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First Semi-annual Assessment Monitoring Event

Sampling Date: July 10-13, 1995

Watauga County Landfill
NCDEHNR Permit No. 95-02

Prepared for:

Watauga County, North Carolina

Volume II of II Book 4 of 9

DAA JN: 6520-21

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(INCLUDES SW-846 METHOD 8270A SEMI-VOLATILES FORMS)

METHOD 8260 VOLATILE DATA VALIDATION SUMMARY

GC/MS organic data review was performed on volatile organic parameters analyzed using USEPA SW-846 Method 8260. The parameter list included methylene chloride and vinyl chloride for confirmational analysis. To meet method quantitation limit requirements methylene chloride and vinyl chloride are analyzed using Method 8021. Method 8260 was performed by ETS Analytical Services of Roanoke, Virginia. ETS submitted results to Draper Aden Associates in a final Certificate of Analysis, including: Quality Assurance/Quality Control (QA/QC) documentation, instrument calibration data, internal standards results, raw chromatographic data printouts, and mass spectral results.

Evaluation of ETS's compliance with GC/MS Method 8260 and validation of the results encompassed review of the following items: sample holding times, sample preservation requirements, laboratory QA/QC performance checks, instrument calibration, blank analyses, surrogate spike recoveries, and matrix spike analyses results. Review of all transcriptions from raw data to summary sheets was performed. Specific representative calculations were also performed at random.

ETS listed either 5 μg/L, 10 μg/L, 25 μg/L, or 50 μg/L for all 8260 parameter level of quantitation (LOQ) values. These values are supported by the "March 1995 VOA MDL Study" presented after the narrative in the certificate of analysis and are further supported by the first point of the calibration curve which was 10 μg/L or 50 μg/L.

Samples were collected during the July 10-13, 1995 sampling event of the Watauga County Landfill from core monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12 and MW-17. Samples were received in good condition, with custody seals intact and on ice by ETS on July 13, 1995. Samples from MW-1, MW-3, MW-6, MW-7, MW-8, MW-10, MW-11, and MW-17 were representative of the first sample delivery group (SDG-1) and samples from MW-2, MW-4, MW-9, and MW-12 represented the second sample delivery group (SDG-2). Samples were divided into two SDGs to meet contractual requirements.

Overall, the certificate of analysis for Watauga County Landfill was very complete in its presentation and the data was of acceptable quality, however, revisions were requested from ETS on November 9 and December 1, 1995 to finalize the deliverables package. As well, revisions were required to accurately reflect concentrations of parameters originally reported as non-detect by the laboratory. Separate aliquots for 8260 volatiles and acrolein/acrylonitrile were submitted and analyzed for each of the samples, with the exception of an

acrolein/acrylonitrile sample for MW-7, due to insufficient water production from the monitoring well. Therefore, acrolein and acrylonitrile results for MW-7 are taken from the pH <2 aliquot analysis and required qualification as estimated. A separate 8260 analysis sample was necessary since the preservation requirement for both acrolein and acrylonitrile is pH 4-5 and all other volatile compounds require a pH < 2. Sample pH's for the acrylonitrile/acrolein aliquots were exceeded for the MW-8 and MW-11 samples resulting in qualification of the results for these two parameters in these two wells as estimated (J).

Two initial calibrations (ICAL) were analyzed with this sample batch. The ICALs were separated into two mixes due to the extensive parameter list in order to prevent chemical reactions. Both ICALS were analyzed on 7/14/95 and were designated 2VCAL (Mix 02) and 1VCAL (Mix 01). All samples were associated with both ICALs.

Both ICALs met SW-846 method criteria except for 1,1-dichloroethene %RSD=31.44. Draper Aden method performance criteria was exceeded for acetonitrile (%RSD = 30.67%) 1,1-dichloroethene (%RSD = 31.44%), acrolein (RRF=0.049) and isobutanol (%RSD = 35.03%). The only parameter results requiring qualification are 1,1-dichloroethene results greater than 100 ppb, which require qualification as estimated (J). This applies to the MW-2 sample only.

Six continuing calibrations (CCAL) were associated with this sample batch. All SW-846 method criteria and contractual requirements were met. Isobutanol %D=34.01 exceeded validation criteria requiring isobutanol results in MW-1, MW-3, MW-6, MW-7, MW-8, MW-11, MW-17 and MW-10 to be qualified as estimated (J).

All blank analysis criteria was met. Acetone contamination was present in all method blanks and both trip blanks (Trip Blank-1 and Trip Blank-2). Methylene chloride contamination was also present in all but one method blank and both trip blanks. Chloroform contamination was present in one method blank. Acetone and methylene chloride were also present in all groundwater sample as outlined in the Analytical Data Set Notes. Qualification of acetone and methylene chloride results was required as shown on the Analytical Data Set Notes.

No target parameters, other than laboratory contaminants acetone and methylene chloride, were detected in MW-1 and MW-4. Several target parameters were detected above and below the LOQs in the remaining 10 monitoring wells. Samples for MW-2, MW-6 and MW-10 were diluted 1:25, 1:5, and 1:5, respectively, due to concentrations of target parameters exceeding the upper linear calibration of 10-200 μg/L. Reanalysis of the diluted samples; MW-2DL, MW-6DL, and MW-10DL, was successfully completed. The sample LOQs were raised

by 25X in MW-2DL for 1,1,1-trichloroethane, by 5X in MW-6DL for cis-1,2-dichloroethene and by 5X in MW-10DL for 1,1,1-trichloroethane.All validated results can be found in the Analytical Data Set Notes, after the Method 8260 Volatile Data Review.

A performance evaluation (PE) sample was submitted as MW-1A to ETS for volatile analysis by method 8260. ETS analyzed the MW-1A sample on 7/18/95 with the SDG-1 samples. ETS's reported results were within performance acceptance limits associated with the quality control standards certified by third party laboratory, Environmental Resource Associates (ERA) of Arvada, CO. Correspondence and certified results from ERA are included at the end of the Method 8260 volatile data review and Analytical Data Set Notes for review.

Method 8260 Volatile Data Review

Wells: Core wells: MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-17

QC Samples: MW-1MS, MW-1MSD, MW-9MS, MW-9MSD, Trip Blank-1, Trip Blank-2, Method Blanks

Laboratory: ETS Analytical Services, Inc., Roanoke, Virginia

Does Laboratory parameter list correspond to parameter list requested by DAA?
See MDL Study table for parameter list. X Yes __No

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

X **A. QC HISTORY DOCUMENTATION CRITERIA:**

1. Instrument specific LOD for target parameters? X Yes __No
2. Instrument specific LOQ for target parameters? X Yes __No
3. Instrument Working Range for target parameters? X Yes __No
4. Instrument specific check sample data? X Yes __No

Comments: Instrument QC history documentation was provided. Parameter working ranges were defined through the MDL study presented after the case narrative and the levels of the calibration curve. The calibration curves were made from standards analyzed at five concentration levels from 10 to 200 µg/L for all of the parameters.

X **B. CHECK SAMPLES CRITERIA:**

1. QC check sample data was generated on GC/MS used for analyses? X Yes __No
2. QC check sample contains all target parameters outlined in RFP? X Yes __No
3. QC check samples analyzed in quadruplicate? X Yes __No

4. Reported average recovery (X) of target parameters from check samples? X Yes __No
5. Reported Standard deviation(s) for the recovery of target parameters quadruplicated? X Yes __No

Comments: All QC check sample criteria were met.

X C. **TECHNICAL HOLDING TIMES AND PRESERVATION REQUIREMENTS CRITERIA:**

- 14 day holding time
- Cool 4° C (± 2°C)
- Adjust pH <2 w/ HCL
- Acrylonitrile pH 4-5

Comments: Samples for SDG-1 (MW-1, MW-3, MW-6, MW-7, MW-8, MW-10, MW-11, and MW-17) were collected on July 10-11, 1995 and samples for SDG-2 (MW-2, MW-4, MW-9, and MW-12) were collected on July 12, 1995. SDG-1 samples were analyzed on July 18, 1995 and SDG-2 samples were analyzed on July 21, 1995. Samples for SDG-1 and SDG-2 were received at the laboratory at 2°C and 4°C respectively. All 8260 volatile sample pHs were recorded < 2 as required. Sample pHs for 8260 acrylonitrile/acrolein were exceeded for the MW-8 and MW-11 samples and required qualification as estimated. All remaining samples met requirements with the exception of MW-7. No acrolein/acrylonitrile sample was submitted to the laboratory for MW-7 due to insufficient water production from the monitoring well. Therefore, acrolein and acrylonitrile results for MW-7 are taken from the pH < 2 aliquot analysis and required qualification as estimated. All technical holding times, temperature, and preservation requirements were met with the exceptions noted above.

Separate aliquots for 8260 volatiles and acrolein/acrylonitrile were submitted for analysis for each of the samples. A separate 8260 analysis was necessary since the preservation requirement for acrolein/acrylonitrile is pH 4-5 and all other volatile compounds require a pH < 2.

X **D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:**

- The analysis of the instrument performance check solution must be performed at the beginning of each 12 hour period during which standards or samples are analyzed.
- 50 ng Bromofluorobenzene (BFB)
- Ion abundance criteria

Comments: All GC/MS instrument performance check criteria were met.

X **E. INITIAL CALIBRATION CRITERIA:**

1. SW-846 Criteria:

- The initial calibration (ICAL) and any directly associated blanks and samples must be analyzed within 12 hours of the associated instrument performance (tune) check.
- Randomly check quantitation ions used and listed on data against primary quantitation ions required by method and RFP. Note any differences and request explanation from the analyzing laboratory.
- all target parameters
- 5 levels (dL to upper end)
- 8260A SPCC compound criteria >0.300 or 0.100 (relative response factor)
  - chloromethane (0.100)
  - 1,1-dichloroethane (0.100)
  - bromoform (>0.100)
  - 1,1,2,2,-tetrachloroethane (0.300)
  - chlorobenzene (0.300)
- 6 CCC <30% (%RSD)
  - 1,1-Dichloroethene
  - Chloroform
  - 1,2-Dichloropropane
  - Toluene
  - Ethylbenzene
  - Vinyl Chloride

2. DAA Method Performance Criteria:

All target analytes and system monitoring compounds (surrogates) must have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%

* Does ICAL meet this Criteria? Yes __ No X

\- If "No" list compounds which exceed criteria

1,1-dichloroethene (%RSD = 31.44%)
acetonitrile (%RSD = 30.67%)
isobutanol (%RSD = 35.03%)
acrolein RRF = 0.049

\- Calculation check RRF X and %RSD X

3. Contractual Requirements:

\- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD $\leq$30.0%

\- 3 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%

* Does ICAL meet this criteria? Yes X No__

\- If "No", explain

Comments: The following initial calibrations were associated with these sample batches:

ICAL	SW-846 Criteria	DAA Method Performance Criteria	Contractual Criteria
ICAL MIX 02 7/14/95 Associated Samples: All samples for 8260 volatiles including acrolein/acrylonitrile	All criteria met.	DAA method performance criteria was exceeded for the following compounds: acrolein RRF=0.049 acetonitrile (%RSD = 30.67%) isobutanol (%RSD = 35.03%) Qualification of results for these 3 compounds was not required.	Contractual criteria was met.
ICAL MIX 01 7/14/95 Associated Samples: All samples for 8260 volatiles including acrolein/acrylonitrile	All criteria met. 1,1-dichloroethene %RSD = 31.44, however, 4 pt. curve from 10-100 pp has a %RSD = 1.5.	DAA method performance criteria was exceeded for %RSD for the following compounds: 1,1-dichloroethene (%RSD = 31.44%) The calibration curve is linear from 10-100 ppb (%RSD = 1.5). All positive results greater than 100 ppb will be qualified as estimated. No further qualification of other parameters is deemed necessary.	Contractual criteria was met.

X **F. CONTINUING CALIBRATION CRITERIA:**

1. SW-846 Criteria

- A continuing calibration standard (CCAL) is analyzed at the beginning of each 12 hour analysis period following the analysis of the instrument performance (tune) check and prior to the analysis of the method blank and samples. The CCAL may be part of the ICAL or run independently on another 12 hour analysis period.
- (RRF) 5 SPCC compounds RRF >0.100 or 0.300
- 6 CCC ± 25% (%D)

2. DAA Method Performance Criteria:

All target analytes and system monitoring CMPDS (surrogates) must have RRF's $\geq$0.05 and %D must be within $\pm$ 25.0%.

* Does CCAL meet this criteria? Yes X No __

\- If "No", list compounds which exceed criteria.

None

\- Calculation check RRF X and %D X

3. Contractual Requirements:

\- All target analytes and SMC (SURR) must have %D $\pm$ 25.0%.

\- 3 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's $\geq$ 0.010 and %D $\pm$40.0%.

* Does CCAL meet this criteria? Yes X No __

Comments: The following continuing calibrations were associated with these sample batches:

CCAL	SW-846 Criteria	DAA Method Performance Criteria	Contractual Criteria
1VSTD02 and 2VSTD02 7/18/95 (All parameters except acrolein and acrylonitrile). Associated Samples: Trip Blank-1, MW-1, MW-1MS, MW-1MSD, MW-3, MW-6, MW-7, MW-8, MW-11, MW-17, MW-10, MW-10DL (Note: DL = Diluted sample)	All criteria met.	All criteria met except VSTDO2 Isobutanol %D = 34.1. Isobutanol results in associated samples will be qualified as estimated (J).	All criteria met.
1VSTD03 and 2VSTD03 7/19/95 (Acrolein and acrylonitrile only) Associated Samples: Trip Blank-1 (AC/AC), MW-1(AC/AC), MW-1MS (AC/AC), MW-1MSD (AC/AC), MW-3 (AC/AC), MW-6 (AC/AC), MW-8 (AC/AC), MW-10 (AC/AC), MW-11 (AC/AC), MW-17 (AC/AC) (Note: AC/AC = acrolein/acrylonitrile)	All criteria met.	All criteria met except Acrolein RRF = 0.045. Evaluation of initial and continuing calibration results indicates that qualification of sample results is not required since the laboratory demonstrated their ability to achieve the reported LOQ and %RSD/%D results meet criteria.	All criteria met.
1VSTD05 and 2VSTD05 7/21/95 (All parameters) Associated Samples: Trip Blank-2, Trip Blank-2 (AC/AC), MW-6DL, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12, MW-4 (AC/AC), MW-9 (AC/AC), MW-9MS (AC/AC), MW-9MSD (AC/AC), MW-12 (AC/AC), MW-2DL, MW-2, MW-2 AC/AC) (Note: DL = Diluted sample)	All criteria met.	All criteria met except acrolein RRF = 0.045. No qualification required as discussed earlier.	All criteria met.

X **G. BLANKS CRITERIA:**

- A Method blank analysis must be performed after the calibration standards, prior to sample analysis and once for every 12 hour period beginning with the injection of BFB.
- Interference free
- Trip Blank, Equipment Blank, Method Blank

Comments: The following table itemizes blanks associated with this sample batch. Contaminants were found in the blanks as noted:

Blank	Associated Samples	Contaminants
VBLK02 File: VBLK02.D 7/18/95 Method Blank	Trip Blank-1, MW-1, MW-1MS, MW-1MSD, MW-3, MW-6, MW-7, MW-8, MW-11, MW-17, MW-10, MW-10DL (Note: DL = diluted sample)	Acetone (24 µg/L J) LOQ = 25 µg/L Chloroform (3.7 µg/L J) LOQ = 5 µg/L
VBLK03 File: VBLK03.D 7/19/95 Method Blank	Trip Blank-1 (AC/AC), MW-1 (AC/AC), MW-1MS (AC/AC), MW-1MSD (AC/AC), MW-3 (AC/AC), MW-6 (AC/AC), MW-8 (AC/AC), MW-10 (AC/AC), MW-11 (AC/AC), MW-17 (AC/AC)	Acetone (6.5 µg/L J) LOQ = 25 µg/L Methylene chloride (15 µg/L) LOQ = 5 µg/L
VBLK05 File: VBLK05.D 7/21/95 Method Blank	Trip Blank-2, Trip Blank-2 (AC/AC), MW-6DL, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12, MW-4 (AC/AC), MW-9 (AC/AC), MW-9MS (AC/AC), MW-9MSD (AC/AC), MW-12 (AC/AC), MW-2DL, MW-2, MW-2 (AC/AC) (Note: DL = diluted sample)	Acetone (7.3 µg/L) LOQ = 25 µg/L Methylene chloride (7 µg/L) LOQ = 5 µg/L
Trip Blank-1 File: 180859V.D 7/18/95	All 8260 volatile samples excluding acrolein/acrylonitrile for MW-1, MW-3, MW-6, MW-7, MW-8, MW-10, MW-11, and MW-17.	Acetone (12µg/L J) LOQ=25 µg/L. Methylene chloride (1.5 µg/L J) LOQ = 5 µg/L Chloroform (3.6 µg/L J) LOQ = 5 µg/L
Trip Blank-1 File 180859A.D 7/19/95	Acrolein/acrylonitrile for MW-1, MW-3, MW-6, MW-8, MW-10, MW-11, and MW-17.	No target parameters detected.
Trip Blank-2 File: 180884V.D 7/21/95	All 8260 volatile samples excluding acrolein/acrylonitrile for MW-2, MW-4, MW-9 and MW-12.	Acetone (15 µg/L J) LOQ = 25 µg/L Methylene chloride (2.5 µg/L) LOQ = 5 µg/L Chloroform (3.7 µg/L J) LOQ = 5 µg/L.
Trip Blank-2 File: 180884A.D 7/21/95	Acrolein/acrylonitrile for samples MW-2, MW-4, MW-9 and MW-12.	No target parameters detected.

X **H. SURROGATE SPIKES CRITERIA:**

1. SW-846 Criteria:

- Dibromofluoromethane (86-118)
- 4-Bromofluorobenzene (86-115)
- Toluene-d_8 (88-110)

2. Contractual Requirements:

Corrective action is required if any surrogate in the volatile fraction is out of spec. Flagging of the data as estimated is not acceptable until corrective action is attempted.

- Calculation check of % Recovery

Comments: Surrogate recovery criteria were met.

X **I. MATRIX SPIKE, MATRIX SPIKE DUPLICATES CRITERIA:**
(MS/MSD Requirements-CLP Guidelines)

Compound	%R Water	RPD Water
1,1-Dichloroethene	61-145	14
Trichloroethene	71-120	14
Benzene	76-127	11
Toluene	76-125	13
Chlorobenzene	75-130	13
Acrylonitrile		

- Calculation check % Recovery X and RPD X

Comments: MS and MSD analyses were conducted on samples collected from MW-1 and MW-9. All percent recoveries (%R) and relative percent differences (%RPD) requirements were met. No evidence of matrix interference was exhibited in the MS and MSD samples.

X **J. INTERNAL STANDARDS CRITERIA:**

- Pentafluorobenzene
- 1,4-Difluorobenzene
- Chlorobenzene-d_5
- 1,4-Dichlorobenzene-d_4

Internal standard area - 50% to +100% of last CC
Internal standard retention time ± 30 sec of last CC

- Were these internal standards used?
- Were the QC windows ($^{-}$50% to $^{+}$100%) calculated properly?

Comments: ETS used pentafluorobenzene, 1,4-difluorobenzene, chlorobenzene-d_5, and 1,4-dichlorobenzene-d_4, as recommended by the method. Internal standard area and retention time criteria were met.

X **K. TARGET PARAMETER IDENTIFICATION**

- Check that the RRT of the reported parameter is within ± 0.06 RRT units of the standard RRT.
- Check the sample parameter spectra against the laboratory standard spectra to see that it meets the following criteria:
  - All ions present in the standard spectrum at a relative intensity >10% must be present in the sample spectrum.
  - The relative intensities of the ions must agree ± 20% between the standard and sample spectra.
  - Consider and account for ions present at >10% in the sample mass spectrum and not in the standard spectrum.

1. Are all reported parameters confirmable?
2. Check that all parameter concentrations recorded on the raw sample quantitation reports were accurately transferred to the sample summary sheets.

Comments: All RRTs of the reported parameters were within 0.06 RRT units of the standard RRT. Reported parameters were confirmable through review of the RRTs and mass spectra/chromatograms. All results were transferred correctly from quantitation reports to Form I's, with the exception of the concentration of 1,1,1-trichloroethane being reported as 1300 µg/L on the Form I for the MW-2 sample (page 193). The actual concentration reported on the diluted analysis (MW-2 DL) was 1570 µg/L. Revision 1 was submitted to correct the error.

The samples for MW-2, MW-6, and MW-10 were diluted by factors of 1:25, 1:5, and 1:5, respectively due to concentrations of target parameters exceeding the upper linear concentration range of the calibration curve. The sample identification for the diluted analyses were designated by the laboratory as MW-2DL, MW-6DL, and MW-10DL.

X **L. LIBRARY SEARCHES**

Comments: Library searches were not requested with this data set.

X **M. ADDITIONAL COMMENTS**

Two sets of revisions was requested on 11/9/95 and 12/1/95.

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd Edition - Final Update I and II/IIA) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, February 1994). Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: _____ Date: 1/10/96

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	1,1-dichloroethene	MW-2	169.98	170J	Sample result qualified as estimated due to exceeding %RSD criteria during initial calibration. Linear calibration range = 10ppb - 100ppb.
8260	1,1-dichloroethene	MW-3	3.67J	3.7J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1-dichloroethene	MW-6	1.28J	1.3J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1-dichloroethene	MW-8	4.10J	4.1J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1-dichloroethene	MW-10	87.74	88	No action taken.
8260	1,1-dichloroethene	MW-12	3.60J	3.6J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1-dichloroethene	MW-17	1.64J	1.6J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	Isobutanol	MW-1, MW-3, MW-6, MW-7, MW-8, MW-11, MW-17, and MW10	U	UJ	CCAL %D > 25%, therefore, associated sample results are qualified as estimated (J).

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	acetone	MW-1	5.70J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-1	2.27J	5U	Sample result is below the LOQ of 5 µg/L. Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	All remaining parameters	MW-1	U	U	No parameters detected above the LOQs.
8260	acetone	MW-2	5.76J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-2	4.61J	5U	Sample result is below LOQ of 5 µg/L and is also less than 10X the concentration of methylene chloride detected in the associated blank; therefore, qualified as 5U.
8260	1,1-dichloroethane	MW-2	93.83	94	No action taken. LOQ = 5 µg/L.
8260	1,1,1-trichloroethane	MW-2	1572.25	1600	No action taken. Sample was diluted 1:25 due to the elevated concentration of the target parameter in the sample. Sample LOQ was raised from 5 µg/L to 125 µg/L. The result was quantified from the diluted analysis of the MW-2DL sample. (DL = diluted sample).

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	tetrachloroethene	MW-2	9.93	9.9	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-2	U	U	No parameters detected above the LOQs.
8260	acetone	MW-3	6.32J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	1,1-dichloroethane	MW-3	162.60	160	No action taken. LOQ = 5 µg/L.
8260	methylene chloride	MW-3	4.46J	5U	Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	dichlorodifluoromethane	MW-3	7.18	7.2	No action taken. LOQ = 5 µg/L.
8260	vinyl chloride	MW-3	3.05J	3.1J	Parameter positively identified below LOQ of 5 ug/L. Concentration estimated.
8260	chloroethane	MW-3	8.69	8.7	No action taken. LOQ = 5 µg/L.
8260	bromomethane	MW-3	2.38J	2.4J	Parameter positively identified below LOQ of 5 ug/L. Concentration estimated.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	trichlorofluoromethane	MW-3	1.13J	1.13J	Parameter positively identified below LOQ of 5 ug/L. Concentration identified.
8260	cis-1,2-dichloroethene	MW-3	50.39	50	No action taken. LOQ = 5 µg/L.
8260	1,1,1-trichloroethane	MW-3	21.17	21	No action taken. LOQ = 5 µg/L.
8260	benzene	MW-3	2.56J	2.6J	Parameter positively identified below LOQ of 5 ug/L. Concentration identified.
8260	1,2-dichloroethane	MW-3	1.84J	1.8J	Parameter positively identified below LOQ of 5 ug/L. Concentration identified.
8260	trichloroethene	MW-3	15.66	16	No action taken. LOQ = 5 µg/L.
8260	1,2-dichloropropane	MW-3	1.04J	1.0J	Parameter positively identified below LOQ of 5 ug/L. Concentration identified.
8260	tetrachloroethene	MW-3	37.03	37	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-3	U	U	No parameters detected above the LOQs.
8260	acetone	MW-4	6.43J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-4	3.14J	5U	Sample result is below LOQ of 5 µg/L and is also less than 10X the concentration of methylene chloride detected in the associated blank; therefore, qualified as 5U.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	All remaining parameters	MW-4	U	U	No parameters detected above the LOQs.
8260	acetone	MW-6	5.12J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	1,1-dichloroethane	MW-6	132.94	130	No action taken. LOQ = 5 µg/L.
8260	methylene chloride	MW-6	4.37J	5U	Sample result is below the LOQ of 5 µg/L, and also less than 10X the concentration detected in the associated blank.
8260	dichlorodifluoromethane	MW-6	2.19J	2.2J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	vinyl chloride	MW-6	22.51	23	No action taken. LOQ = 5 µg/L.
8260	chloroethane	MW-6	16.49	16	No action taken. LOQ = 5 µg/L.
8260	trans-1,2-dichloroethene	MW-6	5.68	5.7	No action taken. LOQ = 5 µg/L.
8260	cis-1,2-dichloroethene	MW-6	432.15	430	No action taken. Sample was diluted 1:5 due to the elevated concentration of the target parameter in the sample. Sample LOQ was raised from 5 µg/L to 25 µg/L. The result was quantified from the diluted analysis of the MW-6 DL sample. (DL = diluted sample).
8260	benzene	MW-6	12.68	13	No action taken. LOQ = 5 µg/L.
8260	trichloroethene	MW-6	47.34	47	No action taken. LOQ = 5 µg/L.
8260	1,2-dichloropropane	MW-6	1.01J	1.0J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	tetrachloroethene	MW-6	14.10	14	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-6	U	U	No parameters detected above the LOQ.
8260	acetone	MW-7	33.20	33U	Sample result is above the LOQ of 25 µg/L, but is below 10X the concentration of acetone detected in the associated blank; therefore, qualified as 33U.
8260	1,1-dichloroethane	MW-7	6.79	6.8	No action taken. LOQ = 5 µg/L.
8260	methylene chloride	MW-7	2.75J	5U	Sample result is below the LOQ of 5 µg/L; and also less than 10X the concentration detected in the associated blank.
8260	chloroethane	MW-7	22.26	22	No action taken. LOQ = 5 µg/L.
8260	trans-1,2-dichloroethene	MW-7	1.57J	1.6J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	cis-1,2-dichloroethene	MW-7	7.94	7.9	No action taken. LOQ = 5 µg/L.
8260	2-butanone	MW-7	14.74	15	No action taken. LOQ = 10 µg/L.
8260	benzene	MW-7	2.67J	2.7J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	trichloroethene	MW-7	1.17J	1.2J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,2-dichloropropane	MW-7	1.64J	1.6J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	All remaining parameters	MW-7	U	U	No parameters detected above the LOQs.
8260	acrylonitrile	MW-7	U	UJ	Sample was not provided to lab due to insufficient water in well. Results were quantified from the pH <2 aliquot and are therefore estimated (J).
8260	acrolein	MW-7	U	UJ	Sample was not provided to lab due to insufficient water in well. Results were quantified from the pH <2 aliquot and are therefore estimated (J).
8260	acetone	MW-8	7.79J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-8	4.60J	5U	Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	dichlorodifluoromethane	MW-8	6.74	6.7	No action taken. LOQ = 5 µg/L.
8260	vinyl chloride	MW-8	7.22	7.2	No action taken. LOQ = 5 µg/L.
8260	chloroethane	MW-8	9.25	9.3	No action taken. LOQ = 5 µg/L.
8260	trans-1,2-dichloroethene	MW-8	1.35J	1.4J	Parameter positively identified below the LOQ of 5 ug/L. concentration estimated.
8260	cis-1,2-dichloroethene	MW-8	88.57	89	No action taken. LOQ = 5 µg/L.
8260	1,1-dichloroethane	MW-8	70.64	71	No action taken. LOQ = 5 µg/L.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	2-butanone	MW-8	4.88J	4.9J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1,1-trichloroethane	MW-8	4.91J	4.9J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	benzene	MW-8	5.50	5.5	No action taken. LOQ = 5 µg/L.
8260	trichloroethene	MW-8	14.57	15	No action taken. LOQ = 5 µg/L.
8260	tetrachloroethene	MW-8	37.78	38	No action taken. LOQ = 5 µg/L.
8260	1,4-dichlorobenzene	MW-8	1.07J	1.1J	Sample result is below LOQ of 5 µg/L. No further action is required.
8260	acrylonitrile	MW-8	U	UJ	Result estimated due to exceeding required pH range.
8260	acrolein	MW-8	U	UJ	Result estimated due to exceeding required pH range.
8260	All remaining parameters	MW-8	U	U	No parameters detected above the LOQs.
8260	acetone	MW-9	6.51J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-9	160	160	No action taken. LOQ = 5 µg/L.
8260	dichlorodifluoromethane	MW-9	2.78J	2.8J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	chloroethane	MW-9	20.86	21	No action taken. LOQ = 5 µg/L.
8260	cis-1,2-dichloroethene	MW-9	6.21	6.2	No action taken. LOQ = 5 µg/L.
8260	1,1-dichloroethane	MW-9	39.68	40	No action taken. LOQ = 5 µg/L.
8260	1,1,1-trichloroethane	MW-9	9.83	9.8	No action taken. LOQ = 5 µg/L.
8260	benzene	MW-9	3.75J	3.8J	Parameter positively identified below the LOQ 5 ug/L. Concentration estimated.
8260	trichloroethene	MW-9	5.96	6	No action taken. LOQ = 5 µg/L.
8260	tetrachloroethene	MW-9	3.62J	3.6J	Parameter positively identified below the LOQ 5 ug/L. Concentration estimated.
8260	o-xylene	MW-9	3.03J	3.0J	Parameter positively identified below the LOQ 5 ug/L. Concentration estimated.
8260	All remaining parameters	MW-9	U	U	No parameters detected above the LOQs.
8260	acetone	MW-10	20.82J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25 U.
8260	methylene chloride	MW-10	2.18J	5U	Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	1,1-dichloroethane	MW-10	54.86	55	No action taken. LOQ = 5 µg/L.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	1,1,1-trichloroethane	MW-10	744.45	740	No action taken. Sample was diluted 1:5 due to elevated concentration of the target parameter in the sample. Sample LOQ was raised from 5 µg/L to 25 µg/L. The result was quantified from the diluted analysis of the MW-10DL sample. (DL = diluted sample).
8260	tetrachloroethene	MW-10	5.69	5.7	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-10	U	U	No parameters detected above the LOQs.
8260	acetone	MW-11	15.64J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	methylene chloride	MW-11	3.54J	5U	Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	dichlorodifluoromethane	MW-11	1.69J	1.7J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	cis-1,2-dichloroethene	MW-11	7.57	7.6	No action taken. LOQ = 5 µg/L.
8260	1,1-dichloroethane	MW-11	25.98	26	No action taken. LOQ = 5 µg/L.
8260	2-butanone	MW-11	3.11J	3.1J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	1,1,1-trichloroethane	MW-11	4.81J	4.8J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	trichloroethene	MW-11	3.05J	3.1J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	tetrachloroethene	MW-11	8.14	8.1	No action taken. LOQ = 5 µg/L.
8260	acrylonitrile	MW-11	U	UJ	Result estimated due to exceeding required pH range.
8260	acrolein	MW-11	U	UJ	Result estimated due to exceeding required pH range.
8260	All remaining parameters	MW-11	U	U	No parameters detected above the LOQs.
8260	acetone	MW-12	7.76J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	1,1-dichloroethane	MW-12	119.04	120	No action taken. LOQ = 5 µg/L.
8260	methylene chloride	MW-12	5.85	5.9U	Sample result is above the LOQ of 5 µg/L, but is less than 10X the concentration of methylene chloride detected in the associated method blank; therefore, qualified as 5.9U.
8260	dichlorodifluoromethane	MW-12	3.96J	4.0J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	chloroethane	MW-12	6.42	6.4	No action taken. LOQ = 5 µg/L.
8260	cis-1,2-dichloroethene	MW-12	42.09	42	No action taken. LOQ = 5 µg/L.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8260	1,1,1-trichloroethane	MW-12	16.23	16	No action taken. LOQ = 5 µg/L.
8260	trichloroethene	MW-12	13.35	13	No action taken. LOQ = 5 µg/L.
8260	tetrachloroethene	MW-12	31.49	31	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-12	U	U	No parameters detected above the LOQs.
8260	acetone	MW-17	9.47J	25U	Sample result is below LOQ of 25 µg/L and is also less than 10X the concentration of acetone detected in the associated blank; therefore, qualified as 25U.
8260	1,1-dichloroethane	MW-17	127.52	130	No action taken. LOQ = 5 µg/L.
8260	methylene chloride	MW-17	3.10J	5U	Sample result is below LOQ of 5 µg/L and less than 10X the concentration detected in the associated blank.
8260	dichlorodifluoromethane	MW-17	4.17J	4.2J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	chloroethane	MW-17	4.90J	4.9J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	cis-1,2-dichloroethene	MW-17	62.56	63	No action taken. LOQ = 5 µg/L.
8260	1,1,1-trichloroethane	MW-17	7.00	7	No action taken. LOQ = 5 µg/L.
8260	1,2-dichloroethane	MW-17	1.80J	1.8J	Parameter positively identified below the LOQ of 5 ug/L. Concentration estimated.
8260	trichloroethene	MW-17	16.74	17	No action taken. LOQ = 5 µg/L.
8260	tetrachloroethene	MW-17	30.27	30	No action taken. LOQ = 5 µg/L.
8260	All remaining parameters	MW-17	U	U	No parameters detected above the LOQs.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

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METHOD 8270A SEMI-VOLATILE DATA VALIDATION SUMMARY

GC/MS organic data review was performed on semi-volatile organic parameters analyzed using USEPA SW-846 Method 8270A. Method 8270A was performed by ETS Analytical Services of Roanoke, Virginia. ETS submitted results to Draper Aden Associates in a final Certificate of Analysis, including: Quality Assurance/Quality Control (QA/QC) documentation, instrument calibration data, internal standards results, raw chromatographic data printouts, and mass spectral results.

Evaluation of ETS's compliance with GC/MS Method 8270A and validation of the results encompassed review of the following items: sample holding times, sample preservation requirements, laboratory QA/QC performance checks, instrument calibration, blank analyses, surrogate spike recoveries, and matrix spike analyses results. Review of all transcriptions from raw sample data to sample summary sheets was performed. Specific representative calculations were also performed at random.

ETS listed either 10 μg/L or 20 μg/L for all 8270A parameter level of quantitation (LOQ) values except 1,4-benzenediamine listed at 100 μg/L and bis(2-ethylhexyl) phthalate at 6 ug/L. These values are supported by the "SVOA Precision and Accuracy Study March 1995" presented after the narrative in the certificate of analysis and are further supported by the first point of the calibration curve which is either 20 μg/ml or 50 μg/ml.

Samples were collected during the July 10-13, 1995 sampling event of the Watauga County Landfill from core monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-17. Samples were received in good condition, with custody seals intact and on ice by ETS on July 13, 1995. Samples from MW-1, MW-3, MW-6, MW-7, MW-8, MW-10, MW-11, and MW-17 were representative of the first sample delivery group (SDG-1) and samples from MW-2, MW-4, MW-9 and MW-12 represented the second sample delivery group (SDG-2). Samples were divided into two SDGs to meet contractual requirements.

Overall, the certificate of analysis for Watauga County Landfill was complete in its presentation and the data was of acceptable quality except for acid fraction results in MW-17 which were qualified as unusable (R) due to low surrogate recoveries which were confirmed as resulting from sample matrix interference. Revision 1 was submitted by ETS on September 25, 1995 to revise all Form I's and report a LOQ of 6 ug/L for the target parameter bis(2-ethylhexyl)phthalate. A second revision was requested by Draper Aden Associates to reflect the revised LOQ of bis(2-ethylhexyl)phthalate on page 11 of the

March 1995 SV MDL study and to review and revise the LOQs of all target parameters for the MW-7 sample on pages 105-108. Due to limited sample volume, an initial volume of 200 ml, instead of 1000 ml, was extracted and concentrated to 1ml, thus the LOQs for all parameters in MW-7 should have been elevated by 5X.

All technical holding times for extraction and analysis were met for the original analyses. Temperature and preservation criteria were also met. Samples were collected on July 10-11, 1995 (SDG-1) and on July 12, 1995 (SDG-2) and were extracted on 7/14-15/95 (SDG-1) and 7/17/95 (SDG-2). Reextraction of the MW-17 sample (MW-17RE) was conducted on 7/20/95 due to low recovery of the acid surrogates. Reextraction of the MW-2 and MW-4 samples (MW-2RE and MW-4RE) was conducted on 7/20/95 due to bis(2 ethylhexyl)phthalate contamination. The MW-9 sample (MW-9RE) was also reextracted for low recoveries of the acid surrogates 2-fluorophenol and 2-chlorophenol-d_4. Holding times for all reextractions were exceeded (MW-17RE, MW-2RE, MW-4RE, MW-9RE). Reextraction analysis results for the acid surrogate recoveries in the MW-17RE and MW-9RE samples duplicated the original analyses results, thus indicating the presence of matrix interference in those samples. Matrix interference, however, was not evident in the MW-9MS and MW-9MSD analyses. A review of extraction logs and data did not reveal an explanation for this. The MW-12 sample was reanalyzed (MW-12R) for exceeding %D criteria for di-n-octyl phthalate. Di-n-octyl phthalate results for MW-12 are from the reanalysis.

Seven initial calibrations (ICAL) were associated with these sample batches. Seven calibrations were necessary due to the extensive parameter list which were separated into seven mixes to prevent chemical reactions. O,O,O-triethylphosphorothioate exceeded DAA method performance criteria, however, no qualification of the data was deemed necessary. All other SW-846, DAA method performance and contractual requirements were met.

Sixteen continuing calibrations (CCAL) were associated with these sample batches. Parameters were separated into several mixes to prevent reactions. Several target parameters exceeded DAA method performance criteria for %D for the respective associated samples and required qualification as estimated (UJ) for these parameters. (See analytical data set notes).

All surrogate criteria was met for all samples except MW-9 and MW-17. All three acid surrogate recoveries for the MW-17 sample were below 10% as listed on the form II, page 62. Two acid surrogate recoveries for sample MW-9 were below QC limits but greater than 10%. Reextraction and reanalysis of these samples revealed very consistent results with the original analyses. Matrix interference was judged as the cause of the low recoveries of the acid surrogates. Holding times for the reextracted samples for MW-17 and MW-9 were exceeded.

Due to acid surrogate recoveries less than 10%, in MW-17 the acid fraction results of the analysis are qualified as unusable (R). Due to low acid surrogate recoveries, although greater than 10%, in MW-9 the acid fraction results of the analysis are qualified as estimated. No matrix interference problems were found in the MW-9MS and MW-9MSD samples. Review of extraction and analytical logs do not reveal a possible explanation for this inconsistency. The following parameters are associated with the acid fraction and are affected by this validation: benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 2-methylphenol, 3-methylphenol, 4-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol.

All blank analysis criteria were met. The target parameter bis(2-ethylhexyl)phthalate was detected above the LOQ in blank SBLK08 and was also detected in associated samples MW-2 and MW-4. The MW-2 and MW-4 samples were reextracted and reanalyzed, but revealed the absence of bis(2-ethylhexyl) phthalate. The presence of bis(2-ethylhexyl)phthalate was judged to be a random laboratory contaminant in the original analyses, since it was not detected in subsequent reanalyses. Bis(2-ethyl hexyl) phthalate results for MW-2 and MW-4 are from the reextraction and reanalyses runs and were estimated due to exceeding the 7 day holding time.

All instrument tuning, surrogate recoveries, internal standard area, internal standard retention time, and matrix spike/matrix spike duplicate requirements were met for all analyses.

No target parameters were detected above the respective laboratory LOQs in any of the twelve core wells: MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-17. Results for all parameters were validated as not detected above the LOQ ("U"), with the exceptions noted exceeding %D criteria, resulting in validation as not detected above the LOQ but estimated ("UJ") in numerous samples and exceeding surrogate recovery criteria resulting in validation of the acid fraction target parameters as unusable (R) in MW-17, and estimated (J) in MW-9.

Method 8270A Semi-Volatile Data Review

Wells: Core Wells: MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-17

QC Samples: MW-1MS, MW-1MSD, MW-9MS, MW-9MSD, Trip Blank-1, Trip Blank-2, Laboratory Method Blanks

Laboratory: ETS Analytical Services, Inc., Roanoke, VA

Does Laboratory parameter list correspond to parameter list requested by DAA?

See table after case narrative for parameter list. X Yes __No

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

X **A. INSTRUMENT QC HISTORY DOCUMENTATION CRITERIA:**

1. Instrument specific LOD for target analytes? X Yes __No
2. Instrument specific LOQ for target analytes? X Yes __No
3. Instrument specific Check Sample Data? X Yes __No
4. Instrument Working Range for target analytes? X Yes __No

Comments: Instrument QC history documented. Parameter working ranges are defined through the MDL study presented after the narrative and the levels of the calibration curve. The calibration curves were made from six levels from 20-50 ug/ml to 160 ug/ml - 200 mg/ml for all target parameters.

X **B. CHECK SAMPLES CRITERIA:**

1. QC check sample data was generated on GC/MS used for analyses? X Yes __No
2. QC check sample contains all target analytes outlined in RFP? X Yes __No
3. QC check samples analyzed in quadruplicate? X Yes __No

4. Reported average recovery (X) of target analytes from check samples? X Yes __No
5. Reported Standard deviation(s) for the recovery of target analytes quadruplicated? X Yes __No

Comments: QC check sample criteria met.

X C. **TECHNICAL HOLDING TIMES AND PRESERVATION REQUIREMENTS CRITERIA:**

- 7 days from collection for extraction (water)
- (14 days for soil)
- 40 days from extraction for analysis (water and soil)
- Cool 4° C (±2°C)

Comments: All technical holding times for extraction and analysis were met for the original analyses. Temperature and preservation criteria were met. Samples were collected on July 10-11, 1995 (SDG-1) and on July 12, 1995 (SDG-2) and were extracted on 7/14-15/95 (SDG-1) and 7/17/95 (SDG-2).

Reextraction of the MW-17 sample (SDG-1) was conducted on 7/20/95 due to low recovery of the acid surrogates. Reextraction of the MW-2 and MW-4 samples (SDG-2) was conducted on 7/20/95 due to suspected bis (2-ethylhexyl) phthalate contamination. The MW-9 (SDG-2) sample was also reextracted for low recoveries for the acid surrogates, 2-fluorophenol and 2-chlorophenol-d_4. Holding times for all reextractions were exceeded (MW-17, MW-2, MW-4, and MW-9).

X **D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:**

The analysis of the instrument performance check solution must be performed at the beginning of each 12 hour period during which standards or samples are analyzed.

- 50 ng DFTPP
- Ion abundance criteria

Comments: All samples were analyzed within 12 hours of meeting ion abundance criteria.

X **E. INITIAL CALIBRATION CRITERIA:**

1. SW-846 Criteria

- The initial calibration (ICAL) and any directly associated blanks and samples must be analyzed within 12 hours of the associated instrument performance (tune) check.
- Randomly check quantitation ions used and listed on data against primary quantitation ions required by method and RFP. Note any differences and request explanation from the analyzing laboratory.
- all target analytes
- 5 levels (dL to upper end)
- calibrate initially
- 4 SPCC compounds >0.050 (relative response factor-average)
  - N-nitroso-di-n-propylamine
  - Hexachlorocyclopentadiene
  - 2,4-Dinitrophenol
  - 4-nitrophenol
- 13 CCC <30% (%RSD)

B/N Fraction	Acid Fraction
• Acenaphthene	• 4-Chloro-3-methylphenol
• 1,4-Dichlorobenzene	• 2,4-Dichlorophenol
• Hexachlorobutadiene	• 2-nitrophenol

- N-Nitrosodiphenylamine
- Di-n-octyl phthalate
- Fluoranthene
- Benzo(a)pyrene
- Phenol
- Pentachlorophenol
- 2,4,6-Trichlorophenol

2. DAA Method Performance Criteria:

- All target analytes and system monitoring compounds (surrogates) must have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%

* Does ICAL meet this Criteria? Yes __ No X

- If "No" list compounds which exceed criteria

See table in comments.

- Calculation check RRF X and % RSD X

3. Contractual Requirements:

- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD $\leq$30.0%

- 5 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%

* Does ICAL meet this criteria? Yes __ No X

- If "No", explain

Comments: The following initial calibrations were associated with the original sample analyses: No data qualification is required.

ICAL	SW-846 Criteria	DAA Method Performance Criteria	Contractual Criteria
1SCAL 7/10/95	All criteria met.	All criteria met.	All criteria met.
7SCAL 7/11/95	All criteria met.	All criteria met.	All criteria met.
8SCAL 7/11/95	All criteria met.	All criteria met.	All criteria met.
9SCAL 7/11/95	All criteria met.	o,o,o-triethylphosphorothioate exceeds method performance criteria for RRF (avg. RRF=0.030). Data qualification was not required due to %RSD requirements being met, and lab has demonstrated can meet the LOQ of 10 ug/ml.	All criteria met.
Kepone SCAL 7/11-12/95	All criteria met.	All criteria met.	All criteria met.
3SCAL 7/18/95	All criteria met.	All criteria met.	All criteria met.

The following initial calibration is associated with the reextraction of MW-2, MW-4, MW-9, and MW-17 samples and with the reanalysis of the MW-12 sample.

ICAL	SW-846 Requirements	DAA Method Performance Criteria	Contractual Requirements
1SCAL 7/29/95	All criteria met.	3-nitroaniline exceeded %RSD method performance requirements (%RSD=67.27%). 3-nitroaniline results were not qualified from the reanalysis reextraction 1SCAL, but were taken from the original 1SCAL on 7/10/95.	3-nitroaniline exceeds %RSD contractual requirements (%RSD-67.27%). 3-nitroaniline results were not associated with the reanalysis reextraction 1SCAL, but were taken from the original 1SCAL on 7/10/95.

X **F. CONTINUING CALIBRATION CRITERIA:**

1. SW-846 Criteria:

- A continuing calibration standard (CCAL) is analyzed at the beginning of each 12 hour analysis period following the analysis of the instrument performance (tune) check and prior to the analysis of the method blank and samples. The CCAL may be part of the ICAL or run independently on another 12 hour analysis period.
- (RRF) 4 SPCC compounds >0.050
- 13 CCC ± 30% (%D)

2. DAA Method Performance Criteria:

- All target analytes and system monitoring CMPDS (surrogates) must have RRF's ≥0.05 and %D must be within ± 25.0%.
- * Does CCAL meet this criteria? Yes __ No X
- If "No", list compounds which exceed criteria.

See table in comments.

- Calculation check RRF X and %D X

3. Contractual Requirements:

- All target analytes and SMC (SURR) must have %D ± 25.0%.
- 5 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's ≥ 0.010 and %D ±40.0%.
- * Does CCAL meet this criteria? Yes X No__

Comments: The following continuing calibrations were associated with the original sample analyses:

CCAL	SW-846 Criteria	DAA Method Performance Criteria	Contractual Criteria
1SSTD07 7/8/95 Associated samples: MW-1, MW-3, MW-6, Trip Blank-1	All criteria met.	DAA method performance criteria for 3-nitroaniline was exceeded for %D (%D=27.3%). Qualification of the results as estimated (J) in the associated samples was required for 3-nitroaniline.	All criteria met.
3SSTD07 7/18/95 Associated samples: MW-1, MW-3, MW-6, Trip Blank-1	All criteria met.	All criteria met.	All criteria met.
7SSTD07 7/18/95 Associated samples: MW-1, MW-3, MW-6, Trip Blank-1	All criteria met.	Criteria for disulfoton was exceeded for %D (%D=35.9%). Qualification of the results, in the associated samples as estimated (J) was required for disulfoton.	All criteria met.
8SSTD07 7/18/95 Associated samples: MW-1, MW-3, MW-6, Trip Blank-1	All criteria met.	All criteria met.	All criteria met.

9SSTD07 7/18/95 Associated samples: MW-1, MW-3, MW-6, Trip Blank-1	All criteria met.	Criteria for RRF was exceeded for o,o,o-triethylphosphorothioate (RRF=0.034). Qualification of result for this compound was not required due to %RSD/%D requirements being met and lab has demonstrated that they can meet LOQ of 10 ug/ml.	All criteria met.
1SSTD08 7/19/95 Associated samples: Trip Blank-2, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	All criteria met.	All criteria met.	All criteria met.
3SSTD08 7/19/95 Associated samples: Trip Blank-2, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	All criteria met.	All criteria met.	All criteria met.
7SSTD08 7/19/95 Associated samples: Trip Blank-2, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	All criteria met.	Criteria was exceeded for disulfoton and chlorobenzilate, for %D (disulfoton %D=27.4%, chlorobenzilate %D=25.2%). Qualification of the results in the associated samples as estimated was required for these 2 compounds.	All criteria met.
8SSTD08 7/19/95 Associated samples: Trip Blank-2, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	All criteria met.	All criteria met.	All criteria met.

9SSTD08 7/19/95 Associated samples: Trip Blank-2, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	All criteria met.	Criteria for %D was exceeded for methapyrilene and 2-acetylaminofluorene (methapyrilene %D=27.3%, and 2-acetylaminofluorene %D=33.8%). Qualification of the results as estimated for these compounds was required for the associated samples.	All criteria met.
1SSTD09 7/19/95 Associated samples: MW-2, MW-4, MW-9, MW-9MS, MW-9MSD	All criteria met except for di-n-octyl phthalate %D = 35.6. *A close examination of the overall CCAL results does not indicate the need for qualification of results for other parameters.	Criteria for %D was exceeded for di-n-octyl phthalate (%D=35.6%). Qualification of results as estimated for this parameter were required for the associated samples.	All criteria met.
3SSTD09 7/19/95 Associated samples: MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12	All criteria met.	Criteria for %D was exceeded for 7,12-dimethylbenz(a)anthracene (%D=26.5%). Qualification of result as estimated was required for the associated samples.	All criteria met.
7SSTD09 7/19/95 Associated samples: MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12	All criteria met.	Criteria for %D was exceeded for chlorobenzilate (%D=29.4%). Qualification of results as estimated was required for the associated samples.	All criteria met.
8SSTD09 7/20/95 Associated samples: MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12	All criteria met.	All criteria met.	All criteria met.

9SSTD09 7/20/95 Associated samples: MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12	All criteria met.	0,0,0-Triethylphosphorothioate RRF=0.034, qualification of results not necessary as discussed earlier. Criteria for %D was exceeded for methapyrilene (%D=39.5%) and 2-acetylaminofluorene (%D=36.7%). Qualification of the results as estimated was required for the associated samples for these two parameters.	All criteria met.

The following CCAL was associated with the reextraction analyses of the MW-2, MW-4, MW-17, and MW-9 samples and the reanalysis of the MW-12 samples:

CCAL	SW-846 Criteria	DAA Method Performance Criteria	Contractual Criteria
1SSTD14 7/31/95 Associated samples: MW-9RE, MW-17RE (matrix interference confirmation) MW-2RE, MW-4RE (bis-(2ethylhexyl)phthalate) MW-12R (reanalysis for di-n-octyl phthalate (RE - Reextraction, R = Reanalysis)	All criteria met.	Criteria for matrix interference confirmation for the MW-9RE and MW-17RE were met. Criteria for %D was exceeded for bis(2-ethylhexyl) phthalate (%D = 29.6%) on the MW-2 and MW-4 samples only. Qualification of the result was required for the associated samples (MW-2RE and MW-4RE). Criteria for di-n-octyl phthalate was met for the MW-12R sample.	All criteria met.

X **G. BLANKS CRITERIA:**

- A Method blank must be analyzed on each GC/MS system used to analyze a specific group or set of samples.
- Interference free
- Trip Blank, Equipment blank, Method Blank

Comments: The following blanks were associated with the original sample analyses:

Blank	Associated Samples	Contaminants
SBLK07 File: SPBLK07.D 7/18/95 All parameters	Trip Blank-1, MW-1, MW-3, MW-6, MW-1MS, MW-1MSD, MW-7, MW-8, MW-10, MW-11, MW-17	None
SBLK08 File: SPBLK08.D 7/19/95 All parameters (MW-12R for di-n-octyl phthalate only)	Trip Blank-2, MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12, MW-12R, (R=reanalysis)	bis(2-ethylhexyl)phthalate 50 μg/L
SBLK14 File: SPBLK14.D 7/31/95 1. matrix interference confirmation 2. bis(2-ethylhexyl)phthalate	1. MW-9RE, MW-17RE 2. MW-2RE, MW-4RE (RE=Reextraction)	None
Trip Blank-1 File: 180859.D 7/18/95 All parameters	MW-1, MW-1MS, MW-1MSD, MW-3, MW-6, MW-7, MW-8, MW-10, MW-11, MW-17	None
Trip Blank-2 File: 180884.D 7/19/95 All parameters	MW-2, MW-4, MW-9, MW-9MS, MW-9MSD, MW-12	None

X **H. SURROGATE SPIKES CRITERIA:**

Surrogate	%Recovery Water
Phenol - d_6	(10-94)
2-Fluorophenol	(21-100)
2,4,6-Tribromophenol	(10-123)
Nitrobenzene - d_5	(35-114)
2-Fluorobiphenyl	(43-116)
p-Terphenyl - d_{14}	(33-141)

- If any two base/neutral or acid surrogates are out of specification, or if any one base/neutral or acid extractable surrogate has a recovery of less than 10%, then there should be a re-extraction and reanalysis to confirm that the non-compliance is due to sample matrix effects rather than laboratory deficiencies.
- Calculation check of % Recovery X

Comments: All three acid surrogate recoveries for the MW-17 sample were below 10% as listed on the form II, page 62. Two acid surrogate recoveries for sample MW-9 were below QC limits but greater than 10%. Reextraction of these samples was conducted and reanalysis of these samples revealed very consistent results with the original analyses. Matrix interference was judged as the cause of the low recoveries of the acid surrogates. Holding times for the reextracted samples for MW-17 and MW-9 were exceeded. Due to acid surrogate recoveries less than 10%, in MW-17 the acid fraction results of the analysis are qualified as unusable (R). Due to low acid surrogate recoveries, although greater than 10%, in MW-9 the acid fraction results of the analysis are qualified as estimated. No matrix interference problems were found in the MW-9MS and MW-9MSD samples. Review of extraction and analytical logs do not reveal a possible explanation for this inconsistency. The following parameters are associated with the acid fraction and are affected by this validation: benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 2-methylphenol, 3-methylphenol, 4-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol.

X I. **MATRIX SPIKE, MATRIX SPIKE DUPLICATES CRITERIA: (MS/MSD Requirements-CLP Guidelines)**

Compound	%R Water	RPD Water
Phenol	12-110	42
2-Chlorophenol	27-123	40
1,4-Dichlorobenzene	36-97	28
N-Nitroso-di-n-propylamine	41-116	38
1,2,4-Trichlorobenzene	39-98	28
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pentachlorophenol	9-103	50
Pyrene	26-127	31

- Calculation check % Recovery X and RPD X

Comments: MS and MSD analyses were conducted on MW-1 and MW-9 samples. All relative percent differences (%RPD) were met for all MS/MSD samples. All percent recovery (%R) values met compliance requirements for MS/MSD samples except 4-nitrophenol in MW-9MSD where the %R was 81%. The recovery window for this parameter is 10-80%. Obviously this is a very minor issue and no qualification or further review is required. All required MS/MSD compounds listed above were included in the analyses.

X J. **INTERNAL STANDARDS CRITERIA:**

- 1,4-Dichlorobenzene-d_4
- Naphthalene-d_8
- Acenaphthene-d_{10}
- Phenanthrene-d_{10}
- Chrysene-d_{12}

- Perylene-d_{12}
- Internal standard area - 50% to +100% of last CC
- Internal standard RF ± 30 sec of last CC
- Were these internal standards used?
- Were these QC windows (-50% to +100%) calculated properly?

Comments: All internal standard and retention time criteria were met.

X **K. TARGET PARAMETER IDENTIFICATION**

- Check that the RRT of the reported parameter is within ± 0.06 RRT units of the standard RRT.
- Check the sample parameter spectra against the laboratory standard spectra to see that it meets the following criteria:
- All ions present in the standard spectrum at a relative intensity >10% must be present in the sample spectrum.
- The relative intensities of the ions must agree ± 20% between the standard and sample spectra.
- Consider and account for ions present at >10% in the sample mass spectrum and not in the standard spectrum.

1. Are all reported parameters confirmable?
2. Check that all parameter concentrations recorded on the raw sample quantitation reports were accurately transferred to the sample summary sheets.

Comments: All target parameter identification criteria was met and all parameter concentrations were accurately transferred from the raw sample data to the sample summary sheets.

The LOQ values for MW-7 are 5X the normal laboratory LOQ due to limited sample volume necessitating the extraction of 200 ml instead of the normal 1000 ml.

X **L. LIBRARY SEARCHES**

Comments: Library searches were not requested with this data set.

X **M. ADDITIONAL COMMENTS**

Revision 2 was requested to revise the MDL study (page 11) to reflect revised LOQ for bis(2-ethylhexyl)phthalate and to revise the LOQs for all parameters for the MW-7 sample to 5X their current value.

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd Edition - Final Update I and II/IIA) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, February, 1994). Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: _____ Date: 1/10/96

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8270A	3-nitroaniline	MW-1	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	disulfoton	MW-1	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except 3-nitroaniline and disulfoton	MW-1	U	U	No detected parameters above the LOQs.
8270A	chlorobenzilate	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	di-n-octyl phthalate	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%.

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8270A	7,12-dimethylbenz(a)anthracene	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	bis(2-ethylhexyl)phthalate	MW-2	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J"). Results for this target parameter were taken from reextraction/reanalysis of the sample, which were performed outside of holding time.
8270A	All parameters except chlorobenzilate, methapyrilene, 2-acetylaminofluorene, di-n-octyl phthalate, 7,12-dimethylbenz(a)anthracene, and bis(2-ethylhexyl) phthalate	MW-2	U	U	No detected parameters above the LOQs. All results except bis(2-ethylhexyl) phthalate are from the original extraction and analysis.
8270A	3-nitroaniline	MW-3	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	disulfoton	MW-3	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except 3-nitroaniline and disulfoton	MW-3	U	U	No detected parameters above the LOQs.
8270A	chlorobenzilate	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").

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8270A	methapyrilene	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	di-n-octyl phthalate	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%.
8270A	7,12-dimethylbenz(a)anthracene	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	bis(2-ethylhexyl)phthalate	MW-4	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. Sample was reextracted and reanalyzed, but results for this parameter were estimated since reextraction/reanalysis missed holding time criteria. Results for this target parameter were taken from reextraction / reanalysis of the sample, which were performed outside of holding time.
8270A	All parameters except chlorobenzilate, methapyrilene, 2-acetylaminofluorene, di-n-octyl phthalate, 7,12-dimethylbenz(a)anthracene, and bis(2-ethylhexyl) phthalate	MW-4	U	U	No detected parameters above the LOQs. All results except bis (2-ethylhexyl) phthalate are from the original extraction and analysis.

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8270A	3-nitroaniline	MW-6	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	disulfoton	MW-6	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except 3-nitroaniline and disulfoton	MW-6	U	U	No detected parameters above the LOQs.
8270A	disulfoton	MW-7	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	chlorobenzilate	MW-7	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-7	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-7	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except disulfoton, chlorobenzilate, methapyrilene, and 2-acetylaminofluorene	MW-7	U	U	No detected parameters above the LOQs.

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8270A	disulfoton	MW-8	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	chlorobenzilate	MW-8	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-8	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-8	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except disulfoton, chlorobenzilate, methapyrilene, and 2-acetylaminofluorene	MW-8	U	U	No detected parameters above the LOQs.
8270A	chlorobenzilate	MW-9	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-9	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").

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8270A	2-acetylaminofluorene	MW-9	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	di-n-octyl phthalate	MW-9	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%.
8270A	7,12-dimethylbenz(a)anthracene	MW-9	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 4-methylphenol, 3-methylphenol, 2-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol	MW-9	U	UJ	All parameters associated with the acid fraction of this analysis are qualified as estimated due to low acid surrogate recoveries.

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8270A	All parameters except chlorobenzilate, methapyrilene, 2-acetylaminofluorene, di-n-octyl phthalate, 7,12-dimethylbenz(a)anthracene and benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 4-methylphenol, 3-methylphenol, 2-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol.	MW-9	U	U	No detected parameters above the LOQs. All results are from the original extraction and analysis. Re-extraction and reanalysis data is provided for matrix interference confirmation only.
8270A	disulfoton	MW-10	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	chlorobenzilate	MW-10	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-10	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-10	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").

JBP 1/96

8270A	All parameters except disulfoton, chlorobenzilate, methapyrilene, and 2-acetylaminofluorene	MW-10	U	U	No detected parameters above the LOQs.
8270A	disulfoton	MW-11	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	chlorobenzilate	MW-11	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-11	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-11	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except disulfoton, chlorobenzilate, methapyrilene, and 2-acetylaminofluorene	MW-11	U	U	No detected parameters above the LOQs.
8270A	chlorobenzilate	MW-12	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-12	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").

8270A	2-acetylaminofluorene	MW-12	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	di-n-octyl phthalate	MW-12	U	U	Results for di-n-octyl phthalate are from the reanalysis of MW-12.
8270A	7,12-dimethylbenz(a)anthracene	MW-12	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	All parameters except chlorobenzilate, methapyrilene, 2-acetylaminofluorene, di-n-octyl phthalate, and 7,12-dimethylbenz(a)anthracene	MW-12	U	UJ	No detected parameters above the LOQs.
8270A	disulfoton	MW-17	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	chlorobenzilate	MW-17	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	methapyrilene	MW-17	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").
8270A	2-acetylaminofluorene	MW-17	U	UJ	Criteria for % Deviation (%D) exceeded DAA method performance criteria of ± 25%. All results for parameter were estimated ("J").

8270A	benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 4-methylphenol, 3-methylphenol, 2-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol	MW-17	U	R	All parameters associated with the acid fraction of the analysis are qualified as unusable (R) due to 3 acid surrogate recoveries less than 10%.
8270A	All parameters except disulfoton, chlorobenzilate, methapyrilene, and 2-acetylaminofluorene, benzyl alcohol, 4-chloro-3-methyl phenol, 2-chlorophenol, 4-chlorophenol, 4-methylphenol, 3-methylphenol, 2-methylphenol, 2,4-dichlorophenol, 2,6-dichlorophenol, 2,4-dimethyphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, phenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol and 2,4,6-trichlorophenol.	MW-17	U	U	No detected parameters above the LOQs. All results are from the original extraction and analysis. Re-extraction and analysis data is provided for matrix interference confirmation only.

See definition section (Section IV.B of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

gsl 1/96

Quality Control Standards

Lot No. 560

Certified Value	Performance Acceptance Limits™		Traceability Recovery (%)
µg/l	µg/l		
45.0	34.8 - 55.8		
59.7	46.0 - 74.6	·1	99.7%
88.1	64.2 - 114	)	104%
68.3	49.1 - 86.7	)	103%
51.1	39.0 - 61.8	)	101%
54.4	41.1 - 67.5	1	101%
56.3	42.7 - 68.1	)	109%
23.2	17.3 - 28.3	ailable	-
109	84.0 - 136	ailable	-
39.1	28.9 - 48.5	ailable	-
53.8	36.5 - 71.6	ailable	-
121	69.6 - 168	ailable	-
91.3	63.2 - 112	ailable	-
34.1	24.9 - 41.6	ailable	-
61.3	47.3 - 74.2		103%
27.5	19.3 - 33.0	ailable	-
105	78.0 - 127	ailable	-
7.2	47.5 - 99.6		99.6%
		ailable	-
µg/l	µg/l		
91.1	33.3 - 101		
125	58.5 - 145		105%
72.6	31.6 - 84.9		109%
109	41.6 - 128		95.1%
35.5	16.4 - 43.3	ilable	-
44.3	21.3 - 50.9		98.8%
93.4	24.6 - 106	ilable	-
68.1	16.3 - 79.0	ilable	-
58.4	21.3 - 69.5	ilable	-
61.8	23.8 - 79.1	ilable	-
27.7	13.7 - 34.1		100%
78.4	42.7 - 90.9		92.5%
37.1	14.4 - 43.0		104%
46.2	22.5 - 63.3		98.2%
125	55.1 - 159		107%
72.6	23.4 - 85.7		92.7%
		lable	-
µg/l	µg/l		
53.5	23.0 - 59.9		
30.7	13.2 - 34.4		93.4%
44.5	13.6 - 53.0		101%
32.3	10.1 - 40.7	able	-
.3	27.7 - 70.9		101%
			102%

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ityPollutnT™/CLP

560

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ENVIRONMENTAL
RESOURCE ASSOCIATES

Interlaboratory Analytical Data - PriorityPollutnT/CLP™

Organics in Water
Catalog No. PP-41

Lot No. 560

ROJECT #
710-95-02
260 VOLATILES

Parameter	Certified Value	Mean Recovery	Mean Recovery (%)	n
VOLATILES (Catalog No. 710)	µg/l	µg/l		
Benzene	45.0	45.1	100%	19
Bromodichloromethane	59.7	61.0	102%	19
Bromoform	88.1	89.5	102%	18
Carbon tetrachloride	68.3	64.3	94.1%	18
Chlorobenzene	51.1	49.9	97.6%	20
Chlorodibromomethane	54.4	54.9	101%	17
1,2-Dichlorobenzene	56.3	54.5	96.7%	16
1,3-Dichlorobenzene	23.2	23.7	102%	15
1,2-Dichloroethane	109	105	96.7%	19
Ethylbenzene	39.1	36.8	94.0%	19
Methylene chloride	53.8	51.8	96.4%	17
4-Methyl-2-pentanone (MIBK)	121	103	85.5%	11
Styrene	91.3	86.1	94.3%	17
Tetrachloroethylene	34.1	31.5	92.3%	17
Toluene	61.3	56.1	91.5%	20
1,1,1-Trichloroethane	27.5	24.2	88.1%	20
Trichloroethylene	105	96.2	91.6%	18
p-Xylene	77.2	75.3	97.6%	15
BASE/NEUTRALS (Catalog No. 711)	µg/l	µg/l		
Acenaphthene	91.1	71.8	78.8%	24
Anthracene	125	105	84.2%	25
Benzo(a)anthracene	72.6	60.3	83.0%	24
Butylbenzylphthalate	109	83.9	76.9%	18
Chrysene	35.5	33.5	94.4%	24
Dibenzofuran	44.3	37.2	84.0%	23
1,2-Dichlorobenzene	93.4	67.5	72.3%	24
1,3-Dichlorobenzene	68.1	48.4	71.1%	23
2,4-Dinitrotoluene	58.4	43.8	75.1%	23
bis(2-Ethylhexyl)phthalate	61.8	52.2	84.5%	23
Fluorene	27.7	24.1	87.1%	24
Hexachlorobenzene	78.4	65.0	82.9%	23
Naphthalene	37.1	29.7	80.1%	23
Nitrobenzene	46.2	36.4	78.9%	24
Pyrene	125	99.7	79.7%	21
1,2,4-Trichlorobenzene	72.6	53.2	73.2%	23
ACIDS (Catalog No. 712)	µg/l	µg/l		
2-Chlorophenol	53.5	43.1	80.5%	21
2,4-Dichlorophenol	30.7	23.7	77.3%	21
2-Methylphenol	44.5	35.7	80.2%	22
Pentachlorophenol	32.3	21.8	67.5%	18
2,4,6,-Trichlorophenol	63.3	51.9	82.0%	23

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SECTION 3.3

REVISIONS TO ORIGINAL DATA SET

Draper Aden Associates
CONSULTING ENGINEERS
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444
Fax: (703) 552-0291

November 9, 1995

Mr. Richard R. Whitney, Ph.D.
Organics Department Manager
ETS Analytical Services, Inc.
1401 Municipal Road, NW
Roanoke, Virginia 24012-1309

RE: Watauga County Landfill - 1st Semi-Annual Assessment Monitoring
Required revisions for GC/MS 8270A and 8260 Analytical Data
ETS SDG #180851
DAA Job No.: 6520-21

Dear Rich:

Draper Aden Associates has conducted a thorough review of the analytical data for Watauga County Landfill's 1st Semi-Annual Assessment Monitoring Event for GC/MS methods 8270A and 8260. Overall, the data sets were very complete; however, the following revisions and discussions are needed to complete the validation process:

Method 8270A

1. The LOQ for bis(2-ethylhexyl)phthalate was still listed as 10 ug/L, instead of 6 ug/L on page R1 101. All other LOQs for this compound were correctly reported in your first revision.

2. Revise the LOQ for bis(2-ethylhexyl) phthalate to 6 ug/L on page 11 of the March 1995 SV MDL study.

3. Review and revise the LOQ data for all target parameters for the MW-7 raw data summary pages 105-108. The initial sample volume which was submitted and extracted was 200 ml instead of 1000 ml and the sample was concentrated to 1 ml. Thus, the LOQs for all parameters must be elevated by a factor of 5X to compensate.

Method 8260

1. Provide a revised narrative with your signature.

2. Document in the narrative that instrument tuning was accomplished using a 50 ng BFB standard.

3. The concentration of 1,1,1-trichloroethane was incorrectly transferred from the MW-2DL diluted analysis. The correct concentration from this analysis was 1570 ug/L. Please provide a revised Volatile Organics Analysis Data Sheet for MW-2 (page 193).

ETS Analytical Services, Inc.

Proudly serving industry and government since 1973.

A USEPA Contract Laboratory

A subsidiary of ETS International, Inc.

WATAUGA COUNTY LANDFILL / DRAPER ADEN ASSOCIATES

CORRECTIONS AND RESUBMISSIONS

Laboratory Name: ETS Analytical Services, Inc., Roanoke, VA.

