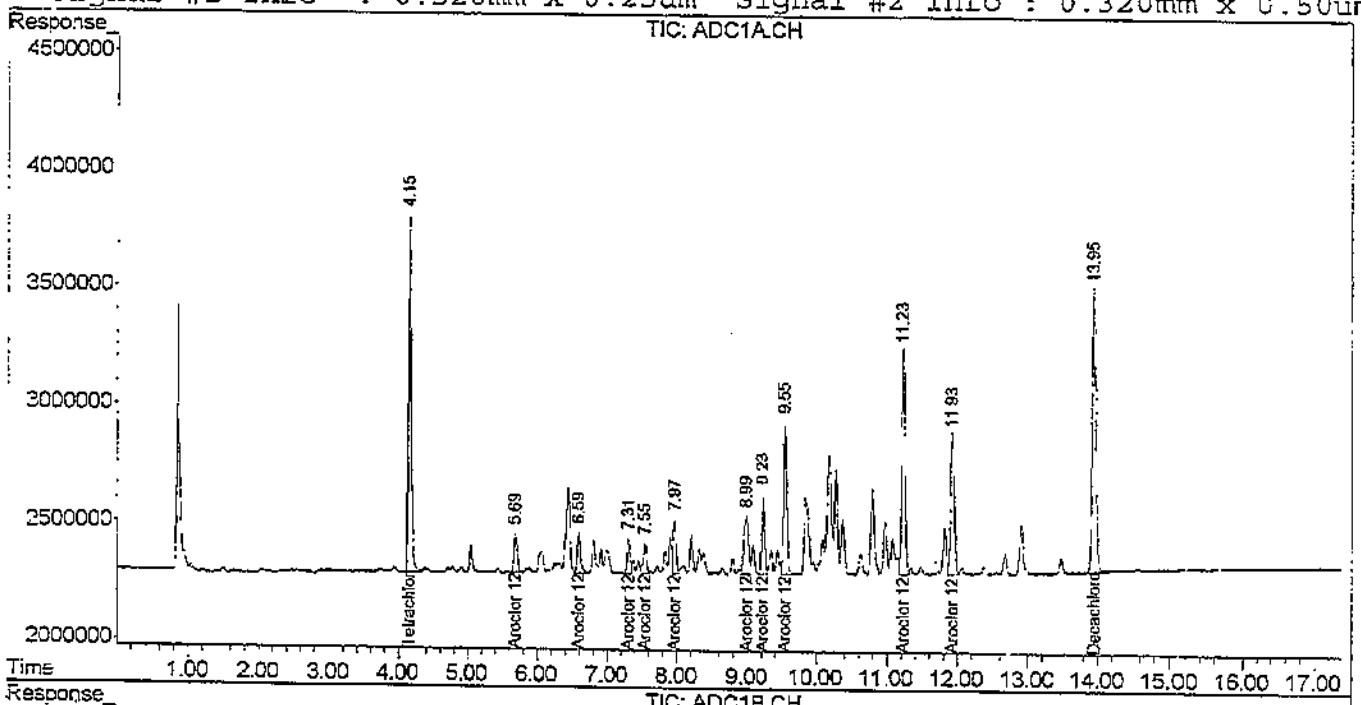
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
	System Monitoring Compounds						
) S	Tetrachloro-m-xy	4.15	5.34	42636064	24970699	16.978	16.229
Spiked Amount	20.000			Recovery	=	84.89%	81.14%
) S	Decachlorobiphen	13.95	15.38	43778804	22297465	16.826	15.803
Spiked Amount	20.000			Recovery	=	84.13%	79.02%
	Target Compounds						
) L3	Aroclor 1242	5.69	5.95	5403936	2571429	82.112	94.142
) L3	Aroclor 1242 {2}	6.59	6.56	5400223	1949669	73.145	80.691
) L3	Aroclor 1242 {3}	7.31	7.71	3893985	2612091	83.933	74.985
) L3	Aroclor 1242 {4}	7.55	7.91	4484381	1600466	75.850	76.848
) L3	Aroclor 1242 {5}	7.97	8.24	7241855	1991878	77.554	78.511
) L3	Aroclor 1242 - T	0.00	0.00	26424382	10725533	78.055m	80.942m
) L4	Aroclor 1260	8.99	10.36	10988083	6179178	83.348	92.511
) L4	Aroclor 1260 {2}	9.23	10.86	10697862	13492356	83.048	111.886
) L4	Aroclor 1260 {3}	9.56	11.56	20048525	7958267	83.120	91.876
) L4	Aroclor 1260 {4}	11.23	12.57	31526641	16682364	83.948	88.223
) L4	Aroclor 1260 {5}	11.93	13.13	21687506	9706647	85.148	85.056
) L4	Aroclor 1260 - T	0.00	0.00	94948617	54018812	83.869m	93.585m

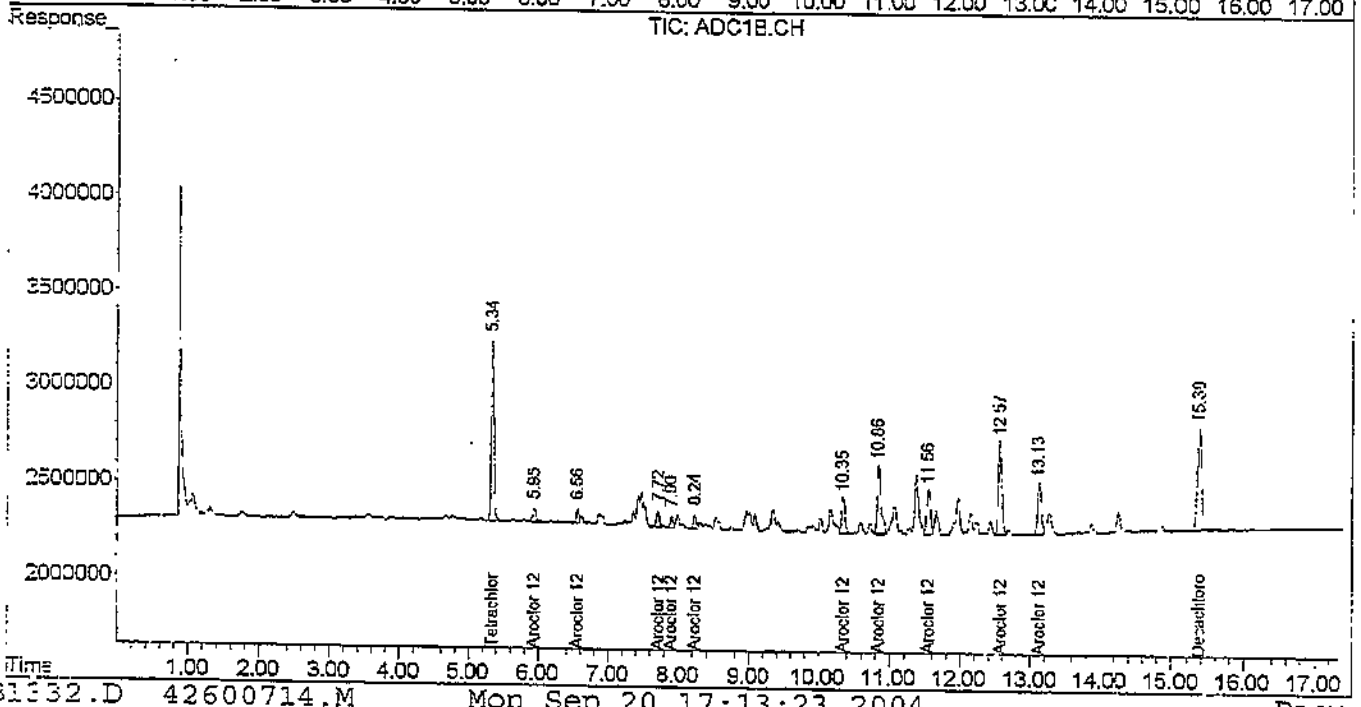
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1332.D\ADC1A.CH Vial: 4
Signal #2 : Z:\DATA\PB092004\PCB1332.D\ADC1B.CH
Acq On : 20 Sep 2004 1:09 pm Operator: STM
Sample : PB0808 bs #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 13:27 2004 Quant Results File: 42600714.RES

Quant Method : H:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00384

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1333.D\ADC1A.CH Vial: 5
Signal #2 : Z:\DATA\PB092004\PCB1333.D\ADC1B.CH
Acq On : 20 Sep 2004 1:29 pm Operator: STM
Sample : PB0808 bsd #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:22:31 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.15	5.33	42634655	25122601	16.977	16.327
Spiked Amount 20.000			Recovery	=	84.89%	81.64%
) S Decachlorobiphen	13.94	15.37	44180945	22789283	16.981	16.152
Spiked Amount 20.000			Recovery	=	84.91%	80.76%
Target Compounds						
) L3 Aroclor 1242	5.68	5.93	5436280	2706700	82.603	99.095
) L3 Aroclor 1242 {2}	6.58	6.55	5351834	1995278	72.489	82.579
) L3 Aroclor 1242 {3}	7.30	7.70	3911143	2553093	84.303	73.291
) L3 Aroclor 1242 {4}	7.54	7.90	4456306	1587544	75.375	76.228
) L3 Aroclor 1242 {5}	7.96	8.22	7292701	1975782	78.098	77.876
) L3 Aroclor 1242 - T	0.00	0.00	26448263	10818397	78.126m	81.643m
) L4 Aroclor 1260	8.98	10.35	11065469	6219366	83.935	93.113
) L4 Aroclor 1260 {2}	9.22	10.85	10752484	13602755	83.472	112.801
) L4 Aroclor 1260 {3}	9.54	11.55	20199591	8044887	83.747	92.876
) L4 Aroclor 1260 {4}	11.22	12.56	32007241	16870988	85.228	89.221
) L4 Aroclor 1260 {5}	11.92	13.12	22027439	9921779	86.482	86.941
) L4 Aroclor 1260 - T	0.00	0.00	96052224	54659776	84.844m	94.695m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

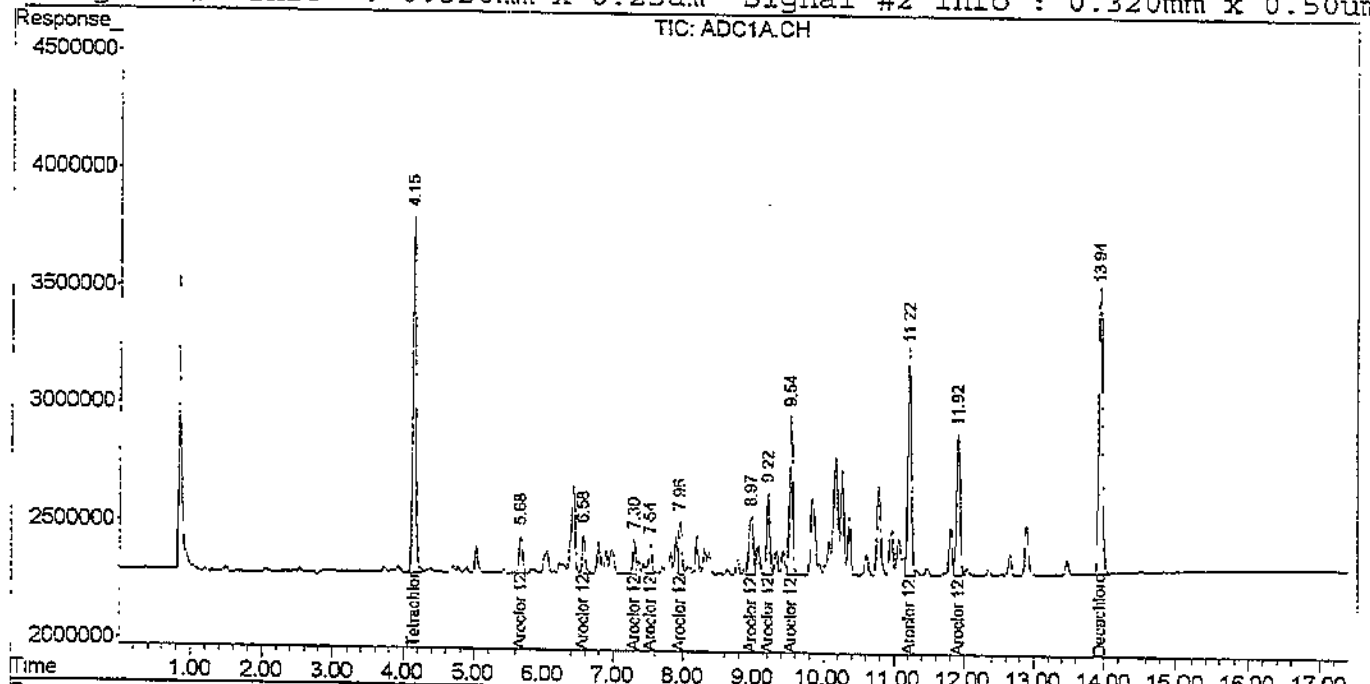
00385

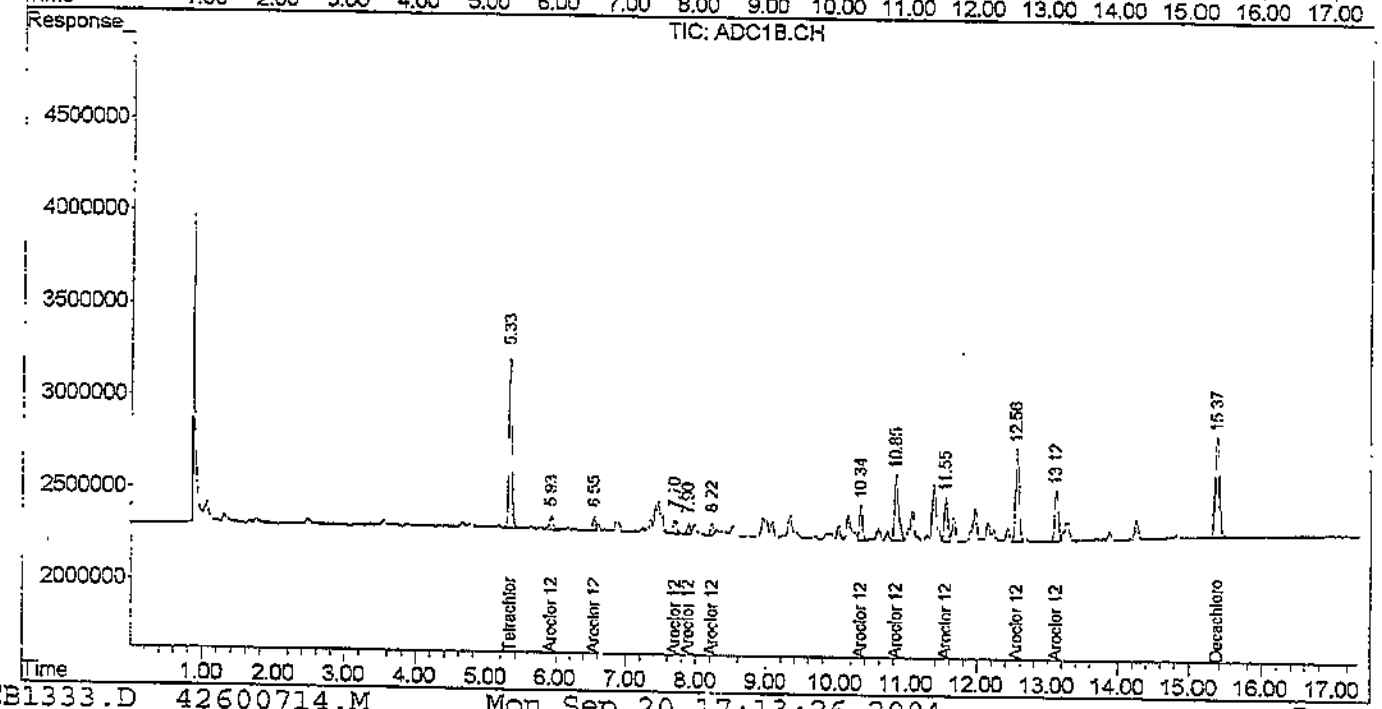
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1333.D\ADC1A.CH Vial: 5
Signal #2 : Z:\DATA\PB092004\PCB1333.D\ADC1B.CH
Acq On : 20 Sep 2004 1:29 pm Operator: STM
Sample : PB0808 bsd #10 &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:22 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00386

MATIX SPIKE / MATRIX SPIKE DUPLICATE

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1335.D\ADC1A.CH Vial: 7
Signal #2 : Z:\DATA\PB092004\PCB1335.D\ADC1B.CH
Acq On : 20 Sep 2004 2:08 pm Operator: STM
Sample : 123627-1 ms &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:27:41 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.16	5.34	43217250	25310106	17.209	16.449
Spiked Amount 20.000			Recovery	=	86.04%	82.25%
) S Decachlorobiphen	13.96	15.38	44849803	22938028	17.238	16.257
Spiked Amount 20.000			Recovery	=	86.19%	81.29%
Target Compounds						
) L3 Aroclor 1242	5.69	5.95	5566503	2536720	84.582	92.872
) L3 Aroclor 1242 {2}	6.59	6.56	5634707	2154020	76.321	89.148
) L3 Aroclor 1242 {3}	7.31	7.71	4083377	2808176	88.015	80.614
) L3 Aroclor 1242 {4}	7.55	7.91	4730127	1755475	80.007	84.291
) L3 Aroclor 1242 {5}	7.97	8.24	7610925	2139012	81.506	84.310
) L3 Aroclor 1242 - T	0.00	0.00	27625640	11393403	81.603m	85.983m
) L4 Aroclor 1260	8.99	10.36	11484632	6344735	87.115	94.990
) L4 Aroclor 1260 {2}	9.23	10.86	11181715	13937582	86.804	115.578
) L4 Aroclor 1260 {3}	9.56	11.56	20970952	8189546	86.945	94.546
) L4 Aroclor 1260 {4}	11.23	12.58	33015009	17064198	87.911	90.242
) L4 Aroclor 1260 {5}	11.93	13.14	22704520	10139725	89.141	88.850
) L4 Aroclor 1260 - T	0.00	0.00	99356828	55675786	87.763m	96.455m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

00388

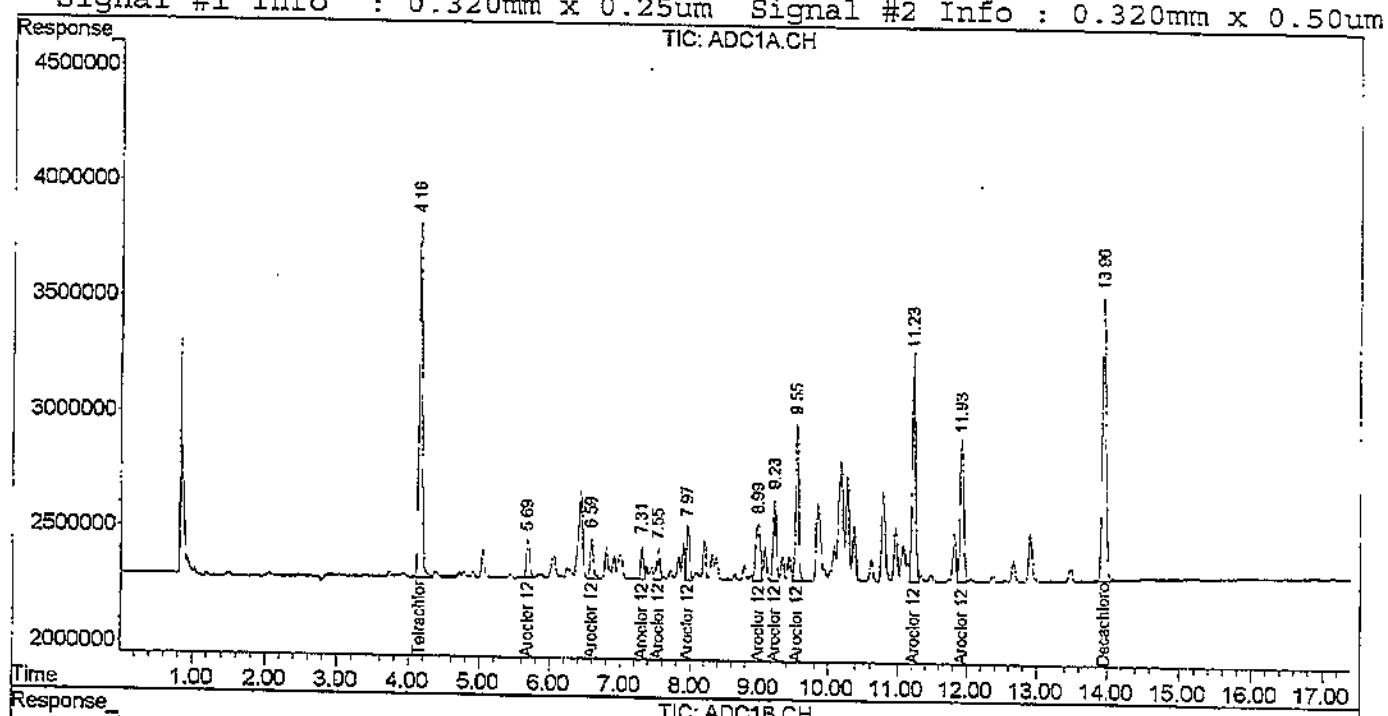
Quantitation Report (Not Reviewed)

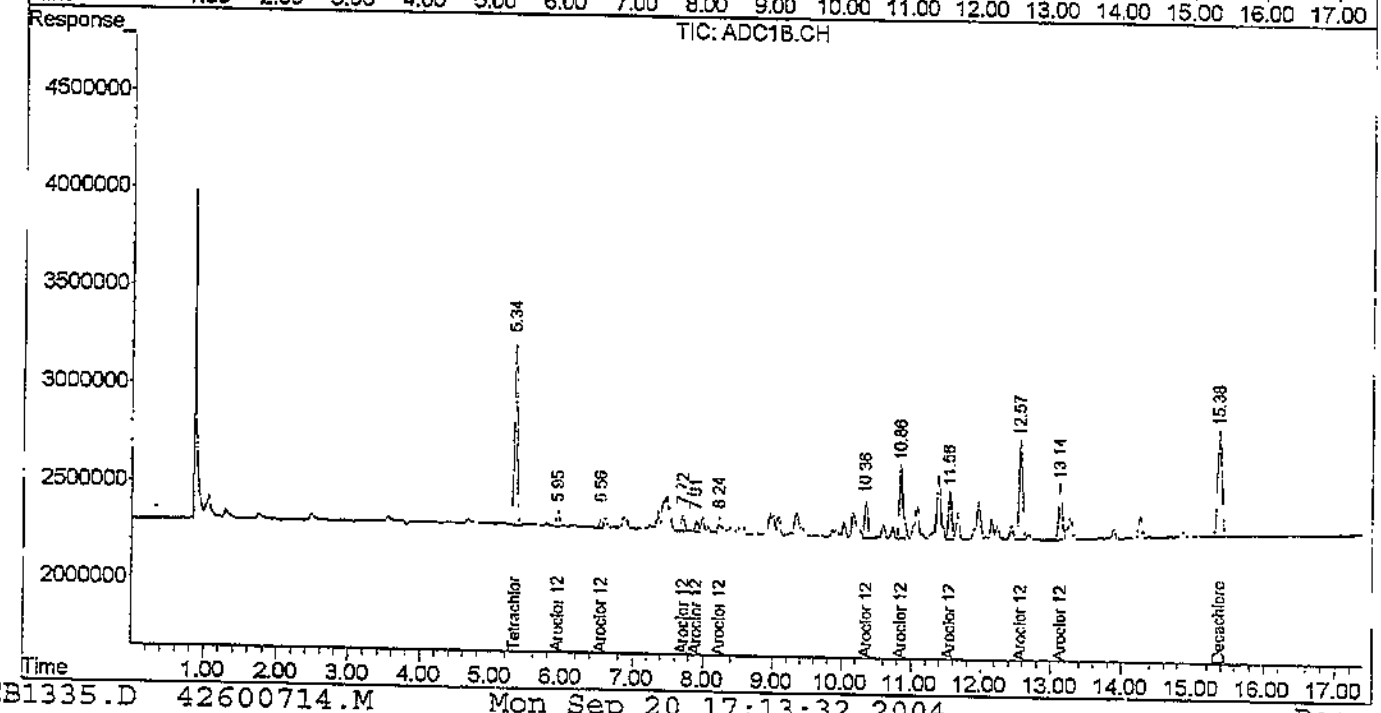
Signal #1 : Z:\DATA\PB092004\PCB1335.D\ADC1A.CH
Signal #2 : Z:\DATA\PB092004\PCB1335.D\ADC1B.CH
Acq On : 20 Sep 2004 2:08 pm
Sample : 123627-1 ms &10
Misc :
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 16:27 2004 Quant Results File: 42600714.RES

Vial: 7
Operator: STM
Inst : Dual Colu
Multiplr: 1.00

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00389

Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1336.D\ADC1A.CH Vial: 8
Signal #2 : Z:\DATA\PB092004\PCB1336.D\ADC1B.CH
Acq On : 20 Sep 2004 2:28 pm Operator: STM
Sample : 123627-1 msd &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 17:07:25 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Initial Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
) S Tetrachloro-m-xy	4.14	5.33	42819951	25834270	17.051	16.790
Spiked Amount 20.000			Recovery	=	85.25%	83.95%
) S Decachlorobiphen	13.94	15.36	44504597	22784240	17.105	16.148
Spiked Amount 20.000			Recovery	=	85.53%	80.74%
Target Compounds						
) L3 Aroclor 1242	5.67	5.93	5512592	2504661	83.763	91.698
) L3 Aroclor 1242 {2}	6.57	6.54	5484544	2371083	74.287	98.132
) L3 Aroclor 1242 {3}	7.29	7.70	4011031	3044278	86.456	87.392
) L3 Aroclor 1242 {4}	7.53	7.89	4867885	1804368	82.337	86.639
) L3 Aroclor 1242 {5}	7.95	8.22	7446814	2130458	79.749	83.973
) L3 Aroclor 1242 - T	0.00	0.00	27322867	11854848	80.709m	89.465m
) L4 Aroclor 1260	8.97	10.34	11364133	6307130	86.201	94.427
) L4 Aroclor 1260 {2}	9.21	10.84	11063477	13943775	85.887	115.629
) L4 Aroclor 1260 {3}	9.53	11.54	20815366	8174261	86.300	94.370
) L4 Aroclor 1260 {4}	11.21	12.56	32996669	17082732	87.862	90.340
) L4 Aroclor 1260 {5}	11.91	13.12	22740616	10230607	89.282	89.647
) L4 Aroclor 1260 - T	0.00	0.00	98980260	55738505	87.431m	96.564m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
PCB1336.D 42600714.M Mon Sep 20 17:13:34 2004

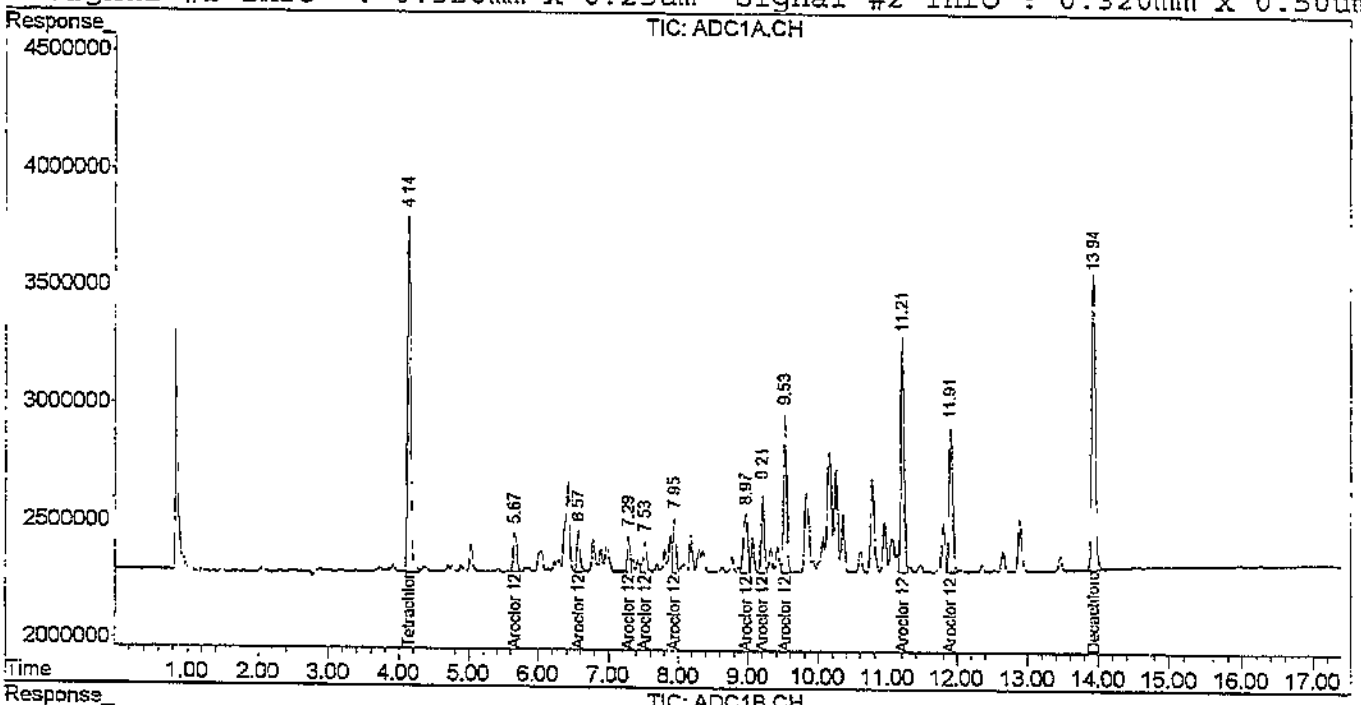
00390

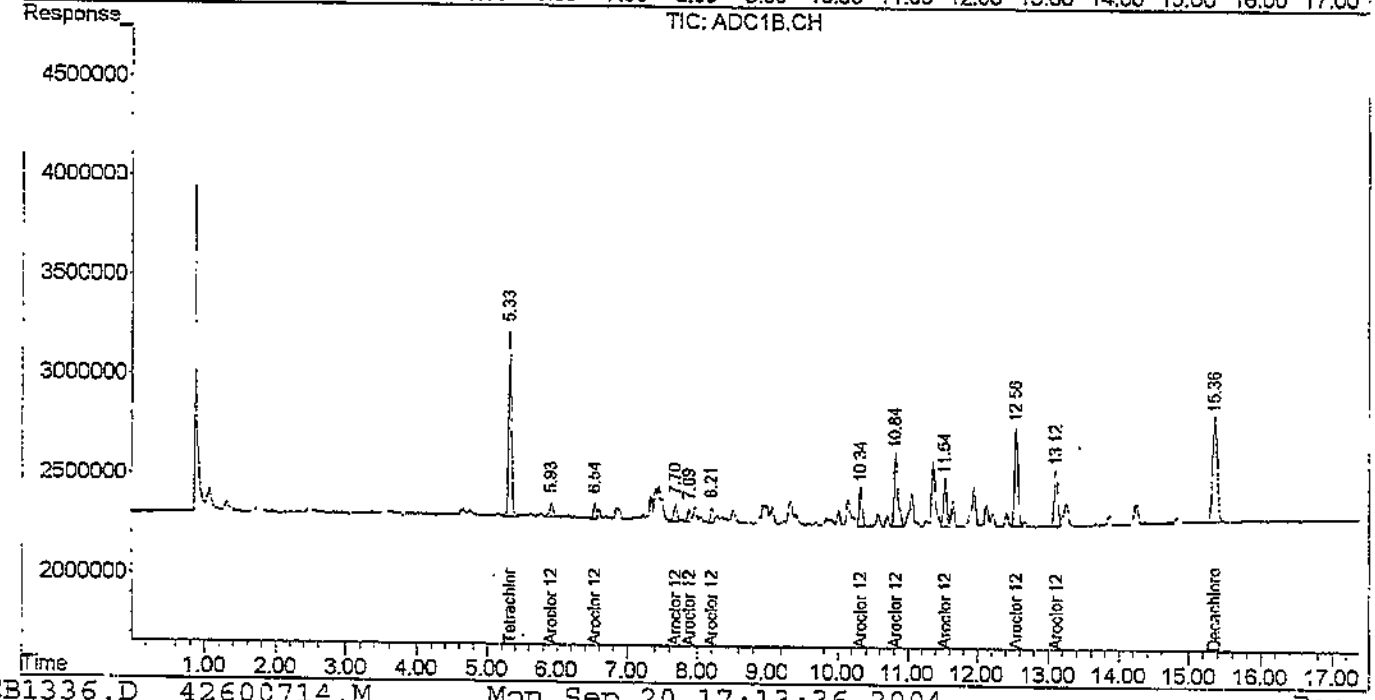
Quantitation Report (Not Reviewed)

Signal #1 : Z:\DATA\PB092004\PCB1336.D\ADC1A.CH Vial: 8
Signal #2 : Z:\DATA\PB092004\PCB1336.D\ADC1B.CH
Acq On : 20 Sep 2004 2:28 pm Operator: STM
Sample : 123627-1 msd &10 Inst : Dual Colu
Misc : Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 20 17:07 2004 Quant Results File: 42600714.RES

Quant Method : Z:\METHODS\42600714.M (Chemstation Integrator)
Title : PCBs by USEPA Method 8082
Last Update : Thu Sep 02 14:22:33 2004
Response via : Multiple Level Calibration
DataAcq Meth : PCB_RUN.M

Volume Inj. : 1.5ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.320mm x 0.25um Signal #2 Info : 0.320mm x 0.50um





00391

LABORATORY WORKSHEETS

00392

PCB's Worksheet - total

QC Level:Tier IV	**Due: 09/21/04**	**Work Order - 123627**
Matrix:solid		
Lloyd & Assoc. Inc.	Proj. Manager:Darla Powell	

pecial structions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

[redacted]

Sample Weight/Volume

Client Sample ID	040916/GNW/MW
Date Received	9/16/2004
Date Sampled	**9/16/2004 11:20:00 AM**

PCB's

Samples are: Low Level ☒ Small Volume ☐ Normal ☐

Analyst Tm Date 9/22/04

Reviewed by [signature] Date 9/21/04

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00393

Printed - 9/20/04

PCB Analysis by USEPA Method 8082

QCBatch ID	PB0808				
Sample Matrix	Low Level Soil				
Surrogate Std. No.	561-152-3				
8082 MS Spike No.	561-152-4	Weighed By/Date			
Hexane Lot Number	041349	Extracted By/Date	ATM 9/20/04		
Acetone Lot Number	040920				
Na2SO4 Lot Number	a17h50				
H2SO4 Lot Number	041575				
Extraction Method	3550 Modified				

QC Sample Type	QC Identifier	Sample Weight (g)	Final Volume (ml)	Surr Spike (ul)	MS/BS spike amt (ul)
Method Blank	PB0808	10.0000	10.0	100	
Duplicate	none				
Duplicate-2	none				
Blank Spike	sPB0808	10.0000	10.0	100	100
Blank Spike Duplicate	dPB0808	10.0000	10.0	100	100
Matrix Spike	123627s1	10.6080	10.0	100	100
Matrix Spike Duplicate	123627d1	10.7719	10.0	100	100
Matrix Spike-2	none				
Matrix Spike Duplicate-2	none				

Sample	Client Sample ID	Sample Weight (g)	Final Volume (ml)	Surr Spike (ul)
123627-1	40916/GNW/M	10.7786	10.0	100

00394

STL Seattle

6a Sample Information

Client Name	**Lloyd & Assoc. Inc.**
Work Order Number	**123627**
Sample Number	**1**
QC Batch Number	**PB0808**
Client Sample ID	**040916/GNW/MW**
Date Received	**09-16-04**
Date Prepared	**09-20-04**
Date Analyzed	**09-20-04**
Sample matrix type	**solid**
QC sample type	**sample**

Related Blank: PB0808

Sample weight (g)	**10.7786**	=	0.01078 /kg	Calc. Fact.	0.001079172
Extract volume (ml)	**10**	=	10 ml	Dry Weight	9.26636242 g
Dilution Factor	**1**	=	1	Sample Units	mg/kg
% Solids	**85.97**	=	0.8597	Spike Factor	0.107917212
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	**1**	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.4996		82.5	OK		
x	Decachlorobiphenyl	15.6316		78.2	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

00395

STL Seattle

6a **Sample Information**

Client Name	Lloyd & Assoc. Inc.
Work Order Number	123627
Sample Number	1
QC Batch Number	PB0808
Client Sample ID	040916/GNW/MW
Date Received	09-16-04
Date Prepared	09-20-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	ms

Related Blank: PB0808

Sample weight (g)	10.608	=	0.01061 /kg	Calc. Fact.	0.001096528
Extract volume (ml)	10	=	10 ml	Dry Weight	9.1196976 g
Dilution Factor	1	=	1	Sample Units	mg/kg
% Solids	85.97	=	0.8597	Spike Factor	0.109652759
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.4492		82.2	OK		
x	Decachlorobiphenyl	16.2573		81.3	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aroclor 1242	85.9825	C1		0.0943	C1	0.011
x	Aroclor 1260	96.4554	C1		0.106	C1	0.011

00396

STL Seattle

6a **Sample Information**

Client Name	Lloyd & Assoc. Inc.
Work Order Number	123627
Sample Number	1
QC Batch Number	PB0808
Client Sample ID	040916/GNW/MW
Date Received	09-16-04
Date Prepared	09-20-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	msd

Related Blank: PB0808

Sample weight (g)	10.7719	=	0.01077 /kg	Calc. Fact.	0.001079843
Extract volume (ml)	10	=	10 ml	Dry Weight	9.26060243 g
Dilution Factor	1	=	1	Sample Units	mg/kg
% Solids	85.97	=	0.8597	Spike Factor	0.107984336
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.7898		83.9	OK		
x	Decachlorobiphenyl	16.1483		80.7	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aroclor 1242	89.4649	C1		0.0966	C1	0.0108
x	Aroclor 1260	96.564	C1		0.104	C1	0.0108

00397

STL Seattle

6a **Sample Information**

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	PB0808
Client Sample ID	
Date Received	
Date Prepared	09-20-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	blank

Related Blank: noblank

Sample weight (g)	10	=	0.01 /kg	Calc. Fact.	0.001
Extract volume (ml)	10	=	10 ml	Dry Weight	10 g
Dilution Factor	1	=	1	Sample Units	mg/kg
% Solids		=	1	Spike Factor	0.1
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.2039		81	OK		
x	Decachlorobiphenyl	16.035		80.2	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

00398

STL Seattle

6a **Sample Information**

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	**PB0808**
Client Sample ID	
Date Received	
Date Prepared	**09-20-04**
Date Analyzed	**09-20-04**
Sample matrix type	**solid**
QC sample type	**bs**

Related Blank: PB0808

Sample weight (g)	**10**	=	0.01 /kg	Calc. Fact.	0.001
Extract volume (ml)	**10**	=	10 ml	Dry Weight	10 g
Dilution Factor	**1**	=	1	Sample Units	mg/kg
% Solids		=	1	Spike Factor	0.1
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	**1**	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.2286		81.1	OK		
x	Decachlorobiphenyl	15.8033		79	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aroclor 1242	80.9423	C1		0.0809	C1	0.01
x	Aroclor 1260	93.5848	C1		0.0936	C1	0.01

00399

STL Seattle

6a **Sample Information**

Client Name	
Work Order Number	
Sample Number	
QC Batch Number	**PB0808**
Client Sample ID	
Date Received	
Date Prepared	**09-20-04**
Date Analyzed	**09-20-04**
Sample matrix type	**solid**
QC sample type	**bsd**

Related Blank: PB0808

Sample weight (g)	**10**	=	0.01 /kg	Calc. Fact.	0.001
Extract volume (ml)	**10**	=	10 ml	Dry Weight	10 g
Dilution Factor	**1**	=	1	Sample Units	mg/kg
% Solids		=	1	Spike Factor	0.1
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1	Blk Dil. Fact	
				Raw Dil. Fact	10

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.3273		81.6	OK		
x	Decachlorobiphenyl	16.1519		80.8	OK		
				-	-		
				-	-		
				-	-		
				-	-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aroclor 1242	81.6431	C1		0.0816	C1	0.01
x	Aroclor 1260	94.6952	C1		0.0947	C1	0.01

00400

TOTAL METALS DATA PACKAGE

Reprocessing Begun
Logged In Analyst: Seattle_inst_Metals Technique: ICP Continuous

Results Data Set (original): 092004
Results Library (original): D:\pe\administrator\Results\Results.mdb
Results Data Set (reprocessed): SP497
Results Library (reprocessed): D:\pe\administrator\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 9/20/04 10:43:38 AM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:09 AM,

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Lu 261.542	454271.4	2105.90	0.46%	100.0	%
Sc 361.383	958712.6	3813.48	0.40%	100.0	%
Y 360.073	494246.1	2368.13	0.48%	100.0	%
As 188.979†	-3.2	5.32	166.56%	[0.00]	mg/L
Cd 226.502†	-434.8	4.63	1.07%	[0.00]	mg/L
Cr 267.716†	630.2	35.73	5.67%	[0.00]	mg/L
Pb 220.353†	-60.9	10.64	17.47%	[0.00]	mg/L
Se 196.026†	16.1	4.66	28.89%	[0.00]	mg/L
Ag 328.068	410.3	92.88	22.64%	[0.00]	mg/L
Cu 327.393†	-4342.4	47.41	1.09%	[0.00]	mg/L
Ni 231.604†	-37.7	9.79	25.99%	[0.00]	mg/L
Zn 206.200†	772.4	13.58	1.76%	[0.00]	mg/L
Be 313.107†	6239.7	66.08	1.06%	[0.00]	mg/L
Sb 206.836†	92.9	7.06	7.60%	[0.00]	mg/L
Tl 190.801†	-4.9	3.10	63.82%	[0.00]	mg/L

Sequence No.: 2
Sample ID: High Standard
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 9/20/04 10:49:43 AM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:23 AM,

Mean Data: High Standard

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Lu 261.542	471422.8	1282.75	0.27%	103.8	%
Sc 361.383	1024310.7	6242.40	0.61%	106.8	%
Y 360.073	512644.1	1161.48	0.23%	103.7	%
As 188.979†	2369.7	31.88	1.35%	[2.00]	mg/L
Cd 226.502†	72800.9	301.08	0.41%	[1.00]	mg/L
Cr 267.716†	209420.4	962.91	0.46%	[2.00]	mg/L
Pb 220.353†	16596.5	127.73	0.77%	[2.00]	mg/L
Se 196.026†	15910.5	27.10	0.17%	[10.0]	mg/L
Ag 328.068	412858.3	667.38	0.16%	[2.00]	mg/L
Cu 327.393†	247247.8	1671.53	0.68%	[2.00]	mg/L
Ni 231.604†	79010.3	428.70	0.54%	[2.00]	mg/L
Zn 206.200†	59973.3	444.65	0.74%	[2.00]	mg/L
Be 313.107†	3191903.3	12454.62	0.39%	[0.40]	mg/L
Sb 206.836†	23913.6	87.39	0.37%	[10.0]	mg/L
Tl 190.801†	14396.9	74.55	0.52%	[10.0]	mg/L

Sequence No.: 3
Sample ID: ICV
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 9/20/04 11:00:36 AM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:24 AM,

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	481052.1	105.9	%	0.53				0.50%
Sc 361.383	1028584.9	107.3	%	0.50				0.47%
Y 360.073	523386.8	105.9	%	0.52				0.49%
As 188.979†	2261.6	1.909	mg/L	0.0182	1.909	mg/L	0.0182	0.96%
QC value within limits for As 188.979 Recovery = 95.44%								
Cd 226.502†	14183.5	0.1948	mg/L	0.00040	0.1948	mg/L	0.00040	0.20%
QC value within limits for Cd 226.502 Recovery = 97.41%								
Cr 267.716†	10113.6	0.0966	mg/L	0.00046	0.0966	mg/L	0.00046	0.48%
QC value within limits for Cr 267.716 Recovery = 96.59%								
Pb 220.353†	4141.6	0.4991	mg/L	0.00354	0.4991	mg/L	0.00354	0.71%
QC value within limits for Pb 220.353 Recovery = 99.82%								
Se 196.026†	6145.1	3.862	mg/L	0.0052	3.862	mg/L	0.0052	0.13%
QC value within limits for Se 196.026 Recovery = 96.56%								
Ag 328.068	201961.9	0.9784	mg/L	0.00689	0.9784	mg/L	0.00689	0.70%
QC value within limits for Ag 328.068 Recovery = 97.84%								
Cu 327.393†	26628.3	0.2154	mg/L	0.00151	0.2154	mg/L	0.00151	0.70%
QC value within limits for Cu 327.393 Recovery = 107.70%								
Ni 231.604†	16061.5	0.4066	mg/L	0.00228	0.4066	mg/L	0.00228	0.56%
QC value within limits for Ni 231.604 Recovery = 101.64%								
Zn 206.200†	5805.4	0.1936	mg/L	0.00075	0.1936	mg/L	0.00075	0.39%
QC value within limits for Zn 206.200 Recovery = 96.80%								
Be 313.107†	158018.4	0.0198	mg/L	0.00001	0.0198	mg/L	0.00001	0.05%
QC value within limits for Be 313.107 Recovery = 99.01%								
Sb 206.836†	8926.8	3.733	mg/L	0.0053	3.733	mg/L	0.0053	0.14%
QC value within limits for Sb 206.836 Recovery = 93.32%								
Tl 190.801†	6111.5	4.245	mg/L	0.0140	4.245	mg/L	0.0140	0.33%
QC value within limits for Tl 190.801 Recovery = 106.13%								

All analytes passed QC.

Sequence No.: 4
Sample ID: ICB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 9/20/04 11:08:04 AM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:30 AM,

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	470798.6	103.6	%	0.68				0.66%
Sc 361.383	995708.8	103.9	%	0.76				0.73%
Y 360.073	512641.3	103.7	%	0.71				0.69%
As 188.979†	-1.7	-0.0014	mg/L	0.00088	-0.0014	mg/L	0.00088	61.60%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	21.2	0.0003	mg/L	0.00012	0.0003	mg/L	0.00012	42.39%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	-105.7	-0.0010	mg/L	0.00016	-0.0010	mg/L	0.00016	15.44%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Pb 220.353†	-1.8	-0.0002	mg/L	0.00054	-0.0002	mg/L	0.00054	257.36%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Se 196.026†	5.7	0.0036	mg/L	0.00399	0.0036	mg/L	0.00399	110.76%
QC value within limits for Se 196.026 Recovery = Not calculated								
Ag 328.068	17.0	0.0001	mg/L	0.00045	0.0001	mg/L	0.00045	543.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Cu 327.393†	345.3	0.0028	mg/L	0.00072	0.0028	mg/L	0.00072	25.64%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Ni 231.604†	16.3	0.0004	mg/L	0.00012	0.0004	mg/L	0.00012	30.25%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Zn 206.200†	-142.4	-0.0047	mg/L	0.00056	-0.0047	mg/L	0.00056	11.75%
QC value within limits for Zn 206.200 Recovery = Not calculated								
Be 313.107†	-203.4	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	36.56%
QC value within limits for Be 313.107 Recovery = Not calculated								
Sb 206.836†	21.7	0.0091	mg/L	0.00107	0.0091	mg/L	0.00107	11.83%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Tl 190.801†	4.5	0.0031	mg/L	0.00134	0.0031	mg/L	0.00134	43.13%
QC value within limits for Tl 190.801 Recovery = Not calculated								

All analytes passed QC.

Sequence No.: 5
Sample ID: ICSA
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 9/20/04 11:26:38 AM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:32 AM,

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	468428.4	103.1	%	0.14				0.13%
Sc 361.383	964247.3	100.6	%	0.36				0.36%
Y 360.073	500593.5	101.3	%	0.57				0.56%
As 188.979†	-4.3	-0.0037	mg/L	0.00247	-0.0037	mg/L	0.00247	67.51%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	100.9	0.0014	mg/L	0.00056	0.0014	mg/L	0.00056	40.33%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	-146.5	-0.0014	mg/L	0.00047	-0.0014	mg/L	0.00047	33.29%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Pb 220.353†	-50.3	-0.0061	mg/L	0.00091	-0.0061	mg/L	0.00091	15.06%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Se 196.026†	42.9	0.0270	mg/L	0.00510	0.0270	mg/L	0.00510	18.91%
QC value within limits for Se 196.026 Recovery = Not calculated								
Ag 328.068	504.8	0.0024	mg/L	0.00051	0.0024	mg/L	0.00051	20.80%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Cu 327.393†	-50.3	-0.0004	mg/L	0.00128	-0.0004	mg/L	0.00128	315.73%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Ni 231.604†	-61.8	-0.0016	mg/L	0.00051	-0.0016	mg/L	0.00051	32.34%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Zn 206.200†	-611.8	-0.0204	mg/L	0.00010	-0.0204	mg/L	0.00010	0.48%
QC value within limits for Zn 206.200 Recovery = Not calculated								
Be 313.107†	4576.5	0.0006	mg/L	0.00009	0.0006	mg/L	0.00009	16.20%
QC value within limits for Be 313.107 Recovery = Not calculated								
Sb 206.836†	-32.8	-0.0137	mg/L	0.00694	-0.0137	mg/L	0.00694	50.57%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Tl 190.801†	43.5	0.0302	mg/L	0.00280	0.0302	mg/L	0.00280	9.26%
QC value within limits for Tl 190.801 Recovery = Not calculated								

All analytes passed QC.

Sequence No.: 6
Sample ID: ICSAB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 9/20/04 11:32:23 AM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:36:33 AM,

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	470210.7	103.5	%	0.42				0.41%
Sc 361.383	963267.1	100.5	%	1.27				1.27%
Y 360.073	501278.9	101.4	%	1.25				1.23%
As 188.979†	10359.0	8.743	mg/L	0.1023	8.743	mg/L	0.1023	1.17%
QC value within limits for As 188.979 Recovery = 87.43%								
Cd 226.502†	178862.3	2.457	mg/L	0.0119	2.457	mg/L	0.0119	0.48%
QC value within limits for Cd 226.502 Recovery = 81.90%								
Cr 267.716†	263836.5	2.520	mg/L	0.0130	2.520	mg/L	0.0130	0.52%
QC value within limits for Cr 267.716 Recovery = 83.99%								
Pb 220.353†	67748.8	8.164	mg/L	0.0341	8.164	mg/L	0.0341	0.42%
QC value within limits for Pb 220.353 Recovery = 81.64%								
Se 196.026†	6681.9	4.200	mg/L	0.0507	4.200	mg/L	0.0507	1.21%
QC value within limits for Se 196.026 Recovery = 83.99%								
Ag 328.068	556674.8	2.697	mg/L	0.0258	2.697	mg/L	0.0258	0.96%
QC value within limits for Ag 328.068 Recovery = 89.89%								
Cu 327.393†	324510.3	2.625	mg/L	0.0131	2.625	mg/L	0.0131	0.50%
QC value within limits for Cu 327.393 Recovery = 87.50%								
Ni 231.604†	100146.5	2.535	mg/L	0.0115	2.535	mg/L	0.0115	0.45%

QC value within limits for Ni 231.604 Recovery = 84.50%

Zn 206.200†	74441.2	2.482 mg/L	0.0128	2.482 mg/L	0.0128	0.52%

QC value within limits for Zn 206.200 Recovery = 82.75%

Be 313.107†	6816190.6	0.8542 mg/L	0.00329	0.8542 mg/L	0.00329	0.38%

QC value within limits for Be 313.107 Recovery = 85.42%

Sb 206.836†	19867.4	8.308 mg/L	0.2356	8.308 mg/L	0.2356	2.84%

QC value within limits for Sb 206.836 Recovery = 83.08%

Tl 190.801†	11879.6	8.252 mg/L	0.1556	8.252 mg/L	0.1556	1.89%

QC value within limits for Tl 190.801 Recovery = 82.52%

All analytes passed QC.

Sequence No.: 1
Sample ID: CCV
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 9/20/04 1:45:48 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:06 AM,

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	503180.3	103.5	%	0.62				0.60%
Sc 361.383	1075574.9	105.0	%	0.39				0.37%
Y 360.073	544401.8	103.5	%	0.65				0.63%
As 188.979†	1173.3	0.9465	mg/L	0.01005	0.9465	mg/L	0.01005	1.06%
QC value within limits for As 188.979 Recovery = 94.65%								
Cd 226.502†	35427.6	0.4679	mg/L	0.00495	0.4679	mg/L	0.00495	1.06%
QC value within limits for Cd 226.502 Recovery = 93.58%								
Cr 267.716†	98901.7	0.9332	mg/L	0.00827	0.9332	mg/L	0.00827	0.89%
QC value within limits for Cr 267.716 Recovery = 93.32%								
Pb 220.353†	8139.9	0.9514	mg/L	0.00687	0.9514	mg/L	0.00687	0.72%
QC value within limits for Pb 220.353 Recovery = 95.14%								
Se 196.026†	7761.2	4.783	mg/L	0.0335	4.783	mg/L	0.0335	0.70%
QC value within limits for Se 196.026 Recovery = 95.66%								
Ag 328.068	227442.8	1.080	mg/L	0.0167	1.080	mg/L	0.0167	1.55%
QC value within limits for Ag 328.068 Recovery = 108.02%								
Cu 327.393†	118353.4	0.9512	mg/L	0.01450	0.9512	mg/L	0.01450	1.52%
QC value within limits for Cu 327.393 Recovery = 95.12%								
Ni 231.604†	39667.8	0.9418	mg/L	0.00789	0.9418	mg/L	0.00789	0.84%
QC value within limits for Ni 231.604 Recovery = 94.18%								
Zn 206.200†	30259.3	0.9419	mg/L	0.00963	0.9419	mg/L	0.00963	1.02%
QC value within limits for Zn 206.200 Recovery = 94.19%								
Be 313.107†	1510487.2	0.1866	mg/L	0.00142	0.1866	mg/L	0.00142	0.76%
QC value within limits for Be 313.107 Recovery = 93.28%								
Sb 206.836†	11895.6	4.736	mg/L	0.0215	4.736	mg/L	0.0215	0.45%
QC value within limits for Sb 206.836 Recovery = 94.71%								
Tl 190.801†	7327.7	4.842	mg/L	0.0216	4.842	mg/L	0.0216	0.45%
QC value within limits for Tl 190.801 Recovery = 96.84%								

All analytes passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 9/20/04 1:49:36 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:07 AM,

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	494238.7	101.7	%	0.58				0.57%
Sc 361.383	1040371.9	101.6	%	0.77				0.76%
Y 360.073	534442.7	101.6	%	0.54				0.53%
As 188.979†	2.1	0.0017	mg/L	0.00441	0.0017	mg/L	0.00441	259.98%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	135.7	0.0018	mg/L	0.00046	0.0018	mg/L	0.00046	25.58%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	361.0	0.0034	mg/L	0.00110	0.0034	mg/L	0.00110	32.38%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Pb 220.353†	33.2	0.0039	mg/L	0.00107	0.0039	mg/L	0.00107	27.60%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Se 196.026	31.2	0.0192	mg/L	0.00673	0.0192	mg/L	0.00673	35.01%
QC value within limits for Se 196.026 Recovery = Not calculated								
Ag 328.068	863.2	0.0041	mg/L	0.00099	0.0041	mg/L	0.00099	24.15%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Cu 327.393†	2032.4	0.0163	mg/L	0.00095	0.0163	mg/L	0.00095	5.79%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Ni 231.604†	135.9	0.0032	mg/L	0.00118	0.0032	mg/L	0.00118	36.57%
QC value within limits for Ni 231.604 Recovery = Not calculated								

Zn 206.200†	34.7	0.0011 mg/L	0.00060	0.0011 mg/L	0.00060	55.32%
QC value within limits for Zn 206.200 Recovery = Not calculated							
Be 313.107†	6211.6	0.0008 mg/L	0.00020	0.0008 mg/L	0.00020	25.66%
QC value within limits for Be 313.107 Recovery = Not calculated							
Sb 206.836†	53.1	0.0211 mg/L	0.00654	0.0211 mg/L	0.00654	30.98%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Tl 190.801†	32.1	0.0205 mg/L	0.00449	0.0205 mg/L	0.00449	21.85%
QC value within limits for Tl 190.801 Recovery = Not calculated							

All analytes passed QC.

Sequence No.: 3
Sample ID: MB-SP497
Analyst:
Sample Wt:
Dilution:

blank

Autosampler Location: 10
Date Collected: 9/20/04 1:52:02 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:09 AM,

Mean Data: MB-SP497

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	497850.8	102.4	%	1.69				1.65%
Sc 361.383	1050996.9	102.6	%	1.57				1.53%
Y 360.073	538381.0	102.3	%	1.70				1.66%
As 188.979†	-0.0	0.0000	mg/L	0.00202	0.0000	mg/L	0.00202	>999.9%
Cd 226.502†	40.0	0.0005	mg/L	0.00010	0.0005	mg/L	0.00010	19.30%
Cr 267.716†	55.7	0.0005	mg/L	0.00033	0.0005	mg/L	0.00033	63.57%
Pb 220.353†	11.4	0.0013	mg/L	0.00056	0.0013	mg/L	0.00056	41.54%
Se 196.026†	7.3	0.0045	mg/L	0.00114	0.0045	mg/L	0.00114	25.43%
Ag 328.068	235.1	0.0011	mg/L	0.00070	0.0011	mg/L	0.00070	62.54%
Cu 327.393†	1238.8	0.0100	mg/L	0.00156	0.0100	mg/L	0.00156	15.69%
Ni 231.604†	18.9	0.0004	mg/L	0.00040	0.0004	mg/L	0.00040	88.40%
Zn 206.200†	-49.6	-0.0015	mg/L	0.00042	-0.0015	mg/L	0.00042	27.32%
Be 313.107†	1261.4	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	29.45%
Sb 206.836†	15.8	0.0063	mg/L	0.00090	0.0063	mg/L	0.00090	14.34%
Tl 190.801†	8.2	0.0054	mg/L	0.00247	0.0054	mg/L	0.00247	45.59%

Sequence No.: 4
Sample ID: 123627-1 1/5
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 9/20/04 1:54:22 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:11 AM,

Mean Data: 123627-1 1/5

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	510011.2	104.9	%	0.06				0.06%
Sc 361.383	1096903.4	107.1	%	0.49				0.46%
Y 360.073	559061.1	106.3	%	0.06				0.06%
As 188.979†	4.0	0.0033	mg/L	0.00291	0.0033	mg/L	0.00291	89.51%
Cd 226.502†	57.1	0.0008	mg/L	0.00004	0.0008	mg/L	0.00004	5.28%
Cr 267.716†	1902.6	0.0180	mg/L	0.00040	0.0180	mg/L	0.00040	2.21%
Pb 220.353†	37.6	0.0044	mg/L	0.00071	0.0044	mg/L	0.00071	16.18%
Se 196.026†	1.2	0.0007	mg/L	0.00264	0.0007	mg/L	0.00264	365.31%
Ag 328.068	-38.3	-0.0002	mg/L	0.00016	-0.0002	mg/L	0.00016	88.50%
Cu 327.393†	3897.3	0.0313	mg/L	0.00092	0.0313	mg/L	0.00092	2.94%
Ni 231.604†	904.3	0.0215	mg/L	0.00021	0.0215	mg/L	0.00021	0.97%
Zn 206.200†	805.9	0.0251	mg/L	0.00032	0.0251	mg/L	0.00032	1.26%
Be 313.107†	1421.9	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	6.80%
Sb 206.836†	9.9	0.0039	mg/L	0.00194	0.0039	mg/L	0.00194	49.14%
Tl 190.801†	2.9	0.0019	mg/L	0.00477	0.0019	mg/L	0.00477	247.13%

Sequence No.: 5
Sample ID: 123627-1
Analyst:
Sample Wt:
Dilution:

sample

Autosampler Location: 12
Date Collected: 9/20/04 1:58:04 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:13 AM,

Mean Data: 123627-1

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	512003.0	105.3	%	0.74				0.70%
Sc 361.383	1129111.2	110.2	%	1.07				0.97%
Y 360.073	585100.3	111.2	%	1.27				1.14%
As 188.979†	14.8	0.0119	mg/L	0.00247	0.0119	mg/L	0.00247	20.73%
Cd 226.502†	83.0	0.0011	mg/L	0.00024	0.0011	mg/L	0.00024	21.51%
Cr 267.716†	9568.4	0.0903	mg/L	0.00088	0.0903	mg/L	0.00088	0.98%
Pb 220.353†	99.0	0.0116	mg/L	0.00096	0.0116	mg/L	0.00096	8.34%
Se 196.026†	6.4	0.0039	mg/L	0.00213	0.0039	mg/L	0.00213	54.46%
Ag 328.068	-112.0	-0.0005	mg/L	0.00037	-0.0005	mg/L	0.00037	69.47%
Cu 327.393†	13863.3	0.1114	mg/L	0.00115	0.1114	mg/L	0.00115	1.03%
Ni 231.604†	4377.5	0.1039	mg/L	0.00138	0.1039	mg/L	0.00138	1.32%
Zn 206.200†	4568.6	0.1422	mg/L	0.00226	0.1422	mg/L	0.00226	1.59%
Be 313.107†	6314.2	0.0008	mg/L	0.00002	0.0008	mg/L	0.00002	2.25%
Sb 206.836†	9.3	0.0037	mg/L	0.00108	0.0037	mg/L	0.00108	29.35%
Tl 190.801†	10.7	0.0070	mg/L	0.00095	0.0070	mg/L	0.00095	13.44%

Sequence No.: 6
Sample ID: 123627-1D
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 9/20/04 2:01:52 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:15 AM,

Mean Data: 123627-1D

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	513496.1	105.7	%	0.87				0.83%
Sc 361.383	1126467.2	110.0	%	0.36				0.33%
Y 360.073	593301.9	112.8	%	1.21				1.08%
As 188.979†	10.2	0.0082	mg/L	0.00278	0.0082	mg/L	0.00278	33.92%
Cd 226.502†	34.0	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	31.63%
Cr 267.716†	7006.5	0.0661	mg/L	0.00019	0.0661	mg/L	0.00019	0.29%
Pb 220.353†	74.8	0.0087	mg/L	0.00081	0.0087	mg/L	0.00081	9.25%
Se 196.026†	1.6	0.0010	mg/L	0.00102	0.0010	mg/L	0.00102	101.92%
Ag 328.068	-217.0	-0.0010	mg/L	0.00063	-0.0010	mg/L	0.00063	61.16%
Cu 327.393†	11024.8	0.0886	mg/L	0.00229	0.0886	mg/L	0.00229	2.58%
Ni 231.604†	3916.6	0.0930	mg/L	0.00062	0.0930	mg/L	0.00062	0.66%
Zn 206.200†	4108.3	0.1279	mg/L	0.00072	0.1279	mg/L	0.00072	0.57%
Be 313.107†	5164.2	0.0006	mg/L	0.00001	0.0006	mg/L	0.00001	1.53%
Sb 206.836†	-5.2	-0.0021	mg/L	0.00139	-0.0021	mg/L	0.00139	67.15%
Tl 190.801†	7.7	0.0051	mg/L	0.00010	0.0051	mg/L	0.00010	2.05%

Sequence No.: 7
Sample ID: 123627-1DD
Analyst:
Sample Wt:
Dilution:

dup

Autosampler Location: 14
Date Collected: 9/20/04 2:05:37 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:17 AM,

Mean Data: 123627-1DD

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	508831.6	104.7	%	0.52				0.49%
Sc 361.383	1120720.5	109.4	%	0.88				0.81%
Y 360.073	591411.6	112.4	%	1.07				0.95%
As 188.979†	24.9	0.0201	mg/L	0.00428	0.0201	mg/L	0.00428	21.30%
Cd 226.502†	14.4	0.0002	mg/L	0.00006	0.0002	mg/L	0.00006	31.73%
Cr 267.716†	8456.8	0.0798	mg/L	0.00083	0.0798	mg/L	0.00083	1.04%
Pb 220.353†	160.3	0.0187	mg/L	0.00022	0.0187	mg/L	0.00022	1.17%
Se 196.026†	-0.5	-0.0003	mg/L	0.00293	-0.0003	mg/L	0.00293	884.02%
Ag 328.068	-392.4	-0.0019	mg/L	0.00024	-0.0019	mg/L	0.00024	13.01%
Cu 327.393†	13504.0	0.1085	mg/L	0.00150	0.1085	mg/L	0.00150	1.38%
Ni 231.604†	4642.4	0.1102	mg/L	0.00131	0.1102	mg/L	0.00131	1.19%
Zn 206.200†	5398.8	0.1681	mg/L	0.00212	0.1681	mg/L	0.00212	1.26%
Be 313.107†	7113.5	0.0009	mg/L	0.00002	0.0009	mg/L	0.00002	2.04%

Sb 206.836†	-8.2	-0.0033 mg/L	0.00127	-0.0033 mg/L	0.00127	38.69%
Tl 190.801†	9.7	0.0064 mg/L	0.00234	0.0064 mg/L	0.00234	36.76%

Sequence No.: 8
Sample ID: 123627-1S
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 9/20/04 2:09:26 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:19 AM,

Mean Data: 123627-1S

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	504369.6	103.8	%	0.98				0.94%
Sc 361.383	1114526.9	108.8	%	0.43				0.40%
Y 360.073	580481.6	110.4	%	1.02				0.93%
As 188.979†	4548.8	3.670	mg/L	0.0143	3.670	mg/L	0.0143	0.39%
Cd 226.502†	6646.9	0.0878	mg/L	0.00022	0.0878	mg/L	0.00022	0.25%
Cr 267.716†	51896.6	0.4897	mg/L	0.00428	0.4897	mg/L	0.00428	0.87%
Pb 220.353†	8011.6	0.9365	mg/L	0.00387	0.9365	mg/L	0.00387	0.41%
Se 196.026†	5481.0	3.378	mg/L	0.0103	3.378	mg/L	0.0103	0.31%
Ag 328.068	112135.9	0.5326	mg/L	0.01044	0.5326	mg/L	0.01044	1.96%
Cu 327.393†	76018.9	0.6109	mg/L	0.01232	0.6109	mg/L	0.01232	2.02%
Ni 231.604†	44360.2	1.053	mg/L	0.0119	1.053	mg/L	0.0119	1.13%
Zn 206.200†	32043.6	0.9975	mg/L	0.01474	0.9975	mg/L	0.01474	1.48%
Be 313.107†	736022.6	0.0909	mg/L	0.00085	0.0909	mg/L	0.00085	0.93%
Sb 206.836†	6674.7	2.657	mg/L	0.0205	2.657	mg/L	0.0205	0.77%
Tl 190.801†	5607.0	3.705	mg/L	0.0059	3.705	mg/L	0.0059	0.16%

Sequence No.: 9
Sample ID: 123627-1SD
Analyst:
Sample Wt:
Dilution:

MS

Autosampler Location: 16
Date Collected: 9/20/04 2:13:17 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:22 AM,

Mean Data: 123627-1SD

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	496973.1	102.3	%	0.60				0.58%
Sc 361.383	1107070.0	108.1	%	0.75				0.69%
Y 360.073	588328.3	111.8	%	0.92				0.82%
As 188.979†	4628.0	3.733	mg/L	0.0514	3.733	mg/L	0.0514	1.38%
Cd 226.502†	6771.0	0.0894	mg/L	0.00105	0.0894	mg/L	0.00105	1.17%
Cr 267.716†	52503.7	0.4954	mg/L	0.00732	0.4954	mg/L	0.00732	1.48%
Pb 220.353†	8142.1	0.9517	mg/L	0.01246	0.9517	mg/L	0.01246	1.31%
Se 196.026†	5561.9	3.428	mg/L	0.0479	3.428	mg/L	0.0479	1.40%
Ag 328.068	113233.2	0.5378	mg/L	0.00869	0.5378	mg/L	0.00869	1.62%
Cu 327.393†	82131.1	0.6601	mg/L	0.01248	0.6601	mg/L	0.01248	1.89%
Ni 231.604†	45980.9	1.092	mg/L	0.0170	1.092	mg/L	0.0170	1.56%
Zn 206.200†	34665.4	1.079	mg/L	0.0192	1.079	mg/L	0.0192	1.78%
Be 313.107†	751165.8	0.0928	mg/L	0.00097	0.0928	mg/L	0.00097	1.05%
Sb 206.836†	6821.4	2.716	mg/L	0.0416	2.716	mg/L	0.0416	1.53%
Tl 190.801†	5657.7	3.738	mg/L	0.0461	3.738	mg/L	0.0461	1.23%

Sequence No.: 10
Sample ID: 123627-1PS
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 17
Date Collected: 9/20/04 2:17:08 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:23 AM,

Mean Data: 123627-1PS

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	498031.9	102.5	%	0.85				0.83%
Sc 361.383	1108285.3	108.2	%	1.28				1.18%
Y 360.073	594441.8	113.0	%	0.55				0.48%

As 188.979†	4620.6	3.728 mg/L	0.0563	3.728 mg/L	0.0563	1.51%
Cd 226.502†	6714.9	0.0887 mg/L	0.00147	0.0887 mg/L	0.00147	1.66%
Cr 267.716†	52430.5	0.4947 mg/L	0.01108	0.4947 mg/L	0.01108	2.24%
Pb 220.353†	8143.0	0.9518 mg/L	0.01417	0.9518 mg/L	0.01417	1.49%
Se 196.026†	5561.9	3.428 mg/L	0.0599	3.428 mg/L	0.0599	1.75%
Ag 328.068	113116.9	0.5372 mg/L	0.00859	0.5372 mg/L	0.00859	1.60%
Cu 327.393†	81776.3	0.6572 mg/L	0.01702	0.6572 mg/L	0.01702	2.59%
Ni 231.604†	46116.9	1.095 mg/L	0.0241	1.095 mg/L	0.0241	2.20%
Zn 206.200†	34646.4	1.078 mg/L	0.0279	1.078 mg/L	0.0279	2.59%
Be 313.107†	742840.9	0.0917 mg/L	0.00128	0.0917 mg/L	0.00128	1.40%
Sb 206.836†	6792.9	2.704 mg/L	0.0600	2.704 mg/L	0.0600	2.22%
Tl 190.801†	5689.0	3.759 mg/L	0.0636	3.759 mg/L	0.0636	1.69%

Sequence No.: 11
Sample ID: BS-SP497
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 18
Date Collected: 9/20/04 2:20:59 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:25 AM,

Mean Data: BS-SP497

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	482112.0	99.20	%	4.030				4.06%
Sc 361.383	1016328.0	99.20	%	3.680				3.71%
Y 360.073	516795.4	98.24	%	4.020				4.09%
As 188.979†	4619.3	3.726	mg/L	0.1433	3.726	mg/L	0.1433	3.84%
Cd 226.502†	6988.5	0.0923	mg/L	0.00327	0.0923	mg/L	0.00327	3.54%
Cr 267.716†	40494.6	0.3821	mg/L	0.01356	0.3821	mg/L	0.01356	3.55%
Pb 220.353†	8393.3	0.9811	mg/L	0.03694	0.9811	mg/L	0.03694	3.77%
Se 196.026†	5623.2	3.465	mg/L	0.1199	3.465	mg/L	0.1199	3.46%
Ag 328.068	111661.6	0.5303	mg/L	0.00469	0.5303	mg/L	0.00469	0.88%
Cu 327.393†	66988.1	0.5384	mg/L	0.01739	0.5384	mg/L	0.01739	3.23%
Ni 231.604†	41452.7	0.9842	mg/L	0.03409	0.9842	mg/L	0.03409	3.46%
Zn 206.200†	29599.4	0.9214	mg/L	0.03167	0.9214	mg/L	0.03167	3.44%
Be 313.107†	746743.4	0.0922	mg/L	0.00331	0.0922	mg/L	0.00331	3.59%
Sb 206.836†	6950.0	2.767	mg/L	0.0930	2.767	mg/L	0.0930	3.36%
Tl 190.801†	5934.0	3.921	mg/L	0.1461	3.921	mg/L	0.1461	3.73%

Sequence No.: 12
Sample ID: BSD-SP497
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 19
Date Collected: 9/20/04 2:24:44 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:27 AM,

Mean Data: BSD-SP497

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	493550.9	101.6	%	4.09				4.03%
Sc 361.383	1042730.3	101.8	%	3.22				3.17%
Y 360.073	527975.2	100.4	%	3.96				3.94%
As 188.979†	4603.7	3.714	mg/L	0.1387	3.714	mg/L	0.1387	3.74%
Cd 226.502†	6995.4	0.0924	mg/L	0.00337	0.0924	mg/L	0.00337	3.65%
Cr 267.716†	40422.1	0.3814	mg/L	0.01167	0.3814	mg/L	0.01167	3.06%
Pb 220.353†	8385.8	0.9802	mg/L	0.03797	0.9802	mg/L	0.03797	3.87%
Se 196.026†	5602.9	3.453	mg/L	0.1311	3.453	mg/L	0.1311	3.80%
Ag 328.068	113380.3	0.5385	mg/L	0.00364	0.5385	mg/L	0.00364	0.68%
Cu 327.393†	66470.5	0.5342	mg/L	0.01456	0.5342	mg/L	0.01456	2.73%
Ni 231.604†	41340.7	0.9815	mg/L	0.03541	0.9815	mg/L	0.03541	3.61%
Zn 206.200†	29385.8	0.9147	mg/L	0.02896	0.9147	mg/L	0.02896	3.17%
Be 313.107†	744828.3	0.0920	mg/L	0.00309	0.0920	mg/L	0.00309	3.36%
Sb 206.836†	6923.5	2.756	mg/L	0.1000	2.756	mg/L	0.1000	3.63%
Tl 190.801†	5939.4	3.925	mg/L	0.1554	3.925	mg/L	0.1554	3.96%

Sequence No.: 13
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 9/20/04 2:28:31 PM

Sample Wt:
Dilution:

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:28 AM,

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	497731.1	102.4	%	3.73				3.64%
Sc 361.383	1061827.8	103.6	%	3.27				3.15%
Y 360.073	533599.8	101.4	%	3.73				3.68%
As 188.979†	1201.9	0.9696	mg/L	0.02339	0.9696	mg/L	0.02339	2.41%
QC value within limits for As 188.979 Recovery = 96.96%								
Cd 226.502†	34940.5	0.4615	mg/L	0.00994	0.4615	mg/L	0.00994	2.15%
QC value within limits for Cd 226.502 Recovery = 92.30%								
Cr 267.716†	100780.3	0.9509	mg/L	0.02351	0.9509	mg/L	0.02351	2.47%
QC value within limits for Cr 267.716 Recovery = 95.09%								
Pb 220.353†	8256.7	0.9651	mg/L	0.02160	0.9651	mg/L	0.02160	2.24%
QC value within limits for Pb 220.353 Recovery = 96.51%								
Se 196.026†	7900.9	4.869	mg/L	0.1071	4.869	mg/L	0.1071	2.20%
QC value within limits for Se 196.026 Recovery = 97.38%								
Ag 328.068	226172.1	1.074	mg/L	0.0127	1.074	mg/L	0.0127	1.19%
QC value within limits for Ag 328.068 Recovery = 107.42%								
Cu 327.393†	118484.3	0.9522	mg/L	0.01429	0.9522	mg/L	0.01429	1.50%
QC value within limits for Cu 327.393 Recovery = 95.22%								
Ni 231.604†	40989.0	0.9732	mg/L	0.02225	0.9732	mg/L	0.02225	2.29%
QC value within limits for Ni 231.604 Recovery = 97.32%								
Zn 206.200†	29218.8	0.9095	mg/L	0.01716	0.9095	mg/L	0.01716	1.89%
QC value within limits for Zn 206.200 Recovery = 90.95%								
Be 313.107†	1528670.2	0.1888	mg/L	0.00458	0.1888	mg/L	0.00458	2.42%
QC value within limits for Be 313.107 Recovery = 94.40%								
Sb 206.836†	12077.4	4.808	mg/L	0.1217	4.808	mg/L	0.1217	2.53%
QC value within limits for Sb 206.836 Recovery = 96.16%								
Tl 190.801†	7525.6	4.973	mg/L	0.1234	4.973	mg/L	0.1234	2.48%
QC value within limits for Tl 190.801 Recovery = 99.45%								

All analytes passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 9/20/04 2:32:19 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:30 AM,

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	485669.7	99.93	%	2.429				2.43%
Sc 361.383	1013383.9	98.92	%	2.572				2.60%
Y 360.073	519980.5	98.85	%	2.473				2.50%
As 188.979†	0.5	0.0004	mg/L	0.00350	0.0004	mg/L	0.00350	870.48%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	155.6	0.0021	mg/L	0.00058	0.0021	mg/L	0.00058	28.38%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	357.2	0.0034	mg/L	0.00132	0.0034	mg/L	0.00132	39.03%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Pb 220.353†	43.5	0.0051	mg/L	0.00013	0.0051	mg/L	0.00013	2.50%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Se 196.026†	31.4	0.0194	mg/L	0.00566	0.0194	mg/L	0.00566	29.23%
QC value within limits for Se 196.026 Recovery = Not calculated								
Ag 328.068	1119.2	0.0053	mg/L	0.00173	0.0053	mg/L	0.00173	32.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Cu 327.393†	1218.6	0.0098	mg/L	0.00085	0.0098	mg/L	0.00085	8.67%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Ni 231.604†	139.7	0.0033	mg/L	0.00137	0.0033	mg/L	0.00137	41.38%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Zn 206.200†	112.1	0.0035	mg/L	0.00112	0.0035	mg/L	0.00112	32.22%
QC value within limits for Zn 206.200 Recovery = Not calculated								
Be 313.107†	6012.7	0.0007	mg/L	0.00023	0.0007	mg/L	0.00023	31.22%
QC value within limits for Be 313.107 Recovery = Not calculated								
Sb 206.836†	64.8	0.0258	mg/L	0.00527	0.0258	mg/L	0.00527	20.45%

QC value within limits for Sb 206.836 Recovery = Not calculated

Tl 190.801†	30.3	0.0200 mg/L	0.00662	0.0200 mg/L	0.00662	33.02%

QC value within limits for Tl 190.801 Recovery = Not calculated

All analytes passed QC.

Sequence No.: 15
Sample ID: LCS-SP497
Analyst:
Sample Wt:
Dilution:

ERA

Autosampler Location: 20
Date Collected: 9/20/04 2:34:45 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:32 AM,

Mean Data: LCS-SP497

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	511285.7	105.2	%	3.38				3.21%
Sc 361.383	1127321.4	110.0	%	2.63				2.39%
Y 360.073	681996.9	129.6	%	3.03				2.33%
As 188.979†	1357.3	1.095	mg/L	0.0315	1.095	mg/L	0.0315	2.88%
Cd 226.502†	75211.1	0.9934	mg/L	0.02779	0.9934	mg/L	0.02779	2.80%
Cr 267.716†	176028.7	1.661	mg/L	0.0446	1.661	mg/L	0.0446	2.69%
Pb 220.353†	8659.2	1.012	mg/L	0.0262	1.012	mg/L	0.0262	2.58%
Se 196.026†	2586.3	1.594	mg/L	0.0399	1.594	mg/L	0.0399	2.51%
Ag 328.068	106888.3	0.5076	mg/L	0.06244	0.5076	mg/L	0.06244	12.30%
Cu 327.393†	151837.6	1.220	mg/L	0.0277	1.220	mg/L	0.0277	2.27%
Ni 231.604†	55463.7	1.317	mg/L	0.0367	1.317	mg/L	0.0367	2.79%
Zn 206.200†	54743.7	1.704	mg/L	0.0460	1.704	mg/L	0.0460	2.70%
Be 313.107†	10488192.3	1.295	mg/L	0.0380	1.295	mg/L	0.0380	2.94%
Sb 206.836†	4409.7	1.756	mg/L	0.0424	1.756	mg/L	0.0424	2.42%
Tl 190.801†	2443.2	1.614	mg/L	0.0421	1.614	mg/L	0.0421	2.60%

Sequence No.: 16
Sample ID: 123673-1
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 21
Date Collected: 9/20/04 2:38:44 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:33 AM,

Mean Data: 123673-1

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	448301.3	92.24	%	1.997				2.17%
Sc 361.383	985880.0	96.23	%	1.572				1.63%
Y 360.073	505234.1	96.05	%	2.591				2.70%
As 188.979†	83.1	0.0670	mg/L	0.00483	0.0670	mg/L	0.00483	7.21%
Cd 226.502†	138.9	0.0018	mg/L	0.00025	0.0018	mg/L	0.00025	13.60%
Cr 267.716†	11578.8	0.1093	mg/L	0.00138	0.1093	mg/L	0.00138	1.26%
Pb 220.353†	642.0	0.0750	mg/L	0.00266	0.0750	mg/L	0.00266	3.54%
Se 196.026†	82.8	0.0510	mg/L	0.00531	0.0510	mg/L	0.00531	10.40%
Ag 328.068	2070.8	0.0098	mg/L	0.00044	0.0098	mg/L	0.00044	4.50%
Cu 327.393†	160202.8	1.288	mg/L	0.0062	1.288	mg/L	0.0062	0.48%
Ni 231.604†	3609.1	0.0857	mg/L	0.00162	0.0857	mg/L	0.00162	1.89%
Zn 206.200†	21905.2	0.6819	mg/L	0.01427	0.6819	mg/L	0.01427	2.09%
Be 313.107†	11054.5	0.0014	mg/L	0.00015	0.0014	mg/L	0.00015	10.97%
Sb 206.836†	-40.1	-0.0160	mg/L	0.00415	-0.0160	mg/L	0.00415	25.99%
Tl 190.801†	24.7	0.0163	mg/L	0.00080	0.0163	mg/L	0.00080	4.90%

Sequence No.: 17
Sample ID: 123673-2
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 22
Date Collected: 9/20/04 2:42:36 PM
Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:34 AM,

Mean Data: 123673-2

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	465439.3	95.77	%	0.354				0.37%

Sc 361.383	1062706.9	103.7 %	0.37				0.36%
Y 360.073	554325.3	105.4 %	0.66				0.62%
As 188.979†	91.3	0.0736 mg/L	0.00647	0.0736 mg/L	0.00647	8.79%
Cd 226.502†	-43.8	-0.0006 mg/L	0.00032	-0.0006 mg/L	0.00032	56.10%
Cr 267.716†	39282.0	0.3706 mg/L	0.00344	0.3706 mg/L	0.00344	0.93%
Pb 220.353†	129.1	0.0151 mg/L	0.00162	0.0151 mg/L	0.00162	10.75%
Se 196.026†	84.0	0.0518 mg/L	0.00353	0.0518 mg/L	0.00353	6.81%
Ag 328.068	1673.7	0.0079 mg/L	0.00027	0.0079 mg/L	0.00027	3.34%
Cu 327.393†	151809.3	1.220 mg/L	0.0231	1.220 mg/L	0.0231	1.89%
Ni 231.604†	9827.7	0.2333 mg/L	0.00143	0.2333 mg/L	0.00143	0.61%
Zn 206.200†	35584.3	1.108 mg/L	0.0094	1.108 mg/L	0.0094	0.85%
Be 313.107†	18180.3	0.0022 mg/L	0.00029	0.0022 mg/L	0.00029	12.87%
Sb 206.836†	-46.7	-0.0186 mg/L	0.00448	-0.0186 mg/L	0.00448	24.13%
Tl 190.801†	26.4	0.0175 mg/L	0.00318	0.0175 mg/L	0.00318	18.23%

Sequence No.: 18 **Autosampler Location: 23**
Sample ID: 123673-3 **Date Collected: 9/20/04 2:46:29 PM**
Analyst:
Sample Wt: **Sample Prep Volume:**
Dilution: **Data Type: Reprocessed on 9/21/04 8:37:36 AM,**

Mean Data: 123673-3

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	436395.5	99.79	%	1.458				1.62%
Sc 361.383	988639.7	96.50	%	1.737				1.80%
Y 360.073	513063.5	97.53	%	2.753				2.82%
As 188.979†	78.5	0.0633	mg/L	0.00580	0.0633	mg/L	0.00580	9.16%
Cd 226.502†	-83.8	-0.0011	mg/L	0.00030	-0.0011	mg/L	0.00030	27.26%
Cr 267.716†	42500.6	0.4010	mg/L	0.00880	0.4010	mg/L	0.00880	2.19%
Pb 220.353†	552.0	0.0645	mg/L	0.00267	0.0645	mg/L	0.00267	4.14%
Se 196.026†	70.5	0.0434	mg/L	0.00573	0.0434	mg/L	0.00573	13.18%
Ag 328.068	1810.3	0.0086	mg/L	0.00017	0.0086	mg/L	0.00017	2.01%
Cu 327.393†	137939.1	1.109	mg/L	0.0322	1.109	mg/L	0.0322	2.90%
Ni 231.604†	9754.8	0.2316	mg/L	0.00561	0.2316	mg/L	0.00561	2.42%
Zn 206.200†	34777.2	1.083	mg/L	0.0259	1.083	mg/L	0.0259	2.40%
Be 313.107†	13579.1	0.0017	mg/L	0.00008	0.0017	mg/L	0.00008	4.50%
Sb 206.836†	-43.5	-0.0173	mg/L	0.00274	-0.0173	mg/L	0.00274	15.80%
Tl 190.801†	21.1	0.0140	mg/L	0.00211	0.0140	mg/L	0.00211	15.13%

Sequence No.: 19 **Autosampler Location: 5**
Sample ID: CCV **Date Collected: 9/20/04 2:52:31 PM**
Analyst:
Sample Wt: **Sample Prep Volume:**
Dilution: **Data Type: Reprocessed on 9/21/04 8:37:37 AM,**

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	495159.4	101.9	%	4.03				3.96%
Sc 361.383	1040816.2	101.6	%	3.85				3.79%
Y 360.073	528497.1	100.5	%	4.04				4.02%
As 188.979†	1205.8	0.9727	mg/L	0.03355	0.9727	mg/L	0.03355	3.45%
QC value within limits for As 188.979 Recovery = 97.27%								
Cd 226.502†	36068.6	0.4764	mg/L	0.01043	0.4764	mg/L	0.01043	2.19%
QC value within limits for Cd 226.502 Recovery = 95.28%								
Cr 267.716†	102474.5	0.9669	mg/L	0.02795	0.9669	mg/L	0.02795	2.89%
QC value within limits for Cr 267.716 Recovery = 96.69%								
Pb 220.353†	8366.0	0.9779	mg/L	0.02729	0.9779	mg/L	0.02729	2.79%
QC value within limits for Pb 220.353 Recovery = 97.79%								
Se 196.026†	7967.3	4.910	mg/L	0.1326	4.910	mg/L	0.1326	2.70%
QC value within limits for Se 196.026 Recovery = 98.20%								
Ag 328.068	231425.9	1.099	mg/L	0.0128	1.099	mg/L	0.0128	1.17%
QC value within limits for Ag 328.068 Recovery = 109.91%								
Cu 327.393†	120356.5	0.9673	mg/L	0.02072	0.9673	mg/L	0.02072	2.14%
QC value within limits for Cu 327.393 Recovery = 96.73%								
Ni 231.604†	41584.0	0.9873	mg/L	0.02931	0.9873	mg/L	0.02931	2.97%

QC value within limits for Ni 231.604 Recovery = 98.73%
Zn 206.200† 30180.3 0.9395 mg/L 0.02442 0.9395 mg/L 0.02442 2.60%
QC value within limits for Zn 206.200 Recovery = 93.95%
Be 313.107† 1547890.4 0.1912 mg/L 0.00562 0.1912 mg/L 0.00562 2.94%
QC value within limits for Be 313.107 Recovery = 95.59%
Sb 206.836† 12204.4 4.859 mg/L 0.1410 4.859 mg/L 0.1410 2.90%
QC value within limits for Sb 206.836 Recovery = 97.17%
Tl 190.801† 7517.3 4.967 mg/L 0.1671 4.967 mg/L 0.1671 3.36%
QC value within limits for Tl 190.801 Recovery = 99.34%
All analytes passed QC.

Sequence No.: 20 **Autosampler Location: 6**
Sample ID: CCB **Date Collected: 9/20/04 2:56:19 PM**
Analyst:
Sample Wt: **Sample Prep Volume:**
Dilution: **Data Type: Reprocessed on 9/21/04 8:37:40 AM,**

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Lu 261.542	481746.4	99.12	%	3.026				3.05%
Sc 361.383	1001381.1	97.75	%	2.734				2.80%
Y 360.073	513607.6	97.64	%	3.038				3.11%
As 188.979†	2.6	0.0021	mg/L	0.00028	0.0021	mg/L	0.00028	13.33%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	138.6	0.0018	mg/L	0.00063	0.0018	mg/L	0.00063	34.65%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	346.1	0.0033	mg/L	0.00175	0.0033	mg/L	0.00175	53.55%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Pb 220.353†	29.2	0.0034	mg/L	0.00133	0.0034	mg/L	0.00133	39.14%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Se 196.026†	29.6	0.0182	mg/L	0.01099	0.0182	mg/L	0.01099	60.29%
QC value within limits for Se 196.026 Recovery = Not calculated								
Ag 328.068	1396.8	0.0066	mg/L	0.00160	0.0066	mg/L	0.00160	24.18%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Cu 327.393†	1739.4	0.0140	mg/L	0.00218	0.0140	mg/L	0.00218	15.62%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Ni 231.604†	122.6	0.0029	mg/L	0.00137	0.0029	mg/L	0.00137	47.11%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Zn 206.200†	101.1	0.0031	mg/L	0.00117	0.0031	mg/L	0.00117	37.29%
QC value within limits for Zn 206.200 Recovery = Not calculated								
Be 313.107†	6308.5	0.0008	mg/L	0.00035	0.0008	mg/L	0.00035	44.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Sb 206.836†	67.2	0.0268	mg/L	0.01024	0.0268	mg/L	0.01024	38.26%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Tl 190.801†	28.6	0.0189	mg/L	0.00915	0.0189	mg/L	0.00915	48.46%
QC value within limits for Tl 190.801 Recovery = Not calculated								

All analytes passed QC.

Sequence No.: 21 **Autosampler Location: 7**
Sample ID: ICSA **Date Collected: 9/20/04 2:58:45 PM**
Analyst:
Sample Wt: **Sample Prep Volume:**
Dilution: **Data Type: Reprocessed on 9/21/04 8:37:41 AM,**

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Lu 261.542	471178.8	96.95	%	3.965				4.09%
Sc 361.383	955297.3	93.25	%	4.065				4.36%
Y 360.073	488782.3	92.92	%	5.038				5.42%
As 188.979†	-8.3	-0.0067	mg/L	0.00830	-0.0067	mg/L	0.00830	124.00%
QC value within limits for As 188.979 Recovery = Not calculated								
Cd 226.502†	7.5	0.0001	mg/L	0.00031	0.0001	mg/L	0.00031	315.33%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Cr 267.716†	-210.3	-0.0020	mg/L	0.00010	-0.0020	mg/L	0.00010	5.00%
QC value within limits for Cr 267.716 Recovery = Not calculated								

Pb 220.353†	-72.6	-0.0085 mg/L	0.00212	-0.0085 mg/L	0.00212	25.00%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Se 196.026†	41.5	0.0256 mg/L	0.00441	0.0256 mg/L	0.00441	17.25%
QC value within limits for Se 196.026 Recovery = Not calculated						
Ag 328.068	329.4	0.0016 mg/L	0.00039	0.0016 mg/L	0.00039	24.82%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Cu 327.393†	-1182.3	-0.0095 mg/L	0.00240	-0.0095 mg/L	0.00240	25.24%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Ni 231.604†	-172.0	-0.0041 mg/L	0.00052	-0.0041 mg/L	0.00052	12.83%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Zn 206.200†	-296.1	-0.0092 mg/L	0.00084	-0.0092 mg/L	0.00084	9.14%
QC value within limits for Zn 206.200 Recovery = Not calculated						
Be 313.107†	1762.1	0.0002 mg/L	0.00006	0.0002 mg/L	0.00006	28.03%
QC value within limits for Be 313.107 Recovery = Not calculated						
Sb 206.836†	-54.2	-0.0216 mg/L	0.00309	-0.0216 mg/L	0.00309	14.32%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Tl 190.801†	27.3	0.0180 mg/L	0.00488	0.0180 mg/L	0.00488	27.09%
QC value within limits for Tl 190.801 Recovery = Not calculated						

All analytes passed QC.

Sequence No.: 22
Sample ID: ICSAB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 9/20/04 3:02:42 PM

Sample Prep Volume:
Data Type: Reprocessed on 9/21/04 8:37:43 AM,

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Lu 261.542	472205.2	97.16	%	3.019				3.11%
Sc 361.383	959850.2	93.69	%	2.601				2.78%
Y 360.073	495296.5	94.16	%	2.750				2.92%
As 188.979†	11581.7	9.343	mg/L	0.2767	9.343	mg/L	0.2767	2.96%
QC value within limits for As 188.979 Recovery = 93.43%								
Cd 226.502†	197834.7	2.613	mg/L	0.0813	2.613	mg/L	0.0813	3.11%
QC value within limits for Cd 226.502 Recovery = 87.10%								
Cr 267.716†	292002.0	2.755	mg/L	0.0864	2.755	mg/L	0.0864	3.14%
QC value within limits for Cr 267.716 Recovery = 91.84%								
Pb 220.353†	76481.1	8.940	mg/L	0.2711	8.940	mg/L	0.2711	3.03%
QC value within limits for Pb 220.353 Recovery = 89.40%								
Se 196.026†	7389.7	4.554	mg/L	0.1877	4.554	mg/L	0.1877	4.12%
QC value within limits for Se 196.026 Recovery = 91.08%								
Ag 328.068	568992.1	2.702	mg/L	0.0125	2.702	mg/L	0.0125	0.46%
QC value within limits for Ag 328.068 Recovery = 90.06%								
Cu 327.393†	355779.3	2.859	mg/L	0.0805	2.859	mg/L	0.0805	2.81%
QC value within limits for Cu 327.393 Recovery = 95.31%								
Ni 231.604†	111061.5	2.637	mg/L	0.0821	2.637	mg/L	0.0821	3.11%
QC value within limits for Ni 231.604 Recovery = 87.90%								
Zn 206.200†	78090.6	2.431	mg/L	0.0738	2.431	mg/L	0.0738	3.04%
QC value within limits for Zn 206.200 Recovery = 81.03%								
Be 313.107†	7437392.0	0.9186	mg/L	0.02377	0.9186	mg/L	0.02377	2.59%
QC value within limits for Be 313.107 Recovery = 91.86%								
Sb 206.836†	20924.9	8.326	mg/L	0.1513	8.326	mg/L	0.1513	1.82%
QC value within limits for Sb 206.836 Recovery = 83.26%								
Tl 190.801†	12882.3	8.512	mg/L	0.3251	8.512	mg/L	0.3251	3.82%
QC value within limits for Tl 190.801 Recovery = 85.12%								

All analytes passed QC.

Utility Help

RN RN

col STL-PPB

Dataset/Proto 092104 /STL-PPB

tocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

set

Calib Coeffs

New Cal

pdate Coeffs

Spike Coeffs

A

B 4.54988e-6

C -2.88271e-1

Rho .998766

Type Linear

Calibrated

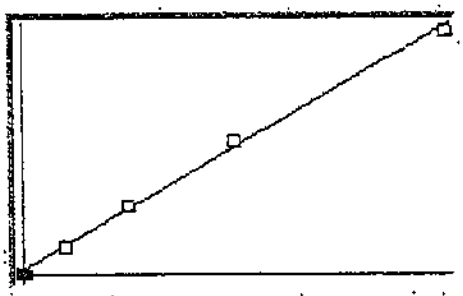
Accepted

Accept

Rel. Abs.
4371049

Accepted

New



Conc. 20.0

Include S2 Rep 1 2 3 4 5

Conc.	Calc.	Dev.	Mean	SD or 2RSD	Rep 1	Rep 2	Rep 3
.00000	-.286	-.286	544	1411	-549	45	2138
.10000	-.158	-.258	28568	4.69%	29786	27042	28877
2.0000	2.03	.030	509503	0.74%	513032	509967	505511
5.0000	5.38	.382	1246255	1.63%	1263578	1251221	1223968
10.000	10.5	.533	2378265	0.13%	2376002	2377132	2381660
20.000	19.6	-.400	4371049	0.43%	4389133	4372468	4351547

NUM

00416

Protocol: STL-PPB

POST-RUN REPORT

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 2 Ck2 4 PPB Seq: 18 10:08:32 21 Sep 04 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.6	3.78	4.00	ppb	.000 %

*** Check Standard: 3 Ck3 2 PPB Seq: 19 10:13:22 21 Sep 04 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		98.7	1.97	2.00	ppb	.000 %

*** Check Standard: 4 Ck4 5 PPB Seq: 20 10:18:14 21 Sep 04 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.	5.12	5.00	ppb	.000 %

*** Check Standard: 1 Ck1 BLANK Seq: 21 10:33:21 21 Sep 04 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.056	.200	ppb	.000 %

*** Check Standard: 4 Ck4 5 PPB Seq: 77 17:37:28 21 Sep 04 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.	5.10	5.00	ppb	.000 %

*** Check Standard: 1 Ck1 BLANK Seq: 78 17:42:17 21 Sep 04 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.000	.200	ppb	.000 %

*** Sample ID: mb-zs119 Seq: 80 17:51:55 21 Sep 04 HG

fcw Hg system #1

Hg .014 ppb .000 % .014 MB

*** Sample ID: 123627-1 Seq: 81 17:57:05 21 Sep 04 HG

fcw Hg system #1

Hg .079 ppb .000 % .079 Sample

*** Sample ID: 123627-1d Seq: 82 18:01:53 21 Sep 04 HG

fcw Hg system #1

Hg .103 ppb .000 % .103 Dup L

*** Sample ID: 123627-1dd Seq: 83 18:06:52 21 Sep 04 HG

fcw Hg system #1

Hg .081 ppb .000 % .081

*** Sample ID: 123627-1s Seq: 84 18:12:00 21 Sep 04 HG

fcw Hg system #1

Hg 2.24 ppb .000 % 2.24 Spike

*** Sample ID: 123627-1sd Seq: 85 18:17:00 21 Sep 04 HG

fcw Hg system #1

Hg 2.22 ppb .000 % 2.22

*** Sample ID: era Seq: 86 18:21:43 21 Sep 04 HG

fcw Hg system #1

Hg 9.02 ppb .000 % 9.02 ERA

*** Sample ID: bs Seq: 87 18:26:46 21 Sep 04 HG

fcw Hg system #1

Hg 1.84 ppb .000 % 1.84

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------------

*** Sample ID: bsd                    Seq:  88     18:31:38 21 Sep 04   HG
                            fcw Hg system #1
Hg    1.87    ppb       .000  %   1.87
                                                                          =
*** Check Standard: 4  Ck4 5 PPB    Seq:  89     18:36:20 21 Sep 04   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          104.     5.21    5.00   ppb        .000  %
                                                                          =
*** Check Standard: 1  Ck1 BLANK    Seq:  90     18:41:02 21 Sep 04   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.011     .200     ppb        .000  %
                                                                          =
*** Sample ID: 123539-1               Seq:  91     18:46:02 21 Sep 04   HG
                            fcw Hg system #1
Hg    .131    ppb       .000  %   .131
                                                                          =
=============================================================================
*** Sample ID: 123539-2               Seq:  92     18:51:26 21 Sep 04   HG
                            fcw Hg system #1
Hg    .173    ppb       .000  %   .173
                                                                          =
=============================================================================
*** Sample ID: 123539-3               Seq:  93     18:56:16 21 Sep 04   HG
                            fcw Hg system #1
Hg    .102    ppb       .000  %   .102
                                                                          =
=============================================================================
*** Sample ID: 123539-4               Seq:  94     19:01:00 21 Sep 04   HG
                            fcw Hg system #1
Hg    .149    ppb       .000  %   .149
                                                                          =
=============================================================================
*** Sample ID: 123539-5               Seq:  95     19:05:40 21 Sep 04   HG
                            fcw Hg system #1
Hg    .120    ppb       .000  %   .120
                                                                          =
=============================================================================
*** Sample ID: 123539-6               Seq:  96     19:10:48 21 Sep 04   HG
                            fcw Hg system #1
Hg    .498    ppb       .000  %   .498
                                                                          =
=============================================================================
*** Sample ID: 123539-7               Seq:  97     19:15:39 21 Sep 04   HG
                            fcw Hg system #1
Hg    .138    ppb       .000  %   .138
                                                                          =
=============================================================================
*** Sample ID: 123539-8               Seq:  98     19:20:19 21 Sep 04   HG
                            fcw Hg system #1
Hg    .159    ppb       .000  %   .159
                                                                          =
=============================================================================
*** Sample ID: 123539-9               Seq:  99     19:24:58 21 Sep 04   HG
                            fcw Hg system #1
Hg    .402    ppb       .000  %   .402
                                                                          =
*** Check Standard: 4  Ck4 5 PPB    Seq:  100    19:29:37 21 Sep 04   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     5.11    5.00   ppb        .000  %
                                                                          =
*** Check Standard: 1  Ck1 BLANK    Seq:  101    19:34:26 21 Sep 04   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.008     .200     ppb        .000  %
```

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------------

*** Sample ID: 123539-10              Seq:  102    19:39:57 21 Sep 04   HG
                            fcw Hg system #1
Hg    .195    ppb       .000  %   .195
                                                                          =
==========================================================================
*** Sample ID: 123539-11              Seq:  103    19:44:38 21 Sep 04   HG
                            fcw Hg system #1
Hg    .167    ppb       .000  %   .167
                                                                          =
==========================================================================
*** Sample ID: 123539-12              Seq:  104    19:49:20 21 Sep 04   HG
                            fcw Hg system #1
Hg    .178    ppb       .000  %   .178
                                                                          =
==========================================================================
*** Sample ID: 123632-1               Seq:  105    19:54:15 21 Sep 04   HG
                            fcw Hg system #1
Hg    .551    ppb       .000  %   .551
                                                                          =
==========================================================================
*** Sample ID: 123632-2               Seq:  106    19:59:14 21 Sep 04   HG
                            fcw Hg system #1
Hg    .305    ppb       .000  %   .305
                                                                          =
==========================================================================
*** Sample ID: 123550-1               Seq:  107    20:04:03 21 Sep 04   HG
                            fcw Hg system #1
Hg    10.2    ppb       .000  %   10.2
                                                                          =
==========================================================================
*** Sample ID: 123550-2               Seq:  109    20:14:14 21 Sep 04   HG
                            fcw Hg system #1
Hg    .075    ppb       .000  %   .075
                                                                          =
*** Check Standard: 4  Ck4 5 PPB    Seq:  110     20:18:57 21 Sep 04   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     5.13    5.00   ppb        .000  %
                                                                          =
*** Check Standard: 1  Ck1 BLANK    Seq:  111     20:23:55 21 Sep 04   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.014     .200     ppb        .000  %
                                                                          =
```

metals Worksheet - total

QC Level:Tier IV	Due: 09/21/04
Matrix:solid	Work Order - 123627
Lloyd & Assoc. Inc.	Proj. Manager:Darla Powell

pecial structions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

[redacted]

Sample Weight/Volume

%Solids

QA/QC Batch SP497

Client Sample ID 040916/GNW/MW

Date Received 9/16/2004

Date Sampled 9/16/2004 11:20:00 AM

nalyte Name	ICP	ICPMS	Result	PQL	Units
ntimony	X				
rsenic					
eryllium					
admium					
hromium					
opper					
ead					
ickel					
elenium					
lver					
hallium					
nc	X				

See attached

nalyst [signature] Date 9-20-04

eviewed by [signature] Date 9/21/04

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00420

STL Seattle

Metals Digestion Log

QCBatch ID	sp497				
Sample Matrix	Soil Digestion Block (3050B Mod.)				
MS Spike No.	GPS#1 : 1001-11-10	Weighed By/Date	CM 9/20/04		
	GPS#2 : 1001-10-17				
		Comments			
HCL Lot No	9000				
Nitric Acid Lot No	9047				
H202 Lot No	S007	Spike Witness Signature/Date	K 9-20-04		

QC Sample Type	QC Identifier	Sample Wt (g)	Final Vol (mL)		Spike Vol
Method Blank	sp497	0.5000	50		
Duplicate	123627r1	0.5111	50		
Duplicate 2	123627r1	0.5485	50		
Blank Spike	ssp497	0.5000	50		1
Blank Spike Duplicate	dsp497	0.5000	50		1
Matrix Spike	123627s1	0.5179	50		1
Matrix Spike Duplicate	123627d1	0.6261	50		1
dup-2					
thp-2					
LCS					
ERA		0.5166	50		

Sample	Client Sample ID	Sample Weight (g)	Final Volume (mL)		
123627-1	040916/GNW/MW	0.5520	50		
123673-1	Kiln Feed	0.5561	50		
123673-2	Clinker	0.5253	50		
123673-3	FM#1	0.5214	50		

00421

STL Seattle

6a **Sample Information** 6010 method is selected

Client Name	Lloyd & Assoc. Inc.
Work Order Number	123627
Sample Number	1
Data Filename	SP497
Client Sample ID	040916/GNW/MW
Date Received	09-16-04
Date Prepared	09-20-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	sample

Related Blan SP497

Sample weight (g)	0.552	=	0.00055 /kg	Calc. Fact.	105.361999
Digest volume	50	=	50 ml	Dry Weight	0.4745544 g
Dilution Factor		=	1	Sample Units	mg/kg
% Solids	85.97	=	0.8597	Spike Factor	2.10723997
		=	1	Rept. Dil. Fac	1
blank= PPB, 1=PPM, 2=%	1	=	0.001		
mg/kg Carbon		=	1		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Arsenic	0.011934			1.26	J	2.11
x	Beryllium	0.00078			0.0822	J	0.211
x	Cadmium	0.001096		0.00053	0.115	J B1	0.527
x	Chromium	0.090282			9.51		1.05
x	Copper	0.111417		0.00996	11.7	B2	2.11
x	Lead	0.011575			1.22		1.05
x	Nickel	0.103935			11		1.05
x	Zinc	0.142211			15		2.11

STL Seattle

6a **Sample Information**	6010 method is selected	
Client Name		
Work Order Number		
Sample Number		Related Blan noblank
Data Filename	**SP497**	
Client Sample ID		
Date Received		
Date Prepared	**09-20-04**	
Date Analyzed	**09-20-04**	
Sample matrix type	**solid**	
QC sample type	**blank**	

Sample weight (g)	**0.5**	=	0.0005 /kg	Calc. Fact.	100
Digest volume	**50**	=	50 ml	Dry Weight	0.5 g
Dilution Factor		=	1	Sample Units	mg/kg
% Solids		=	1	Spike Factor	2
		=	1	Rept. Dil. Fac	1
blank= PPB, 1=PPM, 2=%	**1**	=	0.001		
mg/kg Carbon		=	1		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Cadmium	0.000529			0.0529	J	0.5
x	Copper	0.009956			0.996	J	2
x	Silver	0.001117			0.112	J	1

Mercury (CVAA) Worksheet - total

QC Level:Tier IV	Due: 09/21/04	Work Order - 123627
Matrix:solid		
Lloyd & Assoc. Inc.	Proj. Manager:Darla Powell	

pecial structions

.5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

[redacted]	%Solids	Client Sample ID	040916/GNW/MW
ample Weight/Volume	QA/QC Batch 25119	Date Received	9/16/2004
		Date Sampled	**9/16/2004 11:20:00 AM**

nalyte Name	ICP	ICPMS	Result	PQL	Units
ercury (CVAA)					

under 7471X

Mercury
SMS - required DL
0.41ppm

nalyst _____ Date 9/21/04

eviewed by _____ Date 9-22-04

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00424

Printed - 9/21/04

Mercury Digestion Log

QCBatch ID	zs119				
Sample Matrix	solid				
Hg Spike/Stds Soln Lot #	1001-10-10				
ERA/Chk Stds Spike Soln	10-04HG	Weighed By/Date	CM 9/21/04		
		Extracted By/Date			
H2SO4 Lot #	8159	Comments			
HNO3 Lot #	7418				
HCL Lot #	8156				
SnCl2 Lot #	6678				
KMnO4 Lot #	6913		9/21/04		
K2S2O8 Lot #	6919	Spike Witness Signature/Date			
NaCl Lot #	8438				
Hydroxylamine Sulfate Lot #	8133				
Digestion Procedure	7471A				

QC Sample Type	QC Identifier	Sample Weight (g)	Final Volume (ml)	MS/ES Spike amt (ml)	Standards
Method Blank	zs119	0.5000	50		Blank ppb
Duplicate	123627r1	0.5414	50		0.1 ppb
Duplicate-2	123627r1	0.5146	50		2.0 ppb
Blank Spike	szs119	0.5000	50	1	5.0 ppb
Blank Spike Duplicate	dzs119	0.5000	50	1	10.0 ppb
Matrix Spike	123627s1	0.5255	50	1	20.0 ppb
Matrix Spike Duplicate	123627d1	0.5141	50	1	100
Matrix Spike-2					
Matrix Spike Duplicate-2					
ERA	D038-540	0.1018	50		

Sample	Client Sample ID	Sample Weight (g)	Final Volume (ml)	Comments	Check Stds
123627-1	40916/GNW/M	0.5175	50	100	Blank ppb
123539-1	-1(24-28)/09090	0.5246	50	100	5.0 ppb
123539-2	-2(16-20)/09090	0.5167	50	100	2.0 ppb
123539-3	-3(16-20)/09090	0.5094	50	100	4.0 ppb
123539-4	B-4(8-12)/090904	0.5193	50	100	
123539-5	B-5(8-12)/090904	0.5463	50	100	
123539-6	B-6(8-12)/090904	0.5627	50	100	
123539-7	-7(24-28)/09090	0.5677	50	100	Bath Temp
123539-8	B-8(8-12)/091004	0.5664	50	100	
123539-9	B-9(0-4)/091004	0.5329	50	100	
123539-10	B-10(4-8)/091004	0.5303	50	100	
123539-11	B-11(4-8)/091004	0.5119	50	100	
123539-12	B-12(0-4)/091004	0.5567	50	100	
123632-1	S-SP1-091604	0.5067	50	100	
123632-2	S-SP2-091604	0.5298	50	100	
123550-1	Jo Grow	0.5048	50	100	
123550-2	Water Filtrate	0.5258	50	100	

00425

STL Seattle

6a **Sample Information**

Client Name	**Lloyd & Assoc. Inc.**	
Work Order Number	**123627**	
Sample Number	**1**	Related Blan zs119
Data Filename	**zs119**	
Client Sample ID	**0916/GNW/MW**	
Date Received	**09-16-04**	
Date Prepared	**09-21-04**	
Date Analyzed	**09-21-04**	
Sample matrix type	**solid**	
QC sample type	**sample**	

Sample weight (g)	**0.5175**	=	0.00052 /kg	Calc. Fact.	112.386132
Digest volume	**50**	=	50 ml	Dry Weight	.44489475 g
Dilution Factor		=	1	Sample Unit	mg/kg
% Solids	**85.97**	=	0.8597	Spike Factor	2.24772264
		=	1	Rept. Dil. Fa	1
Report in PPM	**1**	=	0.001		
mg/kg Carbon		=	1		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Mercury	0.000079			0.00888	J	0.0225

00426

STL Seattle

6a **Sample Information**

Client Name					
Work Order Number					
Sample Number				Related Blan noblank	
Data Filename	**zs119**				
Client Sample ID					
Date Received					
Date Prepared	**09-21-04**				
Date Analyzed	**09-21-04**				
Sample matrix type	**solid**				
QC sample type	**blank**				
Sample weight (g)	**0.5**	=	0.0005 /kg	Calc. Fact.	100
Digest volume	**50**	=	50 ml	Dry Weight	0.5 g
Dilution Factor		=	1	Sample Unit	mg/kg
% Solids		=	1	Spike Factor	2
		=	1	Rept. Dil. Fa	1
Report in PPM	**1**	=	0.001		
mg/kg Carbon		=	1		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

00427

PERCENT MOISTURE

00428

% Moisture Worksheet - total

QC Level:Tier IV	Due: 09/21/04	Work Order - 123627
Matrix:solid		
Lloyd & Assoc. Inc.	Proj. Manager:Darla Powell	

pecial structions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

[redacted]	%Solids	Client Sample ID	040916/GNW/MW
ample Weight/Volume	QA/QC Batch	Date Received	9/16/2004
	10620-35	**Date Sampled**	**9/16/2004 11:20:00 AM**

nalyte Name	Method	Result	Units
Moisture	160.3	14.03	% Moisture

nalyst Aj

Date 9-24-04

eviewed by

Date 9-24-04

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00429

Percent Solids EPA Method 160.3

Date: 9/22/04 **Analyst:** AJM

Batch: 1060-85

Sample ID	Wt Dish	Wt Wet	Wt Dry	% Solids	% Moisture
123627-1	0.733	12.973	11.2559	85.97	14.03
123627-1d	0.7884	17.2899	15.0206	86.25	13.75

Duplicate Analysis

Sample ID	Sample	Duplicate	RPD
123627-1	14.03	13.75	2.02

Maintenance Log

Date:

Analyst:

Comments:

00430

TOTAL ORGANIC CARBON DATA PACKAGE

STL Burlington
Colchester, Vermont

Sample Data Summary Package

SDG: 123627

SEVERN TRENT STL

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446

Tel: 802 655 1203 Fax: 802 655 1248
www.stl-inc.com

September 27, 2004

Mr. Stan Palmquist
STL Seattle
5755 8th Street East
Tacoma, WA 98424

Re: Laboratory Project No. 24028
Case 24028; SDG: 123627

Dear Mr. Palmquist:

Enclosed are the analytical results of samples received by STL Burlington on September 17, 2004. This report is sequentially numbered starting with page 0001 and ending with page 0148. Laboratory ID numbers were designated as follows.

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 09/17/04 ETR No: 102407		
586458	040916/GNW/MW	09/16/04	Soil

Documentation of the condition of the samples at the time of their receipt and any exceptions to the laboratory's Sample Acceptance Policy is included in the Sample Handling section of this submittal.

Total Organic Carbon by Lloyd Kahn Modified
Because of the range in calibration and the constraints associated with the establishment of a low concentration calibration point, there is imprecision in the derivation of results at or near the reporting limit when using a linear regression of all the calibration points for quantification. The laboratory used a direct proportion between zero and the relative response of the low calibration standard in deriving results when the response for any one of the determinations for a particular sample was less than that of the low calibration standard.

The analytical results presented in this data report were generated under a quality system that adheres to the requirements specified in the NELAC standard. This report shall not be reproduced, except in full, without the written approval of the laboratory. The release of the data in this report is authorized by the Laboratory Director or his designee, as verified by the following signature.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director

Chain of Custody Record

3755 Ash Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL

Client	Project Manager	Date	Chain of Custody Number
STL Seattle	Darla Powell	9/16/04	11291
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1

City	State	Zip Code	Site Contact	Lab Contact

Project Name and Location (State): 123627

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed): TPH

Special Instructions/ Conditions of Receipt

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	TPH
040916/GNW/MW	9/16/04	11:20				X							X

Cooler: ☒ Yes ☐ No Cooler Temp:_____

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☒ Disposal By Lab ☐ Return To Client ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☒ Other See SWA

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]			1. Received By: [signature]	9.17.04	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

00434

SEVERN TRENT STL

Sample Data Summary Package For Wet Chemistry

WET CHEMISTRY

Sample Report Summary

Client Sample No.
040916/GNW/MW

.ab Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

.ab Code: STLVT | Case No.: 24028 | Lab Sample ID: 586458

/latrix: SOIL | Client: STLWAS | Date Received: 09/17/04

% Solids: 100.0

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	09/20/04	N/A	%	1.0		100.0	
IN847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	1	500	515	

Printed on: 09/22/04 08:26 AM

WET CHEMISTRY

Method Blank Report Summary

ıb Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

ıb Code: STLVT | Case No.: 24028

atrix: SOIL | Client: STLWAS

Solids:

Lab Sample ID	Method	Parameter	Conc.	Units	Qual.	DF	RL	Analytical Run Date	Analytical Batch
3LKLK0920A	IN847	TOC, PSEP (LK Modified)	500	mg/Kg	U	1	500	09/20/04	BLKLK0920A

WET CHEMISTRY

Laboratory Control Sample Report Summary

.ab Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

.ab Code: STLVT | Case No.: 24028

/latrix: SOIL | Client: STLWAS

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCS Conc.	True Value	% Recovery*
LCSLK0920A	IN847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	7510	8500	88

** Control Limit for Percent Recovery is 85-115%, unless otherwise specified.*

Printed on: 09/22/04 08:26 AM

WET CHEMISTRY

Laboratory Control Sample Duplicate
Report Summary

ab Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

ab Code: STLVT | Case No.: 24028

latrix: SOIL | Client: STLWAS

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCSD Conc.	True Value	% Recovery*	RPD**
LCSDLK0920A	IN847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	7030	8500	83	6

** Control Limit for Percent Recovery is 85-115%, unless otherwise specified.*
*** Control Limit for RPD is +/- 20%, unless otherwise specified.*

00439

STL Burlington
Colchester, Vermont

Extended Data Package

SDG: 123627

SEVERN TRENT STL

NARRATIVE

00441

METHOD BLANK

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06457.D\ECD1A.CH Vial: 67
Signal #2 : H:\DATA\091604\ECD06457.D\ECD2B.CH
Acq On : 9-17-2004 06:02:49 PM Operator: SJL/CRF
Sample : MB PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35:05 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
System Monitoring Compounds						
2) SR Tetrachloro-m-xy	7.02	6.23	6314420	4888939	16.885	15.704
Spiked Amount 20.000 Range 60 - 150 Recovery =					84.43%	78.52%
4) SR Decachlorobiphen	13.50	12.90	6378324	4480545	21.130	21.752
Spiked Amount 20.000 Range 60 - 150 Recovery =					105.65%	108.76%
Target Compounds						
1) T Hexachlorobutadi	0.00	3.17	0	158095	N.D.	0.234 #
3) alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
4) T Hexachlorobenzen	7.60	6.92f	144111	115106	0.270	0.340 #
5) M gamma-BHC (Linda	0.00	0.00	0	0	N.D.	N.D.
6) beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) delta-BHC	0.00	7.84f	0	114193	N.D.	0.310 #
8) M Heptachlor	0.00	0.00	0	0	N.D.	N.D.
9) M Aldrin	0.00	8.12	0	273897	N.D.	0.718 #
0) Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.
1) gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
2) alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
3) Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
4) 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
5) M Dieldrin	0.00	0.00	0	0	N.D.	N.D.
6) M Endrin	0.00	0.00	0	0	N.D.	N.D.
7) 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
8) Endosulfan II	0.00	10.58	0	716682	N.D.	2.183 #
9) M 4,4'-DDT	0.00	10.83f	0	3082694	N.D.	14.490 #
0) Endrin Aldehyde	11.27f	10.83	3891797	3082694	12.925	12.057
1) Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.
2) Methoxychlor	12.01f	0.00	153888	0	1.036	N.D. #
3) Endrin Ketone	12.01f	0.00	153888	0	0.351	N.D. #

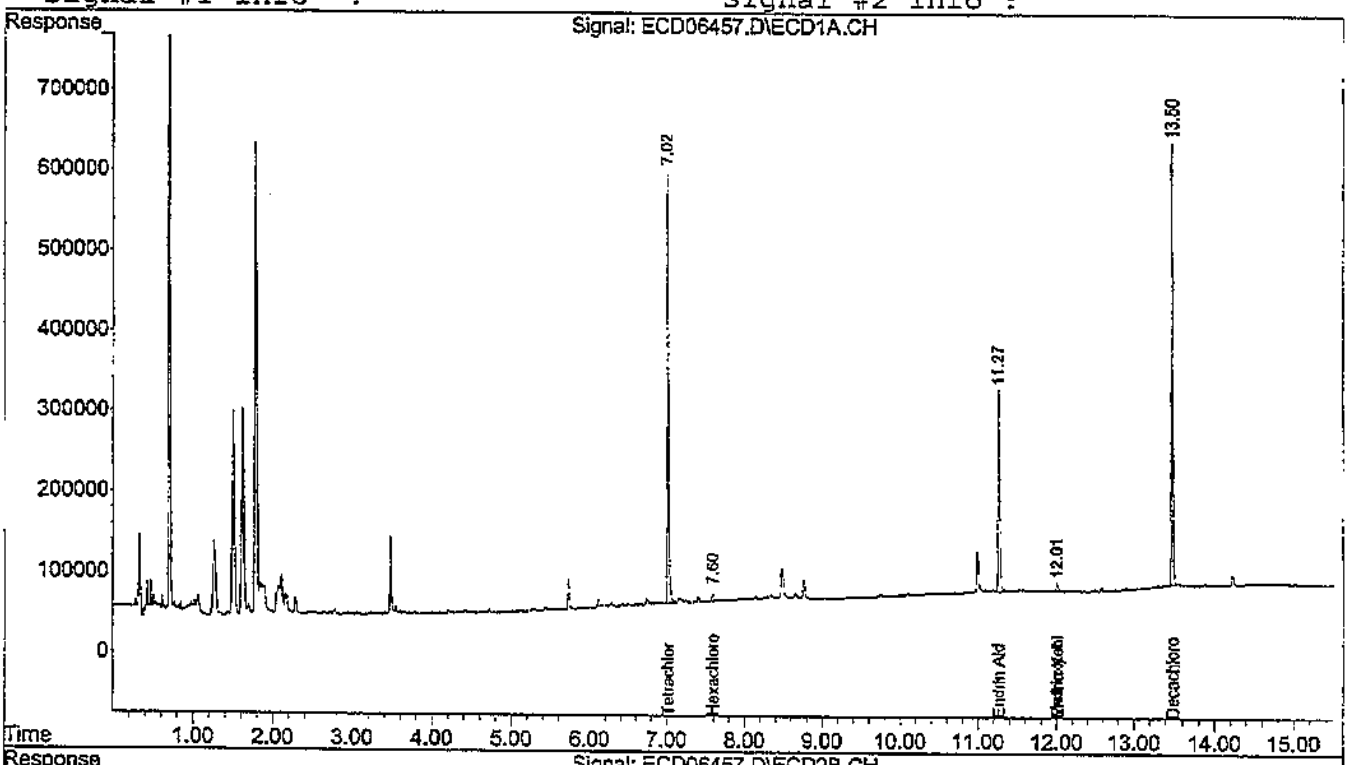
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

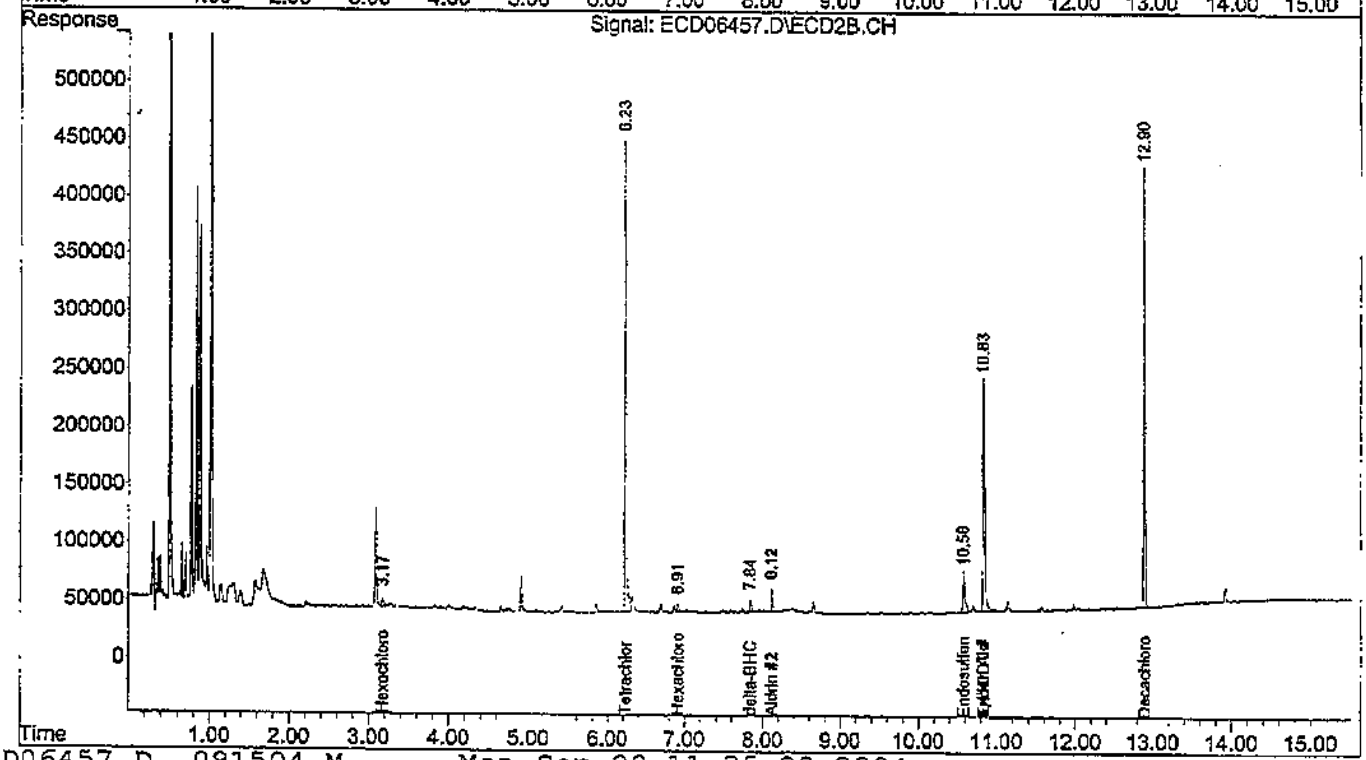
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06457.D\ECD1A.CH Vial: 67
Signal #2 : H:\DATA\091604\ECD06457.D\ECD2B.CH
Acq On : 9-17-2004 06:02:49 PM Operator: SJL/CRF
Sample : MB PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00323

Custom Report - Relative Retention Times

Sample Name MB PE1750

Data File Path H:\DATA\091604\ECD06457.D
Date Acquired 9-17-2004 06:02:49 PM

CCV File Path H:\DATA\091604\ECD06455.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	0.00	3.17	0.0000	0.2458	0.2965	0.2477	-	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5204	0.4834	0.5205	0.4834	OK	OK
alpha-BHC	0.00	0.00	0.0000	0.0000	0.5569	0.5432	-	-
Hexachlorobenzene	7.60	6.92	0.5630	0.5363	0.5631	0.5324	OK	-
gamma-BHC (Lindane)	0.00	0.00	0.0000	0.0000	0.5846	0.5763	-	-
beta-BHC	0.00	0.00	0.0000	0.0000	0.6113	0.5999	-	-
delta-BHC	0.00	7.84	0.0000	0.6082	0.6345	0.6055	-	OK
Heptachlor	0.00	0.00	0.0000	0.0000	0.6379	0.6217	-	-
Aldrin	0.00	8.12	0.0000	0.6294	0.6727	0.6305	-	OK
Heptachlor Epoxide	0.00	0.00	0.0000	0.0000	0.7215	0.6863	-	-
gamma-Chlordane	0.00	0.00	0.0000	0.0000	0.7539	0.7139	-	-
alpha-Chlordane	0.00	0.00	0.0000	0.0000	0.7582	0.7252	-	-
Endosulfan I	0.00	0.00	0.0000	0.0000	0.7603	0.7290	-	-
4,4'-DDE	0.00	0.00	0.0000	0.0000	0.7776	0.7529	-	-
Dieldrin	0.00	0.00	0.0000	0.0000	0.7845	0.7603	-	-
Endrin	0.00	0.00	0.0000	0.0000	0.8043	0.7913	-	-
4,4'-DDD	0.00	0.00	0.0000	0.0000	0.8237	0.8110	-	-
Endosulfan II	0.00	10.58	0.0000	0.8206	0.8291	0.8184	-	OK
4,4'-DDT	0.00	10.83	0.0000	0.8402	0.8490	0.8361	-	-
Endrin Aldehyde	11.27	10.83	0.8349	0.8402	0.8387	0.8406	-	OK
Endosulfan Sulfate	0.00	0.00	0.0000	0.0000	0.8627	0.8590	-	-
Methoxychlor	12.01	0.00	0.8900	0.0000	0.8874	0.8988	OK	-
Endrin Ketone	12.01	0.00	0.8900	0.0000	0.8944	0.9084	-	-
Decachlorobiphenyl (S)	13.50	12.90	1.0000	1.0000	1.0000	1.0000	OK	OK

00324

BLANK SPIKE

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06458.D\ECD1A.CH Vial: 68
Signal #2 : H:\DATA\091604\ECD06458.D\ECD2B.CH
Acq On : 9-17-2004 06:23:57 PM Operator: SJL/CRF
Sample : BS PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35:12 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
	System Monitoring Compounds							
2)	SR Tetrachloro-m-xy	7.02	6.23	6288996	5022354	16.817	16.132	
	Spiked Amount 20.000 Range 60 - 150 Recovery =					84.08%	80.66%	
4)	SR Decachlorobiphen	13.50	12.90	5398196	3774605	17.883	18.325	
	Spiked Amount 20.000 Range 60 - 150 Recovery =					89.42%	91.63%	
	Target Compounds							
1)	T Hexachlorobutadi	4.00	3.20	11266791	10409008	15.431	15.411	
3)	alpha-BHC	7.52	7.01	10873453	8763291	21.441	20.261	
4)	T Hexachlorobenzen	7.60	6.87	10291240	6462537	19.256	19.092	
5)	M gamma-BHC (Linda	7.89	7.43	9783731	7774583	20.997	20.049	
6)	beta-BHC	8.25	7.74	3893756	3082608	18.421	18.494	
7)	delta-BHC	8.56	7.81	9335106	7328578	22.788	19.911	
8)	M Heptachlor	8.61	8.02	9595799	7474959	19.843	21.095	
9)	M Aldrin	9.08	8.13	9031316	7622143	20.898	19.981	
.0)	Heptachlor Epoxi	9.74	8.85	8355766	6864200	19.463	18.811	
.1)	gamma-Chlordane	10.17	9.21	8340016	7153968	19.128	18.618	
.2)	alpha-Chlordane	10.23	9.35	8148438	6939694	18.428	17.836	
.3)	Endosulfan I	10.26	9.40	7863774	6609916	19.675	18.935	
.4)	4,4'-DDE	10.49	9.71	8287106	6957539	19.079	18.922	
.5)	M Dieldrin	10.59	9.80	8521128	6905910	21.258	19.743	
.6)	M Endrin	10.86	10.20	6516474	5463429	18.366	19.093	
.7)	4,4'-DDD	11.12	10.46	6687917	5613143	19.167	19.317	
.8)	Endosulfan II	11.19	10.55	7300065	6697468	19.478	20.397	
.9)	M 4,4'-DDT	11.46	10.78	5141666	4244142	19.245	19.949	
:0)	Endrin Aldehyde	11.32	10.84	5410962	7081776	17.971	27.699	#
:1)	Endosulfan Sulfa	11.64	11.08	6485060	5540770	18.359	18.358	
:2)	Methoxychlor	11.98	11.59	2723980	2200576	18.333	19.926	
:3)	Endrin Ketone	12.07	11.72	7846935	6317876	17.910	17.518	

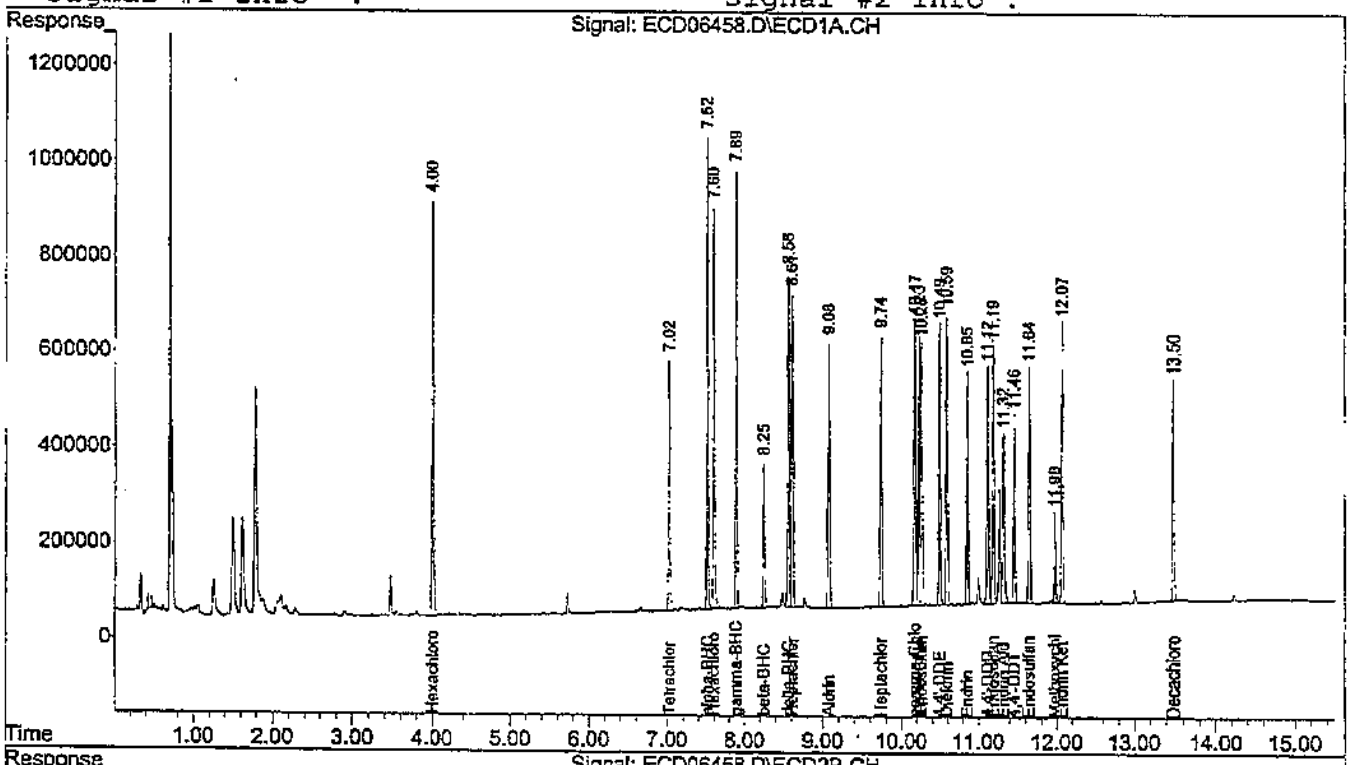
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

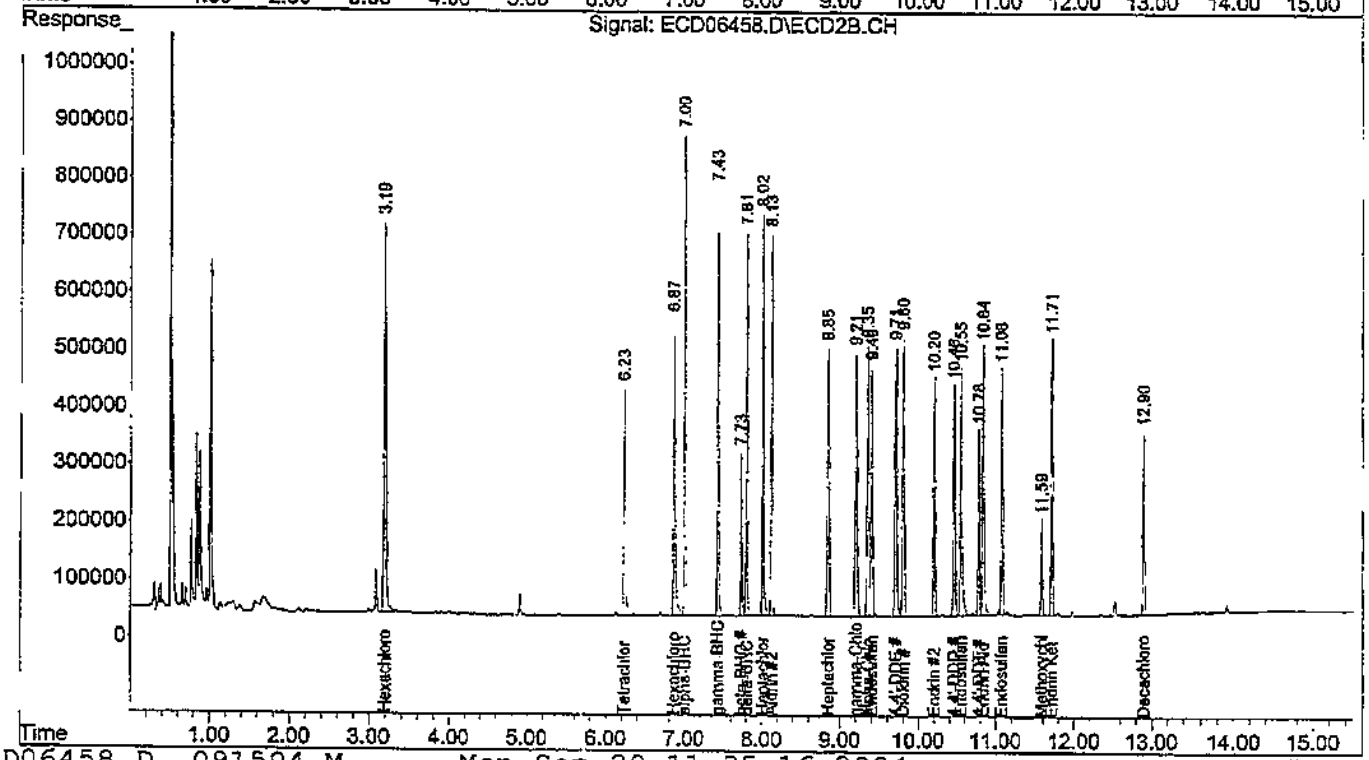
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06458.D\ECD1A.CH Vial: 68
Signal #2 : H:\DATA\091604\ECD06458.D\ECD2B.CH
Acq On : 9-17-2004 06:23:57 PM Operator: SJL/CRF
Sample : BS PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00327

Custom Report - Relative Retention Times

Sample Name BS PE1750

Data File Path H:\DATA\091604\ECD06458.D
Date Acquired 9-17-2004 06:23:57 PM

CCV File Path H:\DATA\091604\ECD06455.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	4.00	3.20	0.2966	0.2478	0.2965	0.2477	OK	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5205	0.4835	0.5205	0.4834	OK	OK
alpha-BHC	7.52	7.01	0.5570	0.5433	0.5569	0.5432	OK	OK
Hexachlorobenzene	7.60	6.87	0.5631	0.5324	0.5631	0.5324	OK	OK
gamma-BHC (Lindane)	7.89	7.43	0.5847	0.5763	0.5846	0.5763	OK	OK
beta-BHC	8.25	7.74	0.6113	0.5999	0.6113	0.5999	OK	OK
delta-BHC	8.56	7.81	0.6344	0.6056	0.6345	0.6055	OK	OK
Heptachlor	8.61	8.02	0.6379	0.6217	0.6379	0.6217	OK	OK
Aldrin	9.08	8.13	0.6727	0.6305	0.6727	0.6305	OK	OK
Heptachlor Epoxide	9.74	8.85	0.7215	0.6863	0.7215	0.6863	OK	OK
gamma-Chlordane	10.17	9.21	0.7539	0.7139	0.7539	0.7139	OK	OK
alpha-Chlordane	10.23	9.35	0.7582	0.7252	0.7582	0.7252	OK	OK
Endosulfan I	10.26	9.40	0.7602	0.7291	0.7603	0.7290	OK	OK
4,4'-DDE	10.49	9.71	0.7776	0.7529	0.7776	0.7529	OK	OK
Dieldrin	10.59	9.80	0.7845	0.7603	0.7845	0.7603	OK	OK
Endrin	10.86	10.20	0.8043	0.7913	0.8043	0.7913	OK	OK
4,4'-DDD	11.12	10.46	0.8237	0.8110	0.8237	0.8110	OK	OK
Endosulfan II	11.19	10.55	0.8290	0.8184	0.8291	0.8184	OK	OK
4,4'-DDT	11.46	10.78	0.8490	0.8361	0.8490	0.8361	OK	OK
Endrin Aldehyde	11.32	10.84	0.8387	0.8404	0.8387	0.8406	OK	OK
Endosulfan Sulfate	11.64	11.08	0.8627	0.8590	0.8627	0.8590	OK	OK
Methoxychlor	11.98	11.59	0.8874	0.8989	0.8874	0.8988	OK	OK
Endrin Ketone	12.07	11.72	0.8944	0.9085	0.8944	0.9084	OK	OK
Decachlorobiphenyl (S)	13.50	12.90	1.0000	1.0000	1.0000	1.0000	OK	OK

00328

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\091604\ECD06459.D\ECD1A.CH Vial: 69
Signal #2 : H:\DATA\091604\ECD06459.D\ECD2B.CH
Acq On : 9-17-2004 06:44:54 PM Operator: SJL/CRF
Sample : BSD PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35:20 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