Project Number: 6520-21

Landfill: Watauga County Landfill, Watauga County, North Carolina First Semiannual Monitoring

SDG: 180851

Attn.: Mr. Jeff Pack
Draper Aden Associates
2206 South Main Street
Blacksburg, Virginia 24060

Re.: Your letter of 11/8/95

Sample Analysis Method: EPA 8260

Comments: (referring to item numbers in your letter)
Method 8270A

1. See attached revised Form 1.

2. See attached revised MDL summary.

3. See attached revised Form 1.
Method 8260A

1-2. See attached signed (revised) narrative.

3. See attached Revised Form 1.

4-5. See atttached revised narrative.

6. Calibration for acrolein, propionitrile, and isobutanol is conducted at levels five-fold higher than for the other compounds, due to low purging efficiency for these compounds (ie, 50, 100, 250, 500, 1000 ug/l for the initial calibration and 250ug/l for the continuing calibration).

1401 Municipal Road, NW • Roanoke, Virginia 24012-1309 • 800-767-4016
703-265-0004 (Voice) • 703-563-4866 (Fax) • etsas @ roanoke.infi.net (E-Mail)

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COMPOUND NAME	SPIKE AMOUNT	MEAN % REC.	STD DEV	RSD	LOD	LOQ	RepL	MCL	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
3,3'-Dimethylbenzidine	20	99	1.57	7.9	4.72	15.7	20		19.29	18.56	19.51	18.24	19.12	21.75	22.30
Butylbenzylphthalate	10	68	0.72	10.6	2.16	7.2	10		5.74	6.76	6.80	6.87	7.73	7.64	6.15
Kepone	10	152	1.60	10.5	4.79	16.0	10		13.54	15.90	17.17	15.70	16.95	13.25	14.17
2-Acetylaminofluorene	10	55	0.61	11.1	1.84	6.1	10		4.74	5.37	5.61	5.46	6.52	5.99	4.90
3,3'-Dichlorobenzidine	10	72	0.85	11.9	2.56	8.5	10		6.21	7.02	7.11	7.10	8.74	7.69	6.35
Benzo[a]anthracene	10	72	0.70	9.8	2.11	7.0	10		6.12	7.19	7.04	7.14	7.96	8.08	6.55
Chrysene	10	71	0.69	9.8	2.07	6.9	10		6.16	7.09	7.03	7.01	7.95	7.93	6.36
bis(2-Ethylhexyl)phthalate	10	69	0.64	9.2	1.92	6.4	6	6	6.00	6.81	6.97	6.76	7.81	7.69	6.50
Di-n-octylphthalate	10	70	0.68	9.7	2.05	6.8	10		5.99	6.81	6.97	7.18	7.96	7.80	6.59
7,12-Dimethylbenz(a)anthracene	10	38	0.41	10.6	1.22	4.1	10		3.97	4.16	3.81	3.61	4.09	4.11	3.01
Benzo[b]fluoranthene	10	69	0.76	11.0	2.28	7.6	10		5.63	7.02	7.01	7.06	7.19	8.04	6.26
Benzo[k]fluoranthene	10	76	0.64	8.4	1.91	6.4	10		6.65	7.51	7.66	7.51	8.49	8.33	7.16
Benzo[a]pyrene	10	69	0.71	10.3	2.14	7.1	10	0.2	5.86	6.78	6.91	6.83	7.83	7.78	6.33
3-Methylcholanthrene	10	40	0.72	18.0	2.15	7.2	10		3.31	3.50	4.05	3.87	4.91	4.98	3.28
Indeno[1,2,3-cd]pyrene	10	67	0.70	10.5	2.10	7.0	10		5.80	6.50	6.73	6.51	7.56	7.62	6.02
Dibenz[a,h]anthracene	10	67	0.71	10.7	2.14	7.1	10		5.70	6.41	6.77	6.51	7.61	7.55	6.08
Benzo[g,h,i]perylene	10	67	0.59	8.8	1.77	5.9	10		6.04	6.62	6.75	6.54	7.52	7.55	6.21

All units are reported in ug / L except MEAN % REC, and RSD which are Percentages.
RepL = Reporting Limit

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 99-R2

MW-06

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180853S

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 180853.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/18/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
66-27-3	Methyl methanesolfonate	10	U
55-18-5	N-Nitrosodiethylamine	10	U
62-50-0	Ethyl methanesulfonate	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
100-51-6	Benzyl alcohol	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	3 & 4-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-86-2	Acetophenone	10	U
95-53-4	0-Toluidine	10	U
98-95-3	Nitrobenzene	10	U
100-75-4	N-Nitrosopiperidine	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
126-68-1	O,O,O-Triethyl phosphorothioate	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
106-47-8	4-Chloroaniline	10	U
1888-71-7	Hexachloropropene	10	U
924-16-3	N-Nitrosodibutylamine	10	U
106-50-3	1,4-Benzenediamine	100	U
59-50-7	4-Chloro-3-methylphenol	10	U
102-58-1	Isosafrole	10	U
94-59-7	Safrole	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 100-R

MW-06

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180853S

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 180853.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/18/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	20	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	10	U
99-09-2	3-Nitroaniline	10	U
100-01-6	4-Nitroaniline	10	U
130-15-4	1,4-Naphthoquinone	10	U
99-65-0	1,3-Dinitrobenzene	10	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
121-14-2	2,4-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	10	U
100-02-7	4-Nitrophenol	10	U
608-93-5	Pentachlorobenzene	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
297-97-2	Thionazin	10	U
99-58-8	5-Nitroso-o-toluidine	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
935-95-5	2,3,4,6-Tetrachlorophenol	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-3-6	N-Nitrososdiphenylamine	10	U
122-39-4	Diphenylamine	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
2303-16-4	trans-Diallate	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 101-E

MW-06

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180853S

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 180853.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/18/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
2303-16-4	cis-Diallate	10	U
298-02-2	Phorate	20	U
62-44-2	Phenacetin	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
60-51-5	Dimethoate	10	U
92-67-1	4-Aminobiphenyl	10	U
82-68-8	Pentachloronitrobenzene	10	U
23950-58-5	Pronamide	10	U
298-04-4	Disulfoton	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
298-00-0	Methyl parathion	10	U
84-74-2	Di-n-butylphthalate	10	U
56-38-2	Parathion	10	U
206-44-0	Fluoranthene	10	U
91-80-5	Methapyrilene	10	U
465-73-6	Isodrin	10	U
129-00-0	Pyrene	10	U
60-11-7	Dimethylaminoazobenzene	10	U
510-15-6	Chlorobenzilate	10	U
52-85-7	Famphur	10	U
119-93-7	3,3'-Dimethylbenzidine	20	U
85-68-7	Butylbenzylphthalate	10	U
143-50-0	Kepone	10	U
53-96-3	2-Acetylaminofluorene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	6	U
117-84-0	Di-n-octylphthalate	10	U
57-97-9	7,12-Dimethylbenz(a)anthracene	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 103-E

MW-06

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180853S

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: 180853.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/18/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
56-49-5	3-Methylcholanthrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 105-R2

MW-07

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180854S

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 180854.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	50	U
10595-95-6	N-Nitrosomethylethylamine	50	U
66-27-3	Methyl methanesolfonate	50	U
55-18-5	N-Nitrosodiethylamine	50	U
62-50-0	Ethyl methanesulfonate	50	U
108-95-2	Phenol	50	U
111-44-4	bis(2-Chloroethyl)ether	50	U
95-57-8	2-Chlorophenol	50	U
100-51-6	Benzyl alcohol	50	U
95-48-7	2-Methylphenol	50	U
106-44-5	3 & 4-Methylphenol	50	U
108-60-1	bis(2-Chloroisopropyl)ether	50	U
930-55-2	N-Nitrosopyrrolidine	50	U
621-64-7	N-Nitroso-di-n-propylamine	50	U
67-72-1	Hexachloroethane	50	U
98-86-2	Acetophenone	50	U
95-53-4	0-Toluidine	50	U
98-95-3	Nitrobenzene	50	U
100-75-4	N-Nitrosopiperidine	50	U
78-59-1	Isophorone	50	U
88-75-5	2-Nitrophenol	50	U
105-67-9	2,4-Dimethylphenol	50	U
126-68-1	O,O,O-Triethyl phosphorothioate	50	U
111-91-1	bis(2-Chloroethoxy)methane	50	U
120-83-2	2,4-Dichlorophenol	50	U
87-65-0	2,6-Dichlorophenol	50	U
106-47-8	4-Chloroaniline	50	U
1888-71-7	Hexachloropropene	50	U
924-16-3	N-Nitrosodibutylamine	50	U
106-50-3	1,4-Benzenediamine	500	U
59-50-7	4-Chloro-3-methylphenol	50	U
102-58-1	Isosafrole	50	U
94-59-7	Safrole	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 106-R2

MW-07

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180854S

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 180854.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
91-57-6	2-Methylnaphthalene	50	U
77-47-4	Hexachlorocyclopentadiene	100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	50	U
88-06-2	2,4,6-Trichlorophenol	50	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	50	U
99-09-2	3-Nitroaniline	50	U
100-01-6	4-Nitroaniline	50	U
130-15-4	1,4-Naphthoquinone	50	U
99-65-0	1,3-Dinitrobenzene	50	U
208-96-8	Acenaphthylene	50	U
131-11-3	Dimethylphthalate	50	U
606-20-2	2,6-Dinitrotoluene	50	U
121-14-2	2,4-Dinitrotoluene	50	U
83-32-9	Acenaphthene	50	U
51-28-5	2,4-Dinitrophenol	50	U
132-64-9	Dibenzofuran	50	U
100-02-7	4-Nitrophenol	50	U
608-93-5	Pentachlorobenzene	50	U
134-32-7	1-Naphthylamine	50	U
91-59-8	2-Naphthylamine	50	U
297-97-2	Thionazin	50	U
99-58-8	5-Nitroso-o-toluidine	50	U
86-73-7	Fluorene	50	U
7005-72-3	4-Chlorophenyl-phenylether	50	U
84-66-2	Diethylphthalate	50	U
935-95-5	2,3,4,6-Tetrachlorophenol	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-3-6	N-Nitrososdiphenylamine	50	U
122-39-4	Diphenylamine	50	U
99-35-4	1,3,5-Trinitrobenzene	50	U
2303-16-4	trans-Diallate	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 107-R2

MW-07

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180854S

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 180854.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
2303-16-4	cis-Diallate	50	U
298-02-2	Phorate	100	U
62-44-2	Phenacetin	50	U
101-55-3	4-Bromophenyl-phenylether	50	U
60-51-5	Dimethoate	50	U
92-67-1	4-Aminobiphenyl	50	U
82-68-8	Pentachloronitrobenzene	50	U
23950-58-5	Pronamide	50	U
298-04-4	Disulfoton	50	U
85-01-8	Phenanthrene	50	U
120-12-7	Anthracene	50	U
298-00-0	Methyl parathion	50	U
84-74-2	Di-n-butylphthalate	50	U
56-38-2	Parathion	50	U
206-44-0	Fluoranthene	50	U
91-80-5	Methapyrilene	50	U
465-73-6	Isodrin	50	U
129-00-0	Pyrene	50	U
60-11-7	Dimethylaminoazobenzene	50	U
510-15-6	Chlorobenzilate	50	U
52-85-7	Famphur	50	U
119-93-7	3,3'-Dimethylbenzidine	100	U
85-68-7	Butylbenzylphthalate	50	U
143-50-0	Kepone	50	U
53-96-3	2-Acetylaminofluorene	50	U
91-94-1	3,3'-Dichlorobenzidine	50	U
56-55-3	Benzo[a]anthracene	50	U
218-01-9	Chrysene	50	U
117-81-7	bis(2-Ethylhexyl)phthalate	30	U
117-84-0	Di-n-octylphthalate	50	U
57-97-9	7,12-Dimethylbenz(a)anthracene	50	U
205-99-2	Benzo[b]fluoranthene	50	U
207-08-9	Benzo[k]fluoranthene	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 108-R

MW-07

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: Group: 180851S

Matrix: (soil/water) WATER Lab Sample ID: 180854S

Sample wt/vol: 200.0 (g/mL) ML Lab File ID: 180854.D

Level: (low/med) Date Received: 7/13/95

% Moisture: decanted: (Y/N): Date Extracted: 7/14/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
56-49-5	3-Methylcholanthrene	50	U
193-39-5	Indeno[1,2,3-cd]pyrene	50	U
53-70-3	Dibenz[a,h]anthracene	50	U
191-24-2	Benzo[g,h,i]perylene	50	U

SECTION 3.4

SW-846 VOLATILES ANALYTICAL DATA

Data Package - Routine Analysis

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

Watauga County Landfill

COVER PAGE - ROUTINE ANALYSIS DATA PACKAGE

Lab Name: ETS Analytical Services Date: 08/10/95

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Client Sample No.	Lab Sample ID
MW1	180851
MW3	180852
MW6	180853
MW7	180854
MW8	180855
MW10	180856
MW11	180857
MW17	180858
TRIP BLANK 1	180859

Comments:

Analysis performed using:
SW 846 Method 9010A for Sulfide

I certify that this data package is in compliance with the terms, and conditions of the SAS contract, both technically and for completeness, for other than the conditions detailed above under Comments. Release of the data contained in this data package and in the computer-readable data submitted on floppy diskette (if applicable) has been authorized by the ETS Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Chris A Southwarth Name: Chris A. Southworth

Date: 8/10/95 Title: Routine Section Mgr.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW1

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180851

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A

ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW3

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180852

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW6

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180853

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:
U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW8

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180855

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795s

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW10

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180856

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW11

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180857

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW17

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180858

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:
U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUNTY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

TRIP BLANK 1

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180851

Matrix: GROUNDWATER Lab Sample ID: 180859

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

Watauga County Landfill

Form 2A
Initial and Continuing Calibration Verification

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180851 Date: 08/10/95

Analyte	Units	Type	Source	True	Found	% Rec	QAO	QARPT
Sulfide	mg/l	STD1	ETSAS	50	44.0	88.0	85-115%	071795S
Sulfide	mg/l	STD2	ETSAS	50	44.4	88.8	85-115%	071795S
Sulfide	mg/l	STD3	ETSAS	50	44.0	88.0	85-115%	071795S
Sulfide	mg/l	STD4	ETSAS	50	45.0	90.0	85-115%	071795S

Analyte	Units	Type	Source	True	Found	% Rec	QAO	QARPT

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 3A
Continuing Calibration/Preparation Blanks

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180851 Date: 08/10/95

Analyte	Type	Value	Units	QARPT
Sulfide	BLK1	1 U	mg/l	071795S
Sulfide	BLK2	1 U	mg/l	071795S
Sulfide	BLK3	1 U	mg/l	071795S
Sulfide	BLK4	1 U	mg/l	071795S

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 5A
Spike Sample Recovery

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180851 Date: 08/10/95

Analyte	Client ID	Lab ID	Units	Sample	Spike	Spike Added	% Rec	QAO	QARPT
Sulfide	MW1	180851	mg/l	1 U	9.0	10	90.0	80-120%	071795

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 6A
Duplicates

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180851 Date: 08/10/95

Analyte	Client ID	Lab ID	Units	Sample	DUP	RPD	QAO	QARPT
Sulfide	MW1	180851	mg/l	1 U	1 U	0.0	< 20%	071795S

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

[351]

ANALYST COMMENTS

Data For: Sulfides **Case/SAS Number(s):** Watauga Co

Test Method: SW 846, 9030A **Analyst:** CAS **Date:** _____

All reagents and standards were prepared each day of analysis and according to the method.

Standardization:

Rep #1 $N\ Na_2S_2O_3 = \frac{0.025\ N\ \text{Bi-iodate} \times 20\ \text{mls Bi-iodate}}{19.9\ \text{mls}\ Na_2S_2O_3}$

$N = 0.025$

Rep #2 $N\ Na_2S_2O_3 = \frac{0.025N\ \text{Bi-iodate} \times 20\ \text{mls Bi-iodate}}{19.9\ \text{mls}\ Na_2S_2O_3}$

$N = 0.025$

Rep #1 $N\ \text{Iodine} = \frac{0.025\ N\ Na_2S_2O_3 \times 19.8\ \text{mls}\ Na_2S_2O_3}{20\ \text{mls Iodine}}$

$N = 0.025$

Rep #2 $N\ \text{Iodine} = \frac{0.025\ N \times 19.8\ \text{mls}}{20\ \text{mls}}$

$N = 0.025$

_____

Signed

ESI

SULFIDE
EPA METHOD 376.1 1983 Ed.

EPA Case No. _____ Analyst CAS Date 7/17/95

N of Iodine 0.025 N of Na2S2O3 0.025

ETS #	EPA #	mls Sample	mls. OF IODINE	mls. OF Na2S2O3	Answer mg/l	QA/QC
BLK1		200	10	9.9	<1	
Std1	50mg/l	↓	40	18.0	44.0	88.0%
180851	MW1	500	20	19.6	<1	
180851D	MW1D	500	20	19.8	<1	RPD 0.0
180851S	MW1S	520	30	18.5	9	w/ 10ppm 90.0%
180852	MW3	520	20	20	<1	
180853	MW6	520	20	19.4	<1	
180854	~~AAW~~ TRIPBLANK ~~22222~~	500	20	20	<1	
180855	MW8	500	20	19.3	<1	
180856	MW10	500	20	19.8	<1	
180857	MW11	500	20	19.6	<1	
180858	MW17	510	20	19.9	<1	
Std2	50mg/l	200	40	17.8	44.4	88.8%
BLK2		↓	10	9.9	<1	
180880	22222	500	20	19.4	<1	
180881	22222	510	20	18.6	1	
180882	22222	500	20	19.5	<1	
180882D	22222	500	20	19.5	<1	RPD 0.0
180882S	22222	520	30	19.0	8.5	w/ 10ppm 85.0%

$$MG/L = \frac{400(\text{ml of Iodine} - \text{ml of } Na_2S_2O_3)}{\text{ml of sample}}$$

ETS

SULFIDE
EPA METHOD ~~376.1 1983 Ed.~~ 4030A

EPA Case No. _____ Analyst CAS Date 7/17/95

N of Iodine 0.025 N of Na2S203 0.025

ETS #	EPA #	mls Sample	mls. OF IODINE	mls. OF Na2S203	Answer mg/l	QA/QC
180883	22222	500	20	20	<1	
180884	22222	500	20	19.8	<1	
180885	22222	500	20	19.8	<1	
180888	22222	500	20	19.2	<1	
180 8880	22222	500	20	19.4	<1	
Std3	50 mg/l	200	40	17.8	44.4	88.8%
BLK3		↓	20	20	<1	
180888S	22222	520	30	18.2	9.1	w/10 ppm 91%
180889	22222	500	20	19.4	<1	
180890	22222	500	20	20	<1	
180891	22222	500	20	19.3	<1	
180892	22222	500	20	19.7	<1	
180893	22222	500	20	19.8	<1	
180894	22222	500	20	20	<1	
180895	22222	500	20	18.3	1	
Std4	50mg/l	200	40	17.5	45.0	90.0%
BLK4		↓	20	20	<1	

$$MG/L = \frac{400(\text{ml of Iodine} - \text{ml of } Na_2S_2O_3)}{\text{ml of sample}}$$

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Watauga Coutny Landfill

COVER PAGE - ROUTINE ANALYSIS DATA PACKAGE

Lab Name: ETS Analytical Services Date: 08/10/95

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Client Sample No.	Lab Sample ID
MW 2	180880
MW 4	180881
MW 9	180882
MW 12	180883
TRIP BLANK-2	180884
TRIP BLANK-3	180885

Comments:

Analysis performed using:
SW 846 Method 9030A for Sulfide

I certify that this data package is in compliance with the terms, and conditions of the SAS contract, both technically and for completeness, for other than the conditions detailed above under Comments. Release of the data contained in this data package and in the computer-readable data submitted on floppy diskette (if applicable) has been authorized by the ETS Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Chris A Southworth Name: Chris A. Southworth

Date: 8/10/95 Title: Routine Section Mgr.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW 2

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Matrix: GROUNDWATER Lab Sample ID: 180880

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:
U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW 4

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Matrix: GROUNDWATER Lab Sample ID: 180881

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW 9

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Matrix: GROUNDWATER Lab Sample ID: 180882

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

MW 12

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Matrix: GROUNDWATER Lab Sample ID: 180883

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

TRIP BLANK-2

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21 SDG No.: 180880

Matrix: WATER Lab Sample ID: 180884

Level: Date Received: 07/13/95 Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

WATAUGA COUTNY LANDFILL

1A
ROUTINE ANALYSIS DATA SHEET

CLIENT ID NO.

TRIP BLANK-3

Lab Name: ETS Analytical Services

Lab Code: ETS Project No.: 6520-21

SDG No.: 180880

Matrix: WATER

Lab Sample ID: 180885

Level:

Date Received: 07/13/95

Date: 08/10/95

TEST PERFORMED	RESULT	UNITS	FILE
Sulfide	1 U	mg/l	071795S

Notes:

U - Indicates that result was below detection limit of test. Detection limits may vary between samples for the same analyte due to sample size limitations and/or matrix problems.

Watauga County Landfill

Form 2A
Initial and Continuing Calibration Verification

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180880 Date: 08/10/95

Analyte	Units	Type	Source	True	Found	% Rec	QAO	QARPT
Sulfide	mg/l	STD1	ETSAS	50	44.0	88.0	85-115%	071795S
Sulfide	mg/l	STD2	ETSAS	50	44.4	88.8	85-115%	071795S
Sulfide	mg/l	STD3	ETSAS	50	44.0	88.0	85-115%	071795S
Sulfide	mg/l	STD4	ETSAS	50	45.0	90.0	85-115%	071795S

Analyte	Units	Type	Source	True	Found	% Rec	QAO	QARPT

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 3A
Continuing Calibration/Preparation Blanks

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180880 Date: 08/10/95

Analyte	Type	Value	Units	QARPT
Sulfide	BLK1	1 U	mg/l	071795S
Sulfide	BLK2	1 U	mg/l	071795S
Sulfide	BLK3	1 U	mg/l	071795S
Sulfide	BLK4	1 U	mg/l	071795S

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 5A
Spike Sample Recovery

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180880 Date: 08/10/95

Analyte	Client ID	Lab ID	Units	Sample	Spike	Spike Added	% Rec	QAO	QARPT
Sulfide	MW9	180880	mg/l	1 U	8.5	10	85.0	80-120%	071795

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

Watauga County Landfill

Form 6A
Duplicates

Lab Name: ETS Analytical Services, Inc. Job Number: 6520-21

Lab Code: ETS SDG No.: 180880 Date: 08/10/95

Analyte	Client ID	Lab ID	Units	Sample	DUP	RPD	QAO	QARPT
Sulfide	MW9	180882	mg/l	1 U	1 U	0.0	< 20%	071795S

U - Indicates that the result was below limit of test. Detection limits may vary betweeen samples for the same analyte due to sample size limitations and/or matrix problems.

QAO - Quality Assurance Objective

[751]

ANALYST COMMENTS

Data For: Sulfides **Case/SAS Number(s):** Watauga Co

Test Method: SW 846, 9030A **Analyst:** CAS **Date:** _____

All reagents and standards were prepared each day of analysis and according to the method.

Standardization:

Rep #1 $N\ Na_2S_2O_3 = \frac{0.025\ N\ \text{Bi-iodate} \times 20\ \text{mls Bi-iodate}}{19.9\ \text{mls}\ Na_2S_2O_3}$

$N = 0.025$

Rep #2 $N\ Na_2S_2O_3 = \frac{0.025N\ \text{Bi-iodate} \times 20\ \text{mls Bi-iodate}}{19.9\ \text{mls}\ Na_2S_2O_3}$

$N = 0.025$

Rep #1 $N\ \text{Iodine} = \frac{0.025\ N\ Na_2S_2O_3 \times 19.8\ \text{mls}\ Na_2S_2O_3}{20\ \text{mls Iodine}}$

$N = 0.025$

Rep #2 $N\ \text{Iodine} = \frac{0.025\ N \times 19.8\ \text{mls}}{20\ \text{mls}}$

$N = 0.025$

_____

Signed

[351]

SULFIDE
EPA METHOD ~~376.1 1983 Ed.~~ 9030A

EPA Case No. _____ Analyst CAS Date 7/17/95

N of Iodine 0.025 N of Na2S2O3 0.025

ETS #	EPA #	mls Sample	mls. OF IODINE	mls. OF Na2S2O3	Answer mg/l	QA/QC
BLK1		200	10	9.9	<1	
Std1	50mg/l	↓	40	18.0	44.0	88.0%
180851	22222	500	20	19.6	<1	
180851D	22222	500	20	19.8	<1	RPD 0.0
180851S	22222	520	30	18.5	9	w/ 10ppm 90.0%
180852	22222	520	20	20	<1	
180853	22222	520	20	19.4	<1	
180854	~~22222 22222DUP~~	500	20	20	<1	
180855	22222	500	20	19.3	<1	
180856	22222	500	20	19.8	<1	
180857	22222	500	20	19.6	<1	
180858	22222	510	20	19.9	<1	
Std2	50mg/l	200	40	17.8	44.4	88.8%
BLK2		↓	10	9.9	<1	
180880	~~MW2~~	500	20	19.4	<1	
180881	MW4	510	20	18.6	1	
180882	MW9	500	20	19.5	<1	
180882D	MW9D	500	20	19.5	<1	RPD 0.0
180882S	MW9S	520	30	19.0	8.5	w/ 10ppm 85.0%

$$MG/L = \frac{400(\text{ml of Iodine} - \text{ml of } Na_2S_2O_3)}{\text{ml of sample}}$$

ESAT

SULFIDE
EPA METHOD ~~376.1 1983 Ed.~~
9030A

EPA Case No. _____ Analyst CAS Date 7/17/95

N of Iodine 0.025 N of Na2S2O3 0.025

ETS #	EPA #	mls Sample	mls. OF IODINE	mls. OF Na2S2O3	Answer mg/l	QA/QC
180883	MW12	500	20	20	<1	
180884	TRIPBLANK2	500	20	19.5	<1	
180885	TRIPBLANK3	500	20	19.8	<1	
180888	22222	500	20	19.2	<1	
180888D	22222	500	20	19.4	<1	
Std3	50 mg/l	200	40	17.8	44.4	88.8%
BLK3		↓	20	20	<1	
180888S	22222	520	30	18.2	9.1	w/10 ppm 91%
180889	22222	500	20	19.4	<1	
180890	22222	500	20	20	<1	
180891	22222	500	20	19.3	<1	
180892	22222	500	20	19.7	<1	
180893	22222	500	20	19.8	<1	
180894	22222	500	20	20	<1	
180895	22222	500	20	18.3	1	
Std4	50 mg/l	200	40	17.5	45.0	90.0%
BLK4		↓	20	20	<1	

$$MG/L = \frac{400(\text{ml of Iodine} - \text{ml of } Na_2S_2O_3)}{\text{ml of sample}}$$

Data Package - Volatile Organics - EPA 8260

- Narrative and Additional Documentation
- QC Summary
- Sample Data
- Standards Data
- Raw QC Data

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

Narrative and Additional Documentation

- Narrative
- Method QC and MDL Data
- Sample Receipt Records
- Sample Analysis Record

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

WATAUGA COUNTY LANDFILL / DRAPER ADEN ASSOCIATES

CASE NARRATIVE

Laboratory Name: ETS Analytical Services, Inc., Roanoke, VA.

Project Number: 6520-21

Landfill: Watauga County Landfill, Watauga County, North Carolina
1st Semi-annual Assessment Monitoring

Sample Receipt Information: (See enclosed sample receipt record)

Sample Preparation Method: EPA 5030

Sample Analysis Method: EPA 8260

LOD/LOQ: Please see enclosed

Instrument Identification:
HP 5970 GC/MS/DS; Tekmar LSC 2000 / ALS 2016

Instrument Parameters:
Column: 0.535mm x 75M DB-624 (3u) FSCC
Trap: VOCARB 3000
Temperature Program: 40C/2 program 12C/min to 250C
Mode: Full scan electron impact. Total scan time 400msec.
Purge/trap: Heated purge (60C) 30ml/min for 11min; desorb 220C for 6min.

Analytical Comments:
Dilutions were required for samples MW-2, MW-6, and MW-10, and were based on estimates from historical data. For these samples, the raw data are included in the package, but the raw data for the diluted samples are transferred onto the respective Forms 1 (Organic Analysis Data Sheets). Likewise, data for acrolein/ acrylonitrile are included on the Forms 1 with the other analytes. Therefore, only one Form 1 is included in the data package for each sample.

It should be noted that separate aliquots (preserved at pH4) for acrolein/acrylonitrile were not received for samples MW-7 and MW-12. In addition, the acrolein/acrylonitrile aliquots for samples MW-8 and MW-11 were pH<2 upon receipt.

It should be noted that data for four compounds are included on the data reporting sheets, but are not required on the site-specific list of parameters:

Methacrylonitrile (not listed)
Ethyl methacrylate (listed under method 8270)
1,2-Dibromoethane (EDB) (also analyzed by GC/ECD
1,2-Dibromo-3-chloropropane (DBCP) (also analyzed by GC/ECD)

Since none of these compounds were detected in any of the samples, these compounds were not edited out of the reporting forms.

Low levels of 1,1,1-trichloroethane were detected in several of the samples. Mass spectral confirmation was complicated by minimal chromatographic separation from dibromofluoromethane (surrogate) and pentafluorobenzene (internal standard) and some mass spectral overlap. It should be noted that the quantitation ion for 1,1,1-trichloroethane (m/z 97) is absent in the spectra of the internal standard and the surrogate. A spectrum of 1,1,1-trichloroethane from the 10ppb initial calibration standard is included for reference.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

_____ _____

Richard R. Whitney, Ph.D. Date
Organics Laboratory Manager

Compound Name	SPIKE AMT	MEAN % REC	STD DEV	RSD	LOD	LOQ	RepL	MCL	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
Dichlorodifluoromethane	5	89	0.09	2.0	0.26	0.9	5		4.28	4.46	4.43	4.50	4.51	4.53	4.39
Chloromethane	5	85	0.38	8.9	1.13	3.8	5		4.01	4.06	4.74	3.75	4.10	4.49	4.68
Vinyl Chloride	5	93	0.16	3.4	0.47	1.6	5	2	4.33	4.58	4.66	4.83	4.57	4.74	4.67
Chloroethane	5	104	0.43	8.4	1.30	4.3	5		5.57	5.05	5.90	4.66	5.18	4.77	5.15
Bromomethane	5	153	0.83	10.9	2.50	8.3	10		7.25	8.31	9.15	7.66	6.64	7.37	7.16
Trichlorofluoromethane	5	112	0.31	5.5	0.93	3.1	5		5.36	5.72	5.50	5.96	5.98	5.57	5.13
Allyl Chloride	10	100	0.34	3.4	1.03	3.4	5		10.27	10.56	9.61	9.75	9.69	10.07	10.09
1,1-Dichloroethene	5	100	0.18	3.6	0.54	1.8	5	7	4.77	5.10	4.96	5.14	5.06	4.76	5.23
trans-1,2-Dichloroethene	5	96	0.14	2.8	0.41	1.4	5	100	4.56	4.84	4.96	4.92	4.80	4.70	4.80
cis-1,2-Dichloroethene	5	97	0.16	3.3	0.48	1.6	5	70	4.51	4.82	4.89	4.89	4.80	5.01	4.92
Acetone	5	143	2.46	34.4	7.37	24.6	25		5.80	4.49	5.82	4.86	9.23	9.36	10.47
Iodomethane	5	142	0.97	13.6	2.90	9.7	10		8.03	7.68	8.25	6.86	5.66	6.13	7.06
Carbon Disulfide	5	85	0.12	2.9	0.37	1.2	5		4.01	4.34	4.23	4.39	4.21	4.19	4.23
Acetonitrile	10	118	0.69	5.8	2.06	6.9	10		11.59	11.13	11.01	11.89	13.11	11.87	11.81
Methylene Chloride	5	117	0.29	5.0	0.88	2.9	5	5	5.39	5.66	5.88	5.93	5.79	6.10	6.29
Acrylonitrile	10	102	0.65	6.4	1.96	6.5	10		9.37	10.91	10.67	9.43	10.93	10.34	10.09
Acrolein	50	124	3.67	5.9	11.01	36.7	50		58.96	67.34	63.79	58.36	65.16	60.94	58.03
Vinyl Acetate	5	78	0.76	19.4	2.27	7.6	10		4.36	4.22	4.44	4.84	3.06	3.30	2.97
1,1-Dichloroethane	5	97	0.16	3.2	0.47	1.6	5		4.61	4.83	4.77	5.06	5.05	4.83	4.90
Chloroprene	10	102	0.47	4.6	1.42	4.7	5		10.79	10.78	9.87	9.61	10.55	10.06	9.95
2,2-Dichloropropane	5	93	0.52	11.2	1.56	5.2	5		4.73	4.94	4.78	5.08	4.79	4.67	3.51
2-Butanone	5	124	0.97	15.6	2.90	9.7	10		5.14	5.68	6.30	4.96	7.05	7.15	7.21
Propionitrile	50	103	3.78	7.4	11.33	37.8	50		44.88	52.88	54.70	47.43	55.06	52.38	51.61
Bromochloromethane	5	104	0.15	2.9	0.45	1.5	5		4.90	5.25	5.29	5.39	5.24	5.22	5.26
Chloroform	5	101	0.20	4.0	0.61	2.0	5	100	4.60	5.08	5.10	5.13	5.14	4.95	5.21
Methacrylonitrile	10	103	0.56	5.5	1.69	5.6	10		10.29	11.33	10.29	9.71	10.56	10.23	9.65
Methyl Methacrylate	10	105	0.56	5.3	1.68	5.6	10		10.43	11.43	10.14	9.90	11.15	10.19	10.46
1,1,1-Trichloroethane	5	103	0.23	4.5	0.69	2.3	5	200	4.67	5.19	5.08	5.34	5.15	5.12	5.35
Isobutanol	50	89	4.14	9.3	12.43	41.4	50		37.37	46.88	49.46	41.83	47.67	46.43	43.35
1,1-Dichloropropene	5	108	0.17	3.1	0.50	1.7	5	5	5.09	5.43	5.47	5.46	5.39	5.39	5.66
cis-1,3-Dichloropropene	5	100	0.13	2.6	0.39	1.3	5	10	4.74	5.10	4.99	5.04	5.12	4.95	4.93
trans-1,3-Dichloropropene	5	104	0.13	2.6	0.40	1.3	5	10	4.95	5.33	5.22	5.27	5.35	5.18	5.15

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Compound Name	SPIKE AMT	MEAN % REC	STD DEV	RSD	LOD	LOQ	RepL	MCL	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
Carbon Tetrachloride	5	79	0.21	5.3	0.63	2.1	5	5	3.62	4.02	3.91	3.88	3.89	3.86	4.32
Benzene	5	106	0.19	3.6	0.58	1.9	5		4.88	5.36	5.32	5.39	5.33	5.48	5.26
1,2-Dichloroethane	5	102	0.17	3.4	0.52	1.7	5	5	4.73	5.14	5.15	5.20	5.22	5.14	5.19
Trichloroethene	5	104	0.27	5.2	0.81	2.7	5	5	4.66	5.11	5.24	5.15	5.30	5.54	5.30
1,2-Dichloropropane	5	106	0.20	3.7	0.59	2.0	5	5	4.92	5.40	5.35	5.26	5.22	5.56	5.29
Dibromomethane	5	101	0.23	4.6	0.70	2.3	5		4.58	4.96	5.20	5.14	5.23	5.23	5.13
Bromodichloromethane	5	93	0.19	4.1	0.56	1.9	5	100	4.24	4.61	4.70	4.84	4.66	4.64	4.74
2-Chloroethyl vinyl ether	5	106	0.20	3.7	0.59	2.0	10		4.92	5.40	5.35	5.26	5.22	5.56	5.29
4-Methyl-2-pentanone	5	102	0.74	14.5	2.21	7.4	10		4.87	3.68	4.86	5.56	5.16	5.83	5.72
Toluene	5	108	0.21	3.9	0.63	2.1	5	1000	5.16	5.50	5.18	5.73	5.38	5.33	5.57
Ethyl methacrylate	10	84	0.26	3.0	0.77	2.6	5		8.64	8.76	8.01	8.29	8.28	8.56	8.36
1,1,2-Trichloroethane	5	112	0.29	5.1	0.86	2.9	5	5	5.06	5.44	5.48	5.88	5.66	5.64	5.88
1,2-Dibromoethane	5	90	0.16	3.6	0.49	1.6	5	0.05	4.21	4.42	4.45	4.69	4.64	4.57	4.59
Tetrachloroethene	5	112	0.14	2.5	0.43	1.4	5		5.31	5.73	5.56	5.61	5.71	5.69	5.57
1,3-Dichloropropane	5	112	0.22	3.9	0.66	2.2	5		5.14	5.60	5.59	5.72	5.68	5.81	5.68
Dibromochloromethane	5	82	0.14	3.5	0.42	1.4	5	100	3.91	4.04	4.06	4.35	4.01	4.05	4.20
2-Hexanone	5	103	1.03	20.1	3.10	10.3	10		4.76	3.40	4.64	5.00	5.60	6.63	5.88
Chlorobenzene	5	97	0.15	3.0	0.44	1.5	5	100	4.53	4.96	4.85	4.88	4.85	4.91	4.94
1,1,1,2-Tetrachloroethane	5	84	0.10	2.3	0.29	1.0	5		4.04	4.21	4.22	4.29	4.10	4.21	4.32
Ethylbenzene	5	99	0.20	4.0	0.59	2.0	5	700	4.53	4.83	4.99	5.00	4.96	5.13	5.04
Xylene, m & p-	10	97	0.35	3.6	1.04	3.5	5	1000	8.98	9.63	9.66	9.81	10.12	9.59	9.79
Xylene, o-	5	96	0.18	3.7	0.53	1.8	5	1000	4.41	4.90	4.88	4.79	4.95	4.79	4.78
Styrene	5	91	0.10	2.3	0.31	1.0	5	100	4.35	4.60	4.47	4.63	4.56	4.63	4.50
Bromoform	5	68	0.14	4.2	0.43	1.4	5	100	3.17	3.26	3.40	3.55	3.45	3.36	3.55
Isopropylbenzene	5	102	0.16	3.1	0.47	1.6	5		4.82	5.13	5.08	5.23	5.30	5.17	5.02
n-Propylbenzene	5	103	0.15	3.0	0.46	1.5	5		4.80	5.19	5.08	5.19	5.24	5.24	5.18
1,3,5-Trimethylbenzene	5	101	0.13	2.7	0.40	1.3	5		4.77	5.01	5.04	5.12	5.18	5.12	5.09
1,2,4-Trimethylbenzene	5	104	0.23	4.5	0.70	2.3	5		4.75	5.18	5.06	5.22	5.50	5.33	5.25
1,1,2,2-Tetrachloroethane	5	96	0.17	3.5	0.51	1.7	5		4.62	4.51	4.81	5.04	4.82	4.81	4.83
Bromobenzene	5	105	0.22	4.2	0.66	2.2	5		4.79	5.33	5.21	5.33	5.47	5.36	5.32
1,2,3-Trichloropropane	5	107	0.35	6.6	1.06	3.5	5		5.04	4.80	5.26	5.61	5.44	5.78	5.64
trans-1,4-Dichloro-2-butene	10	87	0.49	5.7	1.48	4.9	5		8.94	9.54	8.84	8.22	9.03	8.26	8.30

Compound Name	SPIKE AMT	MEAN % REC	STD DEV	RSD	LOD	LOQ	RepL	MCL	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
2-Chlorotoluene	5	104	0.19	3.7	0.58	1.9	5		4.79	5.26	5.17	5.19	5.38	5.35	5.16
4-Chlorotoluene	5	102	0.11	2.1	0.32	1.1	5		4.90	5.19	5.02	5.18	5.04	5.12	5.17
1,3-Dichlorobenzene	5	107	0.19	3.5	0.56	1.9	5	600	5.00	5.44	5.32	5.59	5.41	5.47	5.30
1,4-Dichlorobenzene	5	109	0.17	3.1	0.51	1.7	5	75	5.16	5.52	5.39	5.41	5.56	5.69	5.37
1,2-Dichlorobenzene	5	106	0.15	2.8	0.44	1.5	5	600	5.00	5.20	5.26	5.44	5.40	5.36	5.27
tert-Butylbenzene	5	102	0.16	3.2	0.49	1.6	5		4.76	5.11	5.16	5.13	5.25	5.24	5.17
sec-Butylbenzene	5	102	0.15	3.0	0.46	1.5	5		4.80	5.13	5.04	5.21	5.22	5.21	5.14
p-Isopropyltoluene	5	104	0.15	2.9	0.45	1.5	5		4.87	5.24	5.20	5.32	5.27	5.25	5.17
n-Butylbenzene	5	103	0.11	2.2	0.34	1.1	5		4.93	5.22	5.15	5.11	5.06	5.27	5.18
1,2-Dibromo-3-chloropropane	5	79	0.64	16.2	1.92	6.4	5	0.2	3.96	2.83	3.56	3.93	4.04	4.79	4.55
1,2,4-Trichlorobenzene	5	111	0.31	5.6	0.93	3.1	5	70	5.89	5.80	5.70	5.62	5.33	5.33	5.01
1,2,3-Trichlorobenzene	5	114	0.40	7.0	1.20	4.0	5		6.23	6.06	5.85	5.80	5.42	5.41	5.09
Hexachlorobutadiene	5	106	0.16	3.1	0.49	1.6	5		4.98	5.32	5.31	5.53	5.37	5.27	5.31
Naphthalene	5	150	1.11	14.8	3.34	11.1	10		9.40	8.09	7.92	7.49	6.95	6.86	5.90

All units are reported in ug / L except MEAN % REC., and RSD which are Percentages.
RepL = Reporting Limit

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VOA Presicion Accuracy Study April 1995

SAMPLE NAME	SPIKE AMNT	RUN 01	RUN 01 % REC.	RUN 02	RUN 02 % REC.	RUN 03	RUN 03 % REC.	RUN 04	RUN 04 % REC.	MEAN % REC. (X)	STD DEV % REC. (S)
Dichlorodifluoromethane	20	21.1	105.5	20.9	104.6	20.4	101.9	19.9	99.3	103	2.8
Chloromethane	20	23.0	115.0	22.9	114.6	22.7	113.7	21.5	107.7	113	3.4
Vinyl Chloride	20	20.6	103.2	20.5	102.6	20.7	103.7	20.6	103.0	103	0.5
Chloroethane	20	27.4	137.1	29.0	145.0	26.4	132.1	25.6	128.0	136	7.3
Bromomethane	20	20.4	101.8	21.3	106.7	21.4	106.9	23.1	115.6	108	5.7
Trichlorofluoromethane	20	19.9	99.6	21.9	109.3	20.9	104.7	19.9	99.6	103	4.7
Allyl Chloride	20	24.1	120.3	24.8	124.1	19.2	95.9	22.7	113.3	113	12.5
1,1-Dichloroethene	20	20.3	101.6	20.5	102.3	20.5	102.5	20.1	100.4	102	1.0
trans-1,2-Dichloroethene	20	20.2	100.9	19.7	98.5	19.5	97.7	20.2	101.2	100	1.7
cis-1,2-Dichloroethene	20	20.6	102.9	20.4	102.0	20.7	103.3	21.2	106.1	104	1.8
Acetone	20	11.2	56.1	6.3	31.6	10.6	53.1	11.2	55.8	49	11.7
Iodomethane	20	19.2	96.1	20.4	101.8	18.6	92.9	19.2	95.9	97	3.7
Carbon Disulfide	20	18.6	93.0	18.6	92.9	18.8	94.0	18.2	90.9	93	1.3
Acetonitrile	20	26.0	129.8	26.7	133.4	23.6	117.8	25.7	128.5	127	6.7
Methylene Chloride	20	21.7	108.4	21.7	108.6	23.4	116.8	22.7	113.5	112	4.0
Acrylonitrile	20	26.5	132.3	29.5	147.6	24.9	124.5	25.2	126.0	133	10.6
Acrolein	100	137.5	137.5	145.6	145.6	118.9	118.9	134.5	134.5	134	11.2
Vinyl Acetate	20	19.4	97.1	23.2	115.9	22.2	111.1	18.8	93.8	104	10.7
1,1-Dichloroethane	20	20.4	102.0	20.4	102.2	20.4	101.9	20.9	104.7	103	1.3
Chloroprene	20	22.3	111.3	23.5	117.7	18.5	92.5	21.3	106.3	107	10.7
2,2-Dichloropropane	20	20.8	104.0	22.1	110.7	19.5	97.7	19.0	95.1	102	7.0
2-Butanone	20	22.5	112.6	16.0	80.1	14.9	74.5	21.5	107.4	94	19.1
Propionitrile	100	143.3	143.3	152.6	152.6	153.1	153.1	131.9	131.9	145	10.0
Bromochloromethane	20	20.9	104.5	20.8	103.8	20.3	101.4	21.0	105.2	104	1.7
Chloroform	20	20.9	104.3	20.5	102.7	20.6	103.2	21.1	105.3	104	1.2
Methacrylonitrile	20	24.1	120.4	25.1	125.7	20.9	104.4	21.2	105.9	114	10.6
Methyl Methacrylate	20	15.6	78.1	15.6	78.0	15.9	79.5	16.3	81.4	79	1.6
1,1,1-Trichloroethane	20	20.7	103.7	20.8	104.1	20.4	102.2	20.4	102.1	103	1.0
Isobutanol	100	150.3	150.3	163.8	163.8	185.1	185.1	143.6	143.6	161	18.3
1,1-Dichloropropene	20	20.4	102.0	20.9	104.3	20.2	101.2	20.6	103.0	103	1.3
cis-1,3-Dichloropropene	20	19.7	98.6	19.8	98.8	19.3	96.7	20.2	101.2	99	1.9

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SAMPLE NAME	SPIKE AMNT	RUN 01	RUN 01 % REC.	RUN 02	RUN 02 % REC.	RUN 03	RUN 03 % REC.	RUN 04	RUN 04 % REC.	MEAN % REC. (X)	STD DEV % REC. (S)
trans-1,3-Dichloropropene	20	19.6	97.8	19.6	98.0	19.1	95.7	19.7	98.4	97	1.2
Carbon Tetrachloride	20	18.7	93.6	18.7	93.4	18.6	93.0	18.2	91.0	93	1.2
Benzene	20	20.9	104.5	20.6	103.1	20.6	103.1	21.5	107.3	104	2.0
1,2-Dichloroethane	20	21.3	106.7	21.3	106.4	20.9	104.5	21.8	109.1	107	1.9
Trichloroethene	20	20.3	101.3	19.5	97.3	19.2	95.8	19.5	97.4	98	2.3
1,2-Dichloropropane	20	20.7	103.7	20.5	102.7	21.0	104.9	21.2	105.9	104	1.4
Dibromomethane	20	20.8	103.9	21.2	105.9	20.2	101.0	21.7	108.3	105	3.1
Bromodichloromethane	20	19.5	97.5	19.9	99.4	19.2	96.0	20.2	100.9	98	2.1
2-Chloroethyl vinyl ether	20	20.7	103.7	20.5	102.7	21.0	104.9	21.2	105.9	104	1.4
4-Methyl-2-pentanone	20	21.1	105.5	20.8	103.8	20.5	102.3	20.7	103.4	104	1.3
Toluene	20	20.4	101.8	20.5	102.5	20.9	104.5	20.9	104.5	103	1.4
Ethyl methacrylate	20	23.1	115.6	24.9	124.4	18.5	92.7	21.0	105.0	109	13.7
1,1,2-Trichloroethane	20	20.8	104.0	21.0	104.9	20.8	104.0	22.2	111.2	106	3.5
1,2-Dibromoethane	20	20.7	103.5	20.6	103.1	19.9	99.3	21.6	107.8	103	3.5
Tetrachloroethene	20	21.0	105.2	20.5	102.3	20.7	103.6	20.6	102.8	103	1.3
1,3-Dichloropropane	20	21.2	105.8	20.8	103.9	20.9	104.5	21.8	108.8	106	2.2
Dibromochloromethane	20	19.7	98.7	19.4	97.1	19.4	97.0	19.8	99.1	98	1.0
2-Hexanone	20	22.3	111.3	18.8	93.9	18.6	92.8	16.3	81.3	95	12.4
Chlorobenzene	20	21.2	105.8	20.9	104.3	20.8	104.2	20.9	104.4	105	0.8
1,1,1,2-Tetrachloroethane	20	20.2	101.1	20.1	100.3	19.9	99.3	20.0	100.2	100	0.7
Ethylbenzene	20	21.1	105.3	21.0	105.1	21.2	106.1	21.1	105.7	106	0.5
Xylene, m & p-	40	42.0	104.9	42.1	105.3	43.7	109.3	41.1	102.9	106	2.7
Xylene, o-	20	20.8	104.1	20.7	103.4	21.2	106.0	20.9	104.3	104	1.1
Styrene	20	20.5	102.7	20.1	100.7	20.0	99.9	20.3	101.3	101	1.2
Bromoform	20	18.9	94.7	18.5	92.3	18.6	92.8	19.2	95.8	94	1.6
Isopropylbenzene	20	20.6	103.0	20.4	102.2	20.4	101.9	20.1	100.7	102	0.9
n-Propylbenzene	20	20.4	101.9	20.2	101.0	20.5	102.7	20.6	102.9	102	0.9
1,3,5-Trimethylbenzene	20	20.1	100.7	20.3	101.5	20.9	104.5	20.5	102.7	102	1.6
1,2,4-Trimethylbenzene	20	20.3	101.7	21.2	105.9	21.1	105.7	20.5	102.7	104	2.1
1,1,2,2-Tetrachloroethane	20	20.8	103.9	21.3	106.7	21.4	107.2	21.8	108.8	107	2.0
Bromobenzene	20	20.9	104.4	20.4	102.1	20.8	103.8	21.0	105.1	104	1.3

SAMPLE NAME	SPIKE AMNT	RUN 01	RUN 01 % REC.	RUN 02	RUN 02 % REC.	RUN 03	RUN 03 % REC.	RUN 04	RUN 04 % REC.	MEAN % REC. (X)	STD DEV % REC. (S)
1,2,3-Trichloropropane	20	21.5	107.3	21.3	106.5	21.0	105.2	22.1	110.3	107	2.2
trans-1,4-Dichloro-2-butene	20	21.8	108.8	22.2	111.0	18.2	91.0	20.1	100.5	103	9.1
2-Chlorotoluene	20	20.8	104.1	20.8	104.0	21.1	105.6	21.3	106.7	105	1.3
4-Chlorotoluene	20	20.5	102.3	20.0	100.0	20.4	101.8	20.5	102.6	102	1.2
1,3-Dichlorobenzene	20	20.7	103.5	20.3	101.7	20.7	103.6	21.3	106.7	104	2.1
1,4-Dichlorobenzene	20	21.3	106.3	21.0	105.1	21.2	105.9	21.0	105.0	106	0.6
1,2-Dichlorobenzene	20	21.1	105.5	20.9	104.3	21.0	104.9	21.6	108.0	106	1.6
tert-Butylbenzene	20	20.4	101.8	20.3	101.7	20.5	102.7	20.7	103.3	102	0.8
sec-Butylbenzene	20	20.4	101.8	20.3	101.3	20.4	102.1	20.5	102.7	102	0.6
p-Isopropyltoluene	20	20.6	103.0	20.2	101.0	20.3	101.6	20.7	103.5	102	1.2
n-Butylbenzene	20	20.6	103.0	20.5	102.3	20.5	102.4	20.9	104.4	103	1.0
1,2-Dibromo-3-chloropropane	20	20.3	101.4	19.5	97.7	19.8	98.9	19.8	98.9	99	1.5
1,2,4-Trichlorobenzene	20	21.0	104.9	22.0	110.2	22.0	110.1	22.3	111.5	109	2.9
1,2,3-Trichlorobenzene	20	21.0	105.2	22.4	112.1	22.4	112.0	22.9	114.4	111	4.0
Hexachlorobutadiene	20	21.0	105.0	20.1	100.4	21.1	105.7	21.1	105.3	104	2.5
Naphthalene	20	22.3	111.3	25.5	127.3	25.7	128.5	24.4	122.2	122	7.8
Dibromofluoromethane	50	51.0	102.0	51.9	103.9	50.4	100.9	51.7	103.4	103	1.4
Toluene-d8	50	49.7	99.4	50.6	101.2	48.2	96.4	49.6	99.3	99	2.0
Bromofluorobenzene	50	49.6	99.3	50.2	100.3	48.4	96.7	51.1	102.3	100	2.3

DRAPER ADEN pH LOG

LANDFILL: Watauga Co. JOB #: 6520-21 Anal SDG NUMBER: 180851

DATE	INT.	FIELD ID NUMBER	LAB ID NUMBER	SAMPLE DESCRIPTION	TEMP.	8260 <2	8260 Acid 4-5	8270	Sulfide	VOA	Ac/Ac					PROBLEMS:
7/13/95	LRL/SDB	MW1	180851	clear/colorless	2°	<2	5	✓	>12	<2	4-5					D/S
		MW3	180852	cloudy/beige	2°	<2	5	✓	>12	<2	4-5					
		MW6	180853	clear/colorless	2°	<2	5	✓	>12	<2	4-5					
		MW7	180854	opaque/colorless	2°	✓	—	✓	—	<2	NA					8270 + 8260 very low volume
		MW8	180855	cloudy/colorless	2°	<2	<2	✓	>12	<2	<2					
		MW10	180856	opaque/colorless	2°	<2	5	✓	>12	<2	4-5					
		MW11	180857	clear/colorless	2°	<2	<2	✓	>12	<2	<2					
		MW17	180858	clear/colorless	2°	<2	5	✓	>12	<2	4-5					
		TripBlank1	180859	clear/colorless	2°	<2	5	—	>12	<2	4-5					
↓	↓	MW1A	180860	clear/colorless	2°	<2	—	—	—	<2	N/A					

CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? X Yes ___ No (See Note 1) Carrier: FEDERAL EXPRESS Tracking No.: HKYA76

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: X Yes ___ No Bill: X Client ___ Consultant Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro./acryl.	9030 SULFIDES								Special Instructions/Comments
MW-1	7/10	1230	GW	A	U	G	<2		3		X										SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-1	7/10	1230	GW	A	U	G	4-5		3			X									
MW-1	7/10	1230	GW	H	U	G	---		2	X											
MW-1	7/10	1230	GW	F	U	G	---		1				X								
MW-1 MS	7/10	1230	GW	A	U	G	<2	X	3		X										
MW-1 MS	7/10	1230	GW	A	U	G	4-5	X	3			X									
MW-1 MS	7/10	1230	GW	H	U	G	---	X	2	X											
MW-1 MS	7/10	1230	GW	F	U	G	---	X	1				X								

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ✓Yes ___No Temp. on arrival 2°C Received on Ice Yes Describe problems, if any:

Sampler Name (print): [signature]	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): [signature]	Date: 7-12-95	#2 Received By (Sig.): [signature]	Date: 7-13-95	30 (No. Days)
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name: ETSAS	Time: 0900	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? X Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKYA 76

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: X Yes ___ No Bill: X Client ___ Consultant Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro.Jacryl.	9030 SULFIDES								Special Instructions/Comments
MW-1 MSD	7/10	1230	GW	A	U	G	<2	X	3		X										SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-1 MSD	7/10	1230	GW	A	U	G	4-5	X	3			X									
MW-1 MSD	7/10	1230	GW	H	U	G	---	X	2	X											
MW-1 SD	7/10	1230	GW	F	U	G	---	X	1				X								
MW-6	7/10	1430	GW	A	U	G	<2		3		X										
MW-6	7/10	1430	GW	A	U	G	4-5		3			X									
MW-6	7/10	1430	GW	H	U	G	---		2	X											
MW-6	7/10	1430	GW	F	U	G	---		1				X								

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): Lon Dafoin Jr	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): Sheree Tomorrow	Date: 7-12-95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 1st Semi-annual Assessment Monitoring
JN: 6520-21 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HK4A76

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acrolein/cryl.	9030 SULFIDES								Special Instructions/Comments
MW-3	7/10	1530	GW	A	U	G	<2		3		X										
MW-3	7/10	1530	GW	A	U	G	4-5		3			X									
MW-3	7/10	1530	GW	H	U	G	--		2	X											
MW-3	7/10	1530	GW	F	U	G	--		1				X								
MW-7	7/10	1620	GW	A	U	G	<2		1		X										1 bottle 8260 only (insufficient H_2O)
~~MW-7~~				~~A~~	~~U~~	~~G~~	~~4-5~~					X									insufficient H_2O
MW-7	7/11	1530	GW	H	U	G	--		1	X											collected only approx. 200ml (insuff. H_2O)
~~MW-7~~				~~F~~	~~U~~	~~G~~							X								insufficient H_2O

Client's Special Instructions:

SEE ATTACHED PARAMETER LISTS

1. 8260 methods collected in 40 ml clear glass bottles.
2. 8270A method collected in 1 L amber glass bottles and maintained in the dark.
3. Sulfides collected in white plastic bottles.

Lab: Received in Good Condition? ___ Yes ___ No Custody Seal Intact? ___ Yes ___ No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): [illegible] DeFoe	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): Jeff Pack	Date: 7-12-95	#1 Received By (Sig.): [signature]	Date: 7-12-95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

2

CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? X Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKYA76

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: X Yes ___ No Bill: X Client ___ Consultant Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro/acryl.	9030 SULFIDES	Special Instructions/Comments
MW-8	7/10	1645	GW	A	U	G	<2		3		X			SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-8	7/10	1645	GW	A	U	G	4-5		3			X		
MW-8	7/10	1645	GW	H	U	G	---		2	X				
MW-8	7/10	1645	GW	F	U	G	---		1				X	
MW-11	7/11	0930	GW	A	U	G	<2		3		X			
MW-11	7/11	0930	GW	A	U	G	4-5		3			X		
MW-11	7/11	0930	GW	H	U	G	---		2	X				Cap cracked on one 8270 bottle.
MW-11	7/11	0930	GW	F	U	G	---		1				X	

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival_____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): Ken Dotson	Date: 7-12-95	#1 Relinquished By (Sig.):	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): Sherri Tomaich	Date: 7-12-95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature:	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 1st Semi-annual Assessment Monitoring
JN: 6520-21 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? X Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKYA 76

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: X Yes ___ No
Bill: X Client ___ Consultant
Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro/acryl.	9030 SULFIDES	Special Instructions/Comments
MW-10	7/11	1030	GW	A	U	G	<2		3		X			SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-10	7/11	1030	GW	A	U	G	4.5		3			X		
MW-10	7/11	1030	GW	H	U	G	...		2	X				
MW-10	7/11	1030	GW	F	U	G	...		1				X	
~~MW-~~				~~A~~	~~U~~	~~G~~	~~<2~~				~~X~~		JRR	
~~MW-~~				~~A~~	~~U~~	~~G~~	~~4.5~~					~~X~~	JRR	
~~MW-~~				~~H~~	~~U~~	~~G~~				~~X~~			JRR	
~~MW-~~				~~F~~	~~U~~	~~G~~							~~X~~ JRR	
~~MW-~~				~~A~~	~~U~~	~~G~~	~~<2~~				~~X~~		JRR	

Client's Special Instructions:

Lab: Received in Good Condition? ___ Yes ___ No Custody Seal Intact? ___ Yes ___ No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): [illegible]	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): Sherry Romero	Date: 7-12-95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

H

CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? X Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKYA 76

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: X Yes ___ No Bill: X Client ___ Consultant Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro/acryl.	9030 SULFIDES								Special Instructions/Comments
MW-17	7/11	1220	GW	A	U	G	<2		3		X										SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-17	7/11	1220	GW	A	U	G	4-5		3			X									
MW-17	7/11	1220	GW	H	U	G	---		2	X											
MW-17	7/11	1220	GW	F	U	G	---		1				X								
MW-1A	7/12	0730	GW	A	U	G	<2		3		X										
~~MW~~				~~A~~	~~U~~	~~G~~	~~4-5~~					~~X~~	JSL								
~~MW~~				~~H~~	~~U~~	~~G~~	~~---~~			~~X~~			JSL								
~~MW~~				~~F~~	~~U~~	~~G~~							~~X~~	JSL							

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): [signature]	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): Sherry Tomlinson	Date: 7-12-95	#2 Received By (Sig.):	Date:	6 mo ~~(No. Days)~~
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga County	Time: 2:15pm	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

CHAIN OF CUSTODY RECORD

SDG-1

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 1st Semi-annual Assessment Monitoring
JN: 6520-21 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? X Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKYA 76

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: X Yes ___ No
Bill: X Client ___ Consultant
Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro/acryl.	9030 SULFIDES	Special Instructions/Comments
TRIP BLANK- 1	7/6	1400	T	A	U	G	<2		3		X			SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
TRIP BLANK- 1	7/6	1400	T	A	U	G	4-5		3			X		
TRIP BLANK- 1	7/6	1400	T	H	U	G	...		1	X				
TRIP BLANK- 1	7/6	1400	T	F	U	G	...		1				X	

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): [illegible]	Date: 7-12-95	#1 Relinquished By (Sig.): [signature]	Date: 7-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: DAA	Time: 1415	Company Name:	Time:	
Sampler Name (print): JEFF PACK	Date: 7-12-95	#1 Received By (Sig.): [signature]	Date: 7-12-95	#2 Received By (Sig.):	Date:	6 MO (Nor. Days)
Sampler Signature: [signature]	Time: 1308	Company Name: WATAUGA COUNTY	Time: 2:15PM	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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DRAPER ADEN pH LOG

LANDFILL: Watauga Co. JOB #: 6520-21 Anal SDG NUMBER: 180880

DATE	INT.	FIELD ID NUMBER	LAB ID NUMBER	SAMPLE DESCRIPTION	TEMP.	8270A	8260 <2	Acryl. 4-5	Sulfide >12	8260 <	Ac/Ac					PROBLEMS:
7/13/05	LKG	MW2	180880	clear/colorless	4°	✓	<2	5	>12	<2	4-5					(VOA pres)
↓	↓	MW4	180881	clear/colorless	4°	✓	<2	5	>12	<2	4-5					
		MW9	180882	clear/colorless	4°	✓	<2	5	>12	<2	4-5					d/s
		MW12	180883	clear/colorless	4°	✓	<2	5	>12	<2	4-5					
		Trip Blank-2	180884	clear/colorless	4°	✓	<2	5	>12	<2	4-5					
↓	↓	Trip Blank-3	180885	clear/colorless	4°	✓	<2	5	>12			CANCEL				Not on paperwork

MW2, 4, 9, MS, MSD, 12 were not preserved w/ NaOH + Zn Acetate. Preservative vials returned w/ samples.

DAA does not require Sulfides to be preserved with NaOH.

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DRAPER ADEN SAMPLE LOG-IN SHEET

ETS Analytical Services — Page ____ of ____

Received By (Print): Lisa Gilley — Log-In-Date: 7/13/95

Received By (Signature): Lisa Gilley

JOB #: 6520-21
SDG #: 180880
LANDFILL: Watauga County

Remarks:
1. Custody Seals ~~Present~~/Absent
   Intact/~~Broken~~
2. Cooler Temperature: 4°
3. Chain-of-Custody ~~Records~~
   Present/Absent
4. Method of Shipment: del. by ETAS personnel
5. Sampling Event Date: 7/6, 7/12
6. ~~Sample~~ Condition:
   Intact/Broken
   Leaking
7. Does information on custody records and samples agree? NO
8. Date Received at Lab 7/13/95
9. Time Received at Lab 1710 pm

Reviewed By: Lisa Gilley

Date: 7/13/95

FIELD Sample #	Corresponding LAB Sample #	Remarks: Condition of sample shipment:
MW2	180880	Good
MW4	180881	↓
MW9	180882	
MW12	180883	
Trip Blank-2	180884	
Trip Blank-3	180885	

Sample Transfer

Fraction: ____ ____
Area #: ____ ____
By: ____ ____
On: ____ ____

CHAIN OF CUSTODY RECORD

SDG-2

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Note 1) Carrier: ETS pickup at DAA Tracking No.:

Box 1: Matrix
SW. Surface Water; GW. Groundwater; L. Leachate; S. Soil; T. Trip Blank; E. Equipment Blank; P. Product; O. Other

Box 2: Preservative
A. HCl; B. HNO_3; C. H_2SO_4; D. $Na_2S_2O_3$; E. NaOH; F. ZnAc; G. Other (specify); H. None

Box 3: Filtered/Unfiltered
F. Filtered; U. Unfiltered

Box 4: Sample Type
C. Composite; G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acrolein/yl	9030 SULFIDES	Special Instructions/Comments
														SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-2	7/12	1730	GW	A	U	G	<2		3		X			
MW-2	7/12	1730	"	A	U	G	4-5		3			X		
MW-2	7/12	1730	"	H	U	G	...		2	X				
MW-2	7/12	1730	"	F	U	G	...		1				X	Sulfides unpreserved - preserve in lab
MW-4	7/12	1815	"	A	U	G	<2		3		X			
MW-4	7/12	1815	"	A	U	G	4-5		3			X		
MW-4	7/12	1815	"	H	U	G	...		2	X				
MW-4	7/12	1815	GW	F	U	G	...		1				X	Sulfides unpreserved - preserve in lab
~~MW~~				~~A~~	~~U~~	~~G~~	~~<2~~				X		X	

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival_____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): Jeff Pack	Date: 7-13-95	#1 Relinquished By (Sig.):	Date: 7-13-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:	
Sampler Signature:	Time: 1100	Company Name: DAA	Time: 1615	Company Name:	Time:		
Sampler Name (print): Tom DiFonzo	Date: 7-13-95	#1 Received By (Sig.):	Date: 7/13/95	#2 Received By (Sig.):	Date:	30 (No. Days)	
Sampler Signature:	Time: 1100	Company Name ETSAS	Time: 1615	Company Name	Time:		

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

CHAIN OF CUSTODY RECORD

SDG-2

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 1st Semi-annual Assessment Monitoring
JN: 6520-21 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: ETS pickup at DAA
Tracking No.:

Box 1: Matrix
SW. Surface Water — T. Trip Blank
GW. Groundwater — E. Equipment Blank
L. Leachate — P. Product
S. Soil — O. Other

Box 2: Preservative
A. HCl — E. NaOH
B. HNO_3 — F. ZnAc
C. H_2SO_4 — G. Other (specify)
D. $Na_2S_2O_3$ — H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19-95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro/Jacryl.	9030 SULFIDES	Special Instructions/Comments
MW-9 MS	7/12	0845	GW	A	U	G	<2	X	3		X			SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-9 MS	7/12	0845	GW	A	U	G	4-5	X	3			X		
MW-9 MS	7/12	0845	GW	H	U	G	...	X	2	X				
MW-9 MS	7/12	0845	GW	F	U	G	...	X	1				X	
MW-9 MSD	7/12	0845	GW	A	U	G	<2	X	3		X			
MW-9 MSD	7/12	0845	GW	A	U	G	4-5	X	3			X		
MW-9 MSD	7/12	0845	GW	H	U	G	...	X	2	X				
MW-9 SD	7/12	0845	GW	F	U	G	...	X	1				X	

Client's Special Instructions:

Lab: Received in Good Condition? ___ Yes ___ No Custody Seal Intact? ___ Yes ___ No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): Jeff Pack	Date: 7-13-95	#1 Relinquished By (Sig.): Jeff Pack	Date: 7-13-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: Jeff Pack	Time: 1100	Company Name: DAA	Time: 1615	Company Name:	Time:	
Sampler Name (print): Ken Dillingham	Date: 7-13-95	#1 Received By (Sig.): Kim Aldinger	Date: 7/13/95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: Ken Dillingham	Time: 1100	Company Name: ETSAS	Time: 1615	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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CHAIN OF CUSTODY RECORD

SDG-2

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 1st Semi-annual Assessment Monitoring JN: 6520-21 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Note 1) Carrier: ETS pickup at DAA Tracking No.: ___

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: _X_ Yes ___ No Bill: _X_ Client ___ Consultant Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro./acryl.	9030 SULFIDES								Special Instructions/Comments
MW-12	7/12	1000	GW	A	U	G	<2		3		X										SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
MW-12	7/12	1000	GW	A	U	G	4.5		3			X									
MW-12	7/12	1000	GW	H	U	G	---		2	X											
MW-12	7/12	1000	GW	F	U	G	---		1				X								
MW-9	7/12	0845	GW	A	U	G	<2		3		X										
MW-9	7/12	0845	GW	A	U	G	4.5		3			X									
MW-9	7/12	0845	GW	H	U	G	---		2	X											
MW-9	7/12	0845	GW	F	U	G	---		1				X								

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival ___ Received on Ice ___ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 7-13-95	#1 Relinquished By (Sig.): [signature]	Date: 7-13-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1100	Company Name: DAA	Time: 1615	Company Name:	Time:	
Sampler Name (print): Leon Dillon Jr	Date: 7-13-95	#1 Received By (Sig.): Kim Altizer	Date: 7/13/95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: [signature]	Time: 1100	Company Name ETSAS	Time: 1615	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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CHAIN OF CUSTODY RECORD

SDG-2

Laboratory: ETS Analytical Services 1401 Municipal Road NW Roanoke, VA 24012-1309 (703) 265-0004 FAX (703) 563-4866 Attn: Sue Deegan

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 1st Semi-annual Assessment Monitoring
JN: 6520-21 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: ETS picking at DAA
Tracking No.: ——

Box 1: Matrix
SW. Surface Water, GW. Groundwater, L. Leachate, S. Soil, T. Trip Blank, E. Equipment Blank, P. Product, O. Other

Box 2: Preservative
A. HCl, B. HNO_3, C. H_2SO_4, D. $Na_2S_2O_3$, E. NaOH, F. ZnAc, G. Other (specify), H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	8270A SEMI-VOLATILES	8260 VOLATILES	8260 Acro./acryl.	9030 SULFIDES								Special Instructions/Comments
TRIP BLANK 2	7/6	1400		A	U	G	<2		3		X										SEE ATTACHED PARAMETER LISTS 1. 8260 methods collected in 40 ml clear glass bottles. 2. 8270A method collected in 1 L amber glass bottles and maintained in the dark. 3. Sulfides collected in white plastic bottles.
TRIP BLANK 2	7/6	1400		A	U	G	4-5		3			X									
TRIP BLANK 2	7/6	1400		H	U	G	...		2	X											
TRIP BLANK 2	7/6	1400		F	U	G	...		1				X								

Client's Special Instructions:

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival_____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 7-13-95	#1 Relinquished By (Sig.): [signature]	Date: 7-13-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1100	Company Name: DAA	Time: 1615	Company Name:	Time:	
Sampler Name (print): LEN DIVIDIA Jr	Date: 7-13-95	#1 Received By (Sig.): Kim Altizer	Date: 7/13/95	#2 Received By (Sig.):	Date:	30 (No. Days)
Sampler Signature: Len Divida Jr	Time: 1100	Company Name ETSAS	Time: 1615	Company Name	Time:	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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ETS Analytical Services, Inc.

Proudly serving industry and government since 1973.

A USEPA Contract Laboratory

A subsidiary of ETS International, Inc.

FAXED 7/14/95

FAX Cover Sheet

To: Janet Cleary *Date:* 7/14/95

Affiliation: DAA

FAX Number:

From: Lisa Gilley

Subject:

Comments: Watauga County SDG-2

- There was a TripBlank-3 sent but it is Not listed on paperwork. Do you want us to run this sample also?
- mw9, MS, MSD, mw12 were not preserved with zinc acetate/NaOH and preservative vials were returned full w/samples.

Please let me know.

Sulfides were preserved with Zn Acetate but not NaOH - per DAA

Thank you!

Cancel TRIP BLANK #3 - per DAA

Total No. of Pages (including this sheet): 2 *Please call ext. 212 with any transmission problems.*

1401 Municipal Road, NW • Roanoke, Virginia 24012-1309 • 800-767-4016

703-265-0004 (Voice) • 703-563-4866 (Fax) • etsas @ roanoke.infi.net (E-Mail)

Printed on recycled paper Printed on recyclable paper

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW1
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180851
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/10/95 Time: 1230

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW3
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIDIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180852
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/10/95 Time: 1530

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW6
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180853
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/10/95 Time: 1430

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW7
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180854
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/11/95 Time: 1530

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MWS
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180855
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6972
Date: 07/10/95 Time: 1645

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW10
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number: 180856
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/11/95 Time: 1030

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW11
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number: 130857
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/11/95 Time: 0930

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW17
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number: 180858
Date Received: 07/12/95
Due Date: 08/03/95
Client No: 6973
Date: 07/11/95 Time: 1220

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: TRIP BLANK 1
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number: 180859
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/06/95 Time: 1400

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Sulfide	138			MG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW1A
Sample Matrix: GROUNDWATER
Project: 180851
Collected by: L. DiIOIA
Description: WATAUGA CO./1ST SEMI-ANNUAL ASSESSMENT MONITORING

ETS Lab Number:180860
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/12/95 Time: 0730

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW 2
Sample Matrix: GROUNDWATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number:180880
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/12/95 Time: 1730

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW 4
Sample Matrix: GROUNDWATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number: 180881
Date Received: 07/13/95
Due Date: 08/02/95
Client No: 6973
Date: 07/12/95 Time: 1815

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW 9
Sample Matrix: GROUNDWATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number: 180882
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6972
Date: 07/12/95 Time: 0845

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: MW 12
Sample Matrix: GROUNDWATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number:180883
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/12/95 Time: 1000

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: TRIP BLANK-2
Sample Matrix: WATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number: 180884
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/06/95 Time: 1400

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ETS ANALYTICAL SERVICES
Laboratory Data

Client Name: Draper Aden Associates
Client/Field ID: TRIP BLANK-3
Sample Matrix: WATER
Project: 180880
Collected by: J. PACK
Description: WATAUGA COUNTY LANDFILL

ETS Lab Number: 180885
Date Received: 07/13/95
Due Date: 08/03/95
Client No: 6973
Date: 07/06/95 Time: 1400

>>>> ANALYTES TO IDENTIFIED AND MEASURED <<<<

Test(s) to be Performed	TCode	Test Result	FG	UNITS
Sulfide	138			MG/L
Acrylonitrile/Draper Aden	DAACR			UG/L
Semi-Volatiles/Draper Aden	DABNA			UG/L
Volatiles/Draper Aden	DAVOA			UG/L

Comments: _____

Released By: _____ Date of Release: _____

ANALYTICAL METHOD: 8260
TYPE METHOD: GCMS
CLASS: VOLATILE

LANDFILL: Watauga County NC
SAMPLING EVENT: 1st Semi Annual Assessment
SAMPLING DATE: July 10-14, 1995
DAA JN: 6520-21

NORTH CAROLINA ASSESSMENT MONITORING
SW-846 TABLE 2 PARAMETERS

No.	PARAMETER	CAS RN
1	Acetone	67-64-1
2	Acetonitrile (methyl cyanide)	75-05-8
3	Acrolein	107-02-8
4	Acrylonitrile	107-13-1
5	Allyl chloride	107-05-1
6	Benzene	71-43-2
7	Bromochloromethane	74-97-5
8	Bromodichloromethane	75-27-4
9	Bromoform (tribromomethane)	75-25-2
10	Carbon disulfide	75-15-0
11	Carbon tetrachloride	56-23-5
12	Chlorobenzene	108-90-7
13	Chloroethane (ethyl chloride)	75-00-3
14	Chloroform (trichloromethane)	67-66-3
15	Chloroprene	126-99-8
16	Dibromochloromethane	124-48-1
17	o-dichlorobenzene (1,2-dichlorobenzene)	95-50-1
18	m-dichlorobenzene (1,3-dichlorobenzene)	541-73-1
19	p-dichlorobenzene (1,4-dichlorobenzene)	106-46-7
20	trans-1,4-dichloro-2-butene	110-57-6
21	Dichlorodifluoromethane	75-71-8
22	1,1-dichloroethane	75-34-3
23	1,2-dichloroethane	107-06-2
24	1,1-dichloroethylene (vinylidene chloride)	75-35-4
25	cis-1,2-dichloroethylene	156-59-2
26	trans-1,2-dichloroethylene	156-60-5
27	1,2-dichloropropane	78-87-5
28	1,3-dichloropropane	142-28-9
29	2,2-dichloropropane	594-20-7
30	1,1-dichloropropene	563-58-6
31	cis-1,3-dichloropropene	10061-01-5
32	trans-1,3-dichloropropene	10061-02-6
33	Ethylbenzene	100-41-4
34	2-hexanone (methyl butyl ketone - MBK)	591-78-6
35	Isobutyl alcohol	78-83-1

37	Methyl bromide (bromomethane)	74-83-9
38	Methyl chloride (chloromethane)	74-87-3
39	2-butanone (methyl ethyl ketone - MEK)	78-93-3
40	Methyl iodide (iodomethane)	74-88-4
41	Methyl methacrylate	80-62-6
42	4-methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
43	Methylene bromide (dibromomethane)	74-95-3
44	Propionitrile	107-12-0
45	Styrene (phenylethene)	100-42-5
46	1,1,1,2-tetrachloroethane	630-20-6
47	1,1,2,2-tetrachloroethane	79-34-5
48	Tetrachloroethylene (perchloroethylene)	127-18-4
49	Toluene (methyl benzene)	108-88-3
50	1,2,4-trichlorobenzene	120-82-1
51	1,1,1-trichloroethane (methyl chloroform)	71-55-6
52	1,1,2-trichloroethane (ethane trichloride)	79-00-5
53	Trichloroethylene	79-01-6
54	Trichlorofluoromethane (CFC-11)	75-69-4
55	1,2,3-trichloropropane	96-18-4
56	Vinyl acetate	108-05-4
57	Xylenes (total)	---------

ADDITIONAL PARAMETERS FOR 8260

58	Methylene chloride	75-09-2
59	Vinyl chloride	75-01-4

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

ANALYST'S INITIALS: RRW	INSTRUMENT ID: HP5970A	DATE: 7/14/95
ANALYSIS TYPE: V0A	DATA FILE PATH: C:\HPCHEM\1\DATA\071495V	
BACKUP TAPE ID:	MAINTENANCE REF:	

STANDARD ID'S
IS: 01B-76-VIS
SS: 01B-76-VSS
SPK: 01B-86-VMS

OPER INIT.	TIME	MATRIX	ETSAS SAMPLE ID	CLIENT SAMPLE ID	AQUISITION METHOD	QUANT METHOD	DATA FILE ID	LINE
RRW	13:04	W	VTUN13	BFB-50ng	BFB624	BFB624	VTUN13	1
RRW	14:06	W	2VCAL010	VSTD010/050-#2	~~DAASHORT~~	DAASHORT	2VCAL010	2
RRW	14:42	"	2VCAL020	" 20/100 "	"	"	2VCAL020	3
RRW	15:20	"	2VCAL050	" 50/250 "	"	"	2VCAL050	4
RRW	15:57	"	2VCAL100	" 100/500 "	"	"	2VCAL100	5
RRW	16:35	"	2VCAL200	" 200/1000 "	"	"	2VCAL200	6
RRW	18:27	"	1VCAL010	VSTD010-#1	DAALONG	DAALONG	1VCAL010	7
RRW	19:05	"	1VCAL020	" 20 "	"	"	1VCAL020	8
RRW	19:41	"	1VCAL050	" 50 "	"	"	1VCAL050	9
RRW	20:18	"	1VCAL100	" 100 "	"	"	1VCAL100	10
RRW	20:54	"	1VCAL200	" 200 "	"	"	1VCAL200	11
RRW	21:30	"	ICV0714	V0A ICV	Master	Master	ICV0714	12
								13
								14
								15
								16
								17
								18
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								27
								28
								29
								30

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

INT. STD. ABSOLUTE RESPONSES	

COMMENTS:

LINE	SAMPLE AMOUNT	DILUTION	INJECTION VOLUME	IS OK	SS OK	RUN COMMENTS:
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
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26						
27						
28						
29						
30						

ANALYST'S SIGNITURE: _____ DATE: 7/12/95

REVIEWED BY: _____ DATE: _____

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

ANALYST'S INITIALS: RRw	INSTRUMENT ID: HP5970A	DATE: 7/17/96
ANALYSIS TYPE: VOA	DATA FILE PATH: C:\HPCHEM\1\DATA\071796V	
BACKUP TAPE ID:	MAINTENANCE REF:	

STANDARD ID'S
IS: 01B-76-VIS
SS: 01B-76-VSS
SPK: 01B-66-VMS

OPER INIT.	TIME	MATRIX	ETSAS SAMPLE ID	CLIENT SAMPLE ID	AQUISITION METHOD	QUANT METHOD	DATA FILE ID	LINE
RRw	11:57	~	VTUNO2	BFB-50ng	BFB624	BFB624	VTUNO2	1
RRw	12:22		1VSTDO2	VSTDO50 #1	DAALONG	DAALONG	1VSTDO2	2
RRw	13:16		2VSTDO2	VSTDO50 #2	DAASHORT	DAASHORT	2VSTDO2	3
RRw	14:58		VBLKO2	VOA Blank #2	Master	Master	VBLKO2	4
RRw	15:45		180859V	Trip Blank			180859V	5
RRw	16:21		180851V	MW-1			180851V	6
RRw	16:56		↓ MS	↓ MS			180851VS	7
RRw	17:31		↓ MSD	↓ MSD			180851VD	8
RRw	18:06		180852V	MW-3			180852V	9
RRw	18:41		180853V	MW-6			180853V	10
RRw	19:17		180854V	MW-7			180854V	11
RRw	19:52		180855V	MW-8			180855V	12
RRw	20:27		180857V	MW-11			180857V	13
RRw	21:02		180858V	MW-17			180858V	14
RRw	21:38		180860V	MW-1A			180860V	15
RRw	22:13		180856DL	MW-10 DL			180856DL	16
RRw	22:48		180856V	MW-10			180856V	17
Not used	~~RRw 23:24~~		~~180856VDL~~	~~MW-10 DL RRw~~			180096V	18
			End of 12-hr Tune					19
								20
								21
								22
								23
								24
								25
								26
								27
								28
								29
								30

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

INT. STD. ABSOLUTE RESPONSES	

COMMENTS:

LINE	SAMPLE AMOUNT	DILUTION	INJECTION VOLUME	IS OK	SS OK	RUN COMMENTS:
1						ALS
2						1
3						1
4						1
5						1 Watauga County LF.
6						6
7						7
8						8
9						9
10						10 - needs D.I 1:5
11						11
12						12
13						13
14						14
15						15
16						16
17						1
18						2 19/10ml 10ml/50ml - Rerun @ 100ml
19						3
20						4
21						5
22						
23						
24						
25						
26						
27						
28						
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ANALYST'S SIGNITURE: _____ DATE: 7/18/95

REVIEWED BY: _____ DATE: _____

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

ANALYST'S INITIALS: RRW	INSTRUMENT ID: HP5970A	DATE: 7/19/95
ANALYSIS TYPE: VOA	DATA FILE PATH: C:\HPCHEM\1\DATA\ 071995V	
BACKUP TAPE ID:	MAINTENANCE REF:	

STANDARD ID'S
IS: 01B-76-VIS
SS: 01B-76-VSS
SPK: 01B-66-VMS

OPER INIT.	TIME	MATRIX	ETSAS SAMPLE ID	CLIENT SAMPLE ID	AQUISITION METHOD	QUANT METHOD	DATA FILE ID	LINE
RRW	09:53	W	VTUN03	BFB - 50ng.	BFB624	BFB624	VTUN03	1
RRW	10:08	W	1VSTD03	VSTD060 - #1	DAA LONG	DAA LONG	1VSTD03	2
RRW	11:54	W	2VSTD03	VSTD050 - #2	~~DAA LONG~~ DAA SHORT	DAA SHORT	2VSTD03	3
RRW	12:43	W	VBLK03	VOA Blank	Master	Master	VBLK03	4
RRW		W	180859A	Trip BLK (AC/AC)	DAA SHORT	DAA SHORT	180859A	5
RRW	14:14	W	180851A	MW-1 (AC/AC)	DAA SHORT	DAA SHORT	180851A	6
RRW	14:48	↓	180851AMS	MS	↓	↓	180851AS	7
RRW	15:23	↓	180851AMSD	MSD	↓	↓	180851AD	8
RRW	15:58	↓	180852A	MW-3	↓	↓	180852A	9
RRW	16:33	↓	180853A	MW-6	↓	↓	180853A	10
RRW	17:08	↓	180855A	MW-8	↓	↓	180855A	11
RRW	17:43	↓	180856A	MW-10	↓	↓	180856A	12
RRW	18:18	↓	180857A	MW-11	↓	↓	180857A	13
RRW	18:53	↓	180858A	MW-17	↓	↓	180858A	14
RRW	19:29	↓	180853VDL	MW-6 DL (826)	Master	Master	180853DL	15
RRW	20:04	T	~~RW~~ TBLK03	TCLP BLK	Master	Master	TBLK03	16
RRW	20:39	O	180046V -		Master	Master	180046V	17
RRW	21:14	T	180795T		Master	TCLP	180795T	18
RRW	21:50	T	181093T		Master	TCLP	181093T	19
								20
								21
								22
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								28
								29
								30

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

INT. STD. ABSOLUTE RESPONSES	

COMMENTS:

LINE	SAMPLE AMOUNT	DILUTION	INJECTION VOLUME	IS OK	SS OK	RUN COMMENTS:
1	50ng					ATS
2	5ml					1
3	↓					1
4	|					1
5	|					1
6	|					6
7	|					7
8	|					8
9	|					9
10	|					10
11	|					11
12	|					12
13	|					13
14	↓					14
15	5ml →	X5				15
16	5ml					16
17	5ml	→ See Comments				1 1.0g/10ml 100ul:5ml
18	5ml	X5				2
19	5ml	X5				3
20						
21						
22						
23						
24						
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ANALYST'S SIGNITURE: _____ DATE: 7/20/95

REVIEWED BY: _____ DATE: _____

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

ANALYST'S INITIALS: RRw	INSTRUMENT ID: HP5970	DATE: 7/21/95
ANALYSIS TYPE: VOA	DATA FILE PATH: C:\HPCHEM\1\DATA\072195V	
BACKUP TAPE ID:	MAINTENANCE REF:	

STANDARD ID'S	
IS:	01B-76-VIS
SS:	01B-76-VSS
SPK:	01B-66-VMS

OPER INIT.	TIME	MATRIX	ETSAS SAMPLE ID	CLIENT SAMPLE ID	AQUISITION METHOD	QUANT METHOD	DATA FILE ID	LINE
RRw	10:11	—	VTUN05	BFB-50ng	BFB624	BFB624	VTUN05	1
RRw	10:42	w	1VSTD05	VSTD050-#1	DAALONG	DAALONG	1VSTD05	2
RRw	10:57	w	2VSTD05	VSTD050 #2	DAASHORT	DAASHORT	2VSTD05	3
RRw	11:34	w	VBLK05	VBLK05	Master	Master	VBLK05	4
RRw	12:25	w	180884V	Trip BLK2	↓	↓	180884V	5
RRw	13:00	w	180884A	Trip BLK2 (AC)	DAASHORT	DAASHORT	180884A	6
RRw	13:36	w	180853DL	MW-6 DL (xs)	Master	Master	180853DL	7
RRw	10:11	w	180881V	MW-6			180881V	8
RRw	14:06	w	180882V	MW-9			180882V	9
RRw	15:22	w	180882VMS	MW-9 MS			180882VS	10
RRw	15:57	w	180882VMSD	MW-9 MSD			180882VD	11
RRw	16:33	w	180883V	MW-12			180883V	12
RRw	17:09	w	180881A	MW-6 (AC/AC)	DAASHORT	DAASHORT	180881A	13
RRw	17:45	w	180882A	MW-9 (AC/AC)	↓	↓	180882A	14
RRw	18:21	w	180882AMS	MW-9 ↓ MS	↓	↓	180882AS	15
RRw	18:56	w	180882AMSD	MW-9 ↓ MSD	↓	↓	180882AD	16
RRw	19:31	w	180883A	MW-12 (AC/AC)	↓	↓	180883A	17
RRw	20:06	w	180880DLV	MW-2 DL	Master	Master	180880DL	18
RRw	20:42	w	180880V	MW-2	↓	↓	180880V	19
RRw	21:17	w	180880A	MW-2 (AC/AC)	DAASHORT	DAASHORT	180880A	20
								21
								22
								23
								24
								25
								26
								27
								28
								29
								30

ETS ANALYTICAL SERVICES, INC
INSTRUMENT LOGBOOK

INT. STD. ABSOLUTE RESPONSES	

COMMENTS:

LINE	SAMPLE AMOUNT	DILUTION	INJECTION VOLUME	IS OK	SS OK	RUN COMMENTS:
1	50ng					
2	5ml					
3	"					
4						
5						
6						
7		5				
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18		20				
19						
20	✓					
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ANALYST'S SIGNITURE: _____ DATE: 7/22/95

REVIEWED BY: _____ DATE: _____

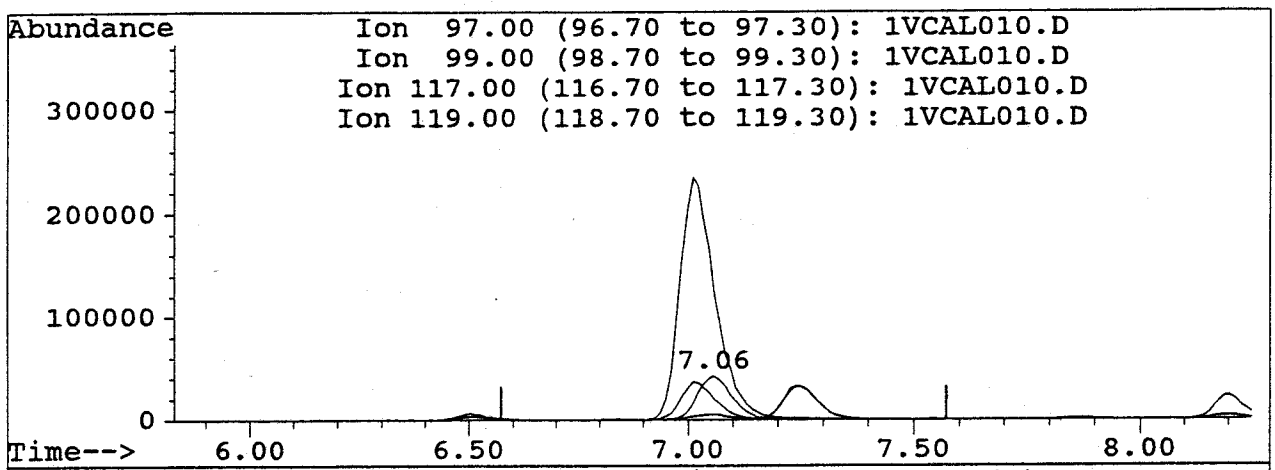
Quantitation Report

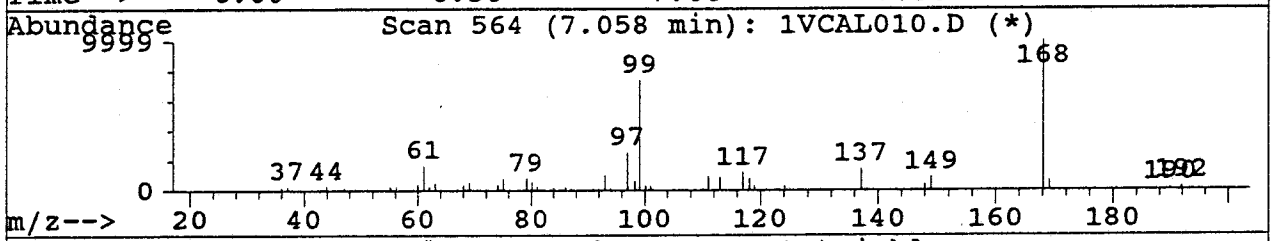
50

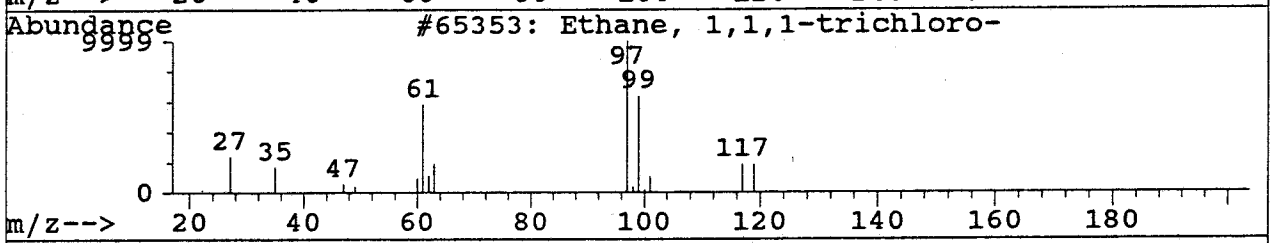
Data File : C:\HPCHEM\1\DATA\VCAL0714\1VCAL010.D
Acq Time : 14 Jul 95 6:27 pm
Sample : VOA ICAL 10 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Multiple Level Calibration







TIC: 1VCAL010.D

(22) 1,1,1-Trichloroethane (T)
7.06min 10.66ug/l
response 231126

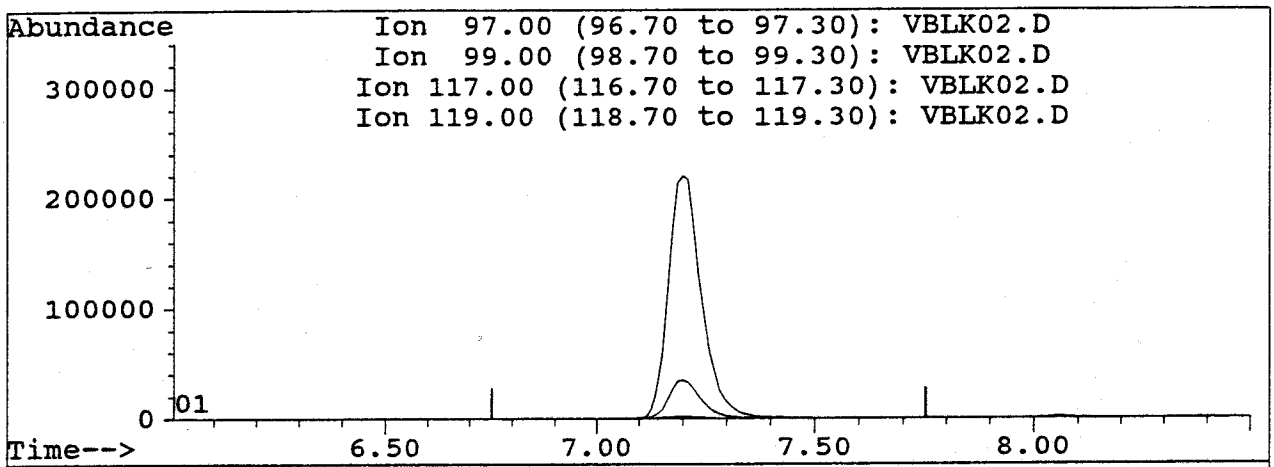
Ion	Exp%	Act%
97.00	100	100
99.00	116.20	288.38#
117.00	17.90	44.71#
119.00	12.30	13.29

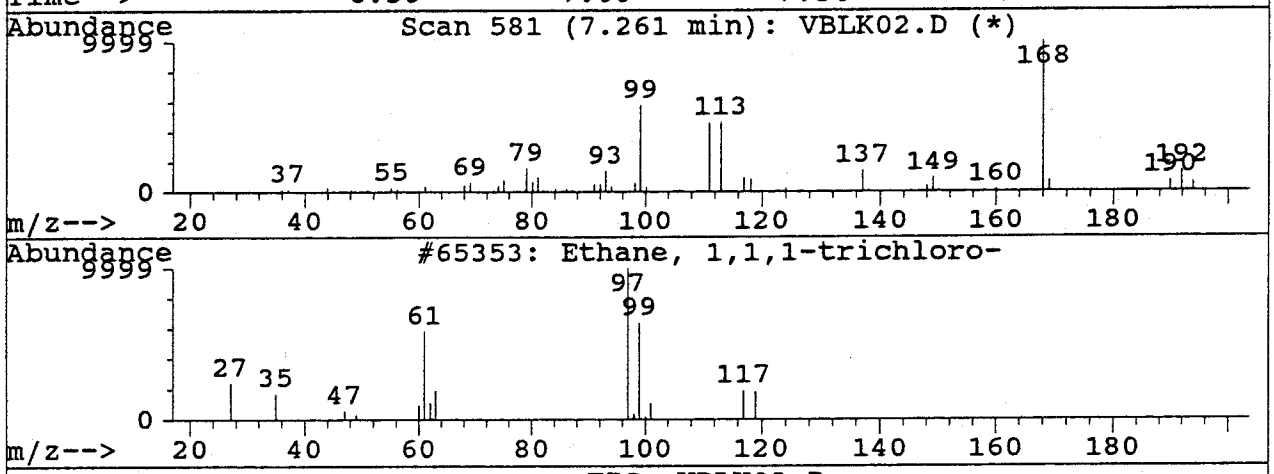
Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\VBLK02.D
Acq Time : 18 Jul 95 2:58 pm
Sample : VOA BLANK #2
Misc : VOA BLK FOR 7/18/95
Quant Time: Jul 18 15:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration





TIC: VBLK02.D

(30) 1,1,1-Trichloroethane (T)
7.25min 0.00ug/l
response 0

Ion	Exp%	Act%
97.00	100	0.00
99.00	116.40	0.00#
117.00	19.20	0.00#
119.00	12.10	0.00#

QC Summary

- Surrogate Summary (Form II)
- Matrix Spike Summary (Form III)
- Method Blank Summary (Form IV)
- GC/MS Instrument Performance Check (Form V)
- Internal Standard Area and RT Summary (Form VIII)

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA COUNTY Location: WATAUGA Group: 180851V

	SAMPLE NO.	SMC1 DBFM #	SMC2 [TOL] #	SMC3 [BFB] #	OTHER #	TOT OUT
01	VBLK02	96	98	96		
02	TRIP BLANK	92	95	93		
03	MW-1	99	100	96		
04	MW-1MS	98	100	96		
05	MW-1MSD	98	100	96		
06	MW-3	98	99	95		
07	MW-6	100	100	98		
08	MW-7	97	96	94		
09	MW-8	100	99	96		
10	MW-11	96	96	93		
11	MW-17	99	100	97		
12	MW-1A	99	99	97		
13	MW-10DL	98	97	94		
14	MW-10	104	104	101		
15	VBLK03	92	95	92		
16	TRIP BLK (AC/A	87	90	92		
17	MW-1 (AC/AC)	99	101	103		
18	MW-1MS (AC/A	98	101	99		
19	MW-1MSD (AC/	97	101	100		
20	MW-3 (AC/AC)	98	100	101		
21	MW-6 (AC/AC)	101	101	103		
22	MW-8 (AC/AC)	101	102	102		
23	MW-10 (AC/AC)	106	101	104		
24	MW-11 (AC/AC)	101	101	102		
25	MW-17 (AC/AC)	105	104	104		
26	VBLK05	92	95	92		
27	TRIP BLK 2	99	97	102		
28	TRIP BLK 2 AC	94	98	93		
29	MW-6DL	94	98	91		
30	MW-4	92	95	90		

	QC LIMITS
SMC1 DBFM = Dibromofluoromethane	(86-118)
SMC2 [TOL] = Toluene-d8	(88-110)
SMC3 [BFB] = Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA COLLection: WATAUGA Group: 180851V

	SAMPLE NO.	SMC1 DBFM #	SMC2 [TOL] #	SMC3 [BFB] #	OTHER #	TOT OUT
01	MW-9	99	100	95		
02	MW-9MS	96	98	93		
03	MW-9MSD	97	99	93		
04	MW-12	93	96	90		
05	MW-4AC	100	100	98		
06	MW-9AC	98	102	98		
07	MW-9ACMS	98	97	95		
08	MW-9ACMSD	100	100	99		
09	MW-12AC	103	103	102		
10	MW-2DL	94	99	90		
11	MW-2	104	100	96		
12	MW-2AC	106	99	99		
13						
14						
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	QC LIMITS
SMC1 DBFM = Dibromofluoromethane	(86-118)
SMC2 [TOL] = Toluene-d8	(88-110)
SMC3 [BFB] = Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETSAS Contract: _____

Project No. 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix Spike - Sample No.: MW-1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	41	82	(61-145)
Acrylonitrile	50	0	49	98	(70-130)
Benzene	50	0	50	100	(76-127)
Trichloroethene	50	0	43	86	(76-120)
Toluene	50	0	50	100	(75-125)
Chlorobenzene	50	0	47	94	(75-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MS % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	41	81	1	14	(61-145)
Acrylonitrile	50	55	110	12	20	(70-130)
Benzene	50	50	100	0	11	(76-127)
Trichloroethene	50	43	86	0	14	(76-120)
Toluene	50	49	98	2	13	(75-125)
Chlorobenzene	50	47	95	1	13	(75-130)

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

* Values outside of QC limits

RPD:0 out of 6 outside limits
Spike Recovery:0 out of 12 outside limits

Comments: _____

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETSAS Contract: _____

Project No. 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix Spike - Sample No.: MW-9

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	40	80	(61-145)
Acrylonitrile	50	0	56	112	(70-130)
Benzene	50	4	52	96	(76-127)
Trichloroethene	50	6	49	86	(76-120)
Toluene	50	0	48	96	(75-125)
Chlorobenzene	50	0	45	90	(75-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MS % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	42	84	5	14	(61-145)
Acrylonitrile	50	54	108	4	20	(70-130)
Benzene	50	55	102	6	11	(76-127)
Trichloroethene	50	51	91	6	14	(76-120)
Toluene	50	51	102	6	13	(75-125)
Chlorobenzene	50	48	90	6	13	(75-130)

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

Comments: _____

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK02

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO LLocation: WATAUGA CO Group: 180851V

Lab File ID: VBLK02.D Lab Sample ID: VBLK02

Date Analyzed: 7/18/95 Time Analyzed: 1458

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIP BLANK	180859V	180859V.D	1545
02	MW-1	180851V	180851V.D	1621
03	MW-1MS	180851VS	180851VS.D	1656
04	MW-1MSD	180851VD	180851VD.D	1731
05	MW-3	180852V	180852V.D	1806
06	MW-6	180853V	180853V.D	1841
07	MW-7	180854V	180854V.D	1917
08	MW-8	180855V	180855V.D	1952
09	MW-11	180857V	180857V.D	2027
10	MW-17	180858V	180858V.D	2102
11	MW-1A	180860V	180860V.D	2138
12	MW-10DL	180856DL	180856DL.D	2213
13	MW-10	180856V	180856V.D	2248
14				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK03

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO LLocation: WATAUGA CO Group: 180851V

Lab File ID: VBLK03.D Lab Sample ID: VBLK03

Date Analyzed: 7/19/95 Time Analyzed: 1243

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIP BLK (AC/AC)	180859A	180859A.D	1331
02	MW-1 (AC/AC)	180851A	180851A.D	1414
03	MW-1MS (AC/AC)	180851AS	180851AS.D	1448
04	MW-1MSD (AC/AC)	180851AD	180851AD.D	1523
05	MW-3 (AC/AC)	180852A	180852A.D	1558
06	MW-6 (AC/AC)	180853A	180853A.D	1633
07	MW-8 (AC/AC)	180855A	180855A.D	1708
08	MW-10 (AC/AC)	180856A	180856A.D	1743
09	MW-11 (AC/AC)	180857A	180857A.D	1818
10	MW-17 (AC/AC)	180858A	180858A.D	1853
11				
12				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK05

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO LLocation: WATAUGA CO Group: 180851V

Lab File ID: VBLK05.D Lab Sample ID: VBLK05

Date Analyzed: 7/21/95 Time Analyzed: 1134

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIP BLK 2	180884V	180884V.D	1225
02	TRIP BLK 2 AC	180884A	180884A.D	1300
03	MW-6DL	180853DL	180853DL.D	1336
04	MW-4	180881V	180881V.D	1411
05	MW-9	180882V	180882V.D	1446
06	MW-9MS	180882VS	180882VS.D	1522
07	MW-9MSD	180882VD	180882VD.D	1557
08	MW-12	180883V	180883V.D	1633
09	MW-4AC	180881A	180881A.D	1709
10	MW-9AC	180882A	180882A.D	1745
11	MW-9ACMS	180882AS	180882AS.D	1821
12	MW-9ACMSD	180882AD	180882AD.D	1856
13	MW-12AC	180883A	180883A.D	1931
14	MW-2DL	180880DL	180880DL.D	2006
15	MW-2	180880V	180880V.D	2042
16	MW-2AC	180880A	180880A.D	2117
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COMMENTS:

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : ETSAS Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Lab File ID: VTUN01.D BFB Injection Date: 7/14/95

Instrument ID: MS5970.A BFB Injection Time: 1304

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	53.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	77.2
175	5.0 - 9.0% of mass 174	5.5 (7.1)1
176	95.0 - 101.0% of mass 174	75.7 (98.1)1
177	5.0 - 9.0% of mass 176	5.2 (6.9)2

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

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	2VCAL010	2VCAL010.D	7/14/95	1406
02	VSTD020	2VCAL020	2VCAL020.D	7/14/95	1442
03	VSTD050	2VCAL050	2VCAL050.D	7/14/95	1520
04	VSTD100	2VCAL100	2VCAL100.D	7/14/95	1557
05	VSTD200	2VCAL200	2VCAL200.D	7/14/95	1635
06	VSTD010	1VCAL010	1VCAL010.D	7/14/95	1827
07	VSTD020	1VCAL020	1VCAL020.D	7/14/95	1905
08	VSTD050	1VCAL050	1VCAL050.D	7/14/95	1941
09	VSTD100	1VCAL100	1VCAL100.D	7/14/95	2018
10	VSTD200	1VCAL200	1VCAL200.D	7/14/95	2054
11					
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22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO LFLocation: WATAUGA CO Group: 180851V

Lab File ID: VTUN02.D BFB Injection Date: 7/18/95

Instrument ID: HP5970 BFB Injection Time: 1149

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.8
75	30.0 - 60.0% of mass 95	50.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	73.2
175	5.0 - 9.0% of mass 174	5.2 (7.1)1
176	95.0 - 101.0% of mass 174	71.0 (97.0)1
177	5.0 - 9.0% of mass 176	4.7 (6.6)2

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

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	1VSTD02	1VSTD02.D	7/18/95	1222
02	VSTD050	2VSTD02	2VSTD02.D	7/18/95	1316
03	VBLK02	VBLK02	VBLK02.D	7/18/95	1458
04	TRIP BLANK	180859V	180859V.D	7/18/95	1545
05	MW-1	180851V	180851V.D	7/18/95	1621
06	MW-1MS	180851VS	180851VS.D	7/18/95	1656
07	MW-1MSD	180851VD	180851VD.D	7/18/95	1731
08	MW-3	180852V	180852V.D	7/18/95	1806
09	MW-6	180853V	180853V.D	7/18/95	1841
10	MW-7	180854V	180854V.D	7/18/95	1917
11	MW-8	180855V	180855V.D	7/18/95	1952
12	MW-11	180857V	180857V.D	7/18/95	2027
13	MW-17	180858V	180858V.D	7/18/95	2102
14	MW-1A	180860V	180860V.D	7/18/95	2138
15	MW-10DL	180856DL	180856DL.D	7/18/95	2213
16	MW-10	180856V	180856V.D	7/18/95	2248
17					
18					
19					
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5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : ETSAS Contract: _____

Project No.: 6520-21 Site: WATAUGA CO LFLocation: WATAUGA CO Group: 180851V

Lab File ID: VTUN03.D BFB Injection Date: 7/19/95

Instrument ID: HP5970 BFB Injection Time: 0945

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.7
75	30.0 - 60.0% of mass 95	51.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	75.5
175	5.0 - 9.0% of mass 174	5.5 (7.3)1
176	95.0 - 101.0% of mass 174	73.9 (97.9)1
177	5.0 - 9.0% of mass 176	4.9 (6.7)2

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

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	1VSTD03	1VSTD03.D	7/19/95	1008
02	VSTD050	2VSTD03	2VSTD03.D	7/19/95	1154
03	VBLK03	VBLK03	VBLK03.D	7/19/95	1243
04	TRIP BLK (AC/	180859A	180859A.D	7/19/95	1331
05	MW-1 (AC/AC)	180851A	180851A.D	7/19/95	1414
06	MW-1MS (AC/	180851AS	180851AS.D	7/19/95	1448
07	MW-1MSD (AC	180851AD	180851AD.D	7/19/95	1523
08	MW-3 (AC/AC)	180852A	180852A.D	7/19/95	1558
09	MW-6 (AC/AC)	180853A	180853A.D	7/19/95	1633
10	MW-8 (AC/AC)	180855A	180855A.D	7/19/95	1708
11	MW-10 (AC/AC	180856A	180856A.D	7/19/95	1743
12	MW-11 (AC/AC	180857A	180857A.D	7/19/95	1818
13	MW-17 (AC/AC	180858A	180858A.D	7/19/95	1853
14					
15					
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21					
22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : ETSAS Contract: _____

Project No.: 6520-21 Site: WATAUGA CO LFLocation: WATAUGA CO Group: 180851V

Lab File ID: VTUN05.D BFB Injection Date: 7/21/95

Instrument ID: HP5970 BFB Injection Time: 1002

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	76.2
175	5.0 - 9.0% of mass 174	6.1 (8.0)1
176	95.0 - 101.0% of mass 174	73.7 (96.7)1
177	5.0 - 9.0% of mass 176	4.7 (6.3)2

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

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	1VSTD05	1VSTD05.D	7/21/95	1022
02	VSTD050	2VSTD05	2VSTD05.D	7/21/95	1057
03	VBLK05	VBLK05	VBLK05.D	7/21/95	1134
04	TRIP BLK 2	180884V	180884V.D	7/21/95	1225
05	TRIP BLK 2 AC	180884A	180884A.D	7/21/95	1300
06	MW-6DL	180853DL	180853DL.D	7/21/95	1336
07	MW-4	180881V	180881V.D	7/21/95	1411
08	MW-9	180882V	180882V.D	7/21/95	1446
09	MW-9MS	180882VS	180882VS.D	7/21/95	1522
10	MW-9MSD	180882VD	180882VD.D	7/21/95	1557
11	MW-12	180883V	180883V.D	7/21/95	1633
12	MW-4AC	180881A	180881A.D	7/21/95	1709
13	MW-9AC	180882A	180882A.D	7/21/95	1745
14	MW-9ACMS	180882AS	180882AS.D	7/21/95	1821
15	MW-9ACMSD	180882AD	180882AD.D	7/21/95	1856
16	MW-12AC	180883A	180883A.D	7/21/95	1931
17	MW-2DL	180880DL	180880DL.D	7/21/95	2006
18	MW-2	180880V	180880V.D	7/21/95	2042
19	MW-2AC	180880A	180880A.D	7/21/95	2117
20					
21					
22					

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD02.D Date Analyzed: 7/18/95

Instrument ID: HP5970 Time Analyzed: 1316

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	1915110	7.22	1676472	8.06	1486605	11.79
	UPPER LIMIT	3830220	7.72	3352944	8.56	2973210	12.29
	LOWER LIMIT	957555	6.72	838236	7.56	743303	11.29
	SAMPLE NO.						
01	VBLK02	1836903	7.20	1628230	8.06	1427238	11.77
02	TRIP BLANK	1869661	7.19	1624186	8.04	1446108	11.77
03	MW-1	1828203	7.19	1637474	8.04	1446245	11.78
04	MW-1MS	1816159	7.18	1628363	8.05	1464370	11.77
05	MW-1MSD	1866832	7.17	1663357	8.03	1486313	11.77
06	MW-3	1836414	7.18	1630436	8.05	1441261	11.77
07	MW-6	1763230	7.18	1585168	8.05	1408769	11.77
08	MW-7	1778168	7.18	1610991	8.03	1412551	11.77
09	MW-8	1768353	7.18	1588841	8.03	1420381	11.76
10	MW-11	1798667	7.17	1627014	8.03	1456128	11.76
11	MW-17	1784490	7.17	1597290	8.03	1429494	11.76
12	MW-1A	1714390	7.17	1530635	8.03	1379727	11.76
13	MW-10DL	1765363	7.16	1574681	8.03	1390232	11.76
14	MW-10	1692838	7.17	1502654	8.03	1348006	11.76
15							
16							
17							
18							
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20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD02.D Date Analyzed: 7/18/95

Instrument ID: HP5970 Time Analyzed: 1316

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1030350	15.08				
	UPPER LIMIT	2060700	15.58				
	LOWER LIMIT	515175	14.58				
	SAMPLE NO.						
01	VBLK02	1000754	15.08				
02	TRIP BLANK	1008216	15.07				
03	MW-1	1017313	15.07				
04	MW-1MS	1021490	15.07				
05	MW-1MSD	1032152	15.07				
06	MW-3	1005145	15.07				
07	MW-6	998108	15.06				
08	MW-7	1008011	15.06				
09	MW-8	997249	15.06				
10	MW-11	1019212	15.06				
11	MW-17	1003012	15.06				
12	MW-1A	978129	15.05				
13	MW-10DL	964709	15.06				
14	MW-10	940459	15.06				
15							
16							
17							
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19							
20							
21							
22							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

606

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD03.D Date Analyzed: 7/19/95

Instrument ID: HP5970 Time Analyzed: 1154

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	1902372	7.16	1680500	8.01	1476191	11.72
	UPPER LIMIT	3804744	7.66	3361000	8.51	2952382	12.22
	LOWER LIMIT	951186	6.66	840250	7.51	738096	11.22
	SAMPLE NO.						
01	VBLK03	1853731	7.16	1612002	8.02	1406446	11.73
02	TRIP BLK (AC/AC)	1890124	7.16	1627320	8.02	1441979	11.73
03	MW-1 (AC/AC)	1817069	7.16	1584769	8.02	1409951	11.73
04	MW-1MS (AC/AC)	1835778	7.15	1605839	8.01	1413154	11.73
05	MW-1MSD (AC/AC)	1830469	7.14	1607774	8.00	1436328	11.72
06	MW-3 (AC/AC)	1824852	7.16	1601533	8.01	1418008	11.72
07	MW-6 (AC/AC)	1693648	7.14	1508043	8.01	1368591	11.72
08	MW-8 (AC/AC)	1692354	7.14	1502103	8.00	1353190	11.72
09	MW-10 (AC/AC)	1547986	7.14	1410356	8.01	1273599	11.72
10	MW-11 (AC/AC)	1655755	7.14	1468878	8.00	1316587	11.72
11	MW-17 (AC/AC)	1664222	7.14	1469180	8.00	1313215	11.72
12							
13							
14							
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19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD03.D Date Analyzed: 7/19/95

Instrument ID: HP5970 Time Analyzed: 1154

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1036783	15.03				
	UPPER LIMIT	2073566	15.53				
	LOWER LIMIT	518392	14.53				
	SAMPLE NO.						
01	VBLK03	979556	15.03				
02	TRIP BLK (AC/AC)	999280	15.02				
03	MW-1 (AC/AC)	992273	15.02				
04	MW-1MS (AC/AC)	999901	15.02				
05	MW-1MSD (AC/AC)	995230	15.02				
06	MW-3 (AC/AC)	984571	15.03				
07	MW-6 (AC/AC)	954929	15.02				
08	MW-8 (AC/AC)	940315	15.03				
09	MW-10 (AC/AC)	883712	15.01				
10	MW-11 (AC/AC)	937840	15.02				
11	MW-17 (AC/AC)	926130	15.01				
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD05.D Date Analyzed: 7/21/95

Instrument ID: HP5970 Time Analyzed: 1057

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	1882747	7.11	1620660	7.98	1463034	11.69
	UPPER LIMIT	3765494	7.61	3241320	8.48	2926068	12.19
	LOWER LIMIT	941374	6.61	810330	7.48	731517	11.19
	SAMPLE NO.						
01	VBLK05	1857430	7.13	1599898	7.98	1426654	11.69
02	TRIP BLK 2	1314210	7.12	1210569	7.97	1157911	11.68
03	TRIP BLK 2 AC	1850285	7.10	1612789	7.96	1429255	11.68
04	MW-6DL	1811850	7.10	1576835	7.96	1411391	11.68
05	MW-4	1809700	7.10	1587153	7.96	1395219	11.67
06	MW-9	1653002	7.11	1450266	7.96	1315549	11.69
07	MW-9MS	1774934	7.11	1554963	7.98	1401873	11.67
08	MW-9MSD	1704813	7.11	1504486	7.97	1354601	11.67
09	MW-12	1767608	7.11	1536453	7.96	1362504	11.67
10	MW-4AC	1652701	7.10	1450178	7.96	1311076	11.67
11	MW-9AC	1824288	6.99	1611237	7.88	1486454	11.66
12	MW-9ACMS	1745904	7.11	1556194	7.96	1390240	11.67
13	MW-9ACMSD	1793441	7.11	1563857	7.98	1392911	11.69
14	MW-12AC	1712270	7.12	1511226	7.97	1352896	11.69
15	MW-2DL	1784248	7.12	1549004	7.97	1371604	11.68
16	MW-2	1645216	7.12	1511257	7.97	1352199	11.69
17	MW-2AC	1643023	7.13	1497109	7.99	1350563	11.68
18							
19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA CO Location: WATAUGA CO Group: 180851V

Lab File ID (Standard): 2VSTD05.D Date Analyzed: 7/21/95

Instrument ID: HP5970 Time Analyzed: 1057

GC Column: DB-624 ID: 0.53 (mm) Heated Purge (Y/N) Y

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1020156	14.98				
	UPPER LIMIT	2040312	15.48				
	LOWER LIMIT	510078	14.48				
	SAMPLE NO.						
01	VBLK05	1006119	14.98				
02	TRIP BLK 2	898263	14.97				
03	TRIP BLK 2 AC	1005102	14.97				
04	MW-6DL	983827	14.97				
05	MW-4	996154	14.97				
06	MW-9	914959	14.98				
07	MW-9MS	983520	14.98				
08	MW-9MSD	955784	14.98				
09	MW-12	956792	14.96				
10	MW-4AC	920702	14.97				
11	MW-9AC	1058003	14.96				
12	MW-9ACMS	982868	14.96				
13	MW-9ACMSD	961218	14.98				
14	MW-12AC	948159	14.97				
15	MW-2DL	951053	14.97				
16	MW-2	971138	14.98				
17	MW-2AC	960843	14.97				
18							
19							
20							
21							
22							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

- Target Compound Results (Form I)
- Raw Data
  - * Chromatogram
  - * Quantitation Report
  - * Target Compound Spectra

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-1

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	5.7	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	2.3	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-1

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

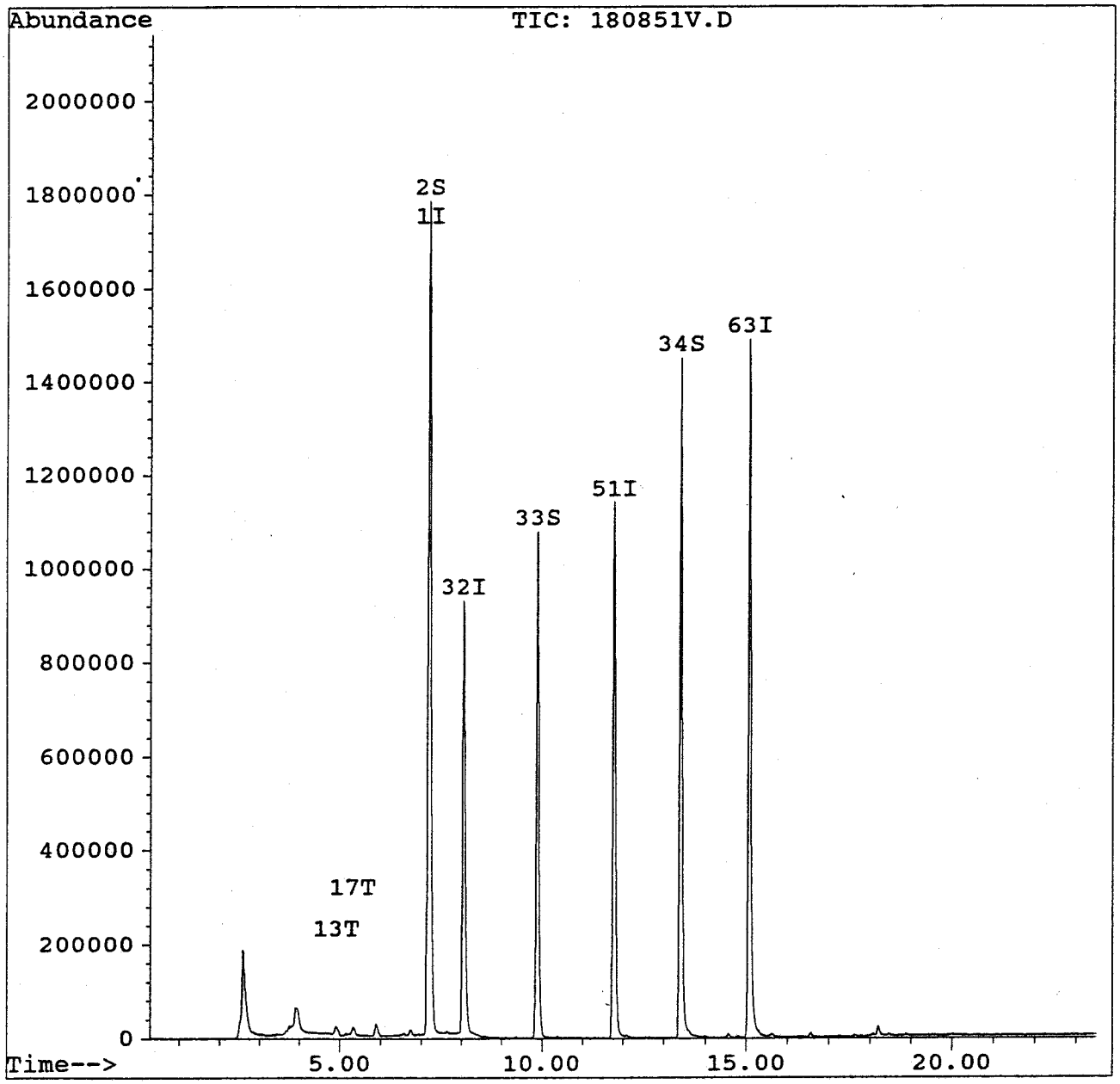
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180851V.D
Acq Time : 18 Jul 95 4:21 pm
Sample : MW-1 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:03 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

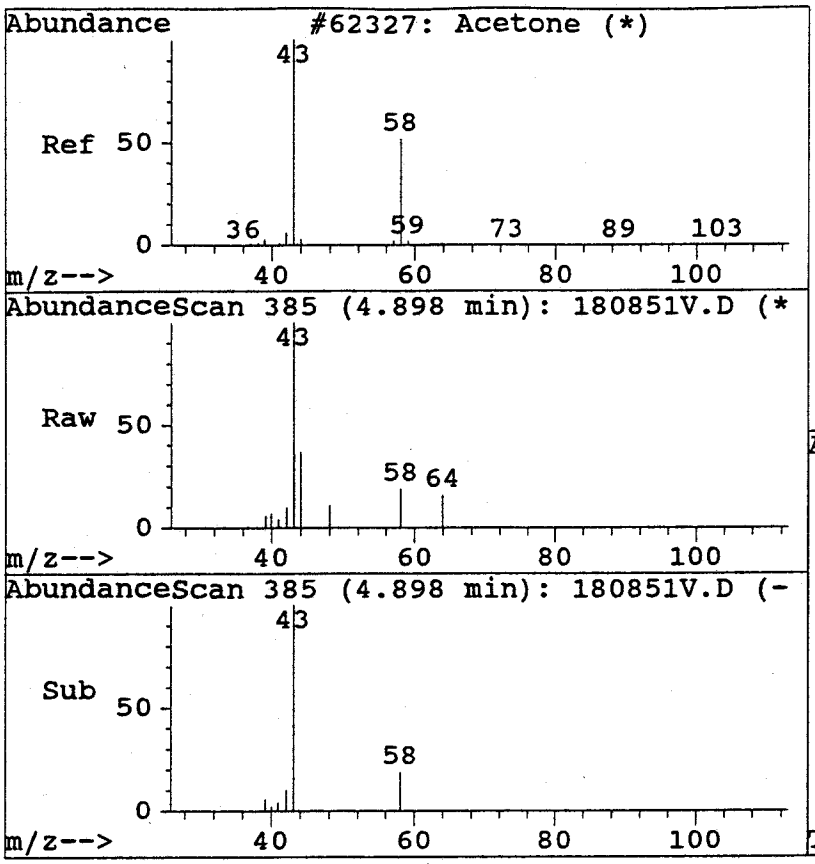
Data File : C:\HPCHEM\1\DATA\071895V\180851V.D
Acq Time : 18 Jul 95 4:21 pm
Sample : MW-1 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:03 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.19	168	1828203	50.00	ug/l		-0.02
32) 1,4-Difluorobenzene	8.04	114	1637474	50.00	ug/l		-0.03
51) Chlorobenzene-d5	11.78	117	1446245	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	15.07	152	1017313	50.00	ug/l		-0.03
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.18	113	991073	49.71	ug/l		99.43%
33) Toluene-d8	9.88	98	1671912	49.77	ug/l		99.53%
34) Bromofluorobenzene	13.39	174	1000548	48.17	ug/l		96.33%
Target Compounds							**Qvalue**
13) Acetone	4.90	43	81050	5.70	ug/l		97
17) Methylene Chloride	5.31	84	19570	2.27	ug/l	#	81

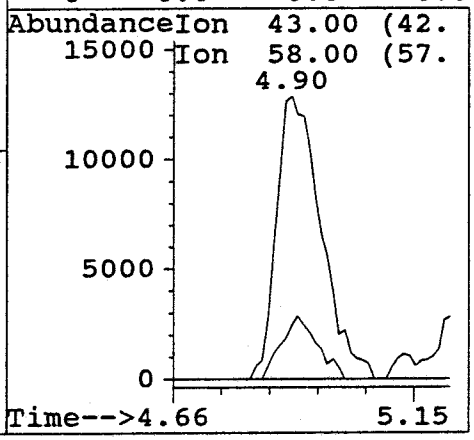
(#) = qualifier out of range (m) = manual integration

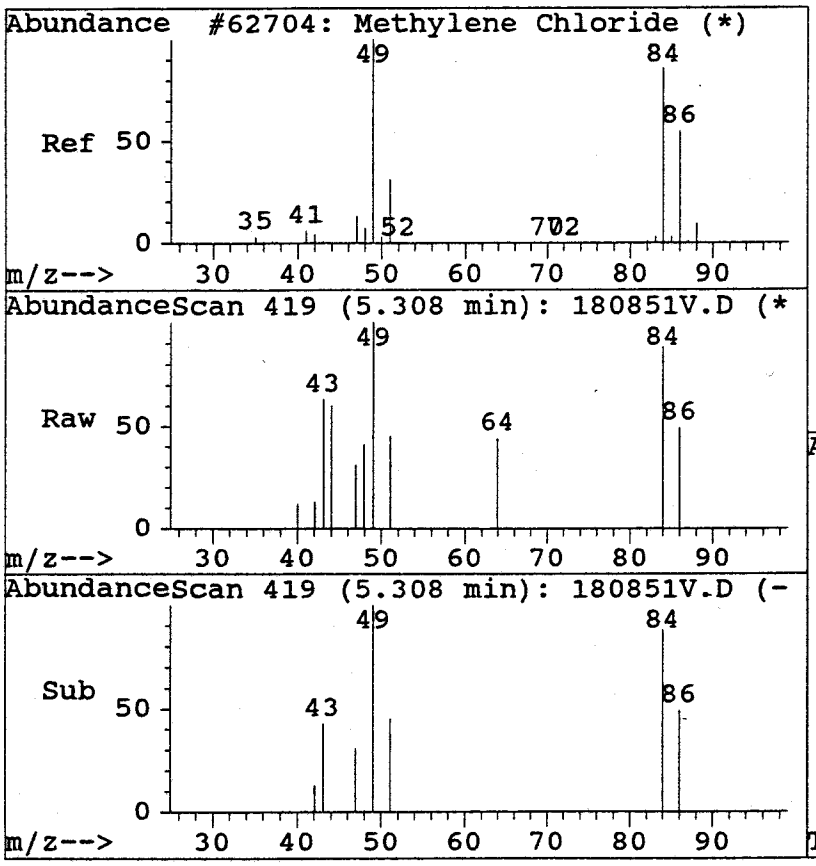


#13
Acetone
Concen: 5.70 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180851V.D
Acq: 18 Jul 95 4:21 pm

Tgt Ion:43 Resp: 81050

Ion	Ratio	Lower	Upper
43	100		
58	19.2	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

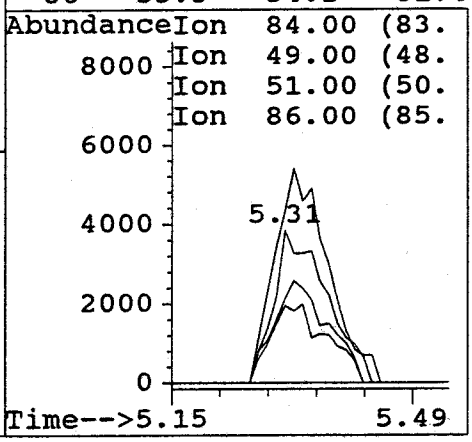




#17
Methylene Chloride
Concen: 2.27 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180851V.D
Acq: 18 Jul 95 4:21 pm

Tgt Ion:84 Resp: 19570

Ion	Ratio	Lower	Upper
84	100		
49	113.0	113.2	169.8#
51	50.7	35.3	52.9
86	55.3	54.2	81.4

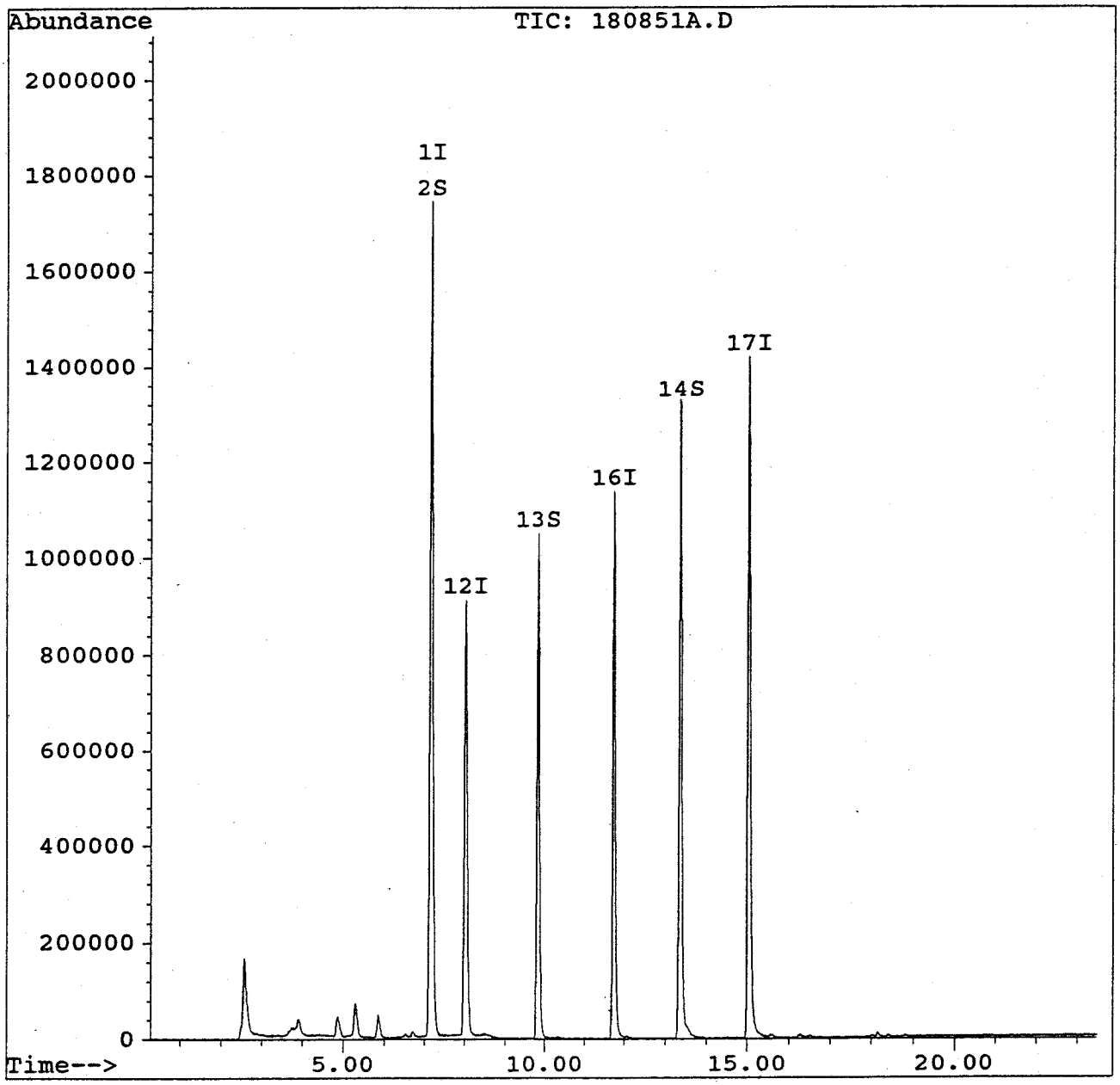


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851A.D
Acq Time : 19 Jul 95 2:14 pm
Sample : MW-1 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:15 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851A.D
Acq Time : 19 Jul 95 2:14 pm
Sample : MW-1 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:15 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.16	168	1817069	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	8.02	114	1584769	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.73	117	1409951	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	992273	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.15	113	933957	49.46	ug/l	98.92%
13) Toluene-d8	9.83	98	1579979	50.42	ug/l	100.84%
14) Bromofluorobenzene	13.36	174	964475	51.25	ug/l	102.50%
Target Compounds						**Qvalue**

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-3

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180852V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180852V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	7.2	
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	3.1	J
000075-00-3	Chloroethane	8.7	
000074-83-9	Bromomethane	2.4	J
000075-69-4	Trichlorofluoromethane	1.1	J
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	3.7	J
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	50	
00067-64-1	Acetone	6.3	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	4.5	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	21	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-3

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180852V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180852V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

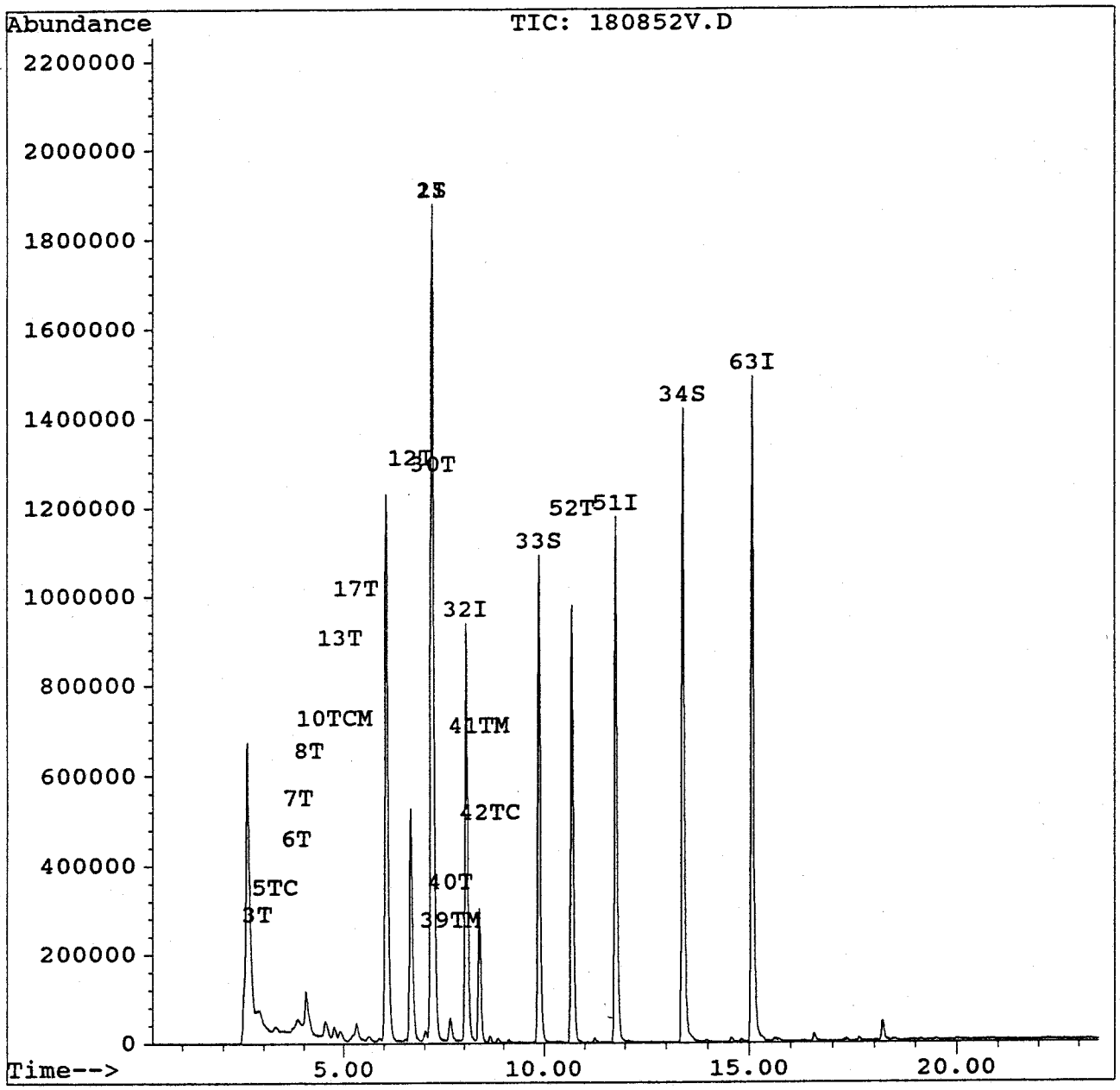
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	2.6	J
000107-06-2	1,2-Dichloroethane	1.8	J
000079-01-6	Trichloroethene	16	
000078-87-5	1,2-Dichloropropane	1	J
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	37	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180852V.D
Acq Time : 18 Jul 95 6:06 pm
Sample : MW-3 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:28 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

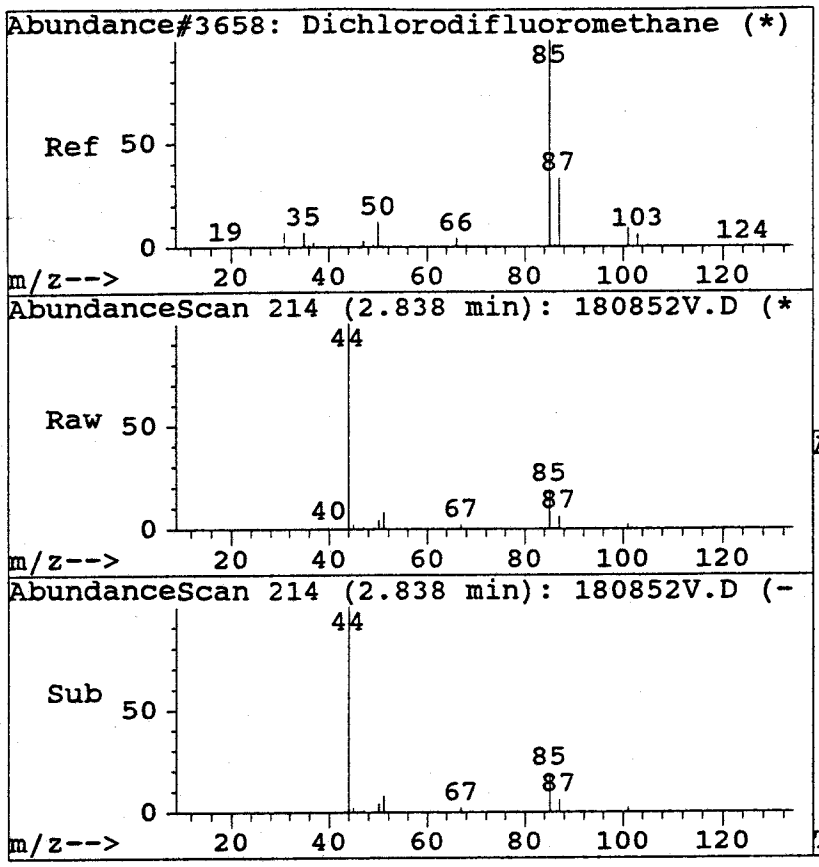
Data File : C:\HPCHEM\1\DATA\071895V\180852V.D
Acq Time : 18 Jul 95 6:06 pm
Sample : MW-3 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:28 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.18	168	1836414	50.00	ug/l		-0.03
32) 1,4-Difluorobenzene	8.05	114	1630436	50.00	ug/l		-0.03
51) Chlorobenzene-d5	11.77	117	1441261	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	15.07	152	1005145	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.18	113	976754	48.78	ug/l		97.55%
33) Toluene-d8	9.87	98	1653546	49.43	ug/l		98.86%
34) Bromofluorobenzene	13.40	174	987093	47.72	ug/l		95.45%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.84	85	89473	7.18	ug/l		99
5) Vinyl Chloride	3.28	62	17091	3.05	ug/l		98
6) Chloroethane	3.81	64	29270	8.69	ug/l		94
7) Bromomethane	3.86	94	15077	2.38	ug/l	m	90
8) Trichlorofluoromethane	4.13	101	16921	1.13	ug/l		95
10) 1,1-Dichloroethene	4.77	96	30608	3.67	ug/l		93
12) cis-1,2-Dichloroethene	6.66	96	497915	50.39	ug/l		88
13) Acetone	4.91	43	90209	6.32	ug/l	#	90
17) Methylene Chloride	5.31	84	38643	4.46	ug/l		94
30) 1,1,1-Trichloroethane	7.23	97	496318	21.17	ug/l	#	63
39) Benzene	7.65	78	65359	2.56	ug/l	#	79
40) 1,2-Dichloroethane	7.66	62	41168	1.84	ug/l	#	90
41) Trichloroethene	8.38	95	245551	15.66	ug/l		98
42) 1,2-Dichloropropane	8.65	63	11986	1.04	ug/l	#	84
52) Tetrachloroethene	10.69	166	756592	37.03	ug/l	#	79