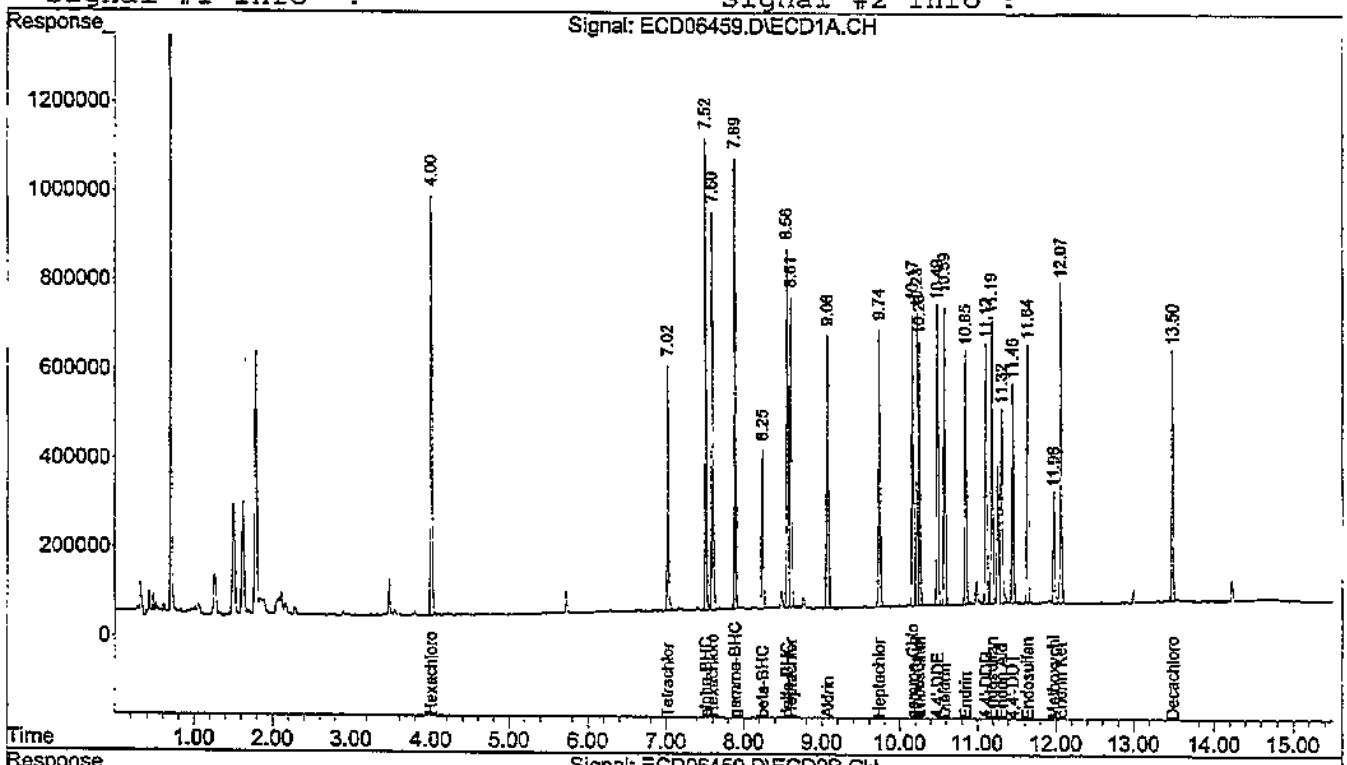
		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
		System Monitoring Compounds							
2)	SR	Tetrachloro-m-xy	7.02	6.23	6567166	5043520	17.560	16.200	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					87.80%	81.00%	
4)	SR	Decachlorobiphen	13.50	12.90	6586820	4576481	21.820	22.218	
		Spiked Amount 20.000 Range 60 - 150 Recovery =					109.10%	111.09%	
		Target Compounds							
1)	T	Hexachlorobutadi	4.00	3.19	11552141	10474066	15.822	15.508	
3)		alpha-BHC	7.52	7.01	11619095	9304501	22.911	21.512	
4)	T	Hexachlorobenzen	7.60	6.87	10934498	6766197	20.459	19.989	
5)	M	gamma-BHC (Linda	7.89	7.43	10615031	8363234	22.781	21.567	
6)		beta-BHC	8.25	7.74	4414360	3472245	20.884	20.832	
7)		delta-BHC	8.56	7.81	10954395	7907302	26.741	21.483	
8)	M	Heptachlor	8.61	8.02	10365424	8624908	21.435	24.341	
9)	M	Aldrin	9.08	8.13	9835117	8212705	22.758	21.530	
0)		Heptachlor Epoxi	9.74	8.85	9328531	7593474	21.729	20.810	
1)		gamma-Chlordane	10.17	9.21	9464540	8070080	21.707	21.002	
2)		alpha-Chlordane	10.23	9.35	9321234	7874401	21.080	20.238	
3)		Endosulfan I	10.26	9.40	8696850	7362129	21.759	21.089	
4)		4,4'-DDE	10.49	9.71	9589798	8040734	22.078	21.868	
5)	M	Dieldrin	10.59	9.80	9671265	7739306	24.128	22.126	
6)	M	Endrin	10.85	10.20	7714728	6423843	21.743	22.449	
7)		4,4'-DDD	11.12	10.46	7956483	6678956	22.803	22.984	
8)		Endosulfan II	11.19	10.55	8556727	7741648	22.831	23.577	
9)	M	4,4'-DDT	11.46	10.78	6476619	5312854	24.242	24.972	
0)		Endrin Aldehyde	11.32	10.84	6435464	8648836	21.373	33.828	#-MATRIX
1)		Endosulfan Sulfa	11.64	11.08	7797920	6672427	22.076	22.108	
2)		Methoxychlor	11.98	11.59	3514744	2760307	23.655	24.995	
3)		Endrin Ketone	12.07	11.71	9395450	7503723	21.444	20.806	

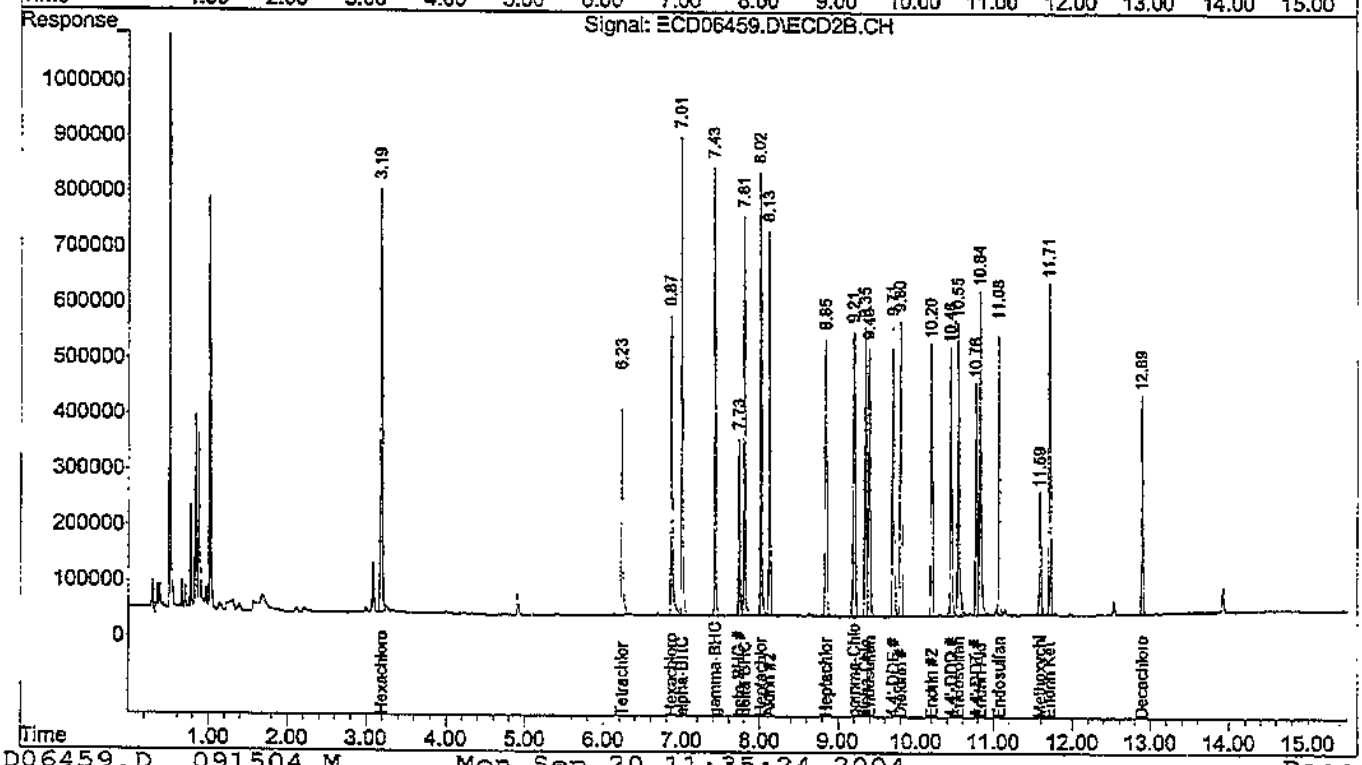
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : H:\DATA\091604\ECD06459.D\ECD1A.CH Vial: 69
Signal #2 : H:\DATA\091604\ECD06459.D\ECD2B.CH
Acq On : 9-17-2004 06:44:54 PM Operator: SJL/CRF
Sample : BSD PE1750 Inst : Agilent E
Misc : SOIL #10 &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 11:35 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





Custom Report - Relative Retention Times

Sample Name BSD PE1750

Data File Path H:\DATA\091604\ECD06459.D
Date Acquired 9-17-2004 06:44:54 PM

CCV File Path H:\DATA\091604\ECD06455.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	+/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	4.00	3.19	0.2965	0.2477	0.2965	0.2477	OK	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5205	0.4834	0.5205	0.4834	OK	OK
alpha-BHC	7.52	7.01	0.5569	0.5433	0.5569	0.5432	OK	OK
Hexachlorobenzene	7.60	6.87	0.5630	0.5324	0.5631	0.5324	OK	OK
gamma-BHC (Lindane)	7.89	7.43	0.5847	0.5763	0.5846	0.5763	OK	OK
beta-BHC	8.25	7.74	0.6113	0.5998	0.6113	0.5999	OK	OK
delta-BHC	8.56	7.81	0.6344	0.6056	0.6345	0.6055	OK	OK
Heptachlor	8.61	8.02	0.6379	0.6217	0.6379	0.6217	OK	OK
Aldrin	9.08	8.13	0.6726	0.6305	0.6727	0.6305	OK	OK
Heptachlor Epoxide	9.74	8.85	0.7214	0.6863	0.7215	0.6863	OK	OK
gamma-Chlordane	10.17	9.21	0.7538	0.7139	0.7539	0.7139	OK	OK
alpha-Chlordane	10.23	9.35	0.7582	0.7252	0.7582	0.7252	OK	OK
Endosulfan I	10.26	9.40	0.7602	0.7291	0.7603	0.7290	OK	OK
4,4'-DDE	10.49	9.71	0.7776	0.7528	0.7776	0.7529	OK	OK
Dieldrin	10.59	9.80	0.7845	0.7602	0.7845	0.7603	OK	OK
Endrin	10.85	10.20	0.8043	0.7913	0.8043	0.7913	OK	OK
4,4'-DDD	11.12	10.46	0.8237	0.8109	0.8237	0.8110	OK	OK
Endosulfan II	11.19	10.55	0.8290	0.8184	0.8291	0.8184	OK	OK
4,4'-DDT	11.46	10.78	0.8490	0.8361	0.8490	0.8361	OK	OK
Endrin Aldehyde	11.32	10.84	0.8386	0.8404	0.8387	0.8406	OK	OK
Endosulfan Sulfate	11.64	11.08	0.8627	0.8590	0.8627	0.8590	OK	OK
Methoxychlor	11.98	11.59	0.8874	0.8988	0.8874	0.8988	OK	OK
Endrin Ketone	12.07	11.71	0.8944	0.9084	0.8944	0.9084	OK	OK
Decachlorobiphenyl (S)	13.50	12.90	1.0000	1.0000	1.0000	1.0000	OK	OK

00331

MATIX SPIKE / MATRIX SPIKE DUPLICATE

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06478.D\ECD1A.CH Vial: 72
Signal #2 : H:\DATA\092004\ECD06478.D\ECD2B.CH
Acq On : 9-20-2004 02:02:33 PM Operator: SJL/CRF
Sample : 123618-03 MS PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:52:59 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
		System Monitoring Compounds						
2)	SR	Tetrachloro-m-xy	7.02	6.23	7836157	5978481	20.954	19.204
Spiked Amount		20.000 Range	60 - 150		Recovery	=	104.77%	96.02%
4)	SR	Decachlorobiphen	13.49	12.89	7558019	5003177	25.038	24.289
Spiked Amount		20.000 Range	60 - 150		Recovery	=	125.19%	121.45%
		Target Compounds						
1)	T	Hexachlorobutadi	4.00	3.19	14691229	13958116	20.121	20.666
3)		alpha-BHC	7.51	7.00	14112095	11280147	27.827	26.080
4)	T	Hexachlorobenzen	7.60	6.87	211.9E6	121.2E6	396.430	358.038
5)	M	gamma-BHC (Linda	7.89	7.43	12688403	10069857	27.231	25.968
6)		beta-BHC	8.25	7.73	5220521	4190090	24.698	25.139
7)		delta-BHC	8.56	7.81	11589858	9037680	28.293	24.554
8)	M	Heptachlor	8.61	8.02	12038526	9096400	24.895	25.671
9)	M	Aldrin	9.07	8.13	13362294	10228310	30.920	26.814
0)		Heptachlor Epoxi	9.73	8.85	11515249	9376459	26.823	25.696
1)		gamma-Chlordane	10.17	9.20	11046589	9603342	25.335	24.992
2)		alpha-Chlordane	10.23	9.35	10432546	10041903	23.593	25.809
3)		Endosulfan I	10.26	9.40	9558817	8599573	23.916	24.634
4)		4,4'-DDE	10.49	9.71	11574865	10280125	26.648	27.958
5)	M	Dieldrin	10.59	9.80	11562981	9543539	28.847	27.284
6)	M	Endrin	10.85	10.20	10626839	9197551	29.951	32.143
7)		4,4'-DDD	11.11	10.46	9641983	6164222	27.633	21.213
8)		Endosulfan II	11.19	10.55	9953923	8556655	26.559	26.059
9)	M	4,4'-DDT	11.46	10.78	7741717	6738292	28.977	31.672
0)		Endrin Aldehyde	11.32	10.83	757131	10758575	2.515	42.080 #
1)		Endosulfan Sulfa	11.64	11.07	7751484	7347430	21.944	24.344
2)		Methoxychlor	11.97	11.59	4146429	3352416	27.907	30.356
3)		Endrin Ketone	12.07	11.71	10135839	8283670	23.134	22.969

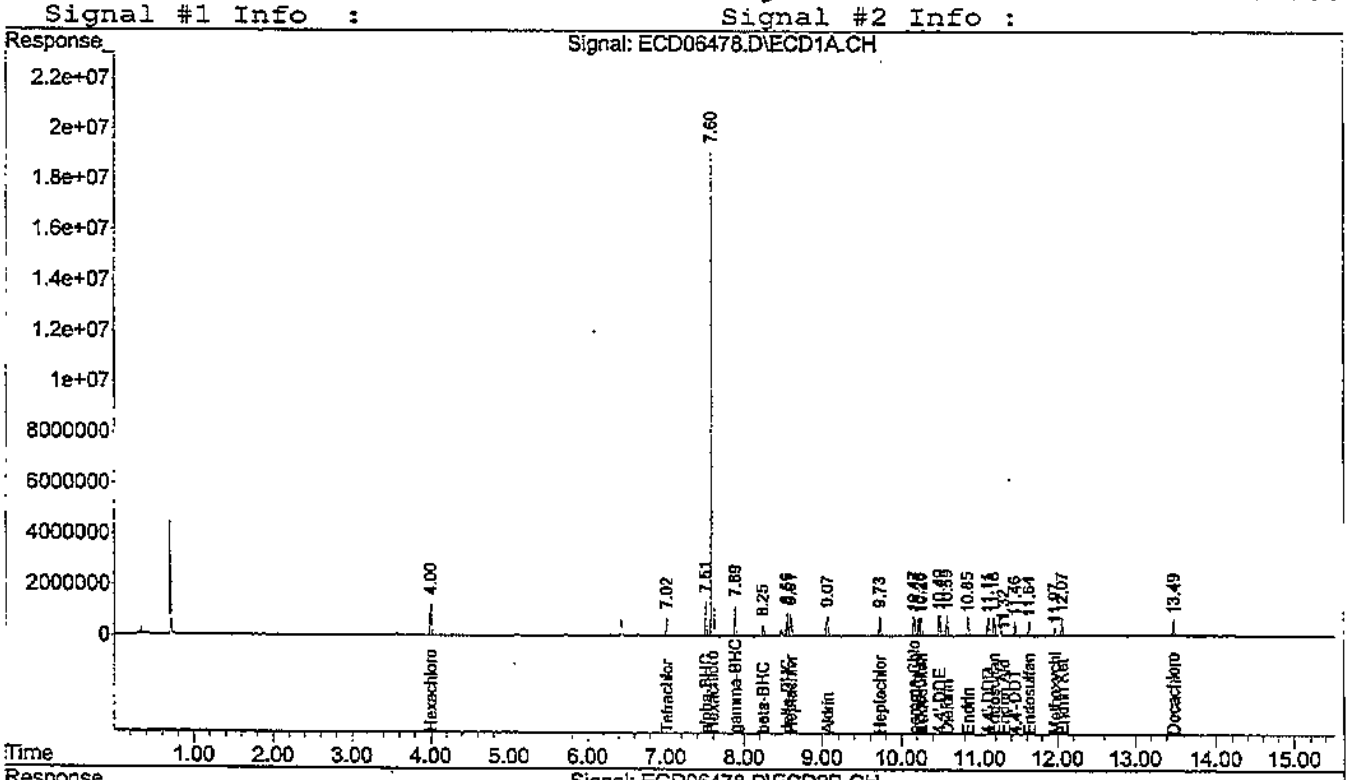
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

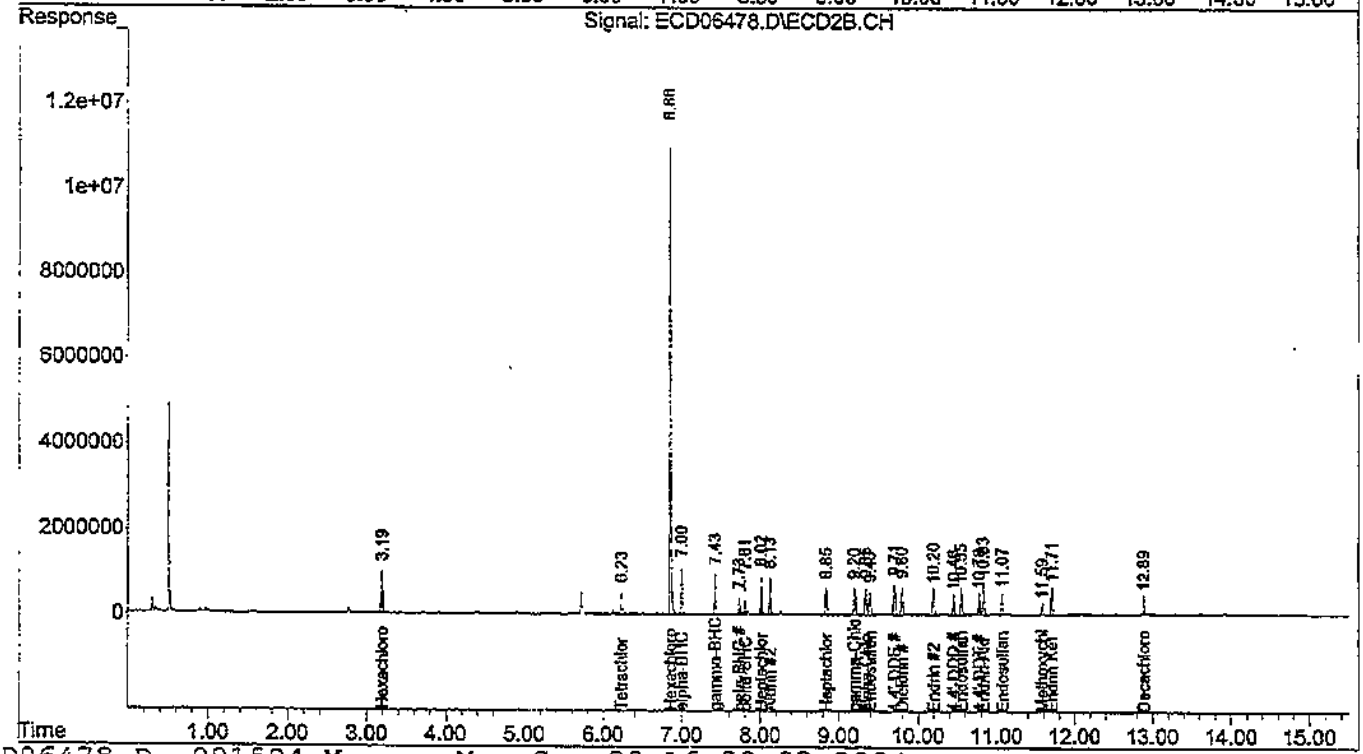
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06478.D\ECD1A.CH Vial: 72
Signal #2 : H:\DATA\092004\ECD06478.D\ECD2B.CH
Acq On : 9-20-2004 02:02:33 PM Operator: SJL/CRF
Sample : 123618-03 MS PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:53 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00134

Custom Report - Relative Retention Times

Sample Name 123618-03 MS PE1750

Data File Path H:\DATA\092004\ECD06478.D
Date Acquired 9-20-2004 02:02:33 PM

CCV File Path H:\DATA\092004\ECD06475.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	+/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	4.00	3.19	0.2966	0.2478	0.2966	0.2477	OK	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5205	0.4835	0.5206	0.4835	OK	OK
alpha-BHC	7.51	7.00	0.5570	0.5433	0.5570	0.5433	OK	OK
Hexachlorobenzene	7.60	6.87	0.5631	0.5325	0.5631	0.5325	OK	OK
gamma-BHC (Lindane)	7.89	7.43	0.5847	0.5764	0.5847	0.5764	OK	OK
beta-BHC	8.25	7.73	0.6113	0.5999	0.6113	0.5999	OK	OK
delta-BHC	8.56	7.81	0.6344	0.6056	0.6345	0.6056	OK	OK
Heptachlor	8.61	8.02	0.6379	0.6217	0.6379	0.6218	OK	OK
Aldrin	9.07	8.13	0.6726	0.6305	0.6726	0.6305	OK	OK
Heptachlor Epoxide	9.73	8.85	0.7215	0.6862	0.7214	0.6863	OK	OK
gamma-Chlordane	10.17	9.20	0.7538	0.7139	0.7538	0.7138	OK	OK
alpha-Chlordane	10.23	9.35	0.7582	0.7252	0.7582	0.7251	OK	OK
Endosulfan I	10.26	9.40	0.7603	0.7290	0.7602	0.7290	OK	OK
4,4'-DDE	10.49	9.71	0.7775	0.7528	0.7776	0.7528	OK	OK
Dieldrin	10.59	9.80	0.7845	0.7602	0.7845	0.7602	OK	OK
Endrin	10.85	10.20	0.8043	0.7913	0.8043	0.7912	OK	OK
4,4'-DDD	11.11	10.46	0.8237	0.8110	0.8237	0.8110	OK	OK
Endosulfan II	11.19	10.55	0.8290	0.8184	0.8290	0.8183	OK	OK
4,4'-DDT	11.46	10.78	0.8490	0.8361	0.8490	0.8361	OK	OK
Endrin Aldehyde	11.32	10.83	0.8387	0.8402	0.8387	0.8405	OK	OK
Endosulfan Sulfate	11.64	11.07	0.8627	0.8590	0.8627	0.8590	OK	OK
Methoxychlor	11.97	11.59	0.8874	0.8988	0.8874	0.8988	OK	OK
Endrin Ketone	12.07	11.71	0.8944	0.9084	0.8945	0.9084	OK	OK
Decachlorobiphenyl (S)	13.49	12.89	1.0000	1.0000	1.0000	1.0000	OK	OK

Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06479.D\ECD1A.CH Vial: 73
Signal #2 : H:\DATA\092004\ECD06479.D\ECD2B.CH
Acq On : 9-20-2004 02:23:26 PM Operator: SJL/CRF
Sample : 123618-03 MSD PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:53:07 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Initial Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml	
System Monitoring Compounds							
2) SR Tetrachloro-m-xy	7.02	6.23	7924486	6035757	21.190	19.388	
Spiked Amount 20.000 Range 60 - 150 Recovery =					105.95%	96.94%	
4) SR Decachlorobiphen	13.49	12.89	7737281	5116499	25.632	24.839	
Spiked Amount 20.000 Range 60 - 150 Recovery =					128.16%	124.19%	
Target Compounds							
1) T Hexachlorobutadi	4.00	3.20	14282520	13220704	19.561	19.574	
3) alpha-BHC	7.51	7.00	13354787	10647829	26.333	24.618	
4) T Hexachlorobenzen	7.60	6.87	178.2E6	103.3E6	333.467	305.278	
5) M gamma-BHC (Linda	7.89	7.43	12009196	9384428	25.773	24.200	
6) beta-BHC	8.25	7.73	4996028	3878714	23.636	23.271	
7) delta-BHC	8.56	7.81	9602856	8390911	23.442	22.797	
8) M Heptachlor	8.61	8.02	11394729	7341046	23.564	20.717	
9) M Aldrin	9.07	8.13	13184642	9740848	30.509	25.536	
0) Heptachlor Epoxi	9.73	8.85	10967810	9095787	25.547	24.927	
1) gamma-Chlordane	10.17	9.20	10879960	9544253	24.953	24.839	
2) alpha-Chlordane	10.23	9.35	10365427	9261612	23.442	23.803	
3) Endosulfan I	10.26	9.40	9267953	8265189	23.188	23.676	
4) 4,4'-DDE	10.49	9.71	11474454	9955344	26.417	27.074	
5) M Dieldrin	10.58	9.80	11187993	9034166	27.911	25.828	
6) M Endrin	10.85	10.20	9884830	8289041	27.860	28.968	
7) 4,4'-DDD	11.11	10.46	9599442	5715321	27.511	19.668	#
8) Endosulfan II	11.19	10.55	9687103	8008320	25.847	24.389	
9) M 4,4'-DDT	11.45	10.78	7386488	6248611	27.647	29.370	
0) Endrin Aldehyde	11.32	10.83	570532	3700641	1.895	14.474	#
1) Endosulfan Sulfa	11.64	11.08	6519161	6119253	18.456	20.275	
2) Methoxychlor	11.97	11.59	4108595	3209968	27.652	29.066	
3) Endrin Ketone	12.07	11.71	9951633	8226838	22.714	22.811	

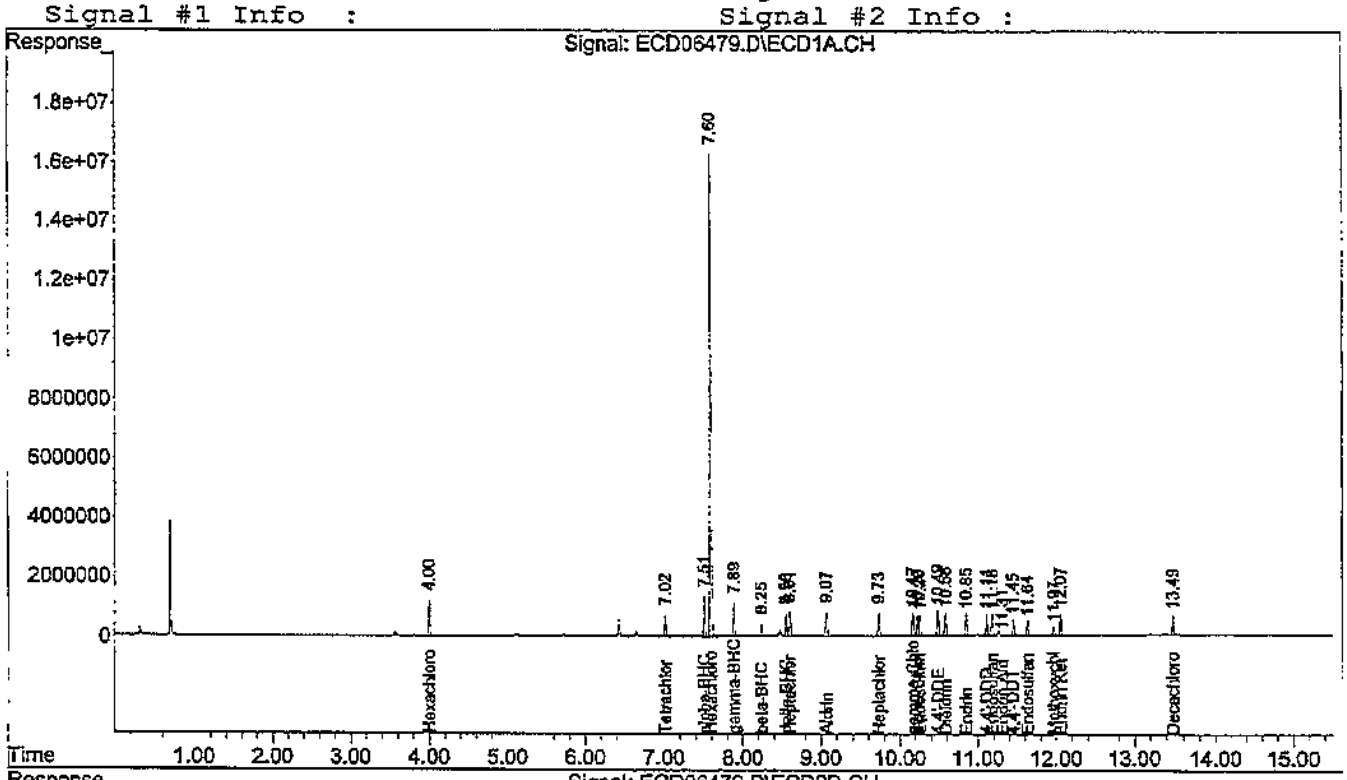
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

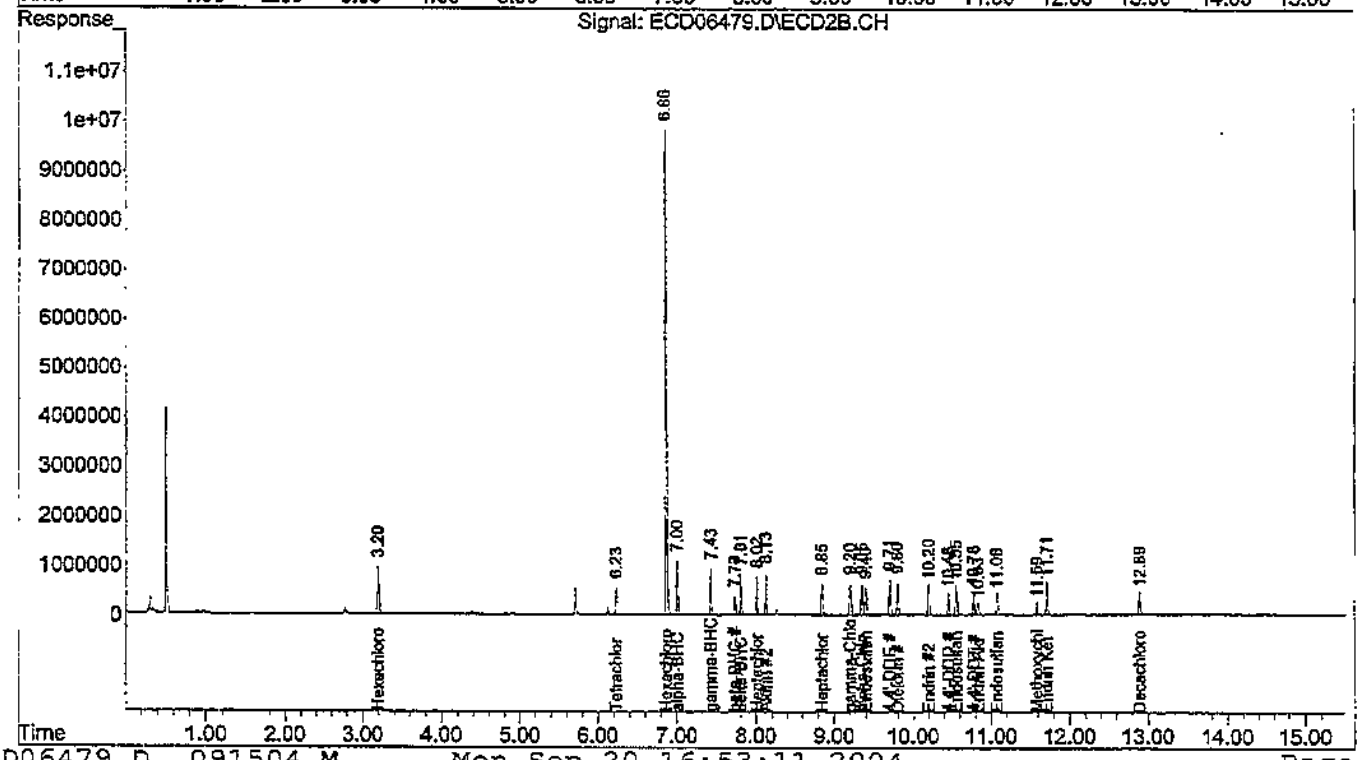
Quantitation Report (Not Reviewed)

Signal #1 : H:\DATA\092004\ECD06479.D\ECD1A.CH Vial: 73
Signal #2 : H:\DATA\092004\ECD06479.D\ECD2B.CH
Acq On : 9-20-2004 02:23:26 PM Operator: SJL/CRF
Sample : 123618-03 MSD PE1750 Inst : Agilent E
Misc : SOIL &10 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Sep 20 16:53 2004 Quant Results File: 091504.RES

Quant Method : H:\METHODS\091504.M (Chemstation Integrator)
Title : 8081A Pesticides - Dual Column
Last Update : Wed Sep 15 13:31:23 2004
Response via : Multiple Level Calibration
DataAcq Meth : PESTSLOW.M

Volume Inj. : 1.0 ul
Signal #1 Phase : RTX-CLPesticides Signal #2 Phase: RTX-CLPesticides 2
Signal #1 Info : Signal #2 Info :





00537

Custom Report - Relative Retention Times

Sample Name 123618-03 MSD PE1750

Data File Path H:\DATA\092004\ECD06479.D
Date Acquired 9-20-2004 02:23:26 PM

CCV File Path H:\DATA\092004\ECD06475.D

Compound Name	RT #1	RT #2	RRT #1	RRT #2	CCV RRT #1	CCV RRT #2	+/- 0.003 Chk. #	+/- 0.003 Chk. #2
Hexachlorobutadiene	4.00	3.20	0.2966	0.2479	0.2966	0.2477	OK	OK
Tetrachloro-m-xylene (S)	7.02	6.23	0.5205	0.4835	0.5206	0.4835	OK	OK
alpha-BHC	7.51	7.00	0.5570	0.5433	0.5570	0.5433	OK	OK
Hexachlorobenzene	7.60	6.87	0.5631	0.5325	0.5631	0.5325	OK	OK
gamma-BHC (Lindane)	7.89	7.43	0.5847	0.5764	0.5847	0.5764	OK	OK
beta-BHC	8.25	7.73	0.6113	0.5999	0.6113	0.5999	OK	OK
delta-BHC	8.56	7.81	0.6344	0.6056	0.6345	0.6056	OK	OK
Heptachlor	8.61	8.02	0.6379	0.6217	0.6379	0.6218	OK	OK
Aldrin	9.07	8.13	0.6726	0.6305	0.6726	0.6305	OK	OK
Heptachlor Epoxide	9.73	8.85	0.7214	0.6863	0.7214	0.6863	OK	OK
gamma-Chlordane	10.17	9.20	0.7538	0.7139	0.7538	0.7138	OK	OK
alpha-Chlordane	10.23	9.35	0.7582	0.7252	0.7582	0.7251	OK	OK
Endosulfan I	10.26	9.40	0.7602	0.7291	0.7602	0.7290	OK	OK
4,4'-DDE	10.49	9.71	0.7775	0.7528	0.7776	0.7528	OK	OK
Dieldrin	10.58	9.80	0.7845	0.7602	0.7845	0.7602	OK	OK
Endrin	10.85	10.20	0.8042	0.7913	0.8043	0.7912	OK	OK
4,4'-DDD	11.11	10.46	0.8237	0.8110	0.8237	0.8110	OK	OK
Endosulfan II	11.19	10.55	0.8290	0.8183	0.8290	0.8183	OK	OK
4,4'-DDT	11.45	10.78	0.8490	0.8360	0.8490	0.8361	OK	OK
Endrin Aldehyde	11.32	10.83	0.8386	0.8402	0.8387	0.8405	OK	OK
Endosulfan Sulfate	11.64	11.08	0.8627	0.8590	0.8627	0.8590	OK	OK
Methoxychlor	11.97	11.59	0.8874	0.8989	0.8874	0.8988	OK	OK
Endrin Ketone	12.07	11.71	0.8943	0.9084	0.8945	0.9084	OK	OK
Decachlorobiphenyl (S)	13.49	12.89	1.0000	1.0000	1.0000	1.0000	OK	OK

LABORATORY WORKSHEETS

00339

Chlorinated Pesticides Worksheet - total

QC Level:Tier IV

Matrix:solid

Lloyd & Assoc. Inc.

Due: 09/21/04 | **Work Order - 123627**

Proj. Manager:Darla Powell

Special Instructions

5 DayTAT 4 jars provided for sample
LL for 8270, 8082, 8081
When billing to Lloyd use CC# on file.
Proj. Spec: Thea Foss project bill to Manson and report to Lloyd & Assoc. Metal via method 200.8. E-mail final EDD to: Diane Munson at dmunson@mansonconstruction.com. Place final report in samp. Receiving

[redacted]

Sample Weight/Volume

Client Sample ID	040916/GNW/MW
Date Received	9/16/2004
Date Sampled	**9/16/2004 11:20:00 AM**

Chlor. Pest. - EPA 8081

Include HCB + HCBD

See attached limits

Samples are: Low Level ☒ Small Volume ☐ Normal ☐

Analyst SM Date 9/22/04

Reviewed by Date 9/22/04

Organics worksheet v4.0
If you have suggestions for changes please bring them to me - Dennis

00340

STL Seattle

6a **Sample Information**

Th	Client Name	Lloyd & Assoc. Inc.
	Work Order Number	123627
	Sample Number	1
	QC Batch Number	PE1750
	Client Sample ID	040916/GNW/MW
	Date Received	09-16-04
	Date Prepared	09-17-04
	Date Analyzed	09-17-04
	Sample matrix type	solid
	QC sample type	sample

Related Blank: PE1750

Sample weight (g)	10.2841	=	0.01028 /kg	Calc. Fact.	1.131062965
Extract volume (ml)	10	=	10 ml	Dry Weight	8.84124077 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids	85.97	=	0.8597	Spike Factor	113.1062965
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.094		80.5	OK		
x	Decachlorobiphenyl	20.8942		104	OK		
					-		
					-		
					-		
					-		
					-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

STL Seattle

6a **Sample Information**

Th Client Name	Tetra Tech, Inc.	
Work Order Number	123618	
Sample Number	3	Related Blank: PE1750
QC Batch Number	PE1750	
Client Sample ID	091504-SP-19	
Date Received	09-16-04	
Date Prepared	09-17-04	
Date Analyzed	09-20-04	
Sample matrix type	solid	
QC sample type	sample	

Sample weight (g)	10.5533	=	0.01055 /kg	Calc. Fact.	0.001520736
Extract volume (ml)	10	=	10 ml	Dry Weight	6.57576123 g
Dilution Factor		=	1	Sample Units	mg/kg
% Solids	62.31	=	0.6231	Spike Factor	0.152073648
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	20.7785	✓	104	OK		
x	Decachlorobiphenyl	24.0654	✓	120	OK		
					-		
					-		
					-		
					-		
					-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

STL Seattle

6a **Sample Information**

Th Client Name	
Work Order Number	
Sample Number	
QC Batch Number	PE1750
Client Sample ID	
Date Received	
Date Prepared	09-17-04
Date Analyzed	09-17-04
Sample matrix type	solid
QC sample type	blank

Related Blank: noblank

Sample weight (g)	10	=	0.01 /kg	Calc. Fact.	1
Extract volume (ml)	10	=	10 ml	Dry Weight	10 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	100
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.885	✓	84.4	OK		
x	Decachlorobiphenyl	21.13	✓	106	OK		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL

00343

STL Seattle

6a Sample Information

Th Client Name	
Work Order Number	
Sample Number	Related Blank: PE1750
QC Batch Number	**PE1750**
Client Sample ID	
Date Received	
Date Prepared	**09-17-04**
Date Analyzed	**09-17-04**
Sample matrix type	**solid**
QC sample type	**bs**

Sample weight (g)	**10**	=	0.01 /kg	Calc. Fact.	1
Extract volume (ml)	**10**	=	10 ml	Dry Weight	10 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	100
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	16.8166		84.1	OK		
x	Decachlorobiphenyl	17.8828		89.4	OK		
					-		
					-		
					-		
					-		
					-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aldrin	20.8983	C1		20.9	C1	1
	alpha-BHC	21.4407	C1		21.4	C1	1
	beta-BHC	18.4209	C1		18.4	C1	1
	delta-BHC	22.7884	C1		22.8	C1	1
x	gamma-BHC (Lindane)	20.9972	C1		21	C1	1
x	4,4'-DDD	19.1671	C1		19.2	C1	2
x	4,4'-DDE	19.0791	C1		19.1	C1	2
x	4,4'-DDT	19.2449	C1		19.2	C1	2
x	Dieldrin	21.2582	C1		21.3	C1	2
	Endosulfan I	19.675	C1		19.7	C1	1
	Endosulfan II	19.4777	C1		19.5	C1	2
	Endosulfan sulfate	18.359	C1		18.4	C1	2
	Endrin	18.3663	C1		18.4	C1	2
	Endrin aldehyde	27.6989	C2		27.7	C2	2
x	Heptachlor	19.8435	C1		19.8	C1	1
	Heptachlor epoxide	19.4632	C1		19.5	C1	1
	Methoxychlor	18.3333	C1		18.3	C1	10
	Endrin ketone	17.9099	C1		17.9	C1	2
x	alpha-Chlordane	18.4278	C1		18.4	C1	1
x	gamma-Chlordane	19.1277	C1		19.1	C1	1
x	Hexachlorobenzene	19.2555	C1		19.3	C1	2

STL Seattle

x	Hexachlorobutadiene	15.4311	C1		15.4	C1	1

STL Seattle

6a **Sample Information**

Th Client Name	
Work Order Number	
Sample Number	Related Blank: PE1750
QC Batch Number	**PE1750**
Client Sample ID	
Date Received	
Date Prepared	**09-17-04**
Date Analyzed	**09-17-04**
Sample matrix type	**solid**
QC sample type	**bsd**

Sample weight (g)	**10**	=	0.01 /kg	Calc. Fact.	1
Extract volume (ml)	**10**	=	10 ml	Dry Weight	10 g
Dilution Factor		=	1	Sample Units	ug/kg
% Solids		=	1	Spike Factor	100
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM		=	1		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	17.5605		87.8	OK		
x	Decachlorobiphenyl	21.8204		109	OK		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aldrin	22.7583	C1		22.8	C1	1
	alpha-BHC	22.911	C1		22.9	C1	1
	beta-BHC	20.8838	C1		20.9	C1	1
	delta-BHC	26.7414	C1		26.7	C1	1
x	gamma-BHC (Lindane)	22.7812	C1		22.8	C1	1
x	4,4'-DDD	22.8027	C1		22.8	C1	2
x	4,4'-DDE	22.0782	C1		22.1	C1	2
x	4,4'-DDT	24.2415	C1		24.2	C1	2
x	Dieldrin	24.1275	C1		24.1	C1	2
	Endosulfan I	21.7594	C1		21.8	C1	1
	Endosulfan II	22.8307	C1		22.8	C1	2
	Endosulfan sulfate	22.0756	C1		22.1	C1	2
	Endrin	21.7435	C1		21.7	C1	2
	Endrin aldehyde	33.8281	C2		33.8	C2	2
x	Heptachlor	21.435	C1		21.4	C1	1
	Heptachlor epoxide	21.7291	C1		21.7	C1	1
	Methoxychlor	23.6553	C1		23.7	C1	10
	Endrin ketone	21.4443	C1		21.4	C1	2
x	alpha-Chlordane	21.0801	C1		21.1	C1	1
x	gamma-Chlordane	21.7068	C1		21.7	C1	1
x	Hexachlorobenzene	20.4591	C1		20.5	C1	2

STL Seattle

x	Hexachlorobutadiene	15.8219	C1		15.8	C1	1

STL Seattle

6a **Sample Information**

Th Client Name	Tetra Tech, Inc.
Work Order Number	123618
Sample Number	3
QC Batch Number	PE1750
Client Sample ID	091504-SP-19
Date Received	09-16-04
Date Prepared	09-17-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	ms

Related Blank: PE1750

Sample weight (g)	10.7266	=	0.01073 /kg	Calc. Fact.	0.001496167
Extract volume (ml)	10	=	10 ml	Dry Weight	6.68374446 g
Dilution Factor		=	1	Sample Units	mg/kg
% Solids	62.31	=	0.6231	Spike Factor	0.149616731
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	20.9537		105	OK		
x	Decachlorobiphenyl	25.0378		125	OK		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aldrin	30.9202	C1		0.0463	C1	0.00598
	alpha-BHC	27.8268	C1		0.0416	C1	0.00598
	beta-BHC	24.6977	C1		0.037	C1	0.00598
	delta-BHC	28.2926	C1		0.0423	C1	0.00598
x	gamma-BHC (Lindane)	27.231	C1		0.0407	C1	0.00598
x	4,4'-DDD	27.6332	C1		0.0413	C1	0.00598
x	4,4'-DDE	26.6484	C1		0.0399	C1	0.00598
x	4,4'-DDT	28.9767	C1		0.0434	C1	0.00598
x	Dieldrin	28.8469	C1		0.0432	C1	0.00598
	Endosulfan I	23.916	C1		0.0358	C1	0.00598
	Endosulfan II	26.5586	C1		0.0397	C1	0.00598
	Endosulfan sulfate	21.9442	C1		0.0328	C1	0.00598
	Endrin	29.951	C1		0.0448	C1	0.00598
	Endrin aldehyde	2.515	C2		0.00376	J C2	0.00598
x	Heptachlor	24.8949	C1		0.0372	C1	0.00598
	Heptachlor epoxide	26.8226	C1		0.0401	C1	0.00598
	Methoxychlor	27.9068	C1		0.0418	C1	0.0299
	Endrin ketone	23.1342	C1		0.0346	C1	0.00598
x	alpha-Chlordane	23.5933	C1		0.0353	C1	0.00598
x	gamma-Chlordane	25.3352	C1		0.0379	C1	0.00598
x	Hexachlorobenzene	396.4297	C1		0.593	C1	0.00598

STL Seattle

x	Hexachlorobutadiene	20.1212	C1	0.0301	C1	0.00598

STL Seattle

6a **Sample Information**

Th Client Name	Tetra Tech, Inc.
Work Order Number	123618
Sample Number	3
QC Batch Number	PE1750
Client Sample ID	091504-SP-19
Date Received	09-16-04
Date Prepared	09-17-04
Date Analyzed	09-20-04
Sample matrix type	solid
QC sample type	msd

Related Blank: PE1750

Sample weight (g)	10.9002	=	0.0109 /kg	Calc. Fact.	0.001472339
Extract volume (ml)	10	=	10 ml	Dry Weight	6.79191462 g
Dilution Factor		=	1	Sample Units	mg/kg
% Solids	62.31	=	0.6231	Spike Factor	0.147233889
GPC (Enter 2 if GPC'd)		=	1	Rept. Dil. Fact.	1
Report in PPM	1	=	0.001		
mg/kg Carbon		=	1		

	Surrogate	Quan Value	User Flags	% Rec.	Warning	Water Low	Water High
x	Tetrachloro-m-xylene	21.1899		106	OK		
x	Decachlorobiphenyl	25.6316		128	OK		
					-		
					-		
					-		
					-		
					-		

x	Target Analytes	Quan Value	User Flag	Blank	Calculated Amount	Total Flags	PQL
x	Aldrin	30.5091	C1		0.0449	C1	0.00589
	alpha-BHC	26.3335	C1		0.0388	C1	0.00589
	beta-BHC	23.6356	C1		0.0348	C1	0.00589
	delta-BHC	23.4421	C1		0.0345	C1	0.00589
x	gamma-BHC (Lindane)	25.7733	C1		0.0379	C1	0.00589
x	4,4'-DDD	27.5113	C1		0.0405	C1	0.00589
x	4,4'-DDE	26.4172	C1		0.0389	C1	0.00589
x	4,4'-DDT	27.6471	C1		0.0407	C1	0.00589
x	Dieldrin	27.9114	C1		0.0411	C1	0.00589
	Endosulfan I	23.1883	C1		0.0341	C1	0.00589
	Endosulfan II	25.8467	C1		0.0381	C1	0.00589
	Endosulfan sulfate	18.4555	C1		0.0272	C1	0.00589
	Endrin	27.8597	C1		0.041	C1	0.00589
	Endrin aldehyde	1.895	C2		ND		0.00589
x	Heptachlor	23.5635	C1		0.0347	C1	0.00589
	Heptachlor epoxide	25.5475	C1		0.0376	C1	0.00589
	Methoxychlor	27.6522	C1		0.0407	C1	0.0294
	Endrin ketone	22.7137	C1		0.0334	C1	0.00589
x	alpha-Chlordane	23.4415	C1		0.0345	C1	0.00589
x	gamma-Chlordane	24.953	C1		0.0367	C1	0.00589
x	Hexachlorobenzene	333.4669	C1		0.491	C1	0.00589

STL Seattle

x	Hexachlorobutadiene	19.5614	C1	0.0288	C1	0.00589

SEVERN TRENT STL

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446

Tel: 802 655 1203 Fax: 802 655 1248
www.stl-inc.com

September 27, 2004

Mr. Stan Palmquist
STL Seattle
5755 8th Street East
Tacoma, WA 98424

Re: Laboratory Project No. 24028
Case 24028; SDG: 123627

Dear Mr. Palmquist:

Enclosed are the analytical results of samples received by STL Burlington on September 17, 2004. This report is sequentially numbered starting with page 0001 and ending with page 0148. Laboratory ID numbers were designated as follows.

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 09/17/04 ETR No: 102407		
586458	040916/GNW/MW	09/16/04	Soil

Documentation of the condition of the samples at the time of their receipt and any exceptions to the laboratory's Sample Acceptance Policy is included in the Sample Handling section of this submittal.

Total Organic Carbon by Lloyd Kahn Modified
Because of the range in calibration and the constraints associated with the establishment of a low concentration calibration point, there is imprecision in the derivation of results at or near the reporting limit when using a linear regression of all the calibration points for quantification. The laboratory used a direct proportion between zero and the relative response of the low calibration standard in deriving results when the response for any one of the determinations for a particular sample was less than that of the low calibration standard.

The analytical results presented in this data report were generated under a quality system that adheres to the requirements specified in the NELAC standard. This report shall not be reproduced, except in full, without the written approval of the laboratory. The release of the data in this report is authorized by the Laboratory Director or his designee, as verified by the following signature.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified in project QA plan, the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL

Client: STL Seattle
Address:
City: State: Zip Code:
Project Name and Location (State): 123627
Contract/Purchase Order/Quote No.:

Project Manager: Darla Powell
Telephone Number (Area Code)/Fax Number:
Site Contact:
Lab Contact:
Carrier/Waybill Number:

Date: 9/16/04
Lab Number:
Chain of Custody Number: 11291
Page 1 of 1

Analysis (Attach list if more space is needed): 8 TOC

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Special Instructions/ Conditions of Receipt
0409116/GNW1MW	9/16/04	1120				X							

Cooler: X Yes ☐ No Cooler Temp:
Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B X Unknown
Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months (A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days X Other See SWA
QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]			1. Received By: [signature]	9/17/04	0930
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274 530 (12/02)

SEVERN TRENT STL

Sample Report Summary
For Wet Chemistry

WET CHEMISTRY

Sample Report Summary

Client Sample No.
040916/GNW/MW

.b Name: STL BURLINGTON
.b Code: STLVT
atrix: SOIL
Solids: 100.0

Contract: 123627
Case No.: 24028
Client: STLWAS

SDG No.: 123627
Lab Sample ID: 586458
Date Received: 09/17/04

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	09/20/04	N/A	%	1.0		100.0	
IN847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	1	500	515	

SEVERN TRENT STL

Quality Control Summary
For Wet Chemistry

WET CHEMISTRY

Method Blank Report Summary

ıb Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

ıb Code: STLVT | Case No.: 24028

atrix: SOIL | Client: STLWAS

Solids:

Lab Sample ID	Method	Parameter	Conc.	Units	Qual.	DF	RL	Analytical Run Date	Analytical Batch
3LKLK0920A	IN847	TOC, PSEP (LK Modified)	500	mg/Kg	U	1	500	09/20/04	BLKLK0920A

WET CHEMISTRY

Laboratory Control Sample Report Summary

.ab Name: STL BURLINGTON Contract: 123627 SDG No.: 123627

.ab Code: STLVT Case No.: 24028

Matrix: SOIL Client: STLWAS

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCS Conc.	True Value	% Recovery*
LCSLK0920A	1N847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	7510	8500	88

** Control Limit for Percent Recovery is 85-115%, unless otherwise specified.*

WET CHEMISTRY

Laboratory Control Sample Duplicate
Report Summary

ab Name: STL BURLINGTON | Contract: 123627 | SDG No.: 123627

ab Code: STLVT | Case No.: 24028

atrix: SOIL | Client: STLWAS

, Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCSD Conc.	True Value	% Recovery*	RPD**
CSDLK0920A	IN847	TOC, PSEP (LK Modified)	09/20/04	BLKLK0920A	mg/Kg	7030	8500	83	5

** Control Limit for Percent Recovery is 85-115%, unless otherwise specified.*
*** Control Limit for RPD is +/- 20%, unless otherwise specified.*

SEVERN TRENT STL

Supportive Documentation For Wet Chemistry

SEVERN TRENT STL

Wet Chemistry Raw Data

Solids, Percent

STL Burlington --- PERCENT SOLID REPORT --- 21-SEP-2004 11:58:45 --- ALW

Method: IN623

Analyst: MNT

Date/Time in: 09/20/04 1445

Date/Time out: 09/21/04 0915

Batch: UA

Date Entered: 09-21-04
Entered by: MNT

Date Verified: 09-21-04
Verified by: ALW

Lab ID	Mass of Dish (g)	Mass of Dish and Wet Sample (g)	Mass of Dish and Dry Sample (g)	Percent Solid
586458	0.96	9.00	9.00	100.0000
586531	0.97	9.04	8.25	90.2107
586545	0.97	9.12	8.66	94.3558
586546	0.97	6.44	5.94	90.8592
586547	0.96	7.97	7.26	89.8716
586548	0.97	8.59	7.91	91.0761
586549	0.96	9.08	8.44	92.1182
586550	0.97	7.45	6.84	90.5864
586551	0.97	9.80	9.34	94.7905
586552	0.96	9.52	9.07	94.7430
586590	0.97	8.19	5.89	68.1441
586590DP	0.96	9.04	6.60	69.8020
586591	0.97	9.10	4.87	47.9705
586592	0.98	9.62	4.72	43.2870
586593	0.98	9.20	4.70	45.2555
586594	0.98	9.79	4.87	44.1544
586595	0.96	8.40	4.50	47.5806
586596	0.96	8.86	4.39	43.4177
586715	0.97	9.34	6.65	67.8614
586718	0.96	9.00	6.38	67.4129

Percent Solids Benchsheet

Date In: 09/20/04
Time In: 1445
Analyst: MNM

Date Out: 9/21/04
Time Out: 0915
Analyst: MNM

LAB ID plus EPA ID	Dish #	Mass of Dish (g)	Mass of Dish & Wet Sample (g)	Mass of Dish & Dry Sample (g)
586545	61	0.97	9.12	8.66
586546	62	0.97	6.44	5.94
586547	63	0.96	7.97	7.26
586548	64	0.97	8.59	7.91
586549	65	0.96	9.08	8.44
586550	66	0.97	7.45	6.84
586551	67	0.97	9.80	9.34
586552	68	0.96	9.52	9.07
586458	69	0.96	9.00	9.00
586590	70	0.97	8.19	5.89
586590D	71	0.96	9.04	6.60
586591	72	0.97	9.10	4.87
586592	73	0.98	9.62	4.72
586593	74	0.98	9.20	4.70
586594	75	0.98	9.79	4.87
586595	76	0.96	8.40	4.50
586596	77	0.96	8.86	4.39
586715	78	0.97	9.34	6.65
586718	79	0.96	9.00	6.38
586531	80	0.97	9.04	8.25

%W/W = grams dry X 100
grams wet

grams dry = weight of dry sample (g) - weight of dish (g)
grams wet = weight of wet sample (g) - weight of dish (g)

Entered by: MNM
Date: 9/21/04
Batch: UA

FWC065:09.02.03:0
STL Burlington

0045

SEVERN TRENT STL

Wet Chemistry Raw Data

TOC, PSEP (LK Modified)

Page 1 of 2 **Total Organic Carbon by Lloyd Kahn, Method IN847**

Analyst: KDS
Prep Date: 09/20/04 Prep Time: 1200
Analysis Date: 09/20/04 Analysis Time: 1602
Date of Calibration Curve: [illegible]
Instrument ID: NA1500 EA1107 [illegible]
Instrument File Name: N-C0920A / / [illegible]
09/20/04 Curve: 0.040, 0.452, 0.995, 1.768, 2.478

LCS Tag ID: LFCO 1405
Matrix Spike Tag ID: 590706
Sulfanilamide Tag ID: WC-02-005-16
Acetanilide Tag ID: WC-02-56-02
Phosphoric Acid Solution Tag ID: 09070401
HCl Lot #: N/A

#	Sample ID	Weight (mg)
	Acetanilide	0.660 ~~0.662~~ [illegible]
	Acetanilide	0.796
	Blank	30
	Blank	30
1	PBS1	5
	PBS2	5
	PBS3	5
	LCS1	10.684
	LCS2	10.165
	LCS3	9.382
	LCS4	9.097
	LCSD1	9.140
	LCSD2	9.021
	LCSD3	9.352
	Acetanilide	0.570
	Acetanilide	0.552
	Blank	30
	Blank	30
	LCSD4	8.285
	586458	8.348
	458	4.242
	458	7.879
2	586279	4.021
	279	7.870
	279	5.576
	586280	6.625
	280	10.590
	280	8.817
	Acetanilide	0.527
	Acetanilide	0.570

#	Sample ID	Weight (mg)
	Blank	30
	Blank	30
	586281	4.615
	281	9.190
	281	7.464
	586282	5.315
	282	4.245
	282	5.517
	586283	5.084
	283	5.323
	283	6.780
3	586284	5.436
	Acetanilide	0.526
	Acetanilide	0.576
	Blank	30
	Blank	30
	586284	6.170
	284	5.311
	586285	5.738
	285	4.401
	285	7.329
	586286	6.182
	286	4.073
	286	6.118
	586287	8.943
	287	10.710
	Acetanilide	0.611
	Acetanilide	0.404
	Blank	30
	Blank	30

Total Organic Carbon by Lloyd Kahn, Method IN847

Analyst: KD S
Prep Date: 09/20/04 Prep Time: 1200
Analysis Date: 09/20/04 Analysis Time:
Date of Calibration Curve:
Instrument ID: NA1500
Instrument File Name:

LCS Tag ID:
Matrix Spike Tag ID:
Sulfanilamide Tag ID:
Acetanilide Tag ID:
Phosphoric Acid Solution Tag ID:
HCl Lot #:

#	Sample ID	Weight (mg)
	~~Acetanilide~~	~~0.611~~
	Acetanilide	0.404
	~~Blank~~	~~30~~ 09/20/04
	~~Blank~~	~~30~~ KD
	586287	4.092 ✓
	586288	5.270 ✓
	288	8.958 ✓
	288	10.236 ✓
4	586289	4.553 ✓
	289	9.228 ✓
	289	9.194 ✓
	586290	5.441 ✓
	290	4.070 ✓
	290	7.044 ✓
	Acetanilide	0.516 ✓
	Acetanilide	0.461 ✓
	Blank	30
	Blank	30
	586291	9.575 ✓
	291	9.854 ✓
	291	5.941 ✓
	586292	7.145 ✓
	292	6.125 ✓
	292	7.185 ✓
	586292MS	5.278 + 0.383
	292MS	9.725 + 0.286
	292MS	4.864 + 0.407
5	586292DP	5.605 ✓
	Acetanilide	0.459 ✓
	Acetanilide	0.524 ✓

#	Sample ID	Weight (mg)
	Blank	30
	Blank	30
	586292DP	6.791 ✓
	292DP	4.954 ✓
	586293	7.422 ✓
	293	8.910 ✓
	293	6.989 ✓
	Acetanilide	0.797 ✓
	Acetanilide	0.699 ✓
	Blank	30
	Blank	30
	Acetanilide	
	Acetanilide	
	Blank	30
	Blank	30

roup No : 1 ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
yPass	0	0	0	0
LANK	0	0	0 Acet. TV: 71.09	0
LANK	0	0	0	0
ULFANILAMIDE	0	41.84000015	0	0
ULFANILAMIDE	0	41.84000015	0	0
ULFANILAMIDE	0	41.84000015	0	0
ULFANILAMIDE	0	41.84000015	0	0
ULFANILAMIDE	0	41.84000015	0	0
CETANILIDE	0	71.25540161	0 100%	0
CETANILIDE	0	70.90415192	0	0
LANK	0	-0.03129943088	0 < 500	0
LANK	0	-0.02955638245	0	0
BS1	0	-0.1795552969	0	0
BS2	0	-0.1766224504	0	0
BS3	0	-0.1617226303	0	0
CS1	0	0.7738213539	0	0
CS2	0	0.7462117076	0	0
SC3	0	0.7705922723	0	0
CS4	0	0.7144966722	0	0
CSD1	0	0.7038708329	0	0
CSD2	0	0.7408939004	-2.046391964	0
CSD3	0	0.6707419157	0	0
CETANILIDE	0	73.03474426	0 103%	0
CETANILIDE	0	73.31266022	0	0
LANK	0	-0.02834065631	0 < 500	0
LANK	0	-0.02962358855	0	0
CSD4	0	0.6953001022	0	0
B6458	0	-0.05096944794	-2.321909904	0
B6458	0	-0.202020362	0	0
B6458	0	-0.09799415618	0	0
B6279	0	1.513315916	0	0
B6279	0	1.527707577	0	0
B6279	0	1.543376207	0	0
B6280	0	1.542287827	-1.653949857	0
B6280	0	1.655427217	0	0
B6280	0	1.409584403	0	0
CETANILIDE	0	73.73714447	0 104%	0
CETANILIDE	0	73.12625122	0	0
LANK	0	-0.02933337353	0 < 500	0
LANK	0	-0.02791729197	0	0
B6281	0	0.9977580309	0	0
B6281	0	1.313570261	0	0
B6281	0	1.256734967	0	0
B6282	0	2.772016048	0	0
B6282	0	2.578458786	0	0
B6282	0	2.855906963	0	0

86283	0	3.695933104	0		0
86283	0	3.678721905	0		0
86283	0	3.636055231	0		0
86284	0	4.936738014	0		0
CETANILIDE	0	73.35650635	0	103%	0
CETANILIDE	0	72.20023346	0		0
LANK	0	-0.03130219877	0	<500	0
LANK	0	-0.03098882735	0		0
86284	0	4.709527493	0		0
86284	0	4.674292088	0		0
86285	0	3.683955908	0		0
86285	0	3.448357821	0		0
86285	0	3.998451471	0		0
86286	0	0	0		0
86286	0	1.468914151	0		0
86286	0	1.535377741	0		0
86287	0	2.926601648	0		0
86287	0	2.118014812	0		0
ACETANILIDE	0	71.33169556	0	100%	0
ACETANILIDE	0	72.50058746	0		0
BLANK	0	-0.03105049394	0	<500	0
BLANK	0	-0.0292377267	0		0
586287	0	2.032459259	0		0
586288	0	5.157144547	0		0
586288	0	4.83132267	0		0
586288	0	9.594561577	0		0
586289	0	6.747616291	0		0
586289	0	6.650848389	0		0
586289	0	6.073876381	0		0
586290	0	7.021224976	0		0
586290	0	6.361815453	0		0
586290	0	8.454710007	0		0
ACETANILIDE	0	73.03952789	0	103%	0
ACETANILIDE	0	72.88014984	0		0
BLANK	0	-0.02969633043	0	<500	0
BLANK	0	-0.0293424353	0		0
586291	0	5.223987103	0		0
586291	0	5.31847477	0		0
586291	0	4.720822811	0		0
586292	0	0.9200962186	0		0
586292	0	0.9701108336	0		0
586292	0	0.7739331722	0		0
586292MS	0	7.707318306	0		0
586292MS	0	3.354025602	0		0
586292MS	0	8.352357864	0		0
586292DP	0	0.7784444094	0		0
ACETANILIDE	0	73.65023804	0	104%	0
ACETANILIDE	0	73.60607147	0		0
BLANK	0	-0.0289105121	0	<500	0

LANK	0	-0.02757396735	0	0
86292DP	0	0.8549382091	0	0
86292DP	0	0.9171670675	0	0
86293	0	4.872694016	0	0
86293	0	4.114758492	0	0
86293	0	3.764565945	0	0
CETANILIDE	0	72.02767181	0 10170 /	0
CETANILIDE	0	71.2841568	0	0
LANK	0	-0.02957702242	-0.7743558288	0
LANK	0	-0.03176331893	0 < 500 /	0

105 Sample(s) in Group No : 1

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	14.81872	26.112750	176.214600	681.875500
ydrogen	-6.472959E-02	0.346330	-535.041100	0.119944
ulphur	0	0.000000	0.000000	0.000000

Eager 200 Summarize Results

Method Name : IN847
Method Filename : CHN0920A.MTH
Company name : SEVERN TRENT LAB
Operator ID : ANALYST

Group No : 1 Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
BS1	0	-0.1795552969	0	0
BS2	0	-0.1766224504	0	0
BS3	0	-0.1617226303	0	0

3 Sample(s) in Group No : 1

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	-.1726335	0.009562	-5.539000	0.000091
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 2 Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
LCS1	0	0.7738213539	0	0
LCS2	0	0.7462117076	0	0
LSC3	0	0.7705922723	0	0
LCS4	0	0.7144966722	0	0

4 Sample(s) in Group No : 2

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	.7512805	0.027446	3.653172	0.000753
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 3 Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
LCSD1	0	0.7038708329	0	0
LCSD2	0	0.7408939004	-2.046391964	0
LCSD3	0	0.6707419157	0	0
LCSD4	0	0.6953001022	0	0

LCS: 7512.805/8500 x100= 88% recovery

LCSD: 7027.017/8500 x100= 83%

0020

4 Sample(s) in Group No : 3

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	.7027017	0.029076	4.137729	0.000845
ydrogen	-.511598	1.023196	-200.000000	1.046930
ulphur	0	0.000000	0.000000	0.000000

Eager 200 Summarize Results

Method Name : IN847
Method Filename : CHN0920A.MTH
Company name : SEVERN TRENT LAB
Operator ID : ANALYST

Eager 200 Summarize Results

Method Name : IN847
Method Filename : CHN0920A.MTH
Company name : SEVERN TRENT LAB
Operator ID : ANALYST

roup No : 1 ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86458	0	-0.05096944794	-2.321909904	0
86458	0	-0.202020362	0	0
86458	0	-0.09799415618	0	0

3 Sample(s) in Group No : 1

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	-.1169947	0.077297	-66.069010	0.005975
ydrogen	-.7739699	1.340555	-173.205100	1.797089
ulphur	0	0.000000	0.000000	0.000000

roup No : 2 ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86279	0	1.513315916	0	0
86279	0	1.527707577	0	0
86279	0	1.543376207	0	0

3 Sample(s) in Group No : 2

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	1.528133	0.015035	0.983858	0.000226
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 3 ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86280	0	1.542287827	-1.653949857	0
86280	0	1.655427217	0	0
86280	0	1.409584403	0	0

3 Sample(s) in Group No : 3

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	1.535766	0.123051	8.012356	0.015142
ydrogen	-.5513166	0.954908	-173.205100	0.911850
ulphur	0	0.000000	0.000000	0.000000

roup No : 4

ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86281	0	0.9977580309	0	0
86281	0	1.313570261	0	0
86281	0	1.256734967	0	0

3 Sample(s) in Group No : 4

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	1.189354	0.168343	14.154170	0.028339
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 5

ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86282	0	2.772016048	0	0
86282	0	2.578458786	0	0
86282	0	2.855906963	0	0

3 Sample(s) in Group No : 5

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	2.735461	0.142291	5.201703	0.020247
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 6

ample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
86283	0	3.695933104	0	0
86283	0	3.678721905	0	0
86283	0	3.636055231	0	0

3 Sample(s) in Group No : 6

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	3.670237	0.030828	0.839934	0.000950
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 7 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86284	0	4.936738014	0	0
86284	0	4.709527493	0	0
86284	0	4.674292088	0	0

3 Sample(s) in Group No : 7

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	4.773519	0.142445	2.984074	0.020291
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 8 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86285	0	3.683955908	0	0
86285	0	3.448357821	0	0
86285	0	3.998451471	0	0

3 Sample(s) in Group No : 8

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	3.710255	0.275988	7.438524	0.076169
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 9 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86286	0	0	0	0
86286	0	1.468914151	0	0
86286	0	1.535377741	0	0

3 Sample(s) in Group No : 9

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	1.001431	0.867901	86.666090	0.753252
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

2 drop average: 1.502147946 = 15,021.459460 mg/kg

Group No : 10

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586287	0	2.926601648	0	0
586287	0	2.118014812	0	0
586287	0	2.032459259	0	0

3 Sample(s) in Group No : 10

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	2.359025	0.493394	20.915140	0.243437
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 11

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586288	0	5.157144547	0	0
586288	0	4.83132267	0	0
586288	0	9.594561577	0	0

3 Sample(s) in Group No : 11

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	6.527676	2.660992	40.764770	7.080879
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 12

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586289	0	6.747616291	0	0
586289	0	6.650848389	0	0
586289	0	6.073876381	0	0

3 Sample(s) in Group No : 12

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	6.49078	0.364277	5.612221	0.132698
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 13 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86290	0	7.021224976	0	0
86290	0	6.361815453	0	0
86290	0	8.454710007	0	0

3 Sample(s) in Group No : 13

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	7.27925	1.070040	14.699860	1.144985
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 14 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86291	0	5.223987103	0	0
86291	0	5.31847477	0	0
86291	0	4.720822811	0	0

3 Sample(s) in Group No : 14

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	5.087761	0.321271	6.314583	0.103215
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

roup No : 15 Element %

ample Name	Nitrogen	Carbon	Hydrogen	Sulphur
86292	0	0.9200962186	0	0
86292	0	0.9701108336	0	0
86292	0	0.7739331722	0	0

3 Sample(s) in Group No : 15

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	.8880467	0.101940	11.479140	0.010392
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 16

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586292MS	0	7.707318306	0	0
586292MS	0	3.354025602	0	0
586292MS	0	8.352357864	0	0

3 Sample(s) in Group No : 16

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	6.471234	2.718779	42.013300	7.391760
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 17

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586292DP	0	0.7784444094	0	0
586292DP	0	0.8549382091	0	0
586292DP	0	0.9171670675	0	0

3 Sample(s) in Group No : 17

Component Name	Average	Std. Dev.	% Rel. S. D.	Variance
Nitrogen	0	0.000000	0.000000	0.000000
Carbon	.8501832	0.069483	8.172763	0.004828
Hydrogen	0	0.000000	0.000000	0.000000
Sulphur	0	0.000000	0.000000	0.000000

Group No : 18

Sample Name	Element % Nitrogen	Carbon	Hydrogen	Sulphur
586293	0	4.872694016	0	0
586293	0	4.114758492	0	0
586293	0	3.764565945	0	0