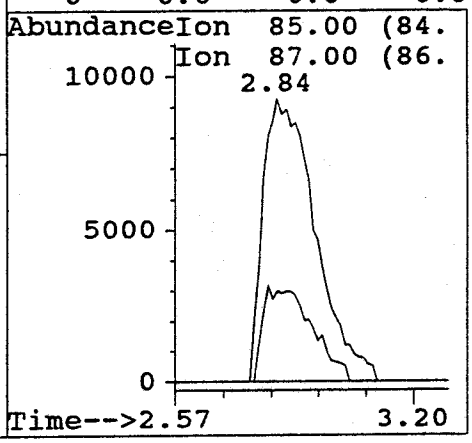
(#) = qualifier out of range (m) = manual integration

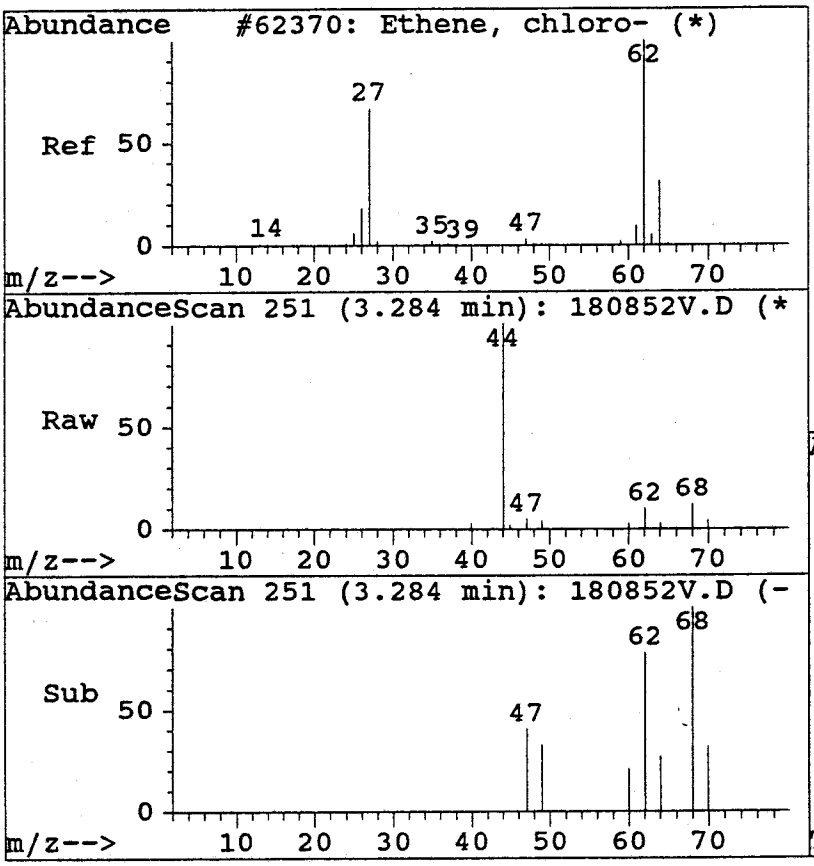


#3
Dichlorodifluoromethane
Concen: 7.18 ug/l $+CO_2$
RT: 2.84 min Scan# 214
Delta R.T. -0.05 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:85 Resp: 89473

Ion	Ratio	Lower	Upper
85	100		
87	32.2	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

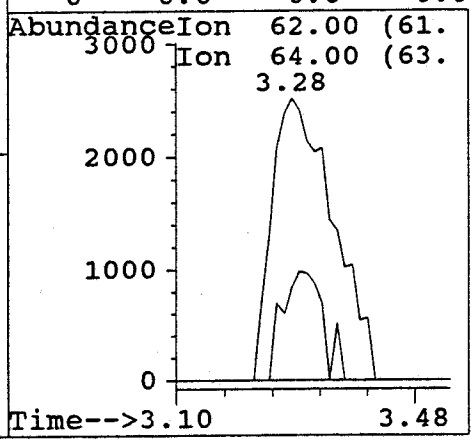


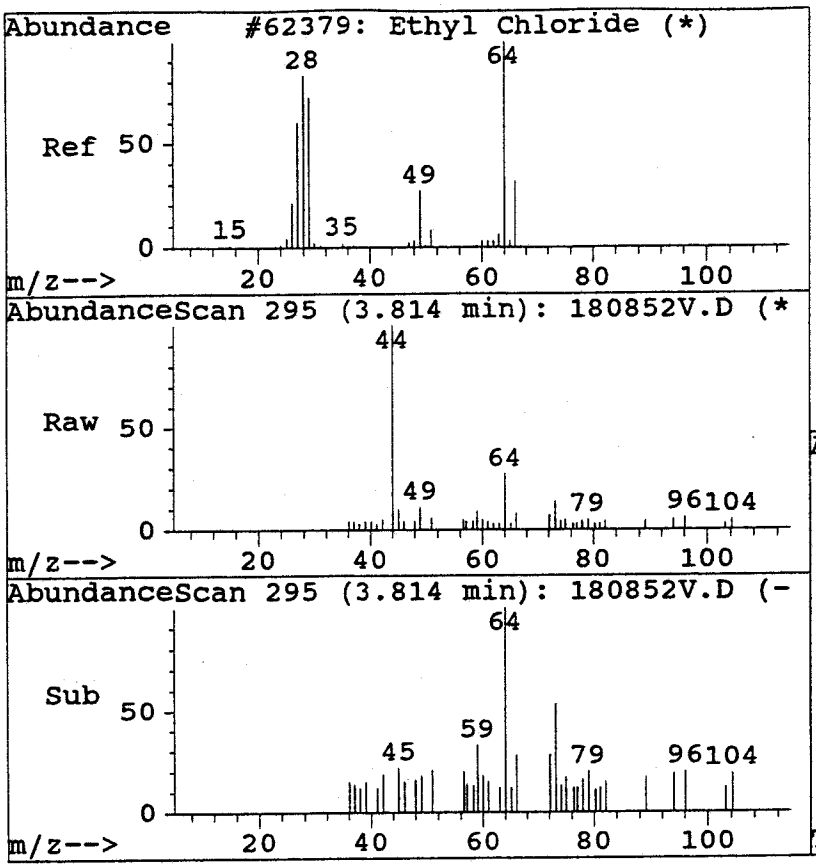


#5
Vinyl Chloride
Concen: 3.05 ug/l
RT: 3.28 min Scan# 251
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:62 Resp: 17091

Ion	Ratio	Lower	Upper
62	100		
64	33.9	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

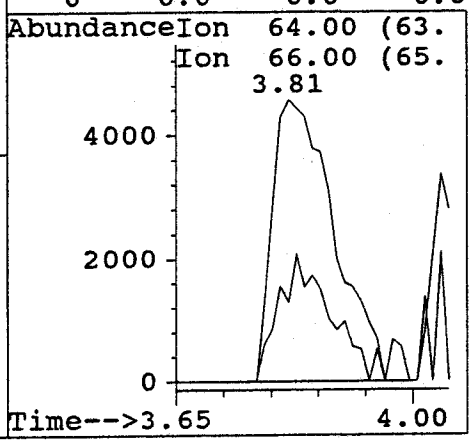


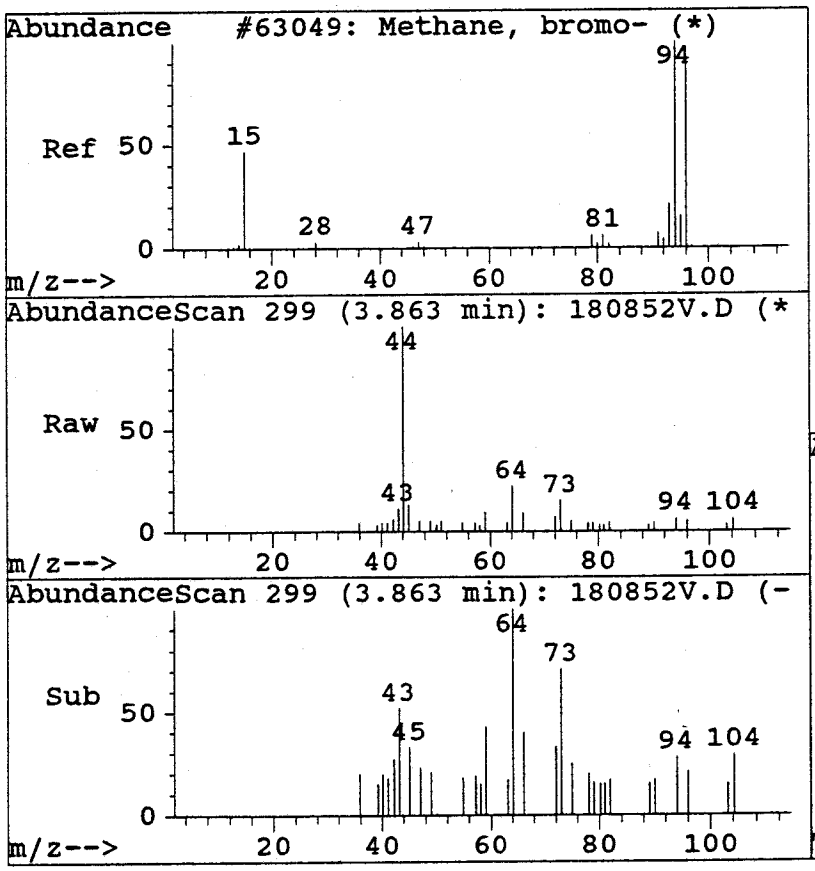


#6
Chloroethane
Concen: 8.69 ug/l
RT: 3.81 min Scan# 295
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:64 Resp: 29270

Ion	Ratio	Lower	Upper
64	100		
66	28.1	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

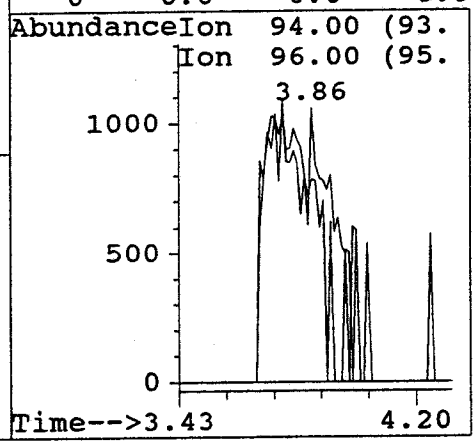


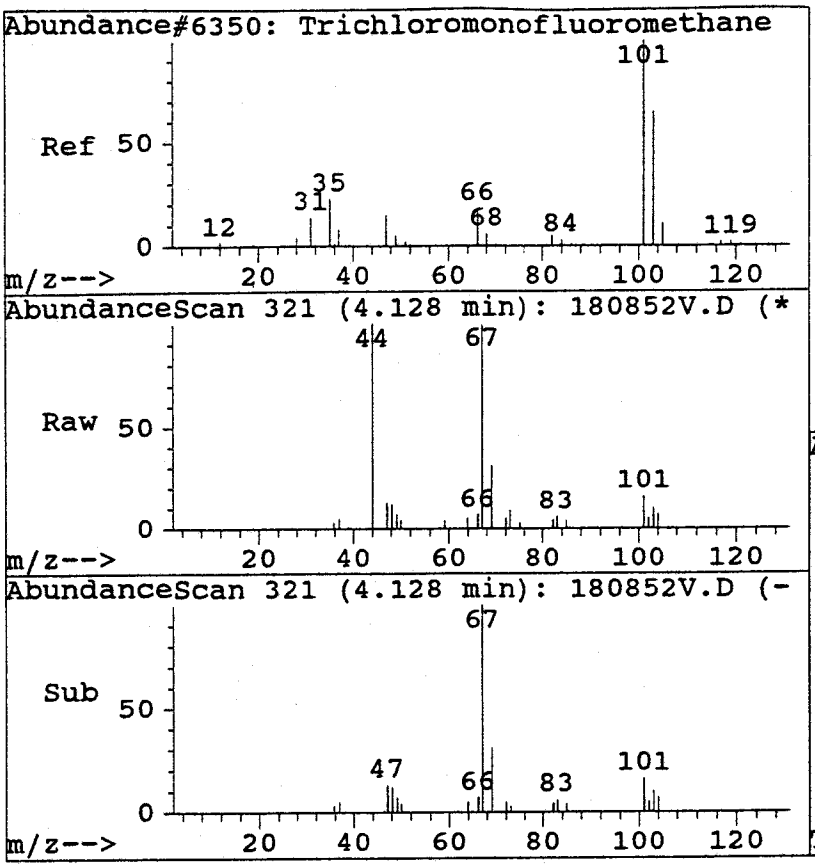


#7
Bromomethane
Concen: 2.38 ug/l m
RT: 3.86 min Scan# 299
Delta R.T. 0.12 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:94 Resp: 15077

Ion	Ratio	Lower	Upper
94	100		
96	94.2	78.0	117.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

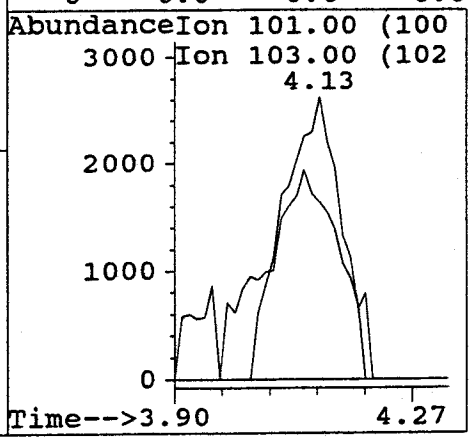


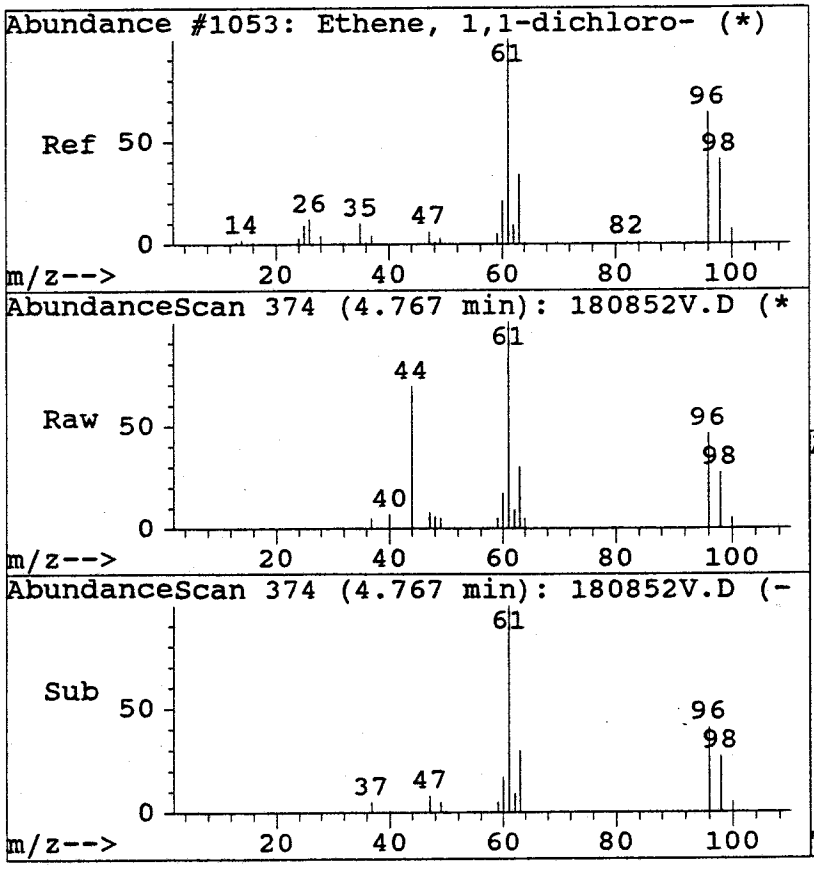


#8
Trichlorofluoromethane
Concen: 1.13 ug/l
RT: 4.13 min Scan# 321
Delta R.T. 0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:101 Resp: 16921

Ion	Ratio	Lower	Upper
101	100		
103	62.5	53.4	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

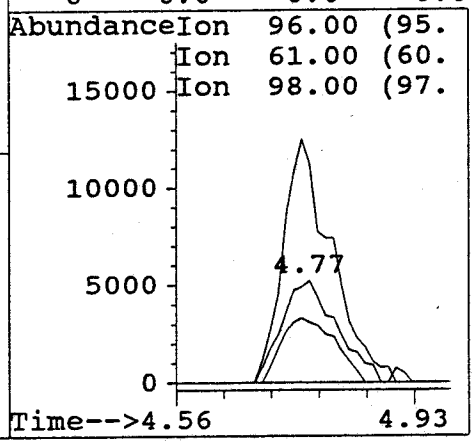


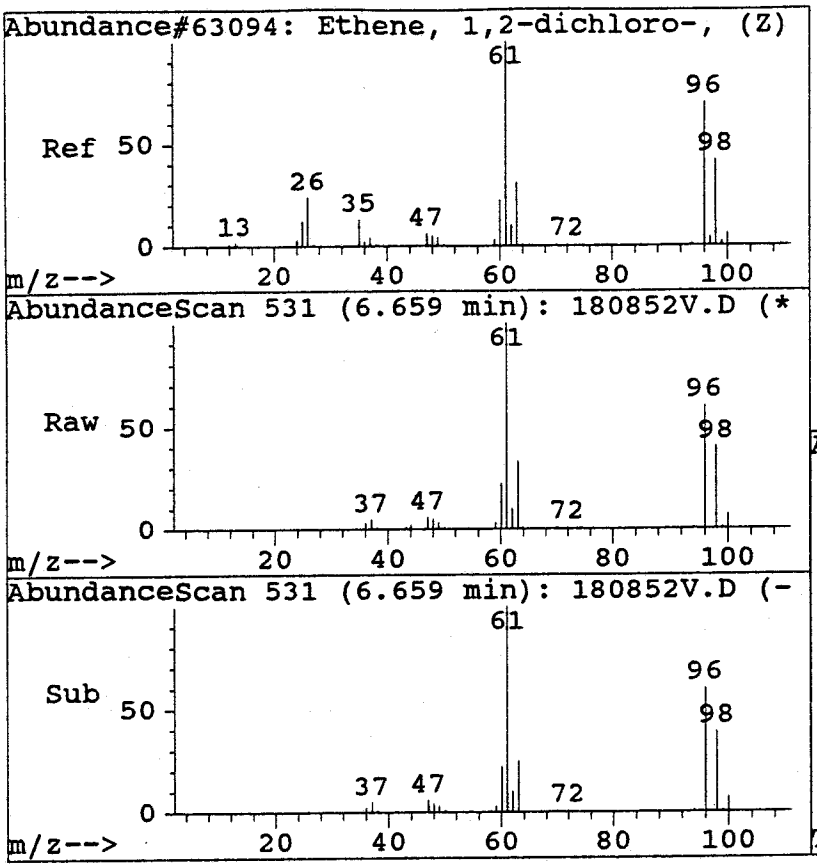


#10
1,1-Dichloroethene
Concen: 3.67 ug/l
RT: 4.77 min Scan# 374
Delta R.T. 0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:96 Resp: 30608

Ion	Ratio	Lower	Upper
96	100		
61	215.8	163.8	245.6
98	59.1	50.4	75.6
0	0.0	0.0	0.0

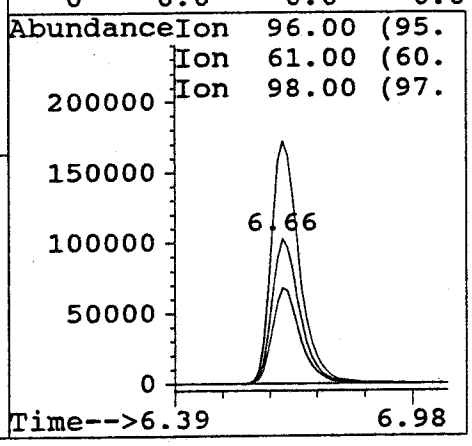


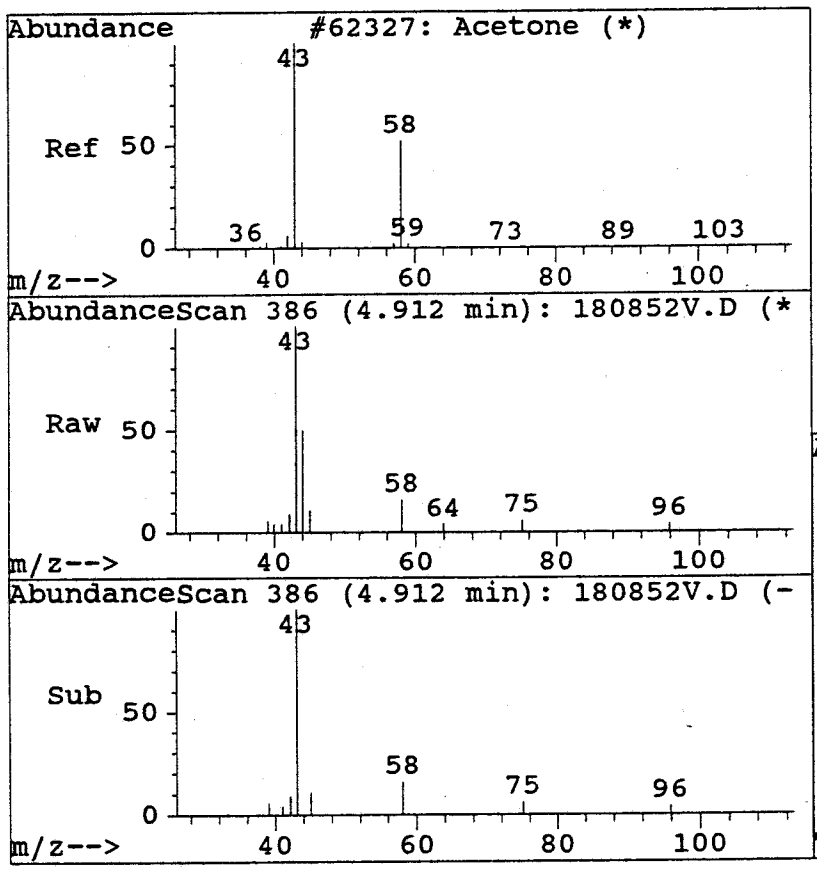


#12
cis-1,2-Dichloroethene
Concen: 50.39 ug/l
RT: 6.66 min Scan# 531
Delta R.T. -0.03 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:96 Resp: 497915

Ion	Ratio	Lower	Upper
96	100		
61	167.4	152.1	228.1
98	66.2	54.4	81.6
0	0.0	0.0	0.0

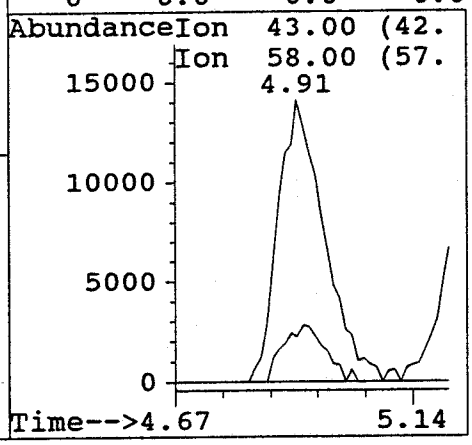


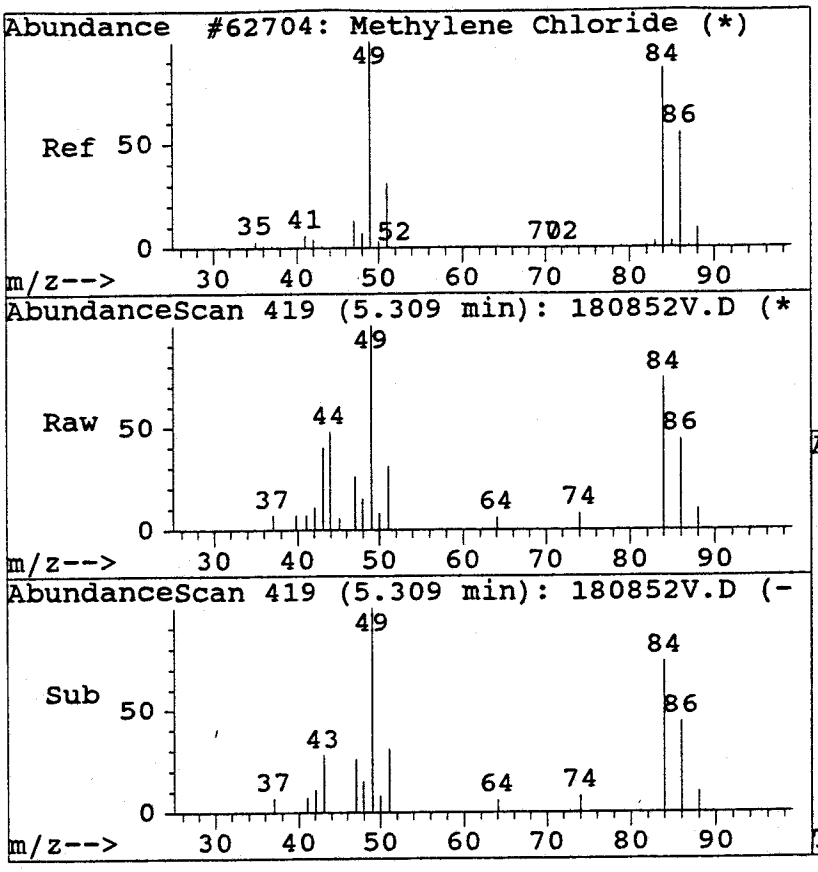


#13
Acetone
Concen: 6.32 ug/l
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:43 Resp: 90209

Ion	Ratio	Lower	Upper
43	100		
58	15.6	16.3	24.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

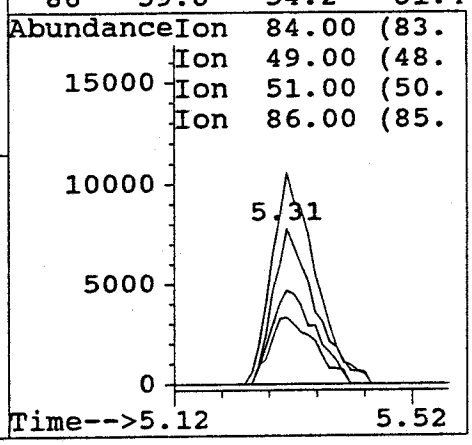


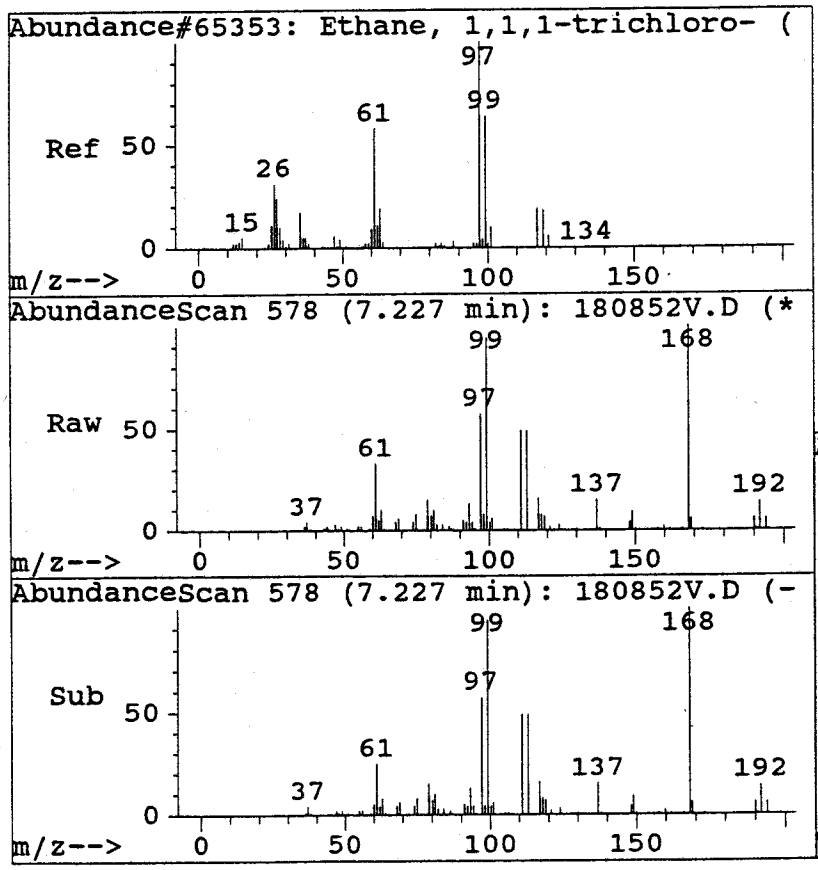


#17
Methylene Chloride
Concen: 4.46 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:84 Resp: 38643

Ion	Ratio	Lower	Upper
84	100		
49	135.7	113.2	169.8
51	42.4	35.3	52.9
86	59.8	54.2	81.4

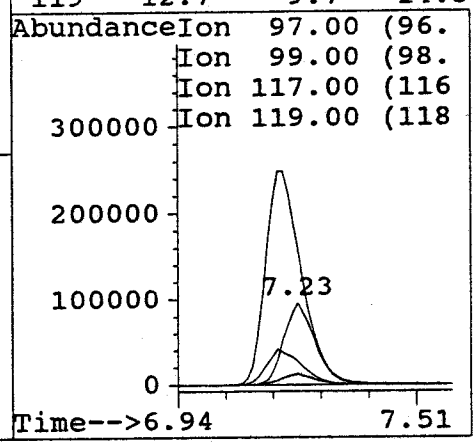


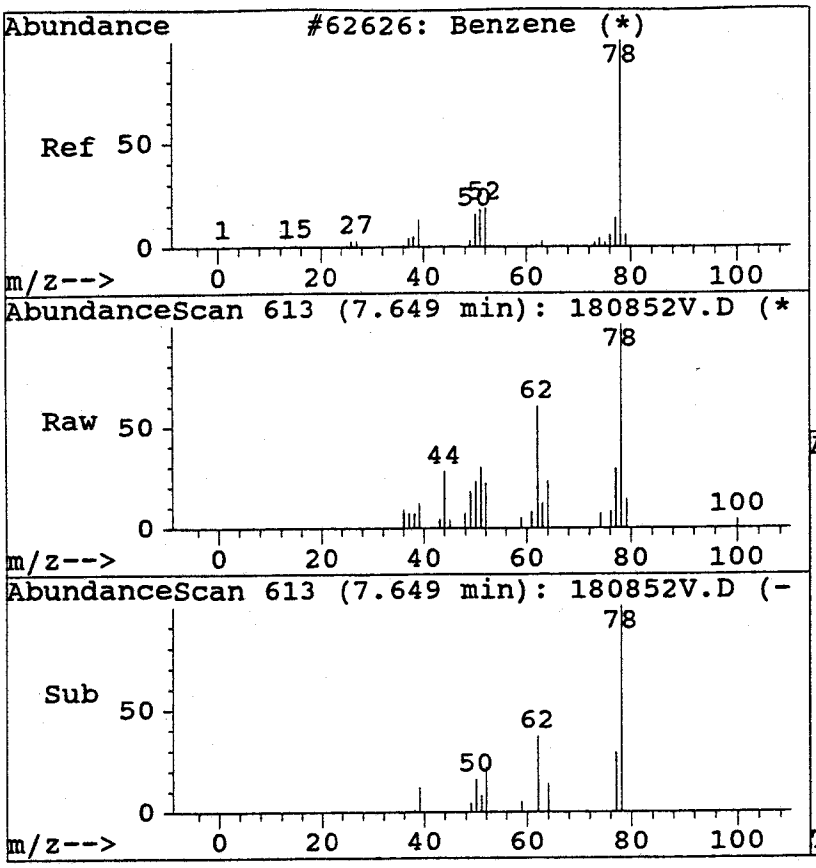


#30
1,1,1-Trichloroethane +IS
Concen: 21.17 ug/l
RT: 7.23 min Scan# 578
Delta R.T. -0.03 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:97 Resp: 496318

Ion	Ratio	Lower	Upper
97	100		
99	164.1	93.1	139.7#
117	27.5	15.4	23.0#
119	12.7	9.7	14.5

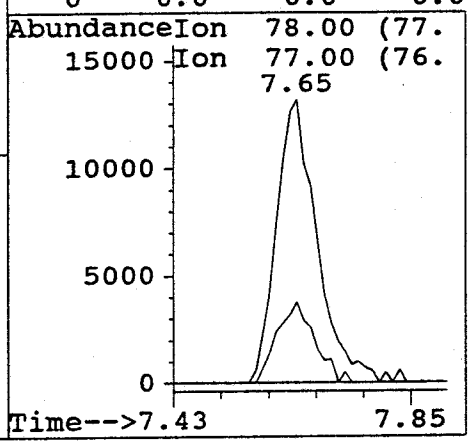


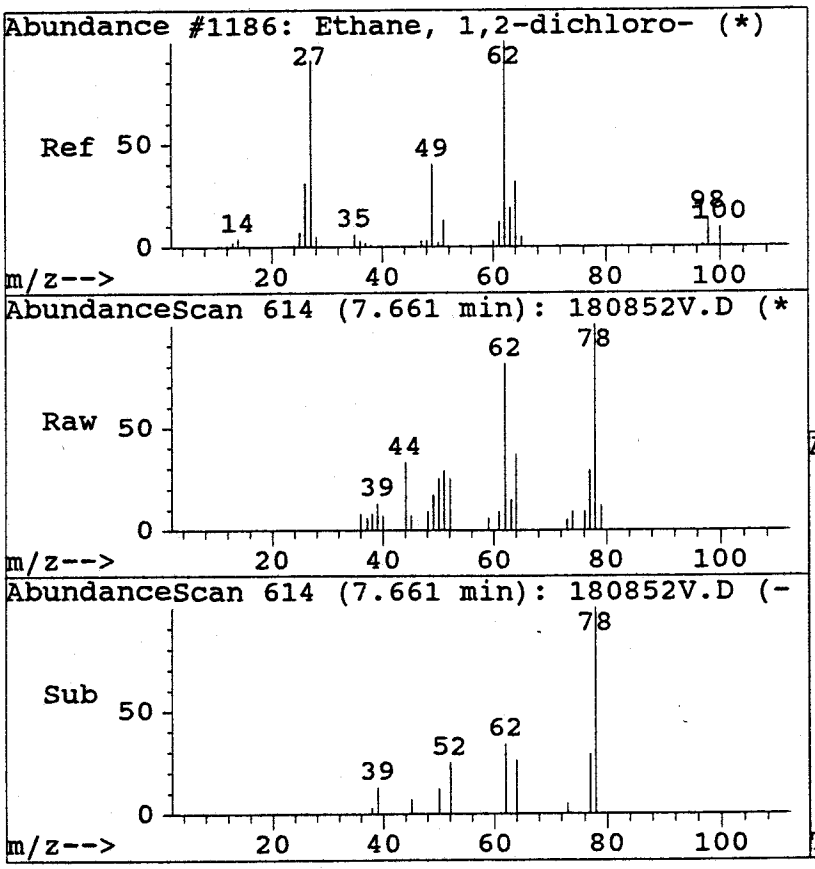


#39
Benzene
Concen: 2.56 ug/l
RT: 7.65 min Scan# 613
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:78 Resp: 65359

Ion	Ratio	Lower	Upper
78	100		
77	28.6	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

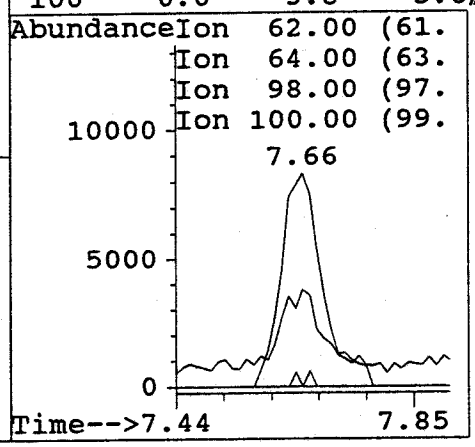


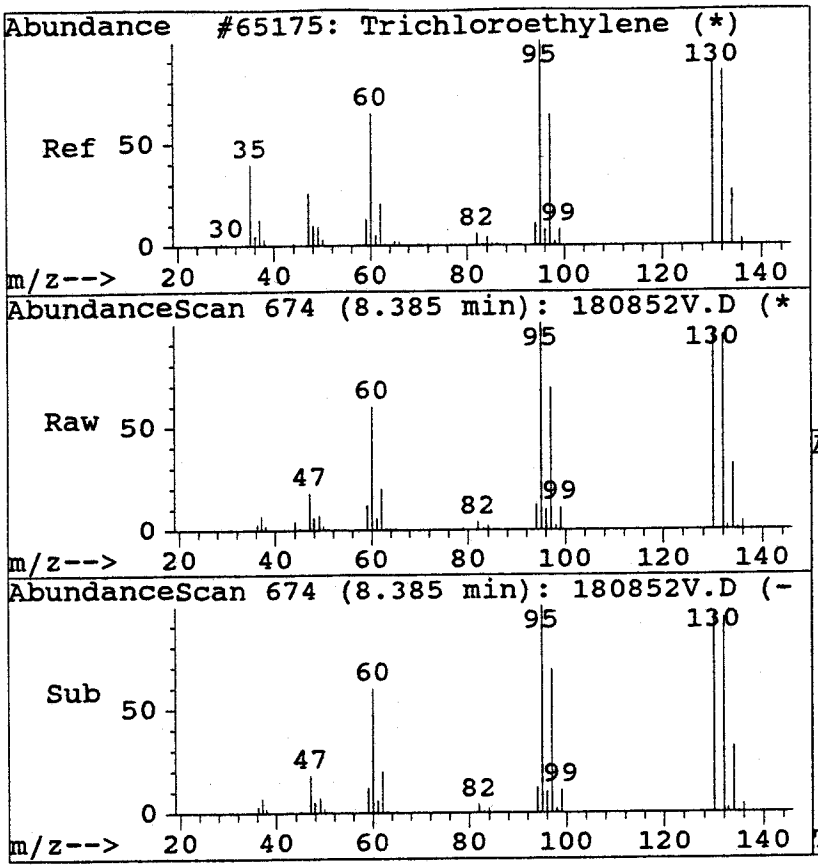


#40
1,2-Dichloroethane + benzene
Concen: 1.84 ug/l
RT: 7.66 min Scan# 614
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:62 Resp: 41168

Ion	Ratio	Lower	Upper
62	100		
64	34.9	24.6	37.0
98	0.0	5.4	8.2#
100	0.0	3.8	5.6#

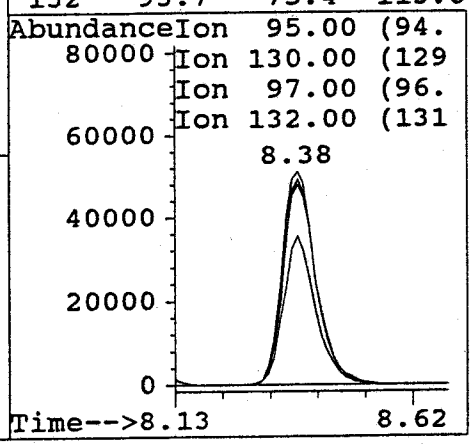


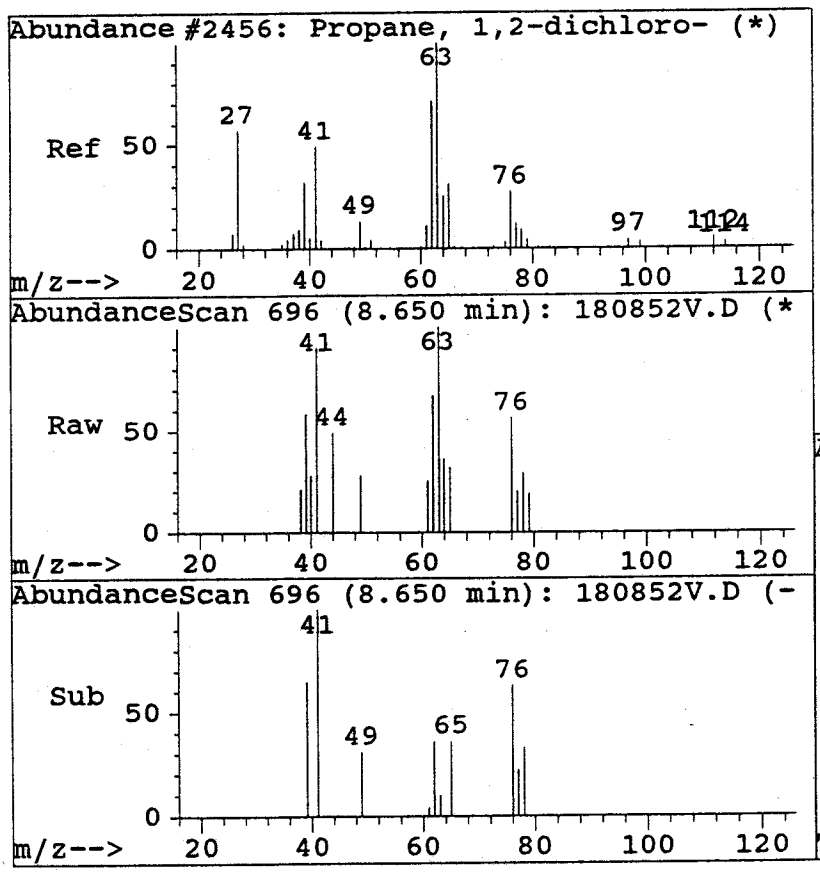


#41
Trichloroethene
Concen: 15.66 ug/l
RT: 8.38 min Scan# 674
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:95 Resp: 245551

Ion	Ratio	Lower	Upper
95	100		
130	96.3	80.0	120.0
97	69.3	53.8	80.8
132	93.7	75.4	113.0

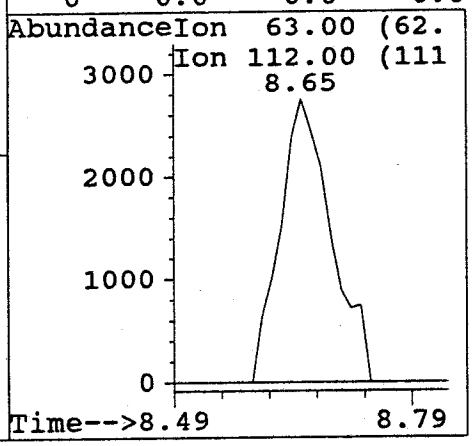


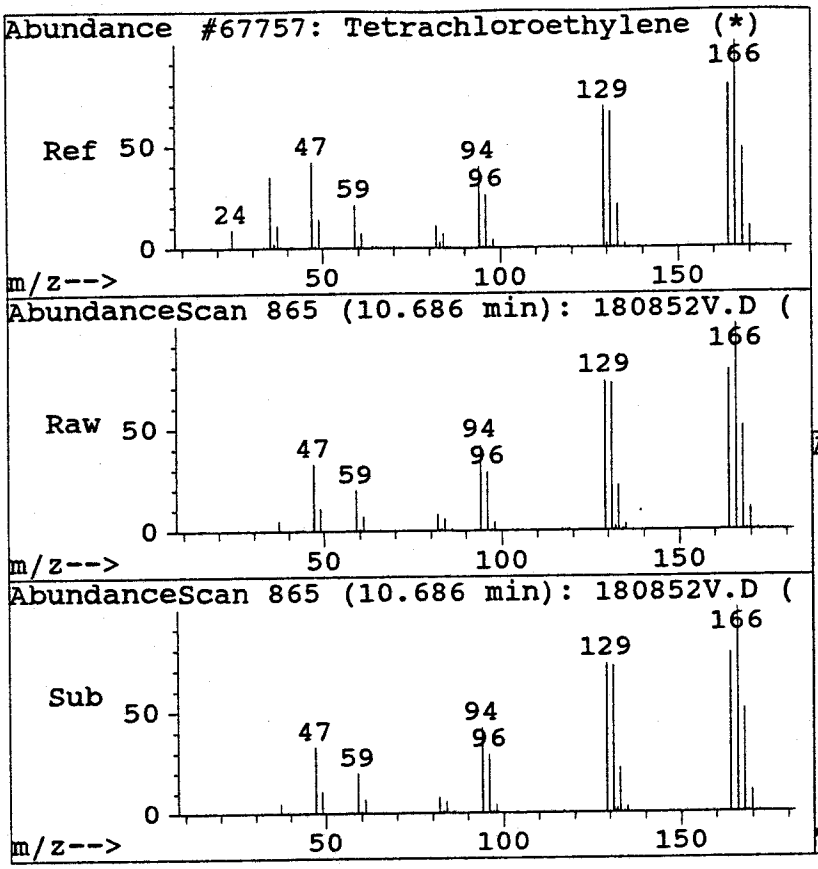


#42
1,2-Dichloropropane
Concen: 1.04 ug/l
RT: 8.65 min Scan# 696
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:63 Resp: 11986

Ion	Ratio	Lower	Upper
63	100		
112	0.0	4.2	6.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

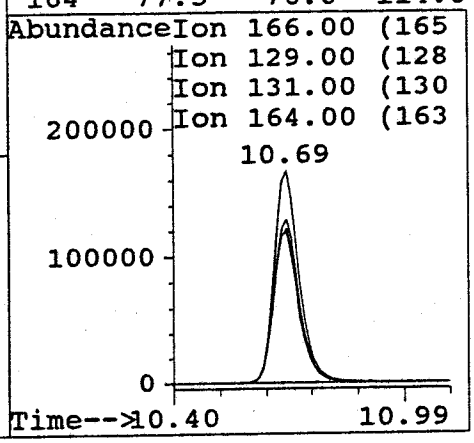




#52
Tetrachloroethene
Concen: 37.03 ug/l
RT: 10.69 min Scan# 865
Delta R.T. -0.02 min
Lab File: 180852V.D
Acq: 18 Jul 95 6:06 pm

Tgt Ion:166 Resp: 756592

Ion	Ratio	Lower	Upper
166	100		
129	73.2	75.4	113.0#
131	71.6	75.0	112.4#
164	77.5	76.0	114.0

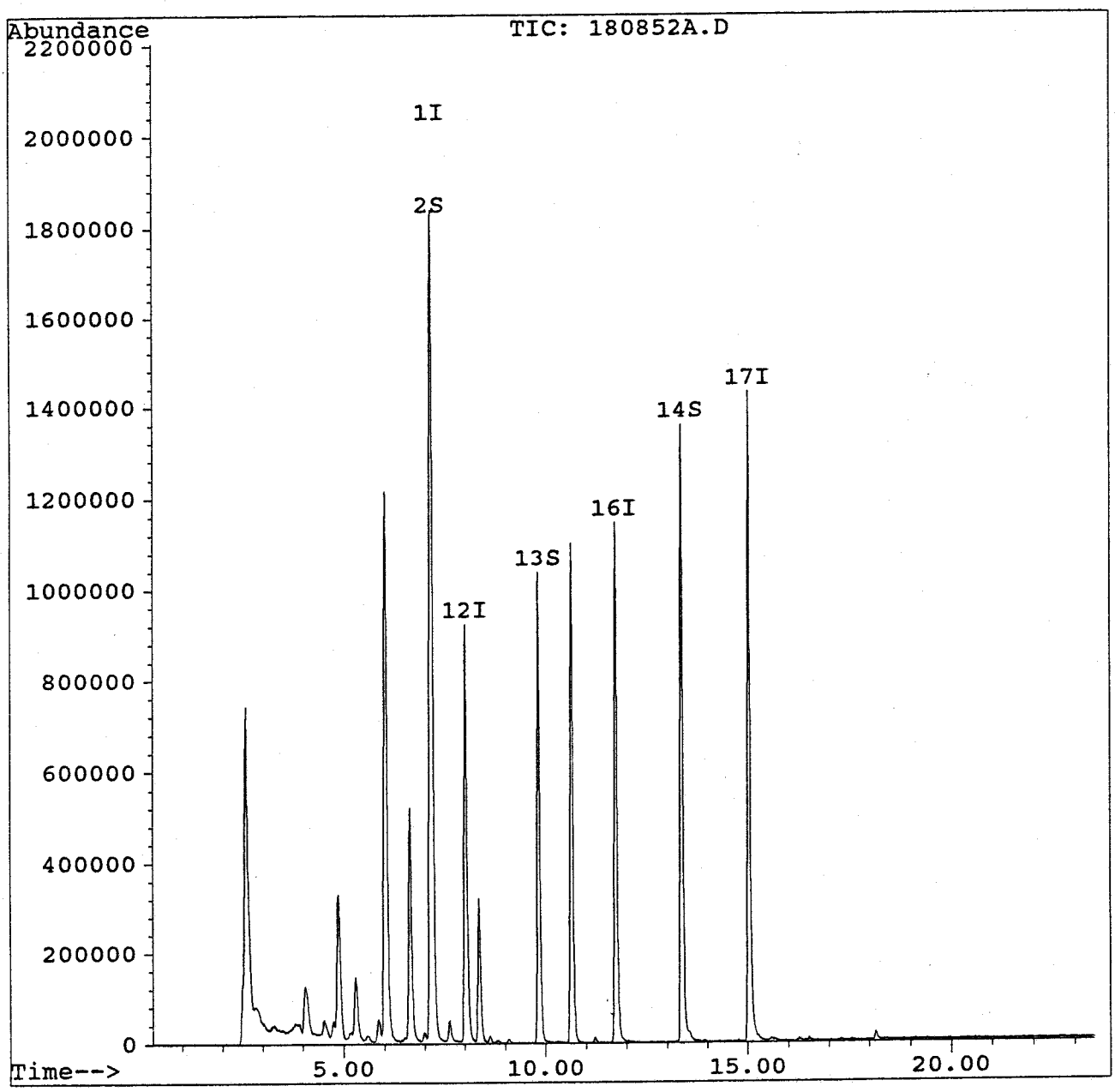


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180852A.D
Acq Time : 19 Jul 95 3:58 pm
Sample : MW-3 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 8:57 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180852A.D
Acq Time : 19 Jul 95 3:58 pm
Sample : MW-3 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 8:57 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.16	168	1824852	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	8.01	114	1601533	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.72	117	1418008	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.03	152	984571	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.14	113	932308	49.16	ug/l	98.32%
13) Toluene-d8	9.83	98	1588674	50.17	ug/l	100.33%
14) Bromofluorobenzene	13.35	174	959188	50.44	ug/l	100.87%
Target Compounds						**Qvalue**

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-6

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180853V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180853V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	2.2	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	23	
000075-00-3	Chloroethane	16	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	1.3	J
000156-60-5	trans-1,2-Dichloroethene	5.7	
000156-59-2	cis-1,2-Dichloroethene	430	D
00067-64-1	Acetone	5.1	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	4.4	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-6

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180853V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180853V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

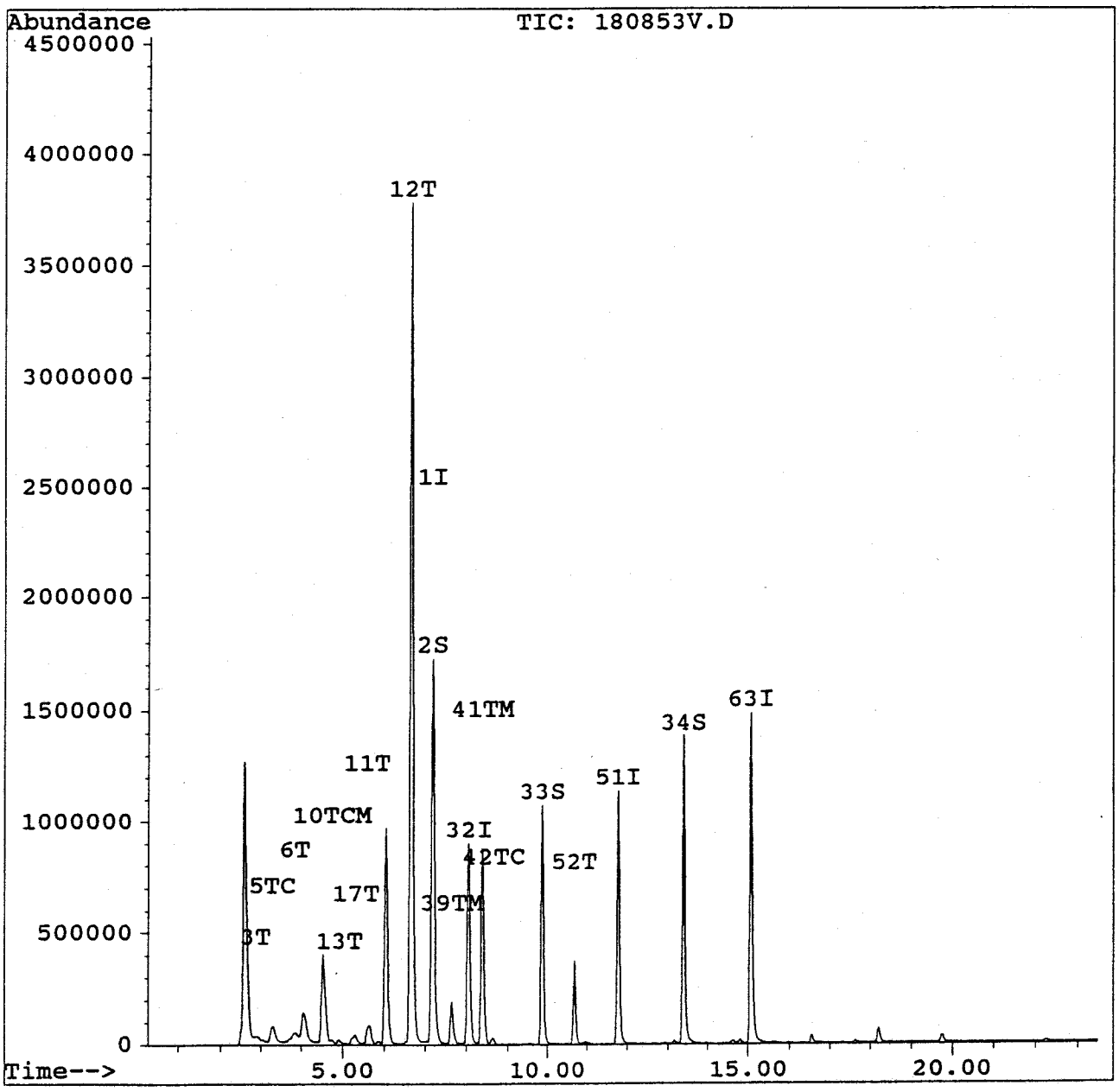
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	13	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	47	
000078-87-5	1,2-Dichloropropane	1	J
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	14	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180853V.D
Acq Time : 18 Jul 95 6:41 pm
Sample : MW-6 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:37 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

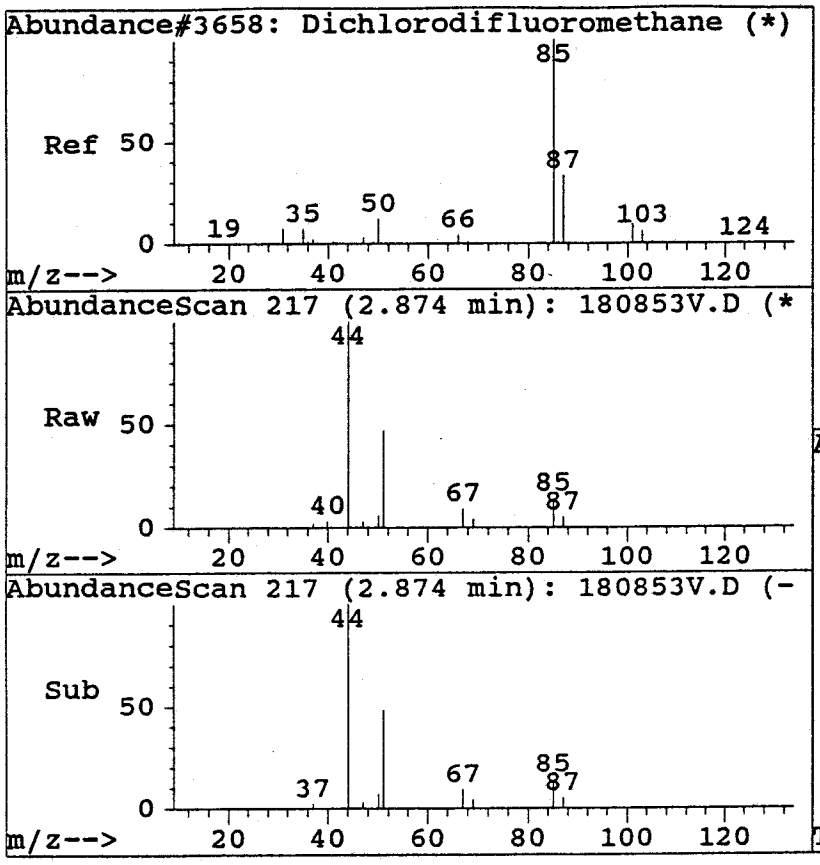
Data File : C:\HPCHEM\1\DATA\071895V\180853V.D
Acq Time : 18 Jul 95 6:41 pm
Sample : MW-6 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:37 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.18	168	1763230	50.00	ug/l		-0.03
32) 1,4-Difluorobenzene	8.05	114	1585168	50.00	ug/l		-0.03
51) Chlorobenzene-d5	11.77	117	1408769	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	15.06	152	998108	50.00	ug/l		-0.03
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.18	113	960177	49.94	ug/l		99.88%
33) Toluene-d8	9.87	98	1624451	49.95	ug/l		99.90%
34) Bromofluorobenzene	13.40	174	981694	48.82	ug/l		97.63%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.87	85	26260	2.19	ug/l		100
5) Vinyl Chloride	3.27	62	121080	22.51	ug/l		98
6) Chloroethane	3.83	64	53355	16.49	ug/l		92
10) 1,1-Dichloroethene	4.74	96	10223	1.28	ug/l	#	90
11) trans-1,2-Dichloroethene	5.59	96	45179	5.68	ug/l		89
12) cis-1,2-Dichloroethene	6.66	96	3710075	391.04	ug/l		85
13) Acetone	4.91	43	70197	5.12	ug/l		95
17) Methylene Chloride	5.31	84	36367	4.37	ug/l		97
39) Benzene	7.64	78	314391	12.68	ug/l	#	77
41) Trichloroethene	8.39	95	721500	47.34	ug/l		95
42) 1,2-Dichloropropane	8.66	63	11281	1.01	ug/l	#	84
52) Tetrachloroethene	10.68	166	281628	14.10	ug/l	#	78

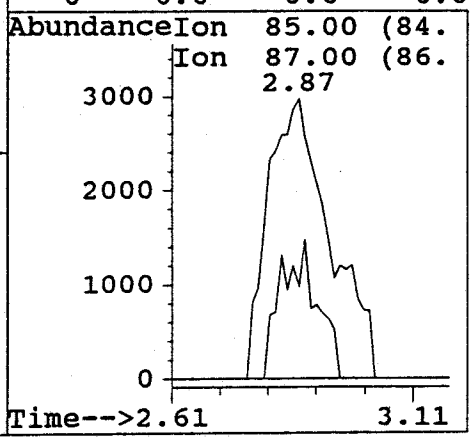
(#) = qualifier out of range (m) = manual integration

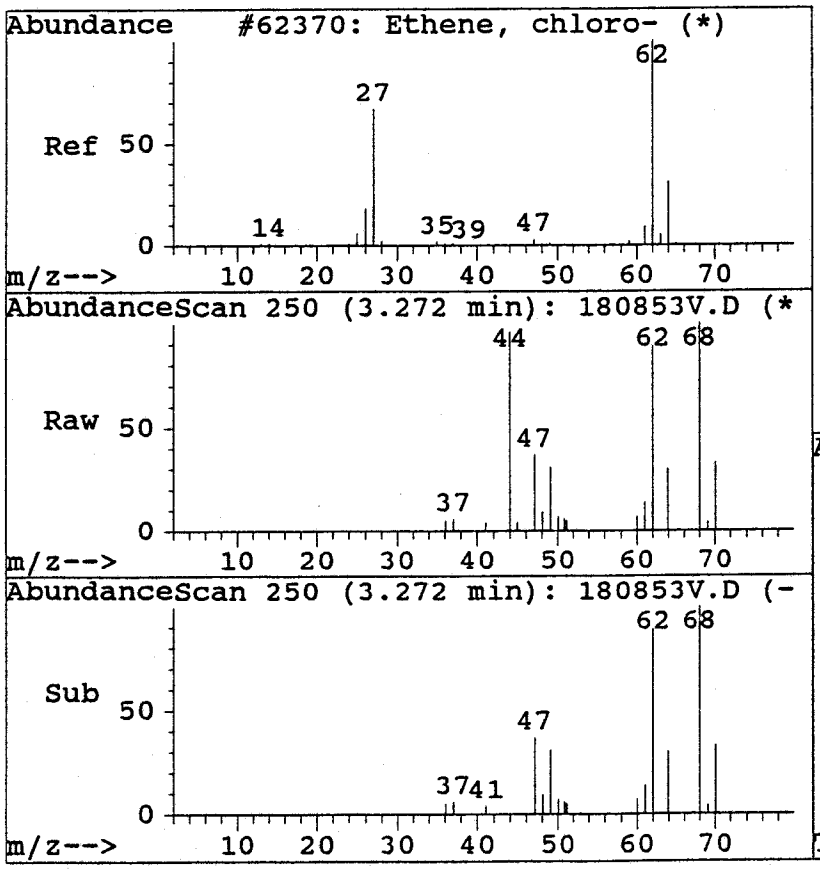


#3
Dichlorodifluoromethane $+Cl_2$
Concen: 2.19 ug/l
RT: 2.87 min Scan# 217
Delta R.T. -0.01 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:85 Resp: 26260

Ion	Ratio	Lower	Upper
85	100		
87	32.6	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

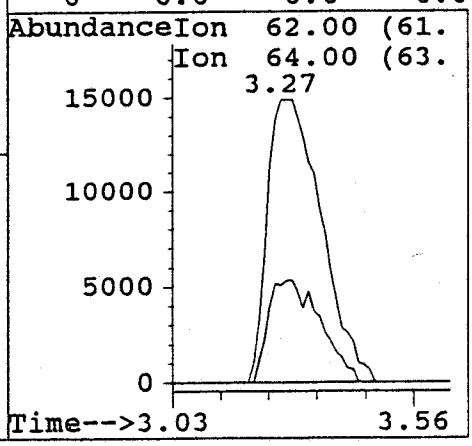


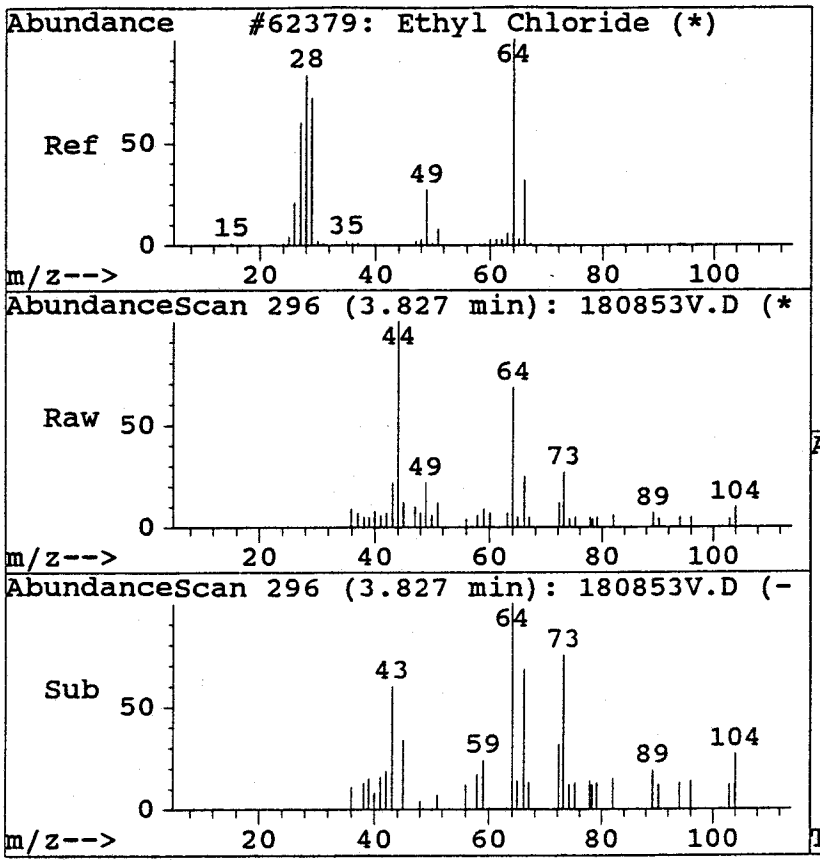


#5
Vinyl Chloride
Concen: 22.51 ug/l
RT: 3.27 min Scan# 250
Delta R.T. -0.04 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:62 Resp: 121080

Ion	Ratio	Lower	Upper
62	100		
64	34.0	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

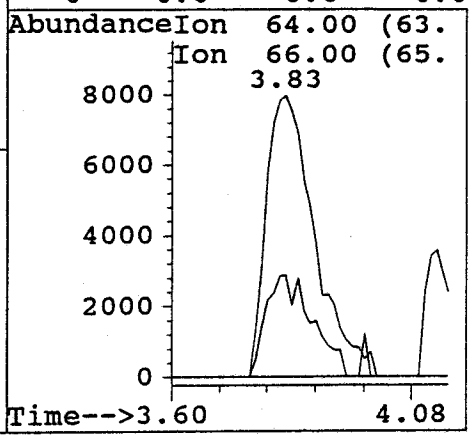


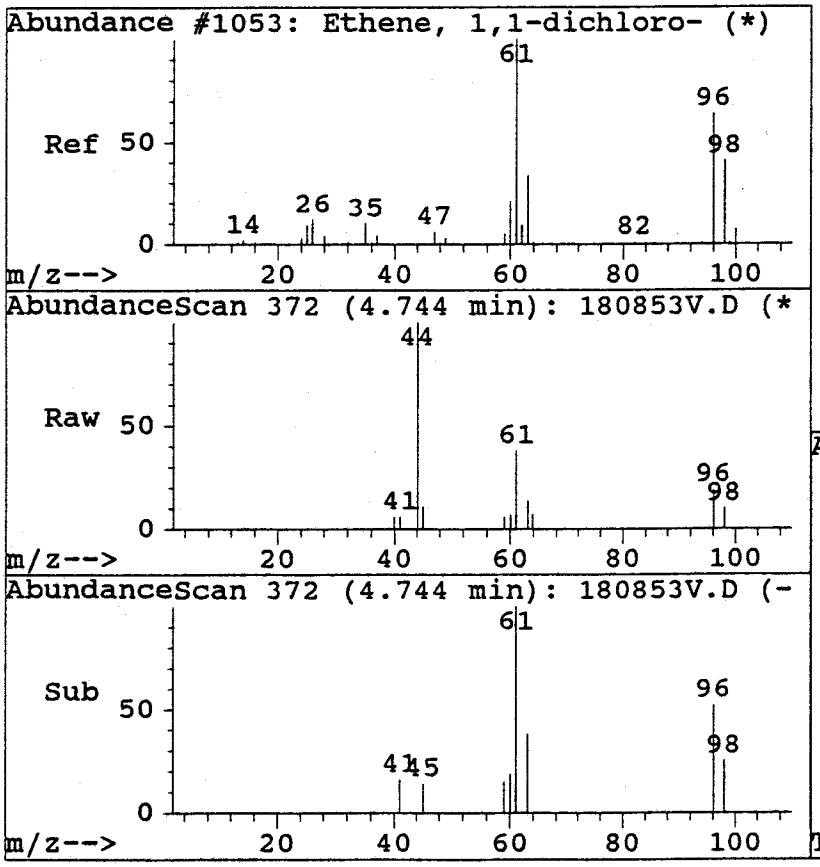


#6
Chloroethane
Concen: 16.49 ug/l
RT: 3.83 min Scan# 296
Delta R.T. -0.01 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:64 Resp: 53355

Ion	Ratio	Lower	Upper
64	100		
66	36.1	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