3 Sample(s) in Group No : 18

omponent Name	Average	Std. Dev.	% Rel. S. D.	Variance
itrogen	0	0.000000	0.000000	0.000000
arbon	4.250673	0.566429	13.325620	0.320841
ydrogen	0	0.000000	0.000000	0.000000
ulphur	0	0.000000	0.000000	0.000000

TOC by Lloyd Kahn

Low Level Concentration Converter

Calibration Date = 9/20/04

Cal Std	Area	Sample Wgt.	% Carbon	Carbon Wgt.
Low Std	129514	0.04	41.84	0.016736

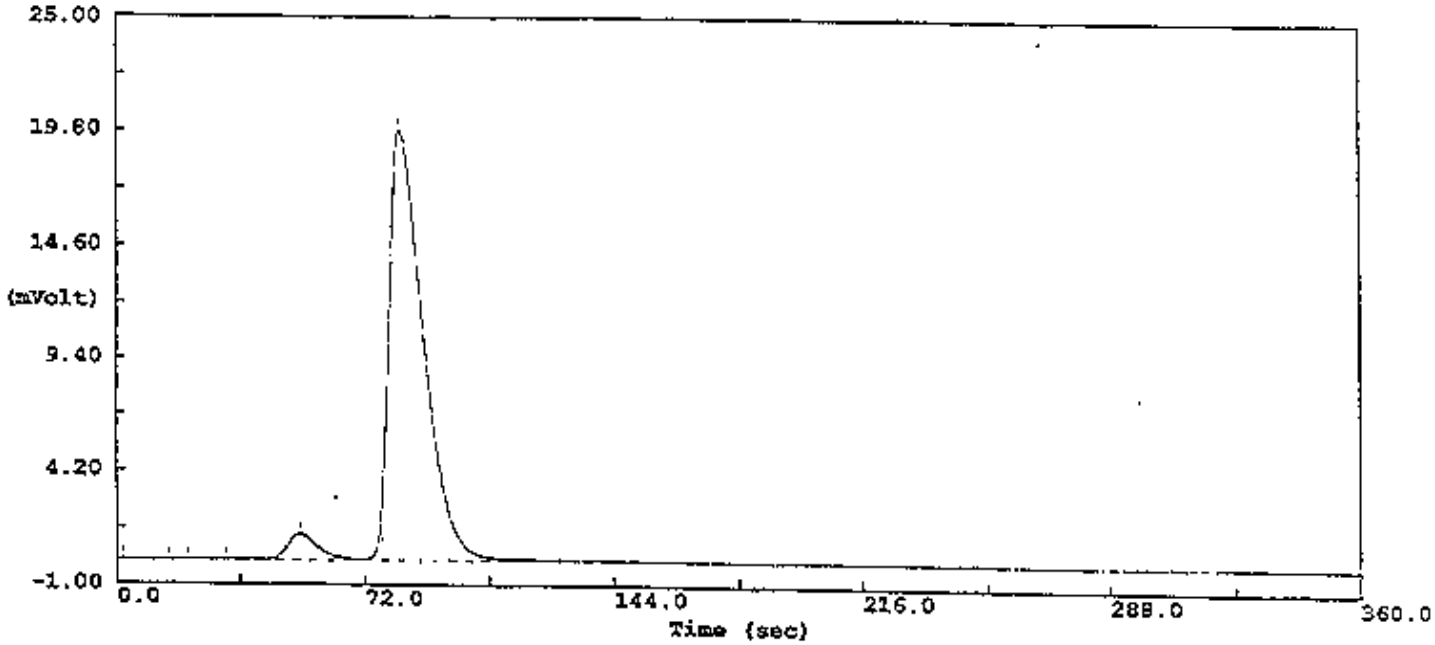
Slope of one point calibration = 7738647.228

Analysis Date(s): 9/20/04

Reporting Limit: 500 mg/Kg

Sample ID	Area	Sample Wgt.	TOC mg/Kg	AVERAGE
BLANK	10788	30	46.46806986	
BLANK	14250	30	61.38023689	
PBS	13516	5	349.3116976	
PBS	14487	5	374.4065228	
PBS	19420	5	501.8965054	408.5382419
BLANK	16665	30	71.78257177	
BLANK	14117	30	60.80735467	
586458	44789	8.348	693.304272	
586458	16218	4.242	494.0393964	
586458	21838	7.879	358.1596952	515.1677879
BLANK	10782	30	46.44222555	
BLANK	11405	30	49.12572643	
BLANK	11282	30	48.59591807	
BLANK	14883	30	64.10681162	
BLANK	13972	30	60.18278384	
BLANK	14675	30	63.21087553	62.500157
BLANK	15533	30	66.9066119	
BLANK	18188	30	78.34271919	
BLANK	14209	30	61.2036341	
BLANK	9866	30	42.49666085	

Eager 200 Strip-Chart



Filename C:\EAW\C092001.DAT
Sample name :ByPass Analysed :09-20-04 13:49

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 13:49

Company Name : SEVERN TRENT LAB
Method File : TEMPLATE.MTH
Printed : 9/20/2004 15:08

Sample ID : ByPass (# 1)
Analysis Type : By-Pass (Area)
Chromatogram : C:\EAW\C092001.DAT

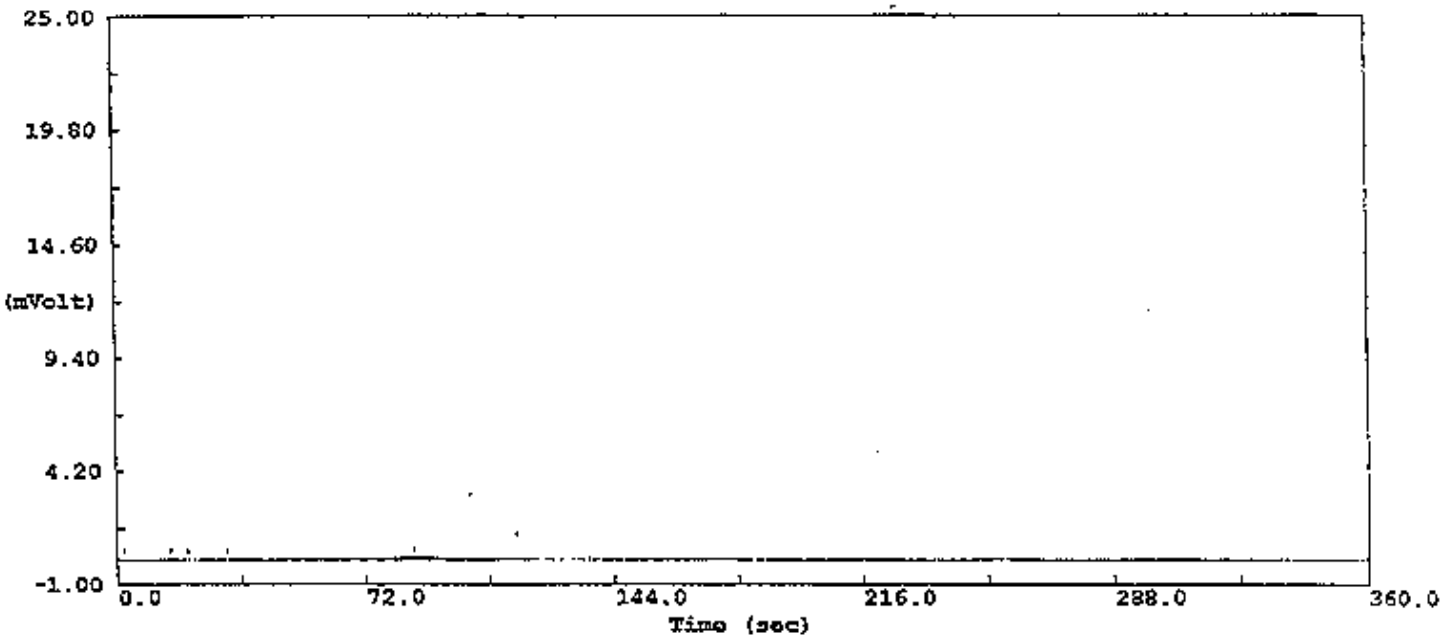
Channel : E.A. Channel A
Sample weight :---

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio
Carbon	0.0000	82	2234099	FU	1.000000

Eager 200 Strip-Chart



Filename C:\EAW\F092002.DAT
Sample name :BLANK Analysed :09-20-04 13:55

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST Company Name : SEVERN TRENT LAB
Method Name : IN847 Method File : TEMPLATE.MTH
Analysed : 09-20-04 13:55 Printed : 9/20/2004 15:08

Sample ID : BLANK (# 2) Channel : E.A. Channel A
Analysis Type : Blank (Area) Sample weight :---
Chromatogram : C:\EAW\F092002.DAT

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

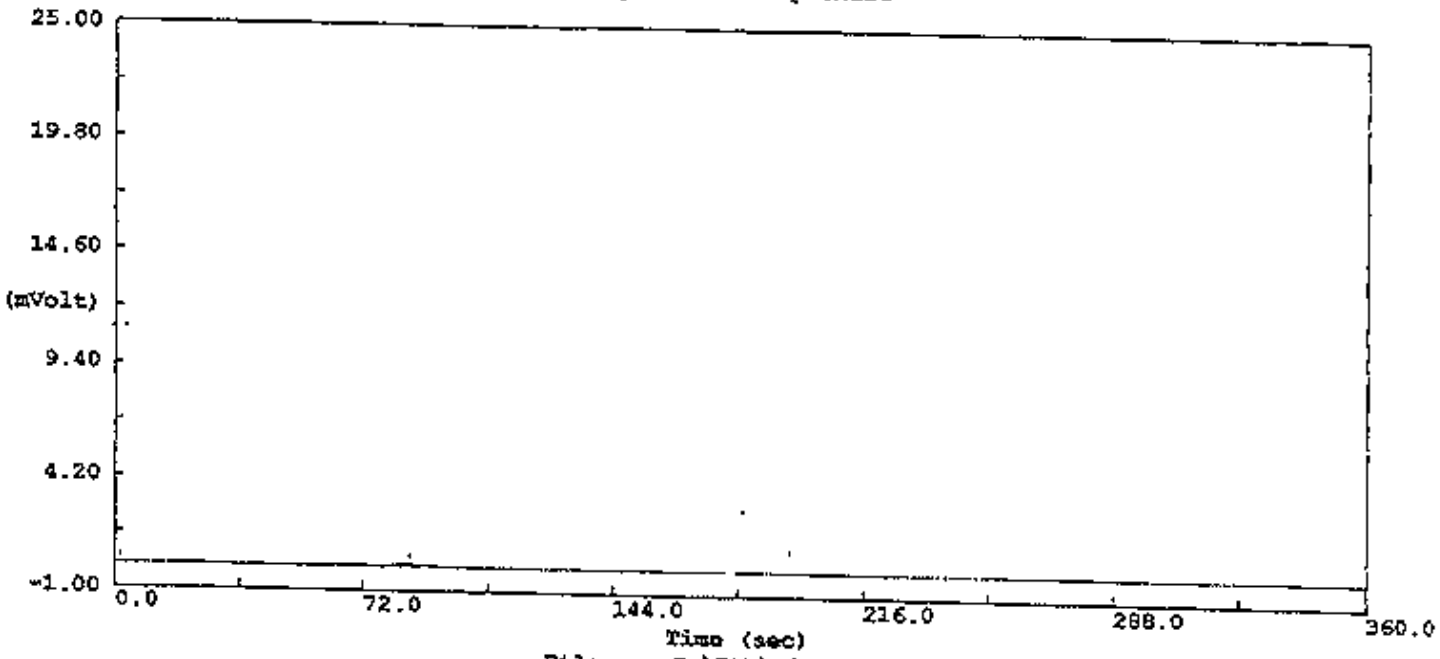
Element Name	Element %	Ret.Time	Area	BC	Area ratio
Carbon	0.0000	86	14607	RS	1.000000

Element Name	Ret.Time	Blank avg.	Level
Nitrogen	44	40.0	0
Carbon	85	14606.5	1

 Sample: BLANK (F092002)

Hydrogen	186	2066.0	0
Sulphur	418	0.0	0

Eager 200 Strip-Chart



Filename C:\EAW\C092003.DAT
Sample name :BLANK Analysed :09-20-04 14:01

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 14:01

Company Name : SEVERN TRENT LAB
Method File : TEMPLATE.MTH
Printed : 9/20/2004 15:08

Sample ID : BLANK (# 3)
Analysis Type : Blank (Area)
Chromatogram : C:\EAW\C092003.DAT

Channel : E.A. Channel A
Sample weight :---

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

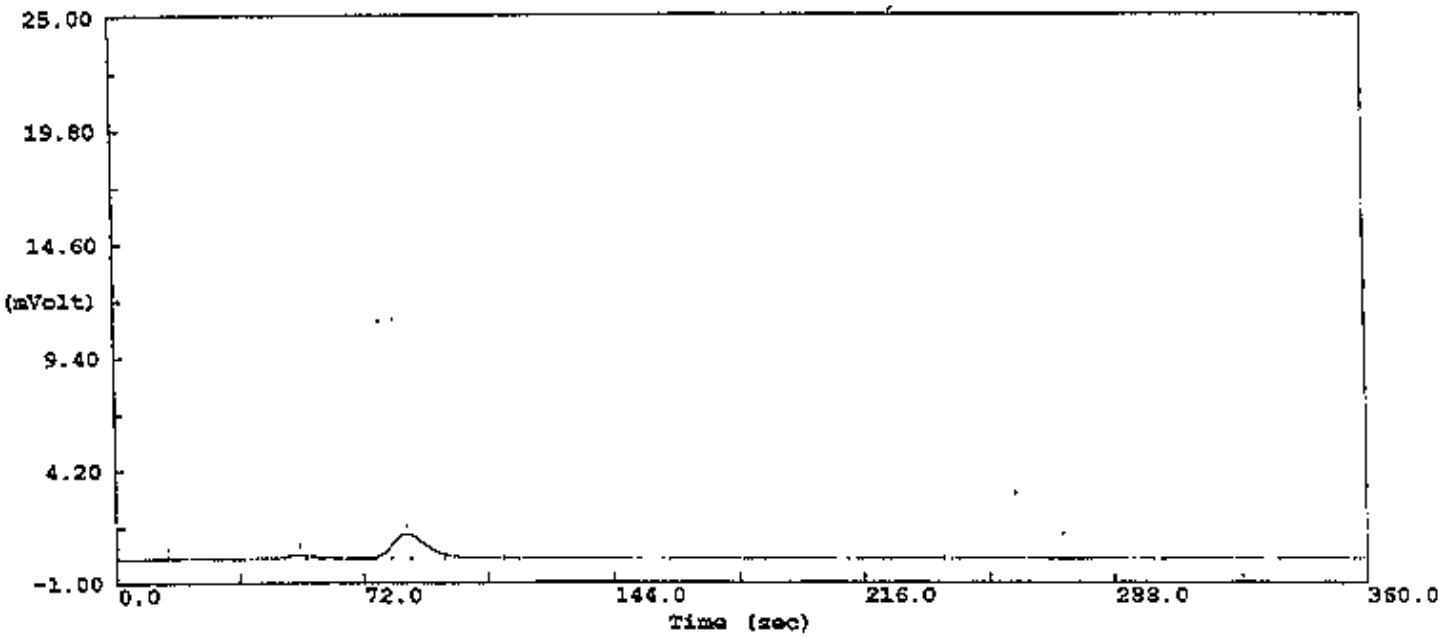
Element Name	Element %	Ret.Time	Area	BC	Area ratio
Carbon	0.0000	85	14383	RS	1.000000

Element Name	Ret.Time	Blank avg.	Level
Nitrogen	44	40.0	0
Carbon	85	14494.8	2

 Sample: BLANK (C092003)

Hydrogen	186	2066.0	0
Sulphur	418	0.0	0

Eager 200 Strip-Chart



Filename C:\EAW\C092004.DAT
Sample name :SULFANILAMIDE Analysed :09-20-04 14:09

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: TEMPLATE.MTH
Analysed	: 09-20-04 14:09	Printed	: 9/20/2004 15:08

Sample ID	: SULFANILAMIDE (# 4)	Channel	: E.A. Channel A
Analysis Type	: Calibration (Area)	Sample weight	: .04
Chromatogram	: C:\EAW\C092004.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

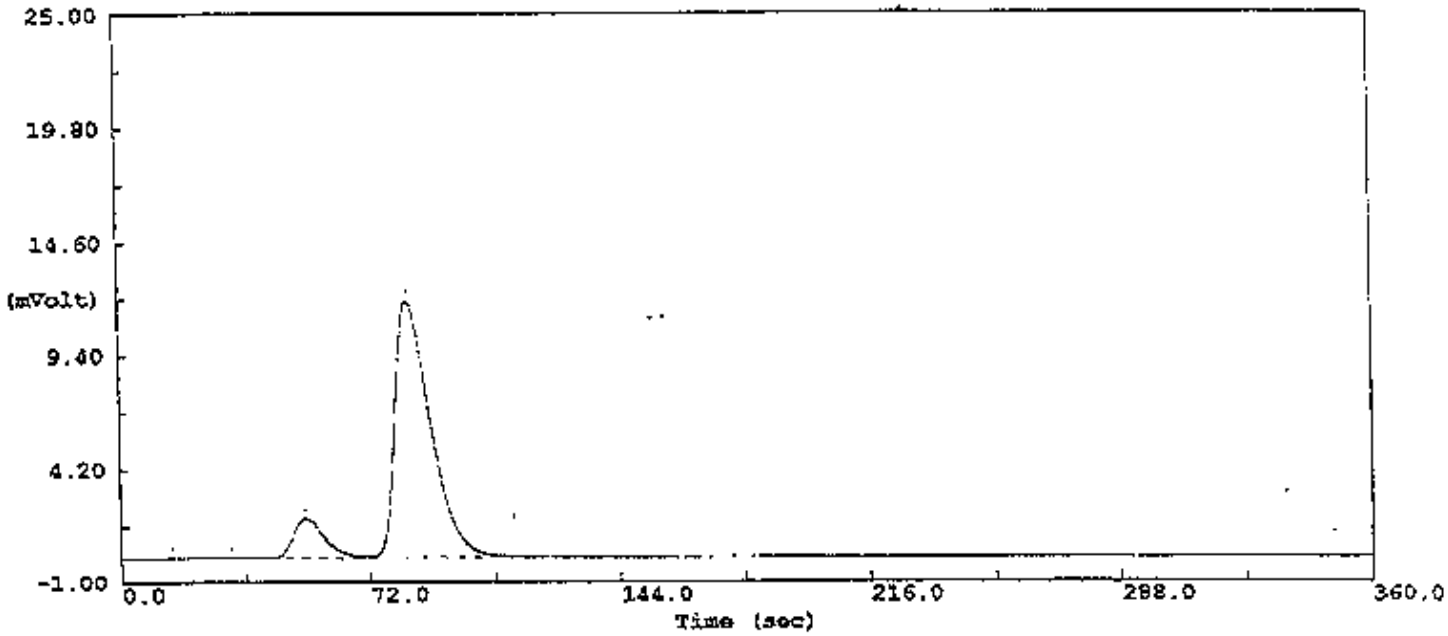
Element Name	STD Elem.%	Ret.Time	Area	BC	Area ratio	K factor
Carbon	41.8400	84	129514	FU	1.000000	

Coefficents of least squares fit to linear equation

Element Name	Ret.Time	X Term	Intercept	Level

Nitrogen	44	....	....	0
Carbon	85	....	....	1
Hydrogen	186	....	....	0
Sulphur	418	....	....	0

Eager 200 Strip-Chart



Filename C:\EAW\C092005.DAT
Sample name :SULFANILAMIDE Analysed :09-20-04 14:15

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 14:15
Company Name : SEVERN TRENT LAB
Method File : TEMPLATE.MTH
Printed : 9/20/2004 15:08

Sample ID : SULFANILAMIDE (# 5)
Analysis Type : Calibration (Area)
Chromatogram : C:\EAW\C092005.DAT
Channel : E.A. Channel A
Sample weight : .452

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

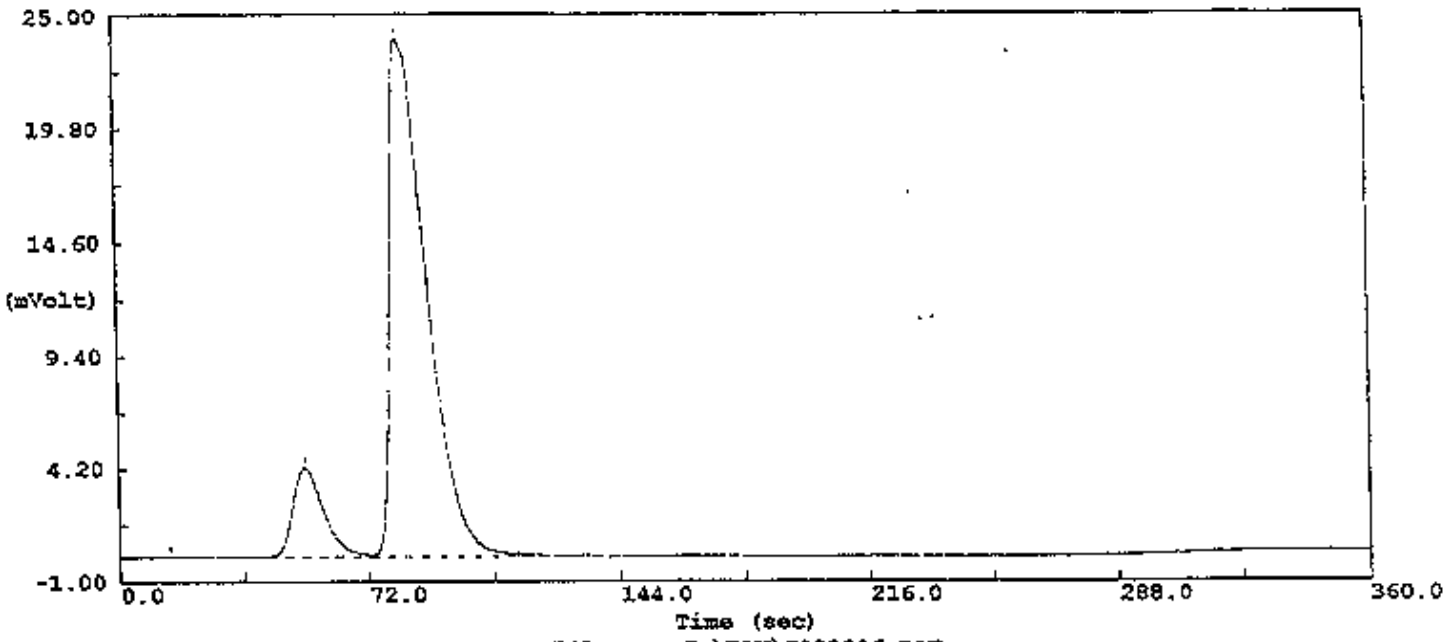
Element Name	STD Elem.%	Ret.Time	Area	BC	Area ratio	K factor
Carbon	41.8400	84	1347724	FU	1.000000	

Coefficents of least squares fit to linear equation

Element Name	Ret.Time	X Term	Intercept	Level

Nitrogen	44	....	....	0
Carbon	85	7.066975E+06	1.124086E+04	2
Hydrogen	186	....	....	0
Sulphur	418	....	....	0

Eager 200 Strip-Chart



Filename C:\EAW\C092006.DAT
Sample name :SULFANILAMIDE Analysed :09-20-04 14:21

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 14:21

Company Name : SEVERN TRENT LAB
Method File : TEMPLATE.MTH
Printed : 9/20/2004 15:08

Sample ID : SULFANILAMIDE (# 6)
Analysis Type : Calibration (Area)
Chromatogram : C:\EAW\C092006.DAT

Channel : E.A. Channel A
Sample weight : .995

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

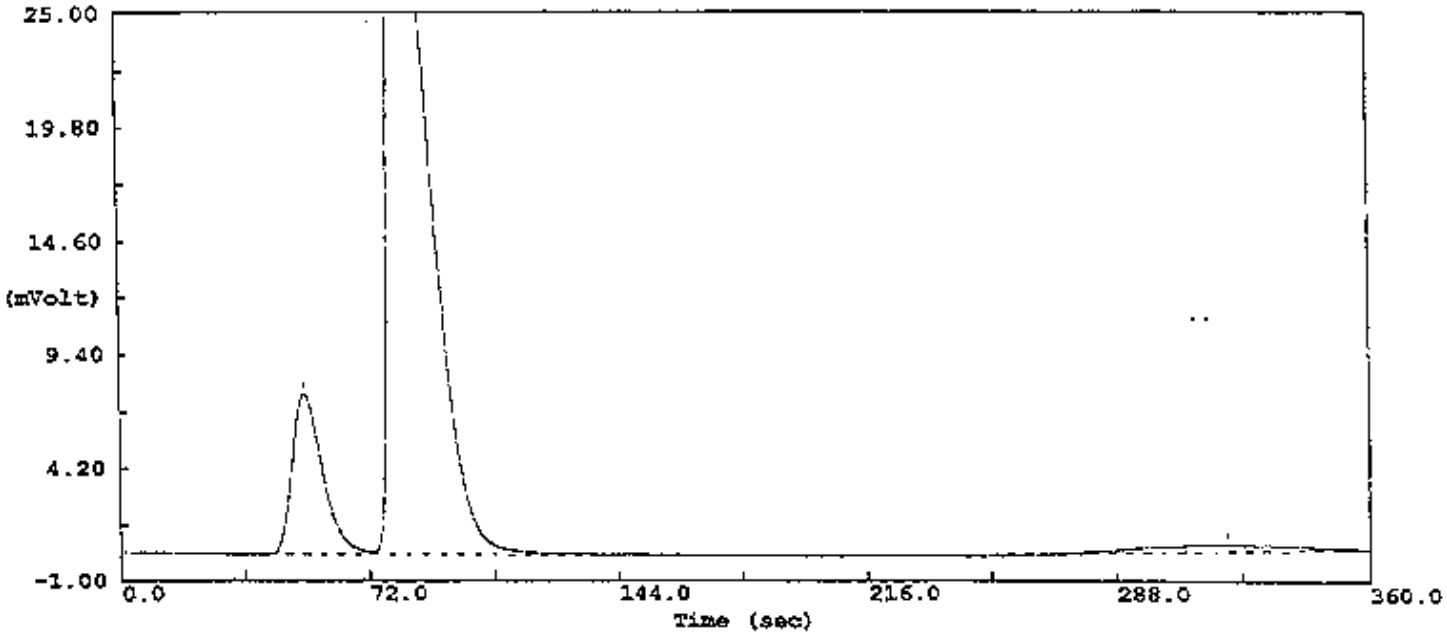
Element Name	STD Elem.%	Ret.Time	Area	EC	Area ratio	K factor
Carbon	41.8400	82	2896477	FU	1.000000	

Coefficents of least squares fit to linear equation

Element Name	Ret.Time	X Term	Intercept	Level

Nitrogen	44	....	....	0
Carbon	85	6.919243E+06	2.294443E+04	3
Hydrogen	186	....	....	0
Sulphur	418	....	....	0

Eager 200 Strip-Chart



Filename C:\EAW\C092007.DAT
Sample name :SULFANILAMIDE Analysed :09-20-04 14:27

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 14:27

Company Name : SEVERN TRENT LAB
Method File : TEMPLATE.MTH
Printed : 9/20/2004 15:08

Sample ID : SULFANILAMIDE (# 7)
Analysis Type : Calibration (Area)
Chromatogram : C:\EAW\C092007.DAT

Channel : E.A. Channel A
Sample weight : 1.768

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

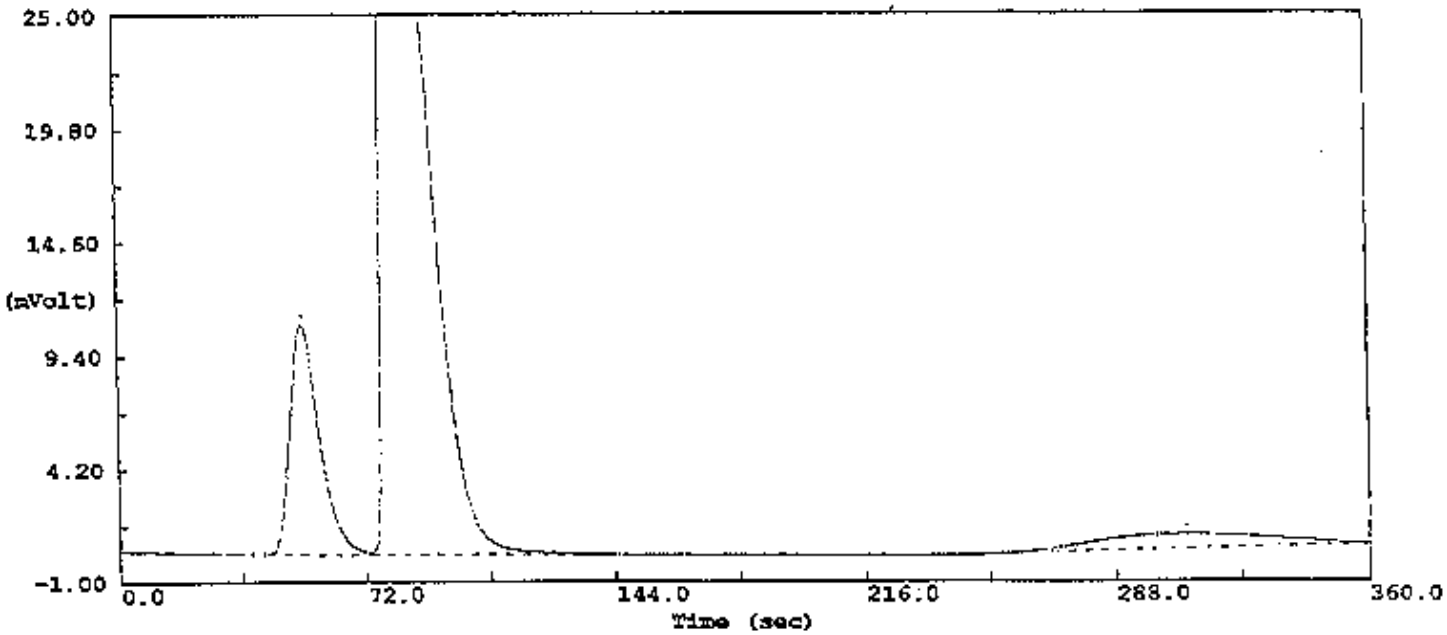
Element Name	STD Elem.%	Ret.Time	Area	BC	Area ratio	K factor
Carbon	41.8400	81	4953470	FU	1.000000	

Coefficents of least squares fit to linear equation

Element Name	Ret.Time	X Term	Intercept	Level

Nitrogen	44	....	....	0
Carbon	85	6.663151E+06	6.317343E+04	4
Hydrogen	186	....	....	0
Sulphur	418	....	....	0

Eager 200 Strip-Chart



Filename C:\EAW\C092008.DAT
Sample name :SULFANILAMIDE Analysed :09-20-04 14:33

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: TEMPLATE.MTH
Analysed	: 09-20-04 14:33	Printed	: 9/20/2004 15:08

Sample ID	: SULFANILAMIDE (# 8)	Channel	: E.A. Channel A
Analysis Type	: Calibration (Area)	Sample weight	: 2.478
Chromatogram	: C:\EAW\C092008.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	STD Elem.%	Ret.Time	Area	BC	Area ratio	K factor
Carbon	41.8400	80	6920659	FU	1.000000	

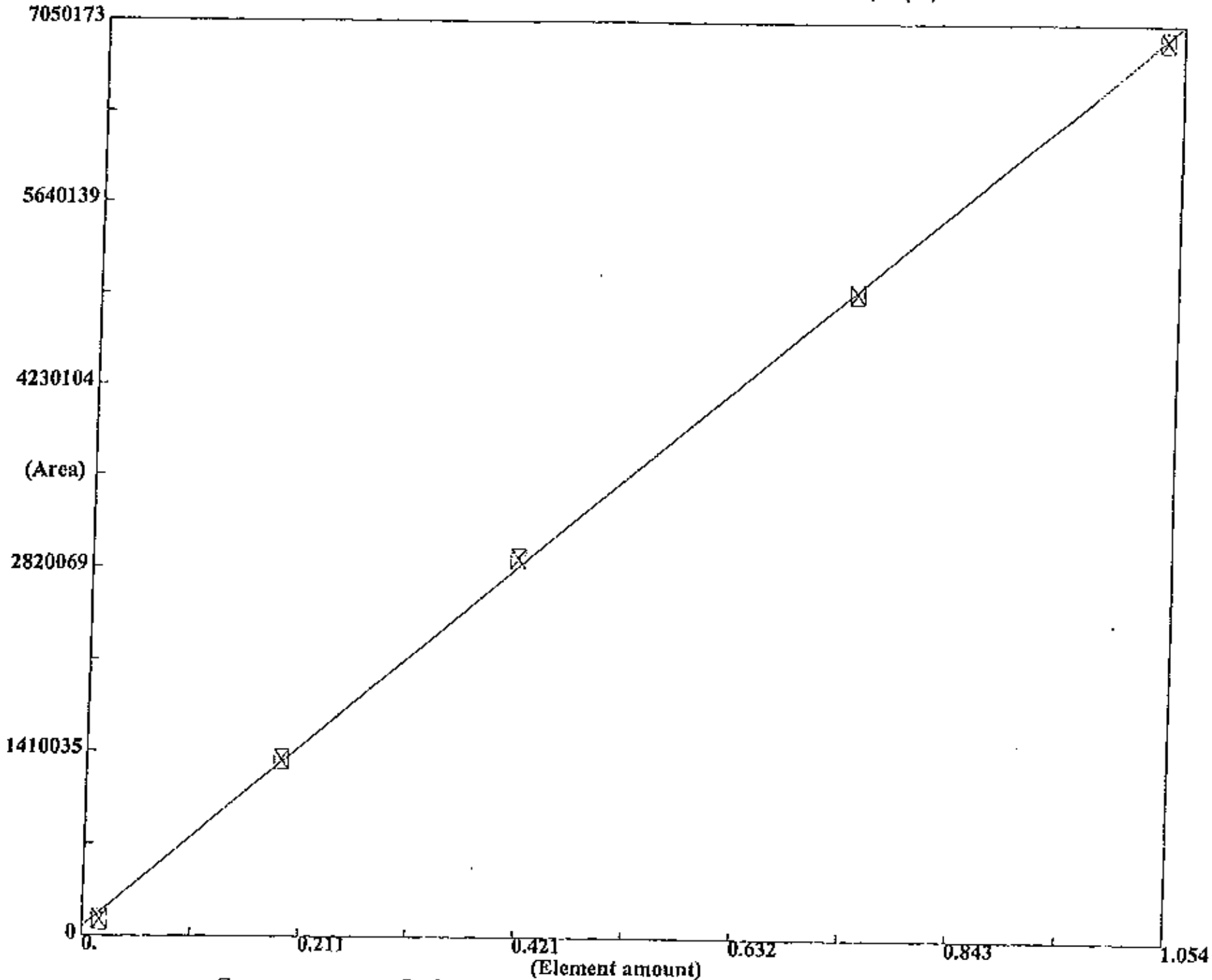
Coefficents of least squares fit to linear equation

Element Name	Ret.Time	X Term	Intercept	Level

Nitrogen	44	....	....	0
Carbon	85	6.621552E+06	7.296273E+04	5
Hydrogen	186	....	....	0
Sulphur	418	....	....	0

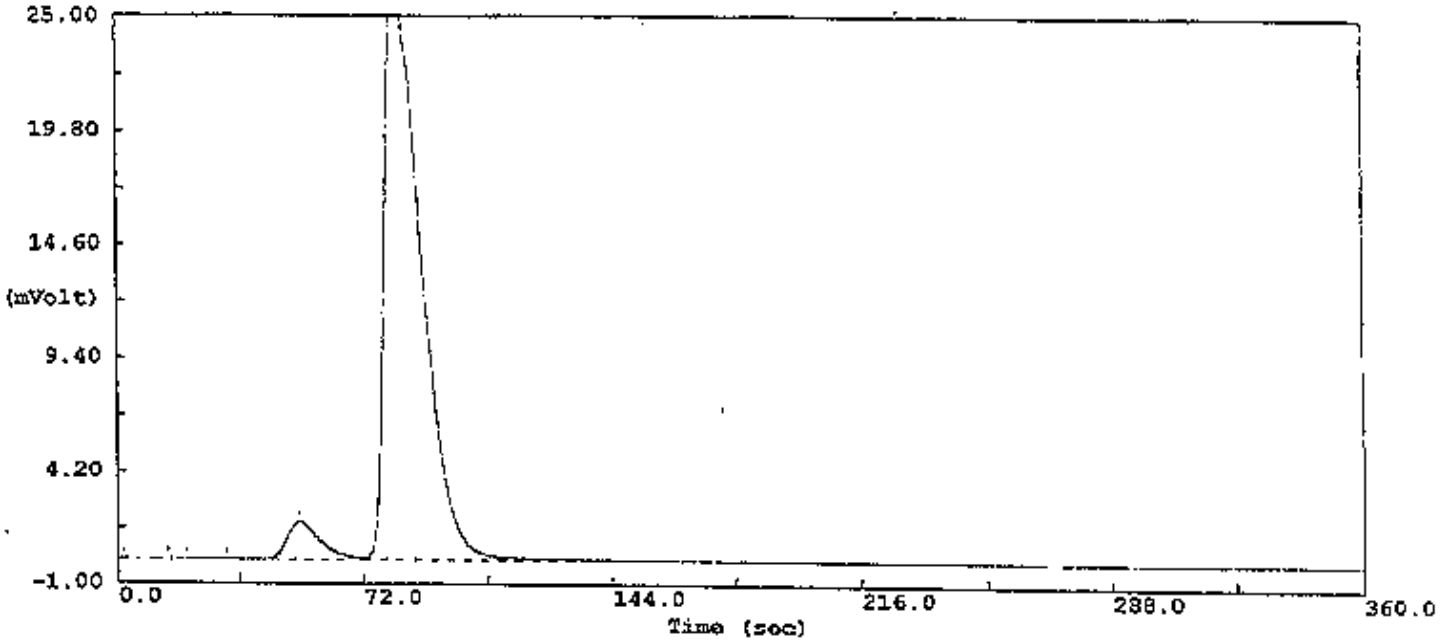
00467

EA1108 Calibration Curve09/15/04 C 7/20/04



Component name : Carbon (Linear fit) Kb=6621552 Kc=72962.73 CF=0.9997136

Eager 200 Strip-Chart



Filename C:\EAW\C092009.DAT
Sample name :ACETANILIDE Analysed :09-20-04 16:02

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CEN0920A.MTH
Analysed	: 09-20-04 16:02	Printed	: 9/20/2004 16:08

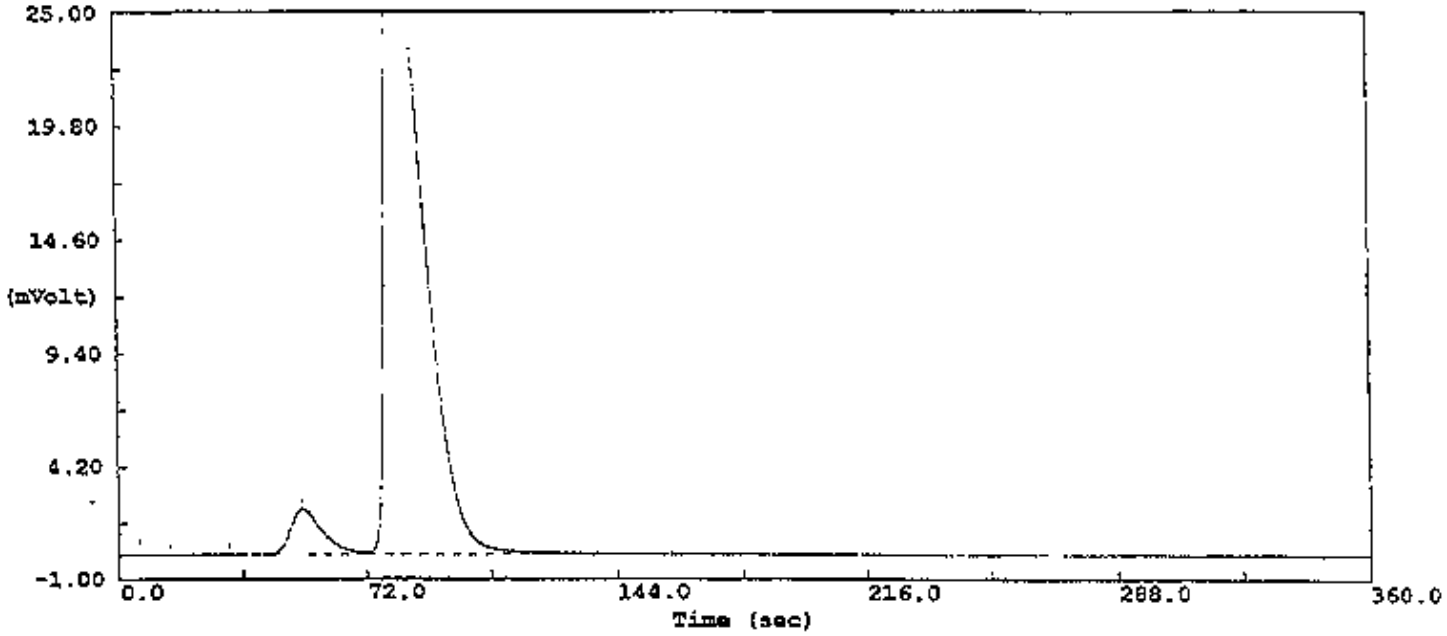
Sample ID	: ACETANILIDE (# 9)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .66
Chromatogram	: C:\EAW\C092009.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	71.2554	81	3186984	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092010.DAT
Sample name :ACETANILIDE Analysed :09-20-04 16:08

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:08
Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 16:14

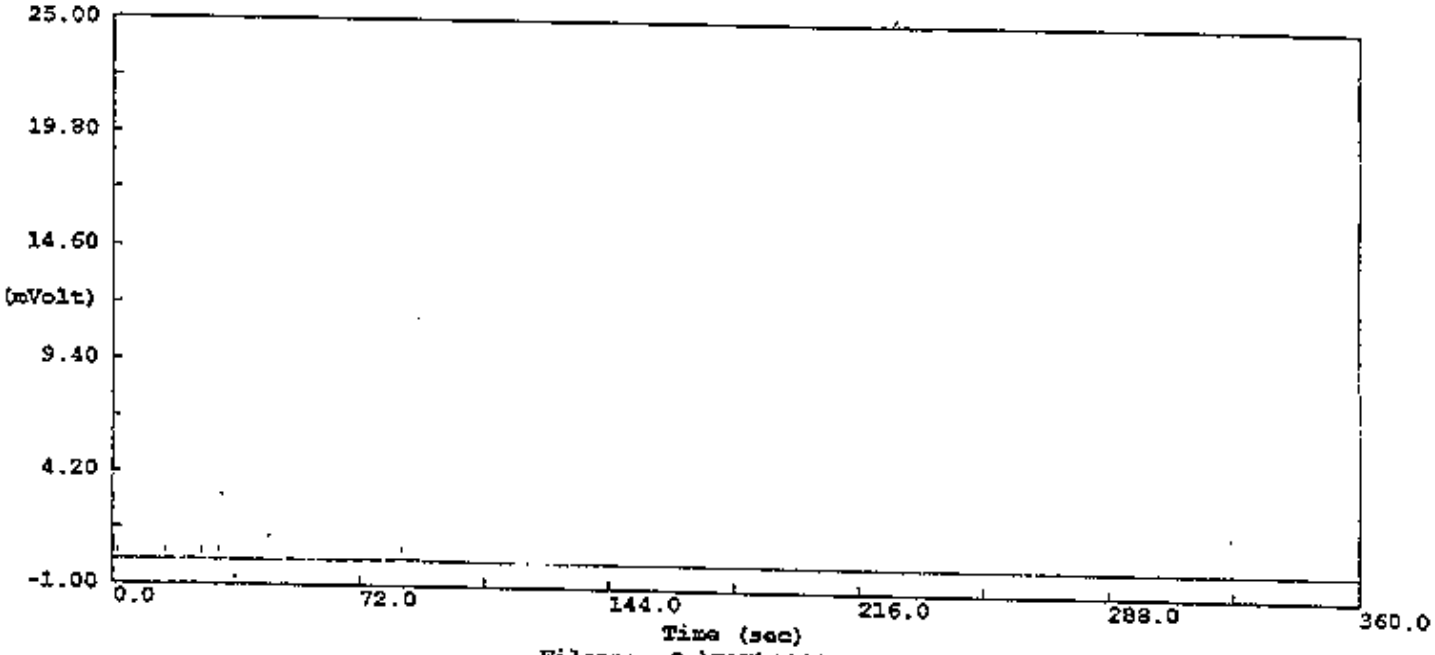
Sample ID : ACETANILIDE (# 10)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092010.DAT
Channel : E.A. Channel A
Sample weight : .796

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	70.9042	81	3810147	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092011.DAT
Sample name :BLANK Analysed :09-20-04 16:14

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:14

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 16:20

Sample ID : BLANK (# 11)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092011.DAT

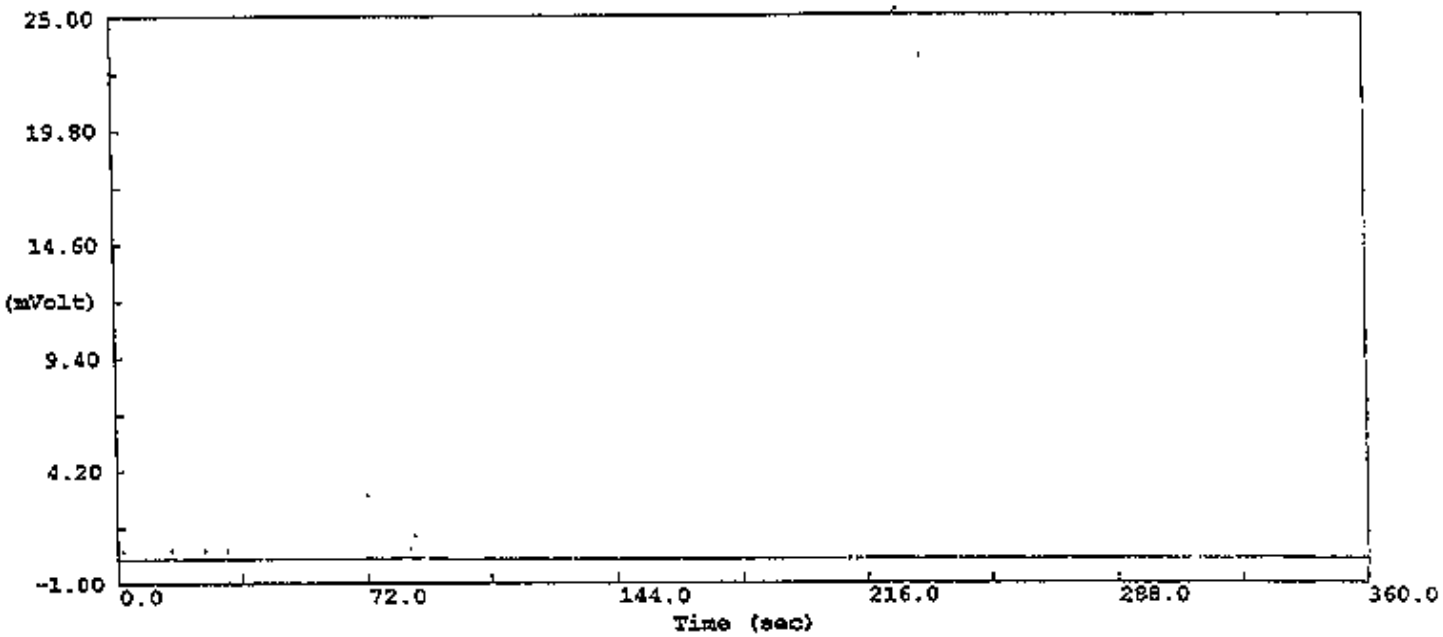
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-3.1299431E-02	84	10788	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092012.DAT
Sample name :BLANK Analysed :09-20-04 16:20

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 16:20	Printed	: 9/20/2004 16:26

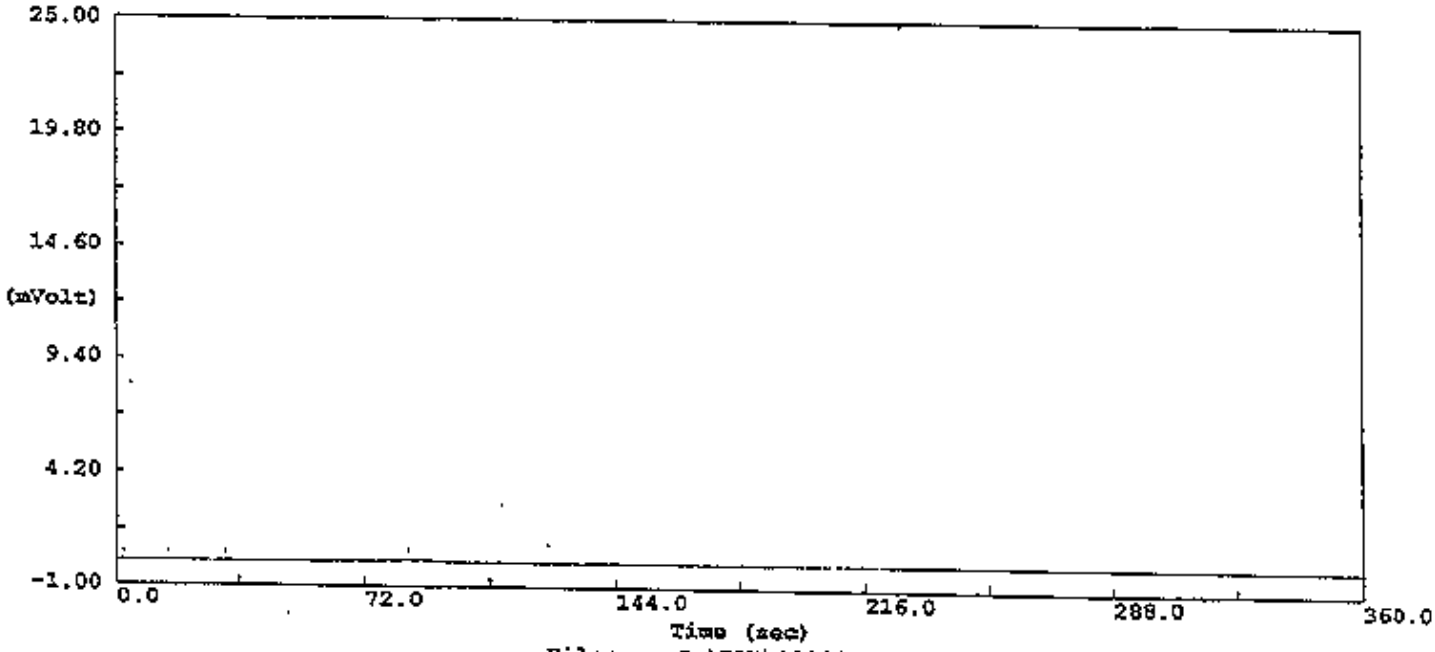
Sample ID	: BLANK (# 12)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C092012.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9556382E-02	84	14250	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092013.DAT
Sample name :PBS1 Analysed :09-20-04 16:26

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:26

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 16:32

Sample ID : PBS1 (# 13)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092013.DAT

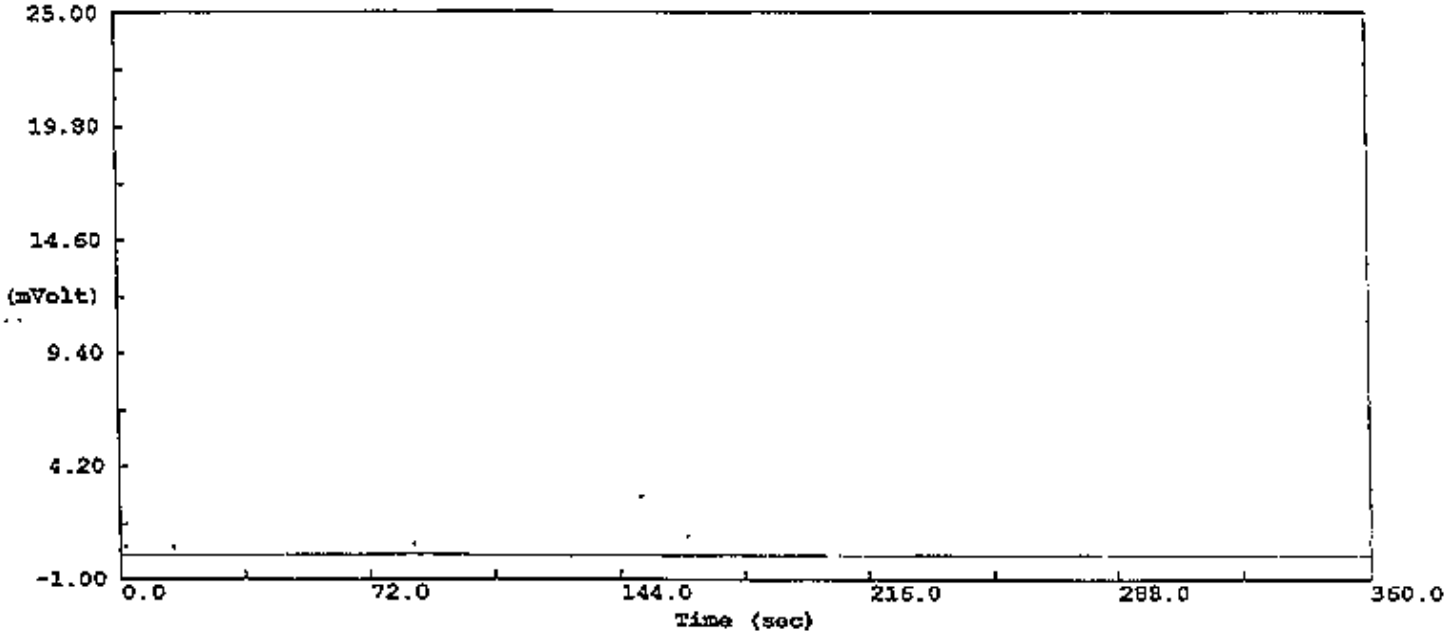
Channel : E.A. Channel A
Sample weight : 5

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-1.7955530E-01	85	13516	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092014.DAT
Sample name :PBS2 Analysed :09-20-04 16:32

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 16:32	Printed	: 9/20/2004 16:38

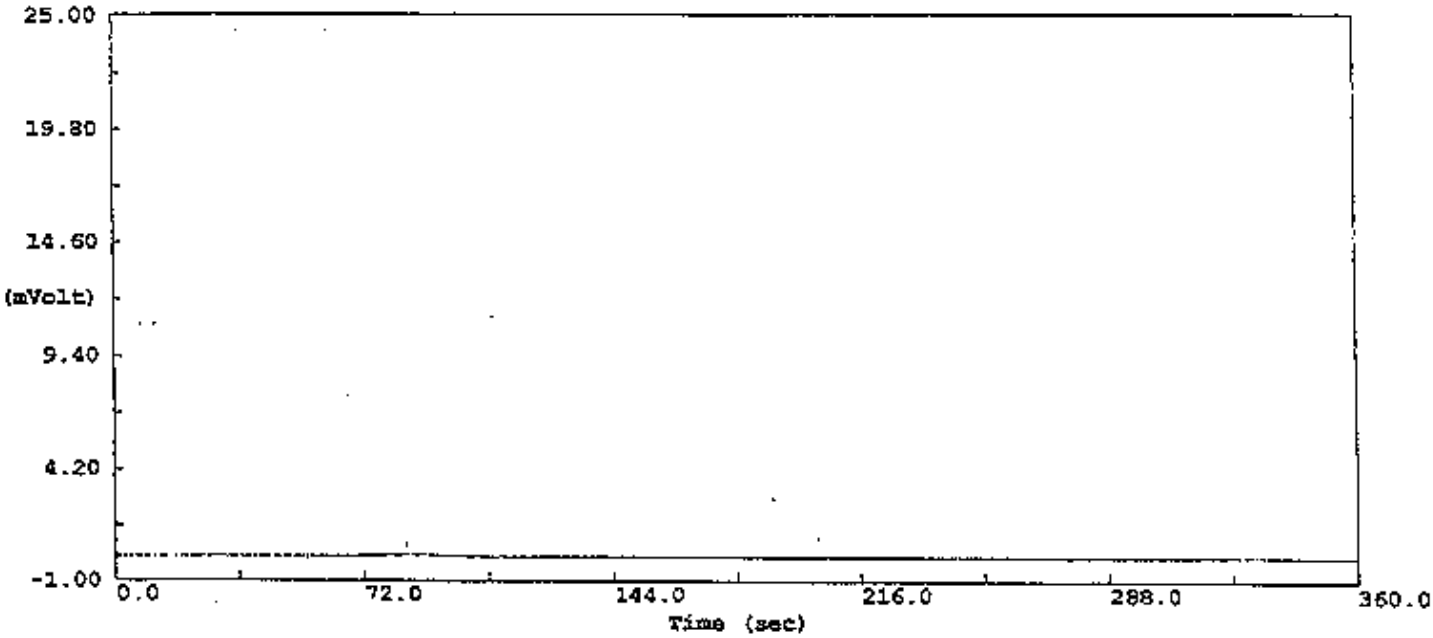
Sample ID	: PBS2 (# 14)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5
Chromatogram	: C:\EAW\C092014.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-1.7662245E-01	85	14487	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092015.DAT
Sample name :PBS3 Analysed :09-20-04 16:38

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:38

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 16:45

Sample ID : PBS3 (# 15)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092015.DAT

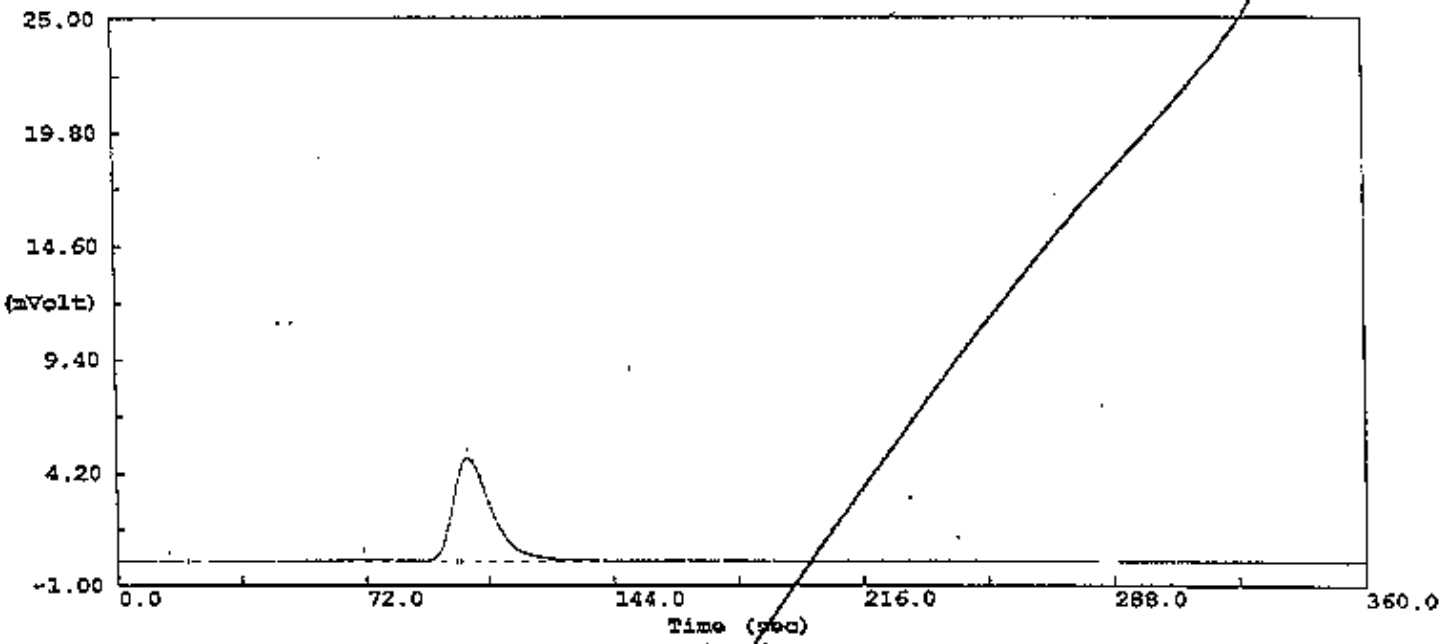
Channel : E.A. Channel A
Sample weight : 5

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-1.6172263E-01	84	19420	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092016.DAT
Sample name :LCS1 Analysed :09-20-04 16:45

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:45

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 16:51

Sample ID : LCS1 (# 16)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092016.DAT

Channel : E.A. Channel A
Sample weight : 10.684

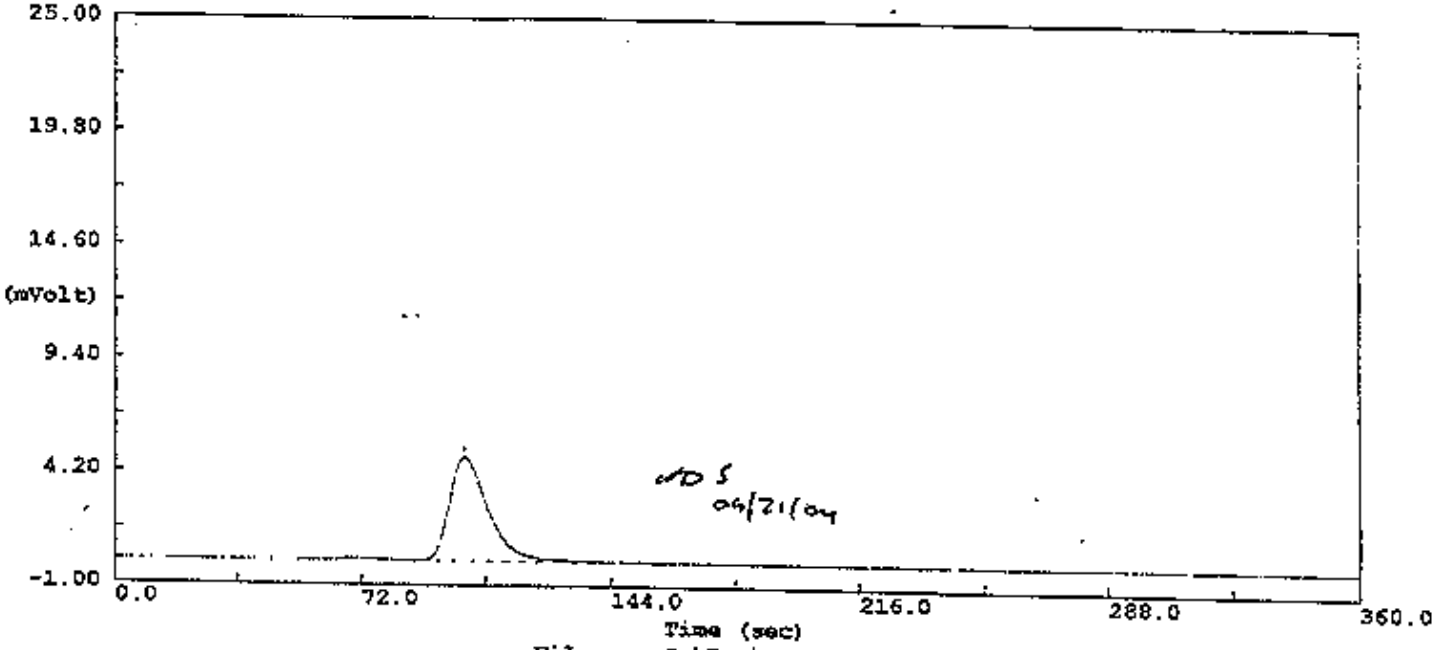
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-8.2099453E-02	71	14882	FU	1.000000	

09/20/04

Eager 200 Strip-Chart



Filename C:\EAW\C092016A.DAT
Sample name :LCS1 Analysed :09-20-04 16:45

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 16:45	Printed	: 9/21/2004 08:21

Sample ID	: LCS1 (# 16)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 10.684
Chromatogram	: C:\EAW\C092016A.DAT		

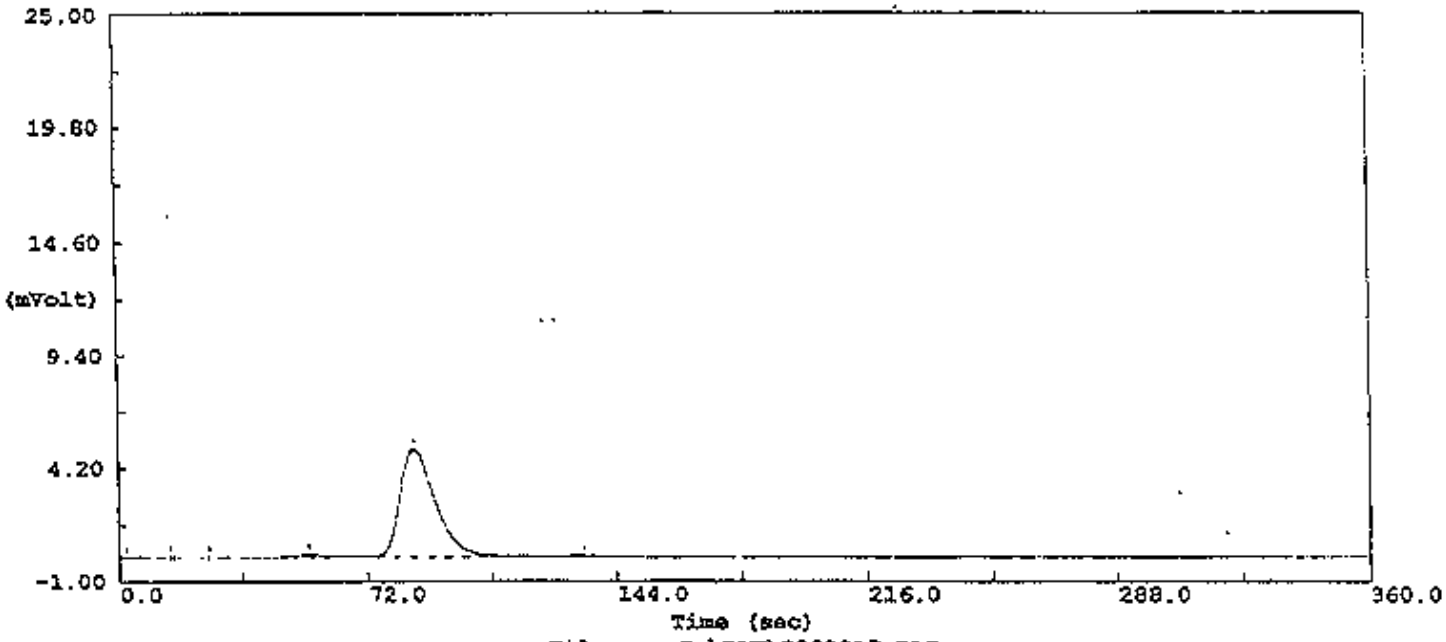
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Warning Chromatogram has been subjected to manual integration.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7738	102	620400	mi	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092017.DAT
Sample name :LCS2 Analysed :09-20-04 16:51

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 16:51	Printed	: 9/20/2004 16:57

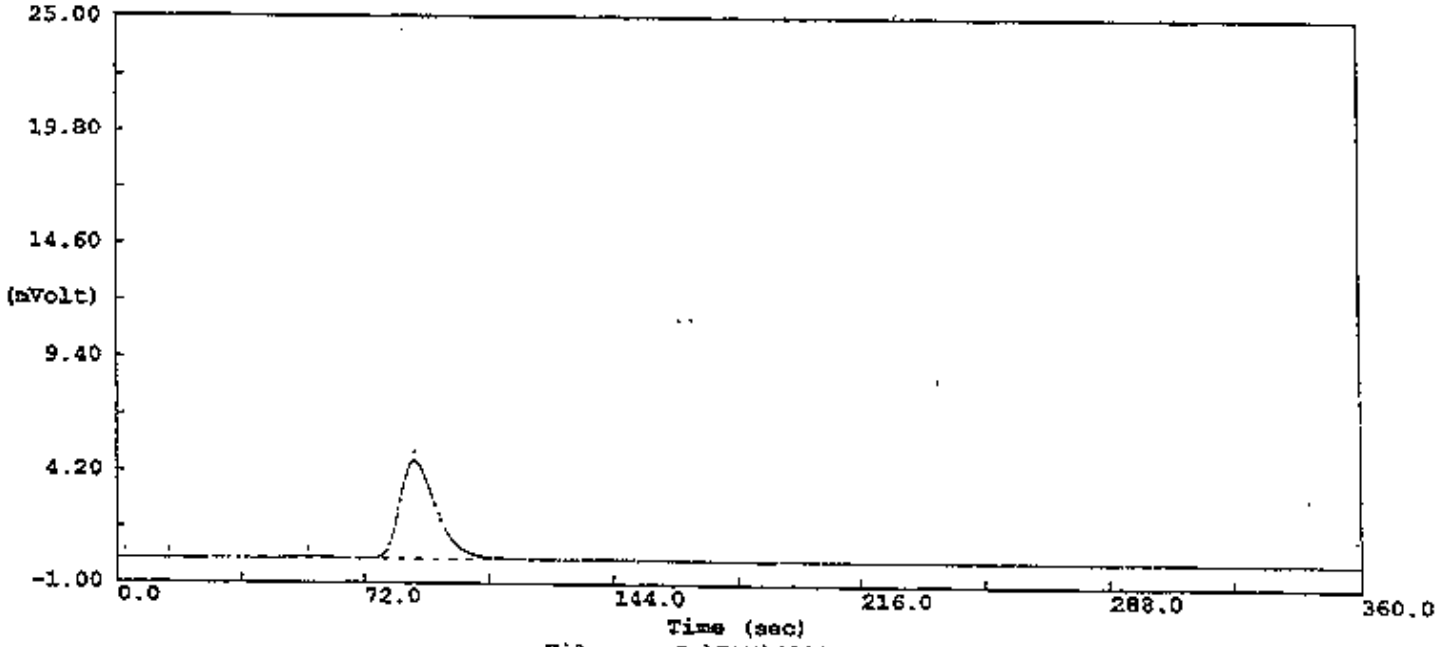
Sample ID	: LCS2 (# 17)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 10.165
Chromatogram	: C:\EAW\C092017.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7462	86	575223	TL	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092018.DAT
Sample name :LSC3 Analysed :09-20-04 16:57

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 16:57

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 17:03

Sample ID : LSC3 (# 18)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092018.DAT