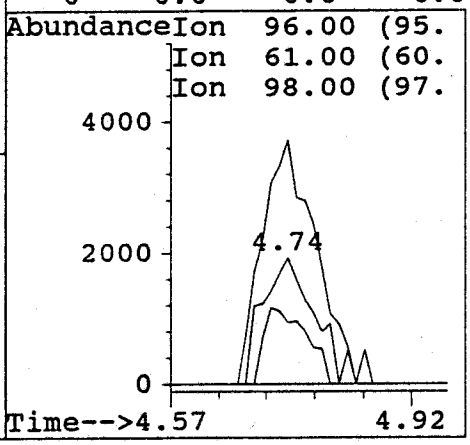


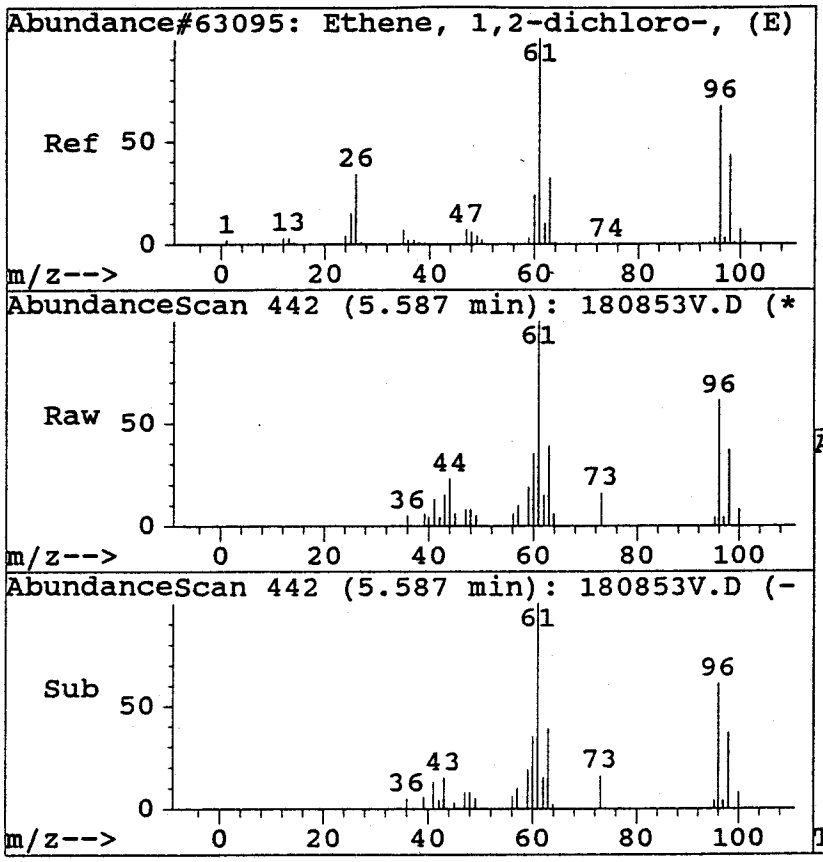


#10
1,1-Dichloroethene
Concen: 1.28 ug/l
RT: 4.74 min Scan# 372
Delta R.T. -0.00 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:96 Resp: 10223

Ion	Ratio	Lower	Upper
96	100		
61	193.5	163.8	245.6
98	49.0	50.4	75.6#
0	0.0	0.0	0.0

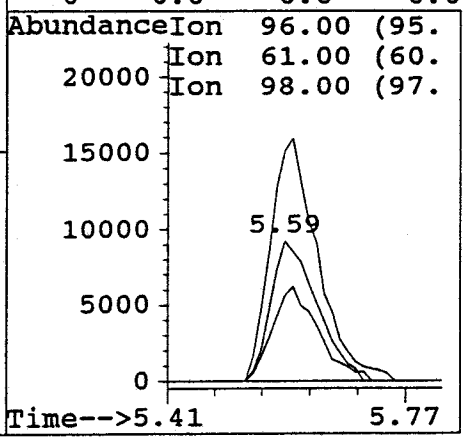


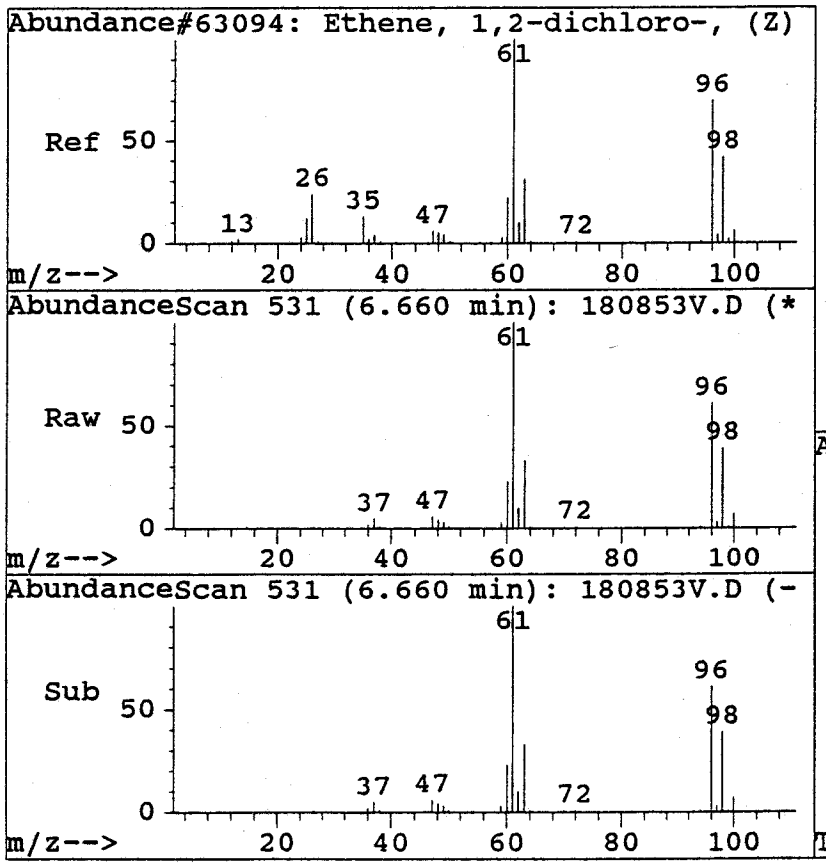


#11
trans-1,2-Dichloroethene
Concen: 5.68 ug/l
RT: 5.59 min Scan# 442
Delta R.T. -0.04 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:96 Resp: 45179

Ion	Ratio	Lower	Upper
96	100		
61	163.4	144.8	217.2
98	60.3	52.4	78.6
0	0.0	0.0	0.0

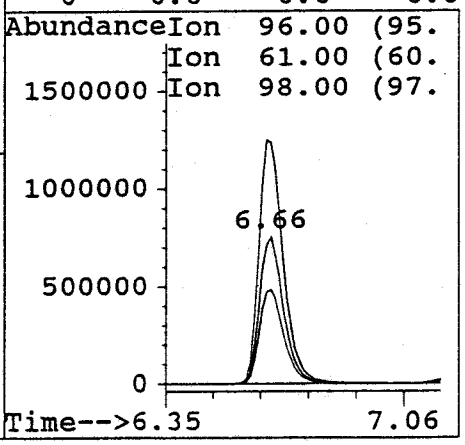


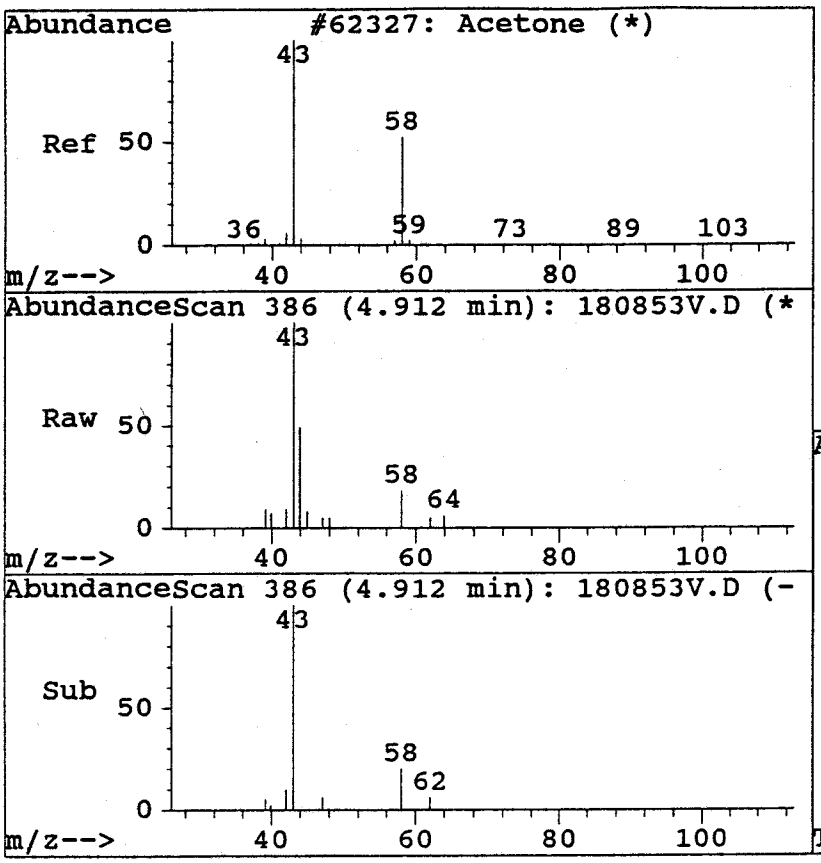


#12
cis-1,2-Dichloroethene
Concen: 391.04 ug/l
RT: 6.66 min Scan# 531
Delta R.T. -0.03 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:96 Resp: 3710075

Ion	Ratio	Lower	Upper
96	100		
61	162.8	152.1	228.1
98	64.1	54.4	81.6
0	0.0	0.0	0.0

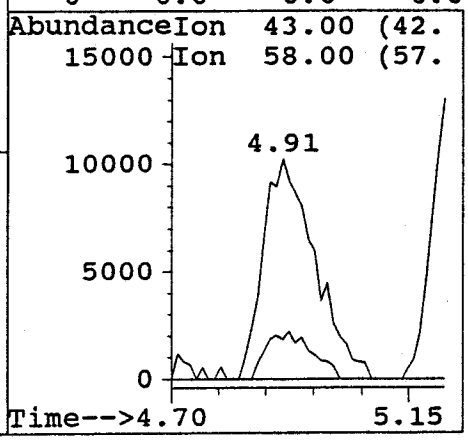


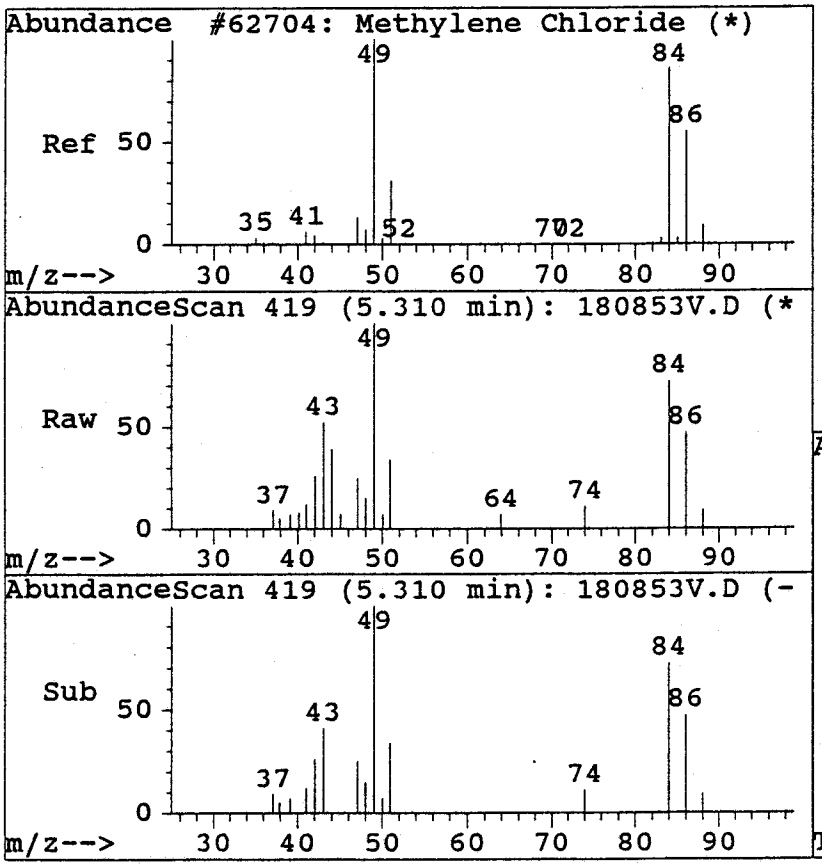


#13
Acetone
Concen: 5.12 ug/l
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:43 Resp: 70197

Ion	Ratio	Lower	Upper
43	100		
58	18.0	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

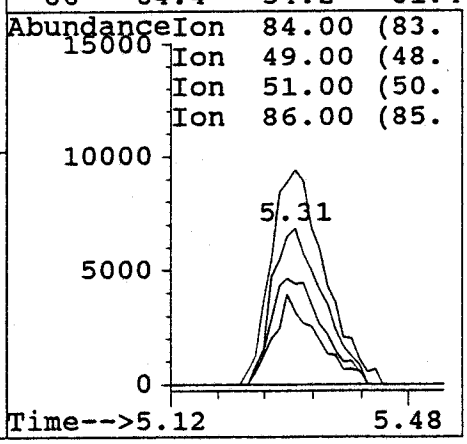


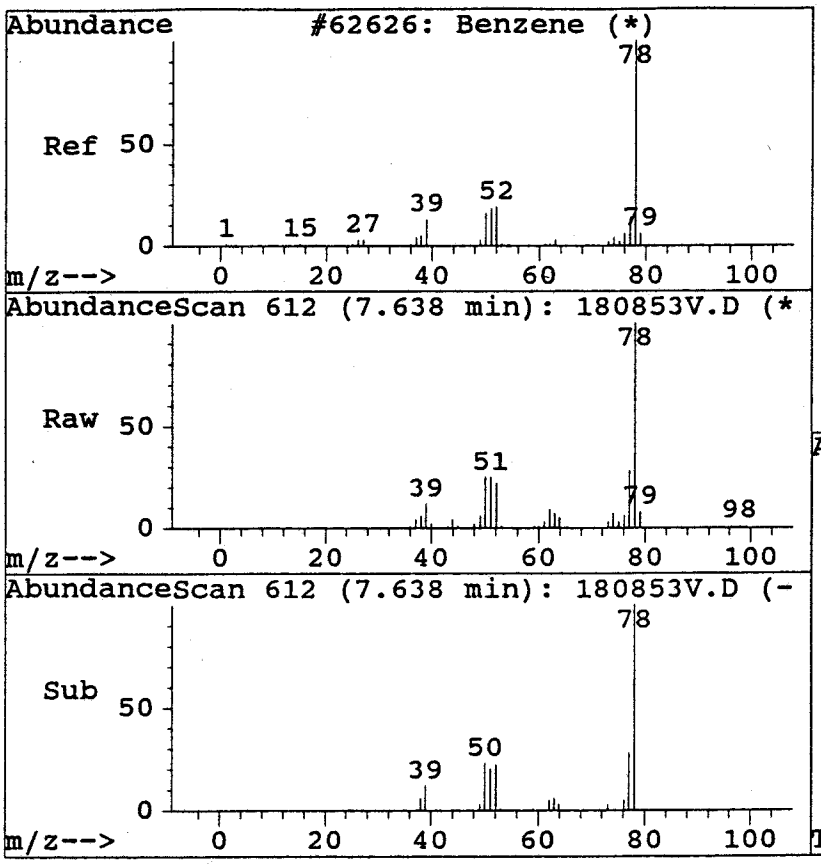


#17
Methylene Chloride
Concen: 4.37 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:84 Resp: 36367

Ion	Ratio	Lower	Upper
84	100		
49	138.1	113.2	169.8
51	46.6	35.3	52.9
86	64.4	54.2	81.4

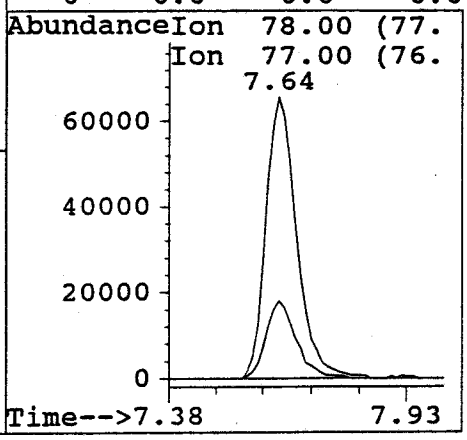


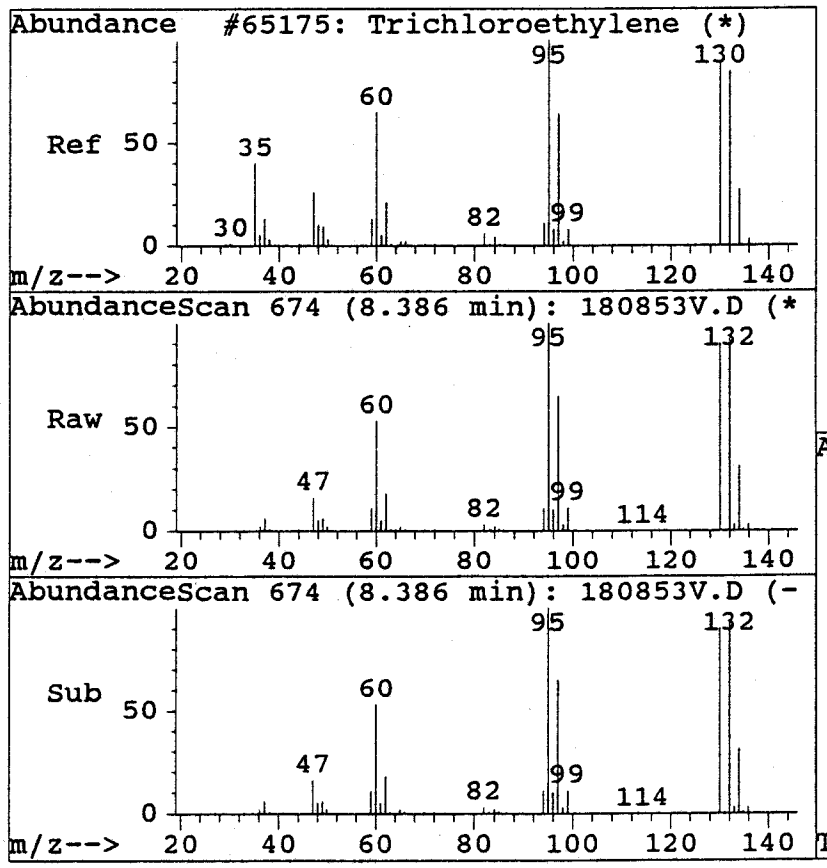


#39
Benzene
Concen: 12.68 ug/l
RT: 7.64 min Scan# 612
Delta R.T. -0.03 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:78 Resp: 314391

Ion	Ratio	Lower	Upper
78	100		
77	27.6	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

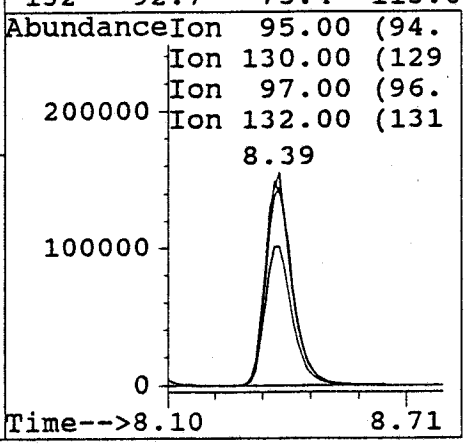


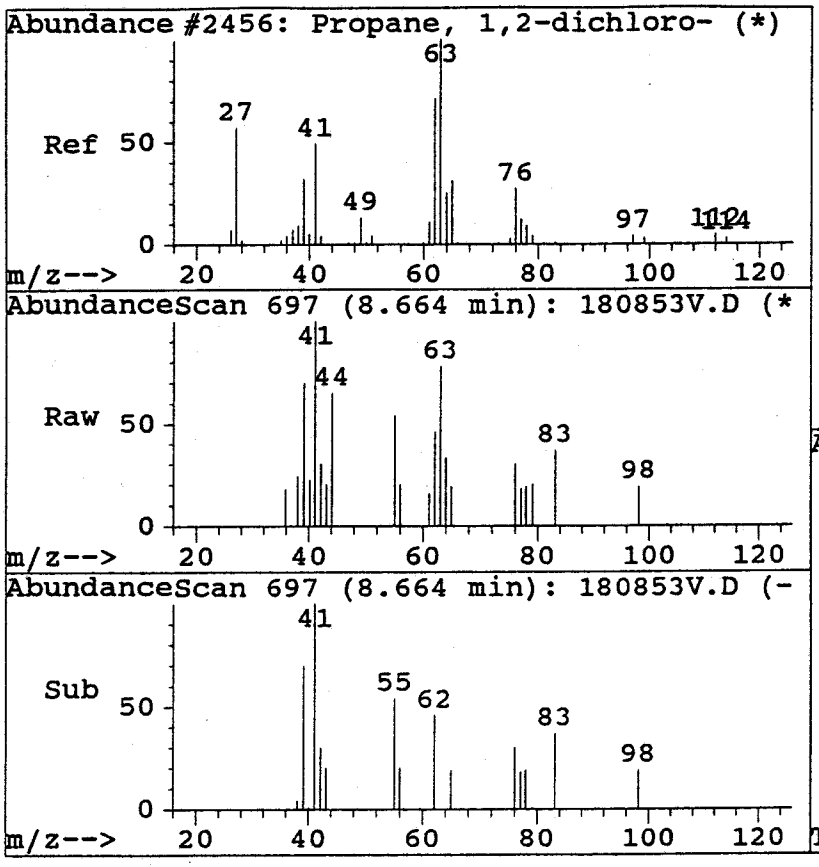


#41
Trichloroethene
Concen: 47.34 ug/l
RT: 8.39 min Scan# 674
Delta R.T. -0.02 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:95 Resp: 721500

Ion	Ratio	Lower	Upper
95	100		
130	90.5	80.0	120.0
97	65.0	53.8	80.8
132	92.7	75.4	113.0

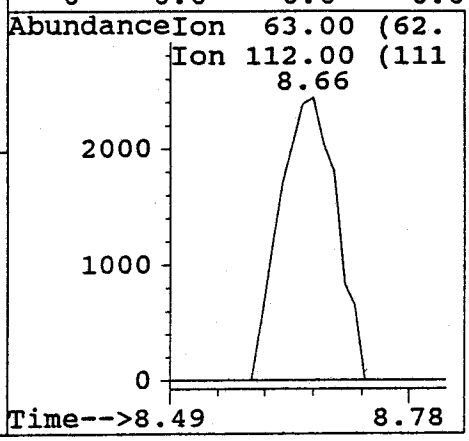


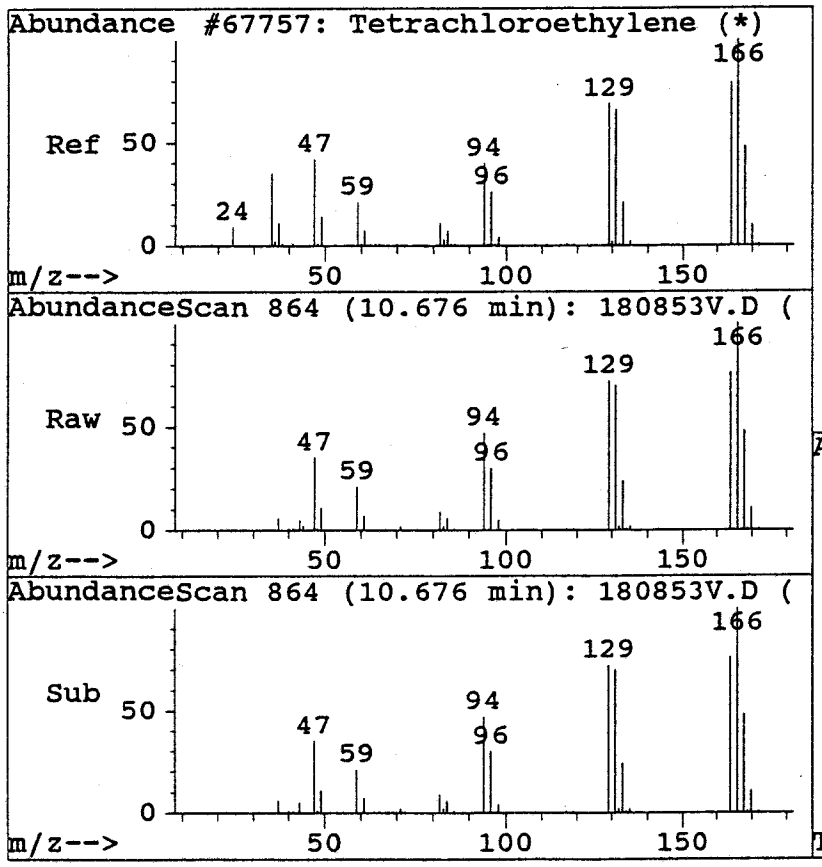


#42
1,2-Dichloropropane
Concen: 1.01 ug/l
RT: 8.66 min Scan# 697
Delta R.T. -0.00 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:63 Resp: 11281

Ion	Ratio	Lower	Upper
63	100		
112	0.0	4.2	6.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

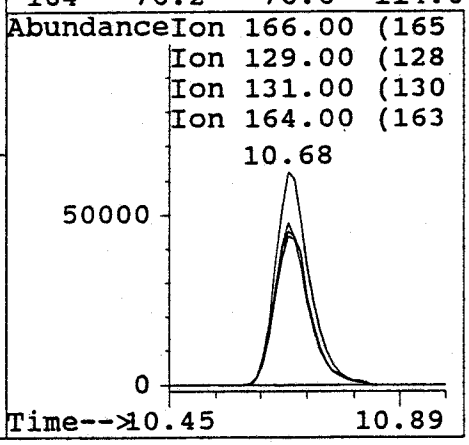




#52
Tetrachloroethene
Concen: 14.10 ug/l
RT: 10.68 min Scan# 864
Delta R.T. -0.03 min
Lab File: 180853V.D
Acq: 18 Jul 95 6:41 pm

Tgt Ion:166 Resp: 281628

Ion	Ratio	Lower	Upper
166	100		
129	72.4	75.4	113.0#
131	70.0	75.0	112.4#
164	76.2	76.0	114.0

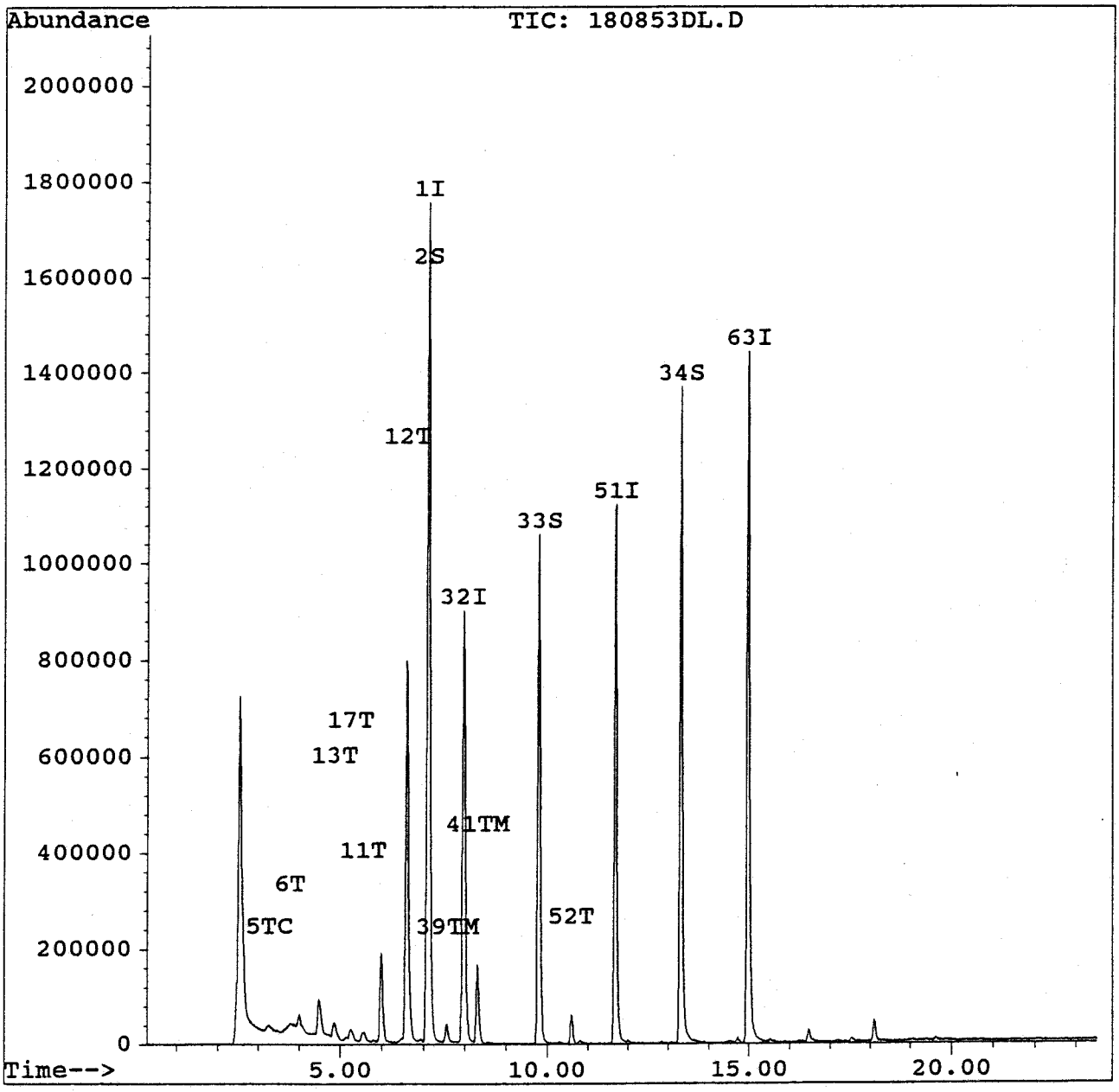


Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180853DL.D
Acq Time : 21 Jul 95 1:36 pm
Sample : MW-6DL (X5) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:29 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

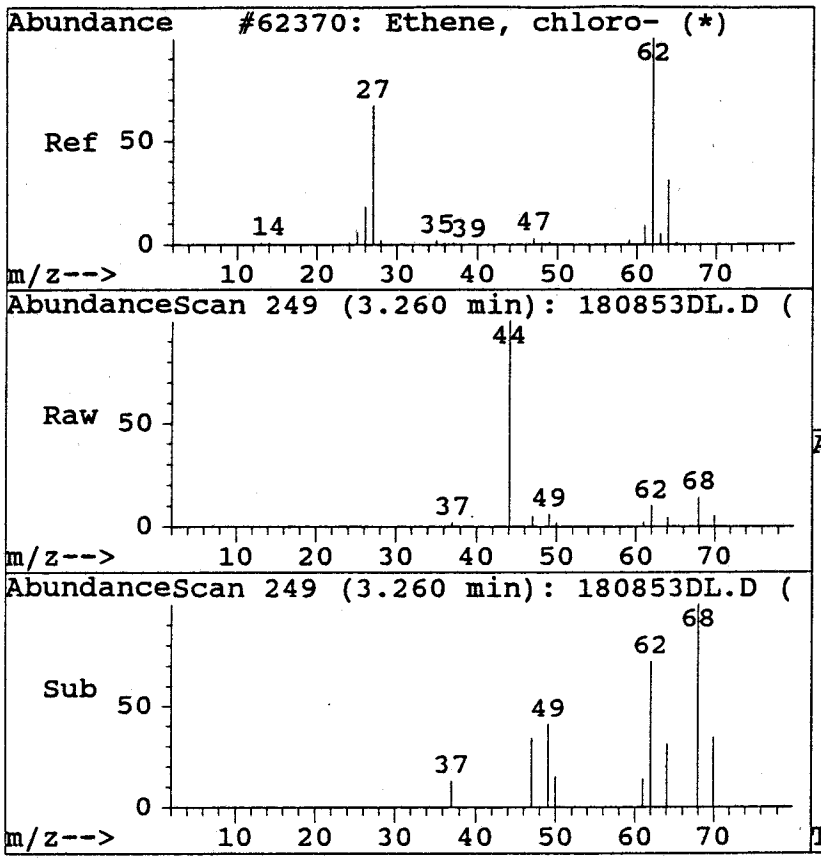
Data File : C:\HPCHEM\1\DATA\072195V\180853DL.D
Acq Time : 21 Jul 95 1:36 pm
Sample : MW-6DL (X5) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:29 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.10	168	1811850	50.00	ug/l		-0.02
32) 1,4-Difluorobenzene	7.96	114	1576835	50.00	ug/l		-0.02
51) Chlorobenzene-d5	11.68	117	1411391	50.00	ug/l		-0.01
63) 1,4-Dichlorobenzene-d4	14.97	152	983827	50.00	ug/l		0.00
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.09	113	927301	46.88	ug/l		93.75%
33) Toluene-d8	9.78	98	1595604	48.75	ug/l		97.51%
34) Bromofluorobenzene	13.30	174	948186	45.52	ug/l		91.05%
Target Compounds							**Qvalue**
5) Vinyl Chloride	3.26	62	23705	4.41	ug/l	#	81
6) Chloroethane	3.78	64	11882	3.89	ug/l	m	96
11) trans-1,2-Dichloroethene	5.54	96	8719	1.11	ug/l		88
12) cis-1,2-Dichloroethene	6.59	96	752080	86.43	ug/l		86
13) Acetone	4.84	43	137643	9.68	ug/l		94
17) Methylene Chloride	5.24	84	27670	3.22	ug/l		93
39) Benzene	7.58	78	65196	2.71	ug/l	#	73
41) Trichloroethene	8.30	95	135875	9.03	ug/l		96
52) Tetrachloroethene	10.59	166	47288	2.37	ug/l	#	75

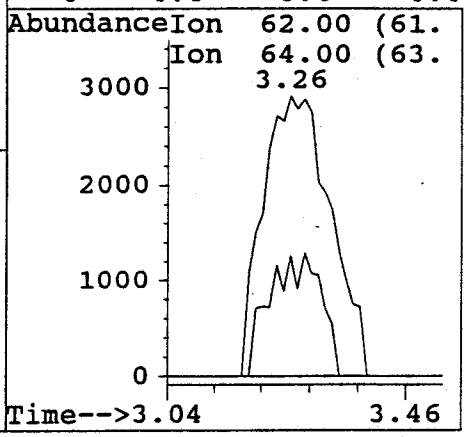
(#) = qualifier out of range (m) = manual integration

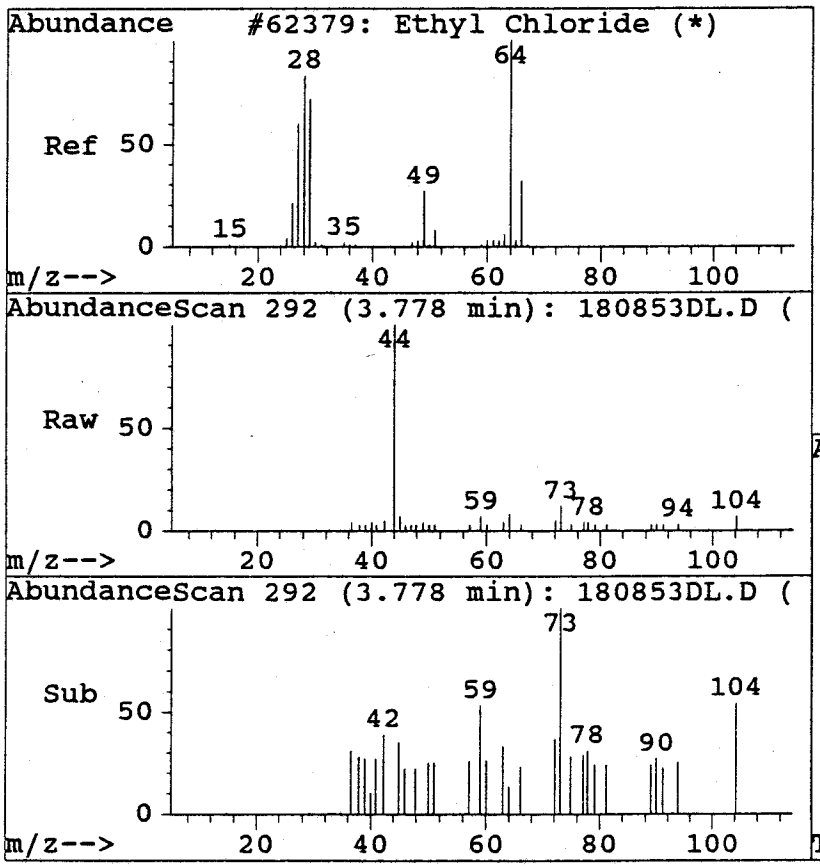


#5
Vinyl Chloride
Concen: 4.41 ug/l
RT: 3.26 min Scan# 249
Delta R.T. 0.01 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:62 Resp: 23705

Ion	Ratio	Lower	Upper
62	100		
64	43.2	26.2	39.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

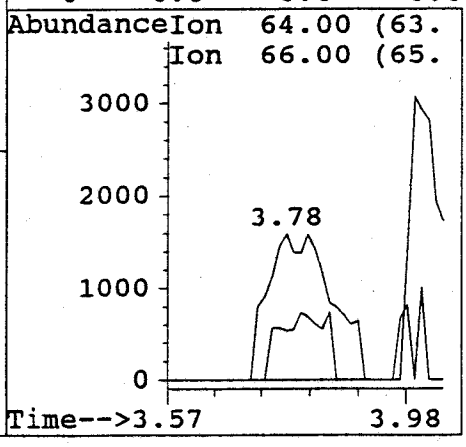


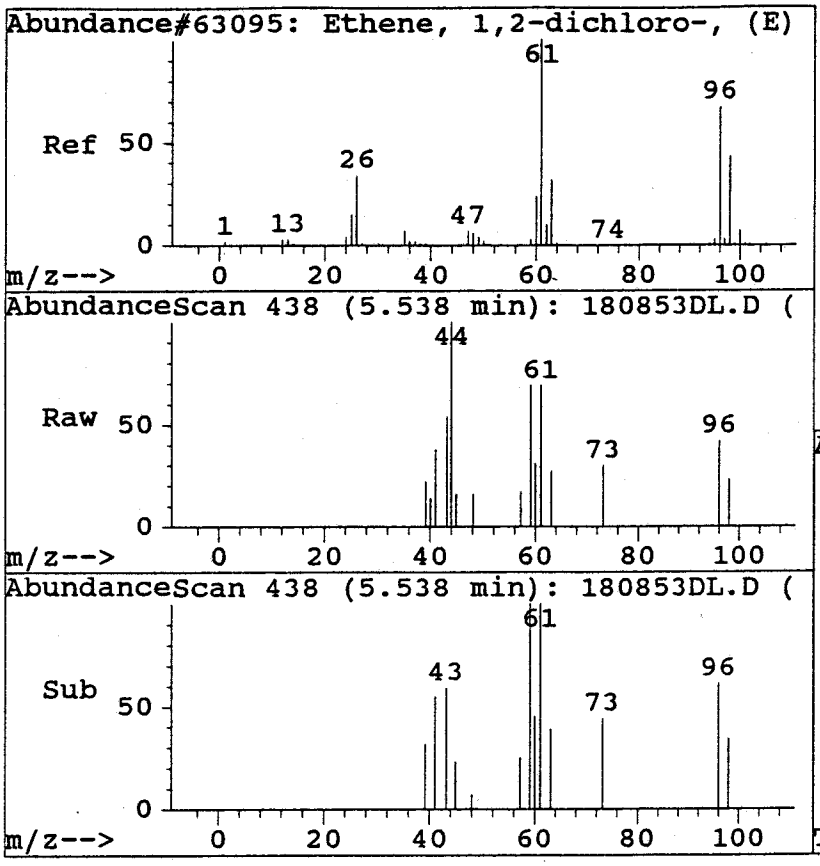


#6
Chloroethane
Concen: 3.89 ug/l m
RT: 3.78 min Scan# 292
Delta R.T. -0.00 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:64 Resp: 11882

Ion	Ratio	Lower	Upper
64	100		
66	33.5	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

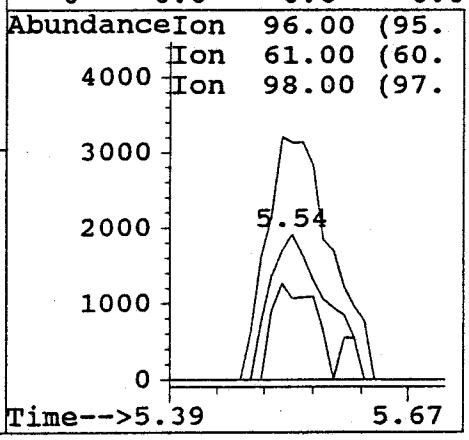


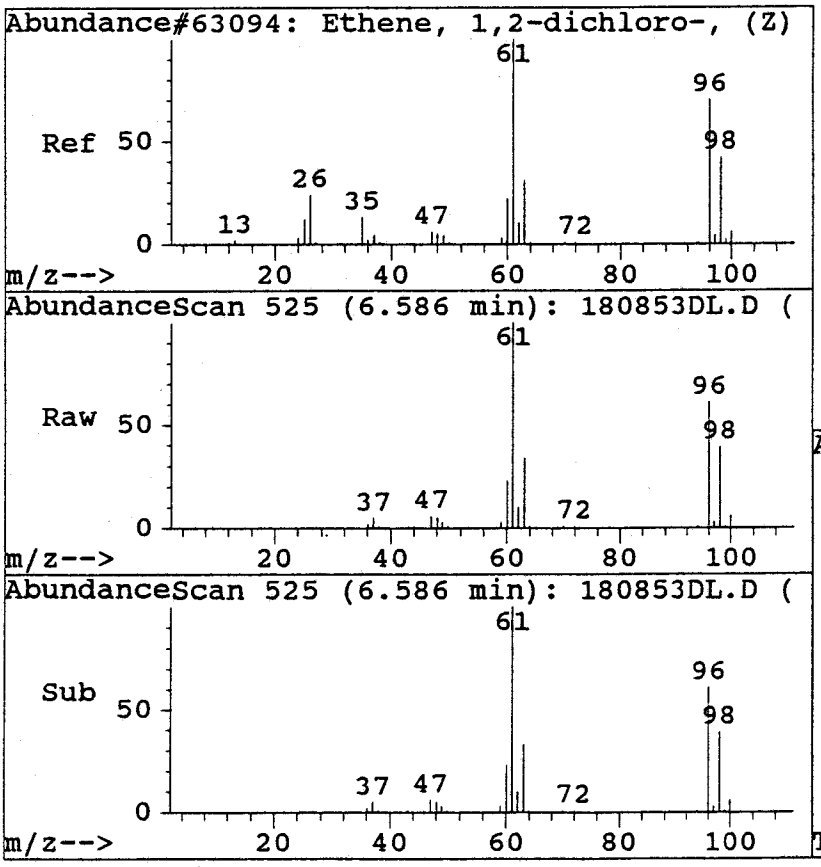


#11
trans-1,2-Dichloroethene
Concen: 1.11 ug/l
RT: 5.54 min Scan# 438
Delta R.T. -0.00 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:96 Resp: 8719

Ion	Ratio	Lower	Upper
96	100		
61	163.3	144.8	217.2
98	55.7	52.4	78.6
0	0.0	0.0	0.0

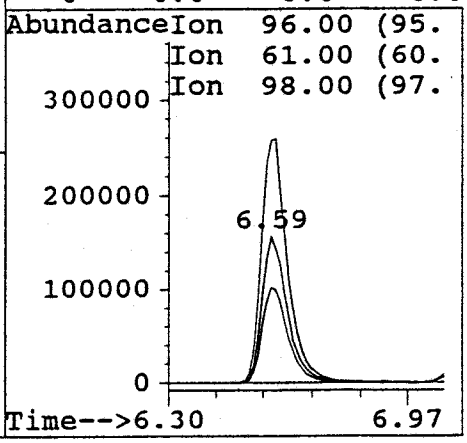


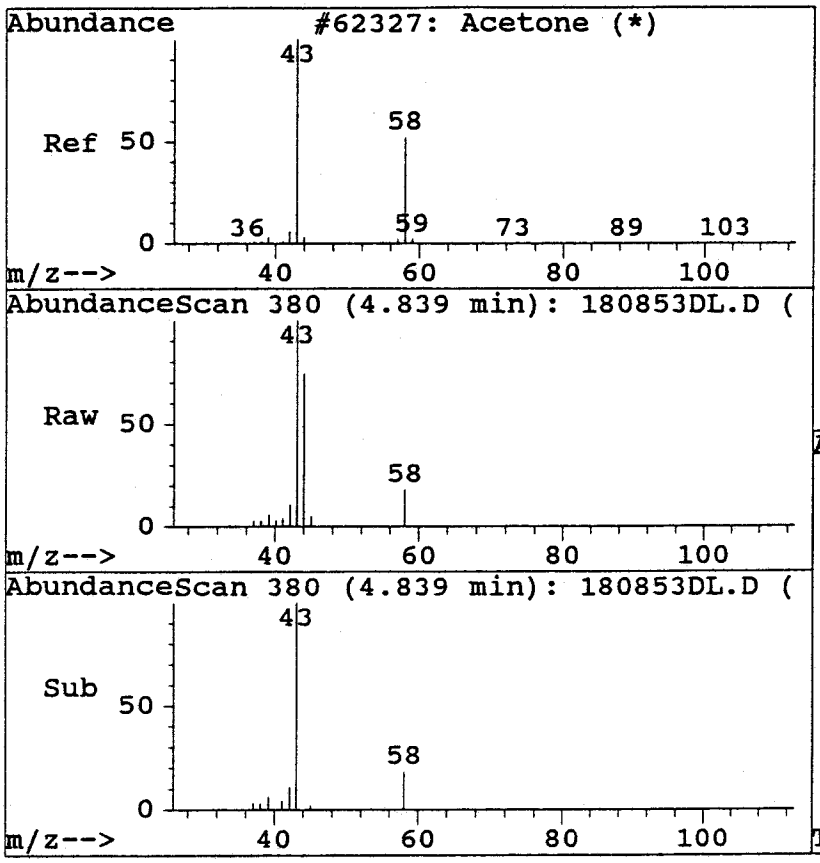


#12
cis-1,2-Dichloroethene
Concen: 86.43 ug/l
RT: 6.59 min Scan# 525
Delta R.T. -0.01 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:96 Resp: 752080

Ion	Ratio	Lower	Upper
96	100		
61	164.2	152.1	228.1
98	64.6	54.4	81.6
0	0.0	0.0	0.0

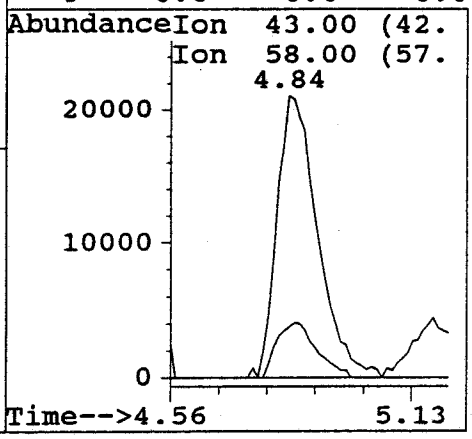


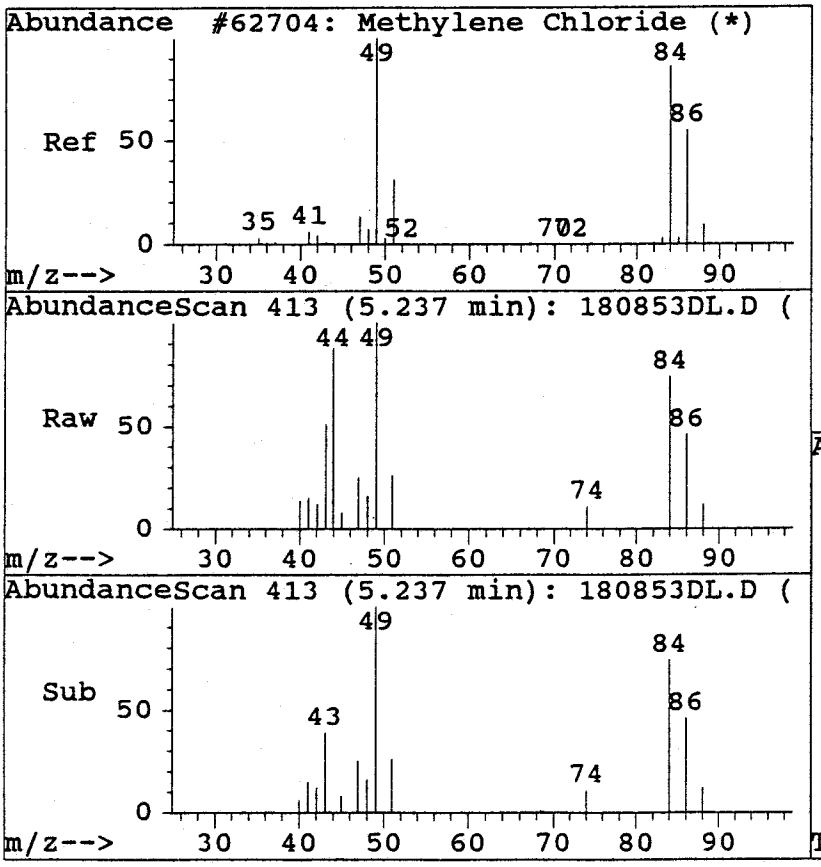


#13
Acetone
Concen: 9.68 ug/l
RT: 4.84 min Scan# 380
Delta R.T. -0.03 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:43 Resp: 137643

Ion	Ratio	Lower	Upper
43	100		
58	17.7	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

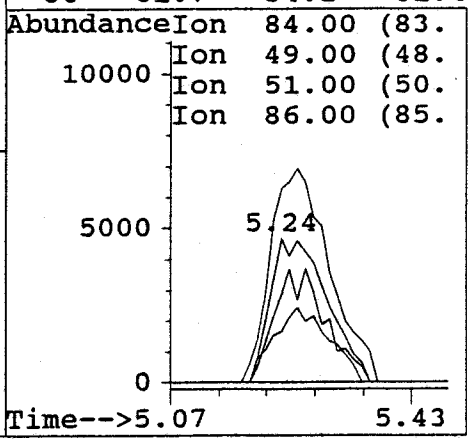


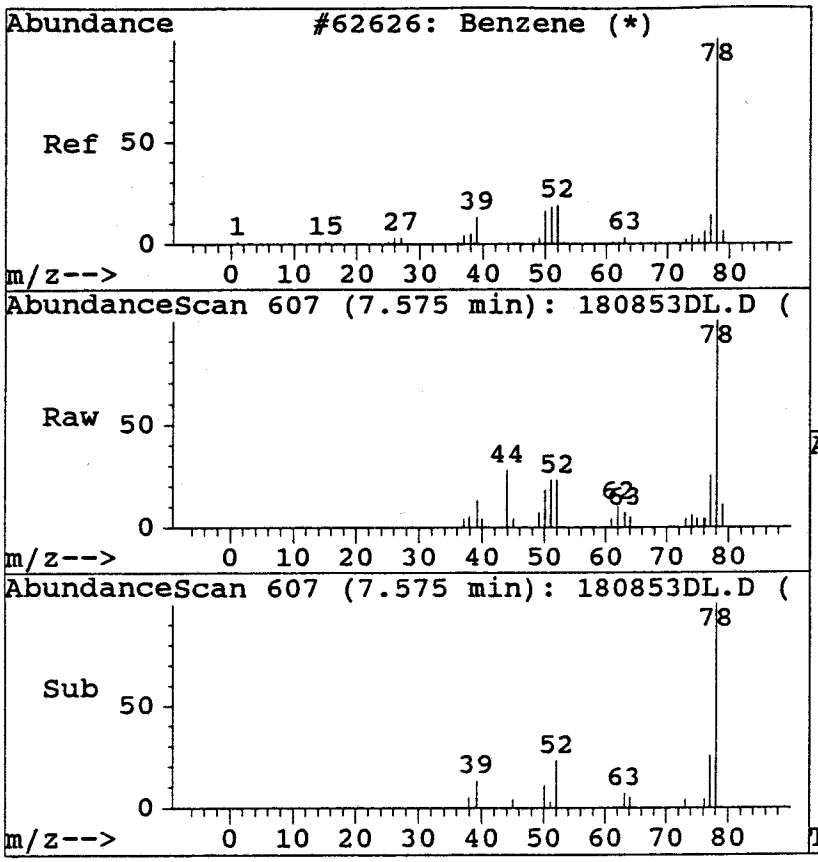


#17
Methylene Chloride
Concen: 3.22 ug/l
RT: 5.24 min Scan# 413
Delta R.T. -0.01 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:84 Resp: 27670

Ion	Ratio	Lower	Upper
84	100		
49	135.2	113.2	169.8
51	35.5	35.3	52.9
86	61.7	54.2	81.4

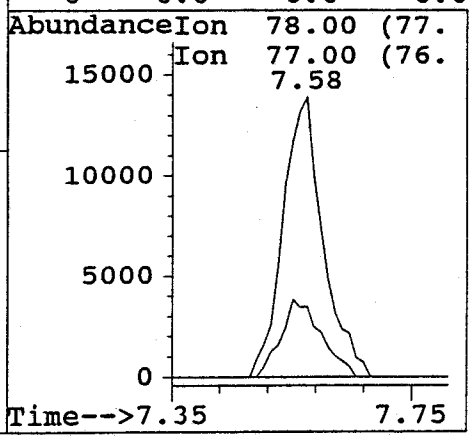


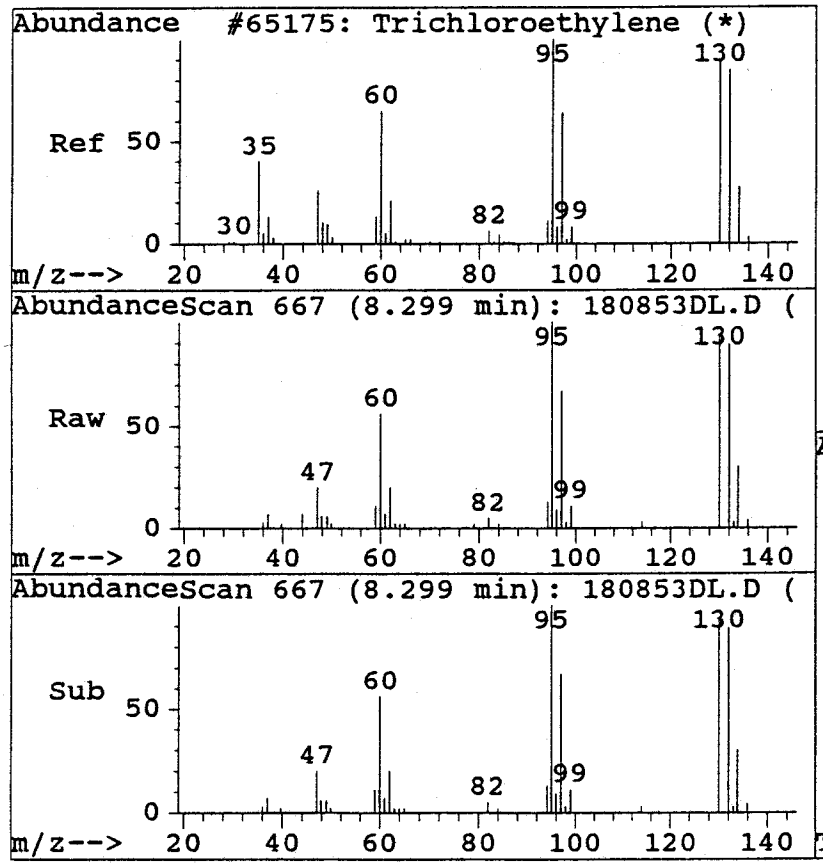


#39
Benzene
Concen: 2.71 ug/l
RT: 7.58 min Scan# 607
Delta R.T. -0.00 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:78 Resp: 65196

Ion	Ratio	Lower	Upper
78	100		
77	25.0	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

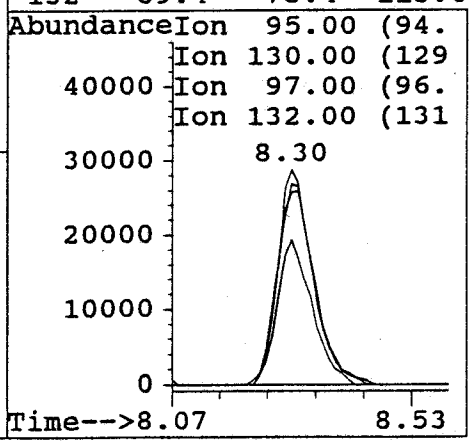


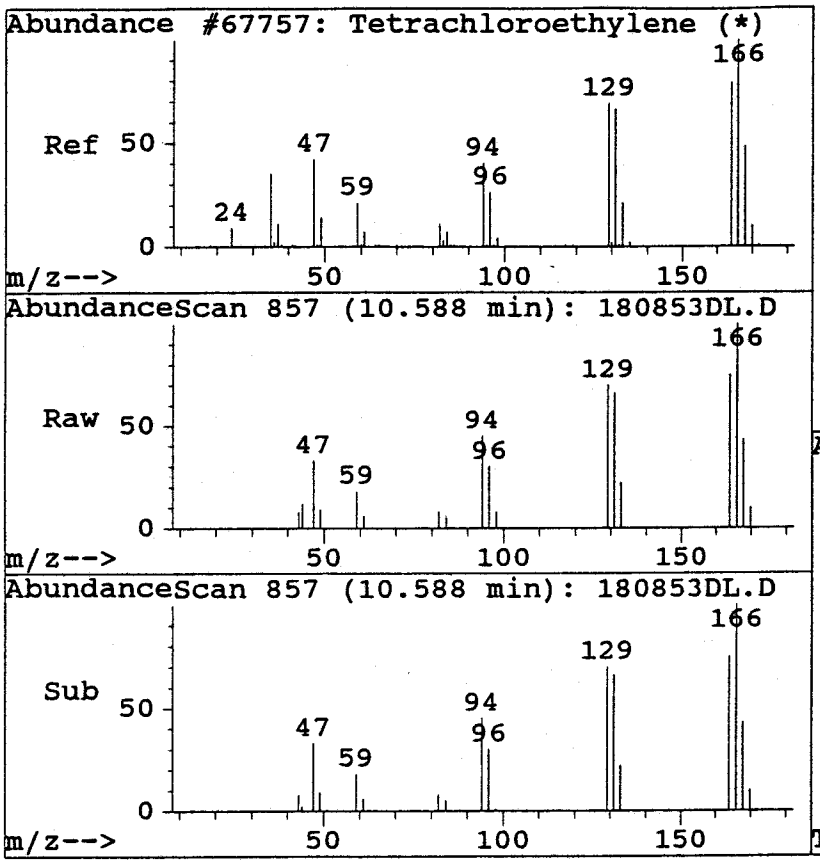


#41
Trichloroethene
Concen: 9.03 ug/l
RT: 8.30 min Scan# 667
Delta R.T. -0.02 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:95 Resp: 135875

Ion	Ratio	Lower	Upper
95	100		
130	93.1	80.0	120.0
97	67.1	53.8	80.8
132	89.4	75.4	113.0

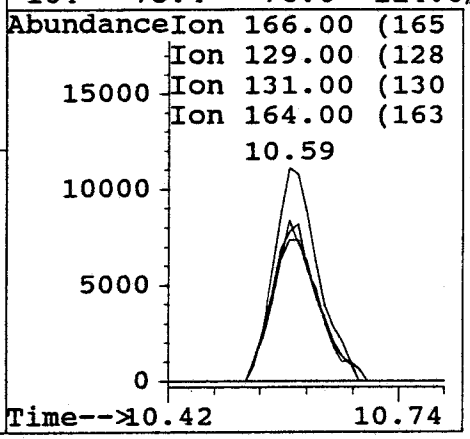




#52
Tetrachloroethene
Concen: 2.37 ug/l
RT: 10.59 min Scan# 857
Delta R.T. -0.02 min
Lab File: 180853DL.D
Acq: 21 Jul 95 1:36 pm

Tgt Ion:166 Resp: 47288

Ion	Ratio	Lower	Upper
166	100		
129	69.9	75.4	113.0#
131	66.3	75.0	112.4#
164	75.4	76.0	114.0#

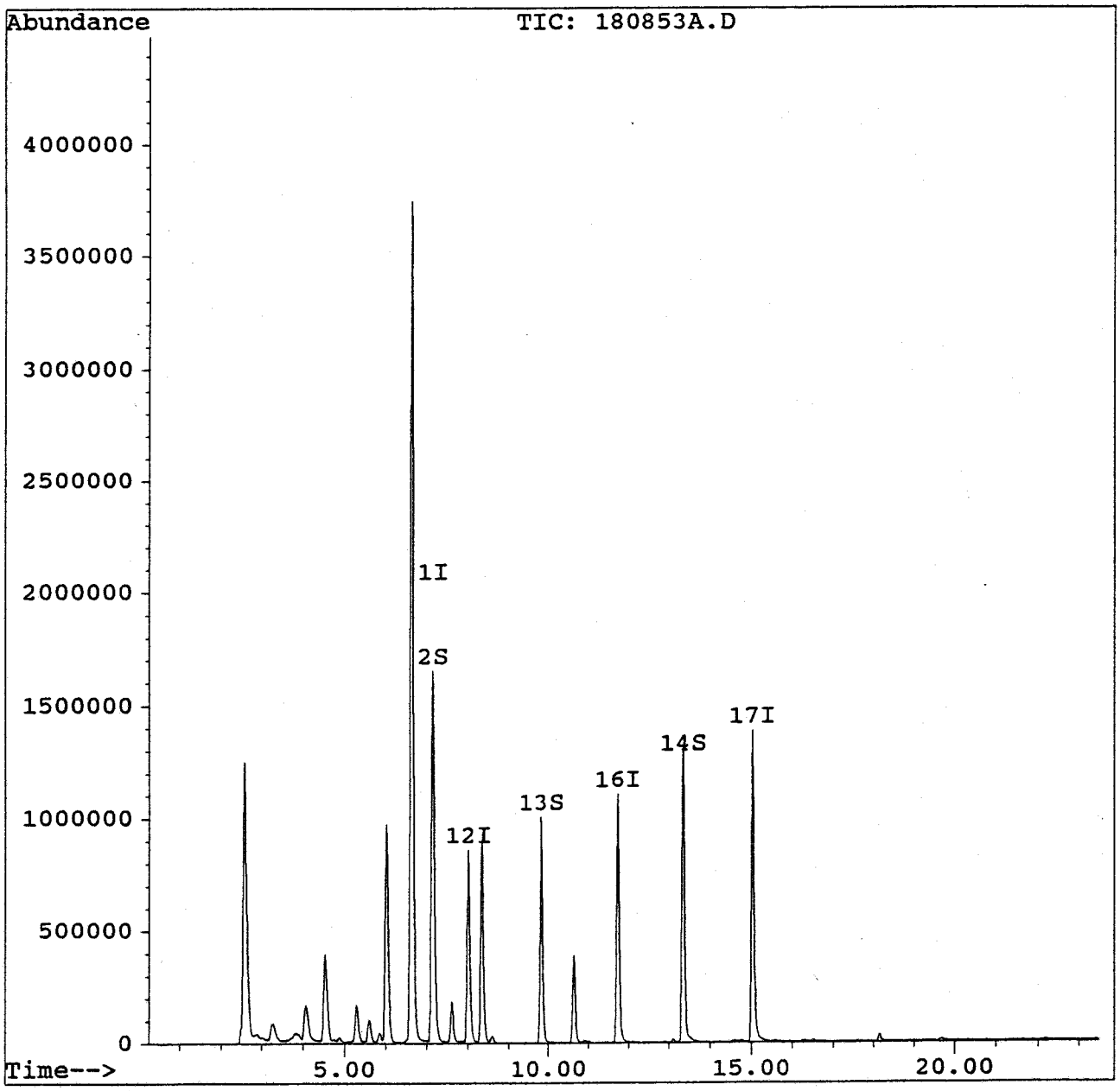


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180853A.D
Acq Time : 19 Jul 95 4:33 pm
Sample : MW-6 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:57 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180853A.D
Acq Time : 19 Jul 95 4:33 pm
Sample : MW-6 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:57 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1693648	50.00	ug/l	-0.01
12) 1,4-Difluorobenzene	8.01	114	1508043	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.72	117	1368591	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	954929	50.00	ug/l	-0.01
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.14	113	884910	50.28	ug/l	100.56%
13) Toluene-d8	9.82	98	1502464	50.38	ug/l	100.77%
14) Bromofluorobenzene	13.35	174	919478	51.35	ug/l	102.69%
Target Compounds						**Qvalue**

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

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-7

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180854V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180854V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	22	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	1.6	J
000156-59-2	cis-1,2-Dichloroethene	7.9	
00067-64-1	Acetone	33	B
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	2.8	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	15	
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-7

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180854V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180854V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

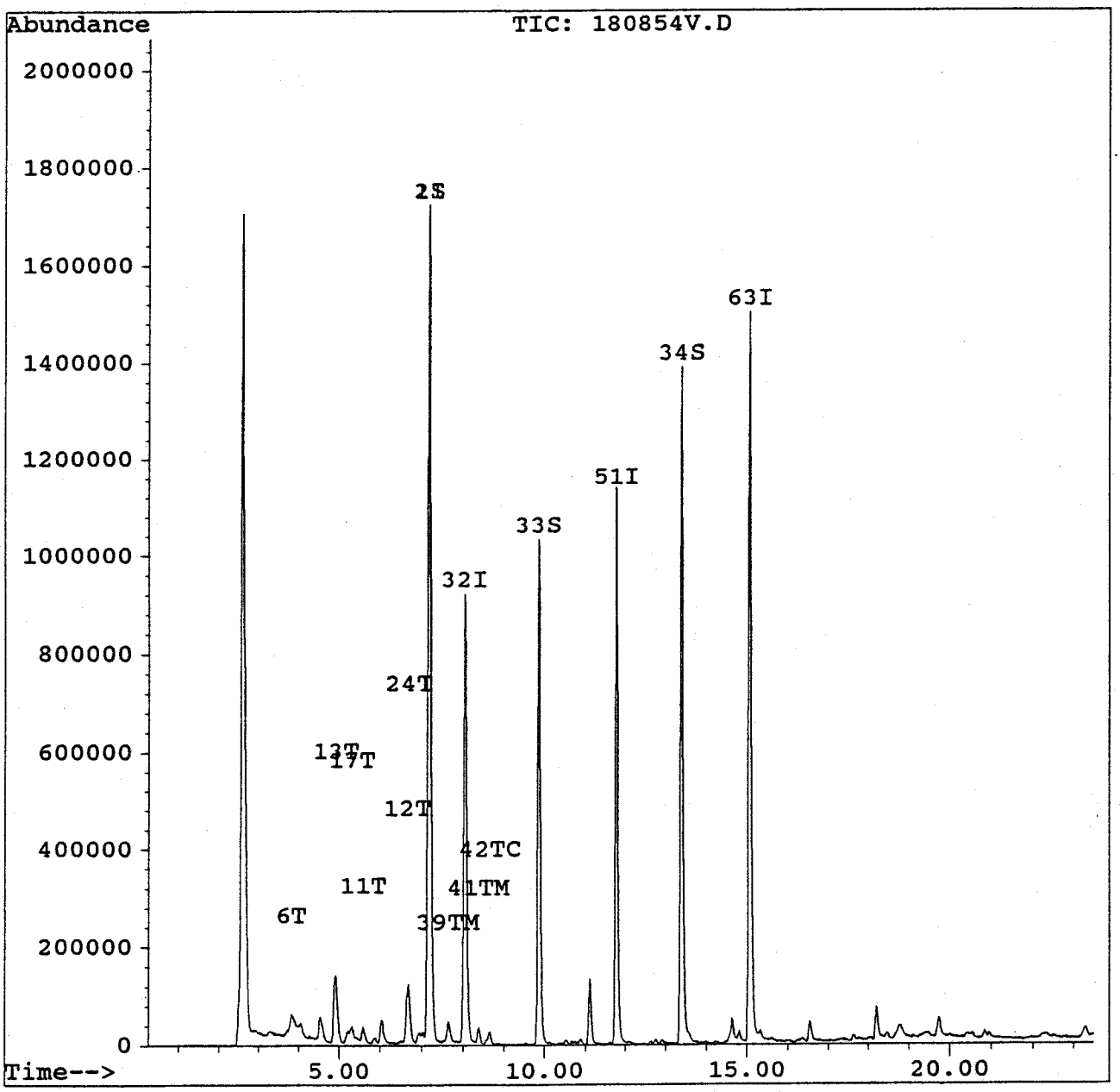
CAS No.	Compound		Q
000071-43-2	Benzene	2.7	J
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	1.2	J
000078-87-5	1,2-Dichloropropane	1.6	J
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180854V.D
Acq Time : 18 Jul 95 7:17 pm
Sample : MW-7 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 11:11 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