Channel : E.A. Channel A
Sample weight : 9.382

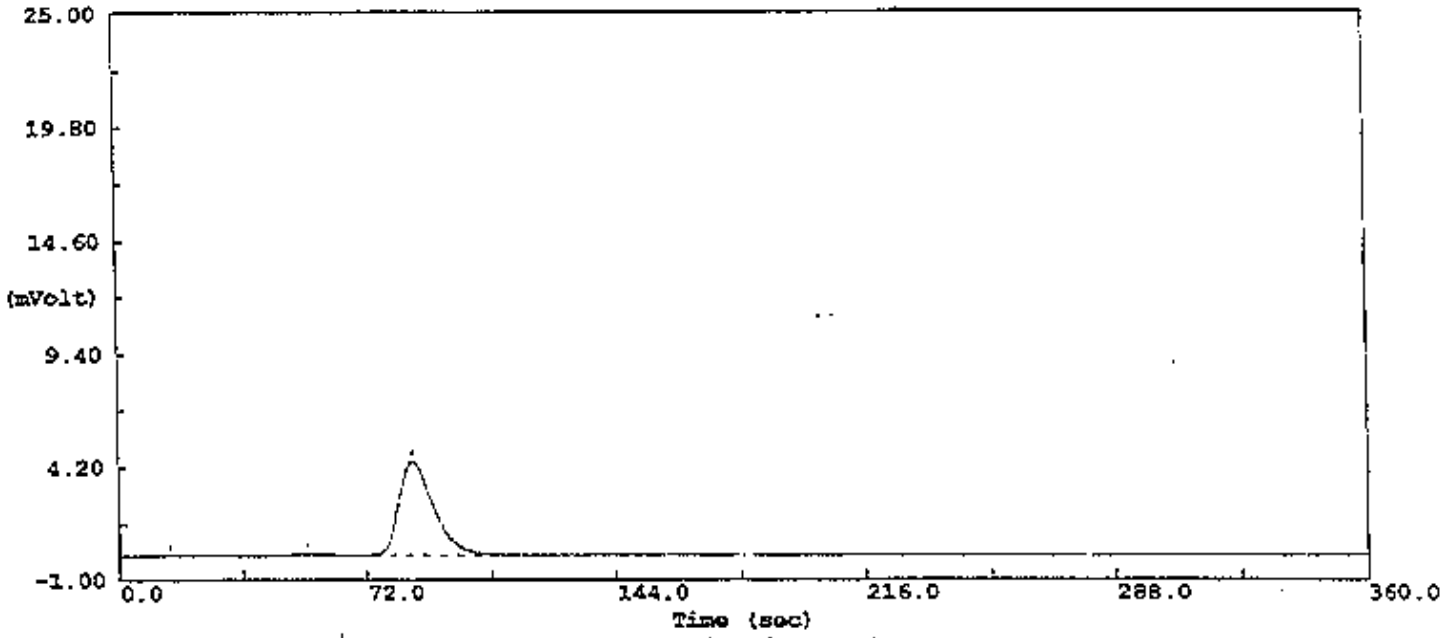
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7706	87	551681	FU	1.000000	

0047

Eager 200 Strip-Chart



Filename C:\EAW\C092019.DAT
Sample name :LCS4 Analysed :09-20-04 17:03

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 17:03	Printed	: 9/20/2004 17:09

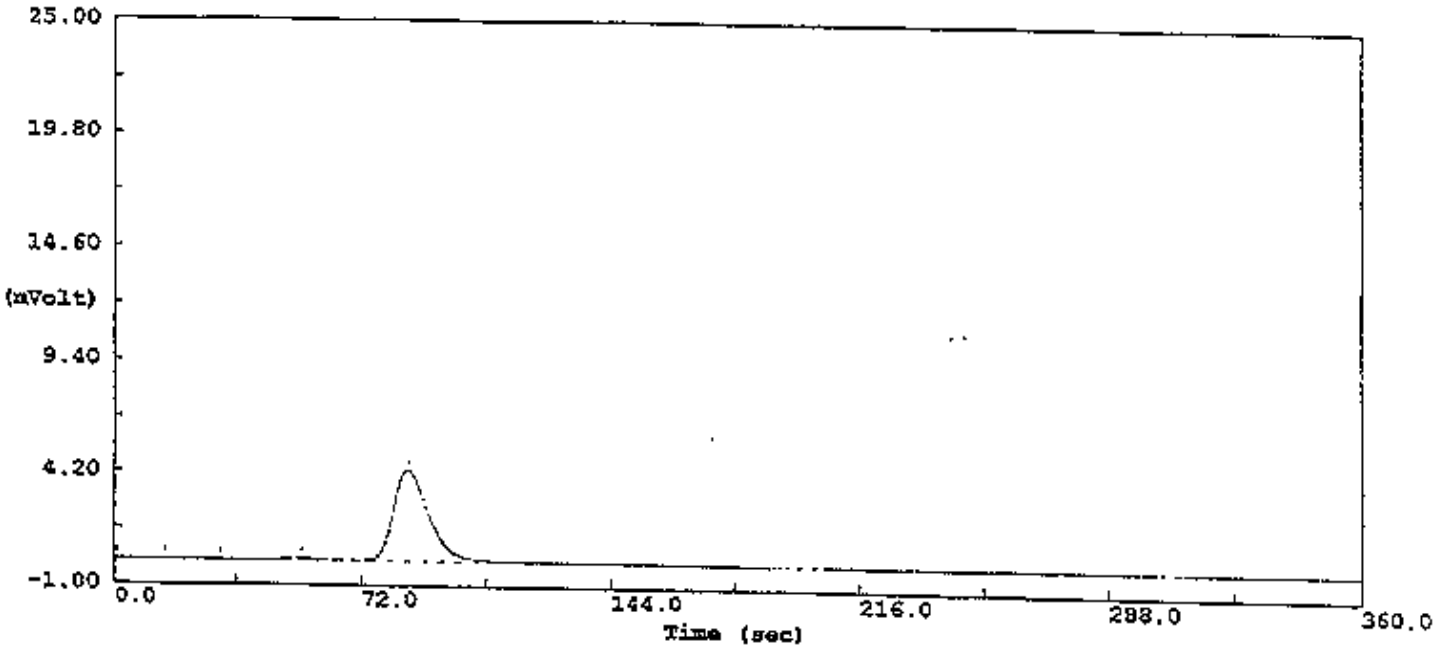
Sample ID	: LCS4 (# 19)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 9.097
Chromatogram	: C:\EAW\C092019.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7145	86	503349	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092020.DAT
Sample name :LCSD1 Analysed :09-20-04 17:09

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 17:09

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 17:15

Sample ID : LCSD1 (# 20)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092020.DAT

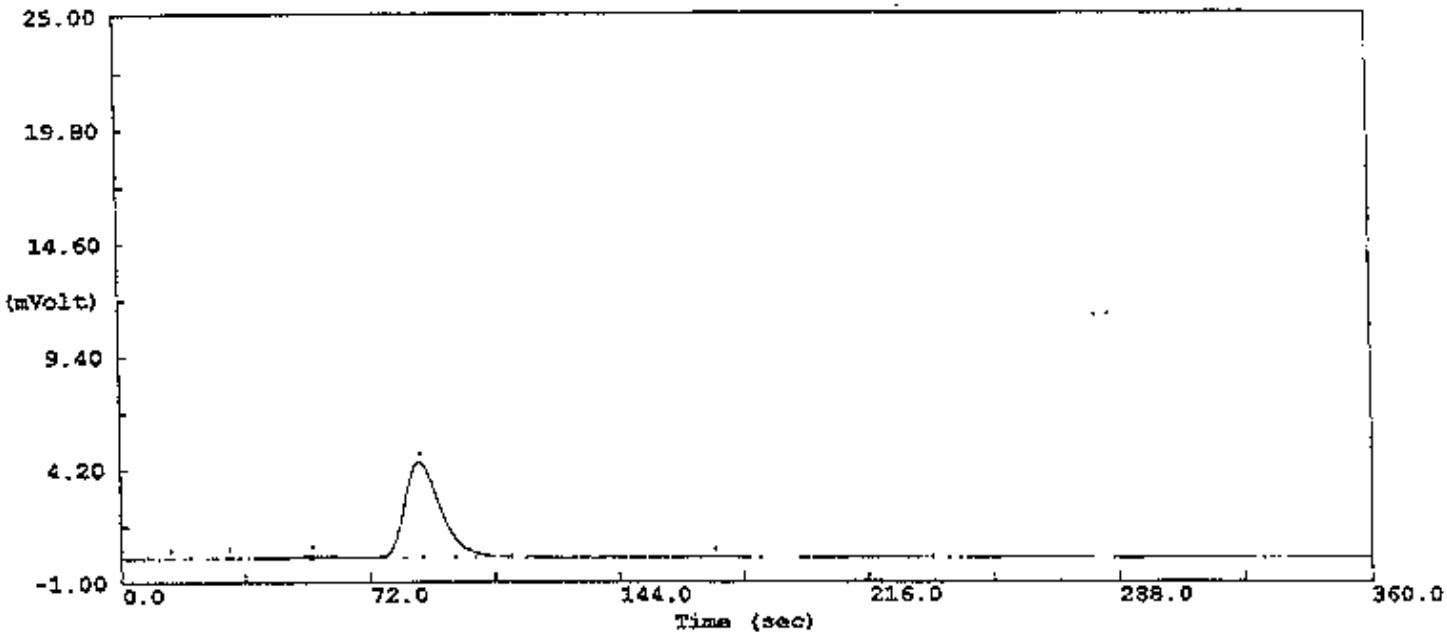
Channel : E.A. Channel A
Sample weight : 9.14

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7039	86	498952	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092021.DAT
Sample name :LCSD2 Analysed :09-20-04 17:15

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 17:15	Printed	: 9/20/2004 17:21

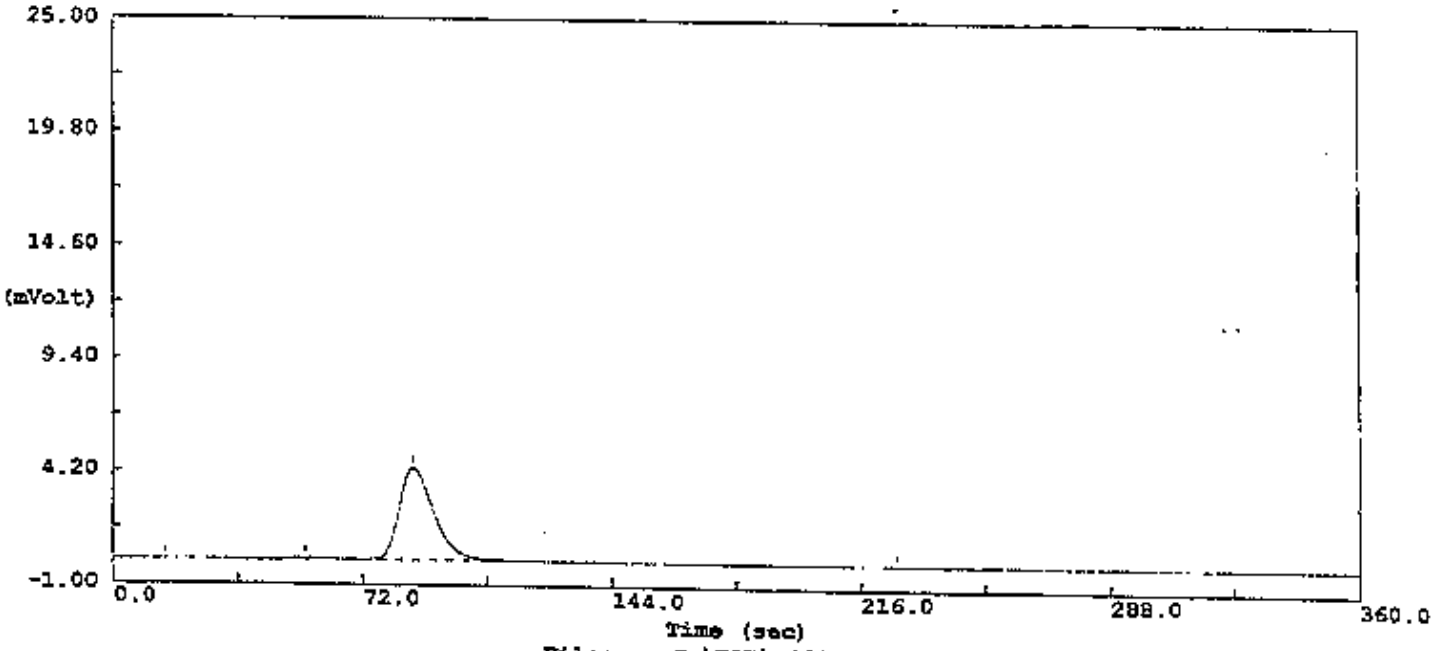
Sample ID	: LCSD2 (# 21)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 9.021
Chromatogram	: C:\EAW\C092021.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7409	87	515521	RS	1.000000	
Hydrogen	-2.0463920E+00	172	673	RS	766.004500	

Eager 200 Strip-Chart



Filename C:\EAW\C092022.DAT
Sample name :LCSD3 Analysed :09-20-04 17:21

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 17:21

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 17:27

Sample ID : LCSD3 (# 22)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092022.DAT

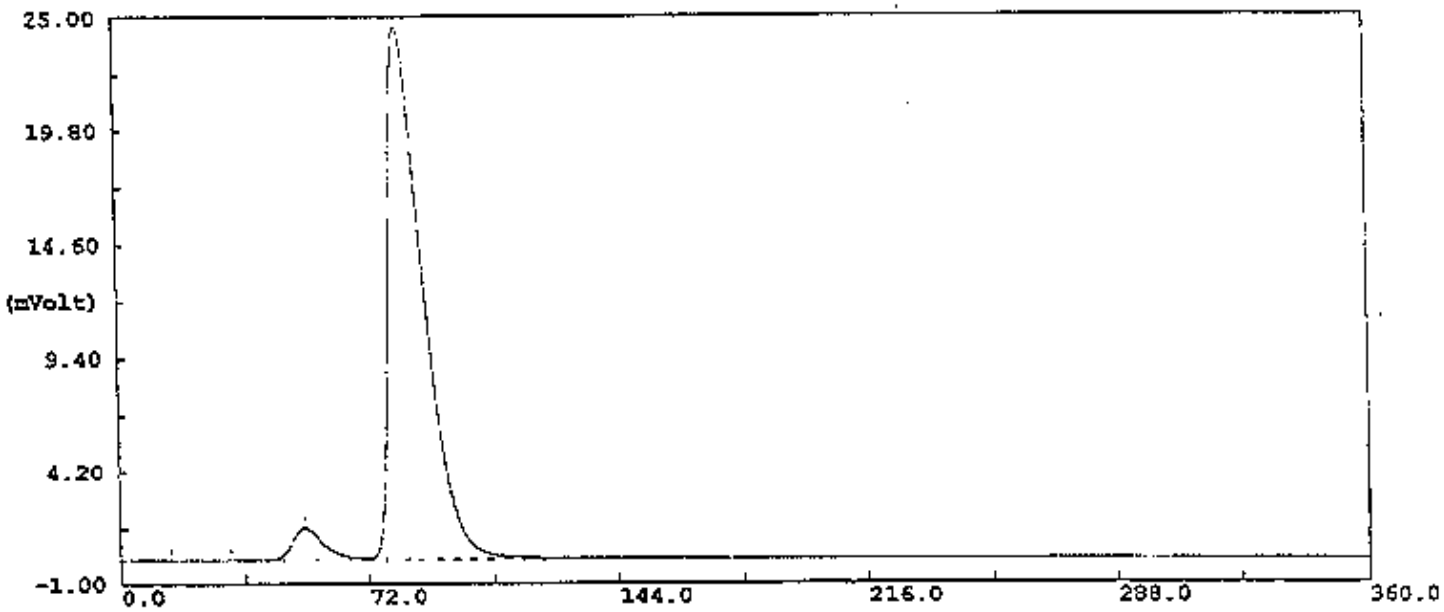
Channel : E.A. Channel A
Sample weight : 9.352

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.6707	87	488318	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092023.DAT
Sample name :ACETANILIDE Analysed :09-20-04 17:27

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 17:27	Printed	: 9/20/2004 17:33

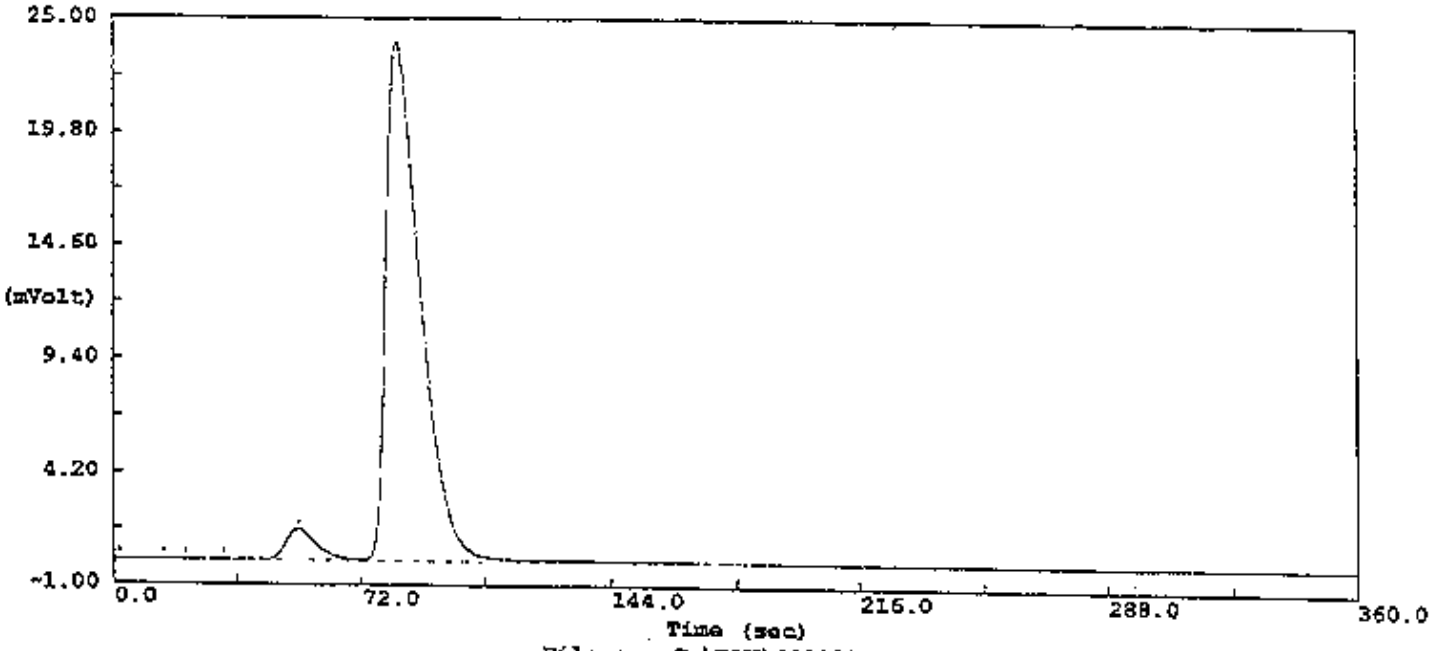
Sample ID	: ACETANILIDE (# 23)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .57
Chromatogram	: C:\EAW\C092023.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.0347	82	2829502	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092024.DAT
Sample name :ACETANILIDE Analysed :09-20-04 17:33

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 17:33	Printed	: 9/20/2004 17:39

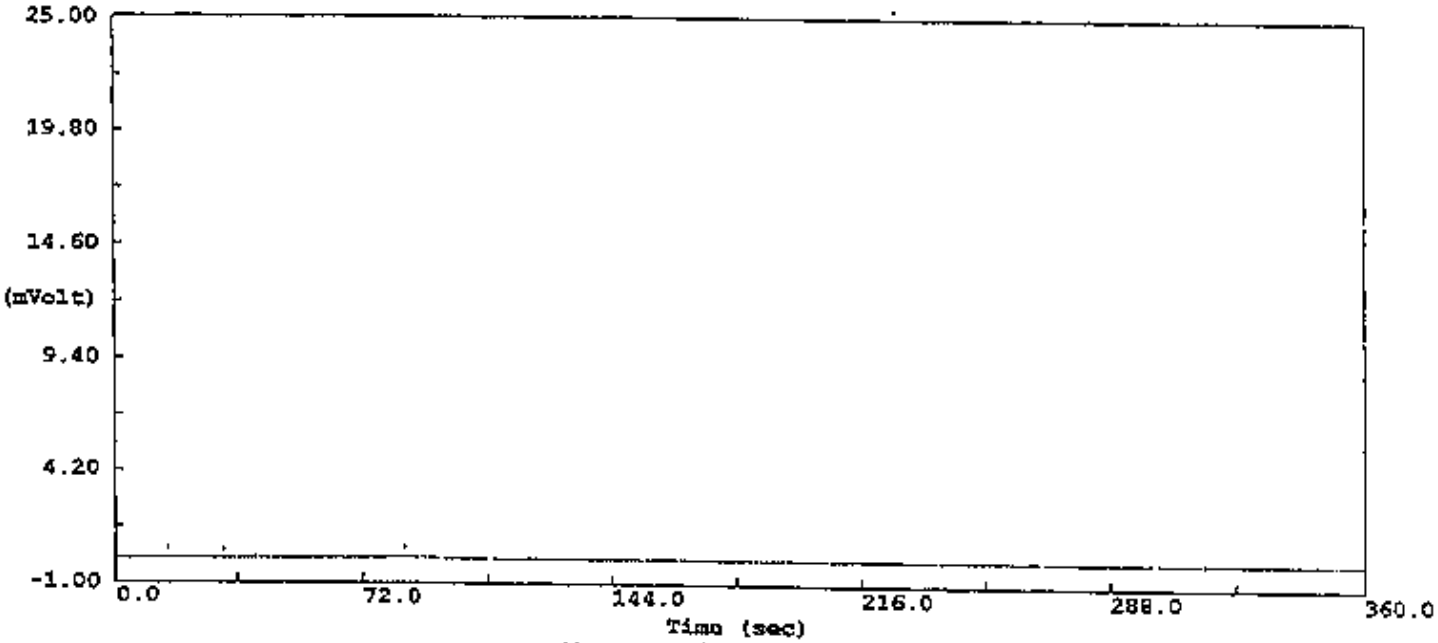
Sample ID	: ACETANILIDE (# 24)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .552
Chromatogram	: C:\EAW\C092024.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.3127	82	2752611	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092025.DAT
Sample name :BLANK Analysed :09-20-04 17:39

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 17:39

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 17:45

Sample ID : BLANK (# 25)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092025.DAT

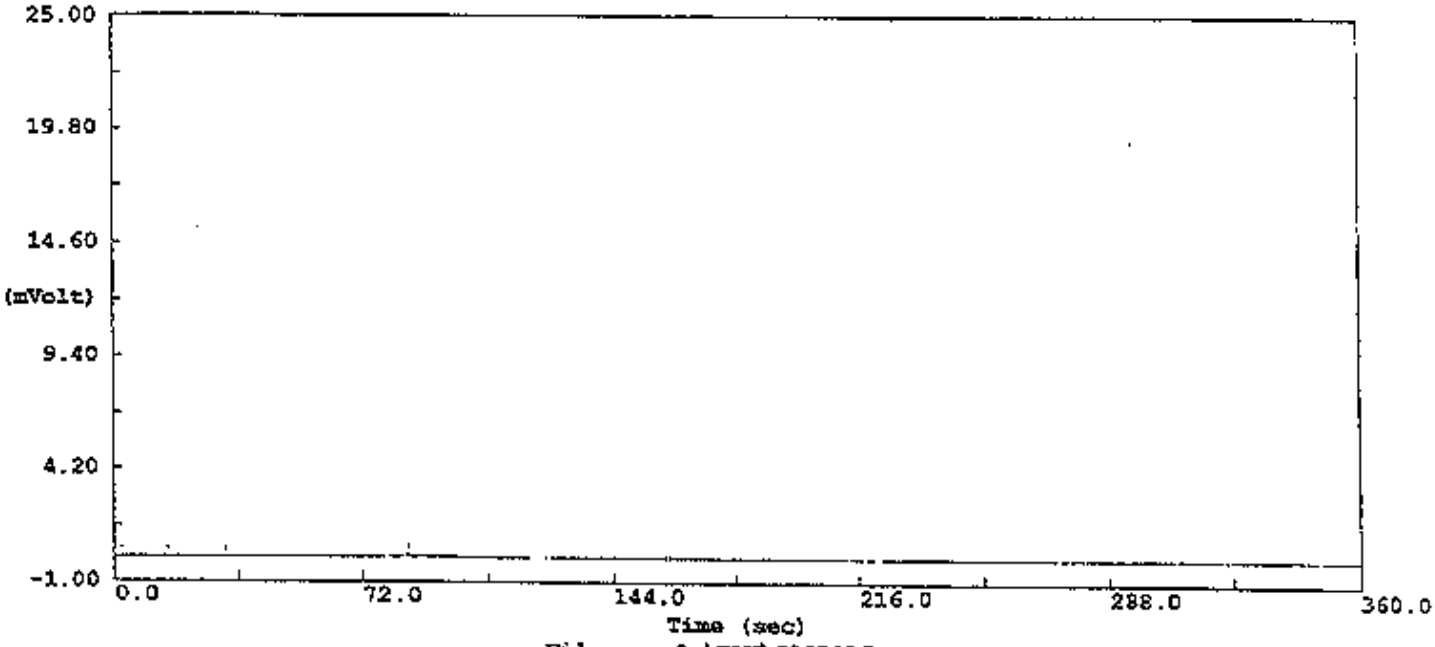
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.83406562E-02	84	16665	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092026.DAT
Sample name :BLANK Analysed :09-20-04 17:45

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 17:45

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 17:51

Sample ID : BLANK (# 26)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092026.DAT

Channel : E.A. Channel A
Sample weight : 30

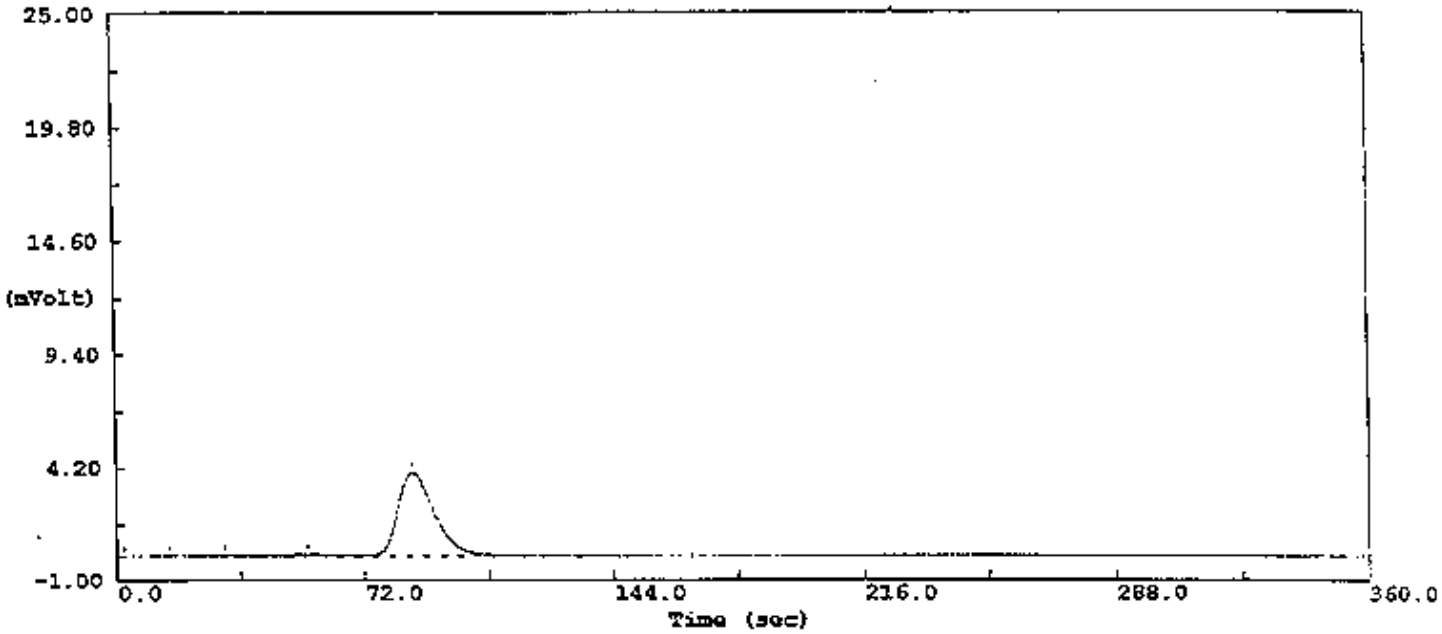
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9623589E-02	85	14117	RS	1.000000	

00477

Eager 200 Strip-Chart



Filename C:\EAW\C092027.DAT
Sample name :LCSD4 Analysed :09-20-04 17:51

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 17:51	Printed	: 9/20/2004 17:57

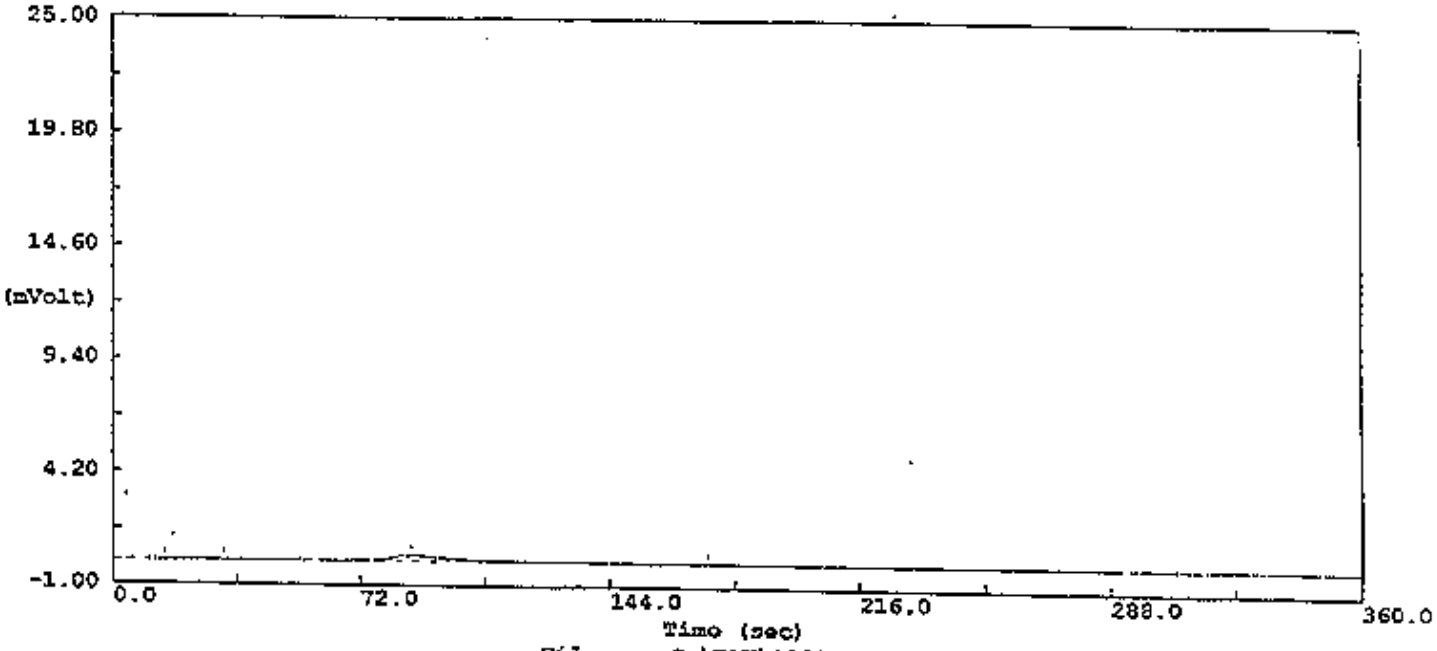
Sample ID	: LCSD4 (# 27)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 8.285
Chromatogram	: C:\EAW\C092027.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.6953	86	454401	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092028.DAT
Sample name :586458 Analysed :09-20-04 17:57

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 17:57

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:03

Sample ID : 586458 (# 28)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092028.DAT

Channel : E.A. Channel A
Sample weight : 8.348

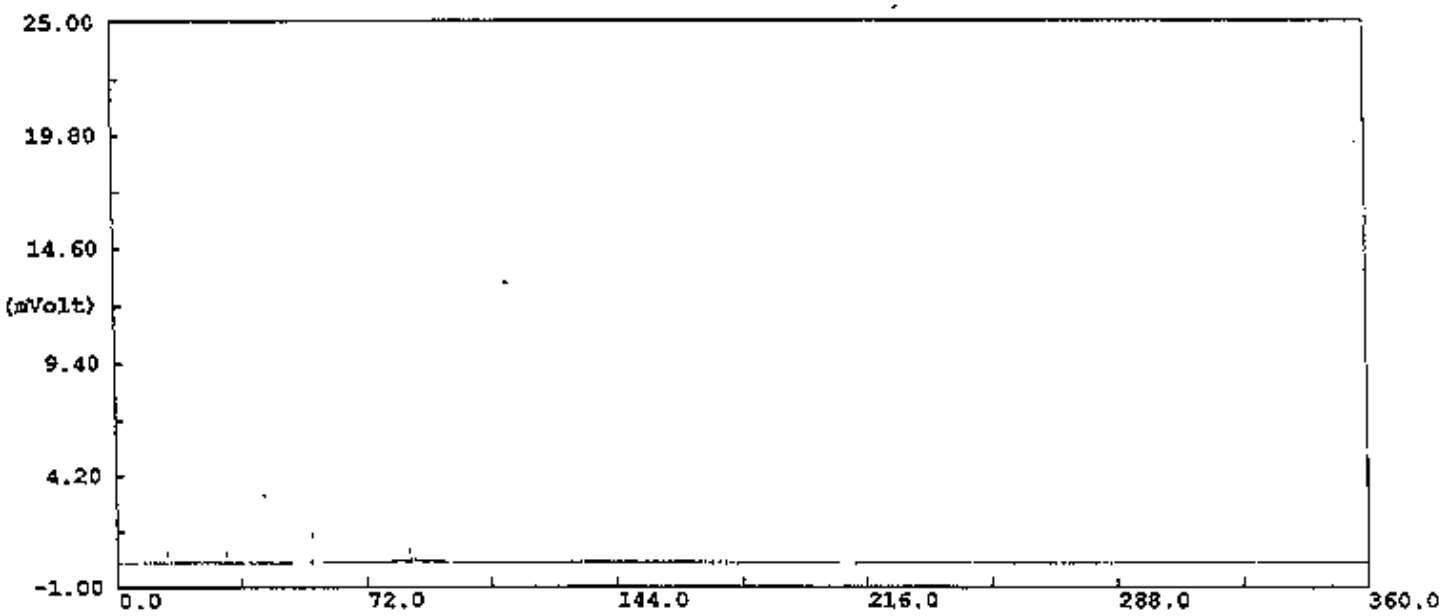
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-5.0969448E-02	87	44789	RS	1.000000	
Hydrogen	-2.3219099E+00	172	543	RS	82.483430	

0047

Eager 200 Strip-Chart



Filename C:\EAW\C092029.DAT
Sample name :586458 Analysed :09-20-04 18:04

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 18:04	Printed	: 9/20/2004 18:10

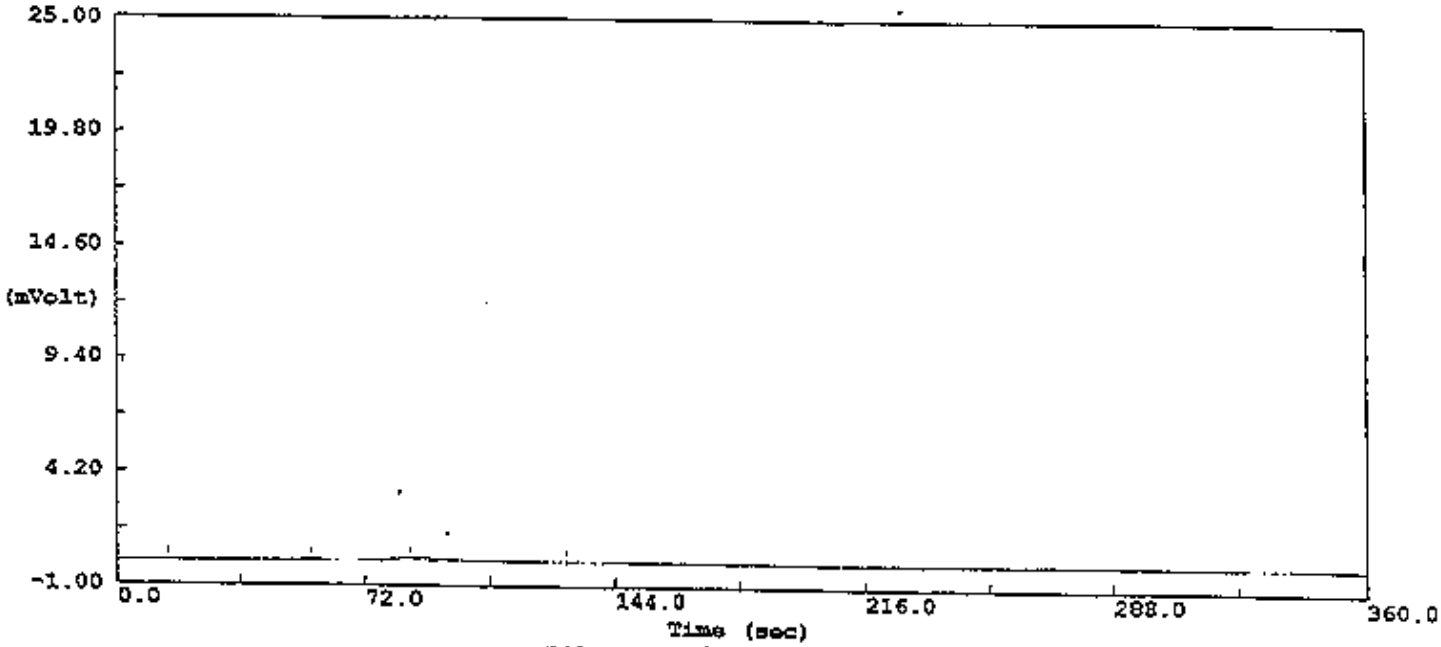
Sample ID	: 586458 (# 29)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 4.242
Chromatogram	: C:\EAW\C092029.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.0202036E-01	85	16218	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092030.DAT
Sample name :586458 Analysed :09-20-04 18:10

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:10

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:16

Sample ID : 586458 (# 30)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092030.DAT

Channel : E.A. Channel A
Sample weight : 7.879

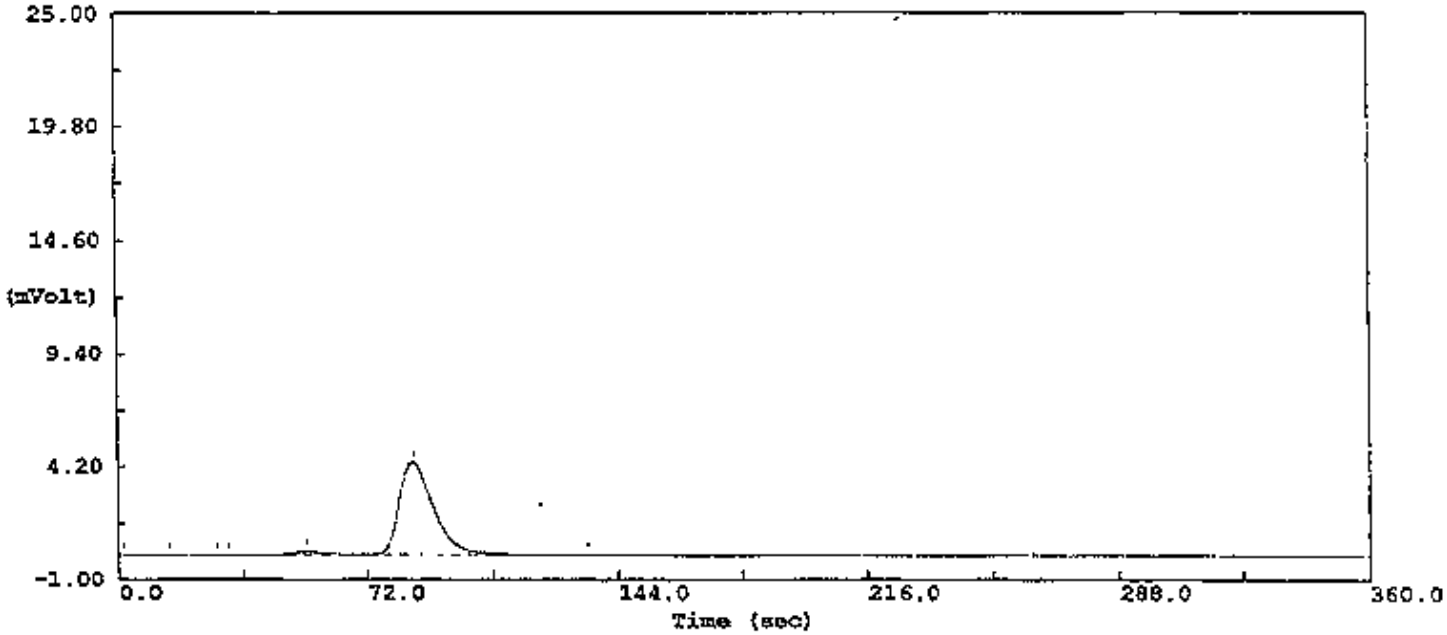
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-9.7994156E-02	85	21838	RS	1.000000	

0047

Eager 200 Strip-Chart



Filename C:\EAW\C092031.DAT
Sample name :586279 Analysed :09-20-04 18:16

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:16
Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:22

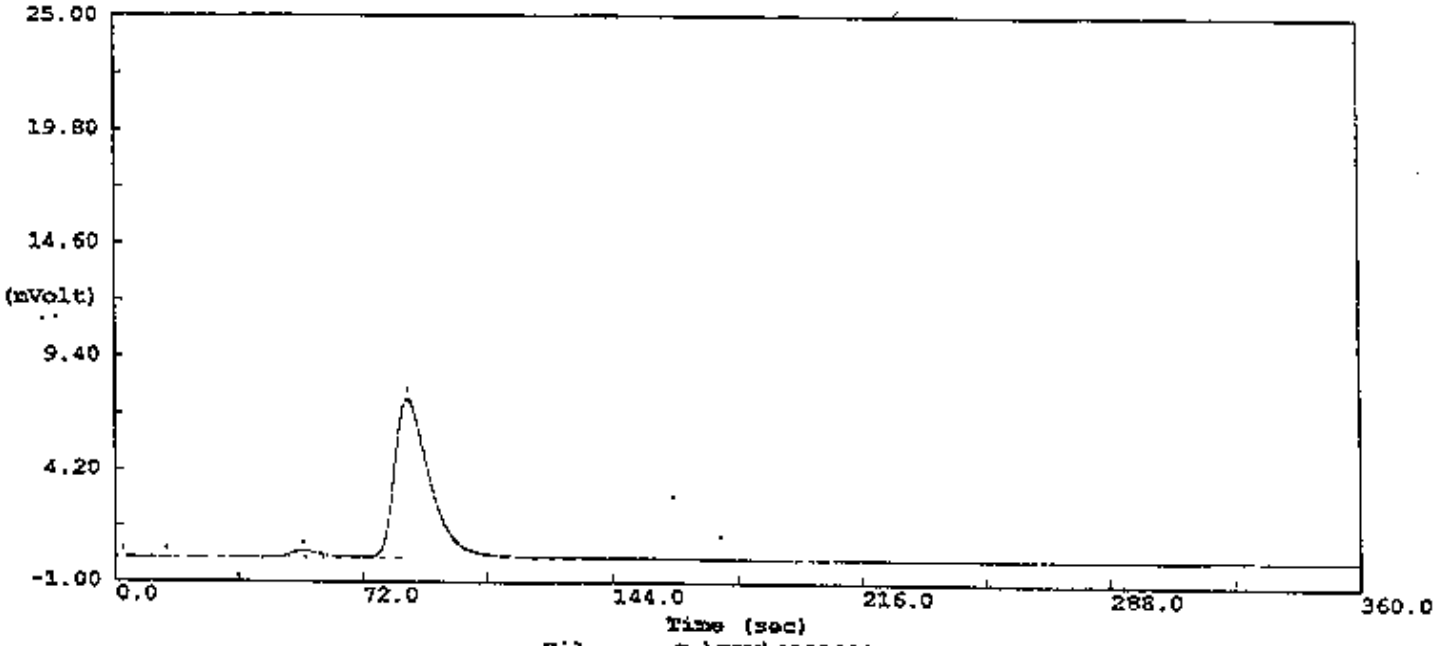
Sample ID : 586279 (# 31)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092031.DAT
Channel : E.A. Channel A
Sample weight : 4.021

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.5133	86	475887	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092032.DAT
Sample name :586279 Analysed :09-20-04 18:22

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:22

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:28

Sample ID : 586279 (# 32)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092032.DAT

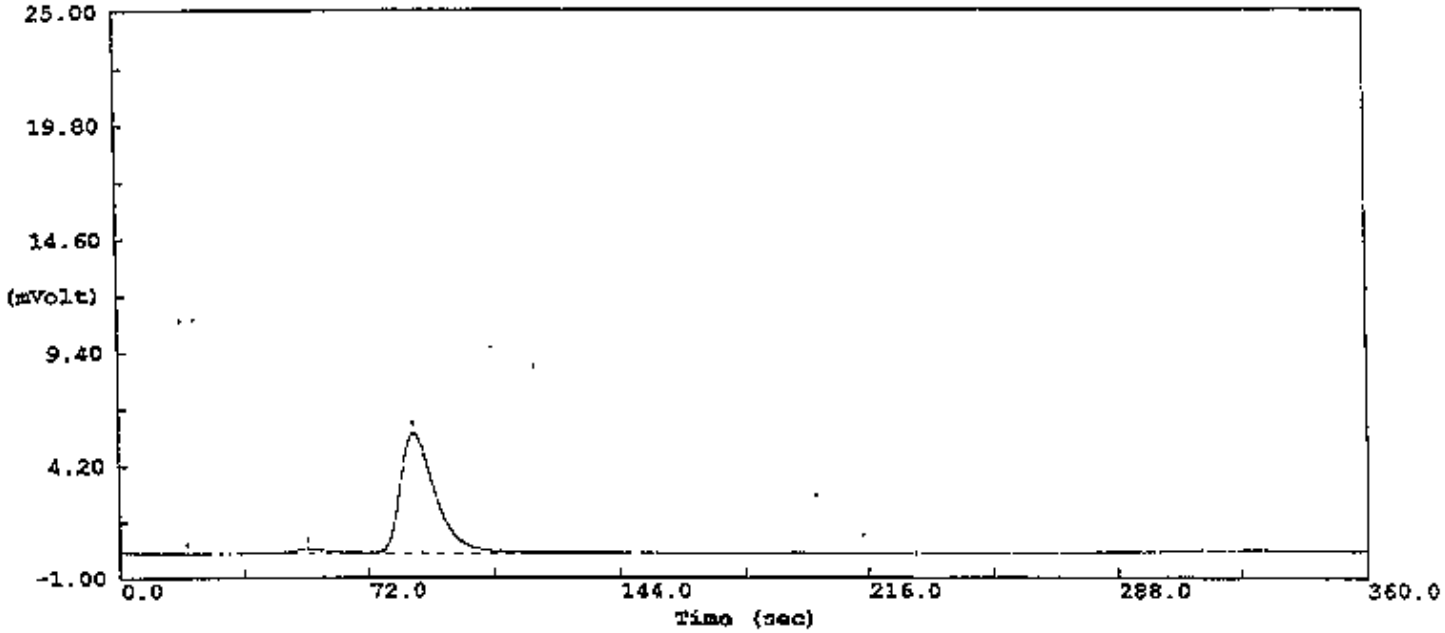
Channel : E.A. Channel A
Sample weight : 7.87

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.5277	86	869076	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092033.DAT
Sample name :586279 Analysed :09-20-04 18:28

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:28

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:34

Sample ID : 586279 (# 33)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092033.DAT

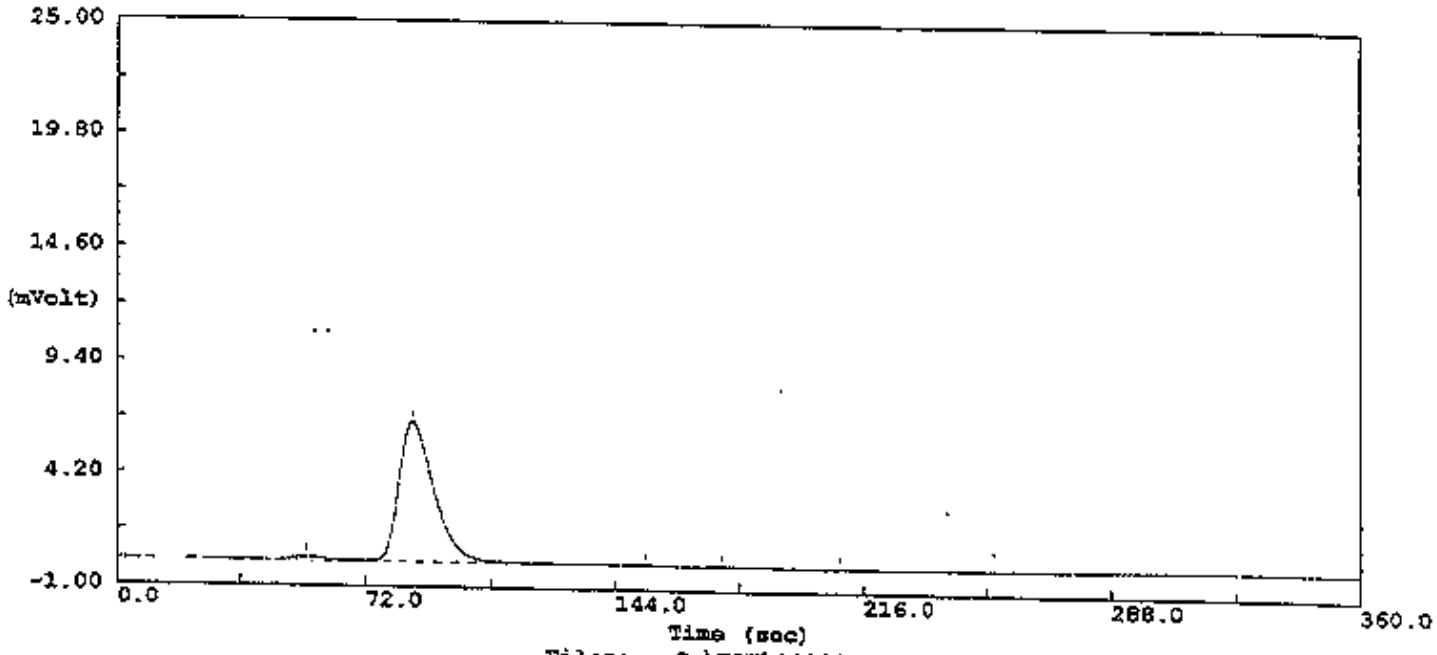
Channel : E.A. Channel A
Sample weight : 5.526

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.5434	85	637695	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092034.DAT
Sample name :586280 Analysed :09-20-04 18:34

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:34

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:40

Sample ID : 586280 (# 34)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092034.DAT

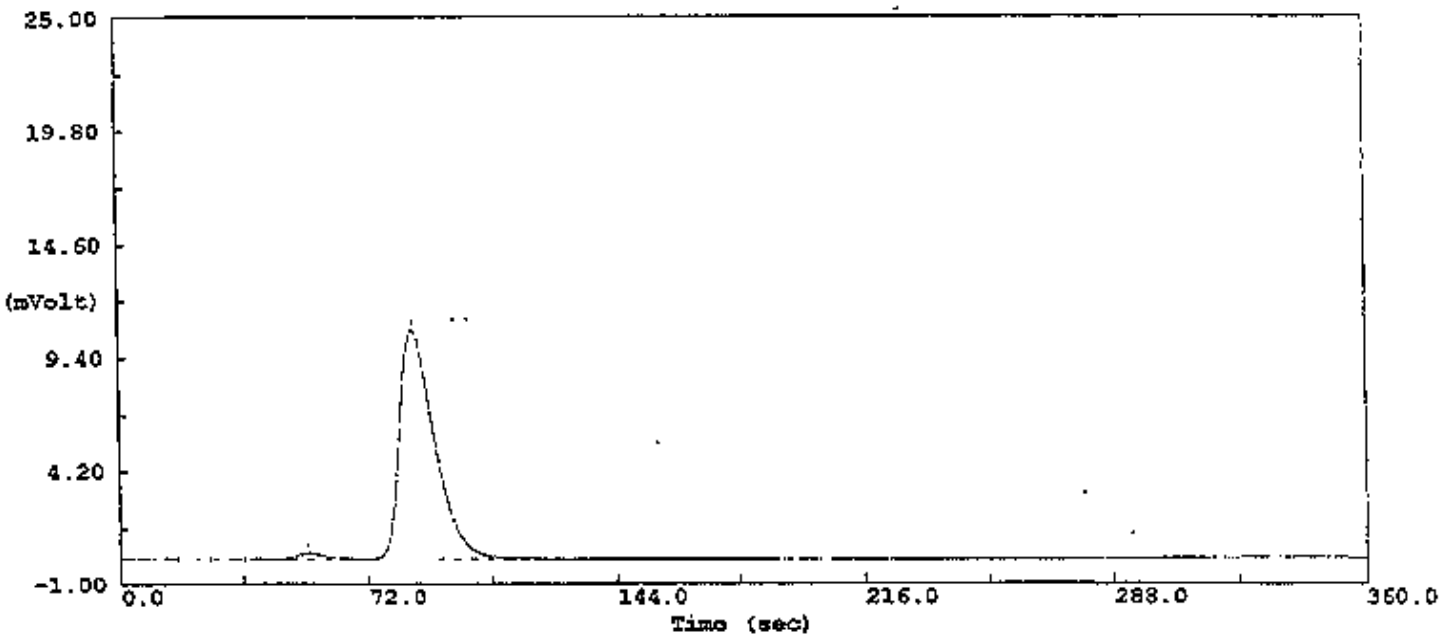
Channel : E.A. Channel A
Sample weight : 6.625

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.5423	86	749530	TL	1.000000	
Hydrogen	-1.6539499E+00	175	1730	CR	433.254400	

Eager 200 Strip-Chart



Filename C:\EAW\C092035.DAT
Sample name :586280 Analysed :09-20-04 18:40

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 18:40	Printed	: 9/20/2004 18:46

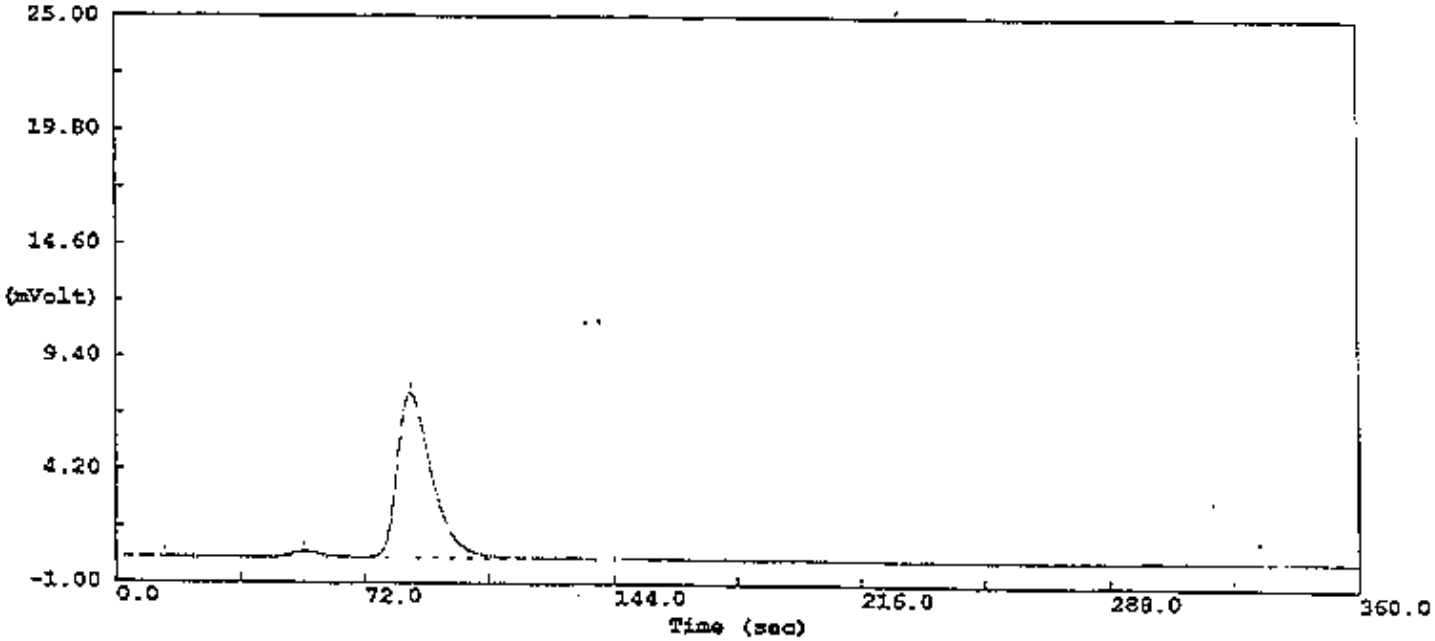
Sample ID	: 586280 (# 35)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 10.59
Chromatogram	: C:\EAW\C092035.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.6554	85	1233785	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092036.DAT
Sample name :586280 Analysed :09-20-04 18:46

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:46

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 18:52

Sample ID : 586280 (# 36)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092036.DAT

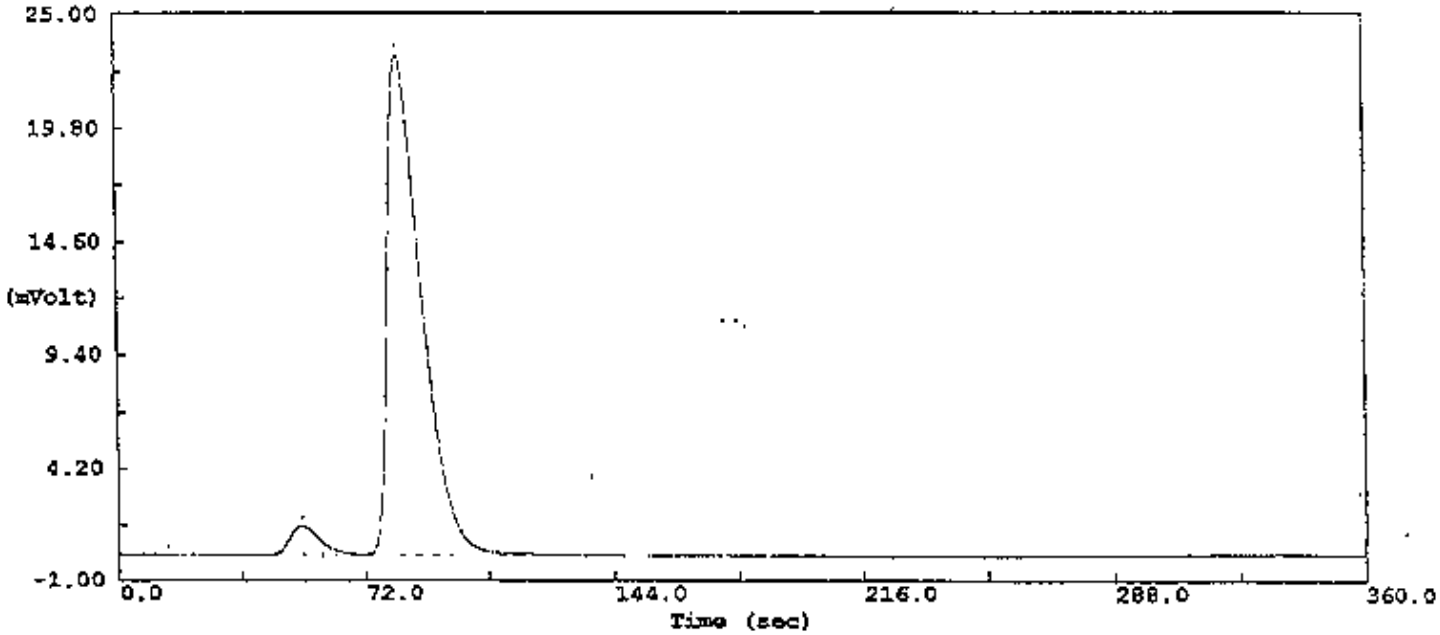
Channel : E.A. Channel A
Sample weight : 8.817

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.4096	86	895909	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092037.DAT
Sample name :ACETANILIDE Analysed :09-20-04 18:52

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 18:52	Printed	: 9/20/2004 18:58

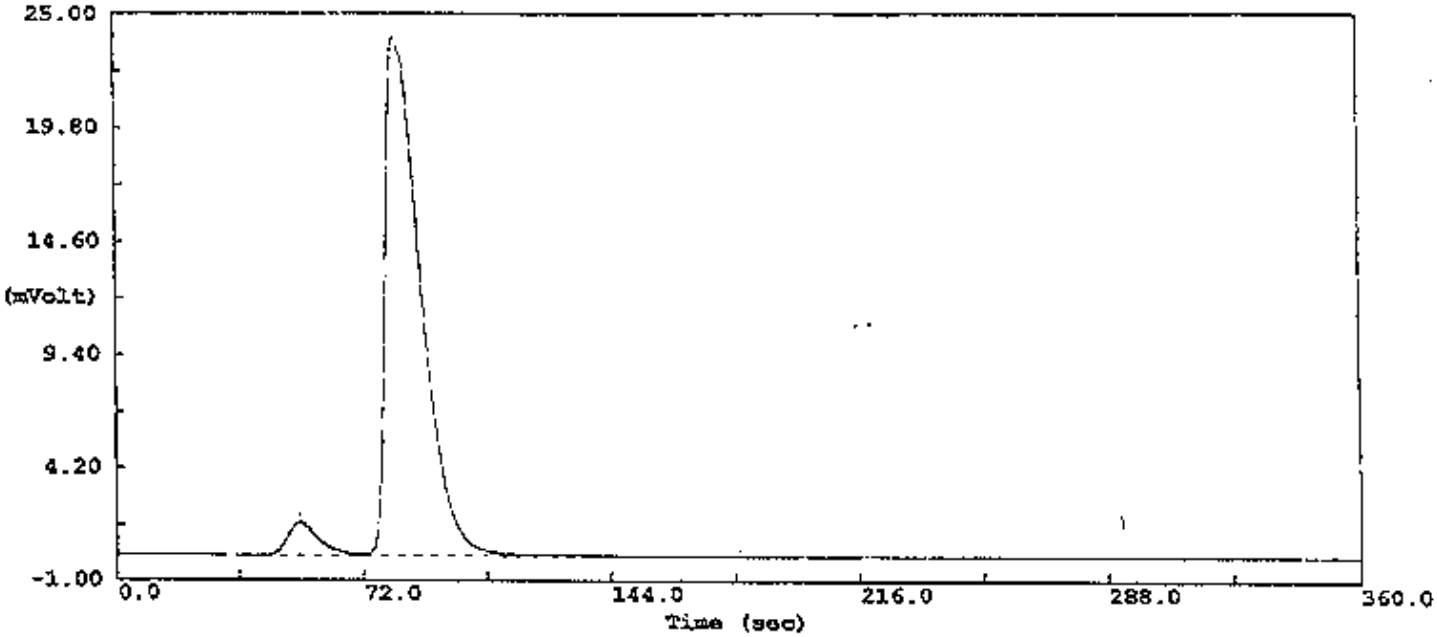
Sample ID	: ACETANILIDE (# 37)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .527
Chromatogram	: C:\EAW\C092037.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.7371	82	2646063	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092038.DAT
Sample name :ACETANILIDE Analysed :09-20-04 18:58

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 18:58

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:04

Sample ID : ACETANILIDE (# 38)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092038.DAT

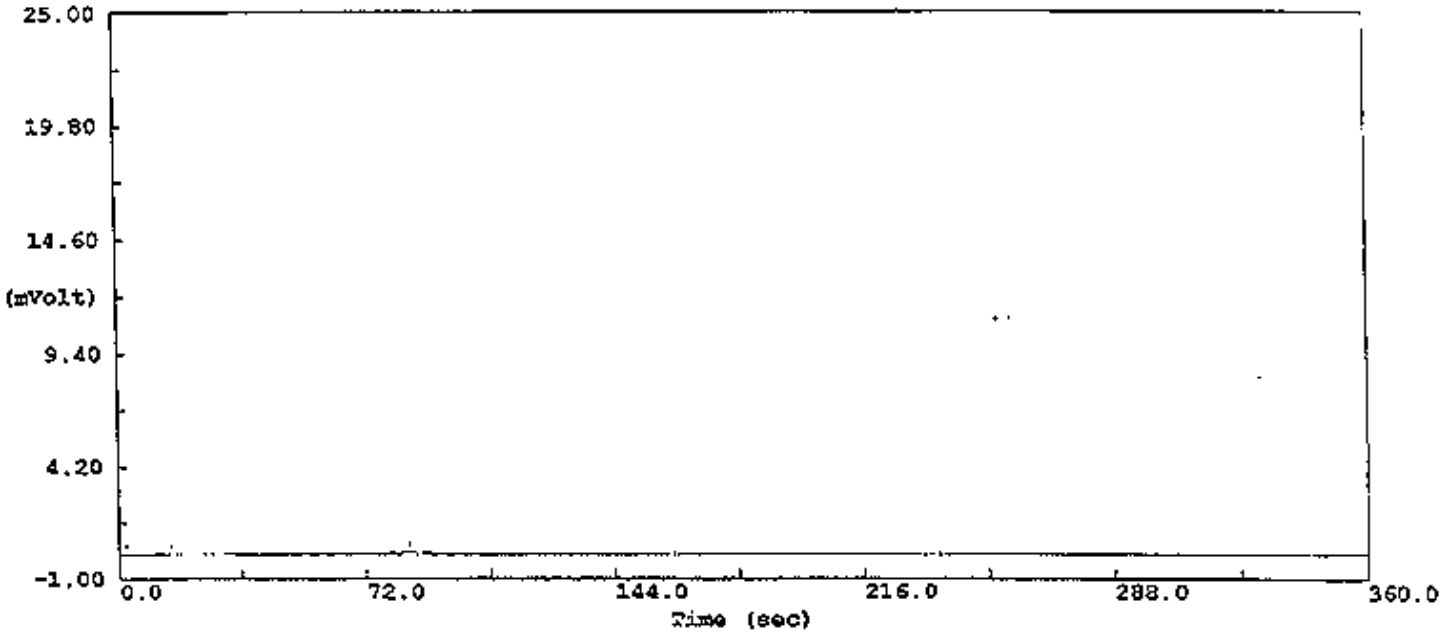
Channel : E.A. Channel A
Sample weight : .57

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.1263	82	2832956	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092039.DAT
Sample name :BLANK Analysed :09-20-04 19:04

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:04

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:10

Sample ID : BLANK (# 39)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092039.DAT

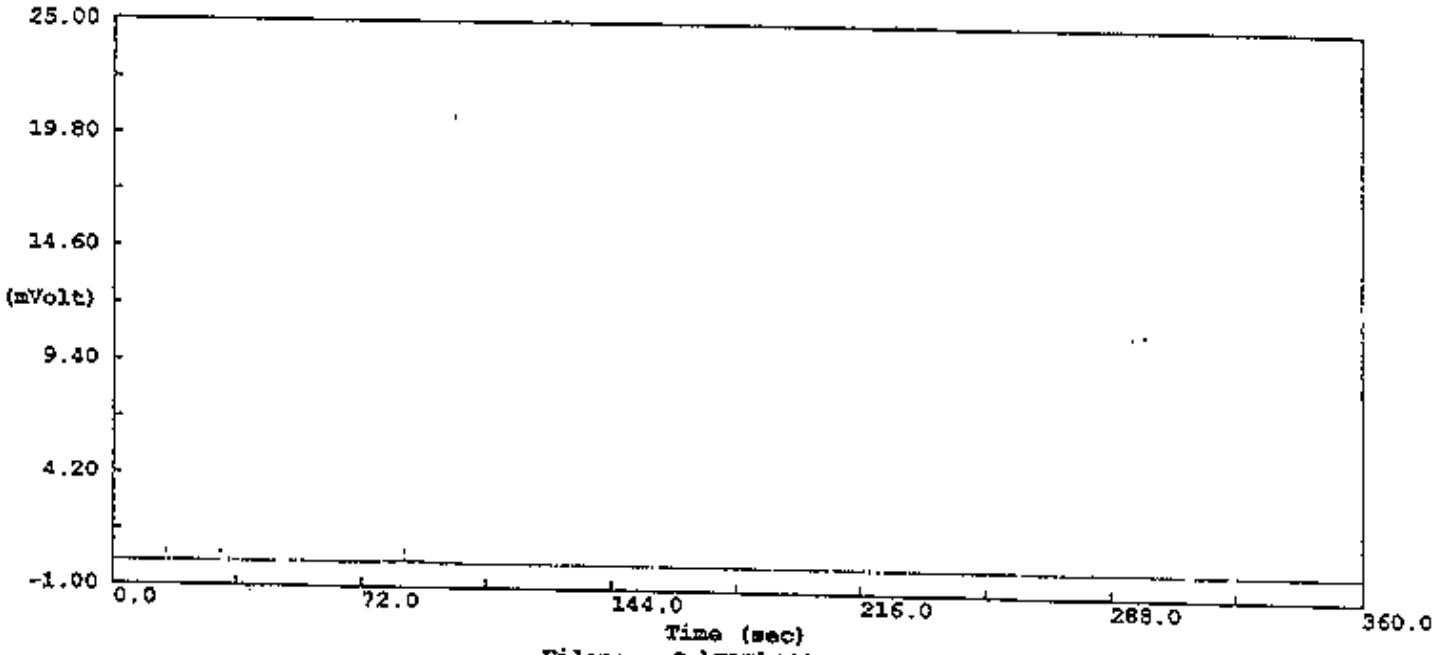
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9333374E-02	84	14693	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092040.DAT
Sample name :BLANK Analysed :09-20-04 19:10

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:10

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:16

Sample ID : BLANK (# 40)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092040.DAT

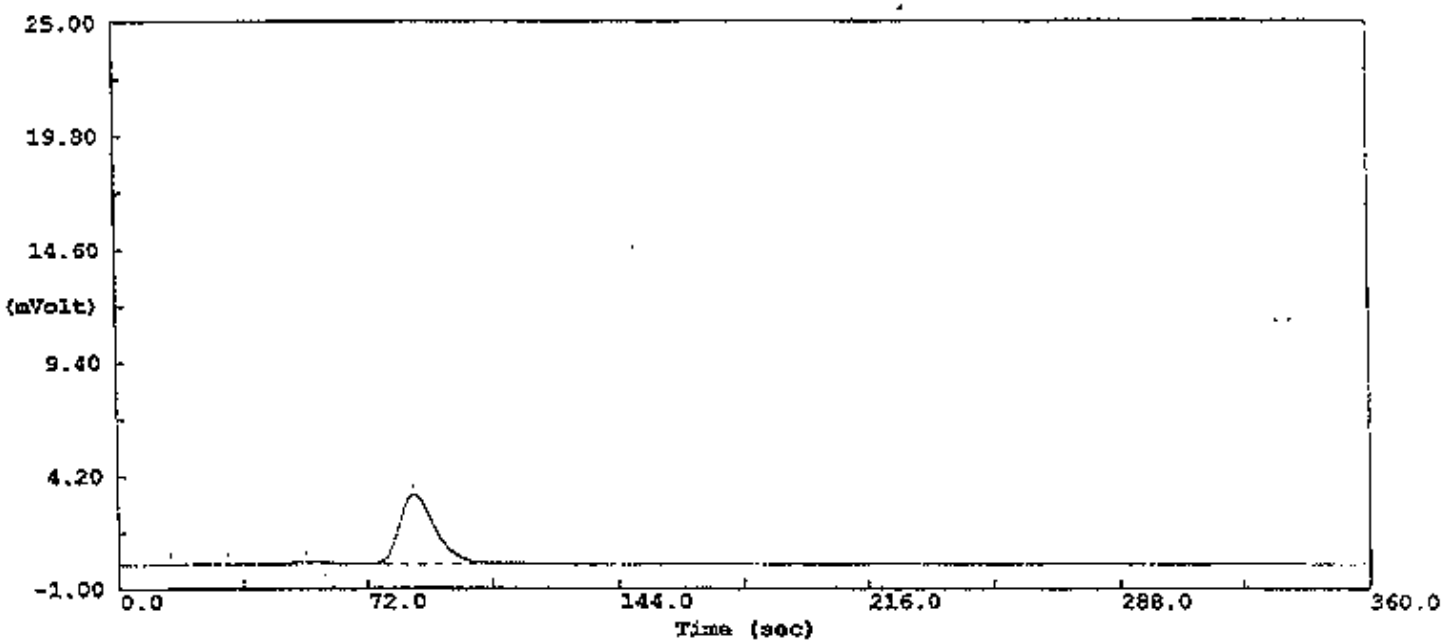
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.7917292E-02	84	17506	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092041.DAT
Sample name :586281 Analysed :09-20-04 19:16

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 19:16	Printed	: 9/20/2004 19:22

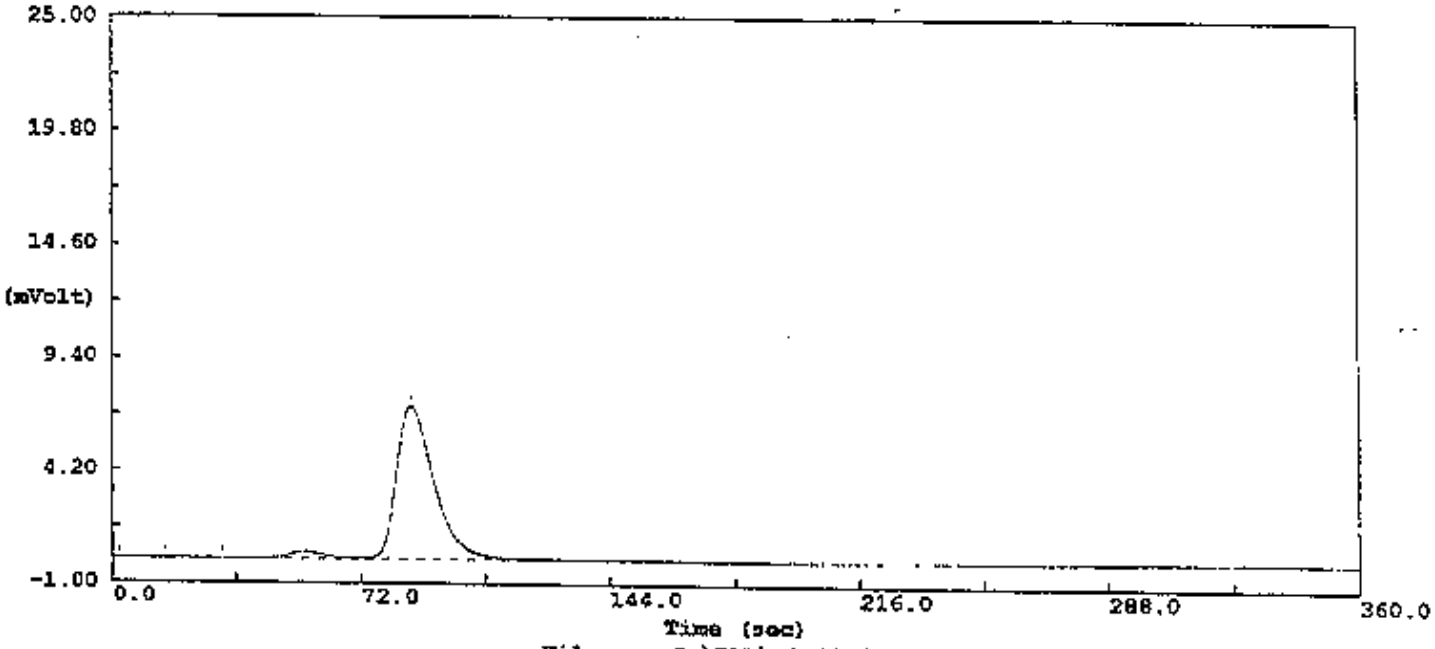
Sample ID	: 586281 (#.41)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 4.615
Chromatogram	: C:\EAW\C092041.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.9978	85	377862	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092042.DAT
Sample name :586281 Analysed :09-20-04 19:22

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:22

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:29

Sample ID : 586281 (# 42)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092042.DAT

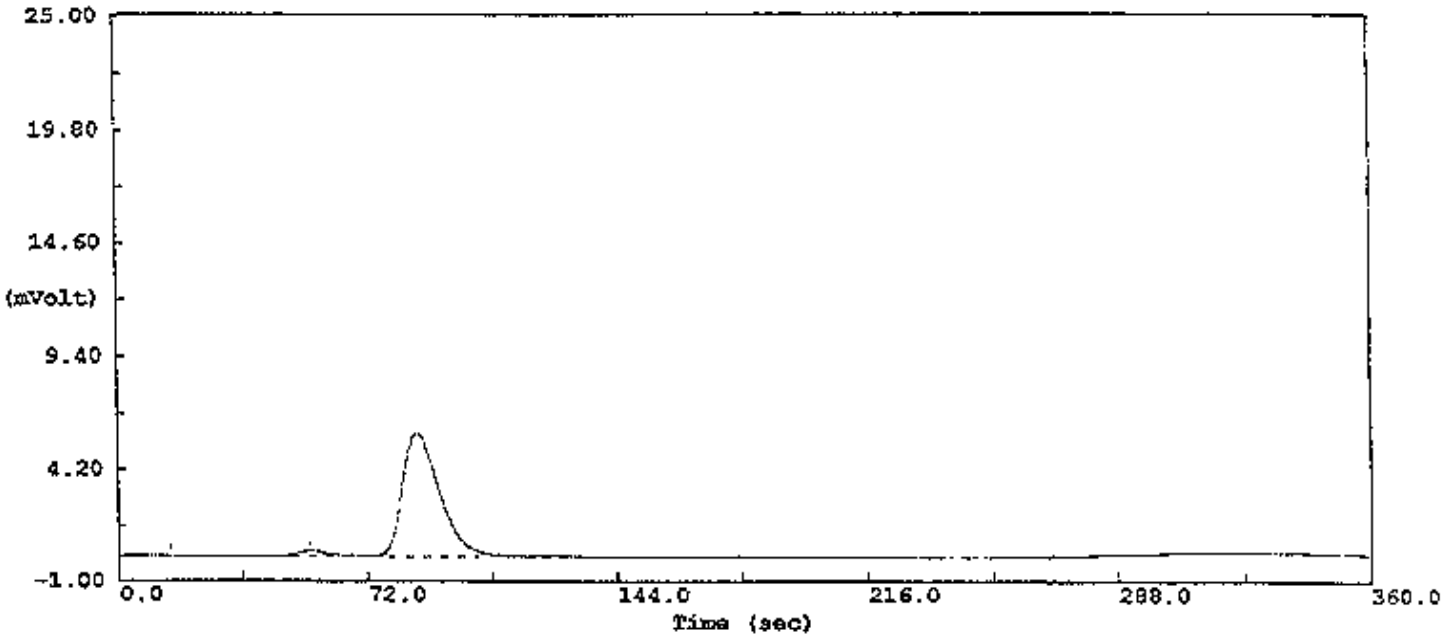
Channel : E.A. Channel A
Sample weight : 9.19

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.3136	86	872297	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092043.DAT
Sample name :586281 Analysed :09-20-04 19:29

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 19:29	Printed	: 9/20/2004 19:35

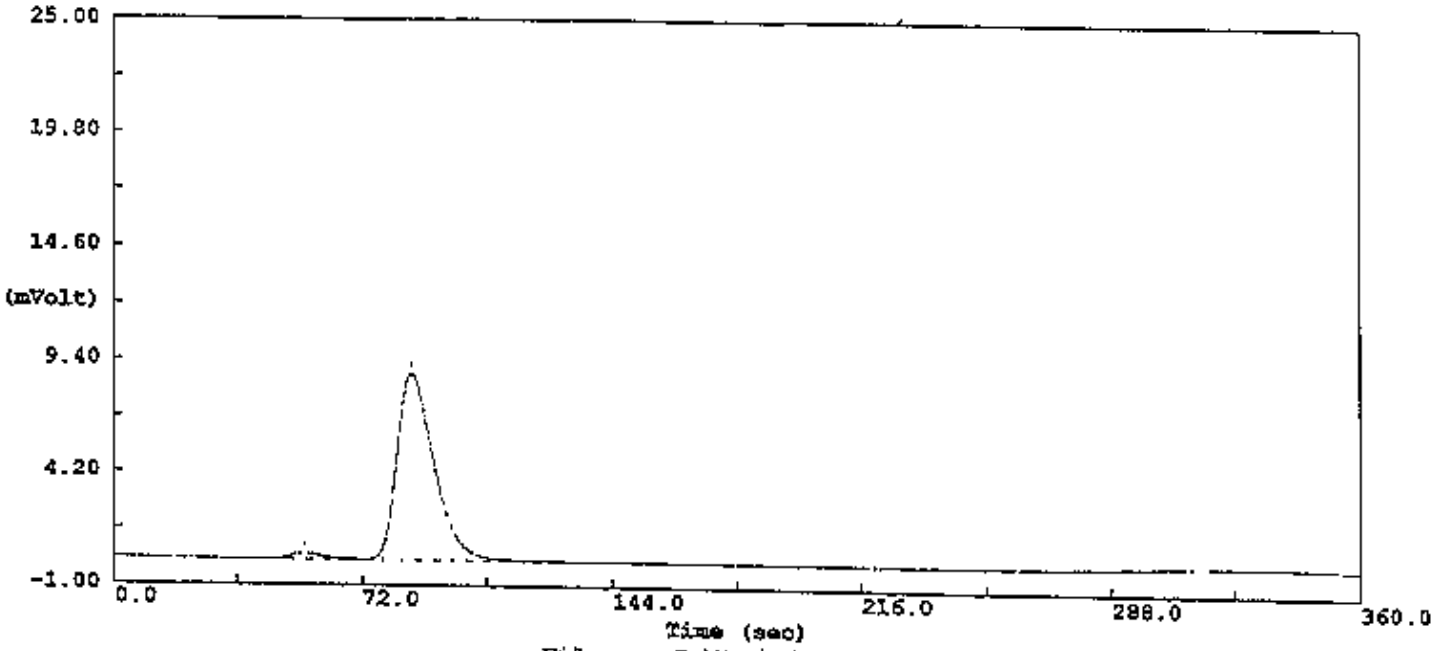
Sample ID	: 586281 (# 43)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 7.464
Chromatogram	: C:\EAW\C092043.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.2567	87	694082	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092044.DAT
Sample name :586282 Analysed :09-20-04 19:35

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:35

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:41

Sample ID : 586282 (# 44)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092044.DAT

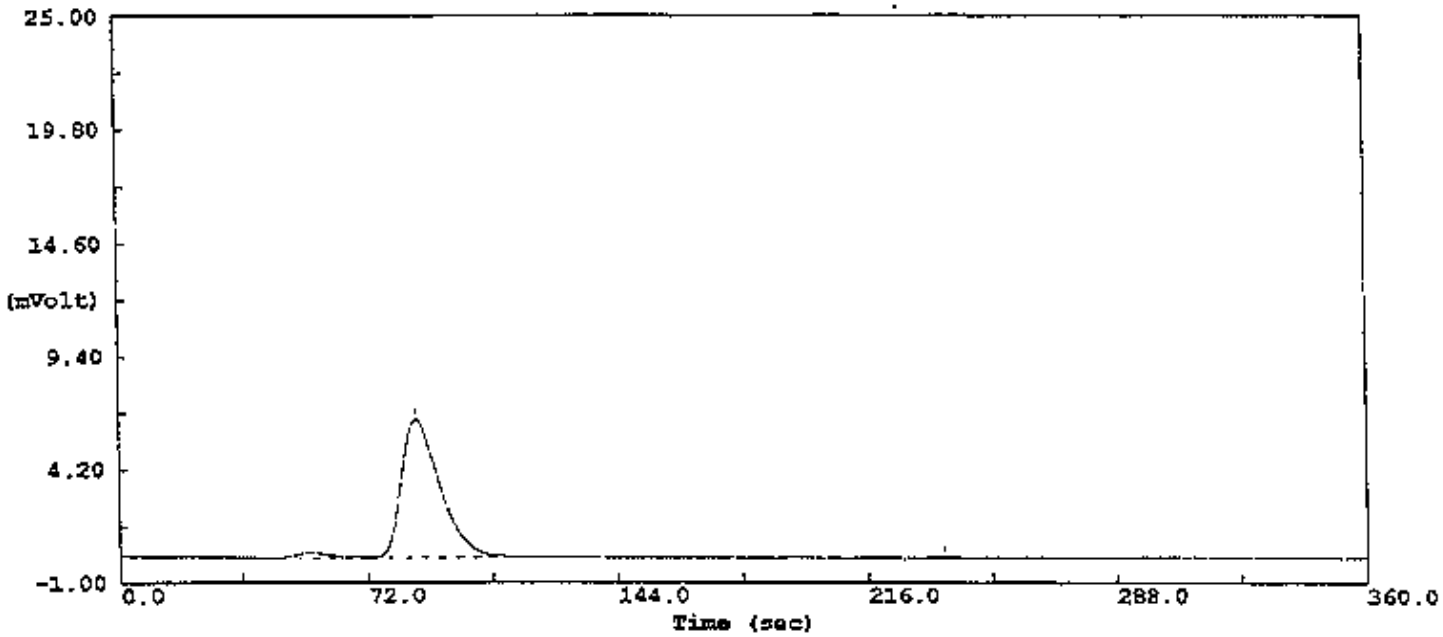
Channel : E.A. Channel A
Sample weight : 5.315

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	2.7720	86	1048534	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092045.DAT
Sample name :586282 Analysed :09-20-04 19:41

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 19:41	Printed	: 9/20/2004 19:47

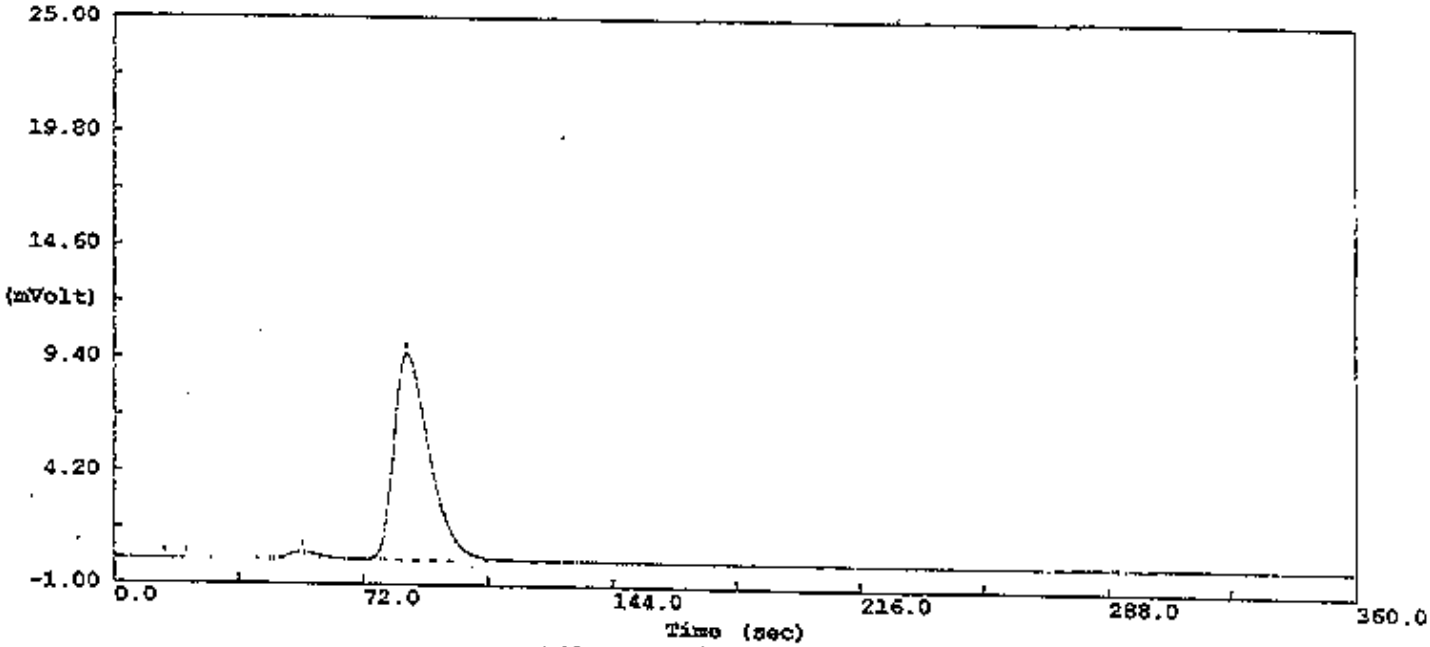
Sample ID	: 586282 (# 45)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 4.245
Chromatogram	: C:\EAW\C092045.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	2.5785	86	797726	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092046.DAT
Sample name :586282 Analysed :09-20-04 19:47

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:47

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 19:53

Sample ID : 586282 (# 46)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092046.DAT

Channel : E.A. Channel A
Sample weight : 5.517

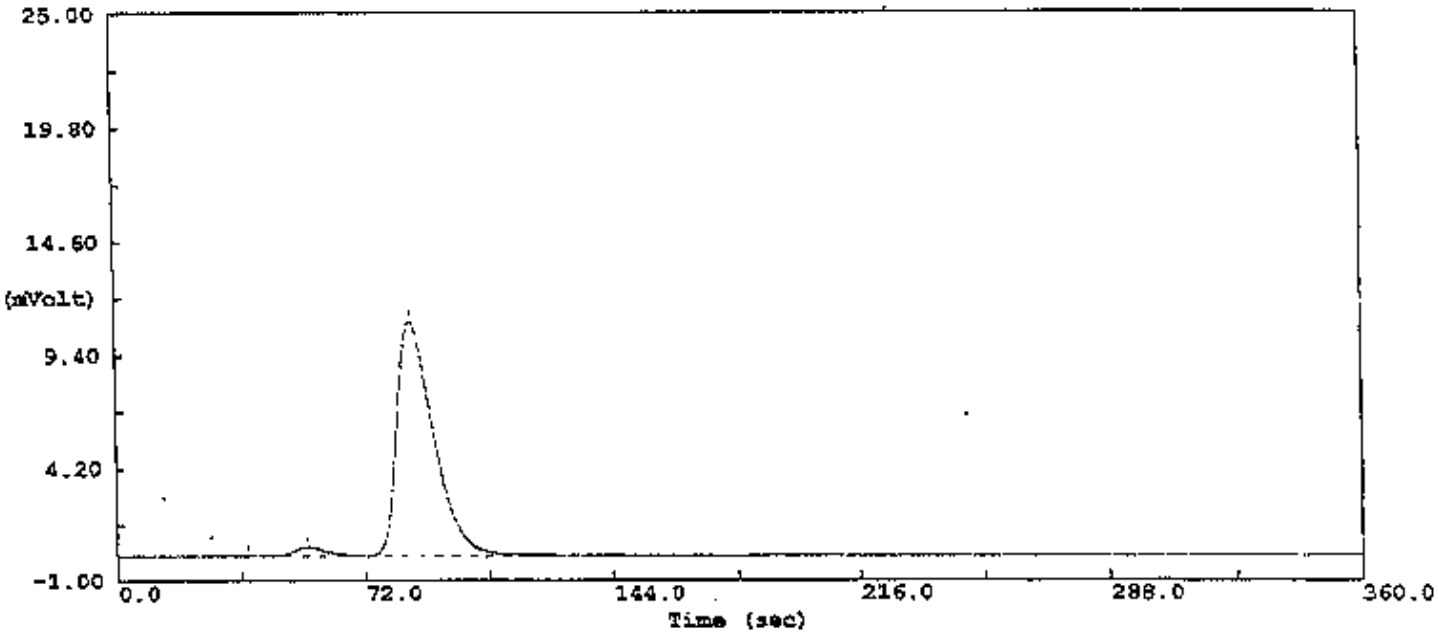
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area xatio	K factor
Carbon	2.8559	85	1116257	FU	1.000000	

0049

Eager 200 Strip-Chart



Filename C:\EAW\C092047.DAT
Sample name :586283 Analysed :09-20-04 19:53

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 19:53	Printed	: 9/20/2004 19:59

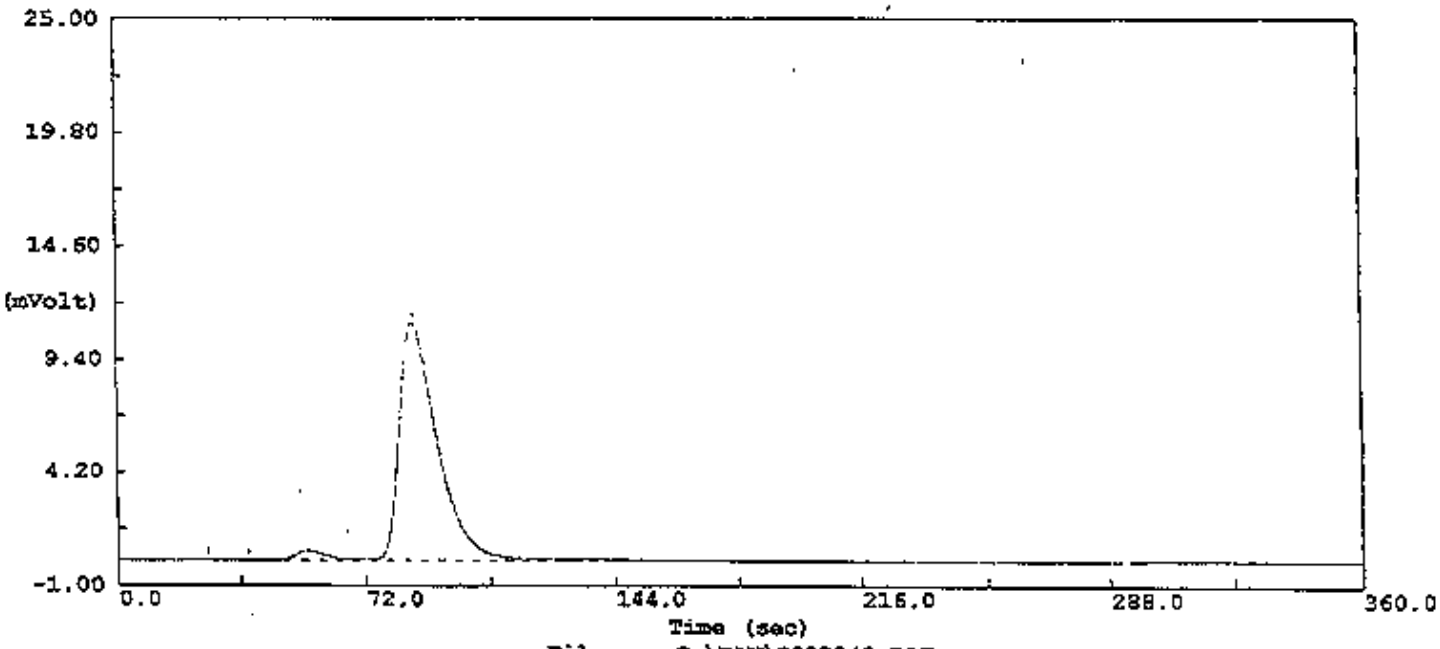
Sample ID	: 586283 (# 47)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.084
Chromatogram	: C:\EAW\C092047.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.6959	86	1317161	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092048.DAT
Sample name :586283 Analysed :09-20-04 19:59

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 19:59

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:05

Sample ID : 586283 (# 48)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092048.DAT

Channel : E.A. Channel A
Sample weight : 5.323

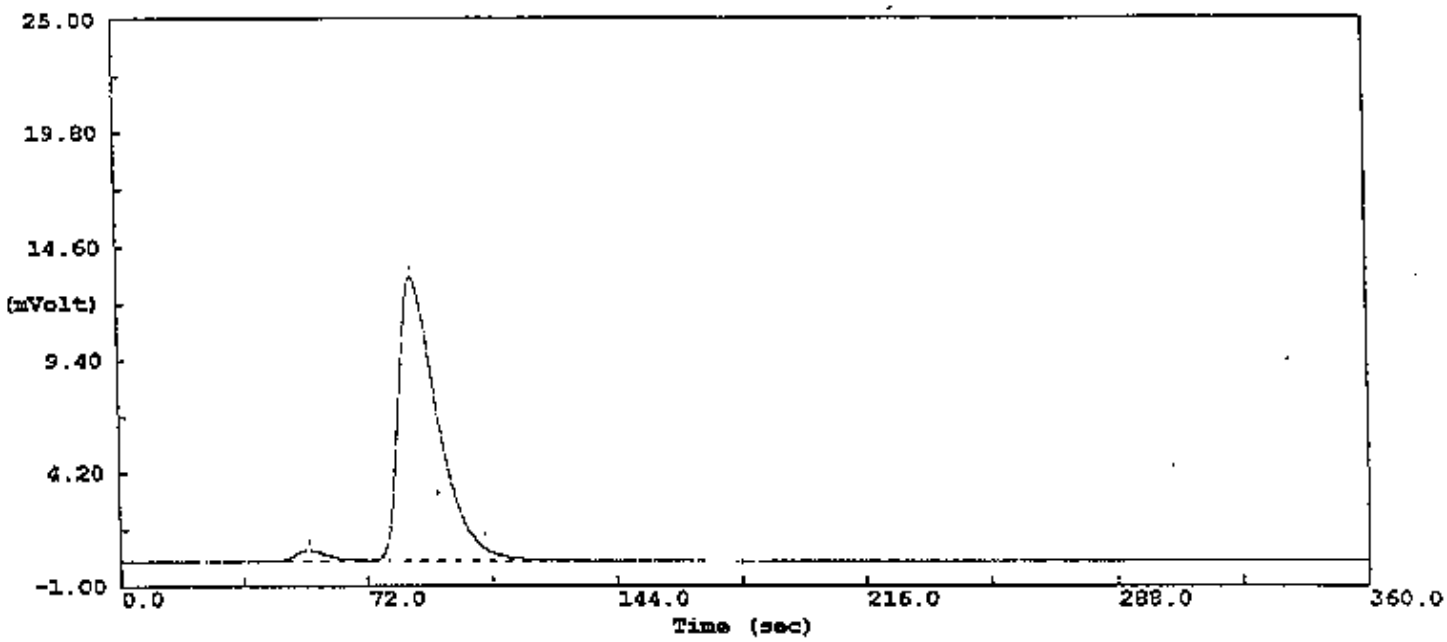
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.6787	86	1369584	FU	1.000000	

00488

Eager 200 Strip-Chart



Filename C:\EAW\C092049.DAT
Sample name :586283 Analysed :09-20-04 20:05

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:05
Company Name : SEVERN TRENT LAB
Method File : CEN0920A.MTH
Printed : 9/20/2004 20:11

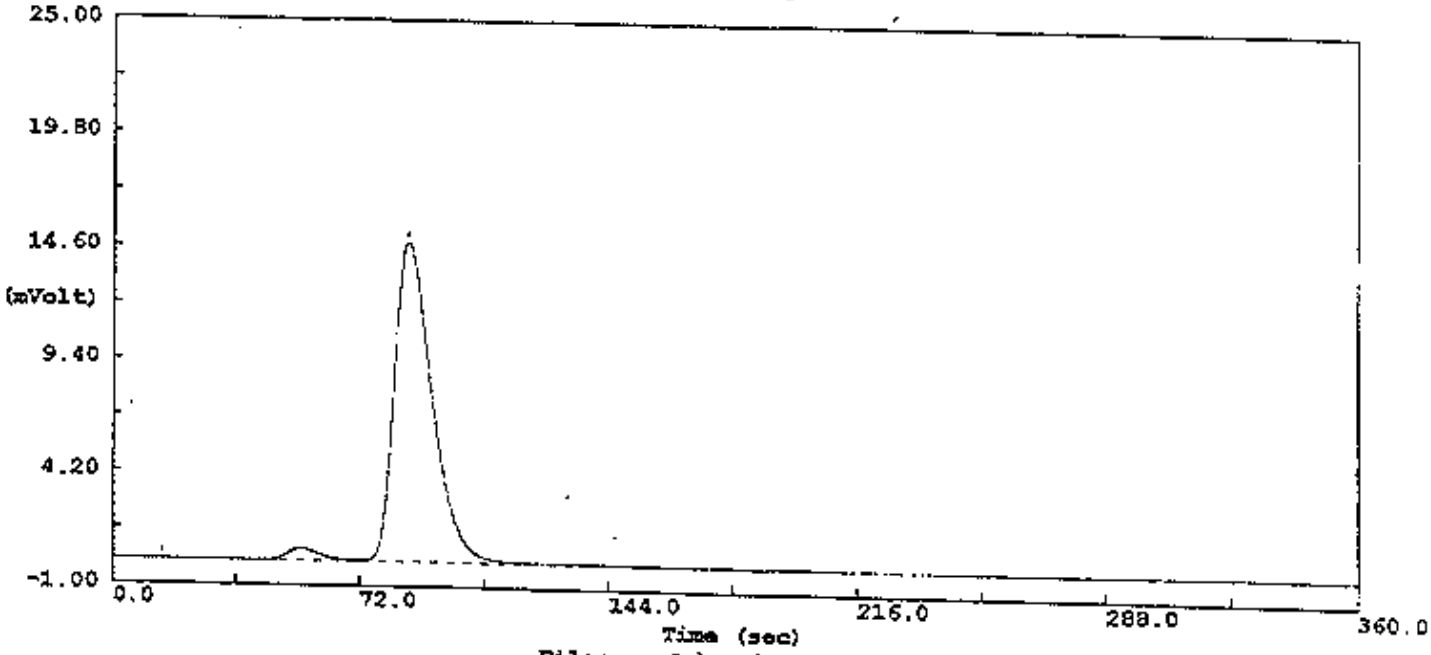
Sample ID : 586283 (# 49)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092049.DAT
Channel : E.A. Channel A
Sample weight : 6.78

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.6361	86	1705338	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092050.DAT
Sample name :586284 Analysed :09-20-04 20:11

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:11

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:17

Sample ID : 586284 (# 50)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092050.DAT

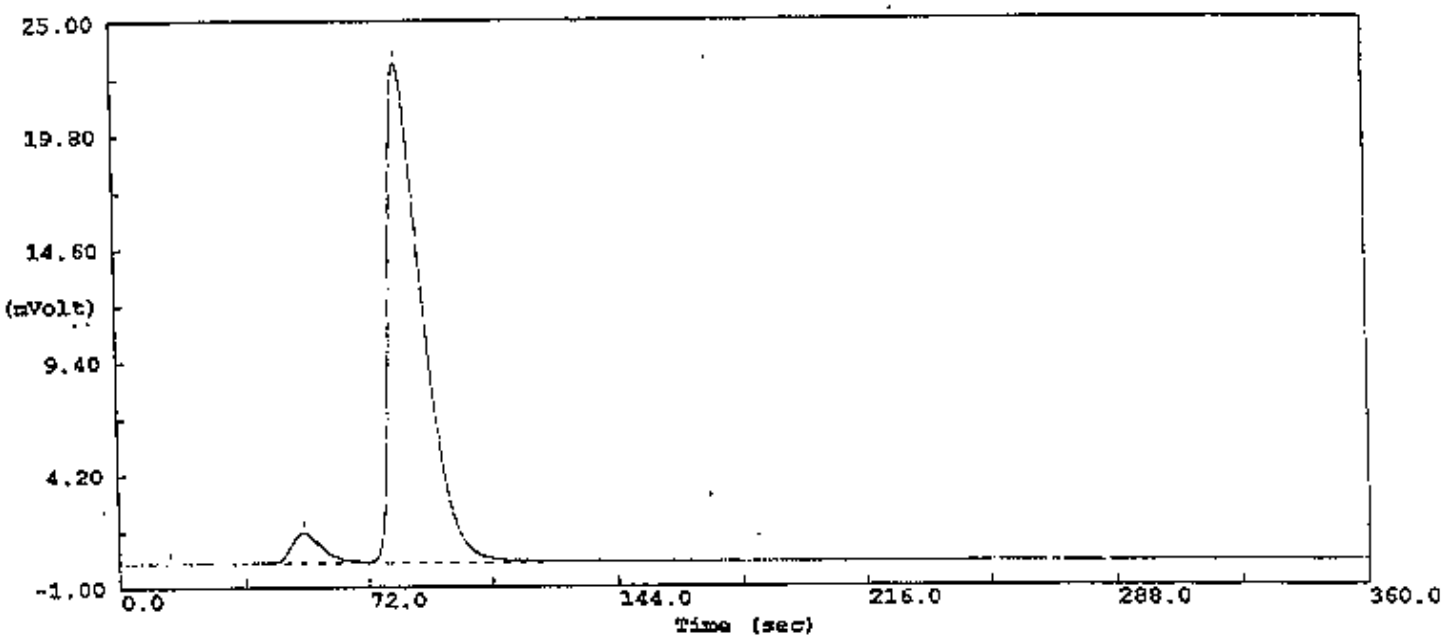
Channel : E.A. Channel A
Sample weight : 5.436

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.9367	86	1849929	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092051.DAT
Sample name :ACETANILIDE Analysed :09-20-04 20:17

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:17

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:23

Sample ID : ACETANILIDE (# 51)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092051.DAT

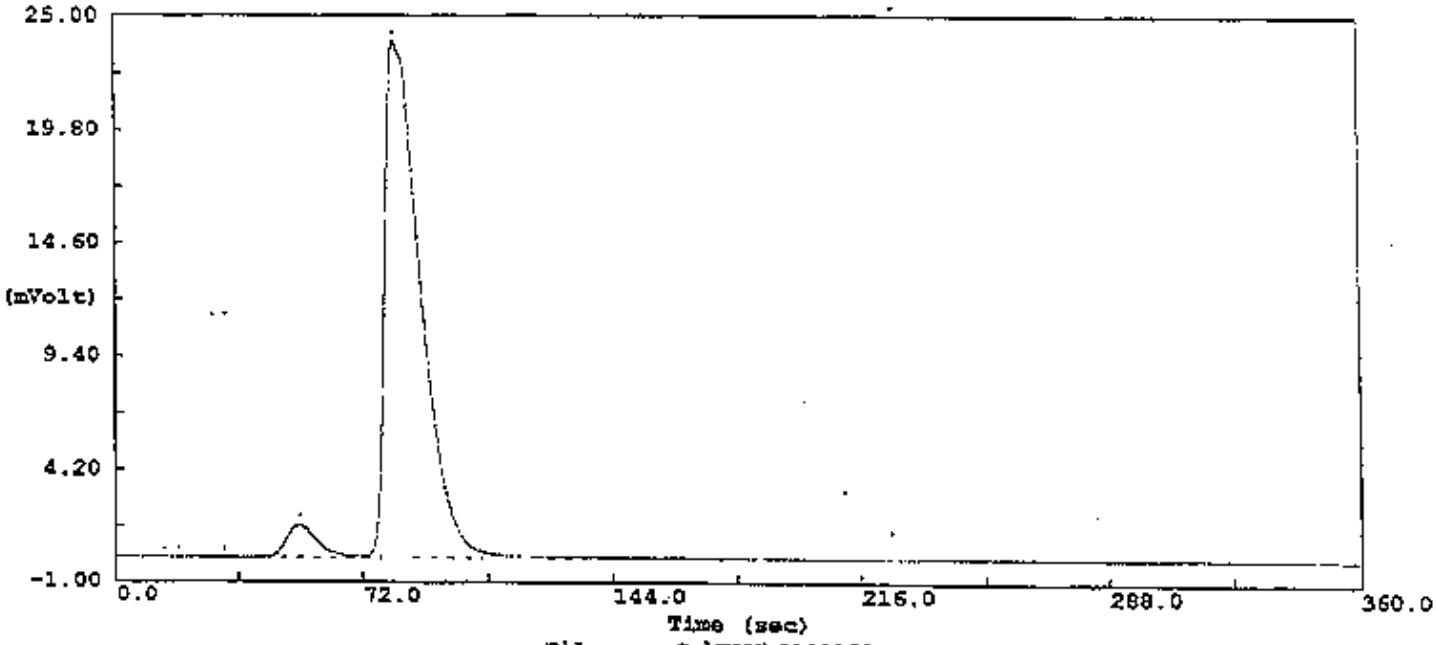
Channel : E.A. Channel A
Sample weight : .526

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.3565	82	2627923	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092052.DAT
Sample name :ACETANILIDE Analysed :09-20-04 20:23

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:23

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:29

Sample ID : ACETANILIDE (# 52)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092052.DAT

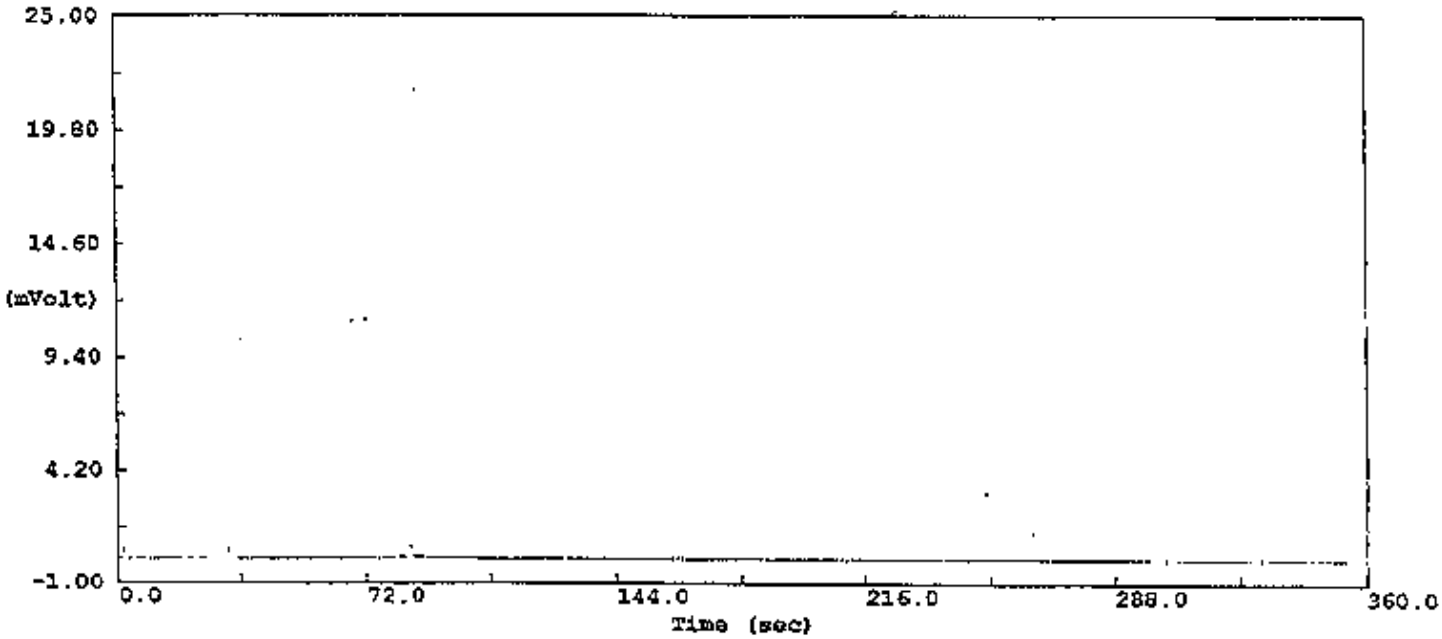
Channel : E.A. Channel A
Sample weight : .576

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	72.2002	82	2826690	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092053.DAT
Sample name :BLANK Analysed :09-20-04 20:29

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 20:29	Printed	: 9/20/2004 20:35

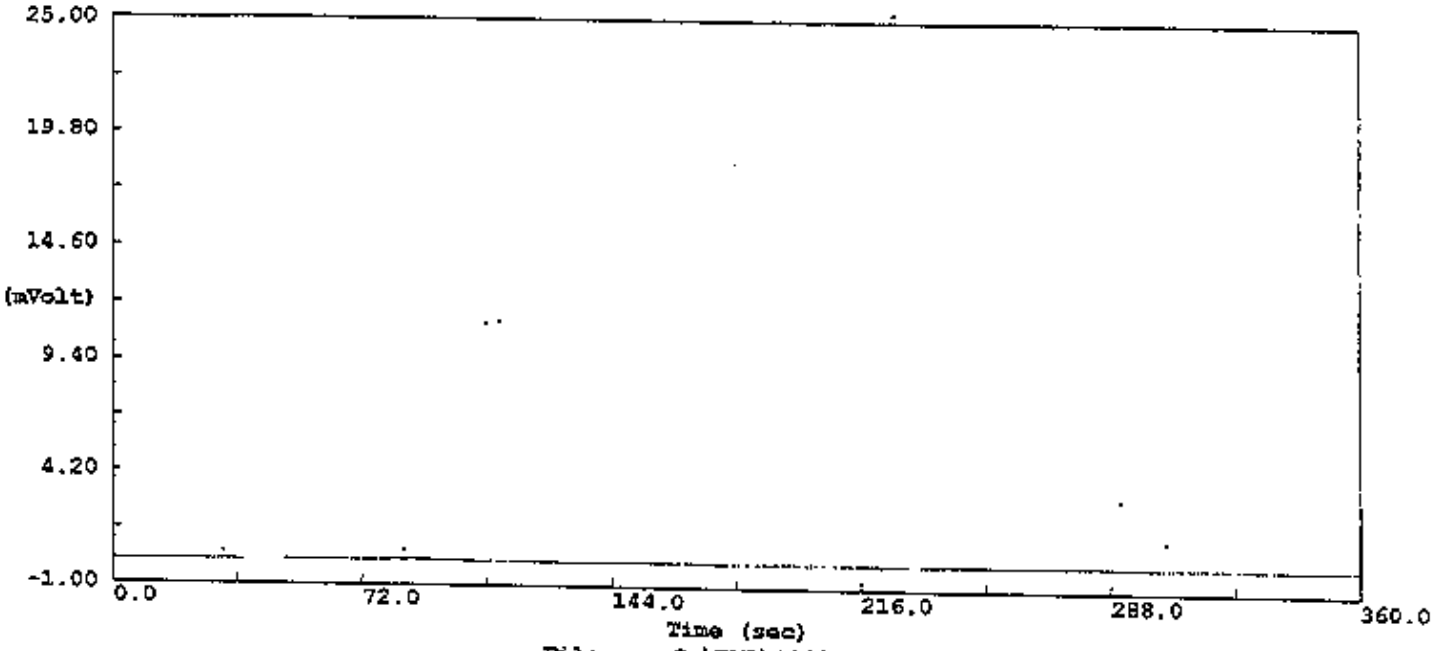
Sample ID	: BLANK (# 53)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C092053.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-3.1302199E-02	85	10782	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092054.DAT
Sample name :BLANK Analysed :09-20-04 20:35

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:35

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:42

Sample ID : BLANK (# 54)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092054.DAT

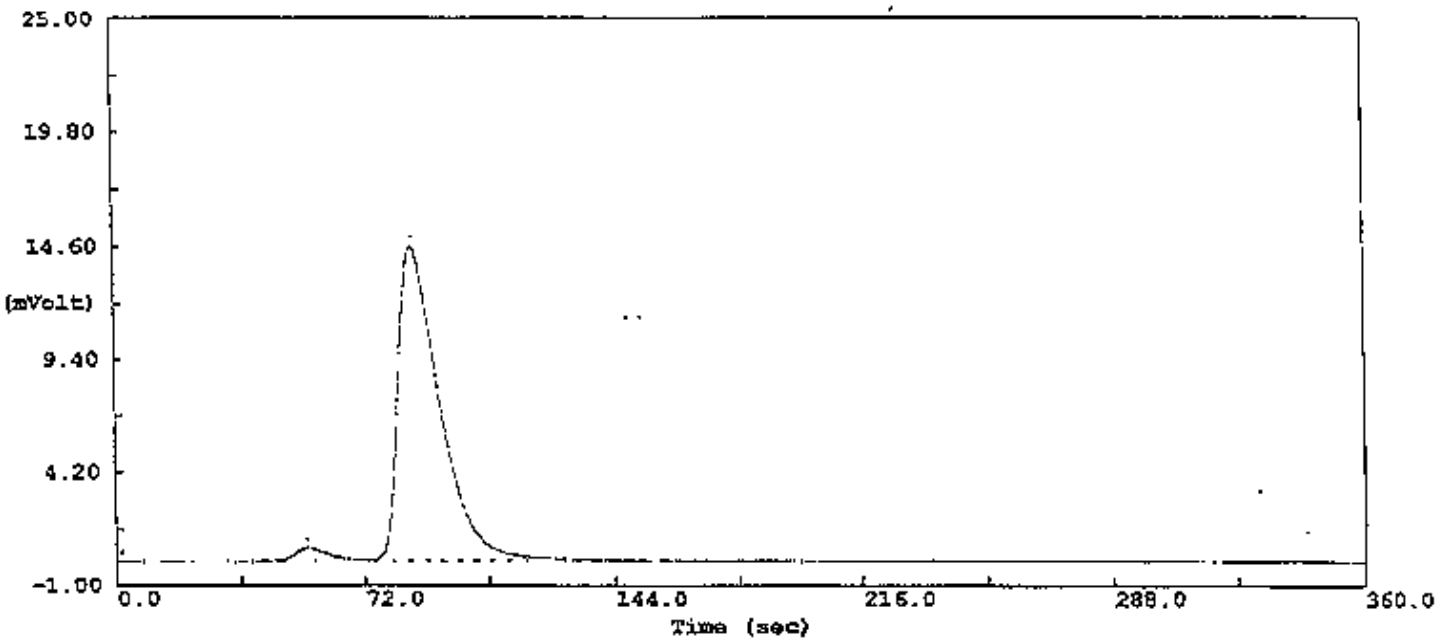
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-3.0988827E-02	84	11405	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092055.DAT
Sample name :586284 Analysed :09-20-04 20:42

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 20:42

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 20:48

Sample ID : 586284 (# 55)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092055.DAT

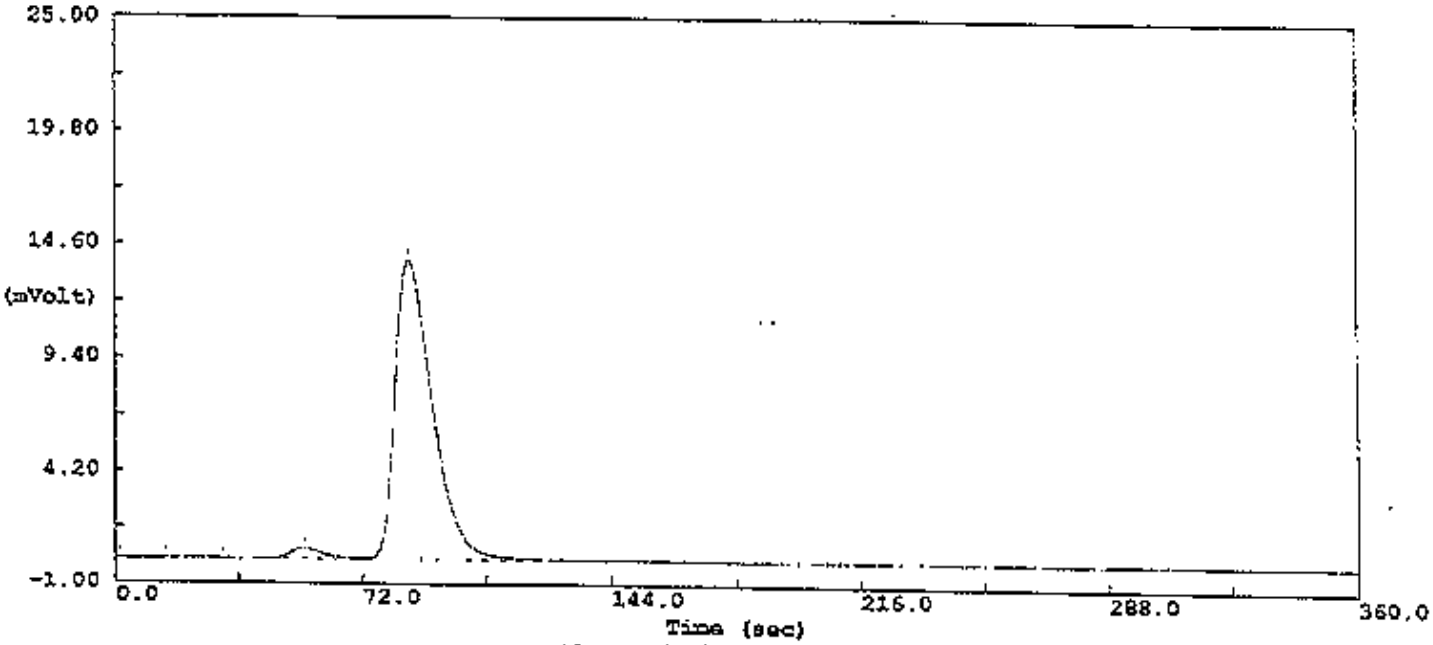
Channel : E.A. Channel A
Sample weight : 6.17

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.7095	86	1997039	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092056.DAT
Sample name :586284 Analysed :09-20-04 20:48

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 20:48	Printed	: 9/20/2004 20:56

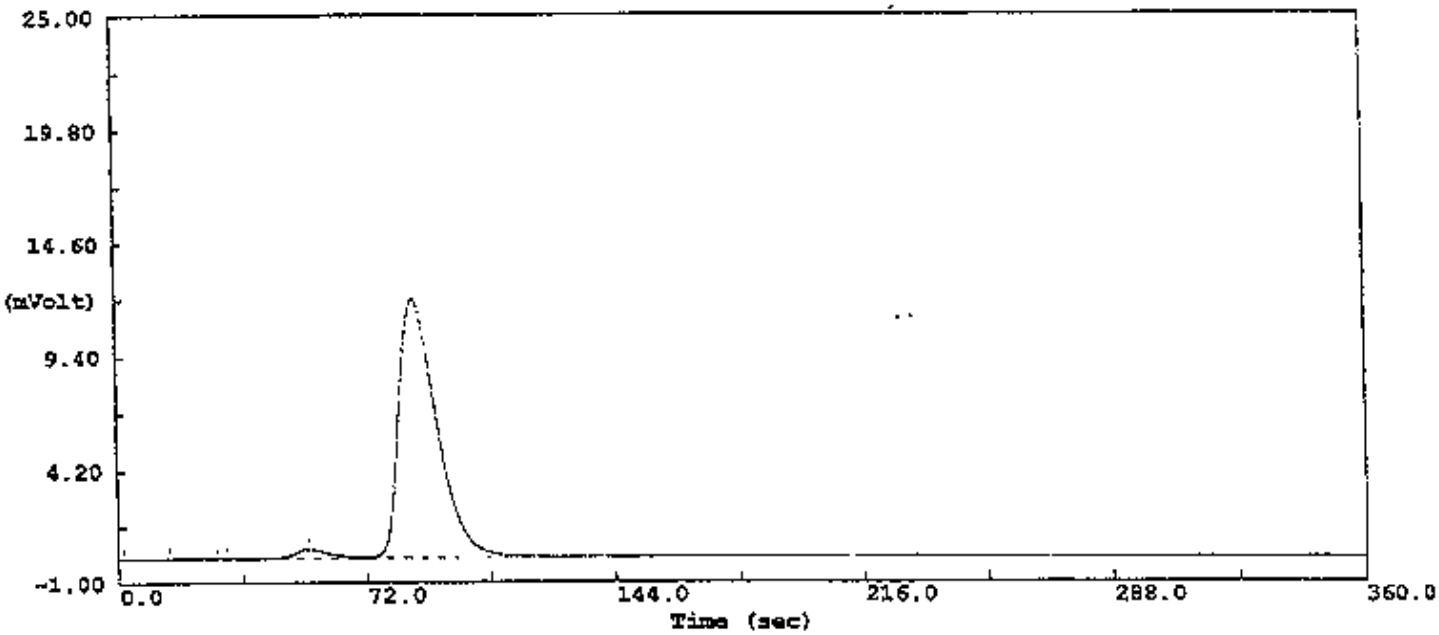
Sample ID	: 586284 (# 56)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.311
Chromatogram	: C:\EAW\C092056.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.6743	85	1716774	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092057.DAT
Sample name :586285 Analysed :09-20-04 20:56

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 20:56	Printed	: 9/20/2004 21:02

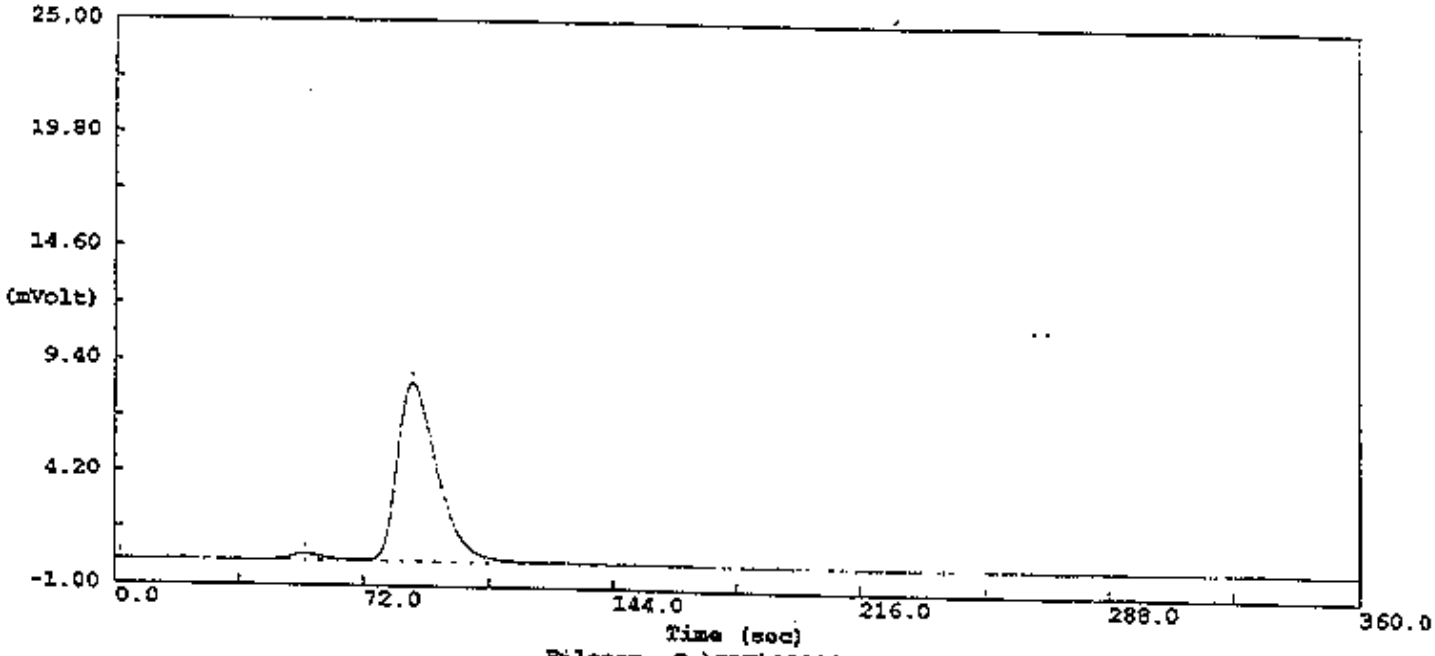
Sample ID	: 586285 (# 57)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.738
Chromatogram	: C:\EAW\C092057.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.6840	86	1472662	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092058.DAT
Sample name :586285 Analysed :09-20-04 21:02

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 21:02

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 21:08

Sample ID : 586285 (# 58)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092058.DAT

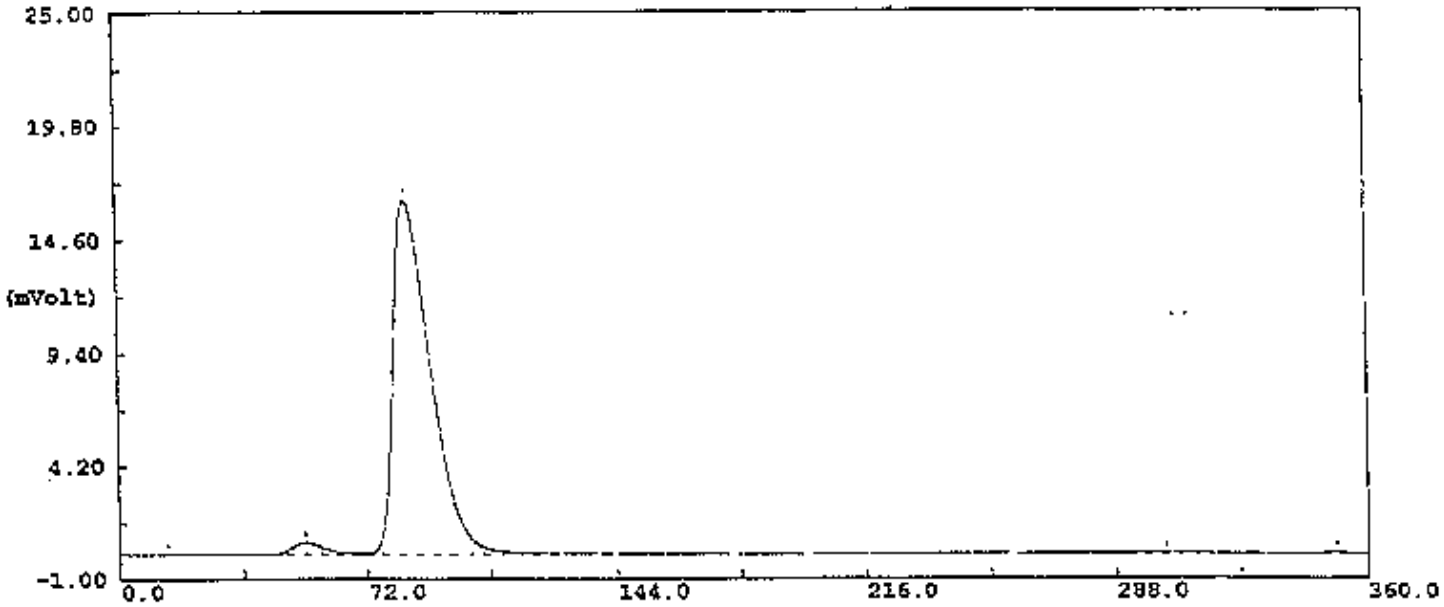
Channel : E.A. Channel A
Sample weight : 4.401

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.4484	86	1077864	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092059.DAT
Sample name :586285 Analysed :09-20-04 21:08

Eager 200 Report

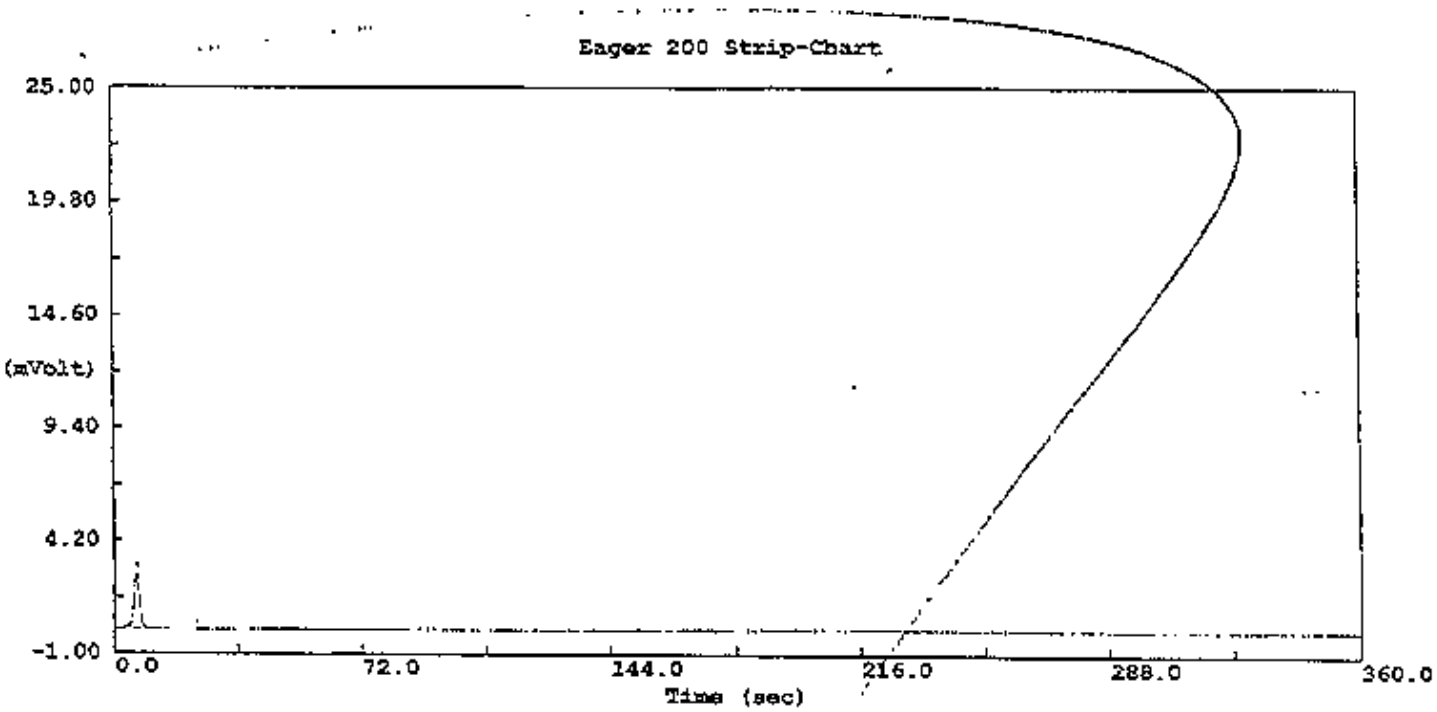
S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 21:08	Printed	: 9/20/2004 21:21

Sample ID	: 586285 (# 59)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 7.329
Chromatogram	: C:\EAW\C092059.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.9985	84	2013385	FU	1.000000	



Filename C:\EAW\C092060.DAT
Sample name :586286 Analysed :09-20-04 21:22

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 21:22	Printed	: 9/20/2004 21:35

Sample ID	: 586286 (# 60)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 6.182
Chromatogram	: C:\EAW\C092060.DAT		

Calib. method : using 'Least Squares to Linear fit'

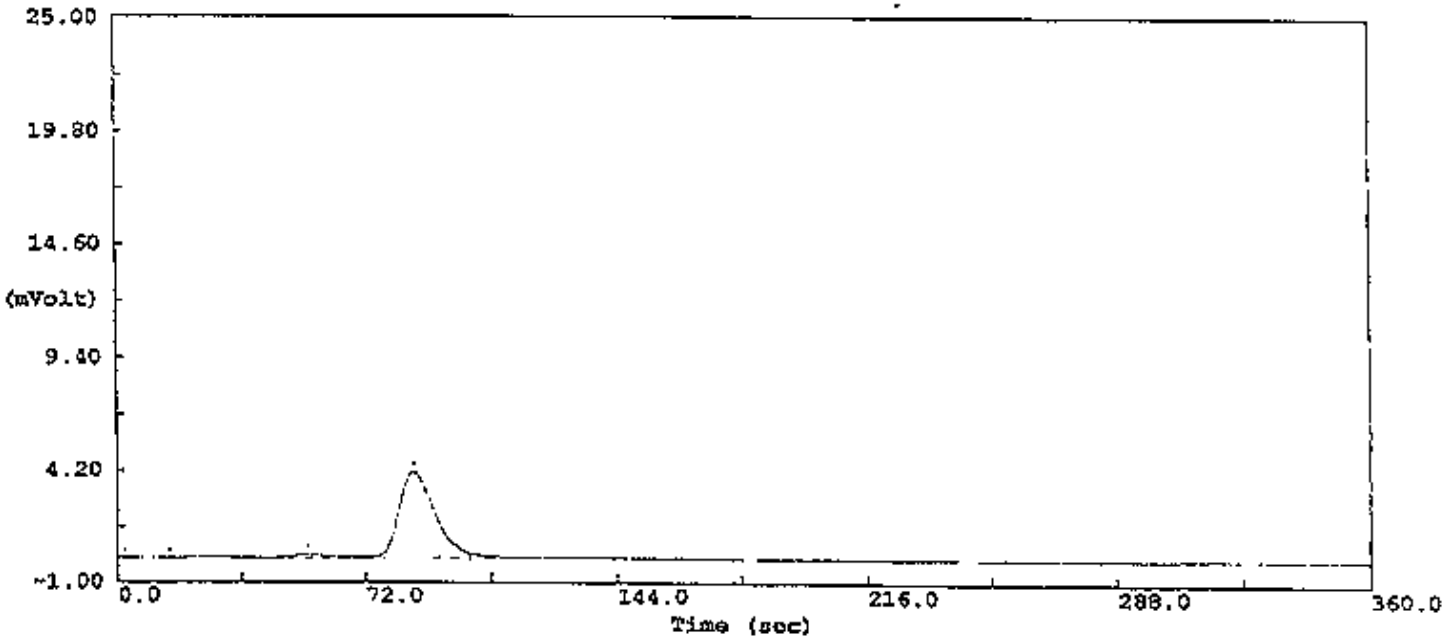
!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor

09/21/04

00494

Eager 200 Strip-Chart



Filename C:\EAW\C092061.DAT
Sample name :586286 Analysed :09-20-04 21:36

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 21:36

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 21:42

Sample ID : 586286 (# 61)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092061.DAT

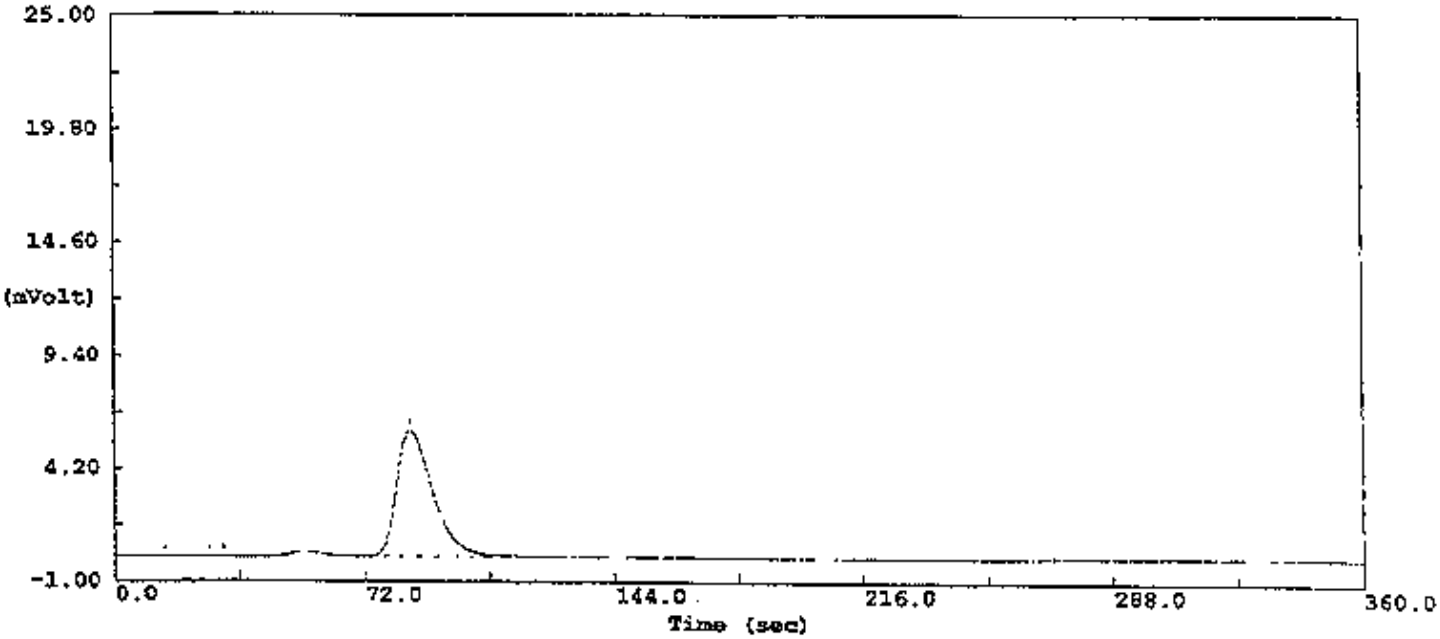
Channel : E.A. Channel A
Sample weight : 4.073

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.4689	86	469123	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092062.DAT
Sample name :586286 Analysed :09-20-04 21:42

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 21:42

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 21:48

Sample ID : 586286 (# 62)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092062.DAT