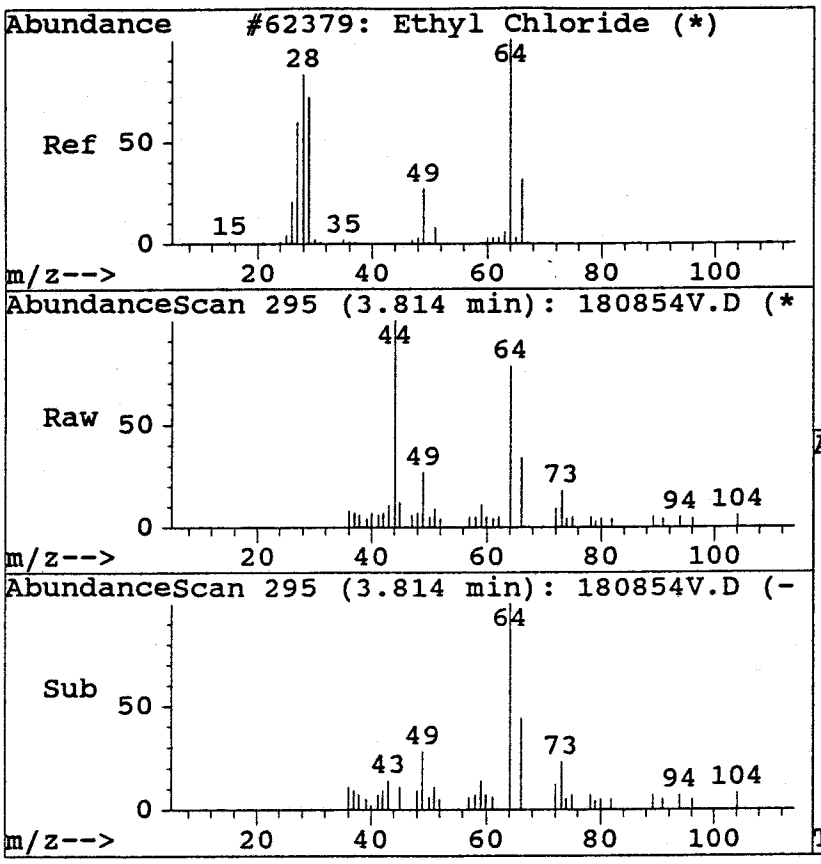
Data File : C:\HPCHEM\1\DATA\071895V\180854V.D
Acq Time : 18 Jul 95 7:17 pm
Sample : MW-7 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 11:11 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.18	168	1778168	50.00	ug/l		-0.03
32) 1,4-Difluorobenzene	8.03	114	1610991	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.77	117	1412551	50.00	ug/l		-0.03
63) 1,4-Dichlorobenzene-d4	15.06	152	1008011	50.00	ug/l		-0.04
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.18	113	943859	48.68	ug/l		97.35%
33) Toluene-d8	9.85	98	1593944	48.22	ug/l		96.45%
34) Bromofluorobenzene	13.38	174	963281	47.13	ug/l		94.27%
Target Compounds							Qvalue
6) Chloroethane	3.81	64	72619	22.26	ug/l	#	77
11) trans-1,2-Dichloroethene	5.59	96	12585	1.57	ug/l		91
12) cis-1,2-Dichloroethene	6.66	96	75959	7.94	ug/l		82
13) Acetone	4.91	43	459094	33.20	ug/l		98
17) Methylene Chloride	5.31	84	23044	2.75	ug/l		92
24) 2-Butanone	6.71	43	263306	14.74	ug/l		94
39) Benzene	7.64	78	67158	2.67	ug/l	#	77
41) Trichloroethene	8.37	95	18099	1.17	ug/l	#	82
42) 1,2-Dichloropropane	8.66	63	18615	1.64	ug/l	#	84

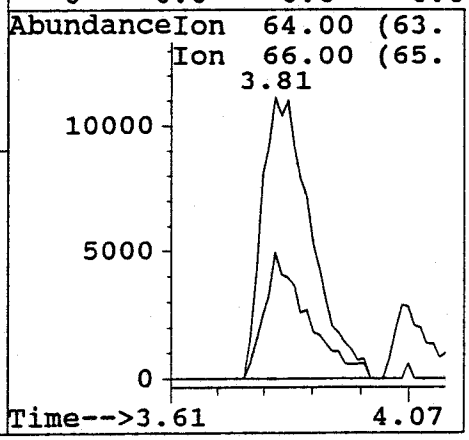
(#) = qualifier out of range (m) = manual integration

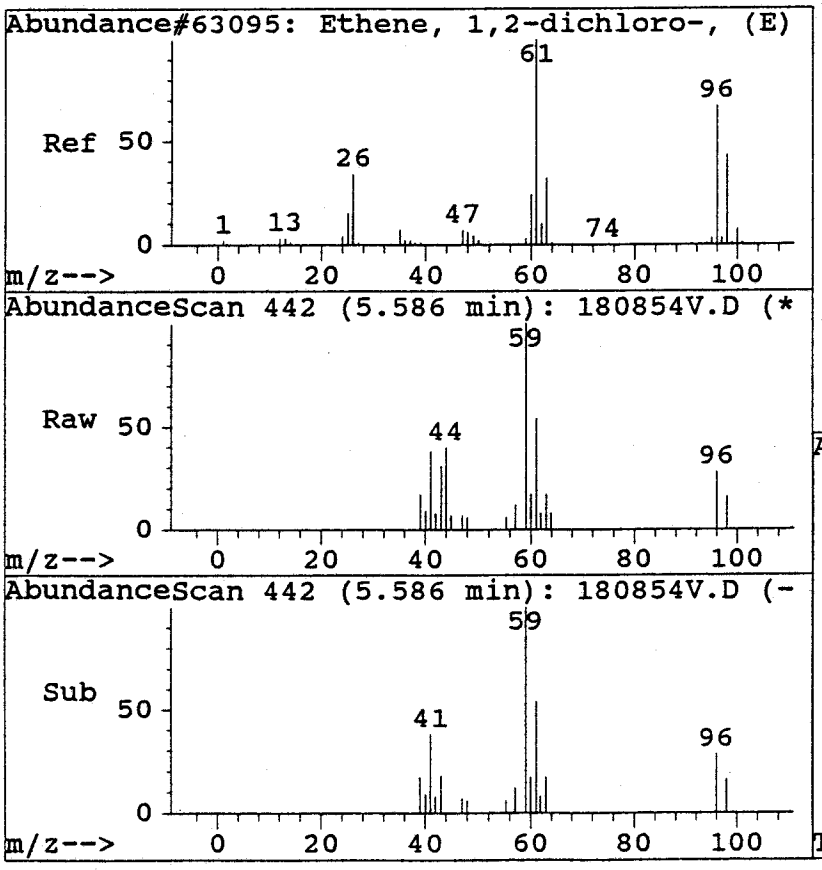


#6
Chloroethane + CO_2 MW
Concen: 22.26 ug/l
RT: 3.81 min Scan# 295
Delta R.T. -0.02 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:64 Resp: 72619

Ion	Ratio	Lower	Upper
64	100		
66	44.3	25.2	37.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

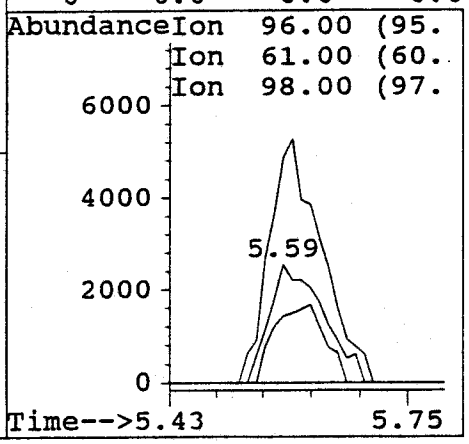


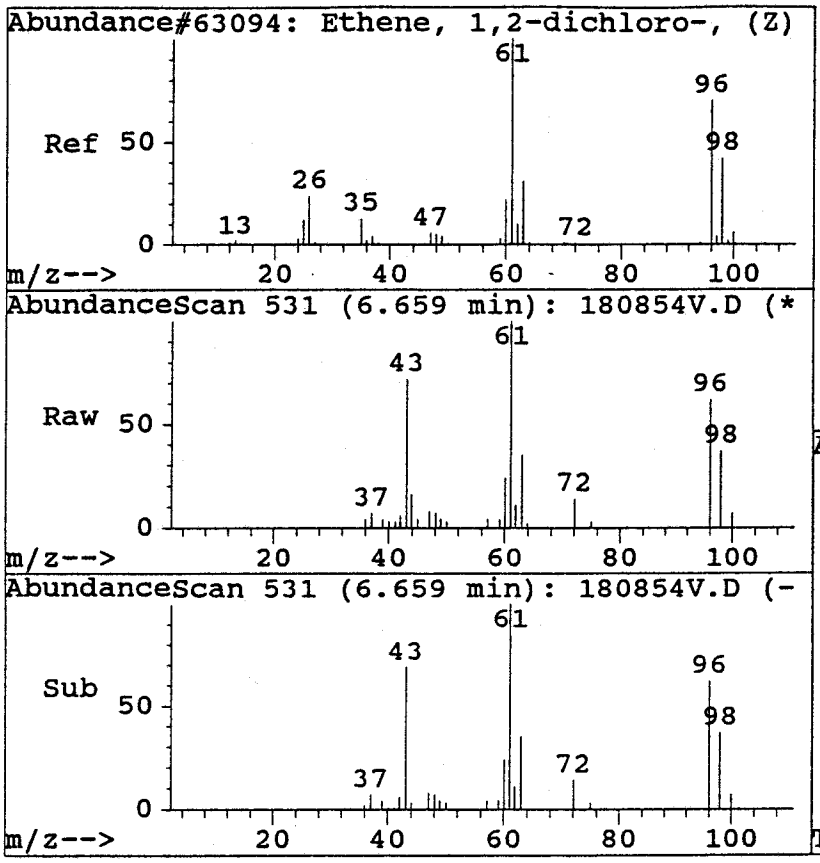


#11
trans-1,2-Dichloroethene
Concen: 1.57 ug/l (interference)
RT: 5.59 min Scan# 442 m/z 59
Delta R.T. -0.04 min MW
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:96 Resp: 12585

Ion	Ratio	Lower	Upper
96	100		
61	191.7	144.8	217.2
98	55.9	52.4	78.6
0	0.0	0.0	0.0

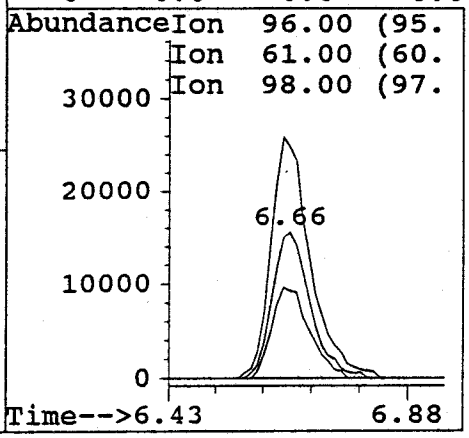


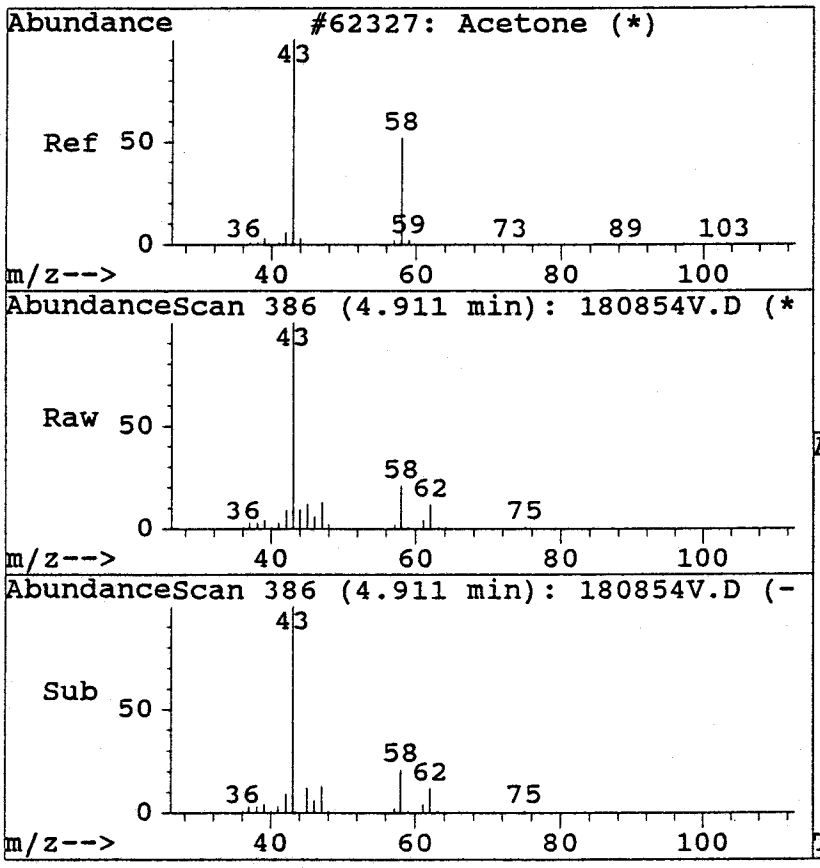


#12
cis-1,2-Dichloroethene
Concen: 7.94 ug/l
RT: 6.66 min Scan# 531
Delta R.T. -0.03 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:96 Resp: 75959

Ion	Ratio	Lower	Upper
96	100		
61	160.1	152.1	228.1
98	59.9	54.4	81.6
0	0.0	0.0	0.0

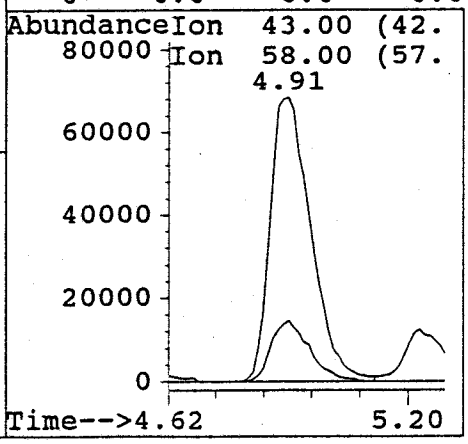


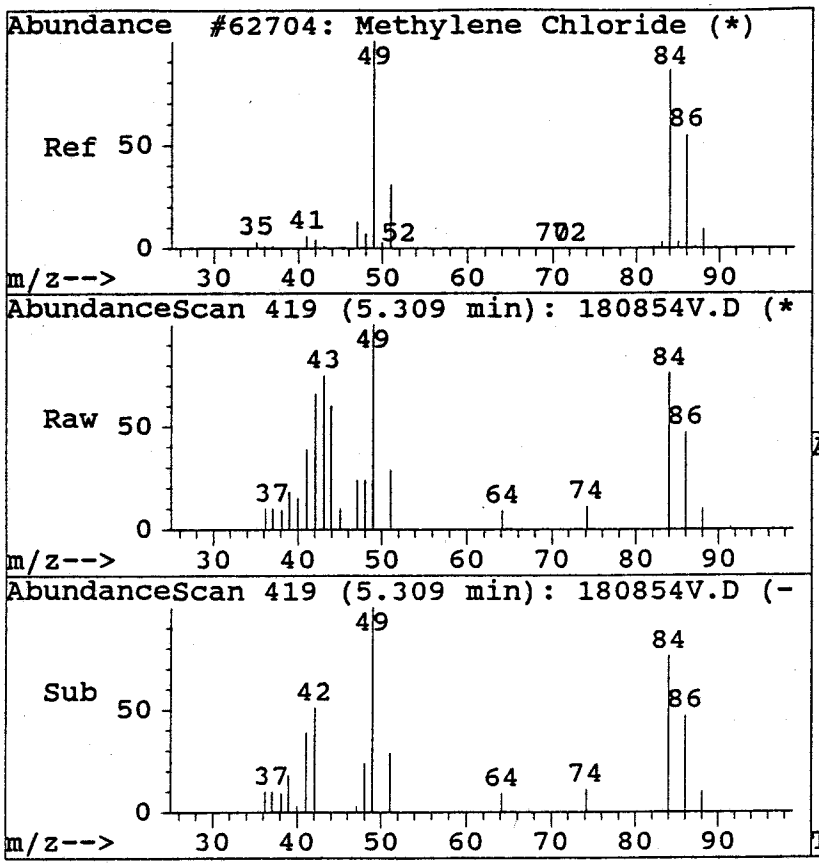


#13
Acetone
Concen: 33.20 ug/l
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:43 Resp: 459094

Ion	Ratio	Lower	Upper
43	100		
58	21.3	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

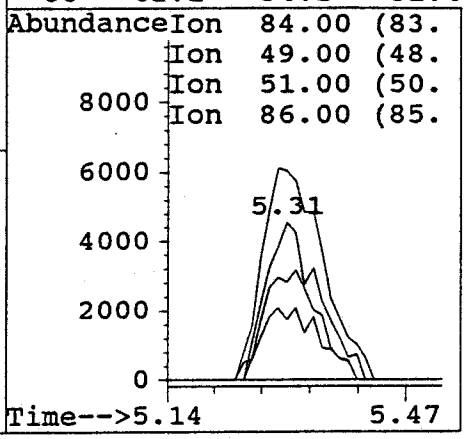


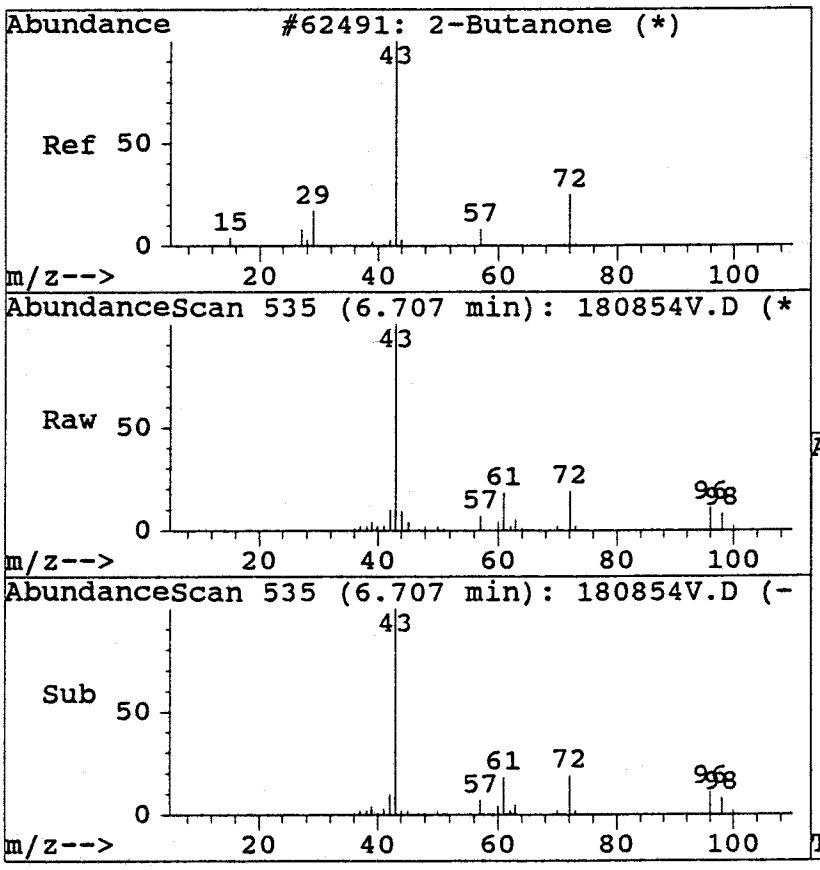


#17
Methylene Chloride
Concen: 2.75 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:84 Resp: 23044

Ion	Ratio	Lower	Upper
84	100		
49	132.2	113.2	169.8
51	38.3	35.3	52.9
86	62.1	54.2	81.4

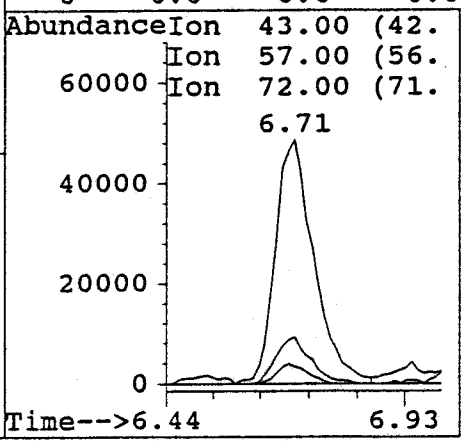


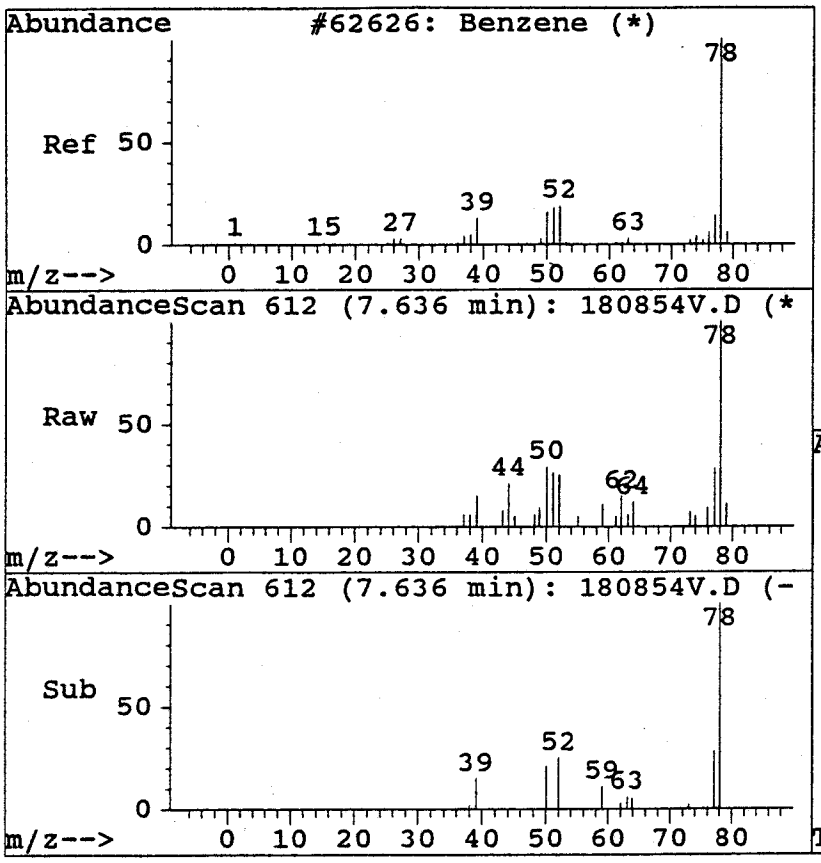


#24
2-Butanone
Concen: 14.74 ug/l
RT: 6.71 min Scan# 535
Delta R.T. -0.04 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:43 Resp: 263306

Ion	Ratio	Lower	Upper
43	100		
57	6.7	5.5	8.3
72	18.9	18.3	27.5
0	0.0	0.0	0.0

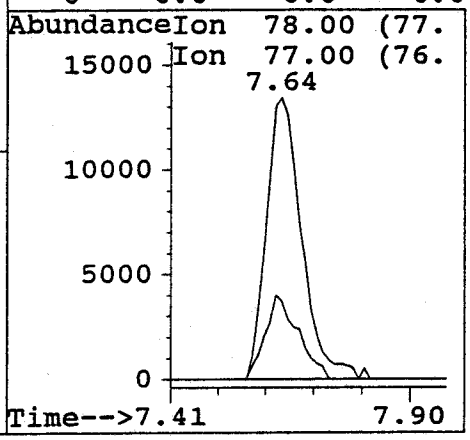


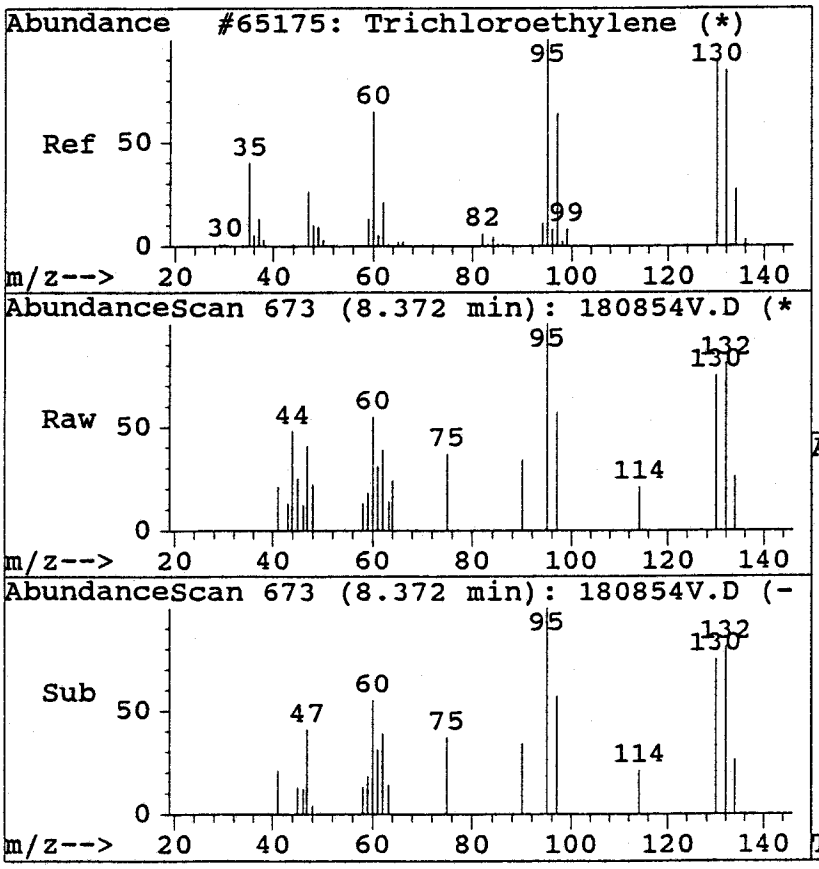


#39
Benzene
Concen: 2.67 ug/l
RT: 7.64 min Scan# 612
Delta R.T. -0.03 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:78 Resp: 67158

Ion	Ratio	Lower	Upper
78	100		
77	27.7	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

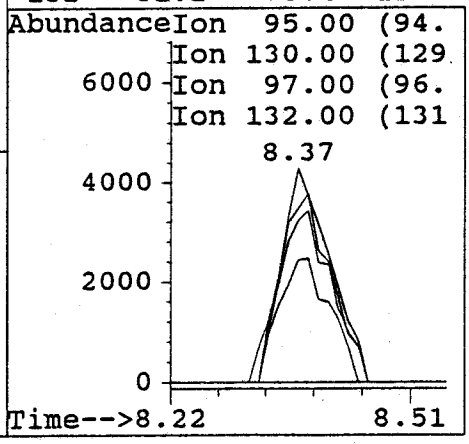


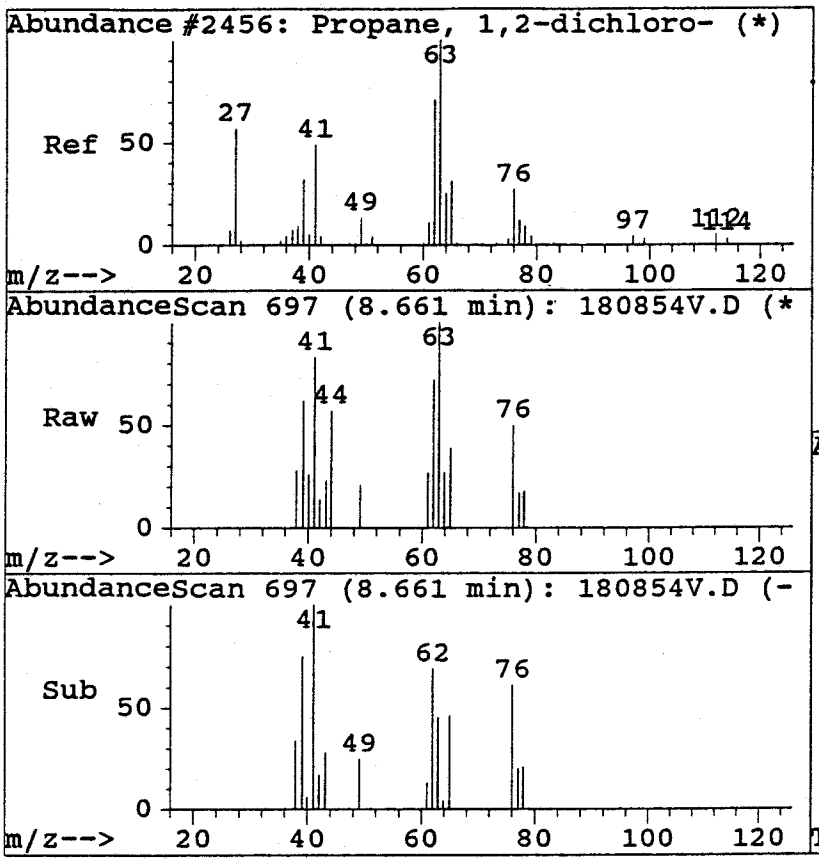


#41
Trichloroethene
Concen: 1.17 ug/l
RT: 8.37 min Scan# 673
Delta R.T. -0.03 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:95 Resp: 18099

Ion	Ratio	Lower	Upper
95	100		
130	75.3	80.0	120.0#
97	56.7	53.8	80.8
132	81.2	75.4	113.0

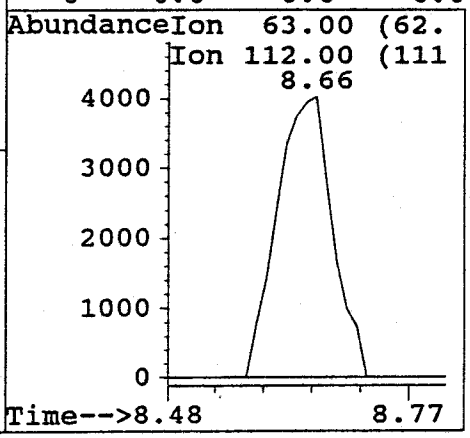




#42
1,2-Dichloropropane
Concen: 1.64 ug/l
RT: 8.66 min Scan# 697
Delta R.T. -0.01 min
Lab File: 180854V.D
Acq: 18 Jul 95 7:17 pm

Tgt Ion:63 Resp: 18615

Ion	Ratio	Lower	Upper
63	100		
112	0.0	4.2	6.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 120

MW-8

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180855V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180855V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	6.7	
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	7.2	
000075-00-3	Chloroethane	9.3	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	4.1	J
000156-60-5	trans-1,2-Dichloroethene	1.4	J
000156-59-2	cis-1,2-Dichloroethene	89	
00067-64-1	Acetone	7.8	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	4.6	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	71	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	4.9	J
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	4.9	J
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 121

MW-8

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180855V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180855V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

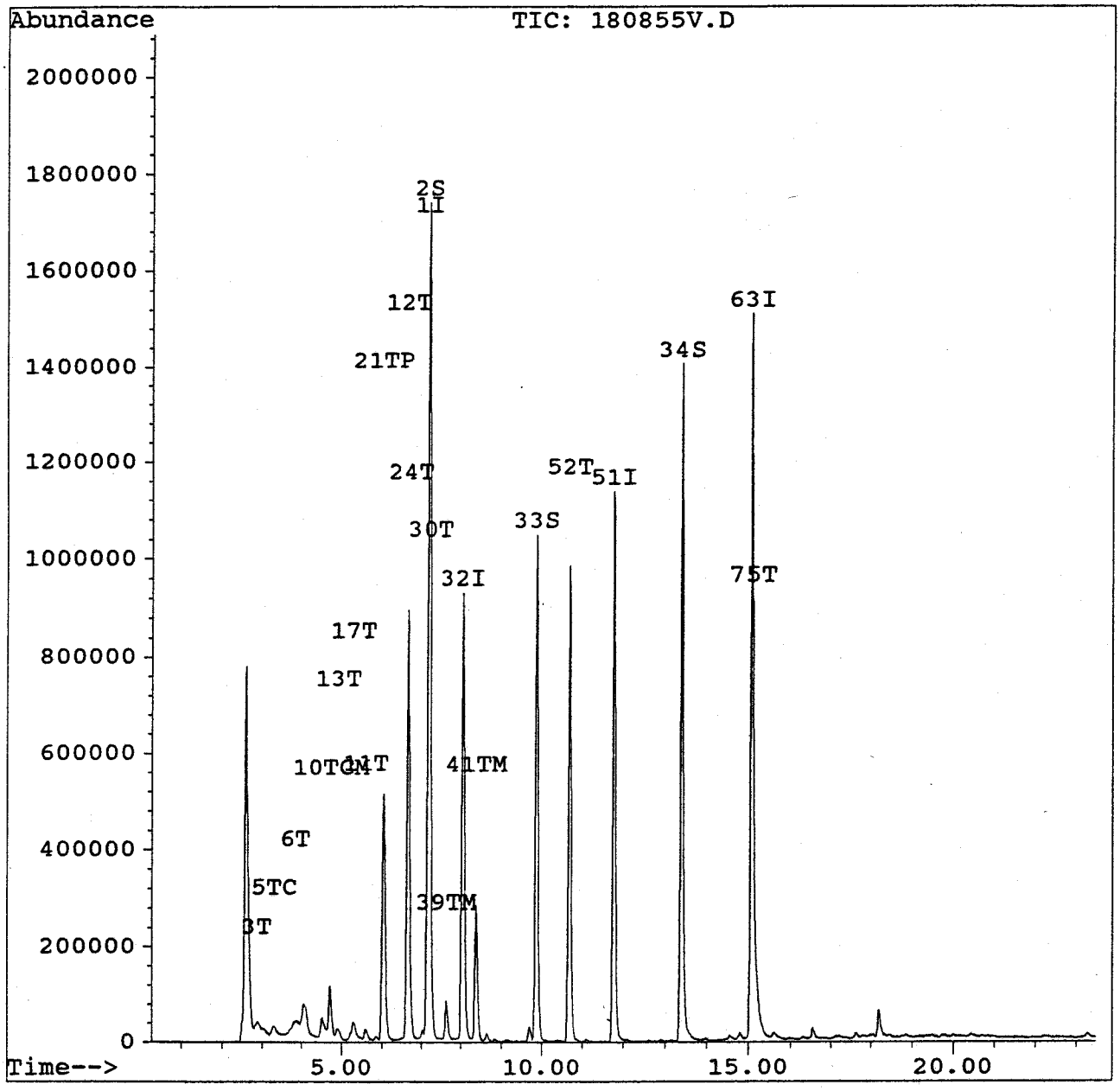
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5.5	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	15	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	38	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	1.1	J
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180855V.D
Acq Time : 18 Jul 95 7:52 pm
Sample : MW-8 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 11:24 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180855V.D
Acq Time : 18 Jul 95 7:52 pm
Sample : MW-8 (8260)
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Inst : MS5970.A
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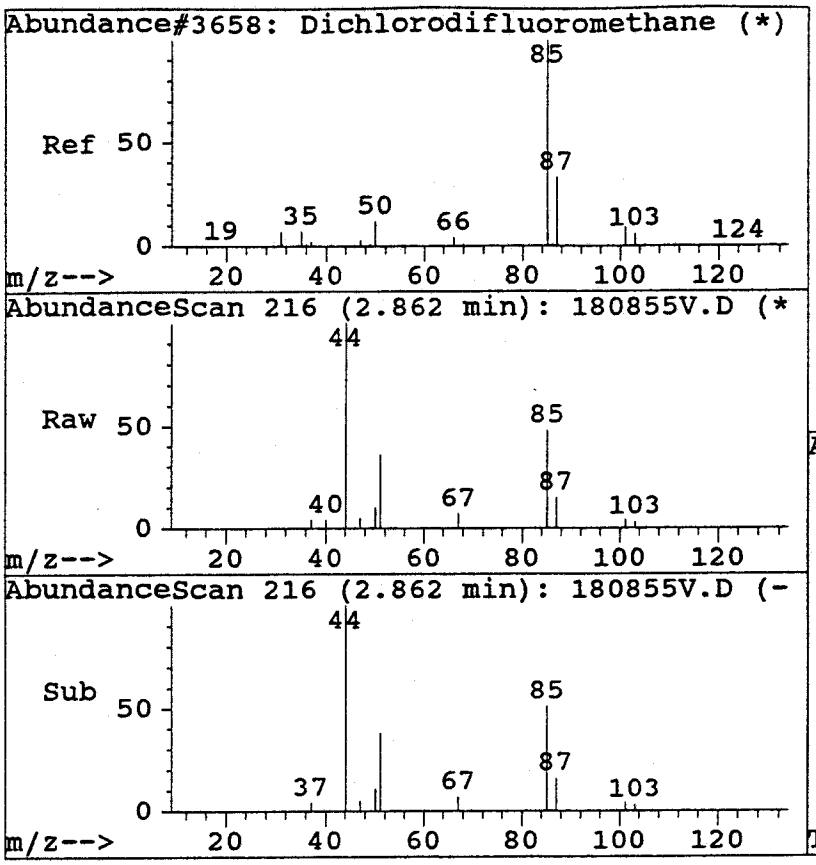
Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.18	168	1768353	50.00	ug/l		-0.03
32) 1,4-Difluorobenzene	8.03	114	1588841	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1420381	50.00	ug/l		-0.04
63) 1,4-Dichlorobenzene-d4	15.06	152	997249	50.00	ug/l		-0.03
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.17	113	960036	49.79	ug/l		99.57%
33) Toluene-d8	9.85	98	1610996	49.42	ug/l		98.84%
34) Bromofluorobenzene	13.39	174	968042	48.03	ug/l		96.05%
Target Compounds							**Qvalue**
3) Dichlorodifluoromethane	2.86	85	80897	6.74	ug/l	m	96
5) Vinyl Chloride	3.31	62	38958	7.22	ug/l		94
6) Chloroethane	3.83	64	30016	9.25	ug/l		98
10) 1,1-Dichloroethene	4.73	96	32921	4.10	ug/l		93
11) trans-1,2-Dichloroethene	5.60	96	10808	1.35	ug/l		95
12) cis-1,2-Dichloroethene	6.65	96	842774	88.57	ug/l		93
13) Acetone	4.91	43	107085	7.79	ug/l		96
17) Methylene Chloride	5.30	84	38343	4.60	ug/l		98
21) 1,1-Dichloroethane	6.03	63	1240880	70.64	ug/l	#	100
24) 2-Butanone	6.72	43	86711	4.88	ug/l	#	82
30) 1,1,1-Trichloroethane	7.21	97	110743	4.91	ug/l	#	1
39) Benzene	7.63	78	136545	5.50	ug/l	#	76
41) Trichloroethene	8.37	95	222602	14.57	ug/l		99
52) Tetrachloroethene	10.67	166	760631	37.78	ug/l	#	77
75) 1,4-Dichlorobenzene	15.10	146	37030	1.07	ug/l	m	82

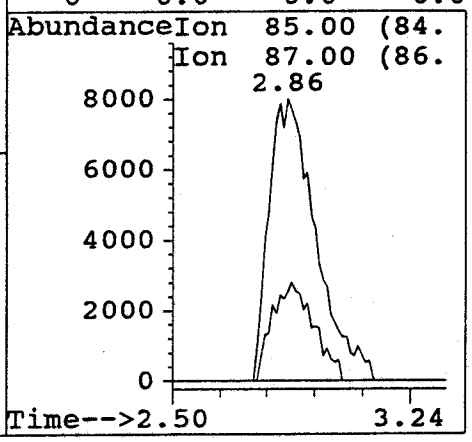
(#) = qualifier out of range (m) = manual integration

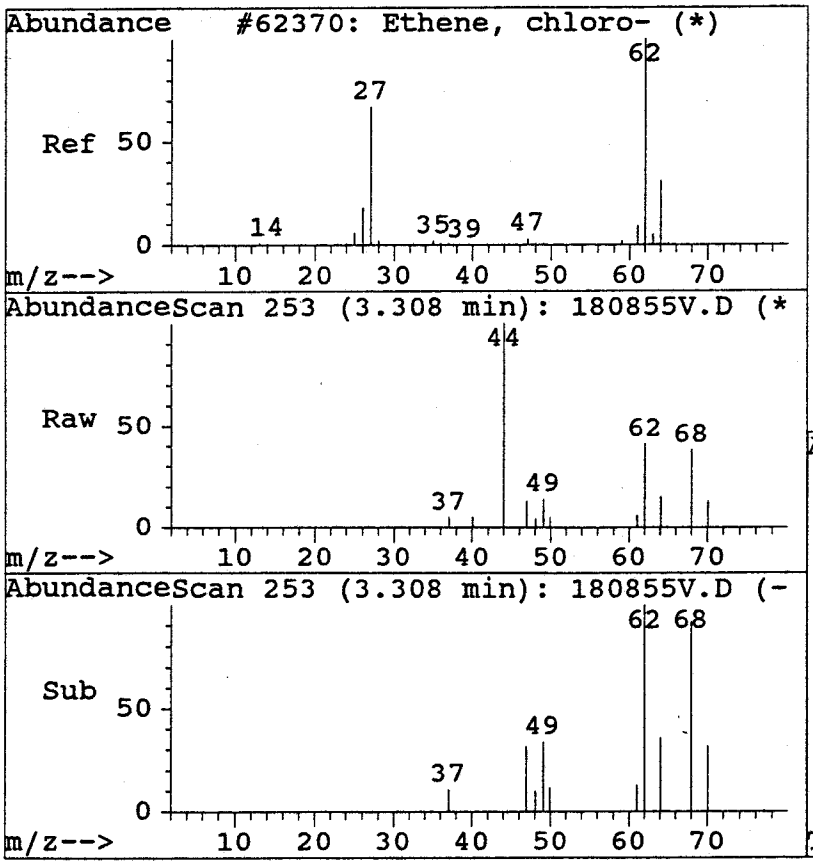


#3
Dichlorodifluoromethane CCl_2F_2
Concen: 6.74 ug/l m
RT: 2.86 min Scan# 216
Delta R.T. -0.02 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:85 Resp: 80897

Ion	Ratio	Lower	Upper
85	100		
87	31.9	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

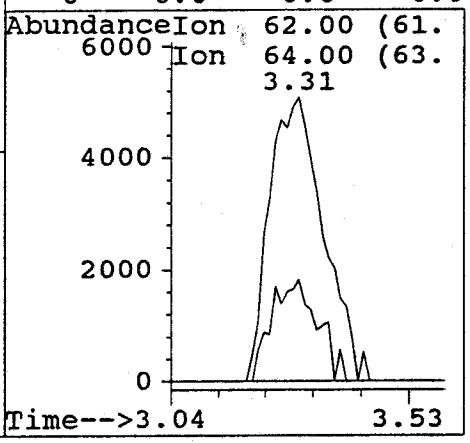


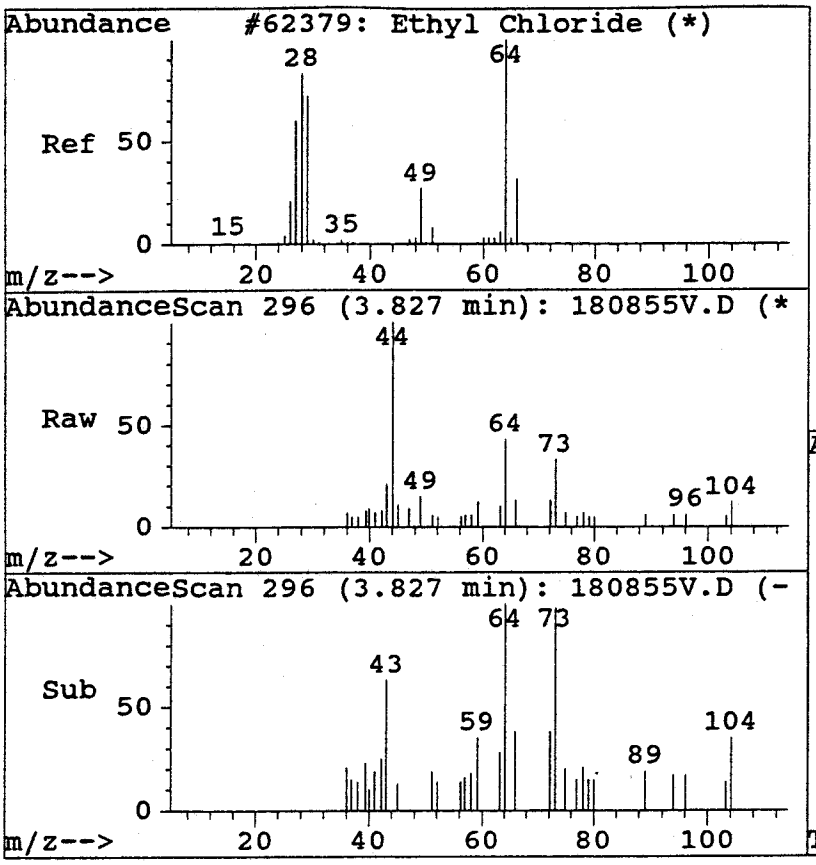


#5
Vinyl Chloride
Concen: 7.22 ug/l
RT: 3.31 min Scan# 253
Delta R.T. -0.00 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:62 Resp: 38958

Ion	Ratio	Lower	Upper
62	100		
64	35.9	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

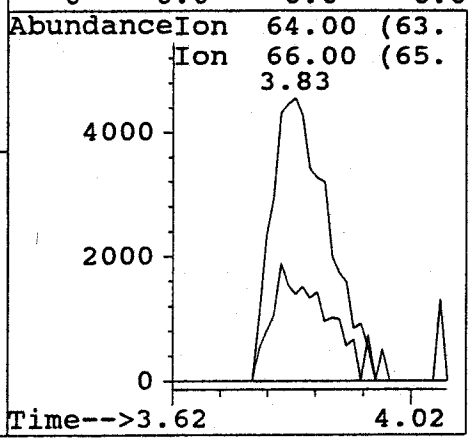


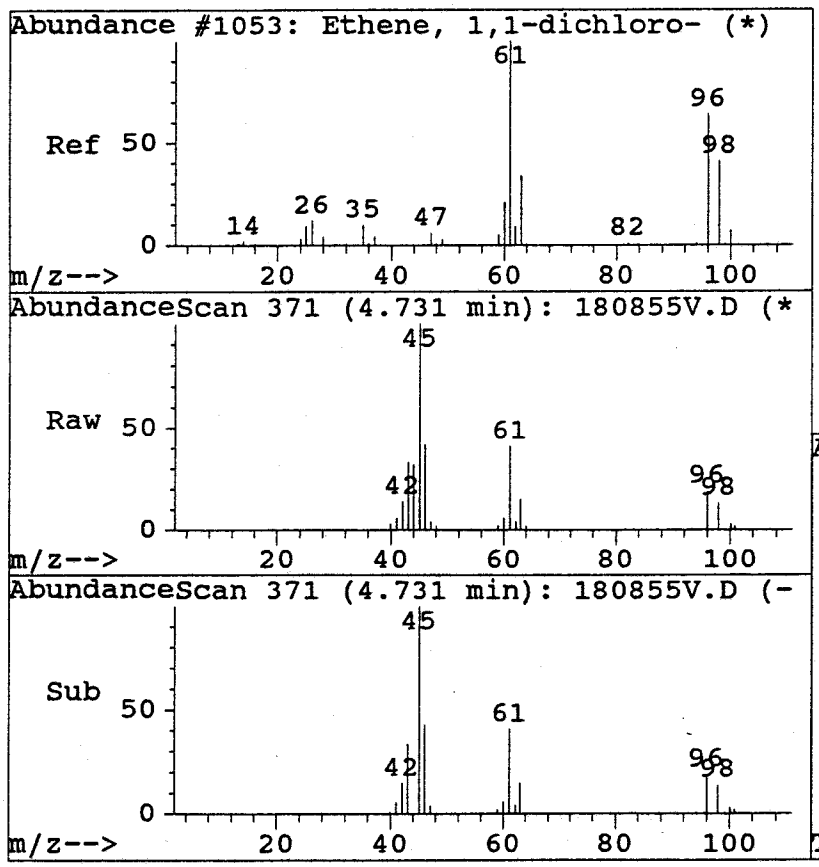


#6
Chloroethane
Concen: 9.25 ug/l
RT: 3.83 min Scan# 296
Delta R.T. -0.01 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:64 Resp: 30016

Ion	Ratio	Lower	Upper
64	100		
66	30.4	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

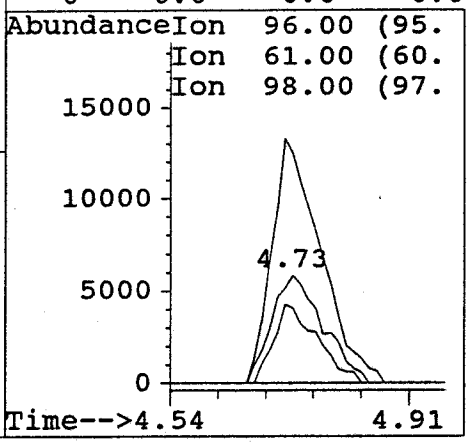


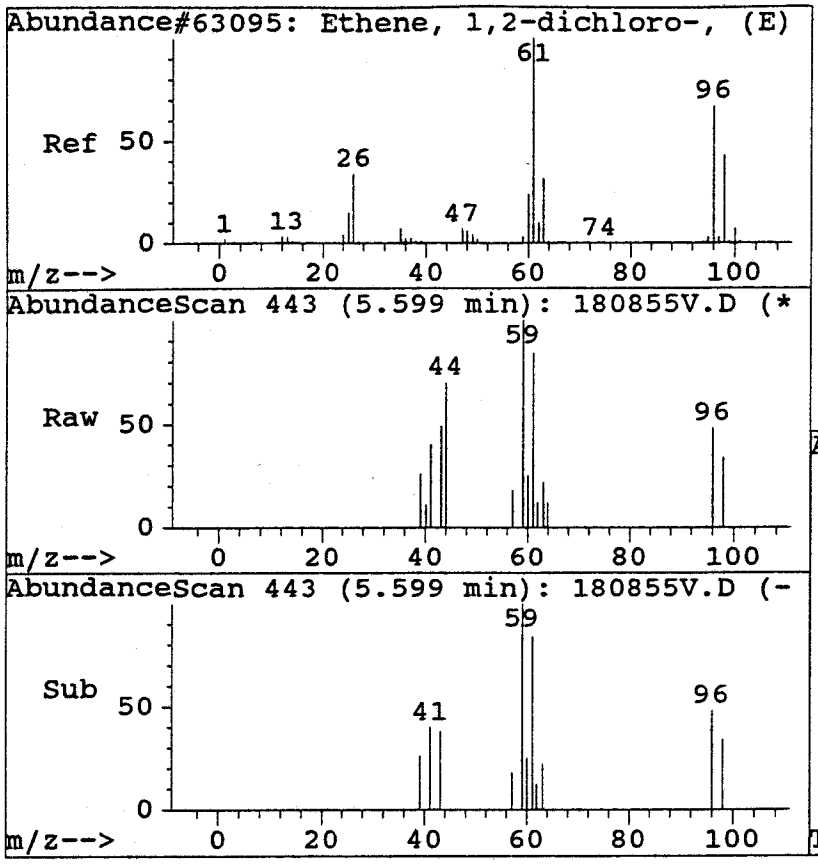


#10
1,1-Dichloroethene
Concen: 4.10 ug/l
RT: 4.73 min Scan# 371
Delta R.T. -0.01 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:96 Resp: 32921

Ion	Ratio	Lower	Upper
96	100		
61	214.1	163.8	245.6
98	70.0	50.4	75.6
0	0.0	0.0	0.0

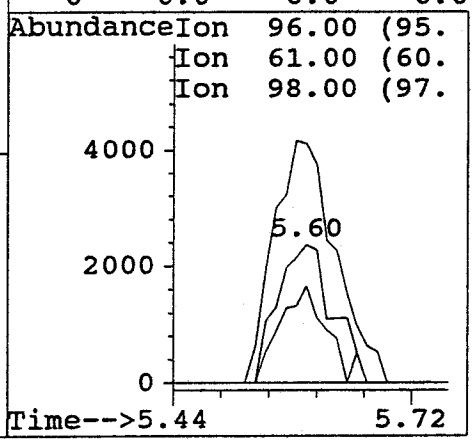


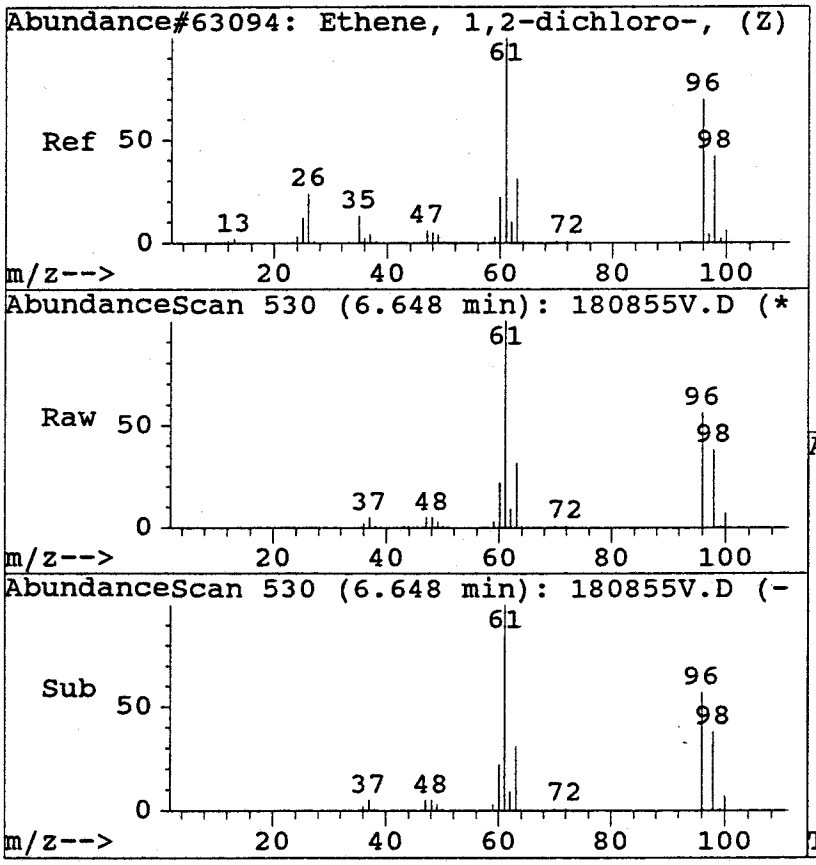


#11
trans-1,2-Dichloroethene
Concen: 1.35 ug/l (interference)
RT: 5.60 min Scan# 443 m/z 59
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:96 Resp: 10808

Ion	Ratio	Lower	Upper
96	100		
61	174.0	144.8	217.2
98	70.1	52.4	78.6
0	0.0	0.0	0.0

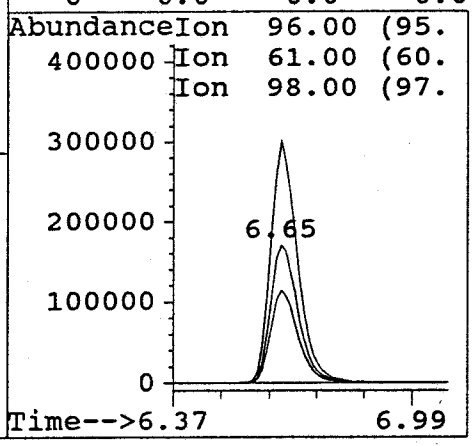


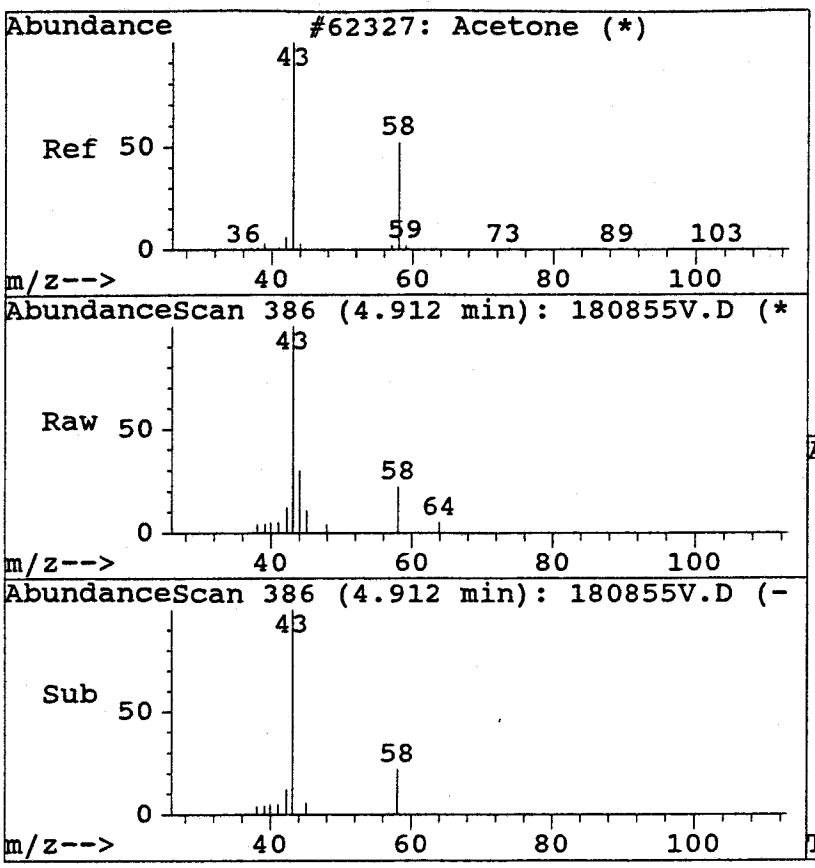


#12
cis-1,2-Dichloroethene
Concen: 88.57 ug/l
RT: 6.65 min Scan# 530
Delta R.T. -0.04 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:96 Resp: 842774

Ion	Ratio	Lower	Upper
96	100		
61	177.2	152.1	228.1
98	66.8	54.4	81.6
0	0.0	0.0	0.0

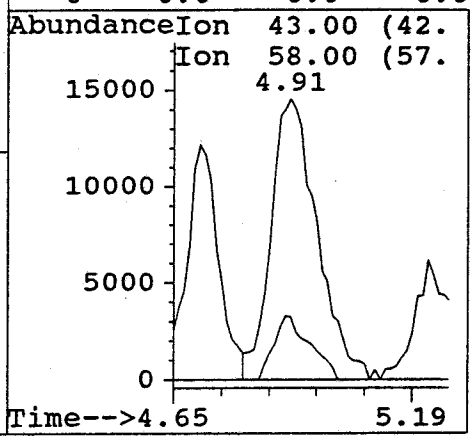


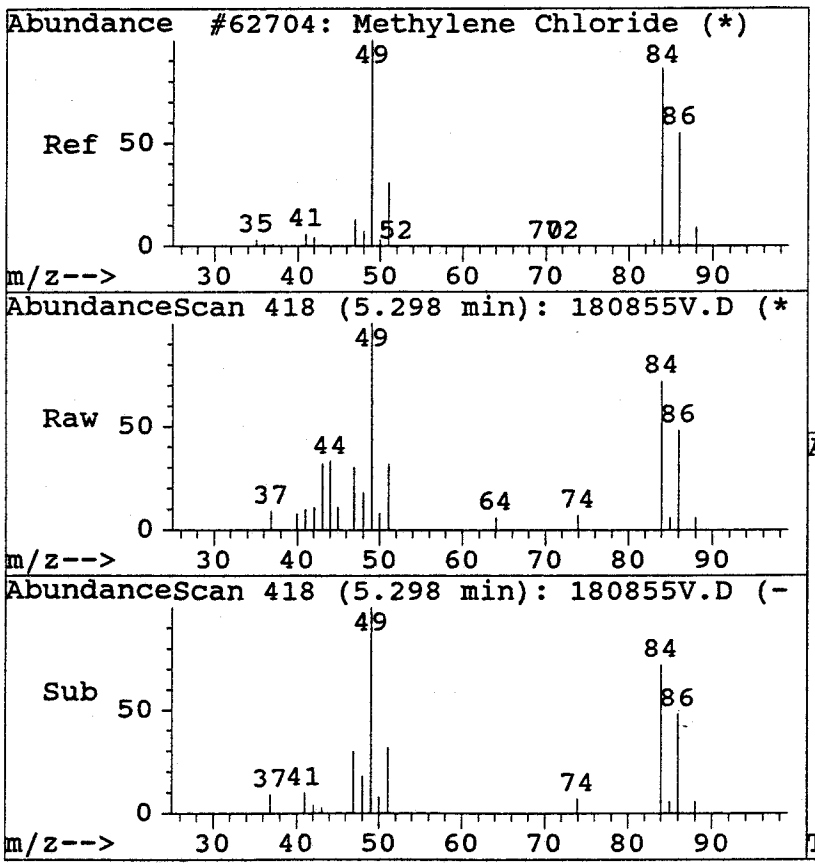


#13
Acetone
Concen: 7.79 ug/l
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:43 Resp: 107085

Ion	Ratio	Lower	Upper
43	100		
58	22.3	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

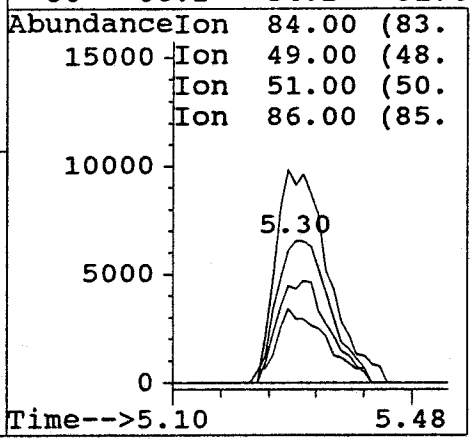


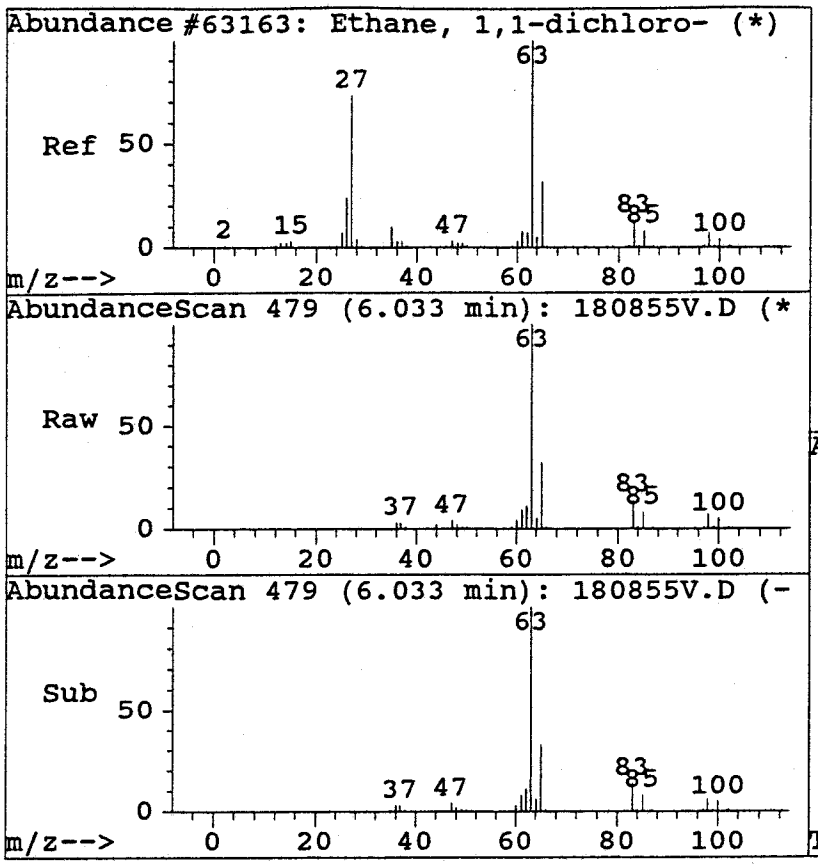


#17
Methylene Chloride
Concen: 4.60 ug/l
RT: 5.30 min Scan# 418
Delta R.T. -0.04 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:84 Resp: 38343

Ion	Ratio	Lower	Upper
84	100		
49	139.3	113.2	169.8
51	45.1	35.3	52.9
86	66.2	54.2	81.4

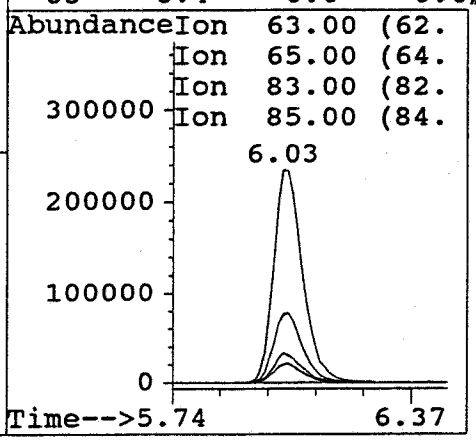


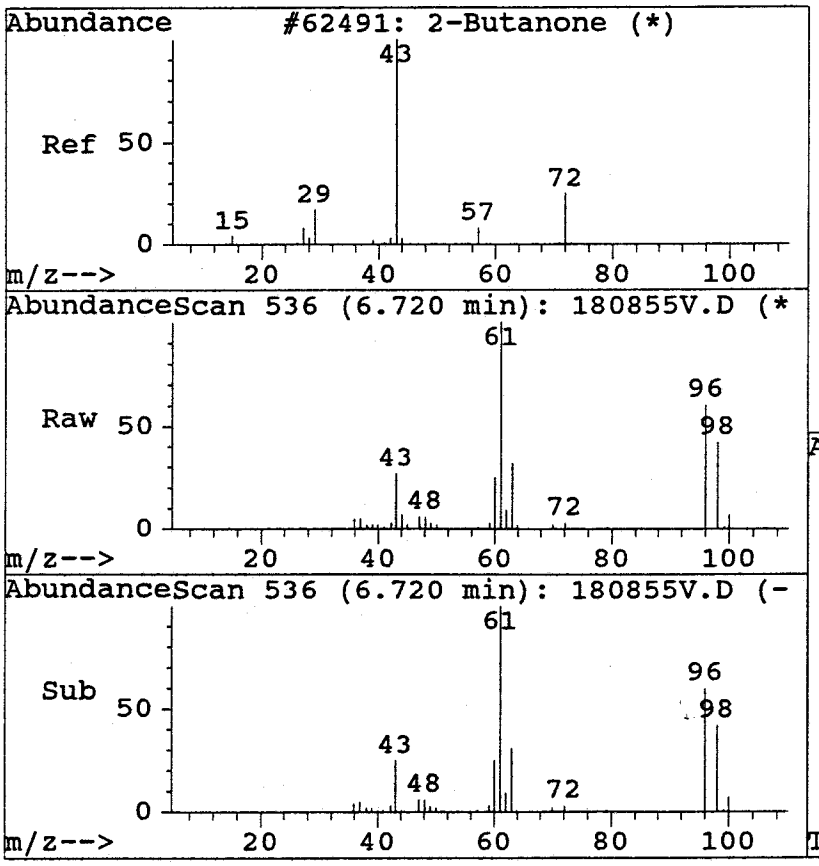


#21
1,1-Dichloroethane
Concen: 70.64 ug/l
RT: 6.03 min Scan# 479
Delta R.T. -0.04 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:63 Resp: 1240880

Ion	Ratio	Lower	Upper
63	100		
65	32.4	0.0	0.0#
83	13.7	0.0	0.0#
85	8.4	0.0	0.0#

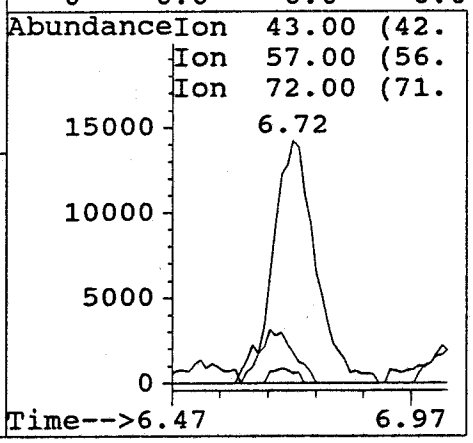


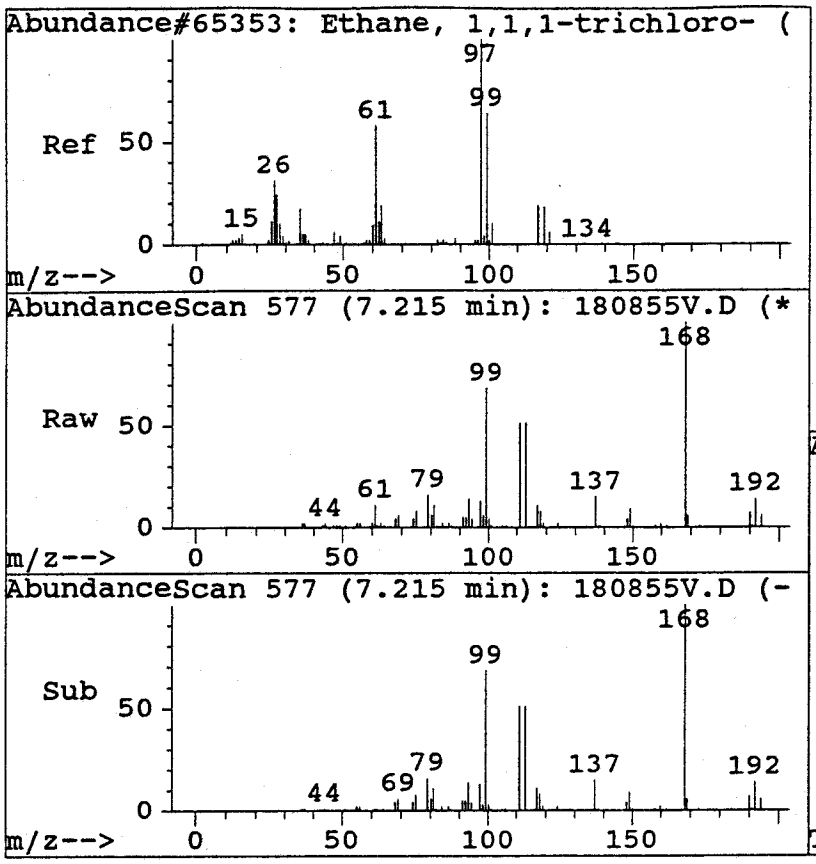


#24
2-Butanone + interference
Concen: 4.88 ug/l (non-target)
RT: 6.72 min Scan# 536
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:43 Resp: 86711