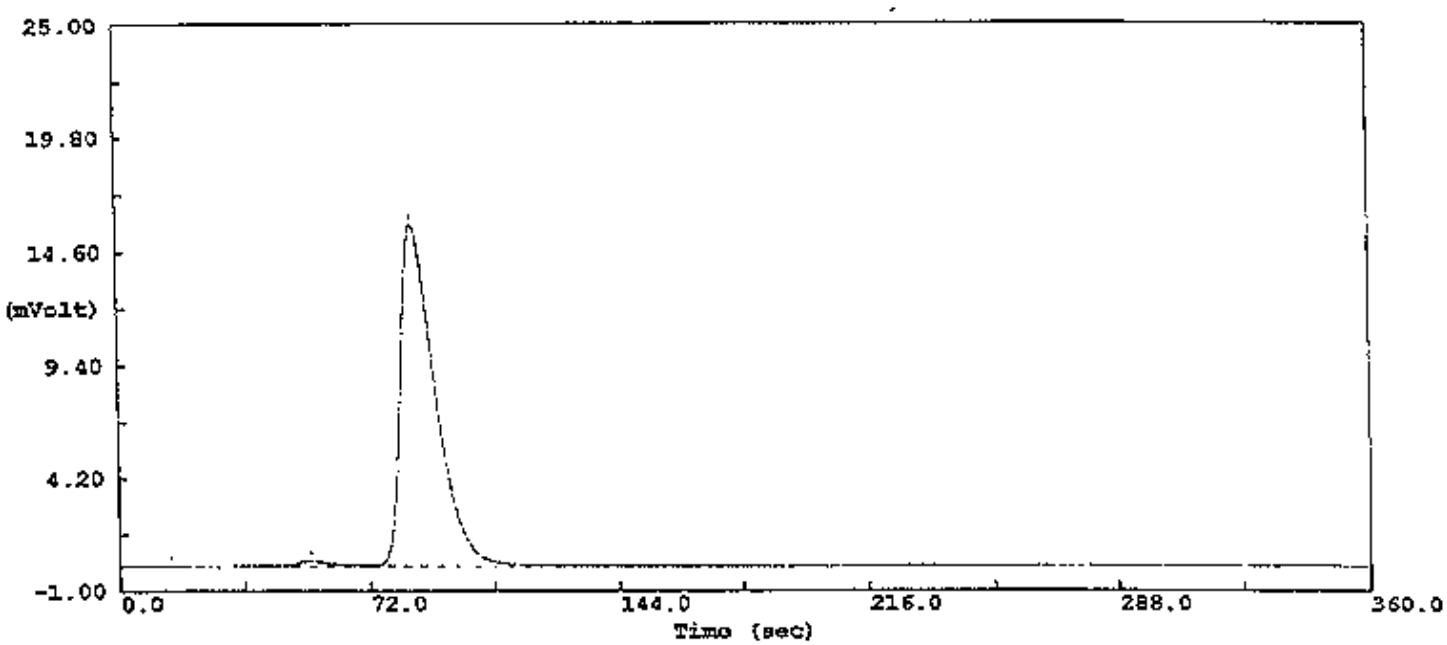
Channel : E.A. Channel A
Sample weight : 6.118

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	1.5354	86	694954	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092063.DAT
Sample name :586287 Analysed :09-20-04 21:48

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 21:48	Printed	: 9/20/2004 21:54

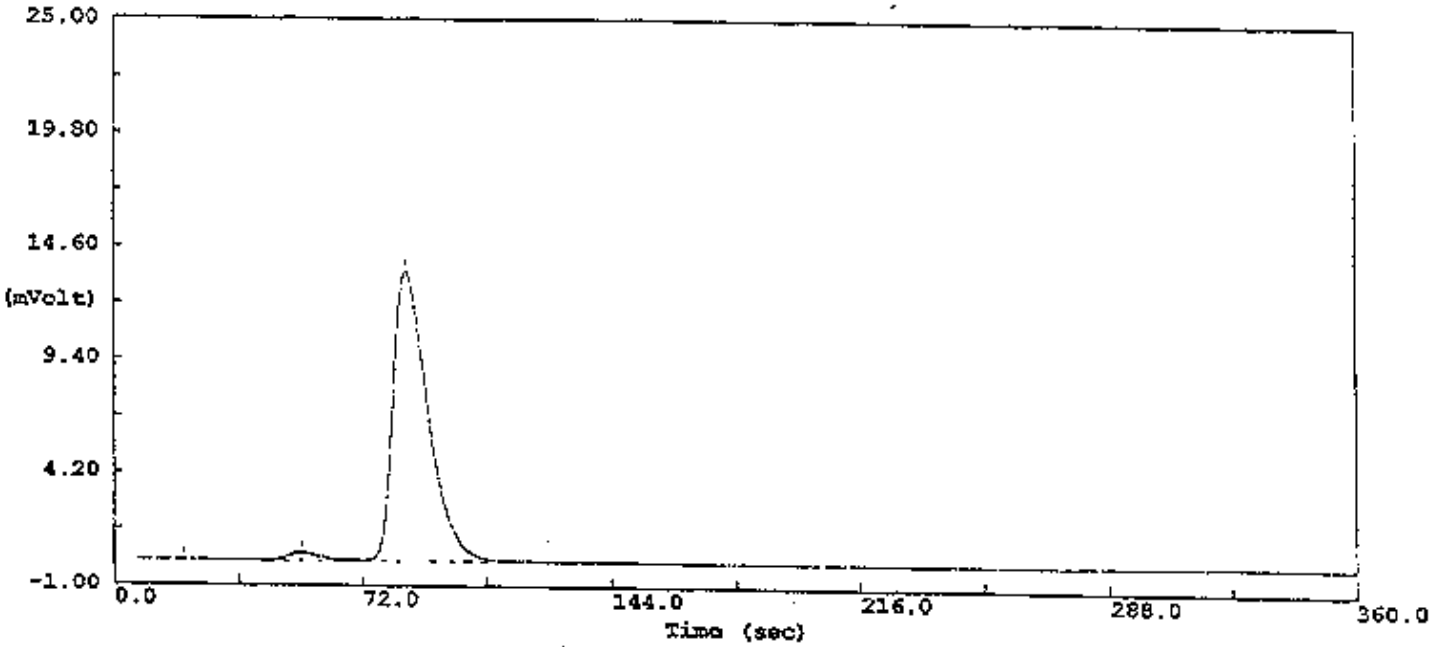
Sample ID	: 586287 (# 63)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 8.943
Chromatogram	: C:\EAW\C092063.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	2.9266	85	1805995	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092064.DAT
Sample name :586287 Analysed :09-20-04 21:54

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 21:54

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:00

Sample ID : 586287 (# 64)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092064.DAT

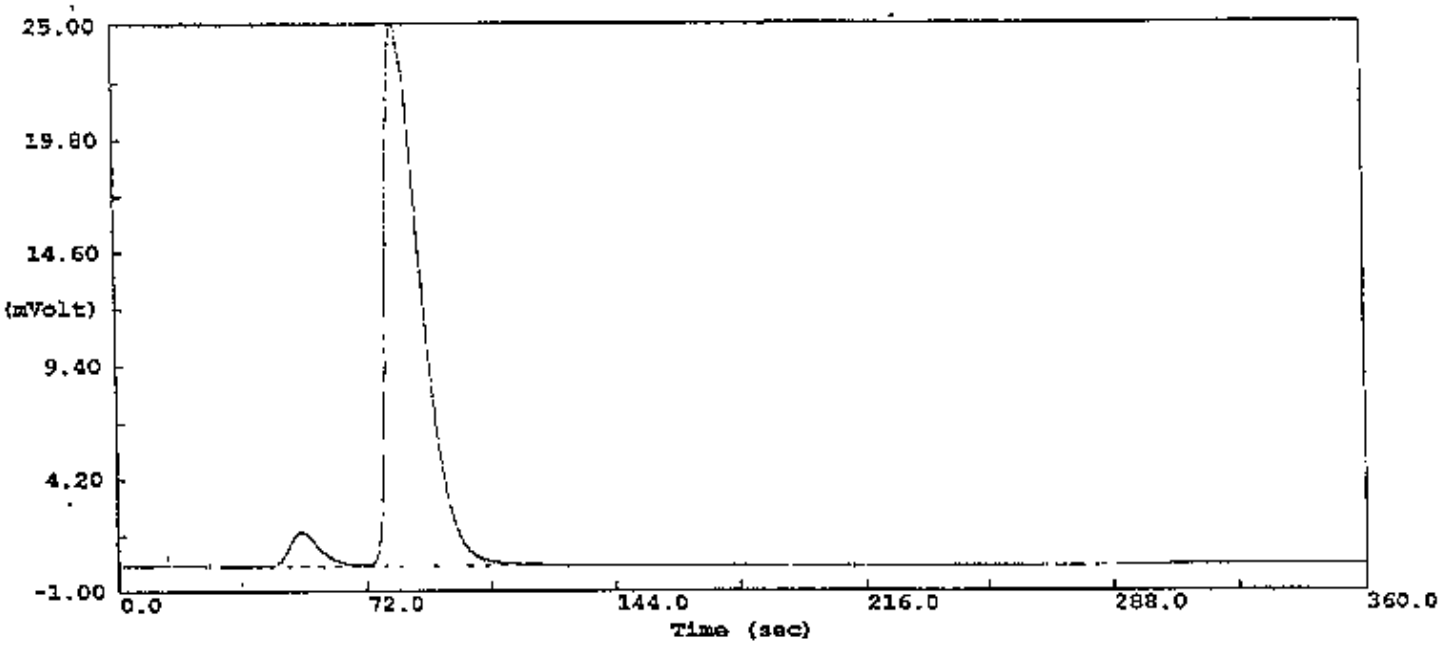
Channel : E.A. Channel A
Sample weight : 10.71

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	2.1180	85	1574991	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092065.DAT
Sample name :ACETANILIDE Analysed :09-20-04 22:00

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 22:00	Printed	: 9/20/2004 22:06

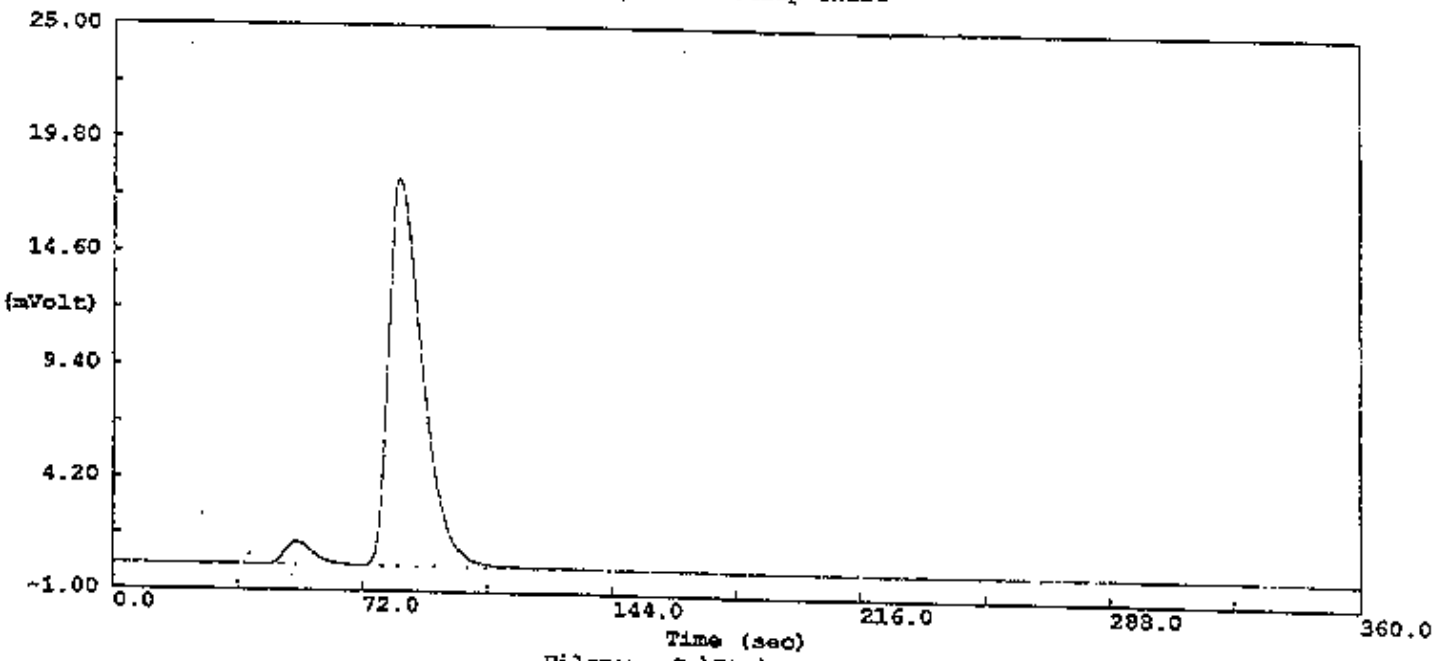
Sample ID	: ACETANILIDE (# 65)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .611
Chromatogram	: C:\EAW\C092065.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	71.3317	82	2958878	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092066.DAT
Sample name :ACETANILIDE Analysed :09-20-04 22:06

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:06

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:12

Sample ID : ACETANILIDE (# 66)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092066.DAT

Channel : E.A. Channel A
Sample weight : .404

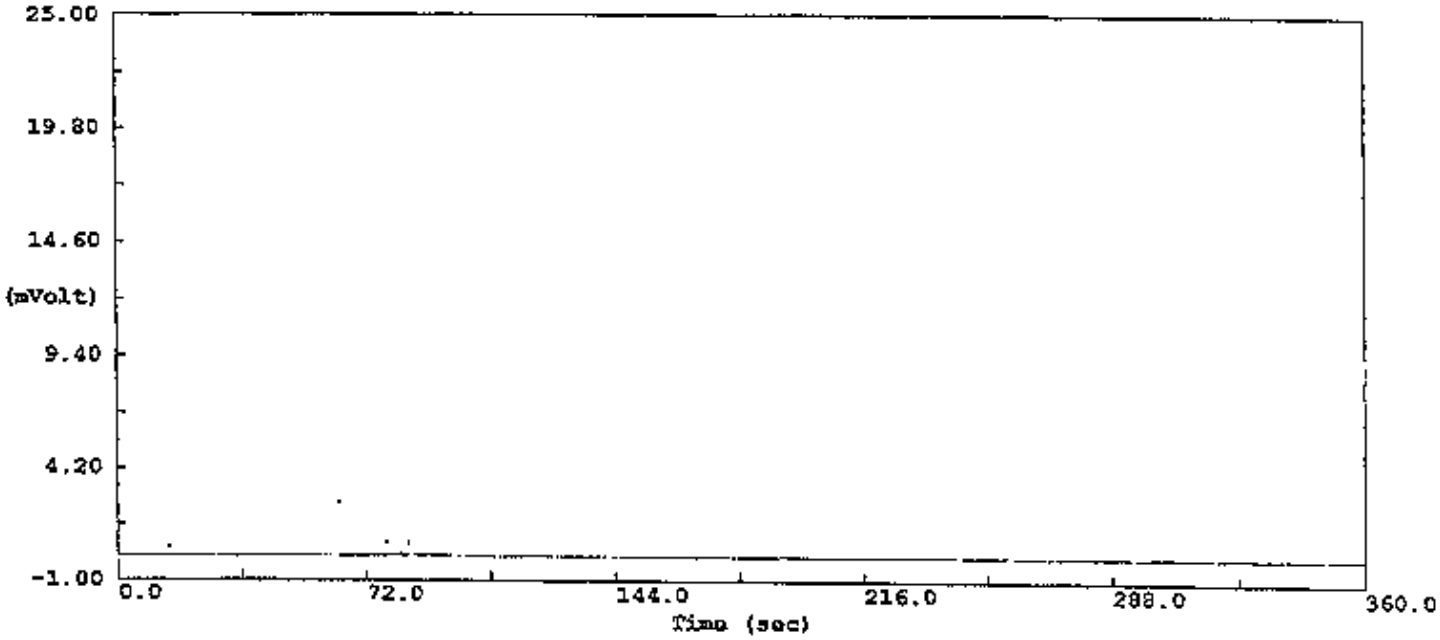
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	72.5006	83	2012431	FU	1.000000	

0049

Eager 200 Strip-Chart



Filename C:\EAW\C092067.DAT
Sample name :BLANK Analysed :09-20-04 22:12

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 22:12	Printed	: 9/20/2004 22:18

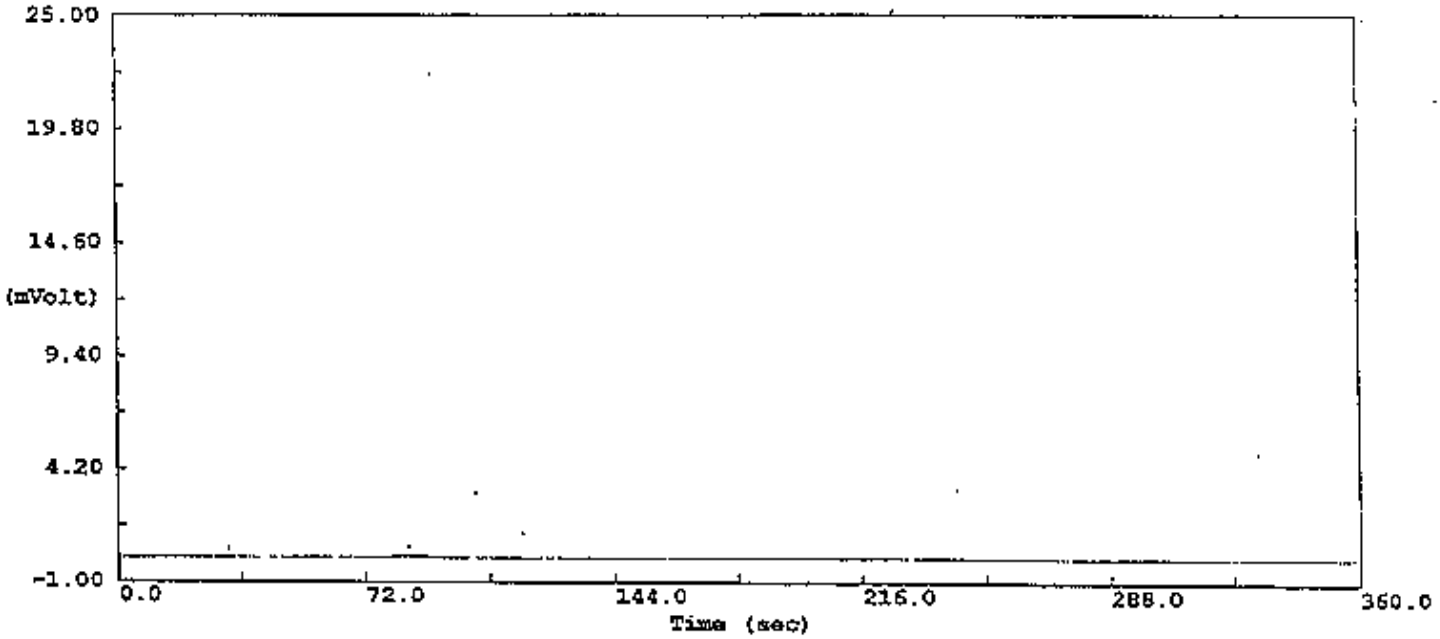
Sample ID	: BLANK (# 67)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C092067.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-3.1050494E-02	84	11282	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092068.DAT
Sample name :BLANK Analysed :09-20-04 22:18

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 22:18	Printed	: 9/20/2004 22:24

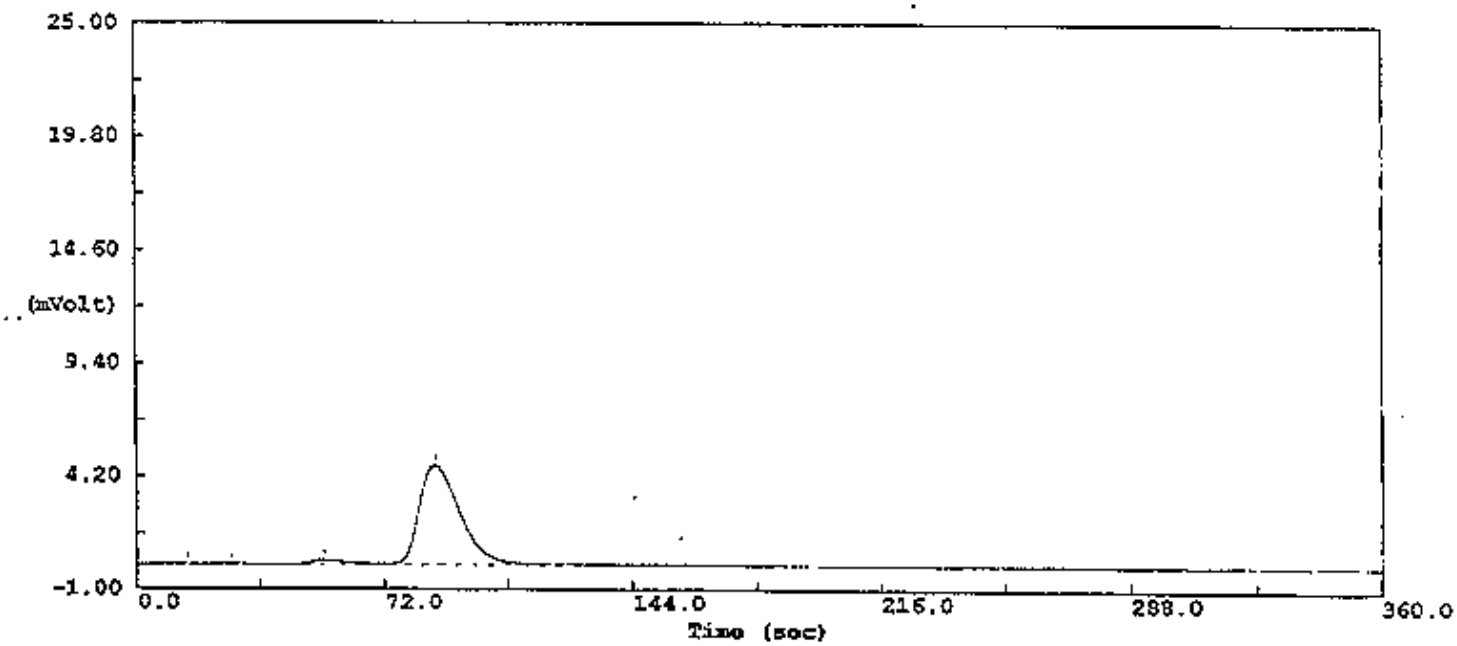
Sample ID	: BLANK (# 68)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C092068.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9237727E-02	84	14883	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092069.DAT
Sample name :586287 Analysed :09-20-04 22:24

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:24

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:30

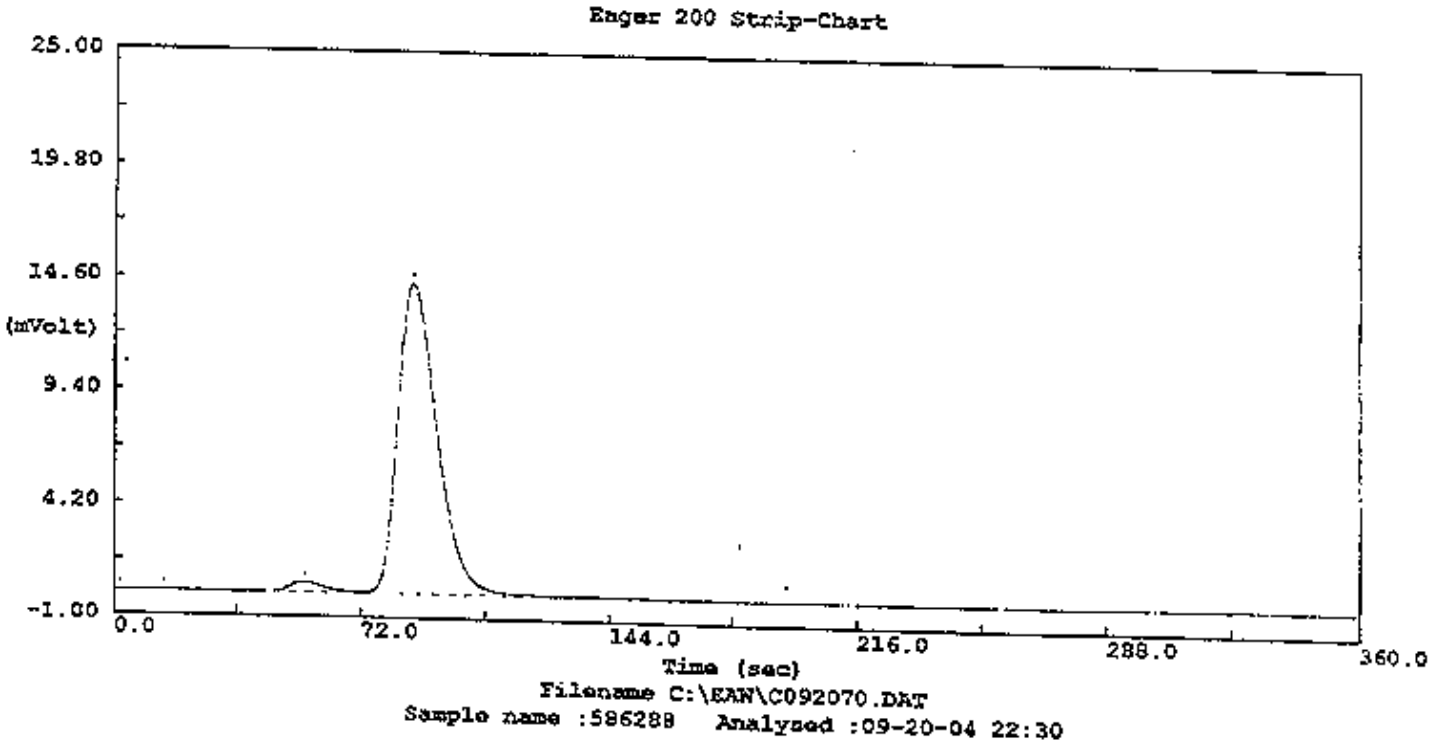
Sample ID : 586287 (# 69)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092069.DAT

Channel : E.A. Channel A
Sample weight : 4.092

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	2.0325	87	623666	FU	1.000000	



Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:30

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:36

Sample ID : 586288 (# 70)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092070.DAT

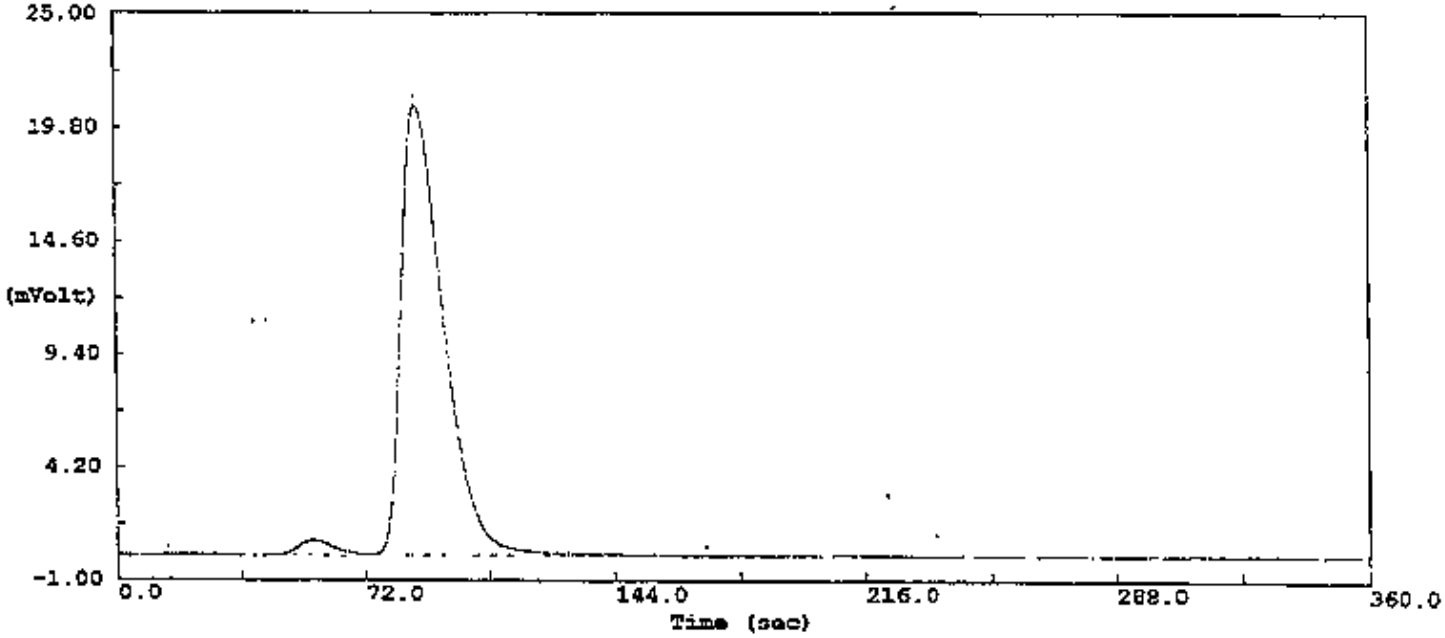
Channel : E.A. Channel A
Sample weight : 5.276

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	5.1571	87	1874627	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092071.DAT
Sample name :586288 Analysed :09-20-04 22:36

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 22:36	Printed	: 9/20/2004 22:42

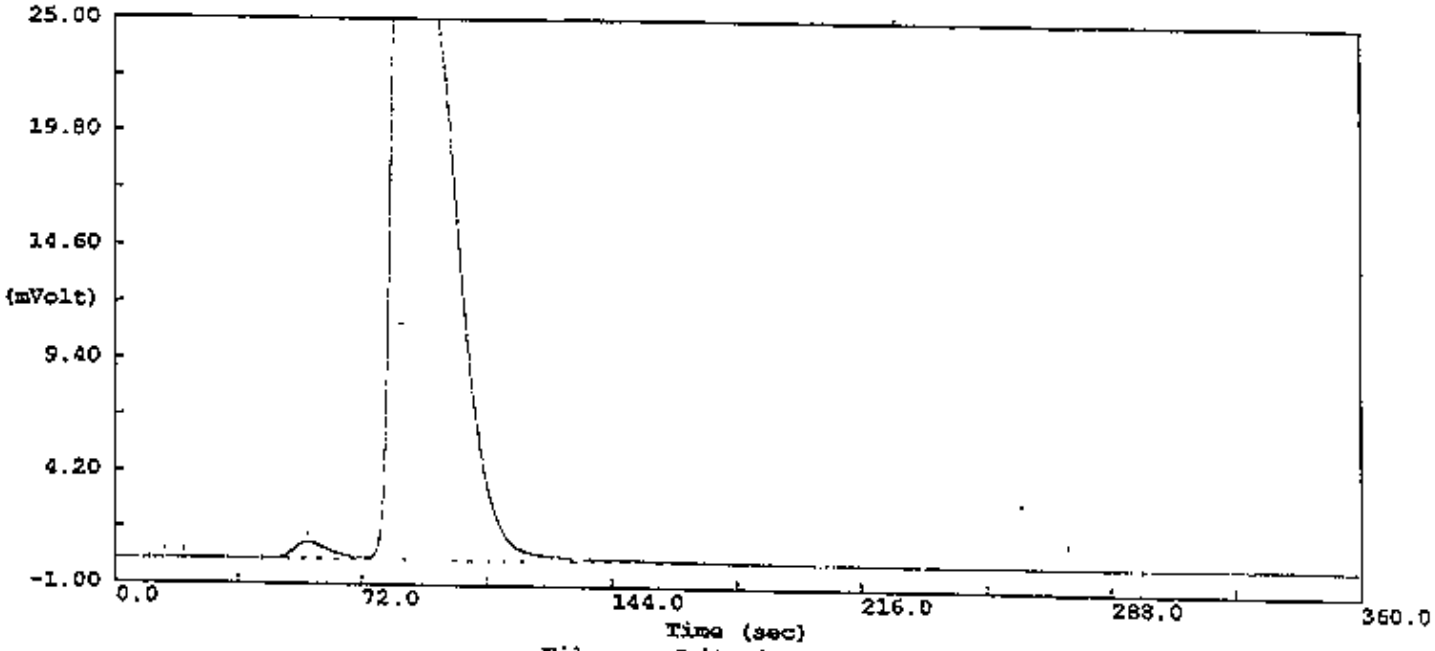
Sample ID	: 586288 (# 71)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 8.958
Chromatogram	: C:\EAW\C092071.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.8313	87	2938703	TL	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092072.DAT
Sample name :586288 Analysed :09-20-04 22:42

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:42

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:48

Sample ID : 586288 (# 72)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092072.DAT

Channel : E.A. Channel A
Sample weight : 10.236

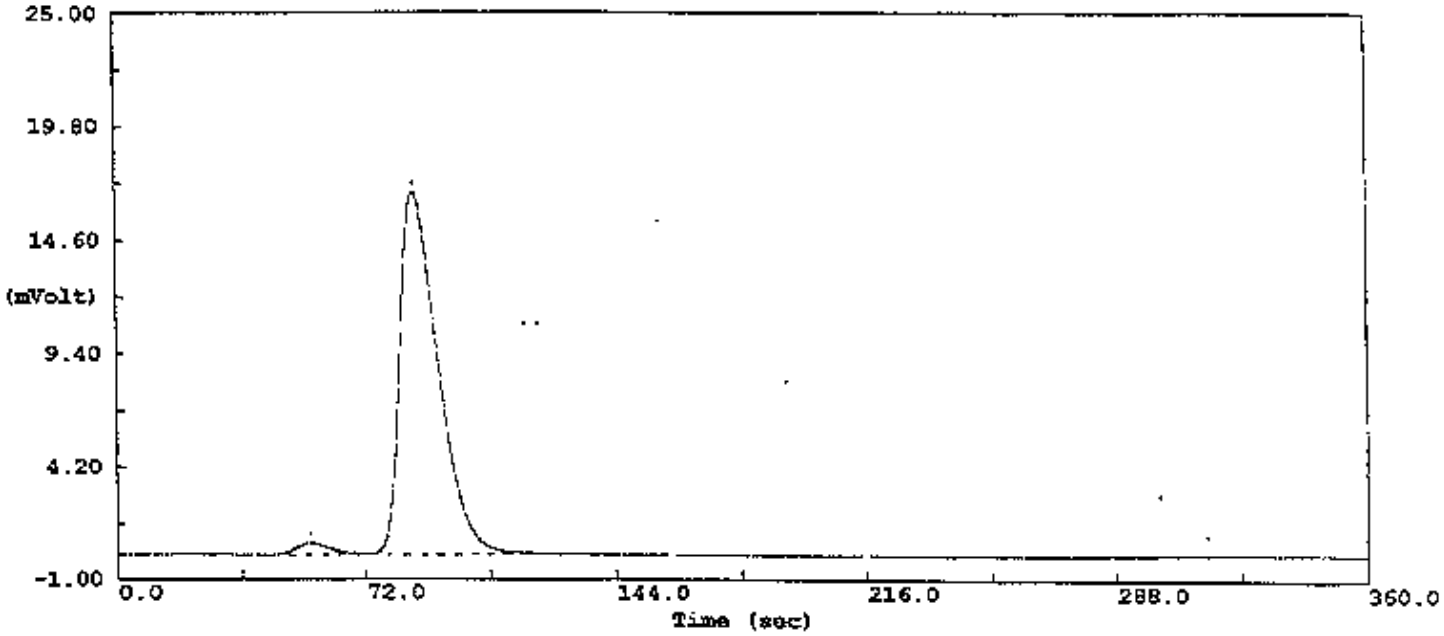
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	9.5946	86	6575984	FU	1.000000	

0050

Eager 200 Strip-Chart



Filename C:\EAW\C092073.DAT
Sample name :586289 Analysed :09-20-04 22:48

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:48

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 22:54

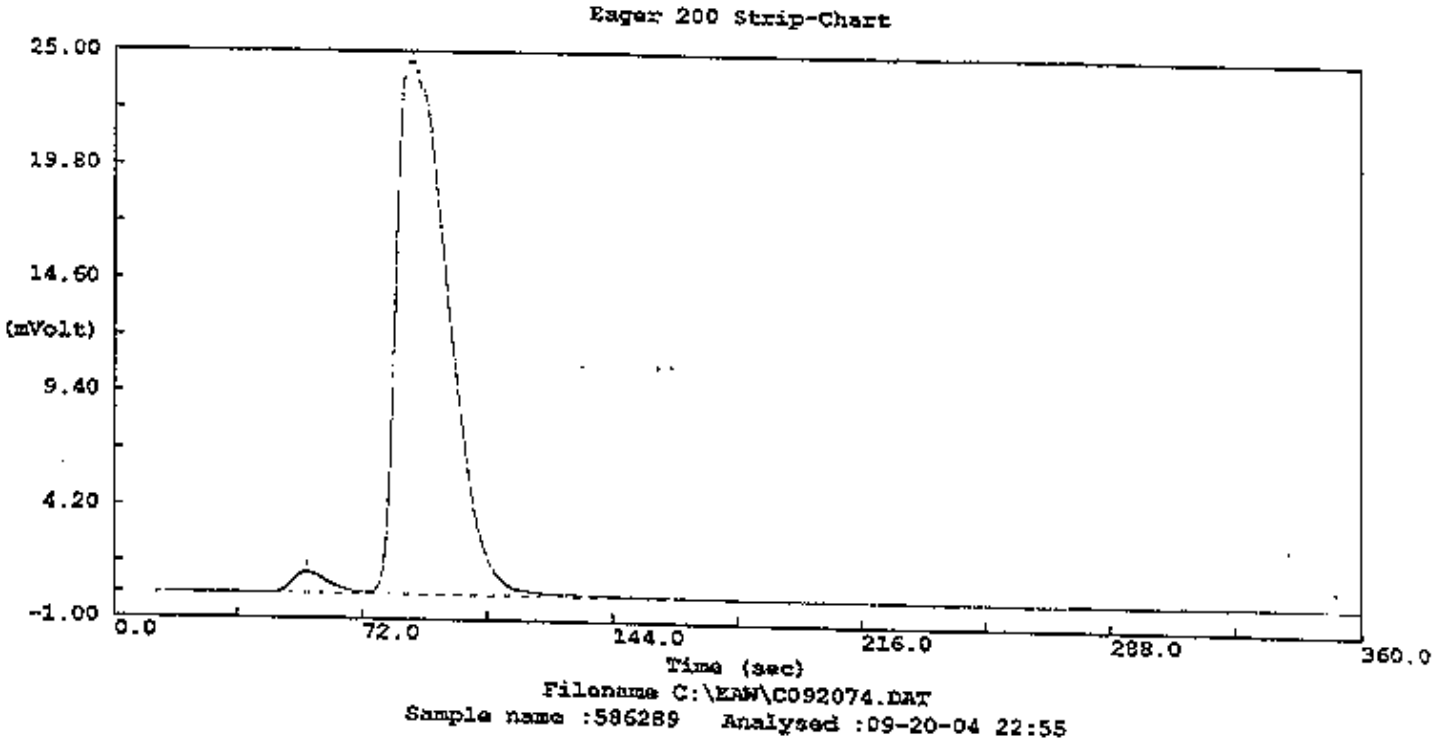
Sample ID : 586289 (# 73)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092073.DAT

Channel : E.A. Channel A
Sample weight : 4.553

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	6.7476	86	2107229	FU	1.000000	



Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 22:55

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 23:01

Sample ID : 586289 (# 74)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092074.DAT

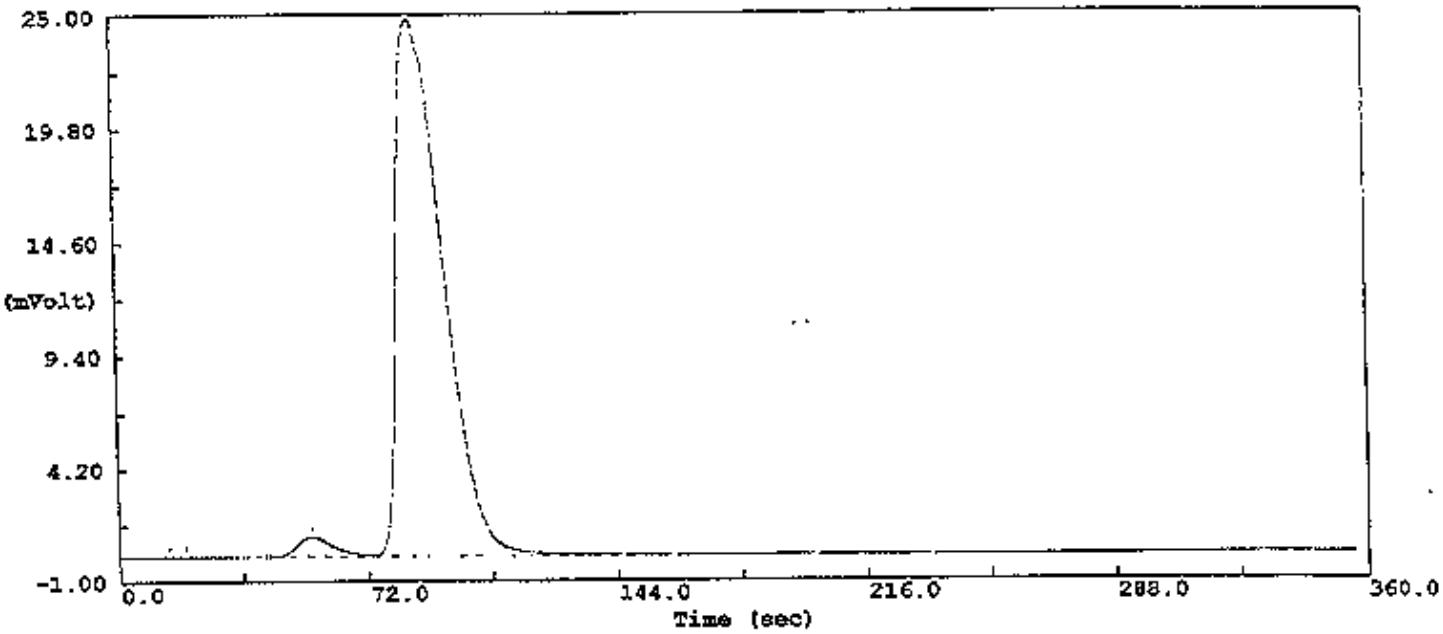
Channel : E.A. Channel A
Sample weight : 9.228

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	6.6508	86	4136876	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092075.DAT
Sample name :586289 Analysed :09-20-04 23:01

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 23:01	Printed	: 9/20/2004 23:07

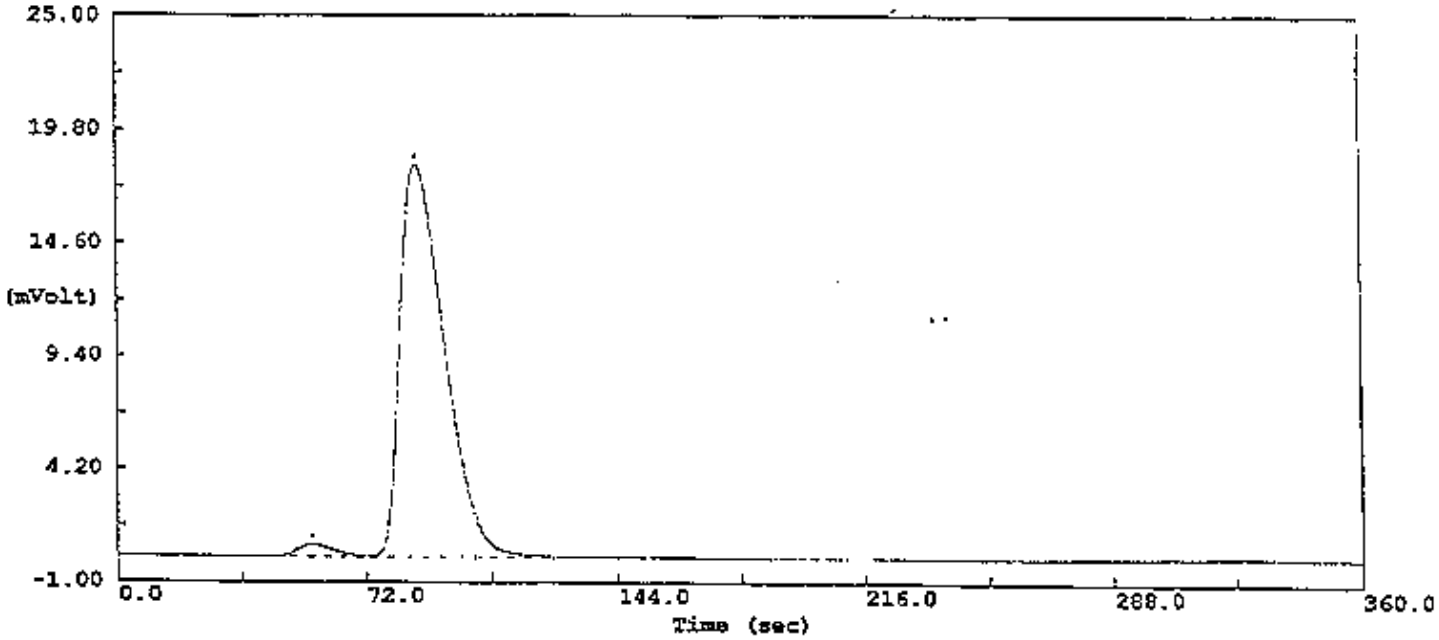
Sample ID	: 586289 (# 75)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 9.194
Chromatogram	: C:\EAW\C092075.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	6.0739	86	3770650	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092076.DAT
Sample name :586290 Analysed :09-20-04 23:07

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 23:07	Printed	: 9/20/2004 23:13

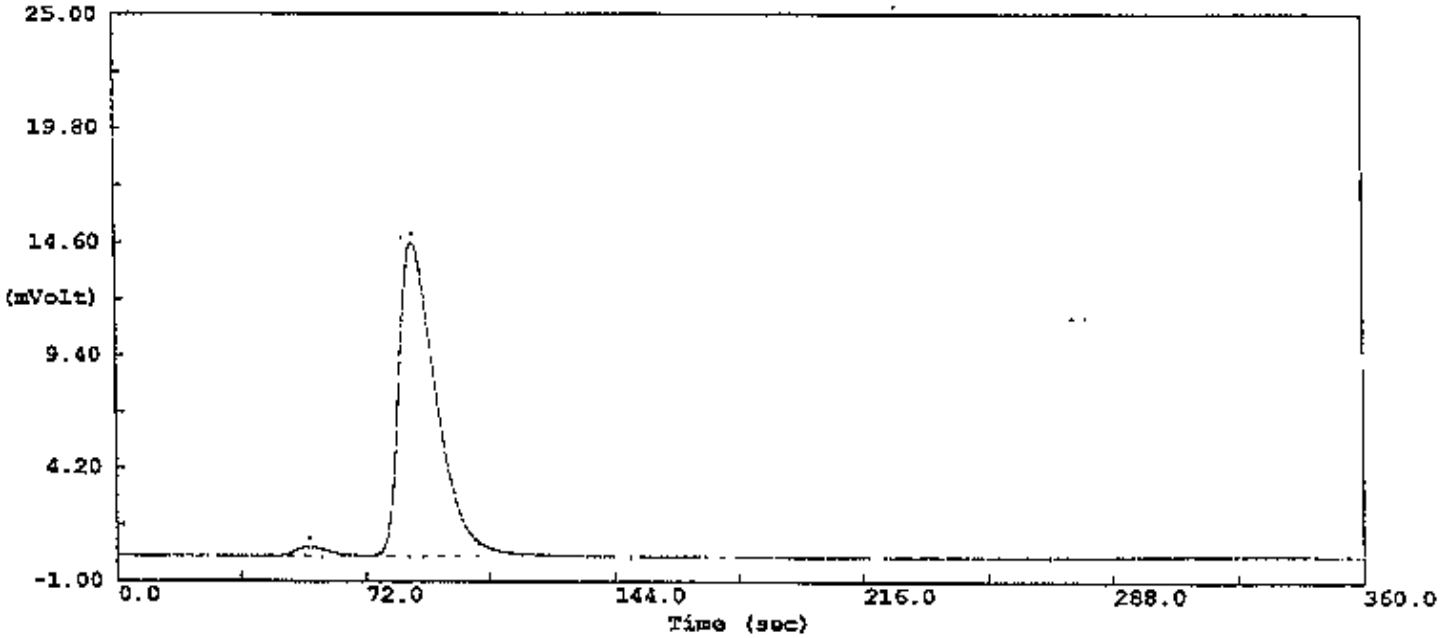
Sample ID	: 586290 (# 76)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.441
Chromatogram	: C:\EAW\C092076.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	7.0212	87	2602560	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092077.DAT
Sample name :586290 Analysed :09-20-04 23:13

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:13

Company Name : SEVERN TRENT LAB
Method File : CEN0920A.MTH
Printed : 9/20/2004 23:19

Sample ID : 586290 (# 77)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092077.DAT

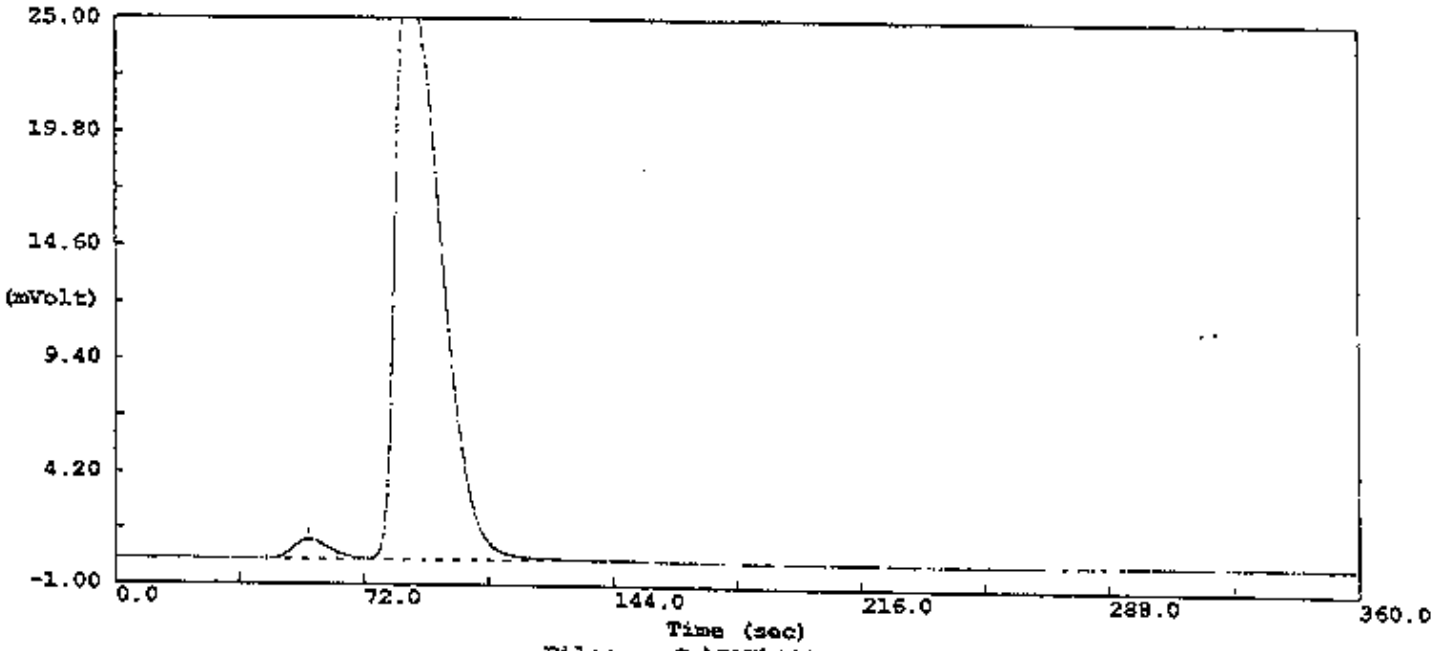
Channel : E.A. Channel A
Sample weight : 4.07

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	6.3618	86	1787454	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092078.DAT
Sample name :586290 Analysed :09-20-04 23:19

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:19

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 23:25

Sample ID : 586290 (# 78)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092078.DAT

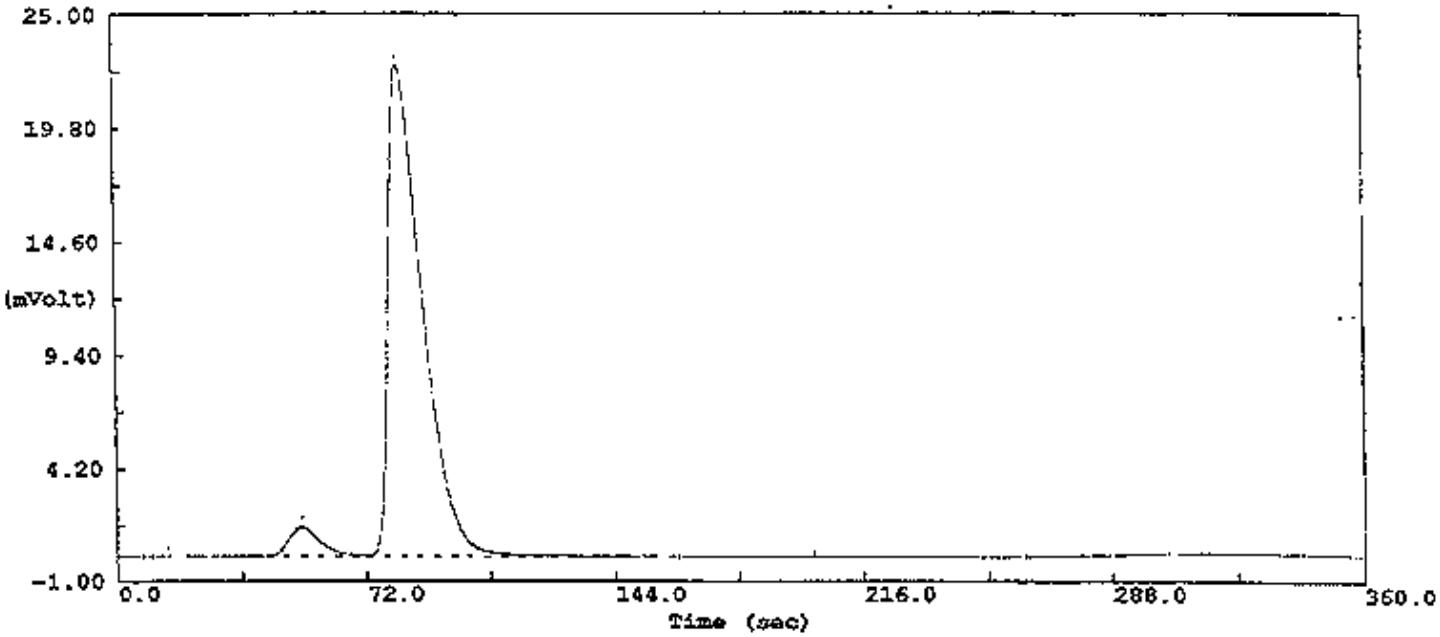
Channel : E.A. Channel A
Sample weight : 7.044

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	8.4547	85	4016426	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092079.DAT
Sample name :ACETANILIDE Analysed :09-20-04 23:25

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 23:25	Printed	: 9/20/2004 23:31

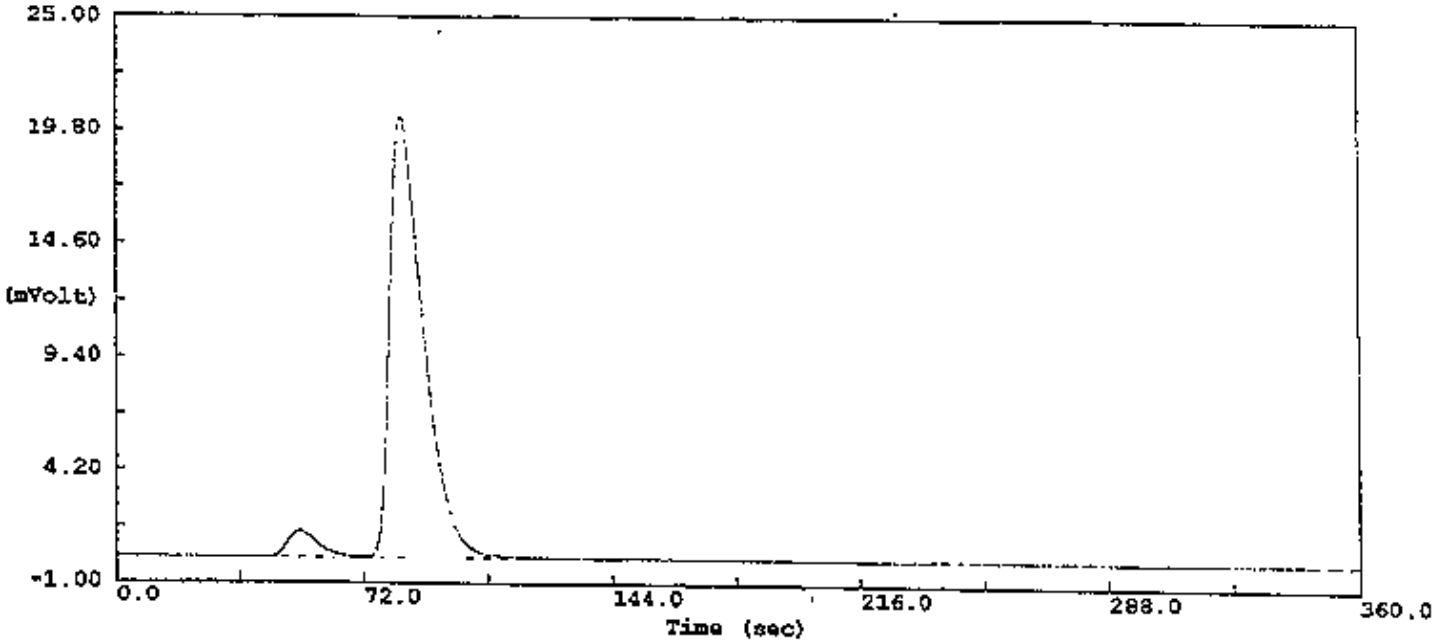
Sample ID	: ACETANILIDE (# 79)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .516
Chromatogram	: C:\EAW\C092079.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.0395	82	2568519	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092080.DAT
Sample name :ACETANILIDE Analysed :09-20-04 23:31

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:31

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 23:37

Sample ID : ACETANILIDE (# 80)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092080.DAT

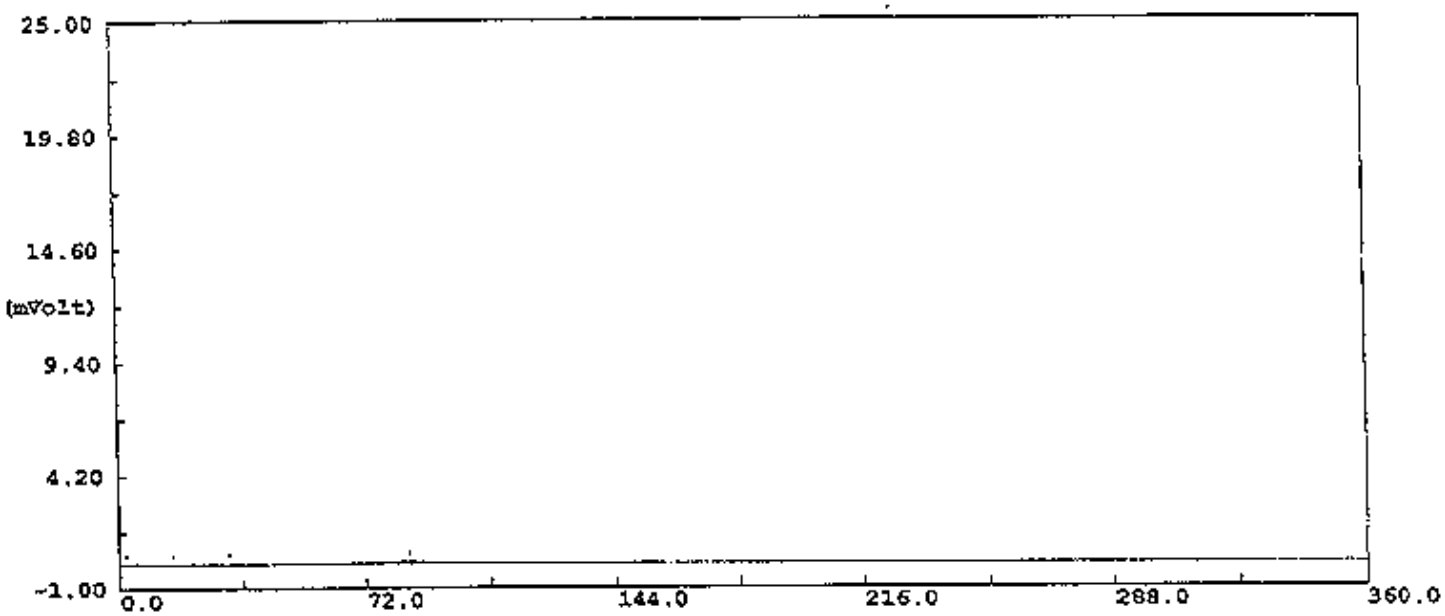
Channel : E.A. Channel A
Sample weight : .461

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	72.8801	83	2297655	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092081.DAT
Sample name :BLANK Analysed :09-20-04 23:37

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-20-04 23:37	Printed	: 9/20/2004 23:43

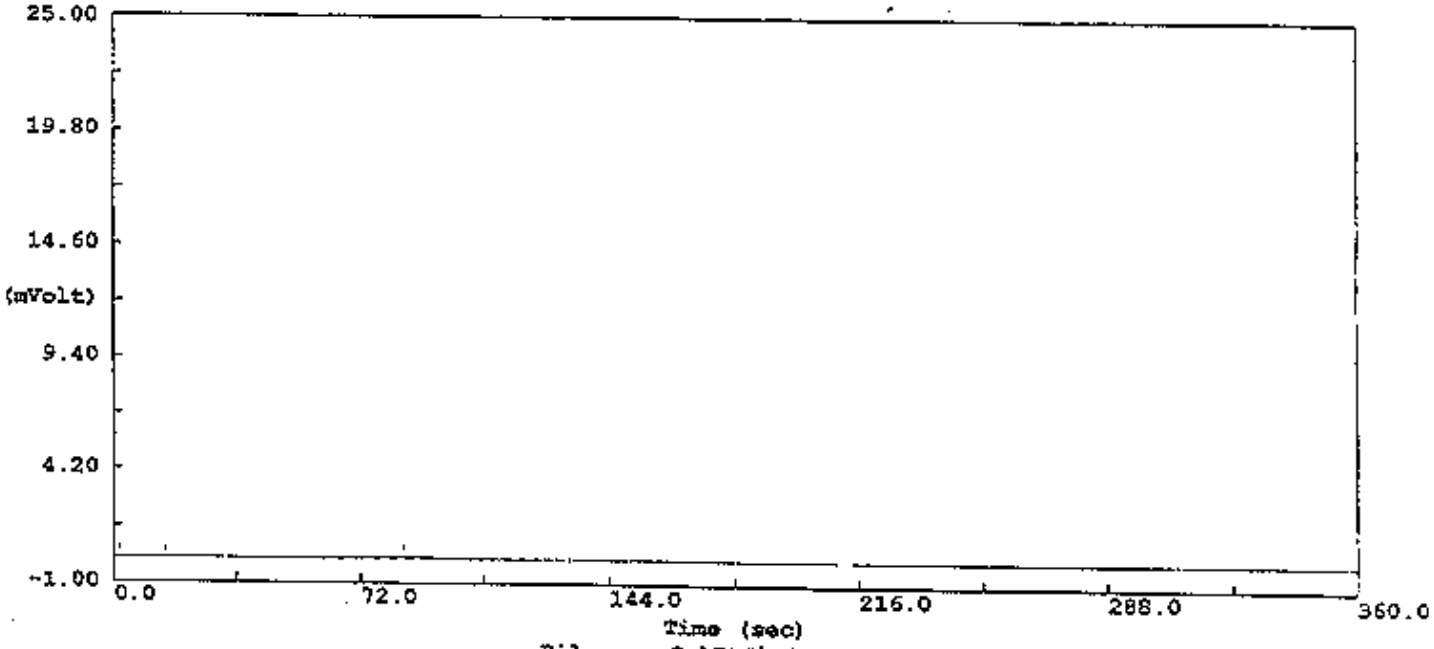
Sample ID	: BLANK (# 81)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C092081.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9696330E-02	85	13972	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092082.DAT
Sample name :BLANK Analysed :09-20-04 23:43

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:43

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 23:49

Sample ID : BLANK (# 82)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092082.DAT

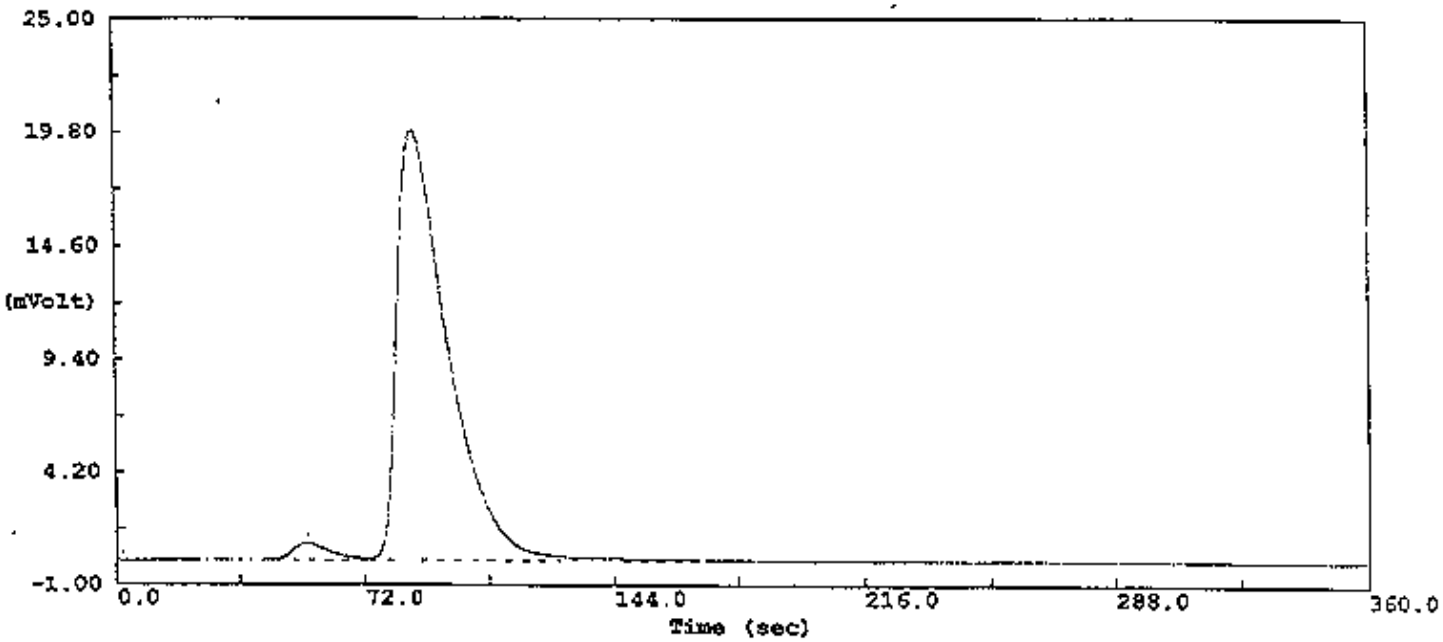
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9342435E-02	85	14675	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092083.DAT
Sample name :586291 Analysed :09-20-04 23:49

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:49

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/20/2004 23:55

Sample ID : 586291 (# 83)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092083.DAT

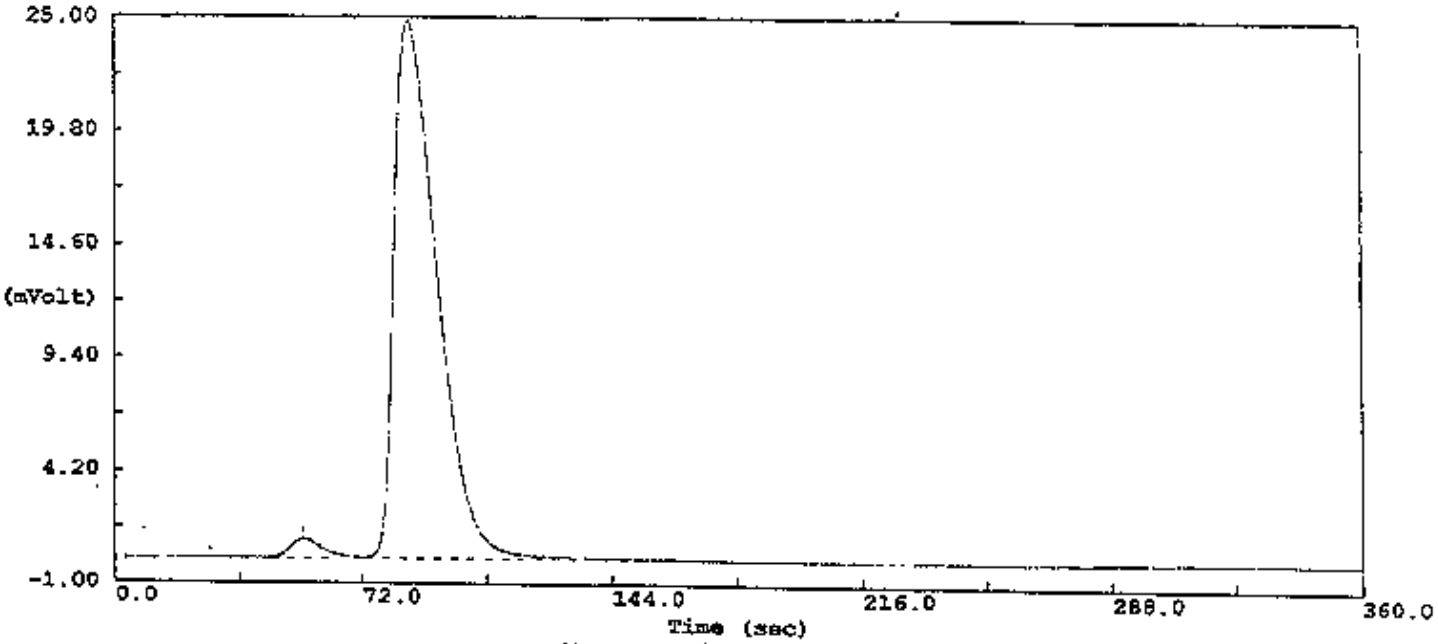
Channel : E.A. Channel A
Sample weight : 9.575

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	5.2240	86	3385041	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092084.DAT
Sample name :586291 Analysed :09-20-04 23:55

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-20-04 23:55

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 00:01

Sample ID : 586291 (# 84)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092084.DAT