Ion	Ratio	Lower	Upper
43	100		
57	4.1	5.5	8.3#
72	12.9	18.3	27.5#
0	0.0	0.0	0.0

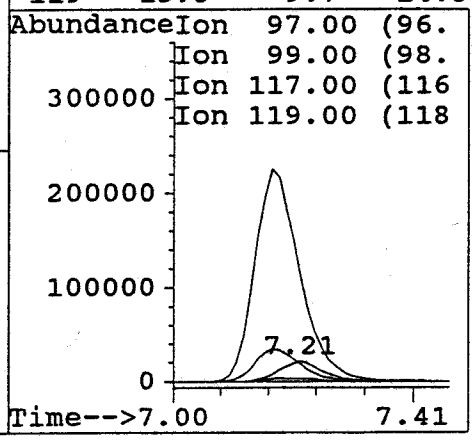


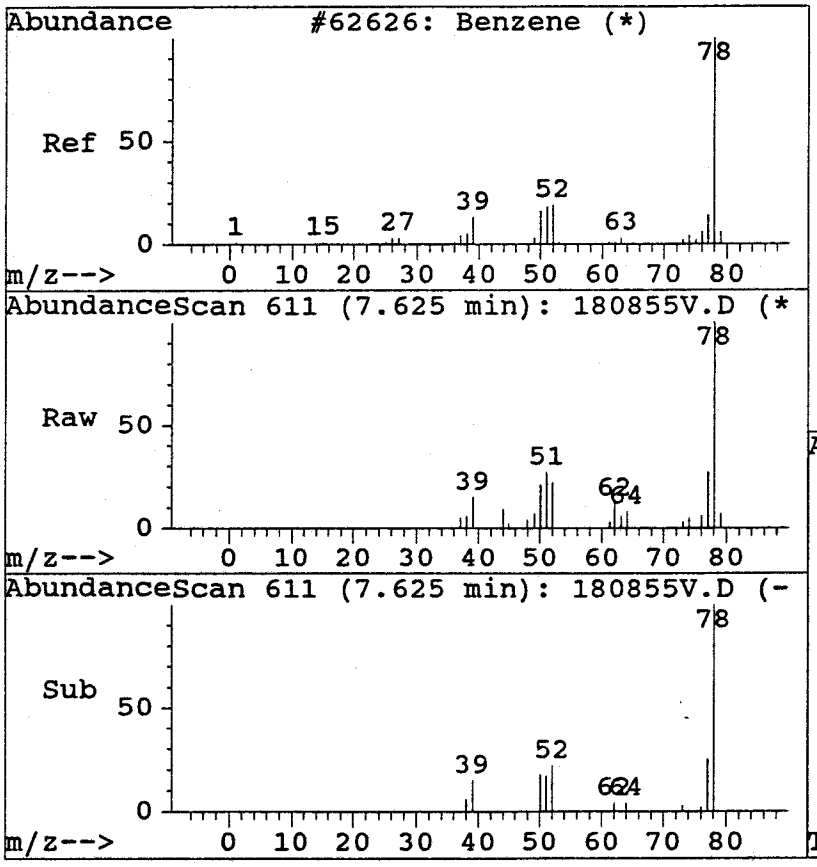


#30
1,1,1-Trichloroethane
Concen: 4.91 ug/l + IS pm
RT: 7.21 min Scan# 577
Delta R.T. -0.04 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:97 Resp: 110743

Ion	Ratio	Lower	Upper
97	100		
99	521.5	93.1	139.7#
117	88.2	15.4	23.0#
119	13.8	9.7	14.5

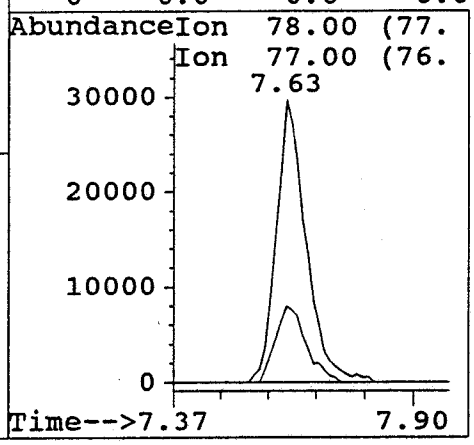


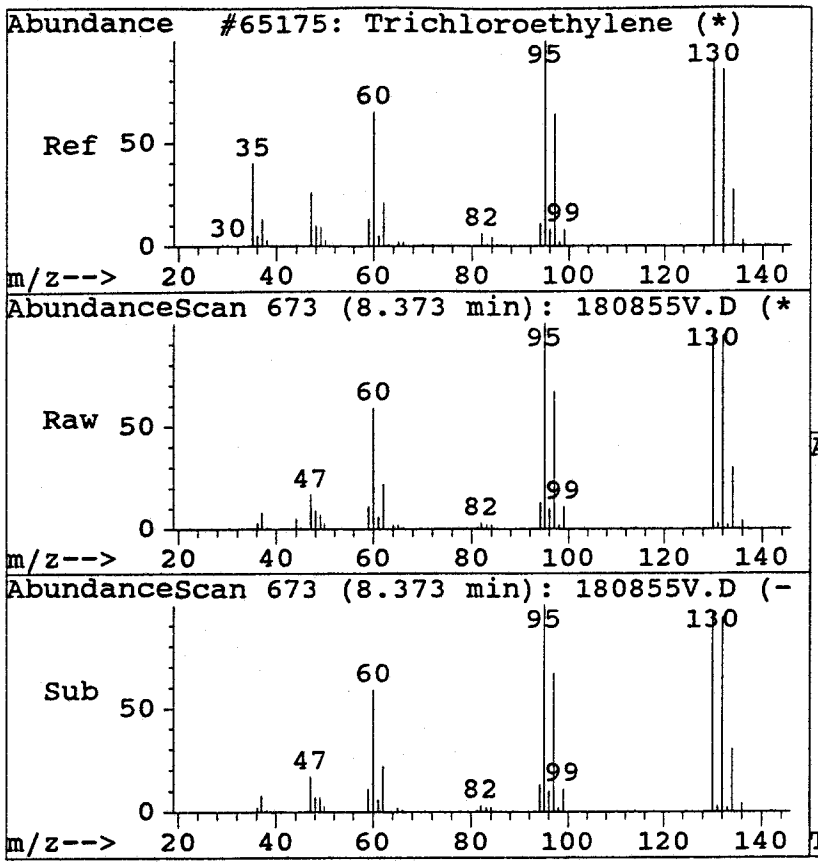


#39
Benzene
Concen: 5.50 ug/l
RT: 7.63 min Scan# 611
Delta R.T. -0.04 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:78 Resp: 136545

Ion	Ratio	Lower	Upper
78	100		
77	27.0	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

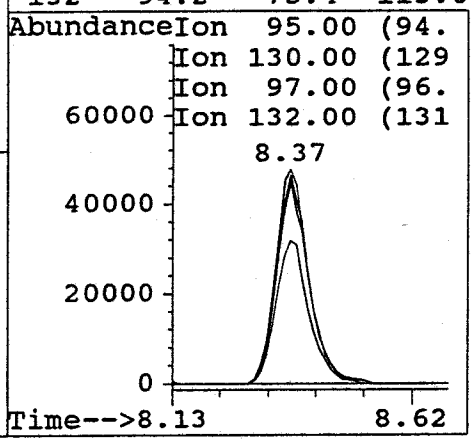


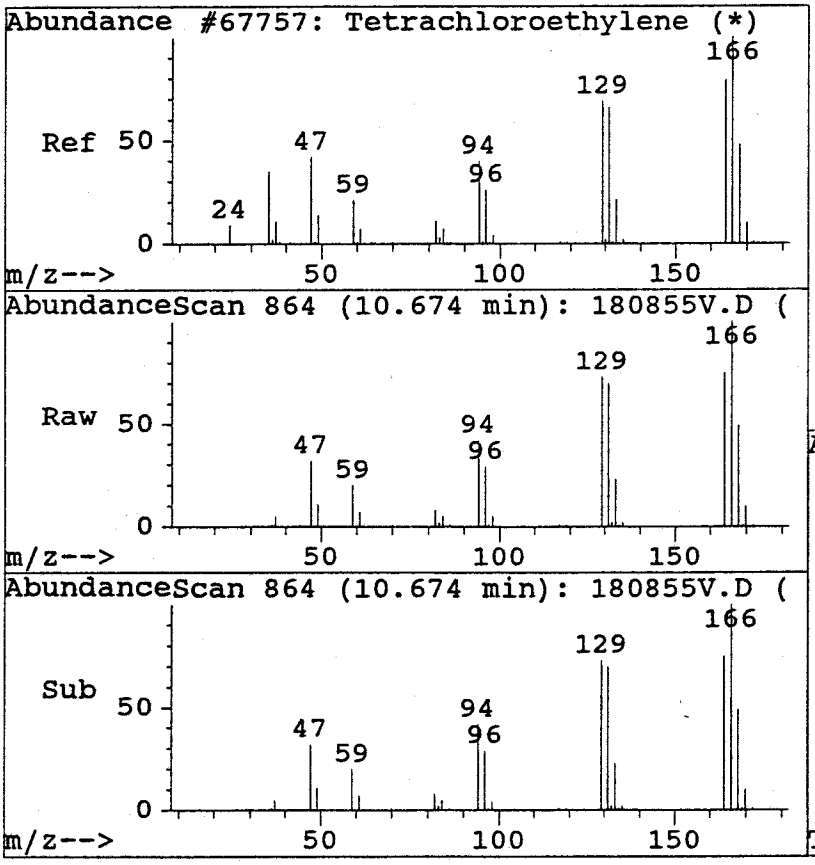


#41
Trichloroethene
Concen: 14.57 ug/l
RT: 8.37 min Scan# 673
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:95 Resp: 222602

Ion	Ratio	Lower	Upper
95	100		
130	97.1	80.0	120.0
97	66.6	53.8	80.8
132	94.2	75.4	113.0

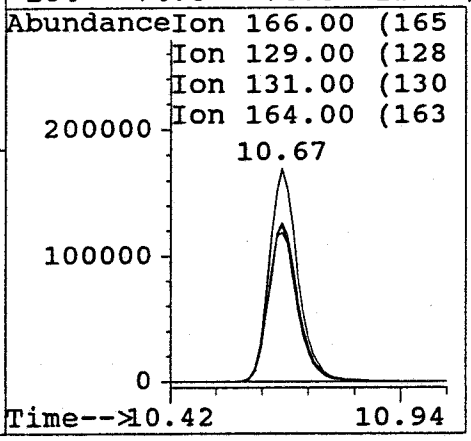


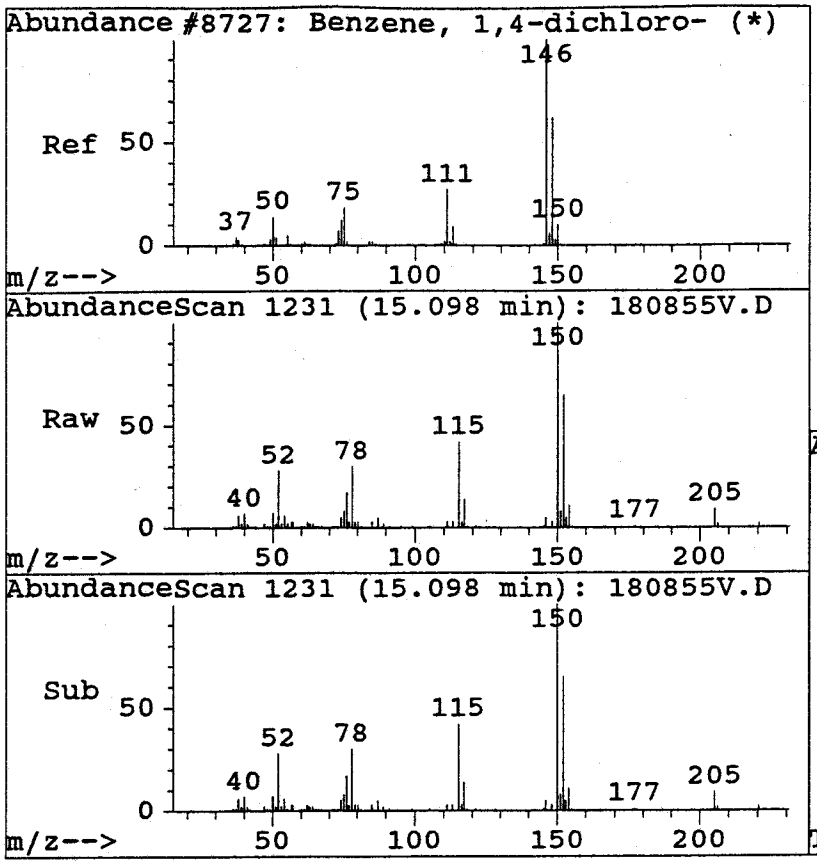


#52
Tetrachloroethene
Concen: 37.78 ug/l
RT: 10.67 min Scan# 864
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:166 Resp: 760631

Ion	Ratio	Lower	Upper
166	100		
129	73.0	75.4	113.0#
131	69.9	75.0	112.4#
164	74.6	76.0	114.0#

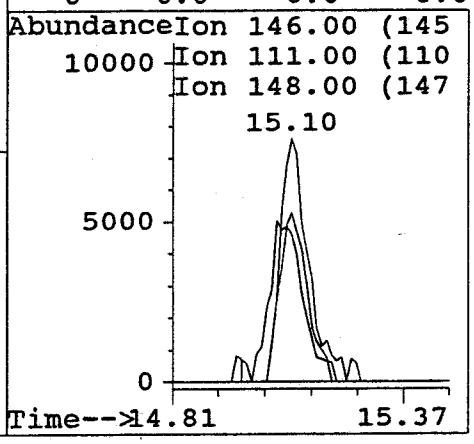




#75
1,4-Dichlorobenzene + IS
Concen: 1.07 ug/l m
RT: 15.10 min Scan# 1231
Delta R.T. -0.03 min
Lab File: 180855V.D
Acq: 18 Jul 95 7:52 pm

Tgt Ion:146 Resp: 37030

Ion	Ratio	Lower	Upper
146	100		
111	26.9	64.2	96.2#
148	62.5	48.4	72.6
0	0.0	0.0	0.0

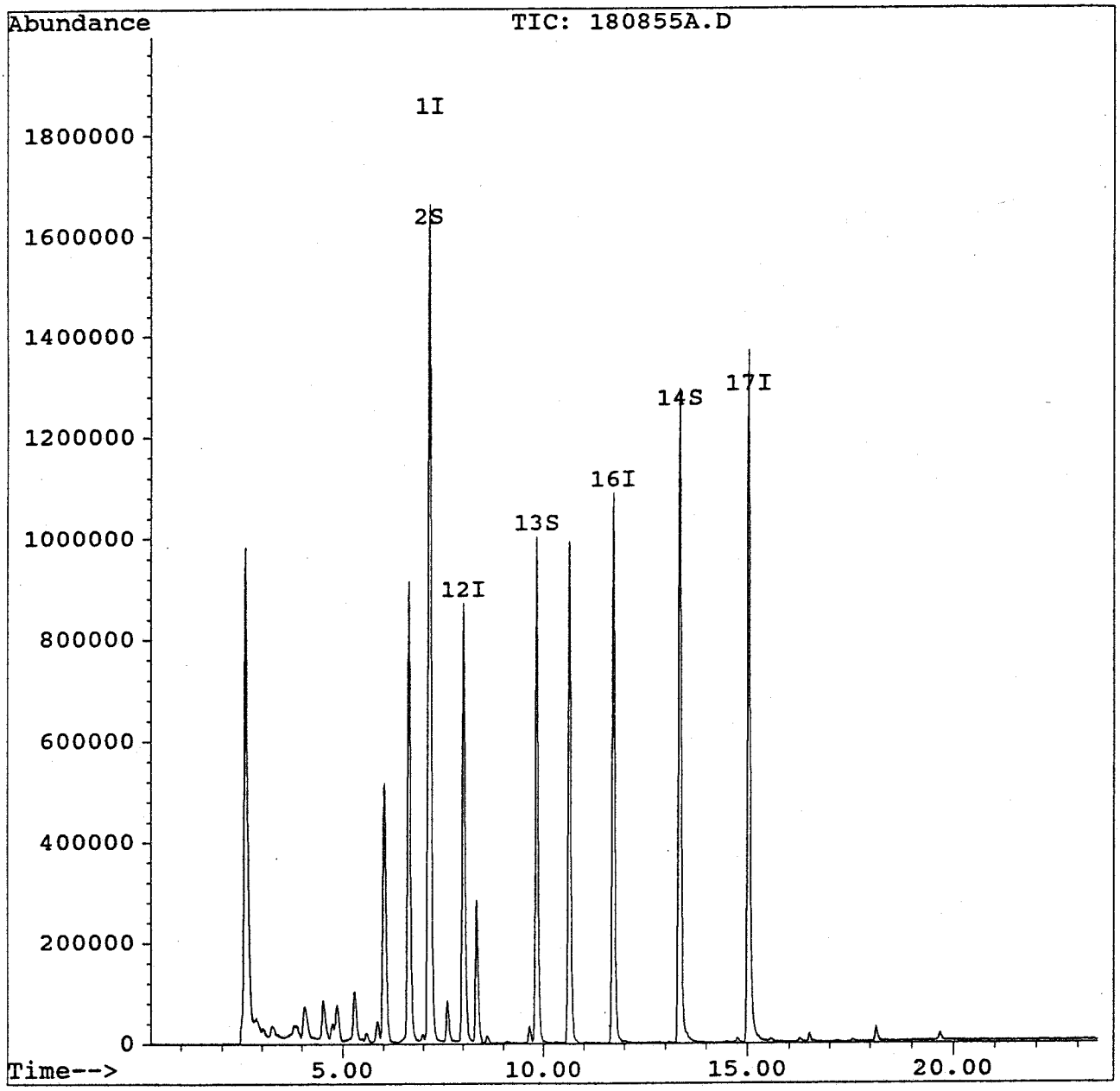


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180855A.D
Acq Time : 19 Jul 95 5:08 pm
Sample : MW-8 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 17:32 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180855A.D
Acq Time : 19 Jul 95 5:08 pm
Sample : MW-8 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 17:32 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1692354	50.00	ug/l	-0.01
12) 1,4-Difluorobenzene	8.00	114	1502103	50.00	ug/l	-0.01
16) Chlorobenzene-d5	11.72	117	1353190	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.03	152	940315	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.13	113	886358	50.40	ug/l	100.80%
13) Toluene-d8	9.82	98	1509998	50.84	ug/l	101.67%
14) Bromofluorobenzene	13.35	174	912063	51.13	ug/l	102.27%
Target Compounds						Qvalue

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-10

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180856V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180856V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	88	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	21	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	2.2	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	55	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	740	D
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-10

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180856V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180856V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

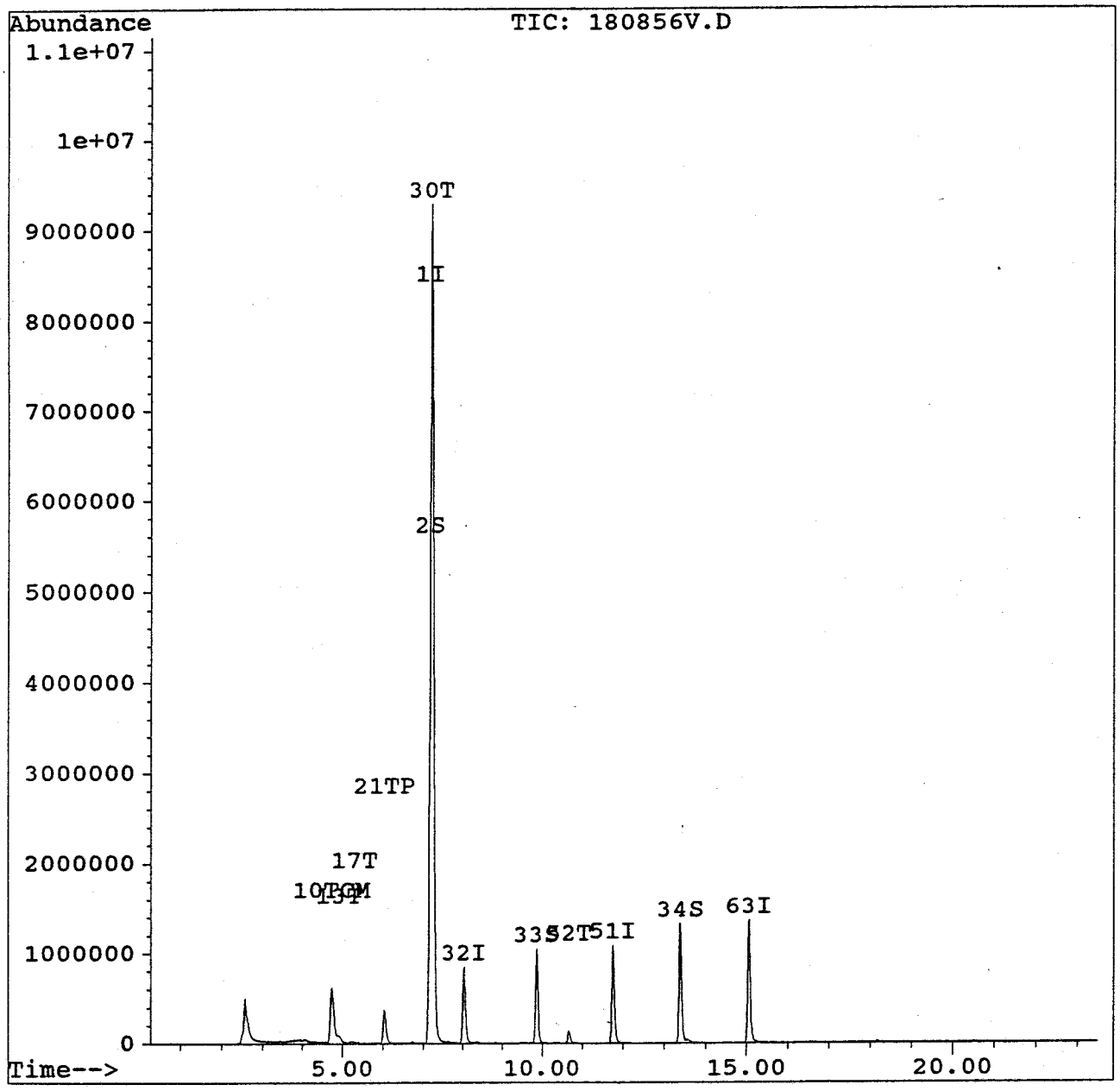
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5.7	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180856V.D
Acq Time : 18 Jul 95 10:48 pm
Sample : MW-10 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 12:01 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

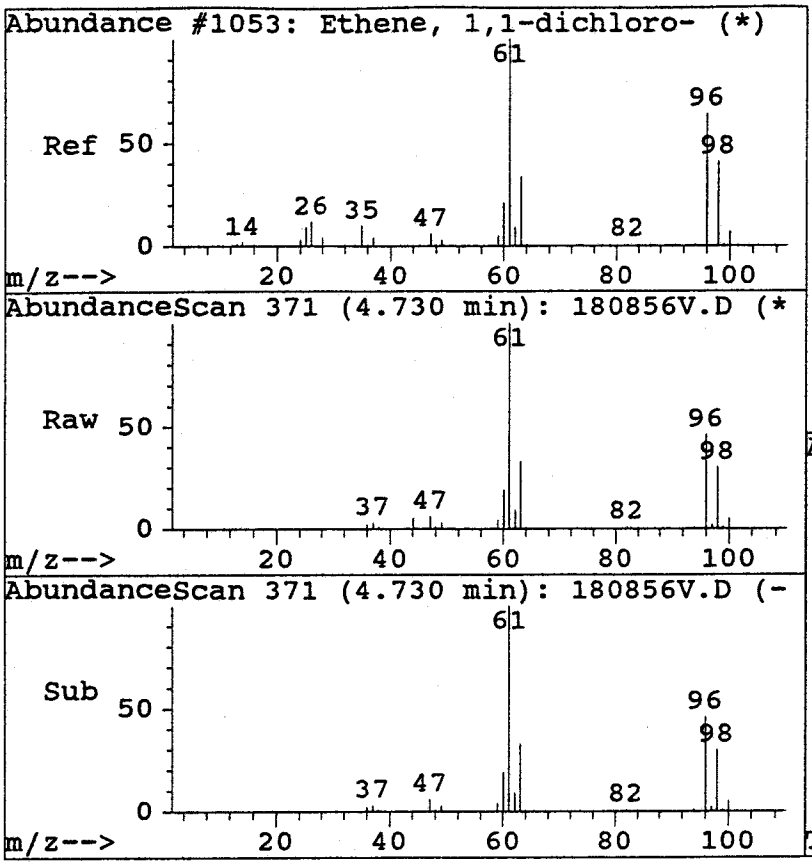
Data File : C:\HPCHEM\1\DATA\071895V\180856V.D
Acq Time : 18 Jul 95 10:48 pm
Sample : MW-10 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 12:01 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.17	168	1692838	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1502654	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1348006	50.00	ug/l		-0.04
63) 1,4-Dichlorobenzene-d4	15.06	152	940459	50.00	ug/l		-0.04
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.17	113	956303	51.80	ug/l		103.61%
33) Toluene-d8	9.85	98	1597397	51.81	ug/l		103.63%
34) Bromofluorobenzene	13.38	174	962255	50.48	ug/l		100.96%
Target Compounds							**Qvalue**
10) 1,1-Dichloroethene	4.73	96	674183	87.74	ug/l		94
13) Acetone	4.90	43	274100	20.82	ug/l		100
17) Methylene Chloride	5.30	84	17399	2.18	ug/l		93
21) 1,1-Dichloroethane	6.03	63	922475	54.86	ug/l	#	100
30) 1,1,1-Trichloroethane	7.20	97	14798780	684.90	ug/l	#	63
52) Tetrachloroethene	10.66	166	108726	5.69	ug/l	#	79

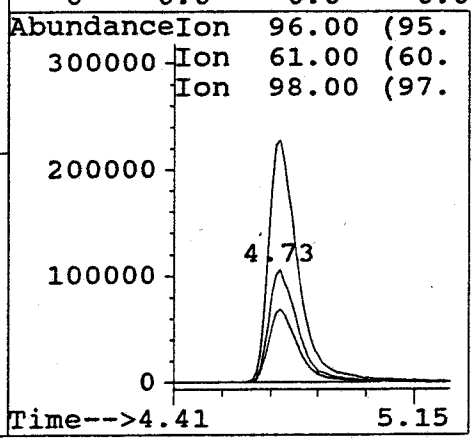
(#) = qualifier out of range (m) = manual integration

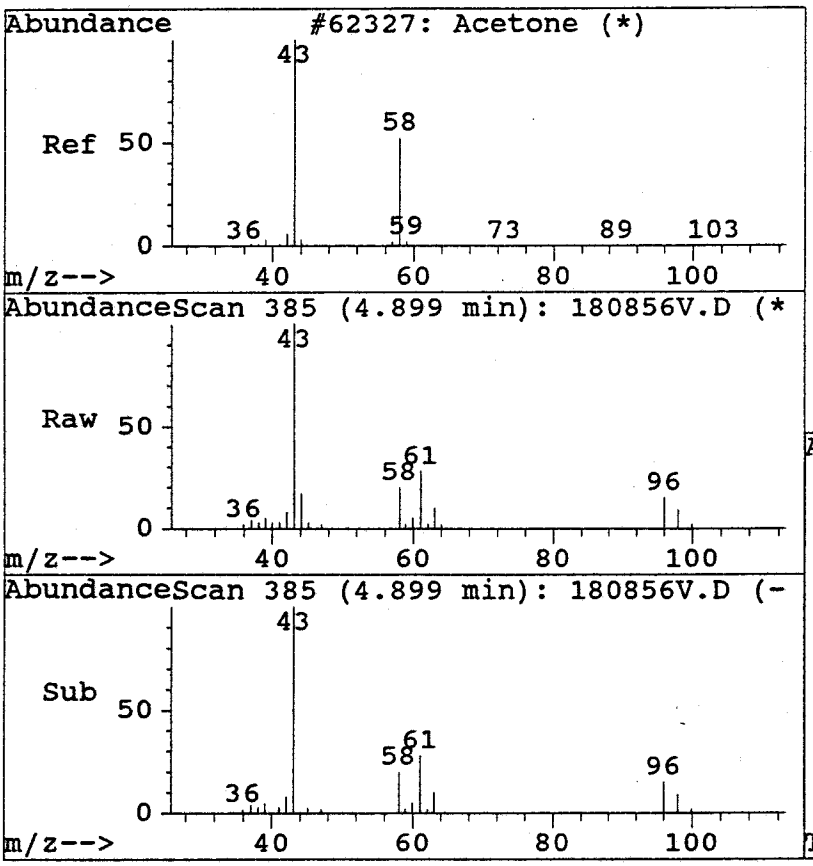


#10
1,1-Dichloroethene
Concen: 87.74 ug/l
RT: 4.73 min Scan# 371
Delta R.T. -0.01 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:96 Resp: 674183

Ion	Ratio	Lower	Upper
96	100		
61	215.4	163.8	245.6
98	65.3	50.4	75.6
0	0.0	0.0	0.0

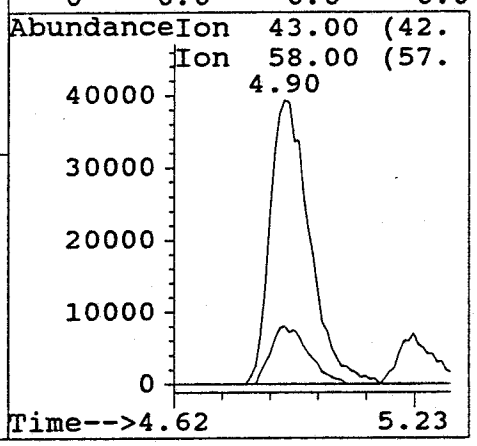


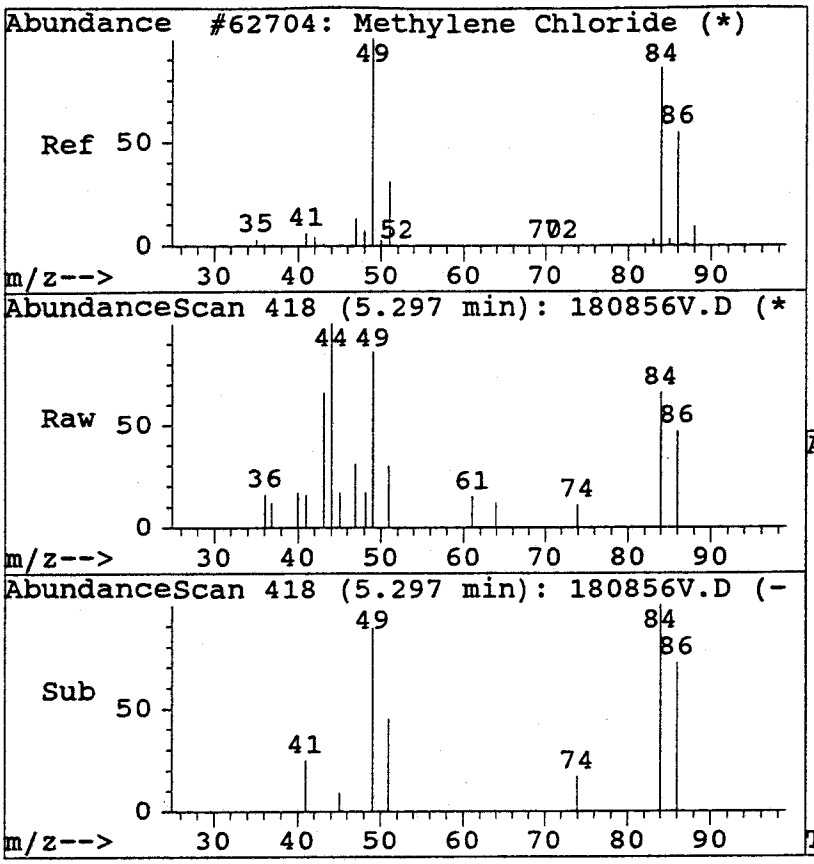


#13
Acetone
Concen: 20.82 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:43 Resp: 274100

Ion	Ratio	Lower	Upper
43	100		
58	20.4	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

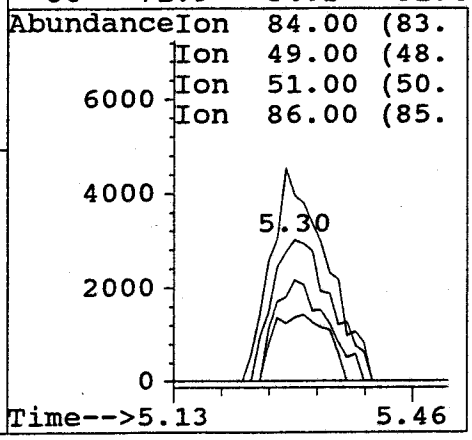


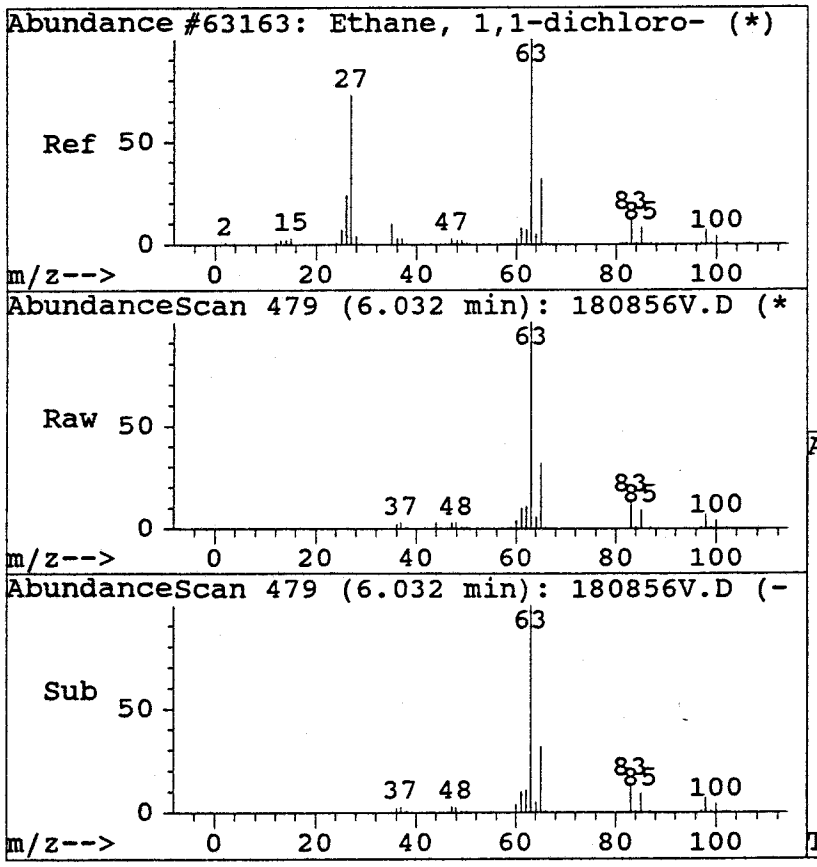


#17
Methylene Chloride
Concen: 2.18 ug/l
RT: 5.30 min Scan# 418
Delta R.T. -0.04 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:84 Resp: 17399

Ion	Ratio	Lower	Upper
84	100		
49	131.1	113.2	169.8
51	45.5	35.3	52.9
86	71.9	54.2	81.4

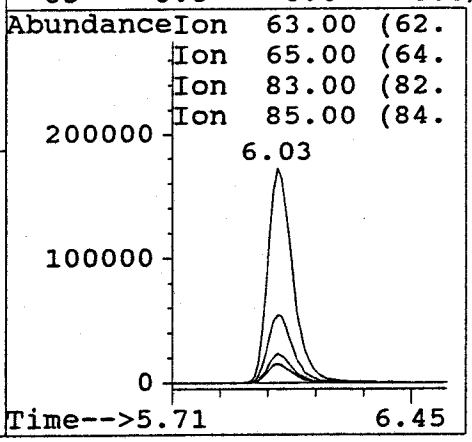


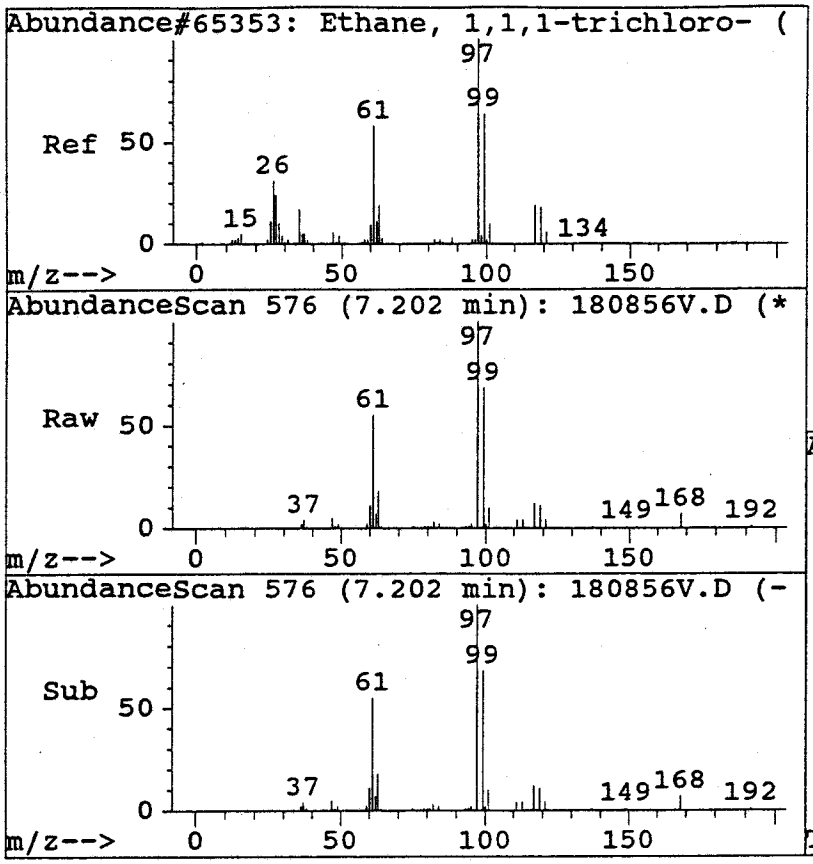


#21
1,1-Dichloroethane
Concen: 54.86 ug/l
RT: 6.03 min Scan# 479
Delta R.T. -0.04 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:63 Resp: 922475

Ion	Ratio	Lower	Upper
63	100		
65	31.6	0.0	0.0#
83	13.7	0.0	0.0#
85	8.8	0.0	0.0#

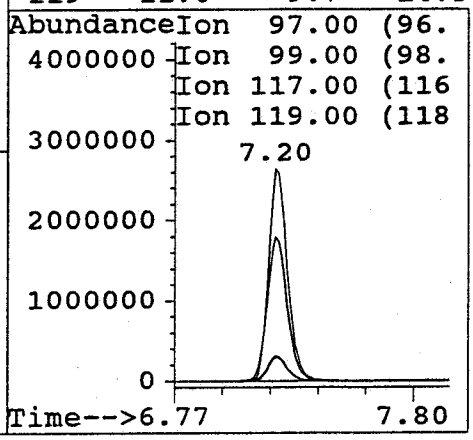


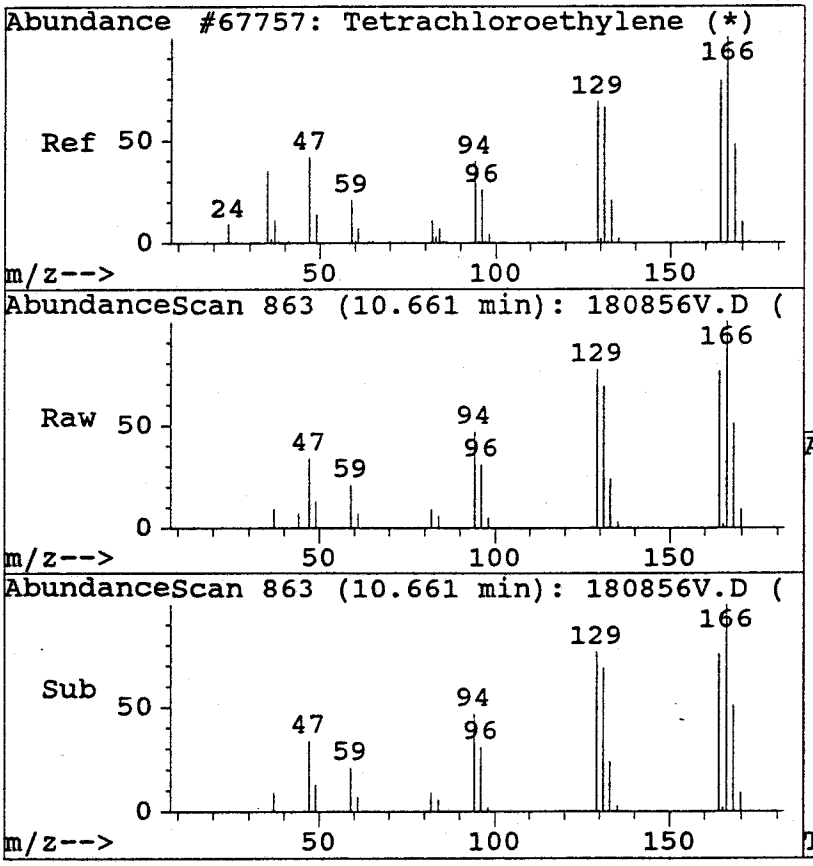


#30
1,1,1-Trichloroethane
Concen: 684.90 ug/l
RT: 7.20 min Scan# 576
Delta R.T. -0.05 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:97 Resp:14798780

Ion	Ratio	Lower	Upper
97	100		
99	68.0	93.1	139.7#
117	12.0	15.4	23.0#
119	11.0	9.7	14.5

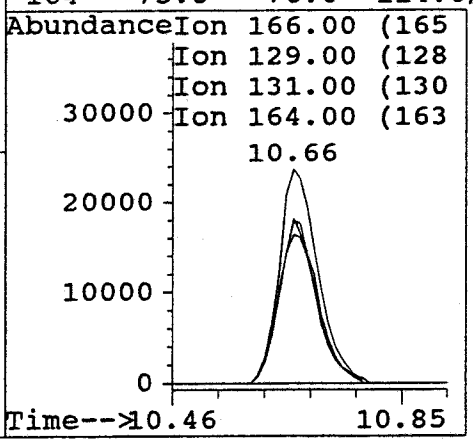




#52
Tetrachloroethene
Concen: 5.69 ug/l
RT: 10.66 min Scan# 863
Delta R.T. -0.05 min
Lab File: 180856V.D
Acq: 18 Jul 95 10:48 pm

Tgt Ion:166 Resp: 108726

Ion	Ratio	Lower	Upper
166	100		
129	76.7	75.4	113.0
131	69.1	75.0	112.4#
164	75.8	76.0	114.0#

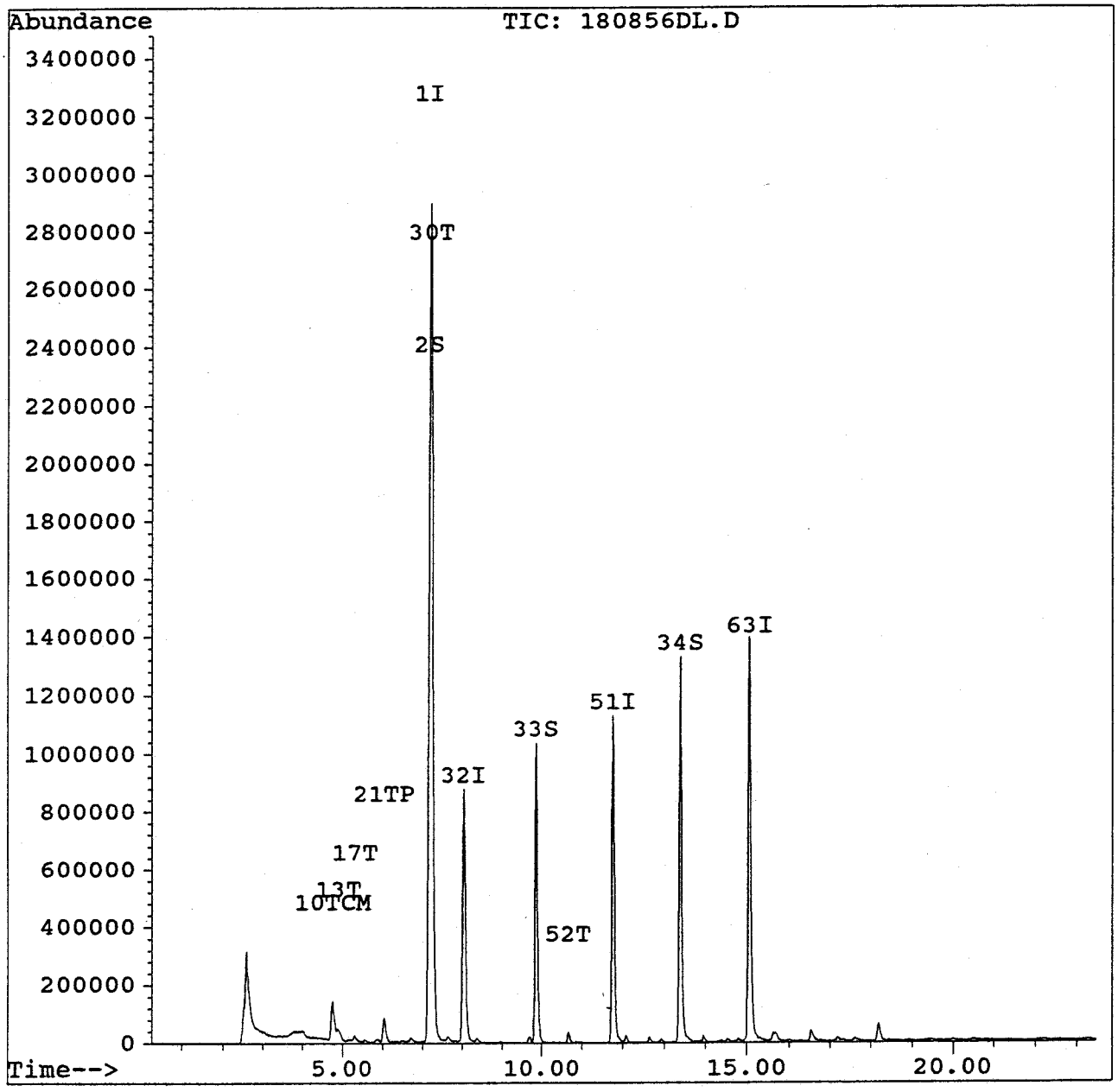


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180856DL.D
Acq Time : 18 Jul 95 10:13 pm
Sample : MW-10DL (X5) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 12:02 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

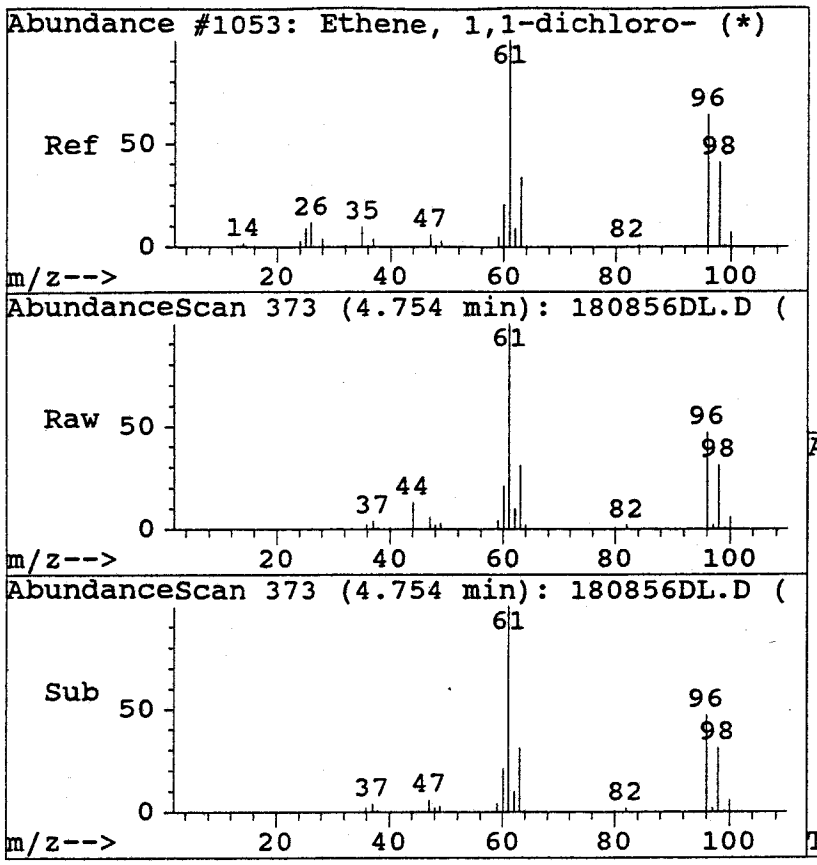
Data File : C:\HPCHEM\1\DATA\071895V\180856DL.D
Acq Time : 18 Jul 95 10:13 pm
Sample : MW-10DL (X5) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 12:02 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.16	168	1765363	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1574681	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1390232	50.00	ug/l		-0.04
63) 1,4-Dichlorobenzene-d4	15.06	152	964709	50.00	ug/l		-0.04
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.16	113	939404	48.80	ug/l		97.60%
33) Toluene-d8	9.85	98	1563245	48.39	ug/l		96.77%
34) Bromofluorobenzene	13.38	174	934604	46.78	ug/l		93.57%
Target Compounds							**Qvalue**
10) 1,1-Dichloroethene	4.75	96	149817	18.70	ug/l		94
13) Acetone	4.90	43	140289	10.22	ug/l		99
17) Methylene Chloride	5.31	84	21172	2.54	ug/l		92
21) 1,1-Dichloroethane	6.04	63	203703	11.62	ug/l	#	100
30) 1,1,1-Trichloroethane	7.21	97	3355006	148.89	ug/l	#	70
52) Tetrachloroethene	10.66	166	28576	1.45	ug/l	#	79

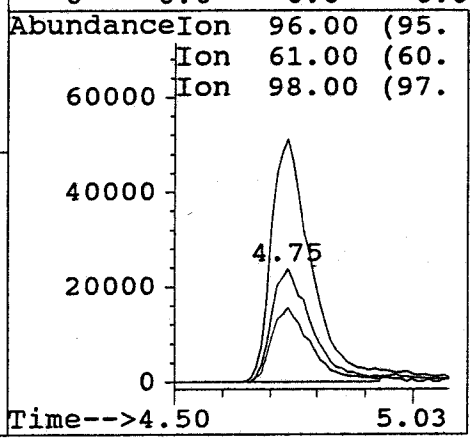
(#) = qualifier out of range (m) = manual integration

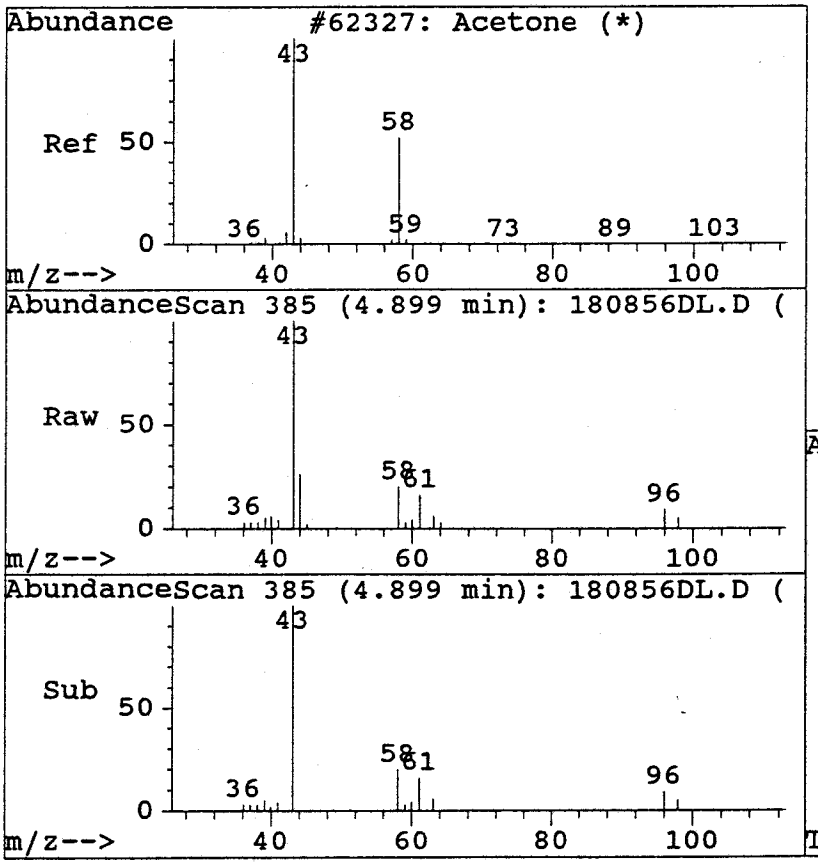


#10
1,1-Dichloroethene
Concen: 18.70 ug/l
RT: 4.75 min Scan# 373
Delta R.T. 0.01 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:96 Resp: 149817

Ion	Ratio	Lower	Upper
96	100		
61	215.0	163.8	245.6
98	65.6	50.4	75.6
0	0.0	0.0	0.0

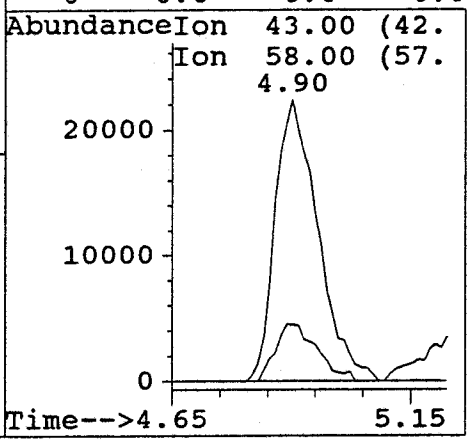


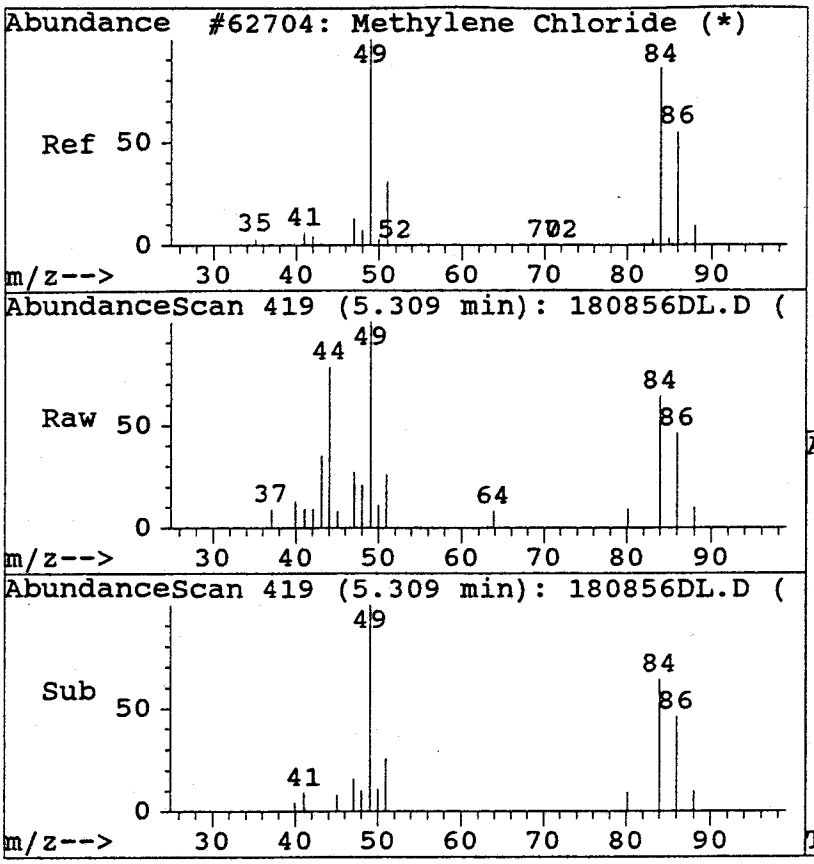


#13
Acetone
Concen: 10.22 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:43 Resp: 140289

Ion	Ratio	Lower	Upper
43	100		
58	20.0	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

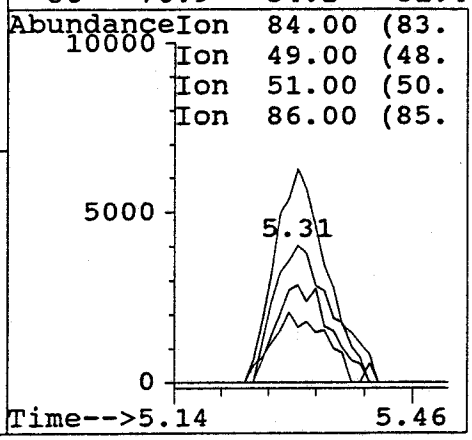


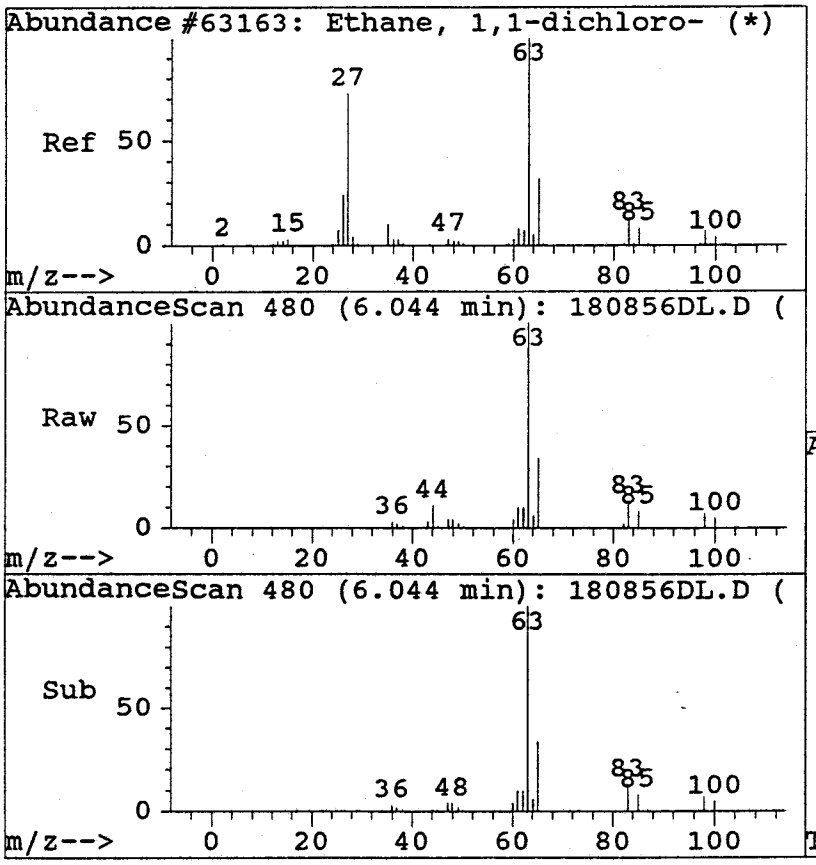


#17
Methylene Chloride
Concen: 2.54 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:84 Resp: 21172

Ion	Ratio	Lower	Upper
84	100		
49	155.4	113.2	169.8
51	40.2	35.3	52.9
86	70.9	54.2	81.4

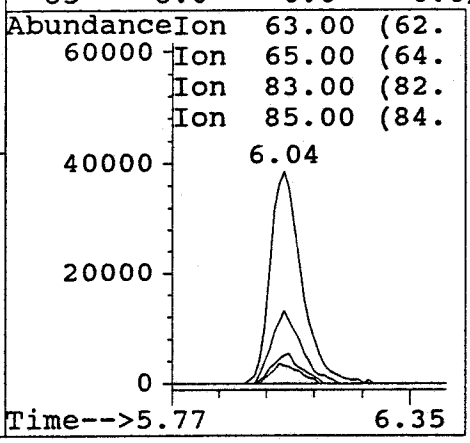


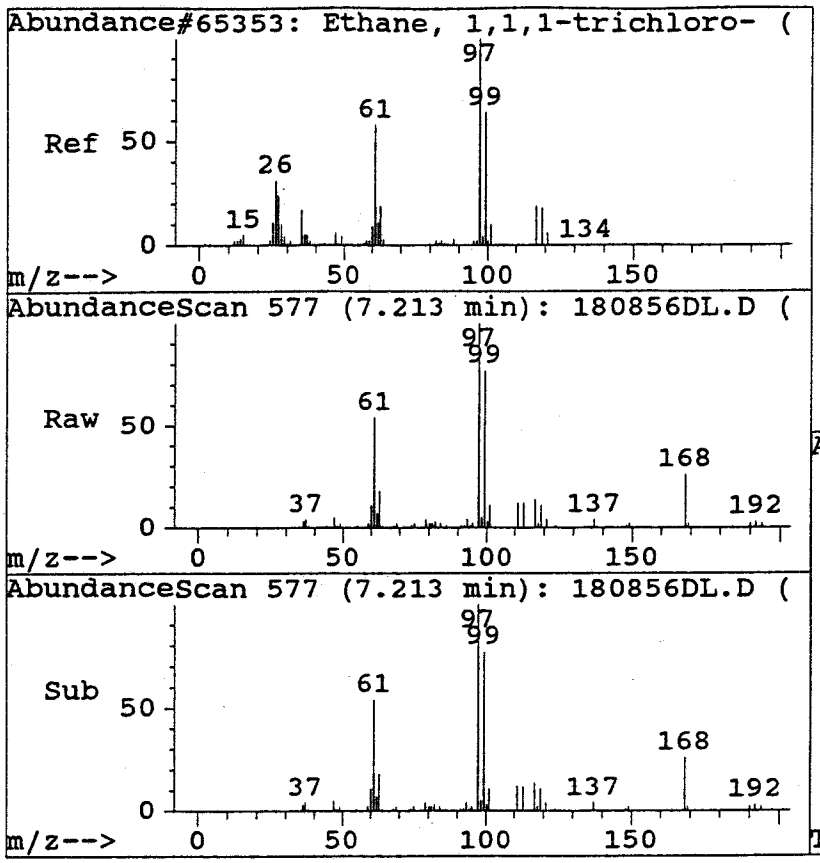


#21
1,1-Dichloroethane
Concen: 11.62 ug/l
RT: 6.04 min Scan# 480
Delta R.T. -0.03 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:63 Resp: 203703

Ion	Ratio	Lower	Upper
63	100		
65	33.9	0.0	0.0#
83	12.9	0.0	0.0#
85	8.0	0.0	0.0#

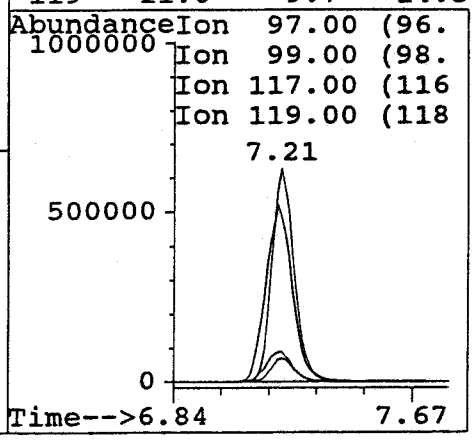


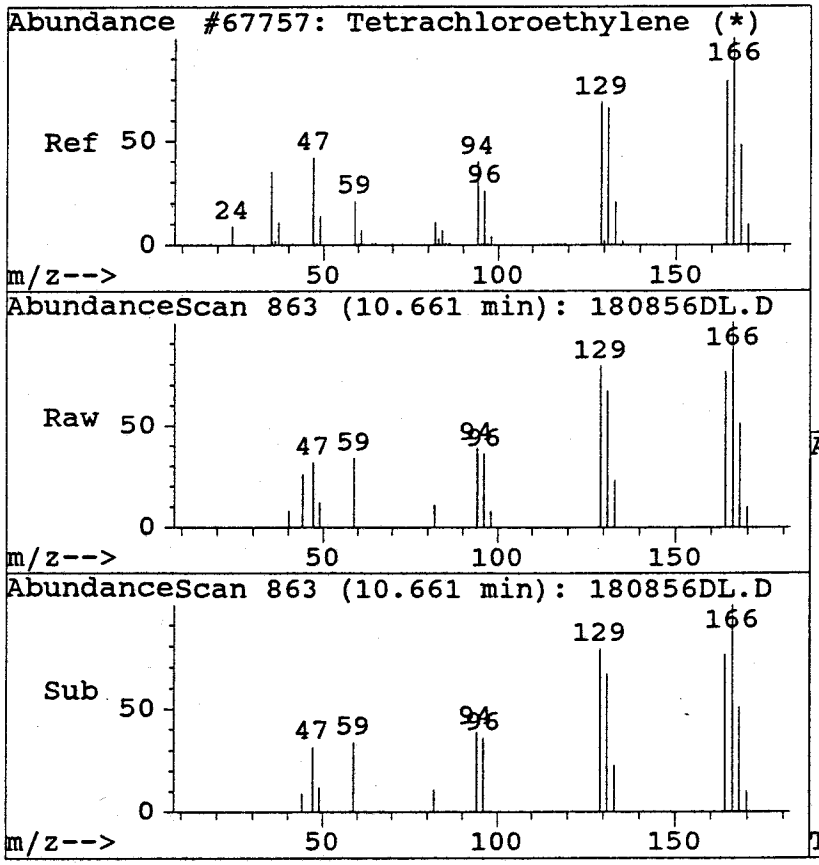


#30
1,1,1-Trichloroethane
Concen: 148.89 ug/l
RT: 7.21 min Scan# 577
Delta R.T. -0.04 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:97 Resp: 3355006

Ion	Ratio	Lower	Upper
97	100		
99	76.8	93.1	139.7#
117	14.5	15.4	23.0#
119	11.0	9.7	14.5

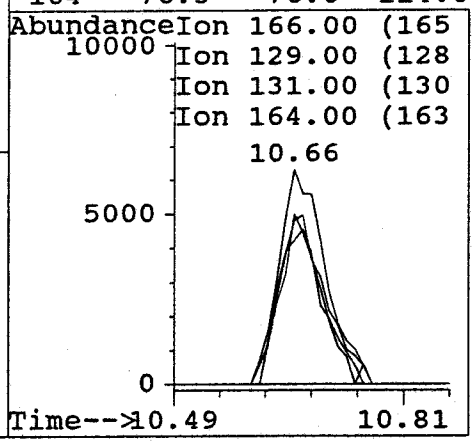




#52
Tetrachloroethene
Concen: 1.45 ug/l
RT: 10.66 min Scan# 863
Delta R.T. -0.05 min
Lab File: 180856DL.D
Acq: 18 Jul 95 10:13 pm

Tgt Ion:166 Resp: 28576

Ion	Ratio	Lower	Upper
166	100		
129	79.0	75.4	113.0
131	66.8	75.0	112.4#
164	76.3	76.0	114.0

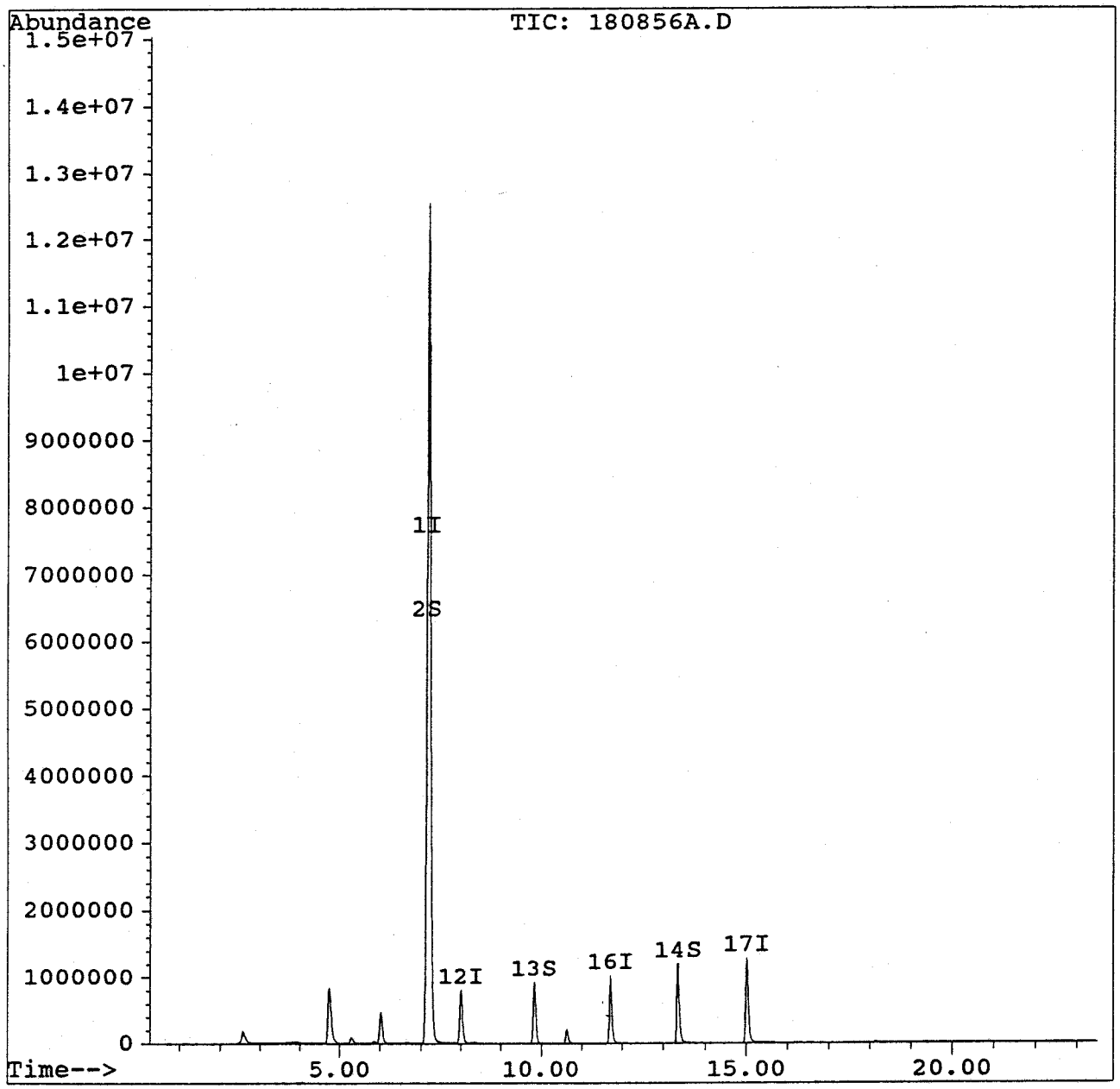


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180856A.D
Acq Time : 19 Jul 95 5:43 pm
Sample : MW-10 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 18:07 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180856A.D
Acq Time : 19 Jul 95 5:43 pm
Sample : MW-10 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 18:07 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1547986	50.00	ug/l	-0.01
12) 1,4-Difluorobenzene	8.01	114	1410356	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.72	117	1273599	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.01	152	883712	50.00	ug/l	-0.02
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.14	113	852989	53.02	ug/l	106.05%
13) Toluene-d8	9.82	98	1412369	50.64	ug/l	101.29%
14) Bromofluorobenzene	13.35	174	869754	51.93	ug/l	103.87%
Target Compounds						**Qvalue**