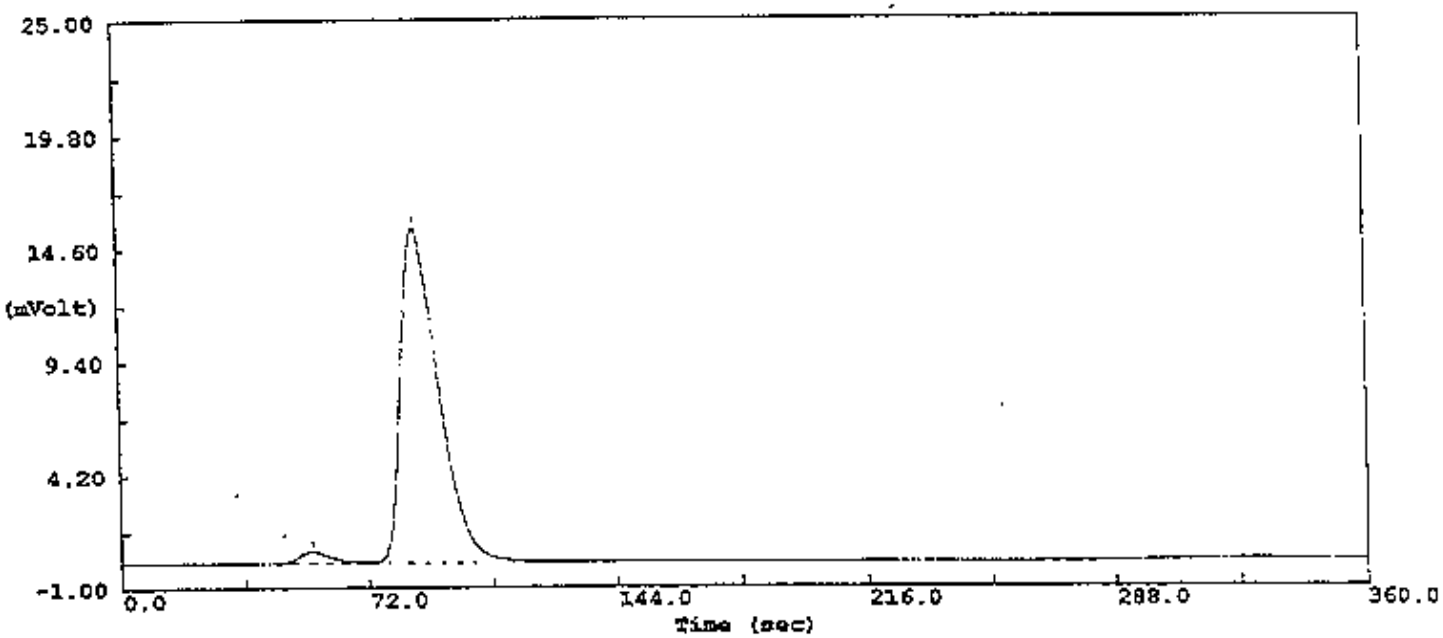
Channel : E.A. Channel A
Sample weight : 9.854

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	5.3185	85	3543202	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092085.DAT
Sample name :586291 Analysed :09-21-04 00:01

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 00:01	Printed	: 9/21/2004 00:07

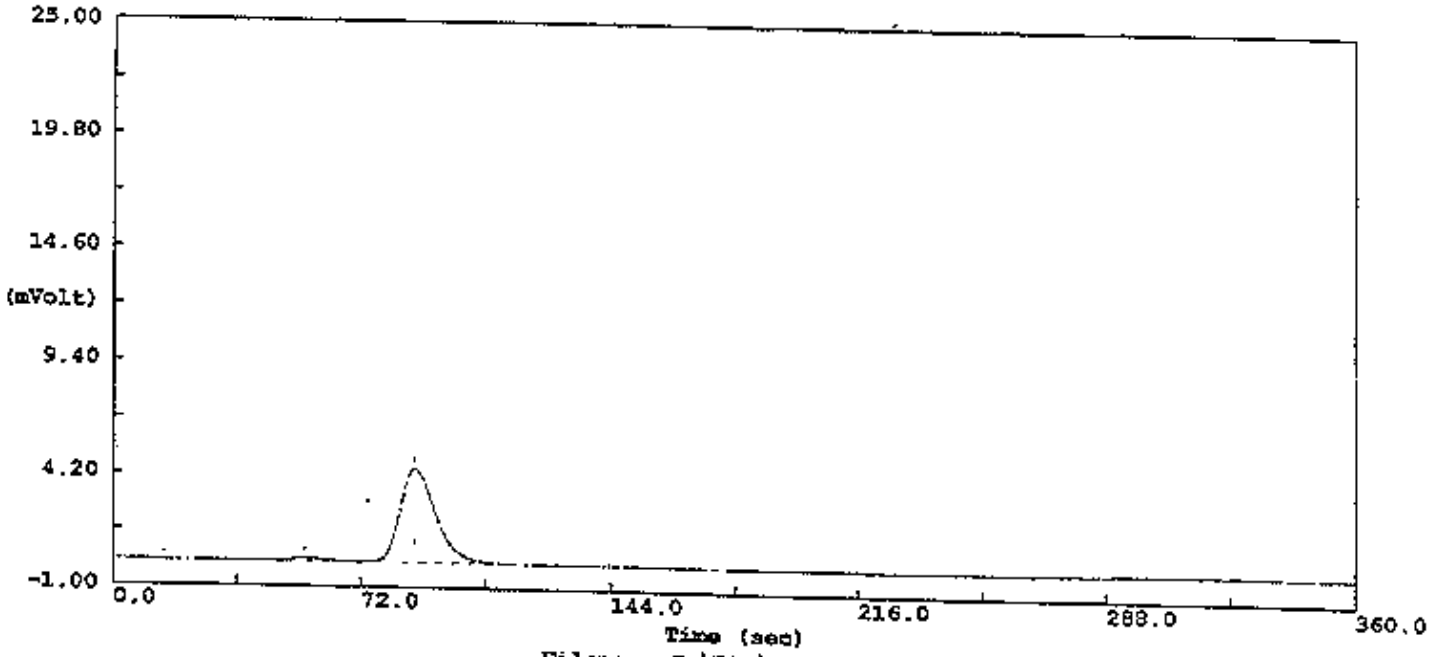
Sample ID	: 586291 (# 85)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.941
Chromatogram	: C:\EAW\C092085.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.7208	86	1930070	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092086.DAT
Sample name :586292 Analysed :09-21-04 00:07

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 00:07

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 00:14

Sample ID : 586292 (# 86)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092086.DAT

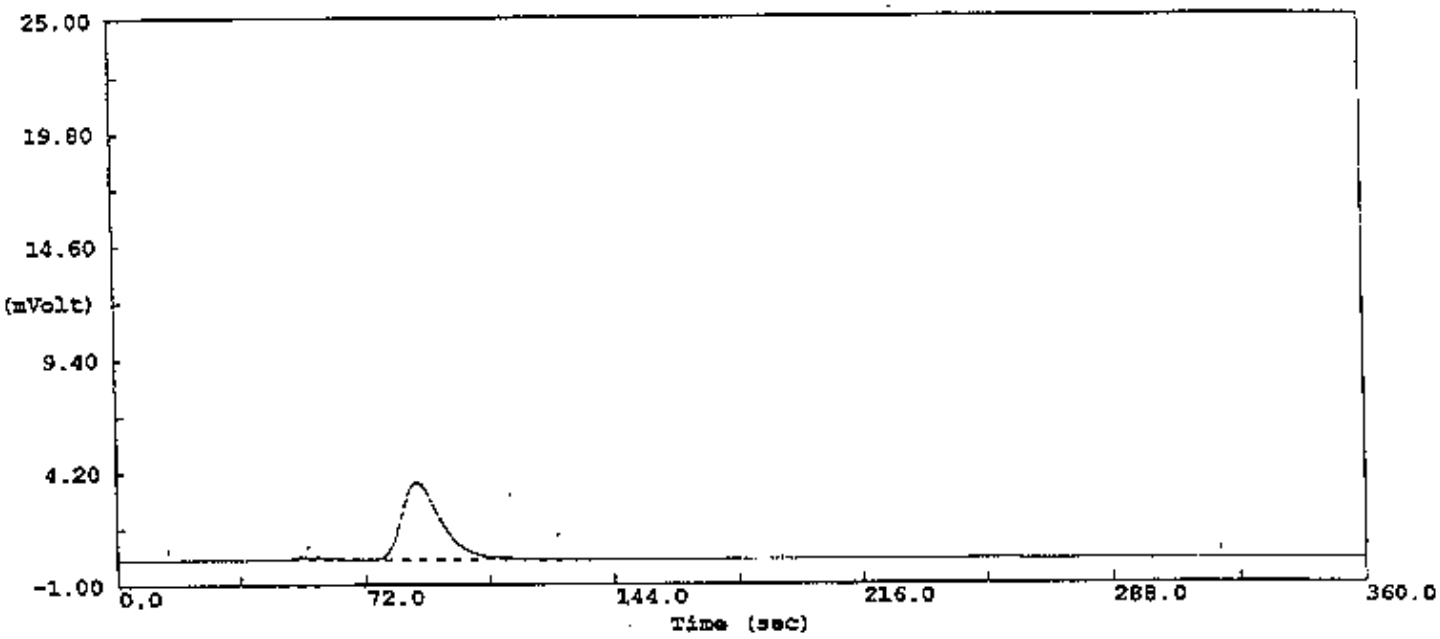
Channel : E.A. Channel A
Sample weight : 7.145

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.9201	87	508269	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092087.DAT
Sample name :586292 Analysed :09-21-04 00:14

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : INB47
Analysed : 09-21-04 00:14

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 00:20

Sample ID : 586292 (# 87)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092087.DAT

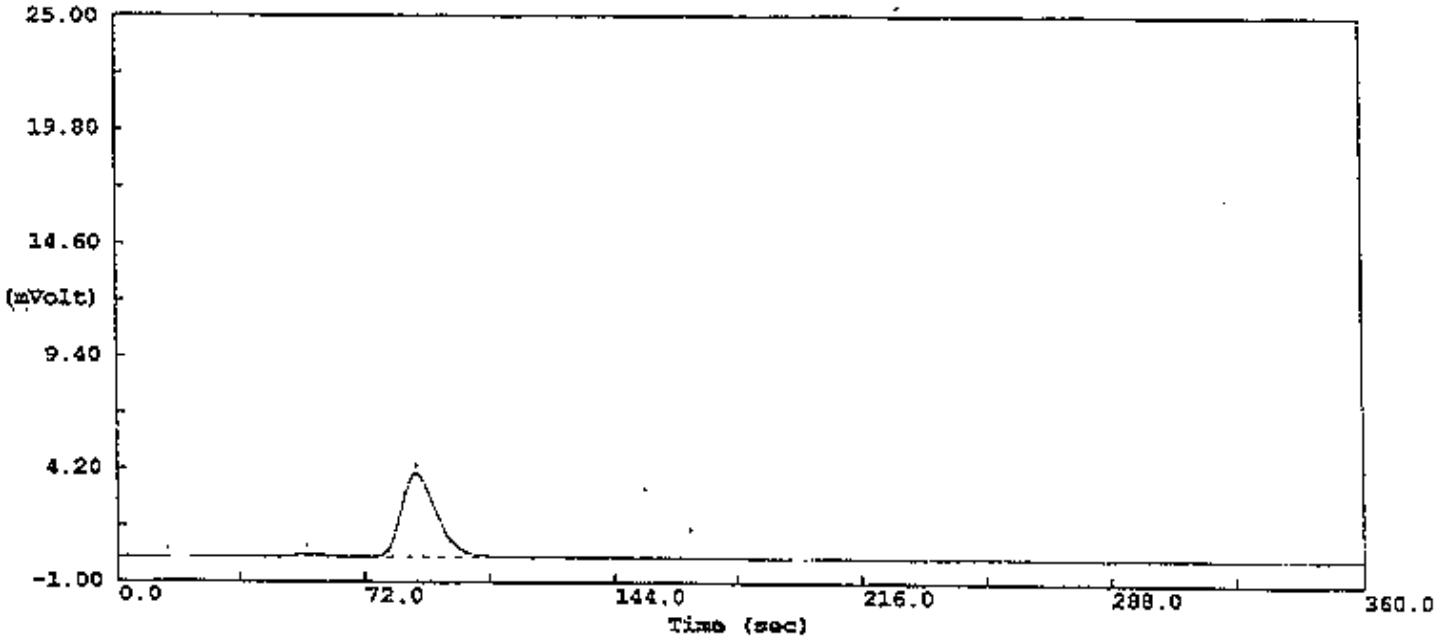
Channel : E.A. Channel A
Sample weight : 6.125

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.9701	87	466411	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092088.DAT
Sample name :586292 Analysed :09-21-04 00:20

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 00:20	Printed	: 9/21/2004 00:26

Sample ID	: 586292 (# 88)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 7.185
Chromatogram	: C:\EAW\C092088.DAT		

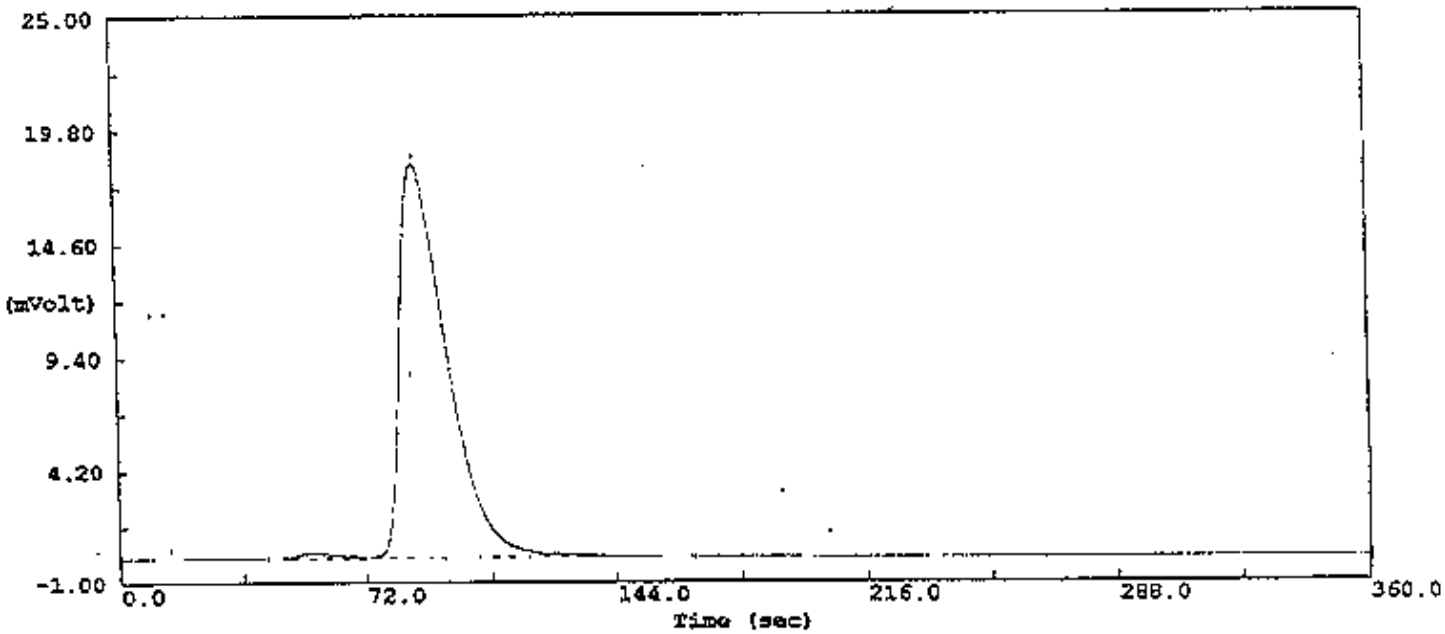
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7739	87	441168	RS	1.000000	

00508

Eager 200 Strip-Chart



Filename C:\EAW\C092089.DAT
Sample name :586292MS Analysed :09-21-04 00:26

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 00:26	Printed	: 9/21/2004 00:32

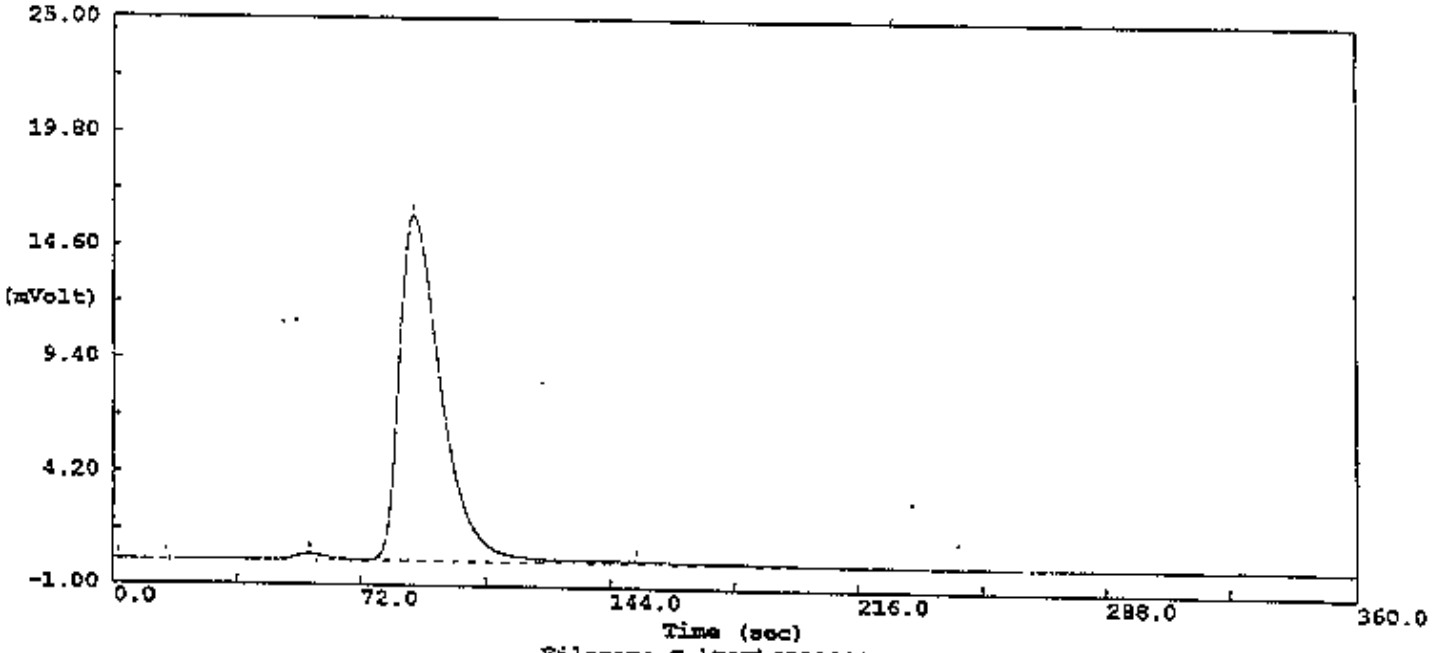
Sample ID	: 586292MS (# 89)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 5.278
Chromatogram	: C:\EAW\C092089.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	7.7073	87	2766559	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092090.DAT
Sample name :586292MS ' Analysed :09-21-04 00:32

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 00:32

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 00:38

Sample ID : 586292MS (# 90)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092090.DAT

Channel : E.A. Channel A
Sample weight : 9.725

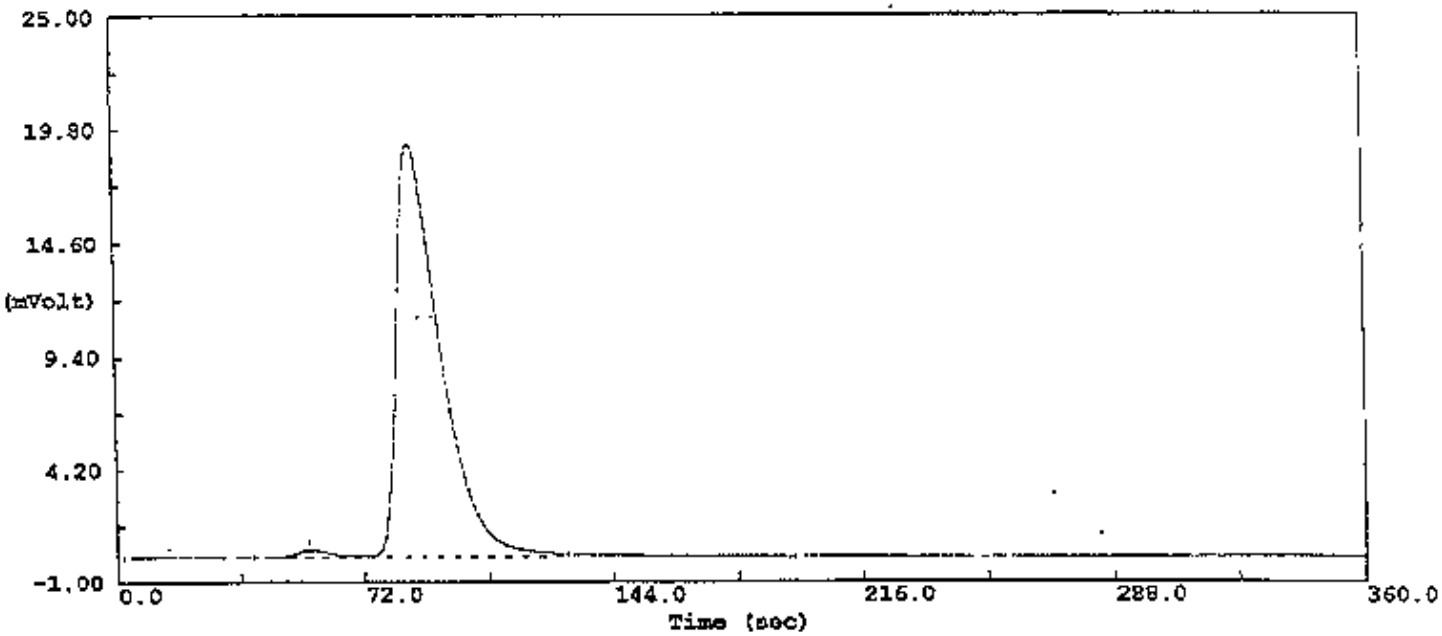
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.3540	87	2232774	TL	1.000000	

60500

Eager 200 Strip-Chart



Filename C:\EAW\C092091.DAT
Sample name :586292MS Analysed :09-21-04 00:38

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 00:38	Printed	: 9/21/2004 00:44

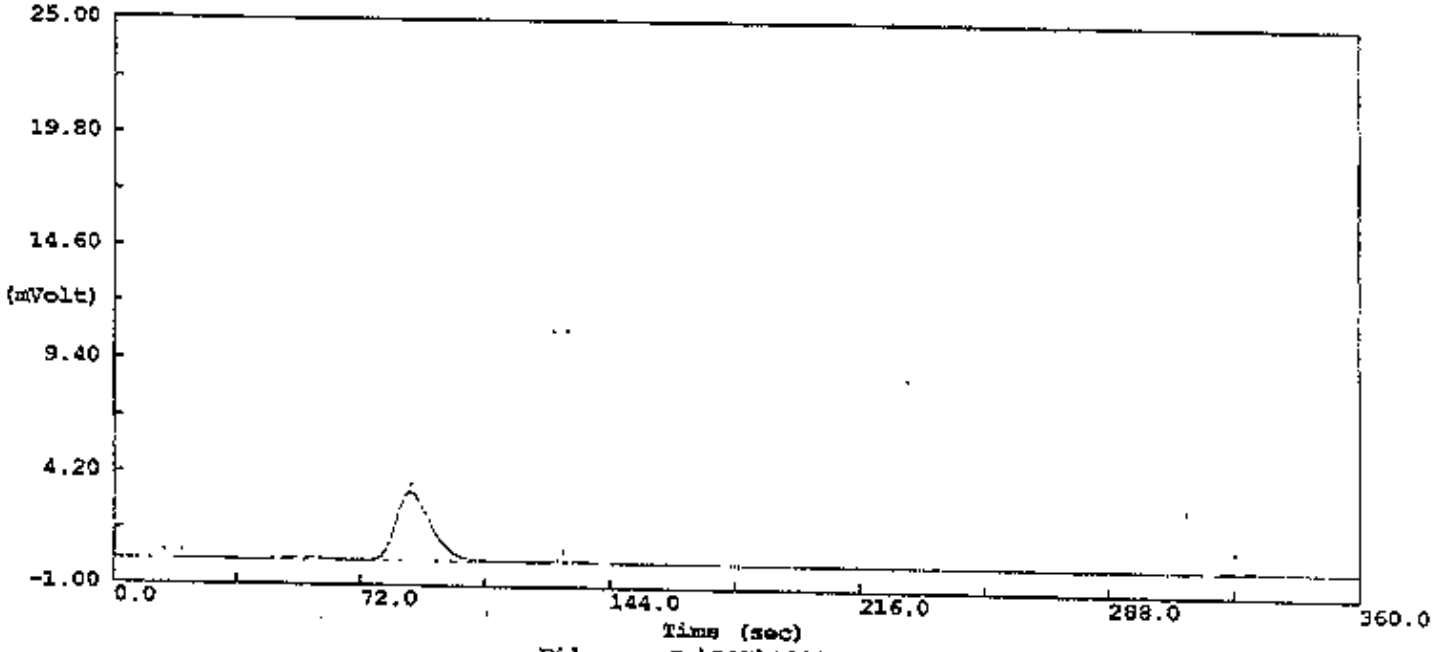
Sample ID	: 586292MS (# 91)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 4.864
Chromatogram	: C:\EAW\C092091.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	8.3524	86	2763026	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092092.DAT
Sample name :586292DP Analysed :09-21-04 00:44

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 00:44

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 00:50

Sample ID : 586292DP (# 92)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092092.DAT

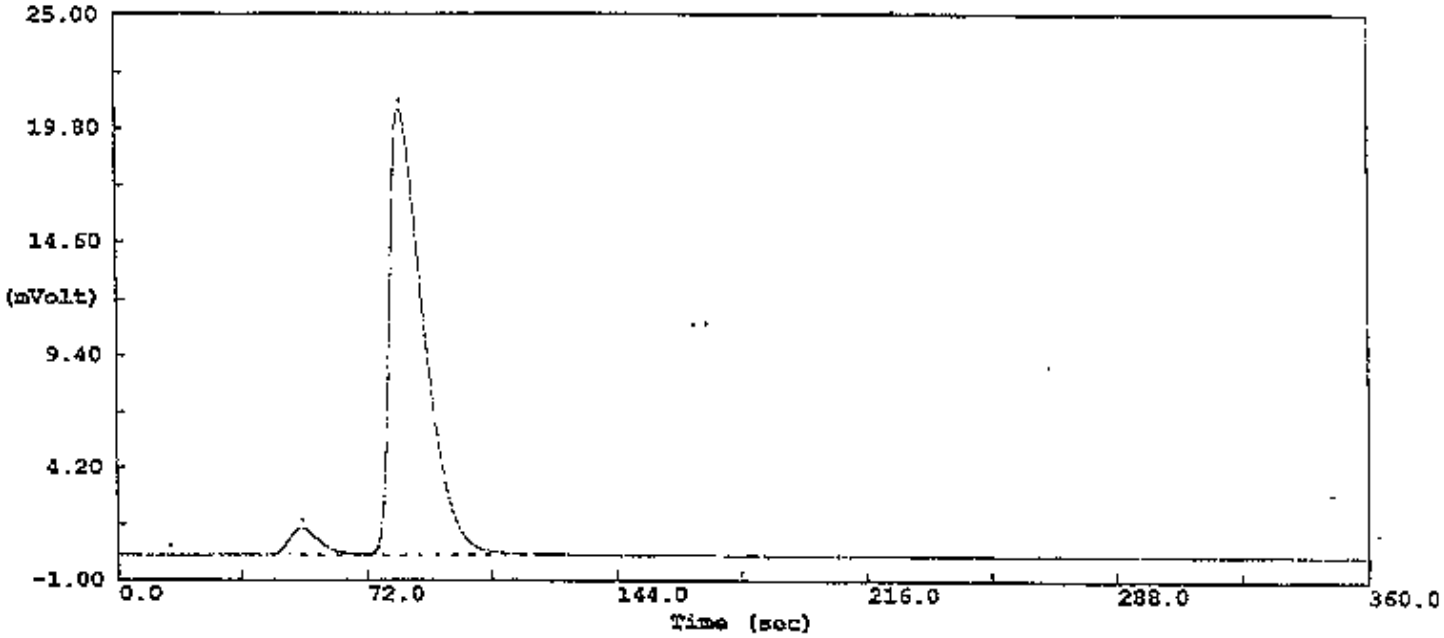
Channel : E.A. Channel A
Sample weight : 5.605

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.7784	87	361873	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092093.DAT
Sample name :ACETANILIDE Analysed :09-21-04 00:50

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 00:50	Printed	: 9/21/2004 00:56

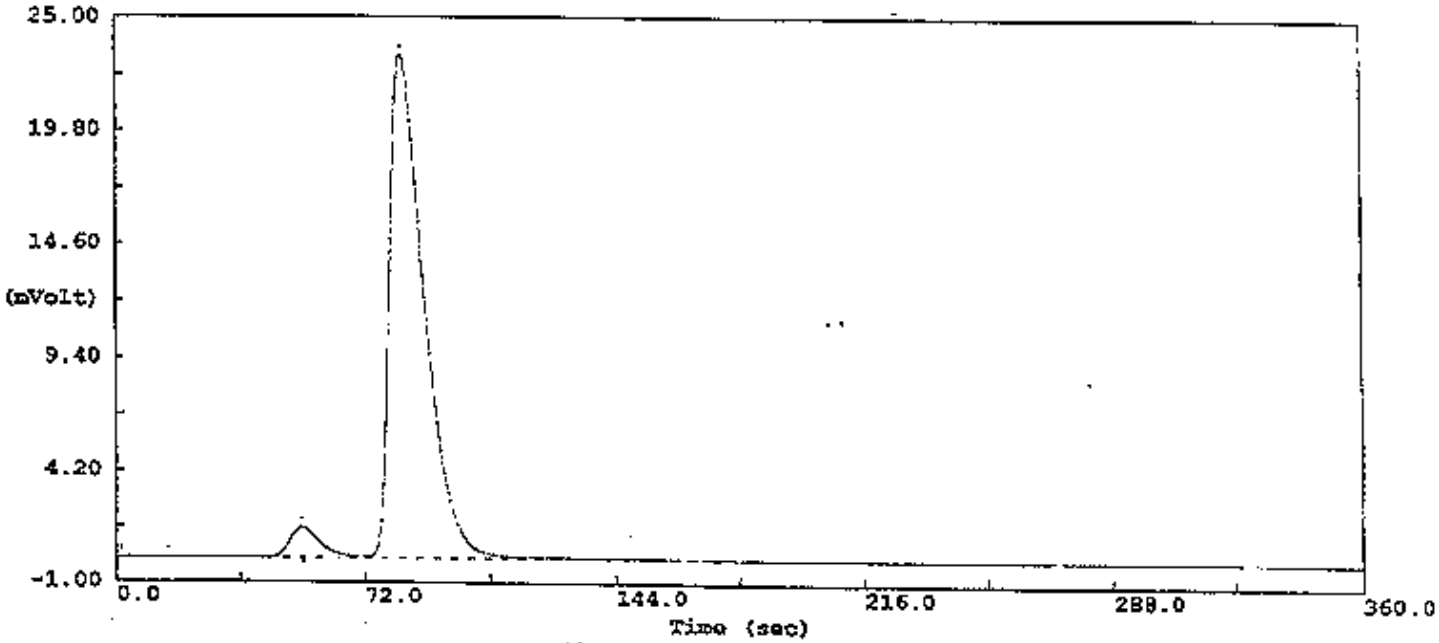
Sample ID	: ACETANILIDE (# 93)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .459
Chromatogram	: C:\EAW\C092093.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.6502	83	2311409	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092094.DAT
Sample name :ACETANILIDE Analysed :09-21-04 00:56

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 00:56

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:02

Sample ID : ACETANILIDE (# 94)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092094.DAT

Channel : E.A. Channel A
Sample weight : .524

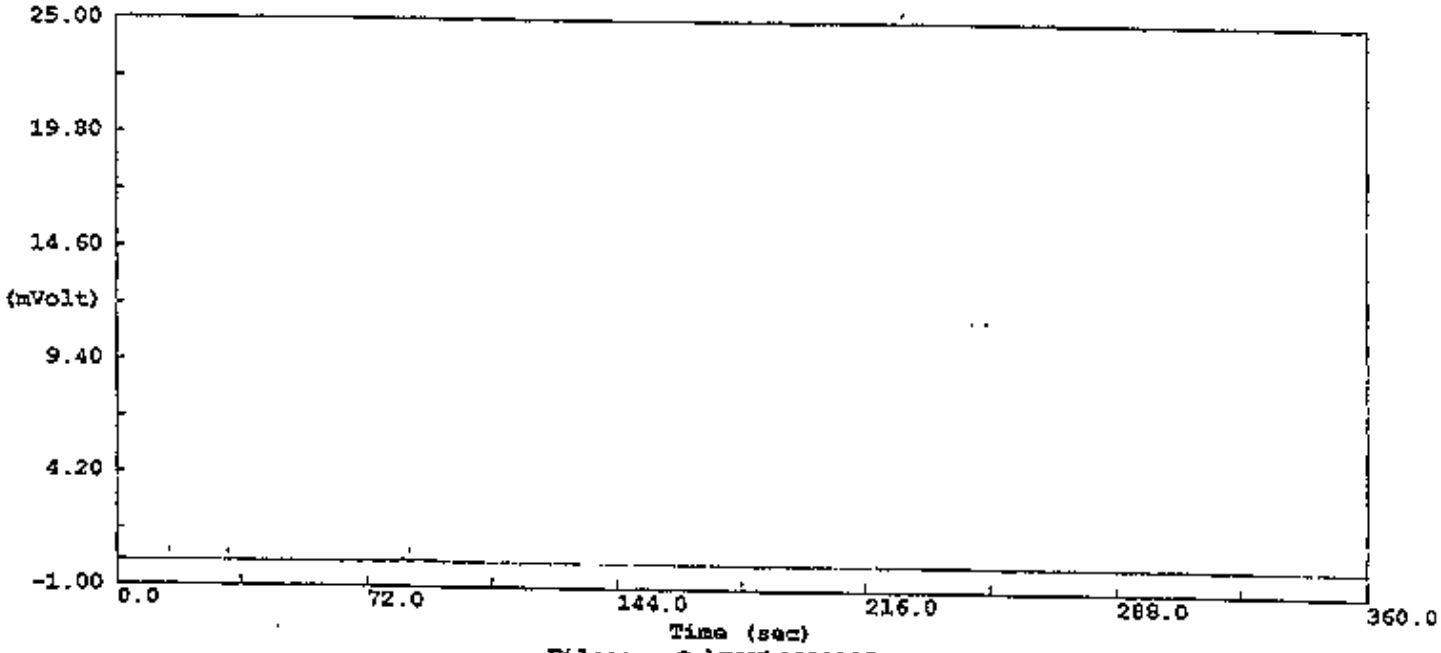
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	73.6061	83	2626868	FU	1.000000	

00511

Eager 200 Strip-Chart



Filename C:\EAW\C092095.DAT
Sample name :BLANK Analysed :09-21-04 01:02

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:02

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:08

Sample ID : BLANK (# 95)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092095.DAT

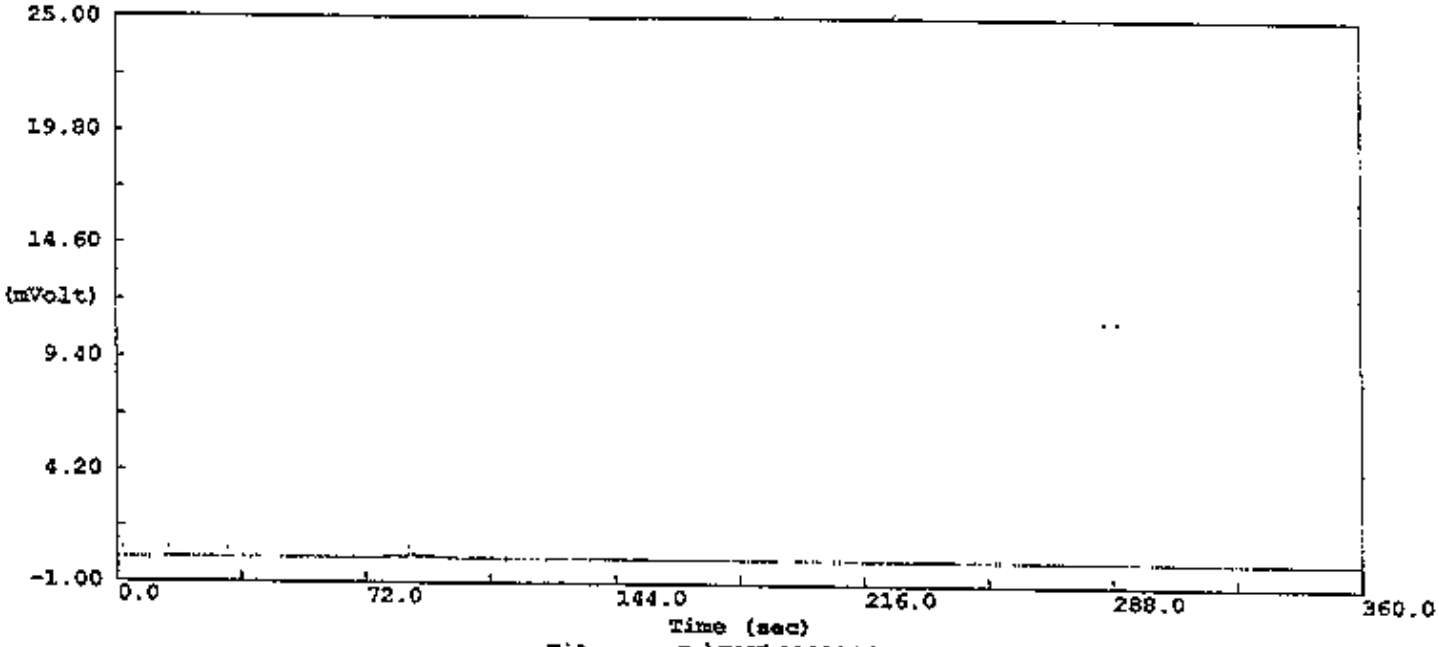
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.8910512E-02	85	15533	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092096.DAT
Sample name :BLANK Analysed :09-21-04 01:08

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:08

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:14

Sample ID : BLANK (# 96)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092096.DAT

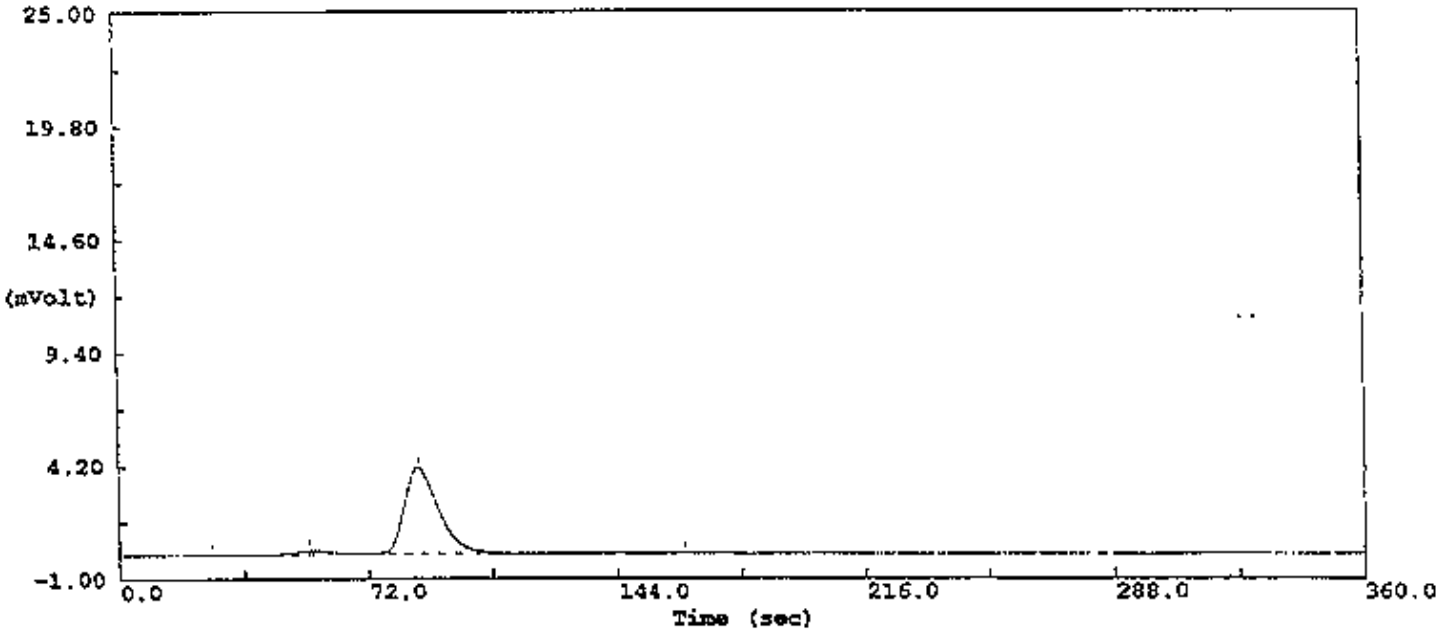
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.7573967E-02	85	18188	RS	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092097.DAT
Sample name :586292DP Analysed :09-21-04 01:14

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:14

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:20

Sample ID : 586292DP (# 97)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092097.DAT

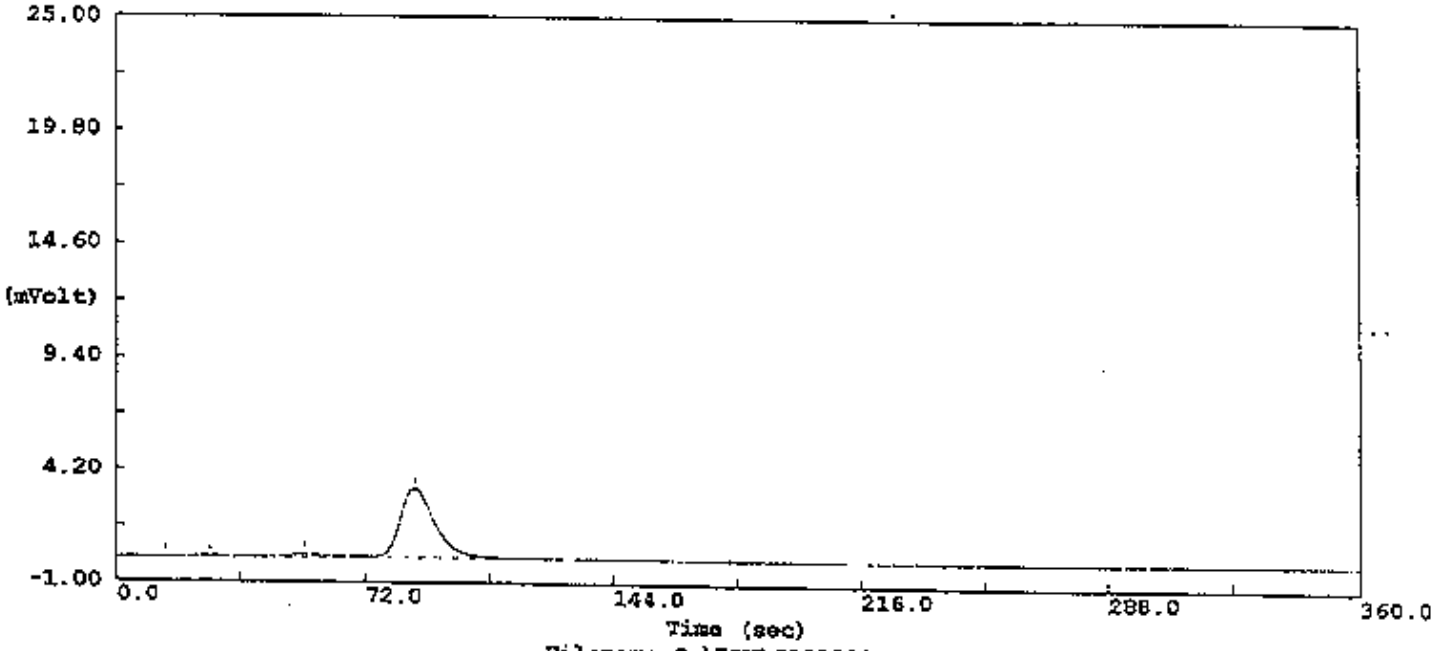
Channel : E.A. Channel A
Sample weight : 6.791

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.8549	87	457402	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C092098.DAT
Sample name :586292DP Analysed :09-21-04 01:20

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:20

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:26

Sample ID : 586292DP (# 98)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092098.DAT

Channel : E.A. Channel A
Sample weight : 4.954

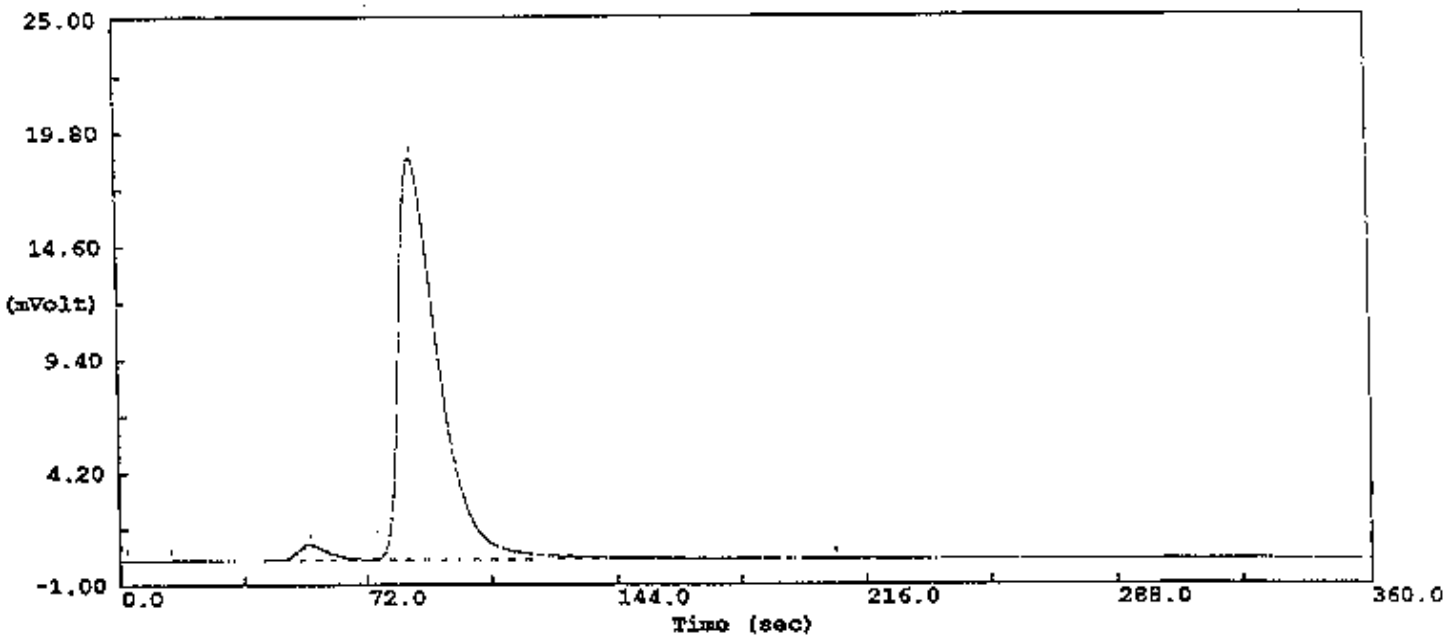
Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	0.9172	87	373823	FU	1.000000	

00513

Eager 200 Strip-Chart



Filename C:\EAW\C092099.DAT
Sample name :586293 Analysed :09-21-04 01:26

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:26

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:32

Sample ID : 586293 (# 99)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C092099.DAT

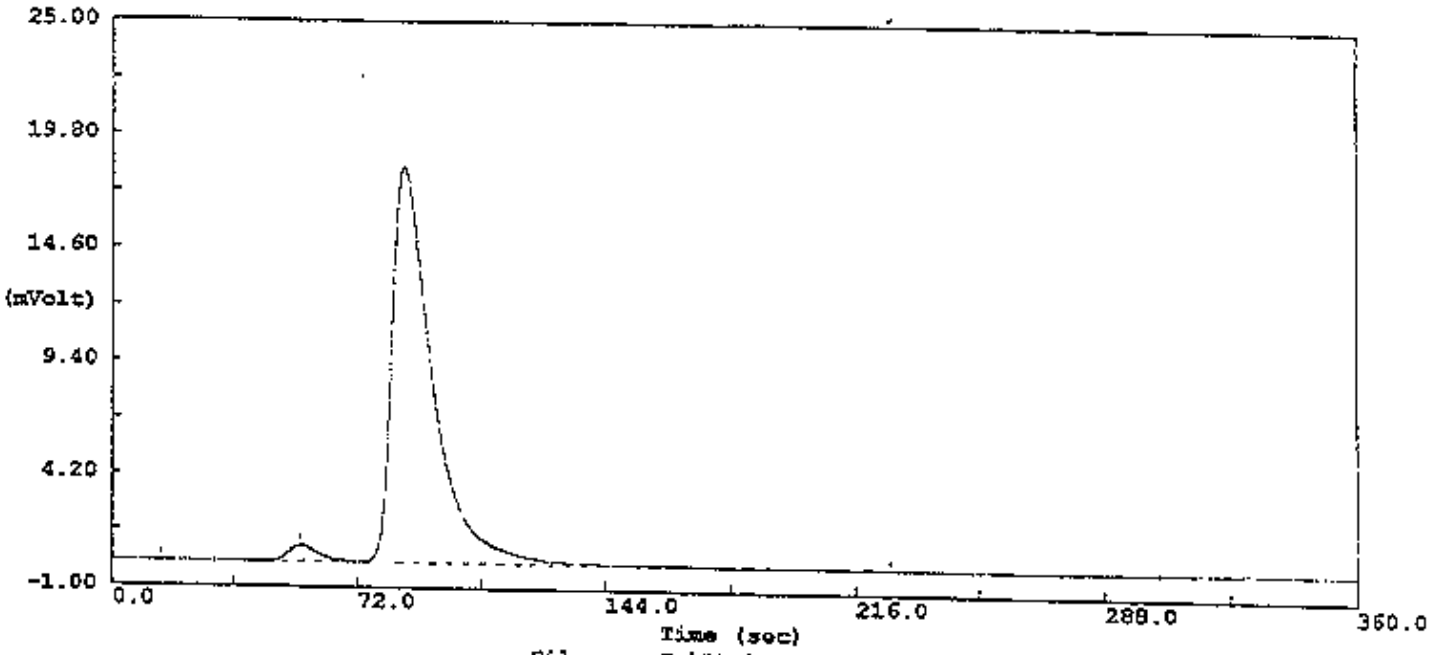
Channel : E.A. Channel A
Sample weight : 7.422

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.8727	86	2467656	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920100.DAT
Sample name :586293 Analysed :09-21-04 01:33

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:33

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:39

Sample ID : 586293 (# 100)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C0920100.DAT

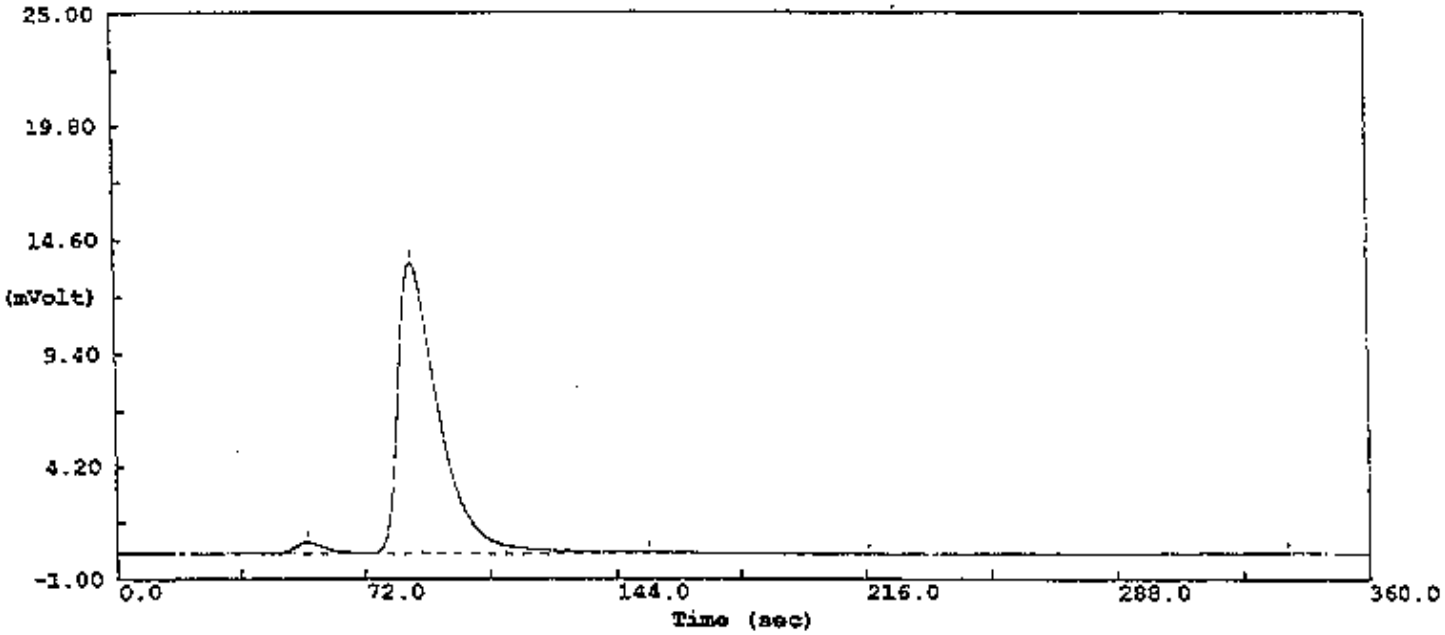
Channel : E.A. Channel A
Sample weight : 8.91

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	4.1148	85	2500589	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920101.DAT
Sample name :S86293 Analysed :09-21-04 01:39

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 01:39	Printed	: 9/21/2004 01:45

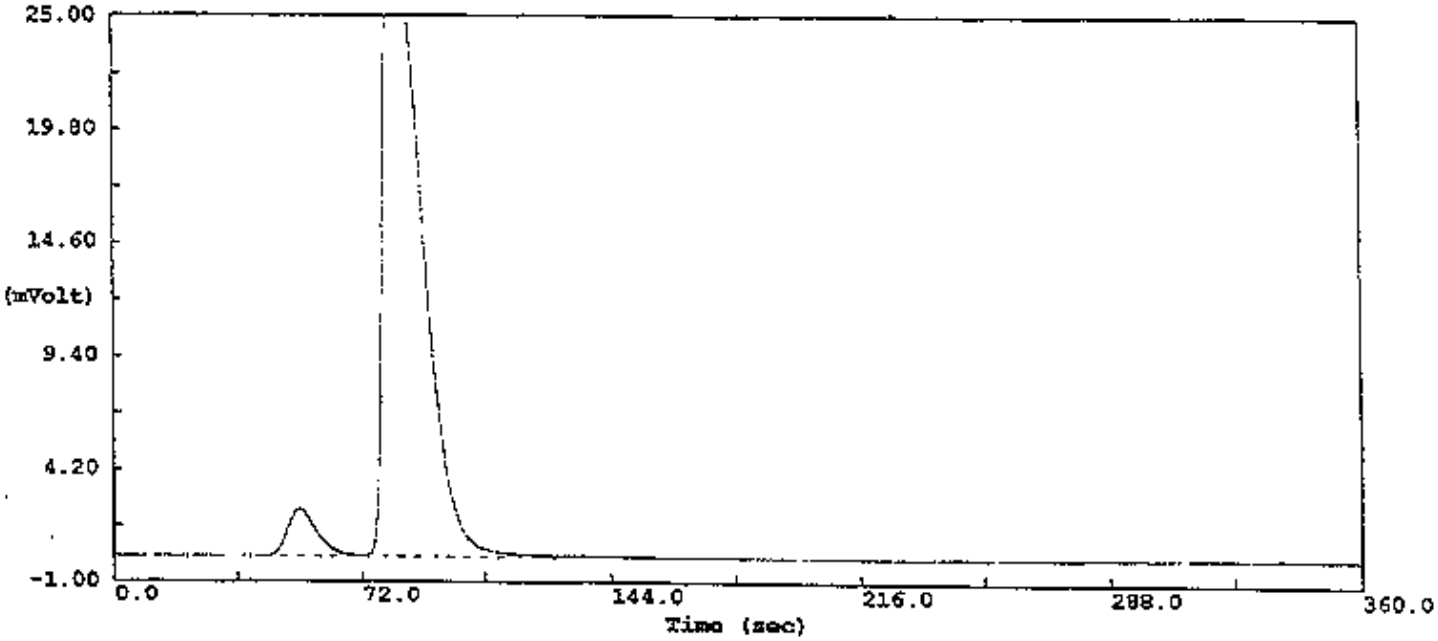
Sample ID	: S86293 (# 101)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 6.989
Chromatogram	: C:\EAW\C0920101.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	3.7646	86	1815129	TL	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920102.DAT
Sample name :ACETANILIDE Analysed :09-21-04 01:45

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 01:45	Printed	: 9/21/2004 01:51

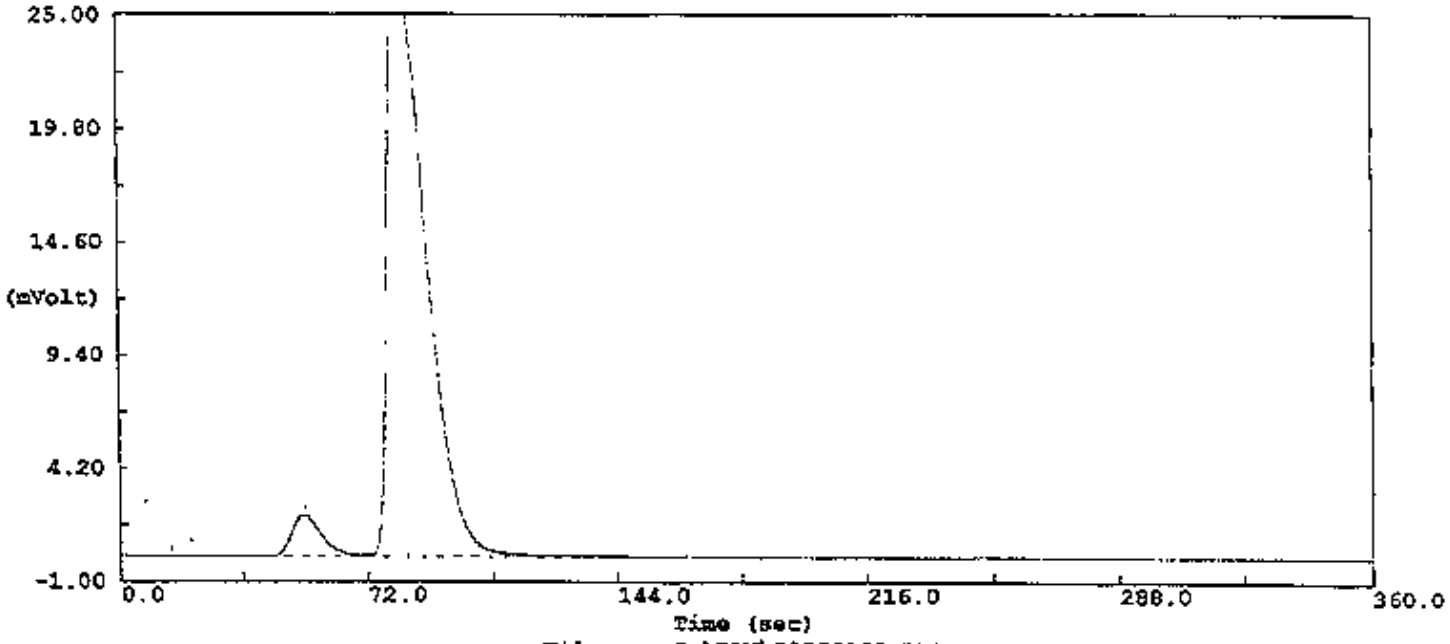
Sample ID	: ACETANILIDE (# 102)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: .797
Chromatogram	: C:\EAW\C0920102.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	72.0277	81	3874134	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920103.DAT
Sample name :ACETANILIDE Analysed :09-21-04 01:51

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : IN847
Analysed : 09-21-04 01:51

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 01:57

Sample ID : ACETANILIDE (# 103)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C0920103.DAT

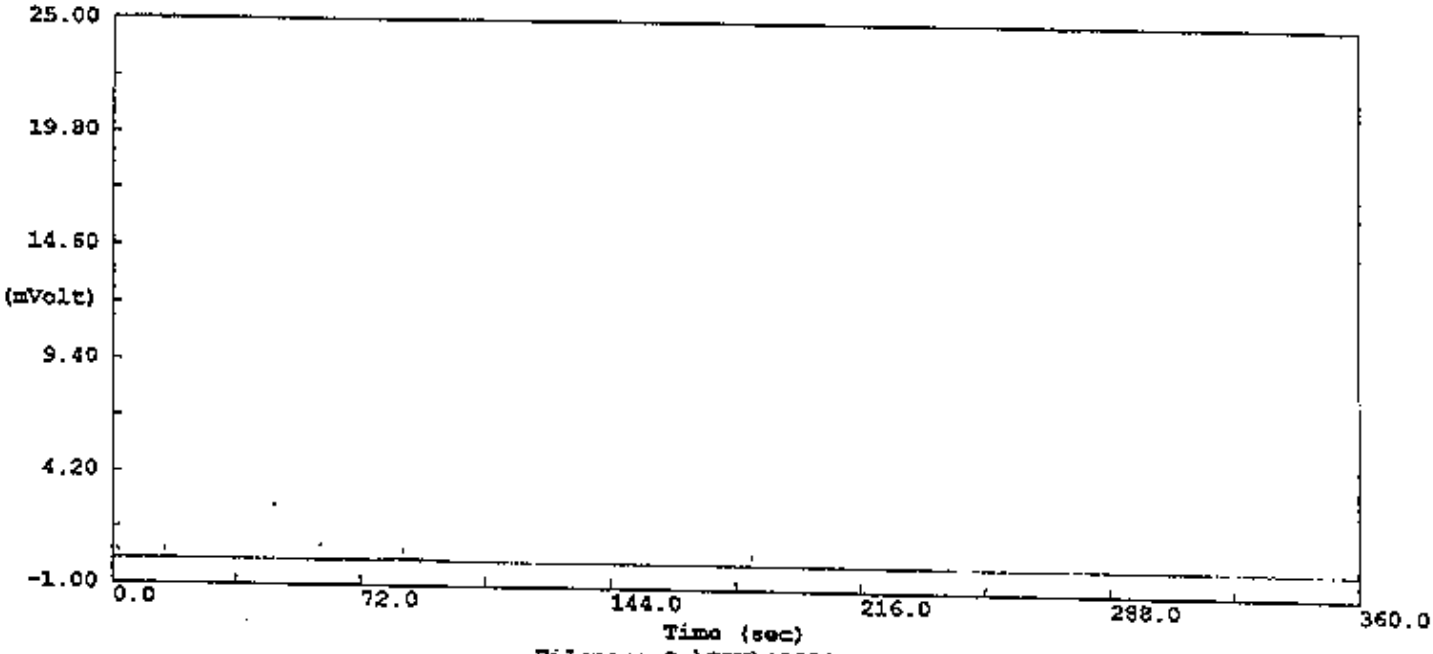
Channel : E.A. Channel A
Sample weight : .699

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	71.2842	81	3372325	FU	1.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920104.DAT
Sample name :BLANK Analysed :09-21-04 01:57

Eager 200 Report

S/W version : 1.06
Operator ID : ANALYST
Method Name : INS47
Analysed : 09-21-04 01:57

Company Name : SEVERN TRENT LAB
Method File : CHN0920A.MTH
Printed : 9/21/2004 02:03

Sample ID : BLANK (# 104)
Analysis Type : UnkNown (Area)
Chromatogram : C:\EAW\C0920104.DAT

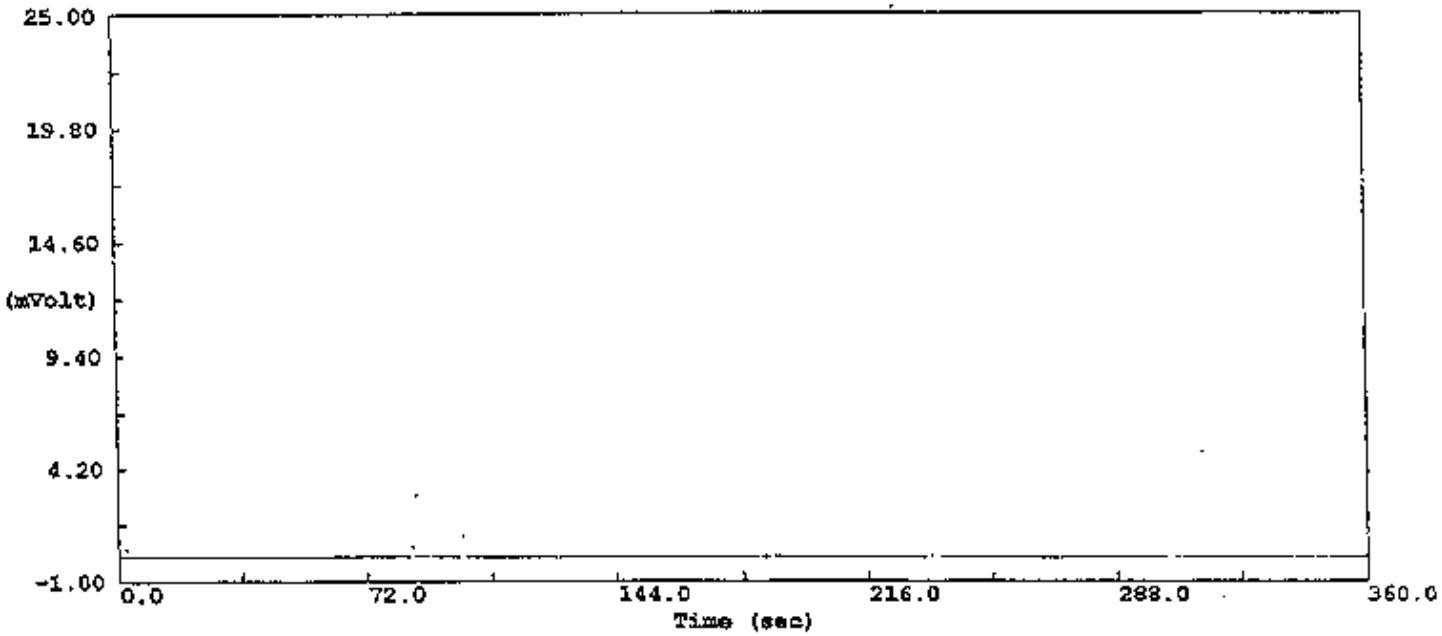
Channel : E.A. Channel A
Sample weight : 30

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-2.9577022E-02	84	14209	RS	1.000000	
Hydrogen	-7.7435583E-01	185	1	RS	14209.000000	

Eager 200 Strip-Chart



Filename C:\EAW\C0920105.DAT
Sample name :BLANK Analysed :09-21-04 02:03

Eager 200 Report

S/W version	: 1.06		
Operator ID	: ANALYST	Company Name	: SEVERN TRENT LAB
Method Name	: IN847	Method File	: CHN0920A.MTH
Analysed	: 09-21-04 02:03	Printed	: 9/21/2004 02:09

Sample ID	: BLANK (# 105)	Channel	: E.A. Channel A
Analysis Type	: UnkNown (Area)	Sample weight	: 30
Chromatogram	: C:\EAW\C0920105.DAT		

Calib. method : using 'Least Squares to Linear fit'

!!! Warning missing one or more peaks.

Element Name	Element %	Ret.Time	Area	BC	Area ratio	K factor
Carbon	-3.1763319E-02	85	9866	RS	1.000000	

SEVERN TRENT STL

SAMPLE HANDLING

00517

FedEx. Express

FedEx Tracking Number 8449 4718 4981

1 From

Date 11.11.04

Sender's Name JIL Seattle Phone 253 922 7310

Company JIL Seattle

Address 5755 8th St E

City Tacoma State WA ZIP 98424

2 Your Internal Billing Reference

3 To

Recipient's Name JIL Burlington Phone 802 655 1223

Company JIL Burlington

Address 238 South Park Dr Suite 1

Address

City Colchester State VT ZIP 05446

8449 4718 4981

Form # 4 HZ0U Recipient's Copy

4a Express Package Service — Packages up to 150 lbs.

- [X] FedEx Priority Overnight
- [ ] FedEx Standard Overnight
- [ ] FedEx First Overnight
- [ ] FedEx 2Day
- [ ] FedEx Express Saver

4b Express Freight Service — Packages over 150 lbs.

- [ ] FedEx 1Day Freight
- [ ] FedEx 2Day Freight
- [ ] FedEx 3Day Freight

5 Packaging

- [ ] FedEx Envelope
- [ ] FedEx Pak
- [X] Other

6 Special Handling

- [ ] SATURDAY Delivery
- [ ] HOLD Weekday at FedEx Location
- [ ] HOLD Saturday at FedEx Location

Does this shipment contain dangerous goods?

- [ ] No
- [ ] Yes
- [ ] Yes
- [ ] Dry Ice
- [ ] Cargo Aircraft Only

7 Payment Bill to:

- [X] Sender
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages 1 Total Weight 12 lbs. Total Declared Value $ .00 Total Charges

8 Release Signature

446

Questions? Visit our Web site at fedex.com

James Brown 9.17.04 0830

0146

81500

SEVERN TRENT LABORATORIES LOG-IN SHEET - Form DC-1

b Name: STL Burlington

Log-in Date: 09/17/04

eceived By (Print or Type Name): Jennifer Brusa

eceived By (Signature):

ase Number: 24028

ample Delivery Group No.: 123627

TR Number: 102407

EMARKS:

. Custody Seal: Present and Intact

. Custody Seal Nos: 385485

. Chain-of-Custody Records: Present

. Sample Information Sheets: Absent*

. Airbill Present: As Airbill

. Airbill Number(s): 844947184981

. Sample Tags: Absent*

. Tag Nos. Listed on COC: N/A

. Sample Condition: Intact

10. VOA Vial Bubbles: N/A

11. Does info on the custody records, sample info sheets, sample tags and labels agree?: Yes

12. Date Received at Lab: 09/17/04

13. Time Received at Lab: 0930

14. Cooler Temperature(s): 6 C

SAMPLE TRANSFER:

Fraction(s): ALL

Area Number: Level 4 Storage

Transferred By: JB1

Transferred On: 09/17/04

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT ETC.
040916/GNW/MW	NA	586458	

09.17.04

* Contact Project Director

Reviewed By: 0147

Date:

STL Burlington
COOLER RECEIPT CHECKLIST

Date Received: 09.17.04 Sample Custodian: AM

Time Received: 0930 ETR/SDG: 102407/123627

RADIATION SCREEN: <0.05 MR/HR (YES) NO

If no, stop work and alert the Supervisor and the PM.

CUSTODY SEALS PRESENT: (YES) NO

If yes, were the custody seals signed? (YES) NO

If yes, are custody seal numbers present? (YES) NO

List custody seal numbers: 385485

TEMPERATURE CHECK: 6 (°C)

Acceptance Criteria (0-6°C) except air samples, which should be shipped at ambient temperature and/or biota/tissue samples, which may be frozen on receipt. The thermal preservation of samples that are hand delivered immediately following collection is considered acceptable if there is evidence that the chilling process has begun.

Thermal Preservation Type: (ICE) (ICE PACK) NONE

CONDITION OF SAMPLE CONTAINERS: (INTACT) BROKEN

If broken, list the client ID for each broken container:

Were any samples received with a short hold time* remaining?

** <7 Days*

WET CHEMISTRY	YES	(NO)
METALS	YES	(NO)
ORGANIC EXTRACTABLES	YES	(NO)
VOLATILE (received unpreserved)	YES	(NO)

If yes, expedite sample log in procedure and alert the appropriate Department Manager.