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-11

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180857V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180857V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	1.7	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	7.6	
00067-64-1	Acetone	16	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	3.5	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	26	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	3.1	J
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	4.8	J
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-11

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180857V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180857V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

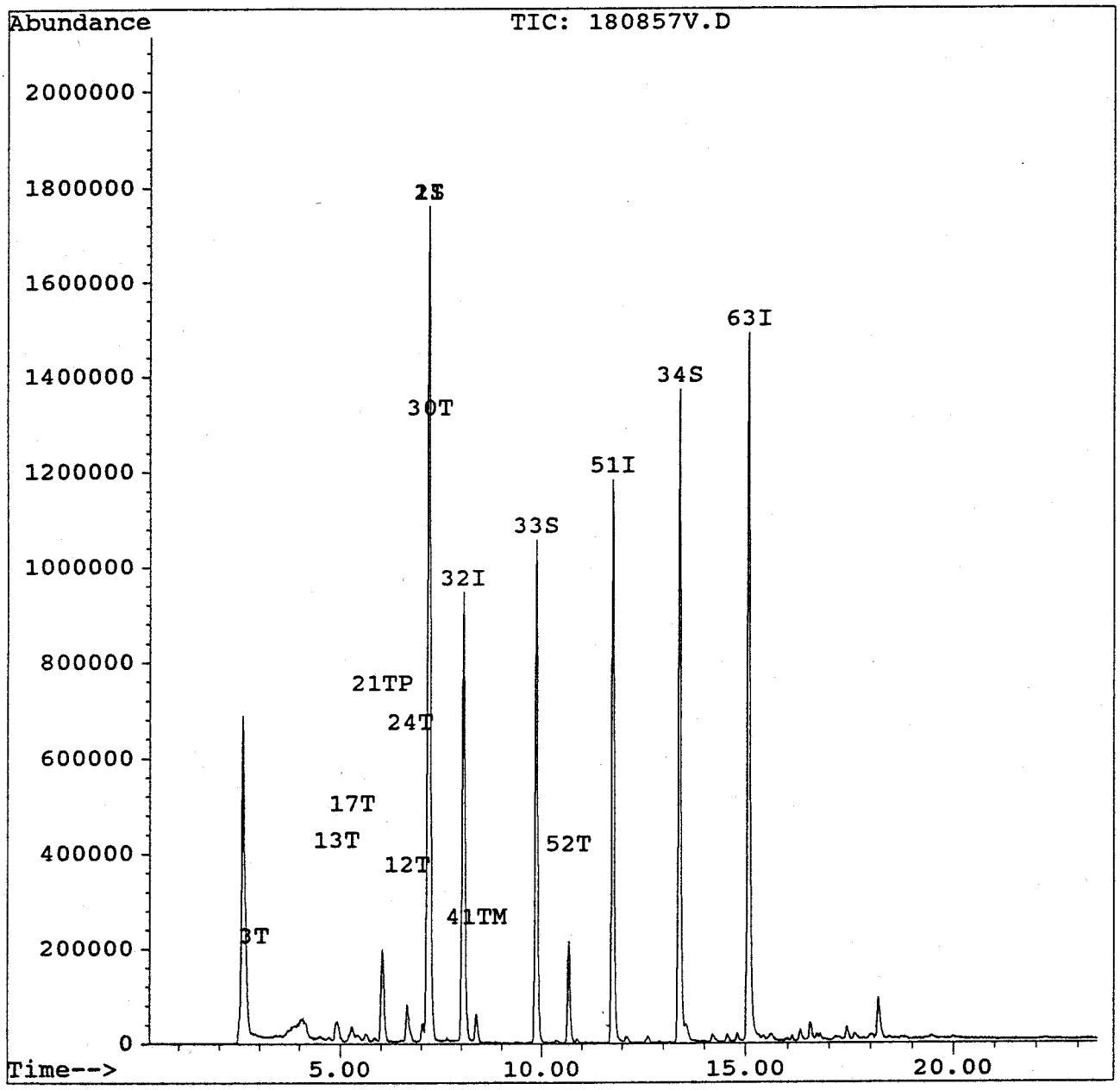
CAS No.	Compound		Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	3.1	J
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	8.1	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180857V.D
Acq Time : 18 Jul 95 8:27 pm
Sample : MW-11 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 11:28 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

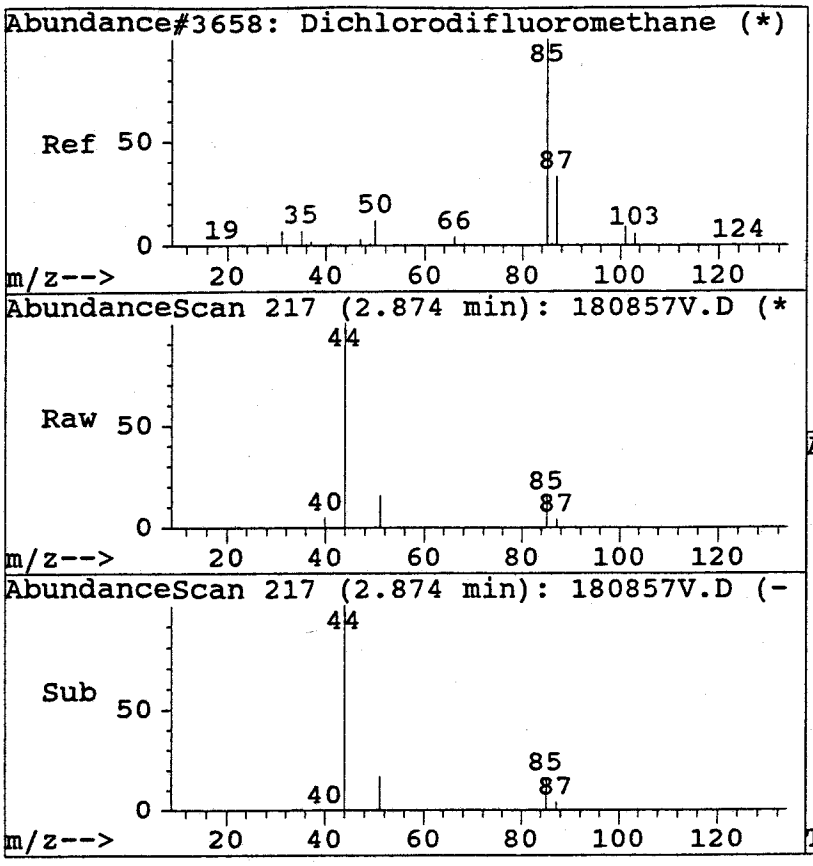
Data File : C:\HPCHEM\1\DATA\071895V\180857V.D
Acq Time : 18 Jul 95 8:27 pm
Sample : MW-11 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 11:28 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.17	168	1798667	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1627014	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1456128	50.00	ug/l		-0.04
63) 1,4-Dichlorobenzene-d4	15.06	152	1019212	50.00	ug/l		-0.04
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.17	113	946262	48.24	ug/l		96.49%
33) Toluene-d8	9.85	98	1604779	48.07	ug/l		96.15%
34) Bromofluorobenzene	13.38	174	957911	46.41	ug/l		92.82%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.87	85	20585	1.69	ug/l	m	89
12) cis-1,2-Dichloroethene	6.65	96	73269	7.57	ug/l		83
13) Acetone	4.90	43	218768	15.64	ug/l		92
17) Methylene Chloride	5.30	84	29998	3.54	ug/l		93
21) 1,1-Dichloroethane	6.03	63	464174	25.98	ug/l	#	100
24) 2-Butanone	6.73	43	56131	3.11	ug/l	#	69
30) 1,1,1-Trichloroethane	7.20	97	110532	4.81	ug/l	#	1
41) Trichloroethene	8.37	95	47738	3.05	ug/l		95
52) Tetrachloroethene	10.66	166	168069	8.14	ug/l	#	76

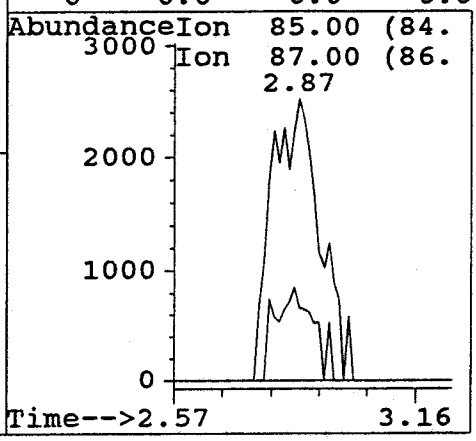
(#) = qualifier out of range (m) = manual integration

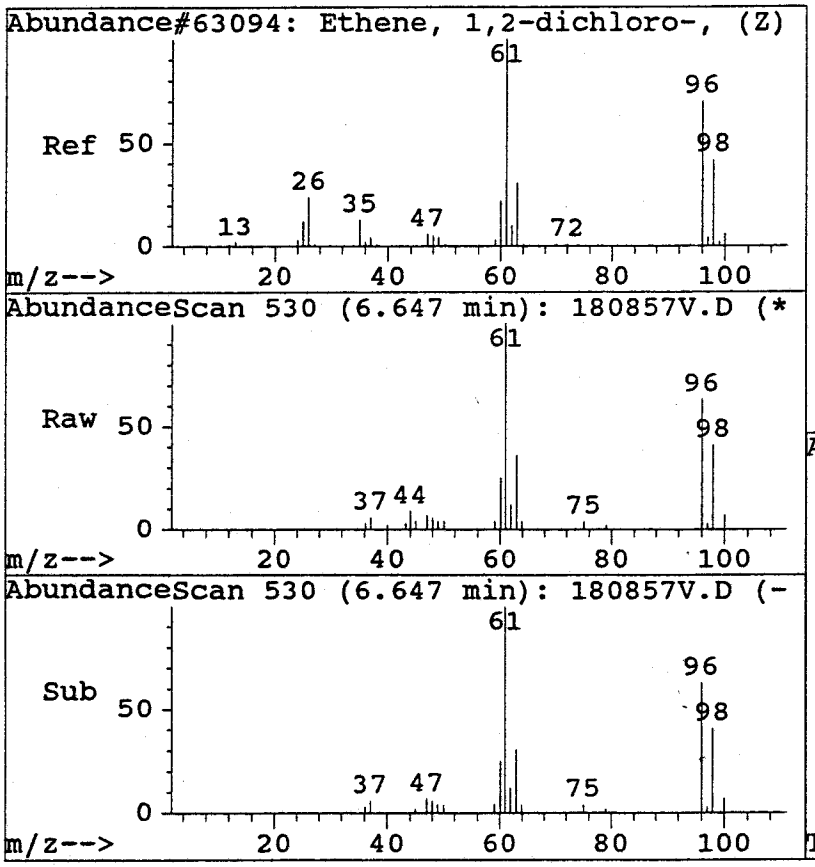


#3
Dichlorodifluoromethane
Concen: 1.69 ug/l m
RT: 2.87 min Scan# 217
Delta R.T. -0.01 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:85 Resp: 20585

Ion	Ratio	Lower	Upper
85	100		
87	26.4	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

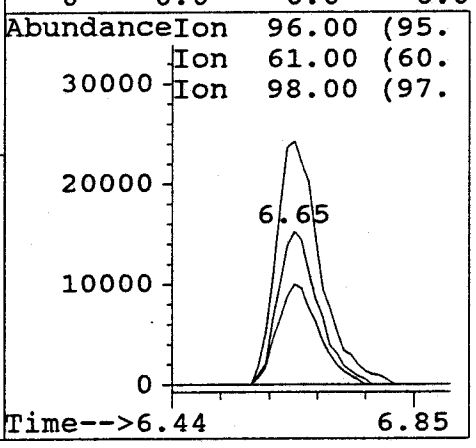


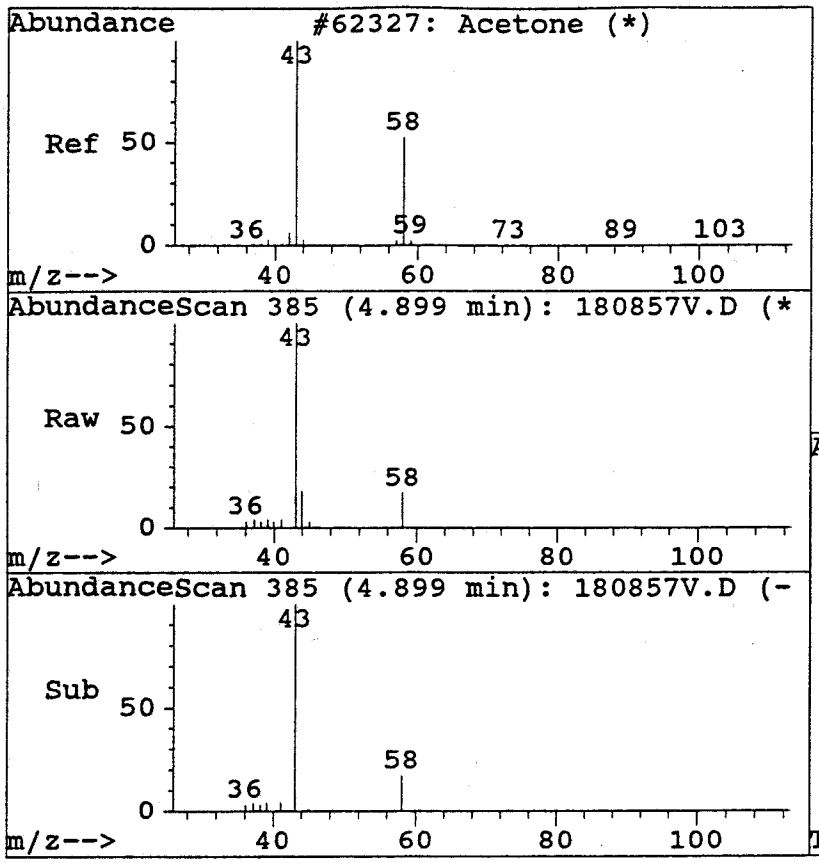


#12
cis-1,2-Dichloroethene
Concen: 7.57 ug/l
RT: 6.65 min Scan# 530
Delta R.T. -0.04 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:96 Resp: 73269

Ion	Ratio	Lower	Upper
96	100		
61	158.4	152.1	228.1
98	65.2	54.4	81.6
0	0.0	0.0	0.0

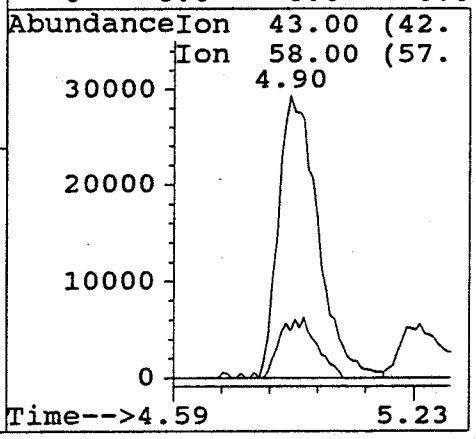


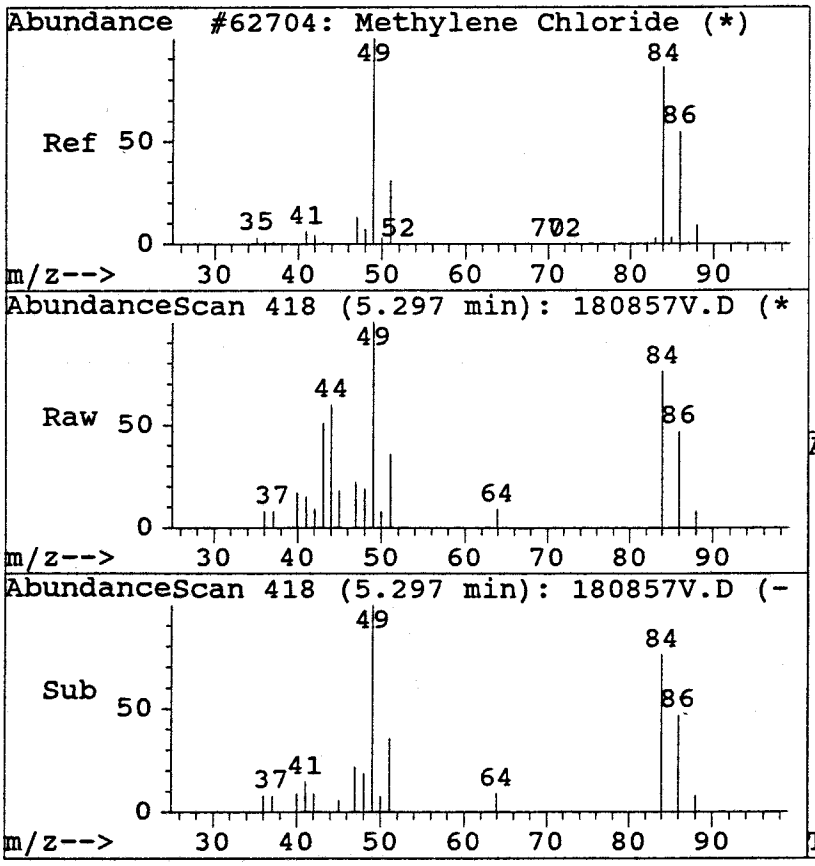


#13
Acetone
Concen: 15.64 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:43 Resp: 218768

Ion	Ratio	Lower	Upper
43	100		
58	16.7	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

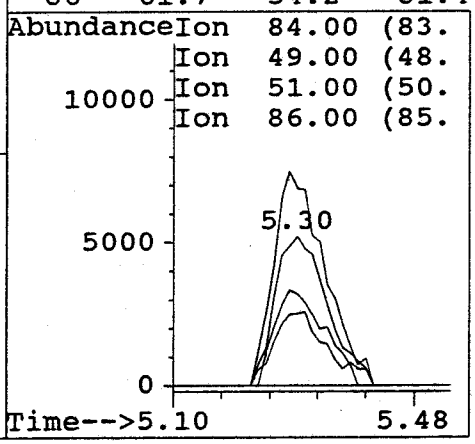


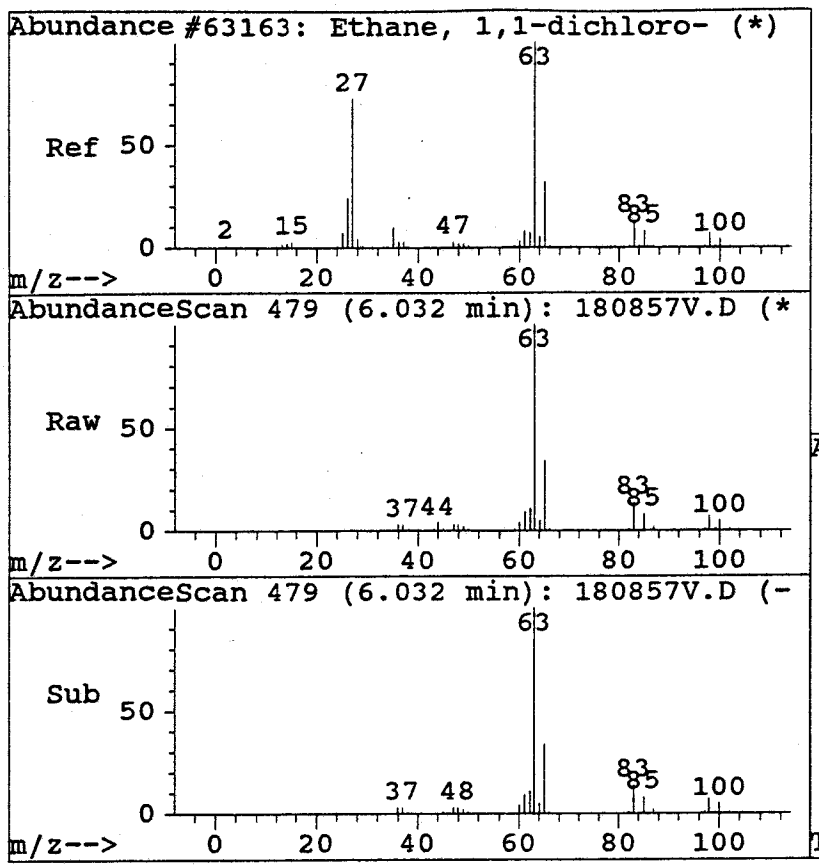


#17
Methylene Chloride
Concen: 3.54 ug/l
RT: 5.30 min Scan# 418
Delta R.T. -0.04 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:84 Resp: 29998

Ion	Ratio	Lower	Upper
84	100		
49	132.0	113.2	169.8
51	48.2	35.3	52.9
86	61.7	54.2	81.4

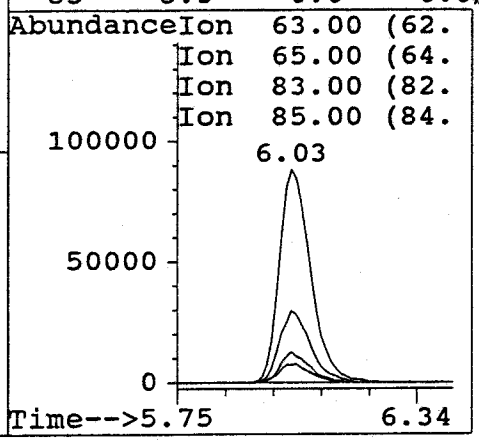


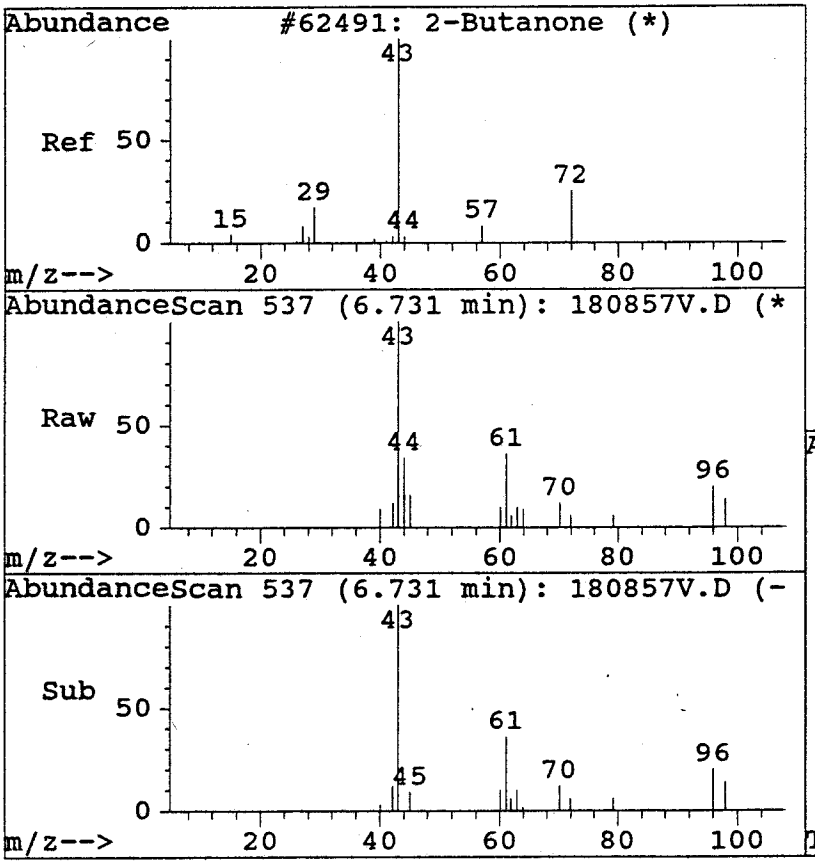


#21
1,1-Dichloroethane
Concen: 25.98 ug/l
RT: 6.03 min Scan# 479
Delta R.T. -0.04 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:63 Resp: 464174

Ion	Ratio	Lower	Upper
63	100		
65	33.7	0.0	0.0#
83	14.5	0.0	0.0#
85	8.3	0.0	0.0#

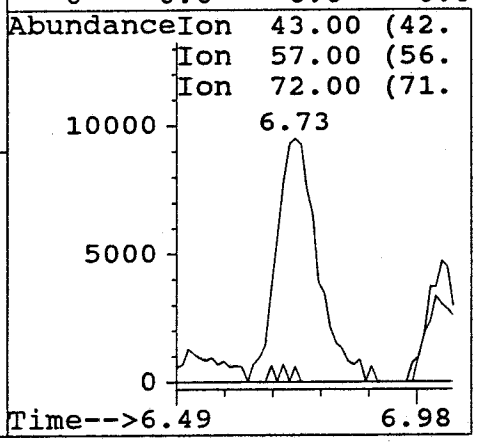


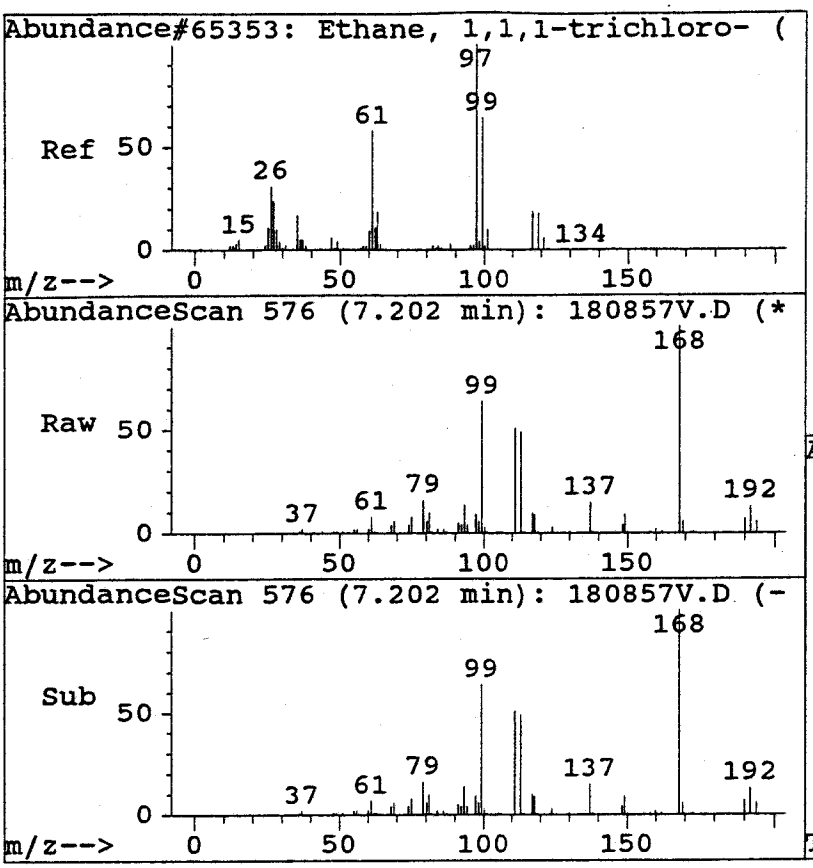


#24
2-Butanone + interference
Concen: 3.11 ug/l (non TCL)
RT: 6.73 min Scan# 537
Delta R.T. -0.02 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:43 Resp: 56131

Ion	Ratio	Lower	Upper
43	100		
57	0.0	5.5	8.3#
72	6.2	18.3	27.5#
0	0.0	0.0	0.0

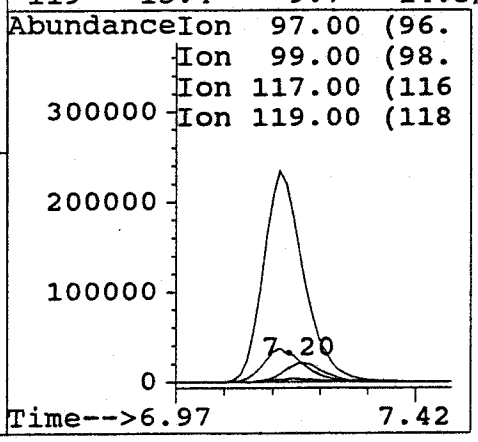


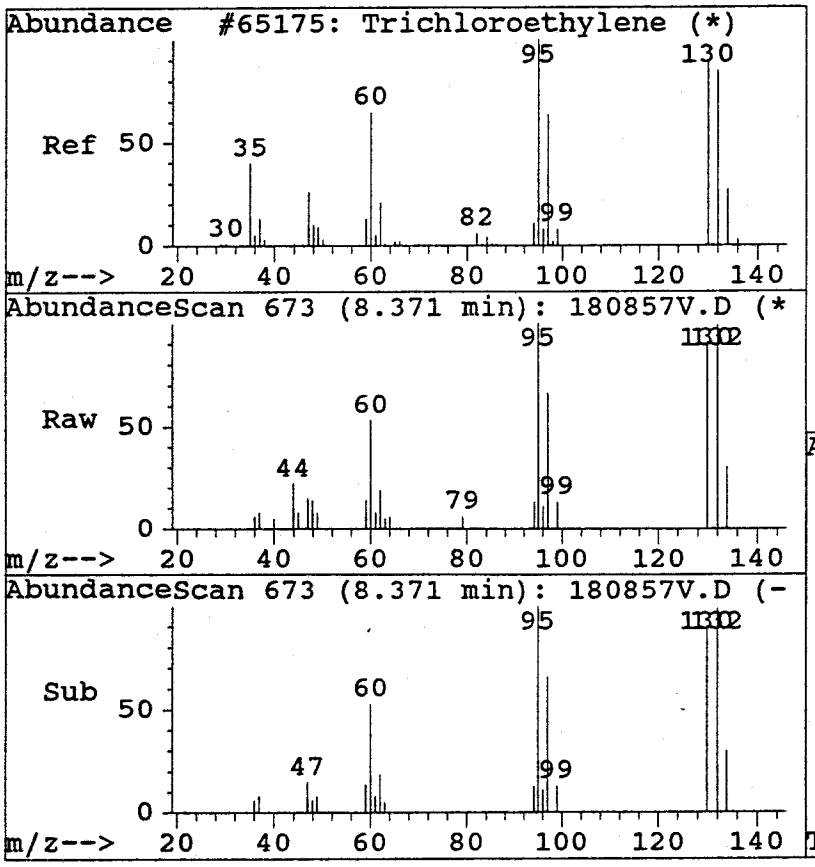


#30
1,1,1-Trichloroethane+IS
Concen: 4.81 ug/l
RT: 7.20 min Scan# 576
Delta R.T. -0.05 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:97 Resp: 110532

Ion	Ratio	Lower	Upper
97	100		
99	694.5	93.1	139.7#
117	110.1	15.4	23.0#
119	15.4	9.7	14.5#

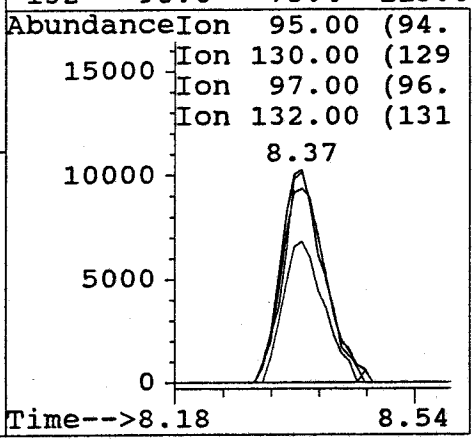


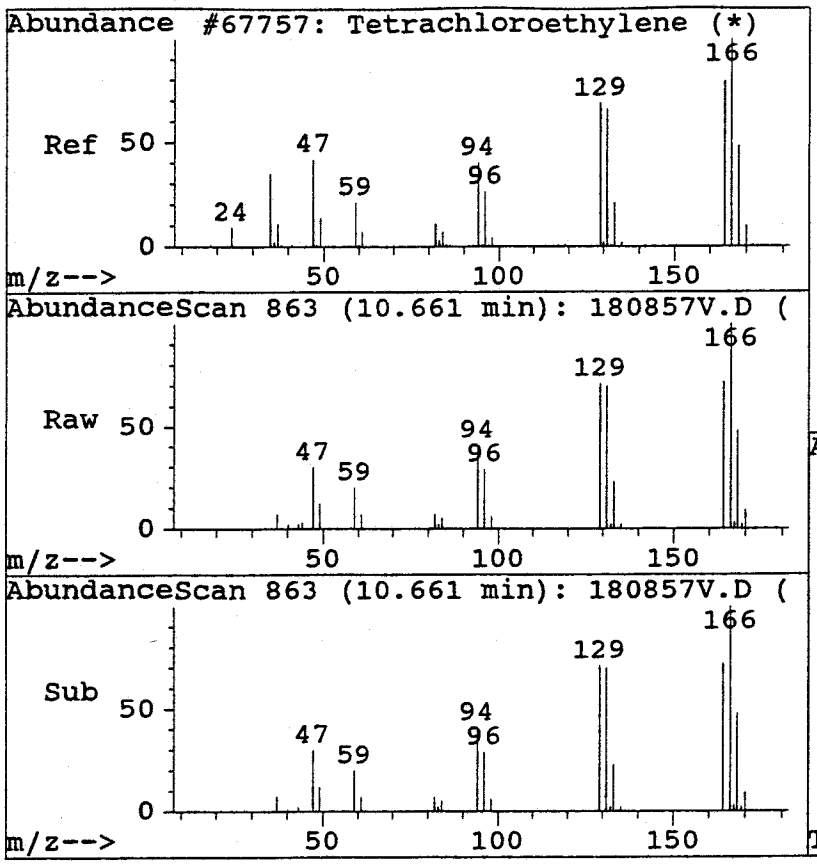


#41
Trichloroethene
Concen: 3.05 ug/l
RT: 8.37 min Scan# 673
Delta R.T. -0.03 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:95 Resp: 47738

Ion	Ratio	Lower	Upper
95	100		
130	91.0	80.0	120.0
97	66.3	53.8	80.8
132	98.6	75.4	113.0

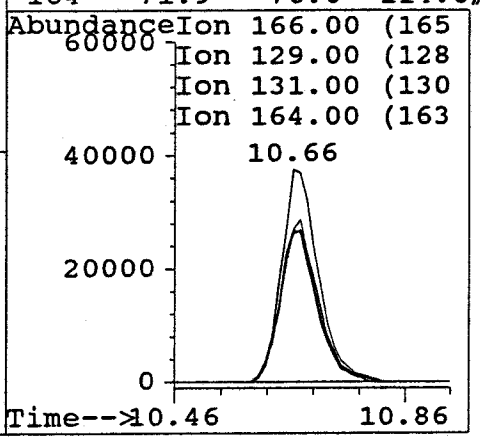




#52
Tetrachloroethene
Concen: 8.14 ug/l
RT: 10.66 min Scan# 863
Delta R.T. -0.05 min
Lab File: 180857V.D
Acq: 18 Jul 95 8:27 pm

Tgt Ion:166 Resp: 168069

Ion	Ratio	Lower	Upper
166	100		
129	71.3	75.4	113.0#
131	69.6	75.0	112.4#
164	71.9	76.0	114.0#

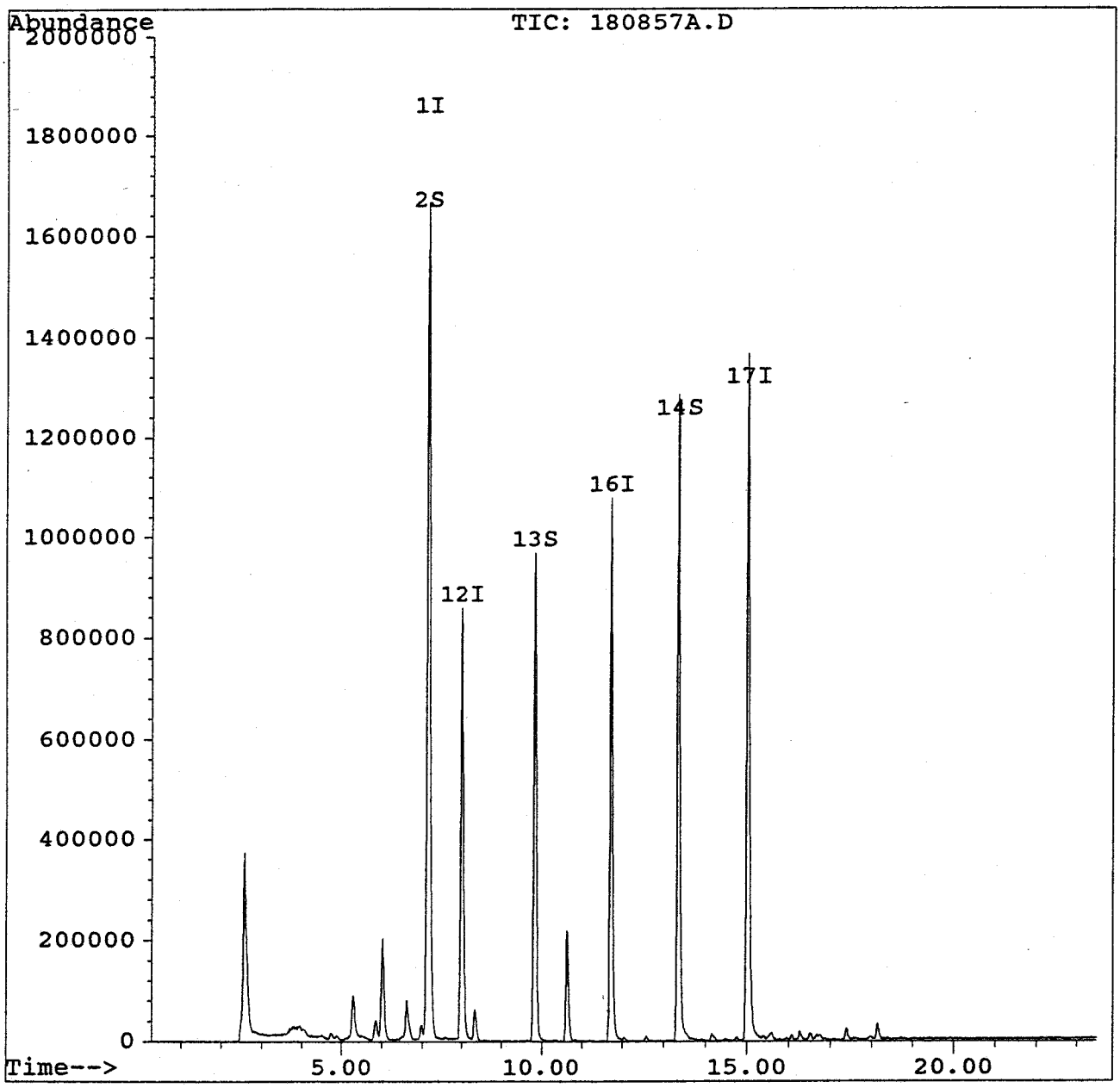


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180857A.D
Acq Time : 19 Jul 95 6:18 pm
Sample : MW-11 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 18:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180857A.D
Acq Time : 19 Jul 95 6:18 pm
Sample : MW-11 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 18:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1655755	50.00	ug/l	-0.01
12) 1,4-Difluorobenzene	8.00	114	1468878	50.00	ug/l	-0.01
16) Chlorobenzene-d5	11.72	117	1316587	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	937840	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.13	113	870170	50.57	ug/l	101.14%
13) Toluene-d8	9.82	98	1461561	50.32	ug/l	100.64%
14) Bromofluorobenzene	13.35	174	892641	51.18	ug/l	102.35%
Target Compounds						Qvalue

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. MW-17

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180858V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180858V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	4.2	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	4.9	J
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	1.6	J
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	63	
00067-64-1	Acetone	9.5	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	3.1	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	7	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

160

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-17

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180858V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180858V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

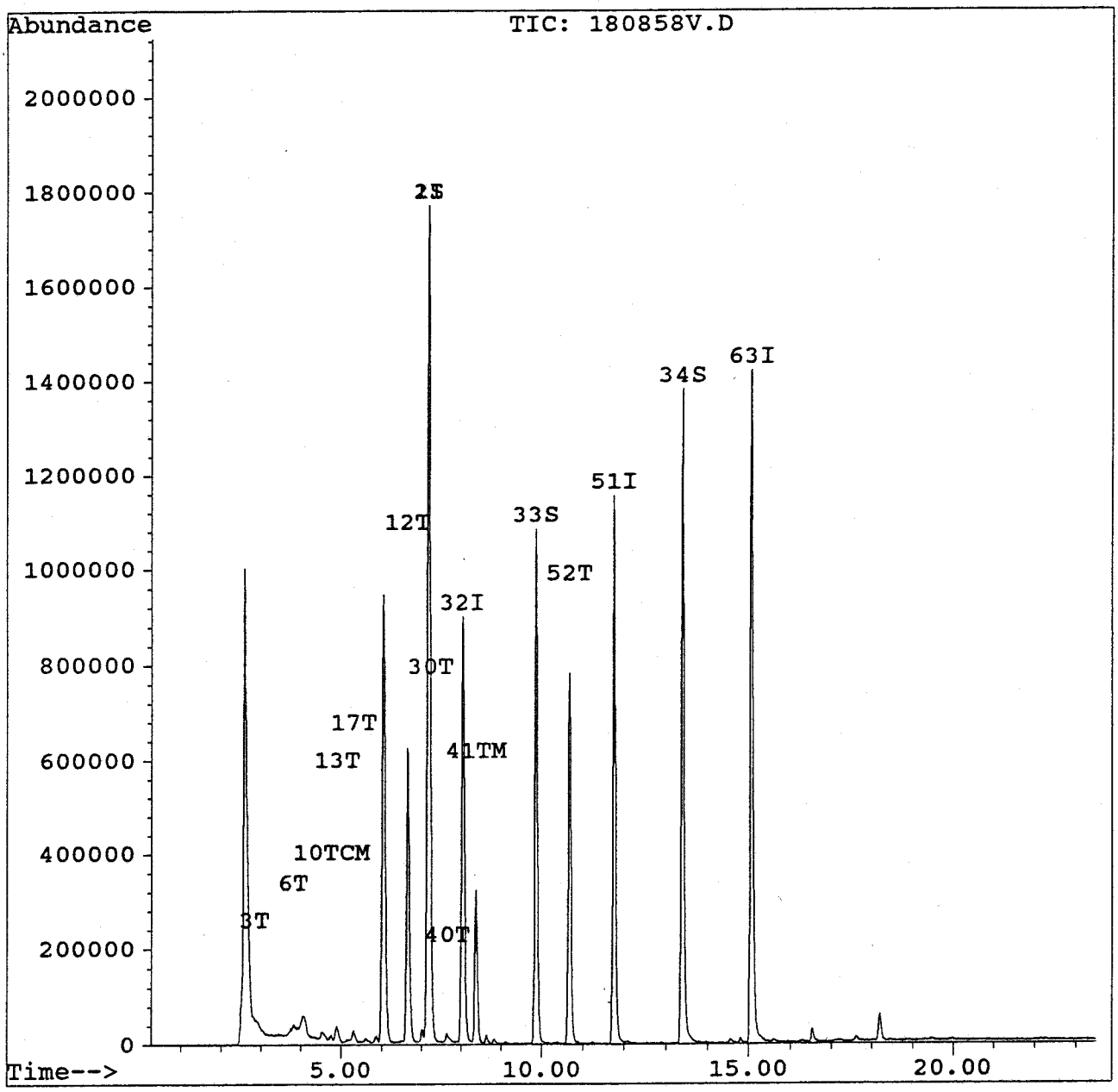
CAS No.	Compound		Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	1.8	J
000079-01-6	Trichloroethene	17	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	30	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180858V.D
Acq Time : 18 Jul 95 9:02 pm
Sample : MW-17 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 15:32 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration



Quantitation Report

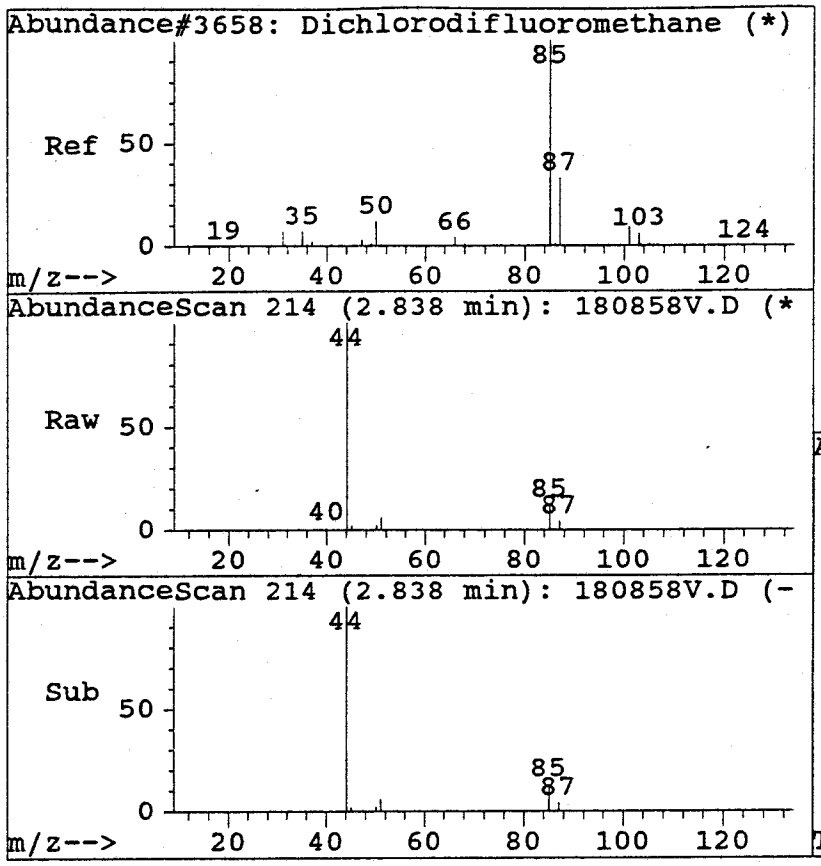
Data File : C:\HPCHEM\1\DATA\071895V\180858V.D
Acq Time : 18 Jul 95 9:02 pm
Sample : MW-17 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 15:32 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.17	168	1784490	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1597290	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1429494	50.00	ug/l		-0.04
63) 1,4-Dichlorobenzene-d4	15.06	152	1003012	50.00	ug/l		-0.04
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.17	113	965971	49.64	ug/l		99.28%
33) Toluene-d8	9.85	98	1640216	50.05	ug/l		100.10%
34) Bromofluorobenzene	13.38	174	984325	48.58	ug/l		97.15%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.84	85	50451	4.17	ug/l		92
6) Chloroethane	3.81	64	16045	4.90	ug/l		99
10) 1,1-Dichloroethene	4.75	96	13244	1.64	ug/l		90
12) cis-1,2-Dichloroethene	6.65	96	600656	62.56	ug/l		85
13) Acetone	4.90	43	131423	9.47	ug/l		92
17) Methylene Chloride	5.31	84	26066	3.10	ug/l		93
30) 1,1,1-Trichloroethane	7.23	97	159340	7.00	ug/l	m	1
40) 1,2-Dichloroethane	7.65	62	39353	1.80	ug/l	#	96
41) Trichloroethene	8.37	95	257089	16.74	ug/l		98
52) Tetrachloroethene	10.67	166	613361	30.27	ug/l	#	77

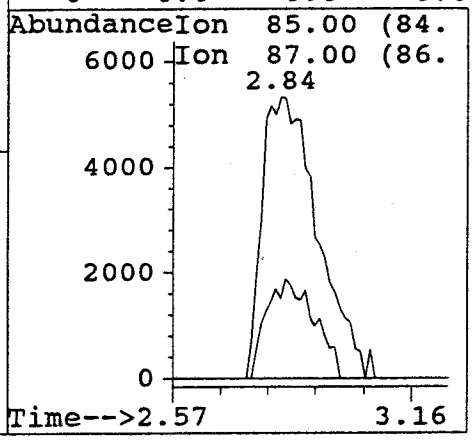
(#) = qualifier out of range (m) = manual integration

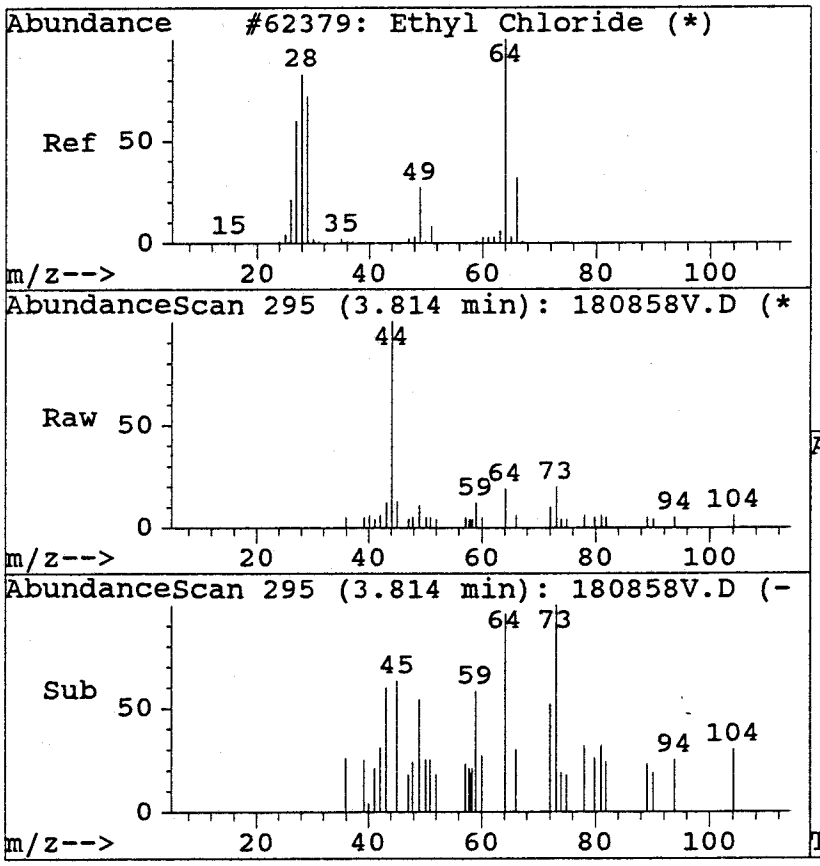


#3
Dichlorodifluoromethane
Concen: 4.17 ug/l
RT: 2.84 min Scan# 214
Delta R.T. -0.05 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:85 Resp: 50451

Ion	Ratio	Lower	Upper
85	100		
87	28.1	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

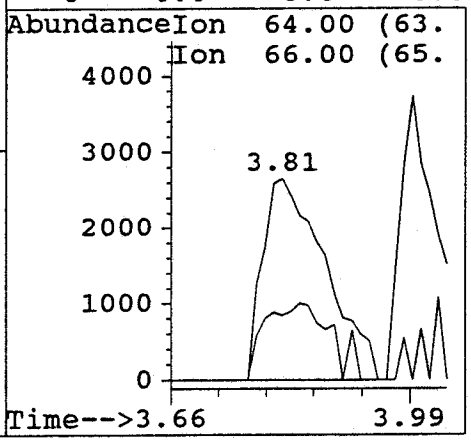


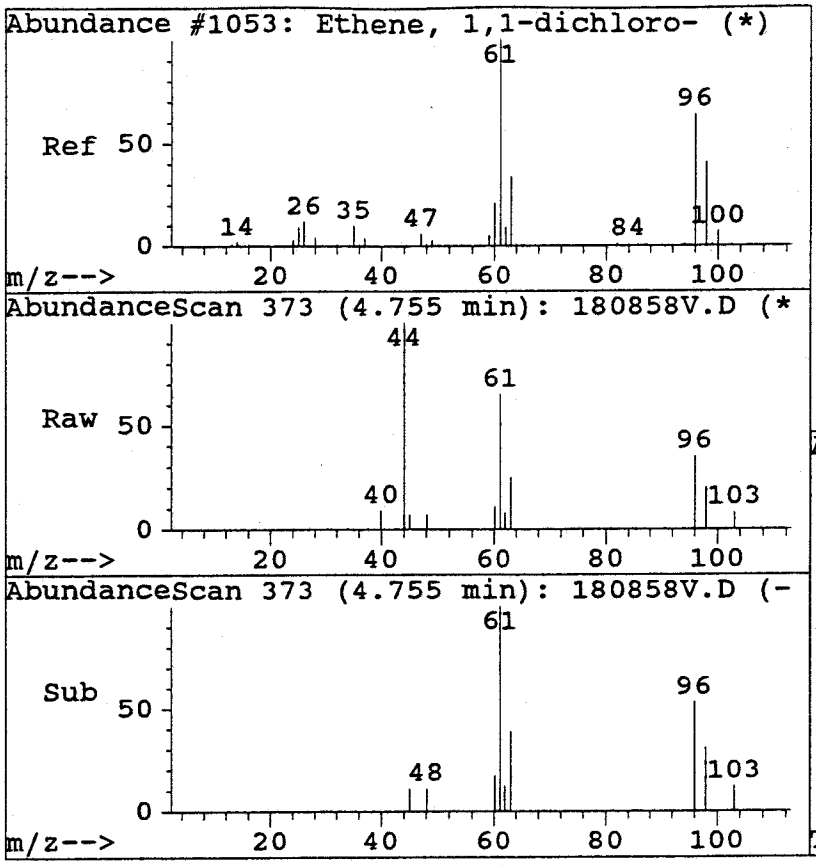


#6
Chloroethane
Concen: 4.90 ug/l
RT: 3.81 min Scan# 295
Delta R.T. -0.02 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:64 Resp: 16045

Ion	Ratio	Lower	Upper
64	100		
66	31.8	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

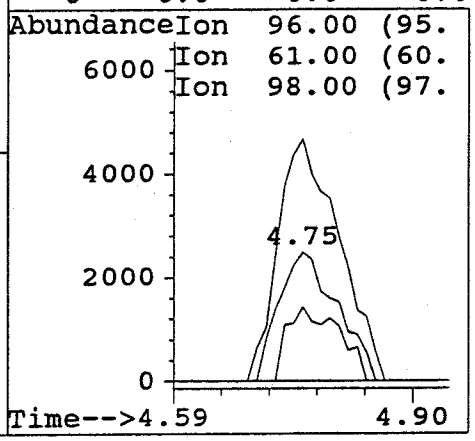


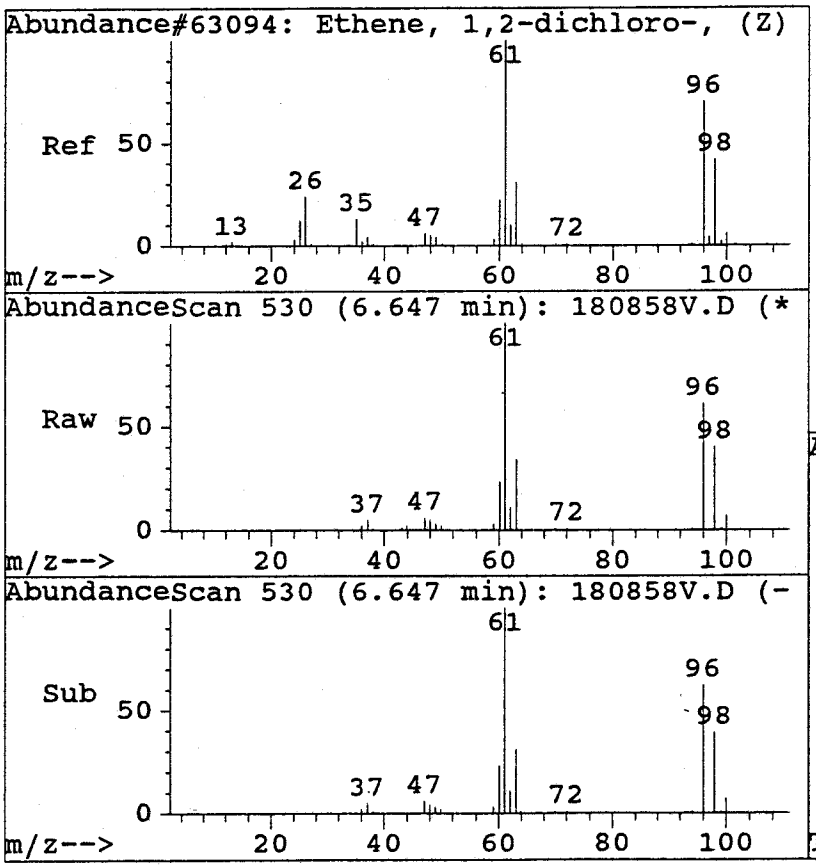


#10
1,1-Dichloroethene
Concen: 1.64 ug/l
RT: 4.75 min Scan# 373
Delta R.T. 0.01 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:96 Resp: 13244

Ion	Ratio	Lower	Upper
96	100		
61	188.1	163.8	245.6
98	57.5	50.4	75.6
0	0.0	0.0	0.0

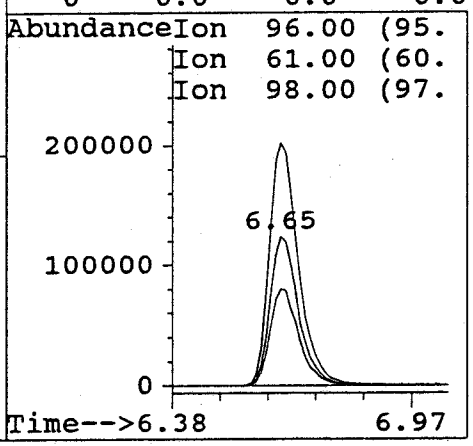


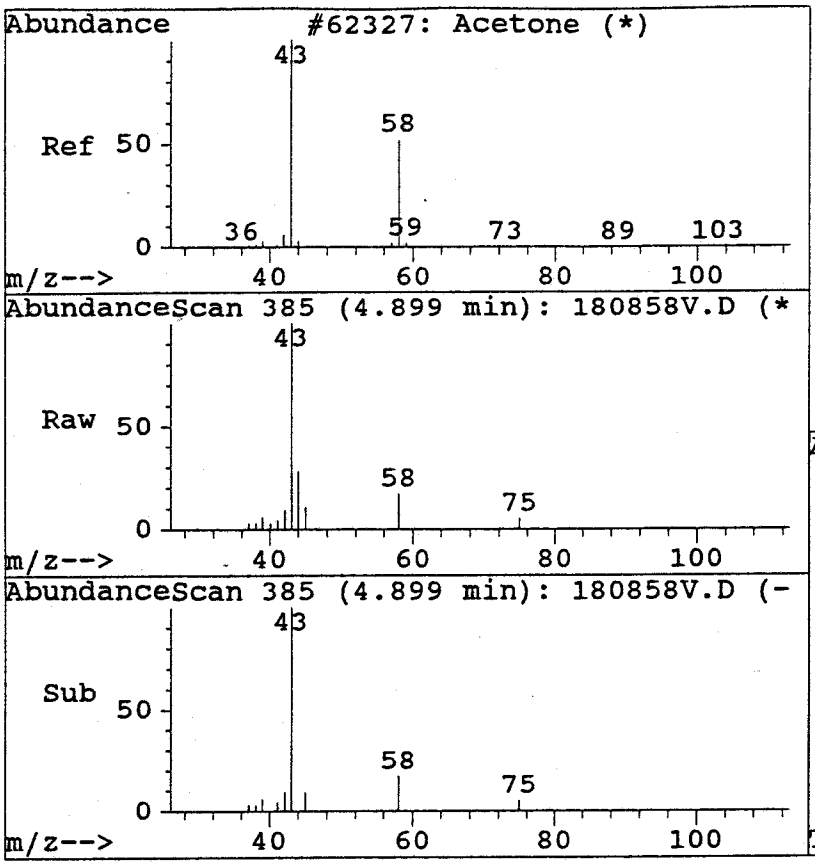


#12
cis-1,2-Dichloroethene
Concen: 62.56 ug/l
RT: 6.65 min Scan# 530
Delta R.T. -0.04 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:96 Resp: 600656

Ion	Ratio	Lower	Upper
96	100		
61	163.4	152.1	228.1
98	64.6	54.4	81.6
0	0.0	0.0	0.0

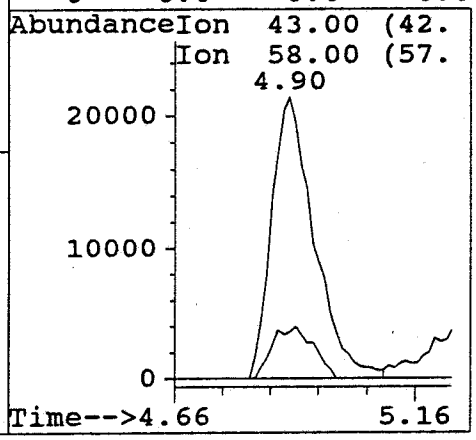


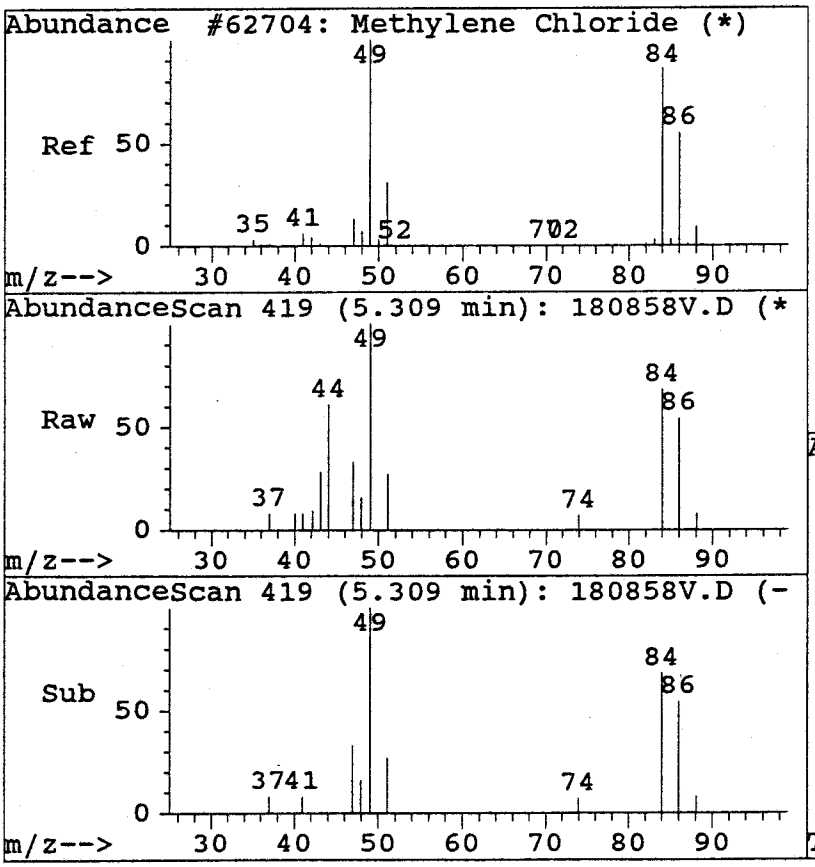


#13
Acetone
Concen: 9.47 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:43 Resp: 131423

Ion	Ratio	Lower	Upper
43	100		
58	16.6	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

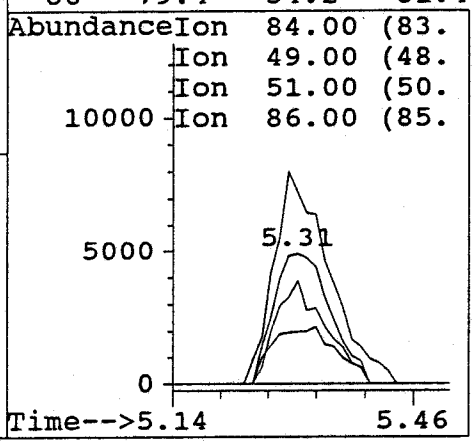


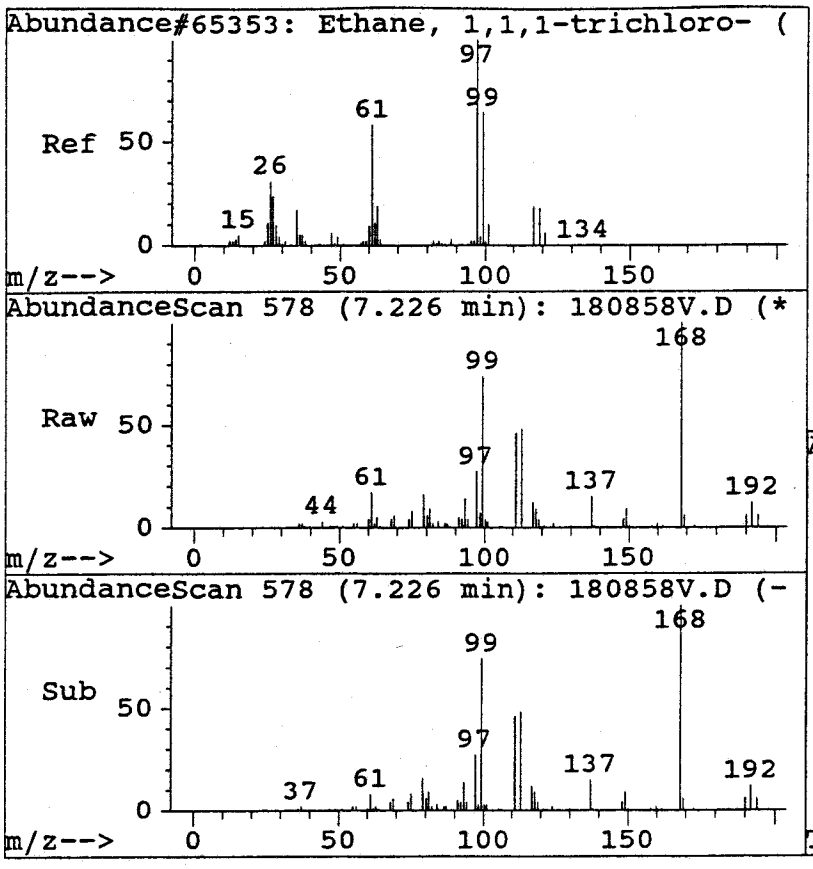


#17
Methylene Chloride
Concen: 3.10 ug/l
RT: 5.31 min Scan# 419
Delta R.T. -0.03 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:84 Resp: 26066

Ion	Ratio	Lower	Upper
84	100		
49	146.9	113.2	169.8
51	40.0	35.3	52.9
86	79.4	54.2	81.4

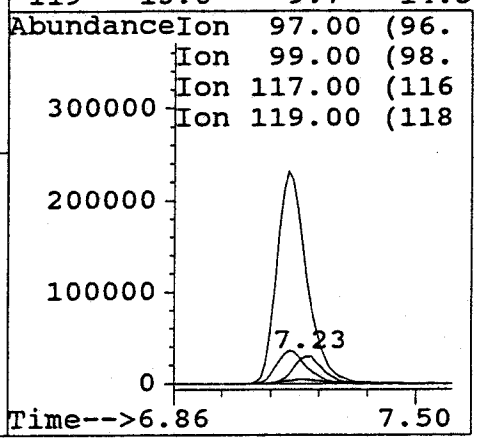


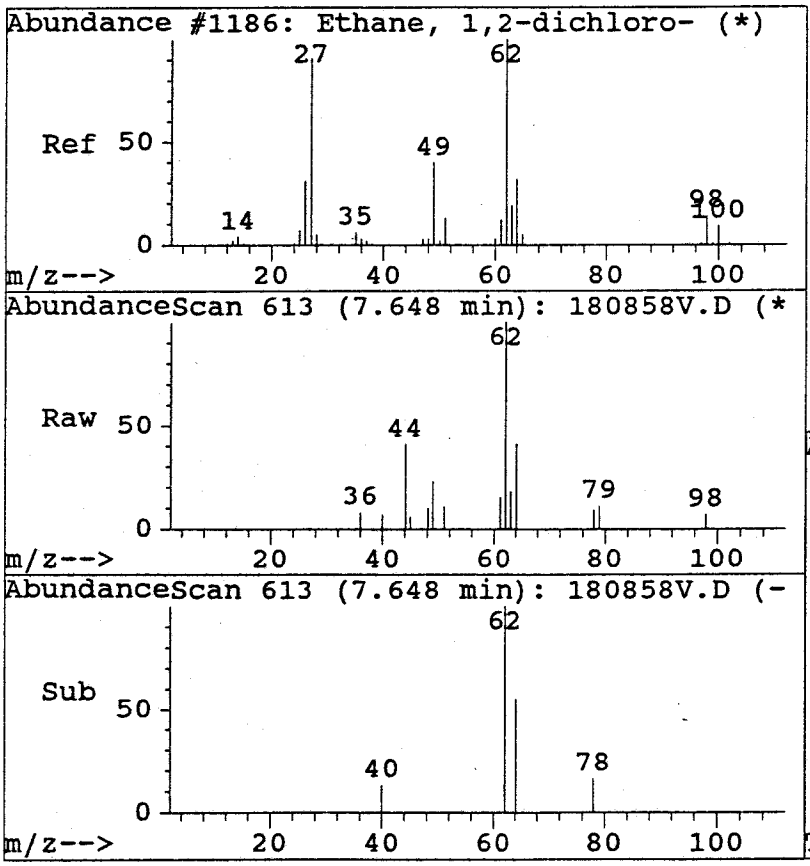


#30
1,1,1-Trichloroethane
Concen: 7.00 ug/l m
RT: 7.23 min Scan# 578
Delta R.T. -0.03 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:97 Resp: 159340

Ion	Ratio	Lower	Upper
97	100		
99	272.2	93.1	139.7#
117	43.9	15.4	23.0#
119	13.6	9.7	14.5

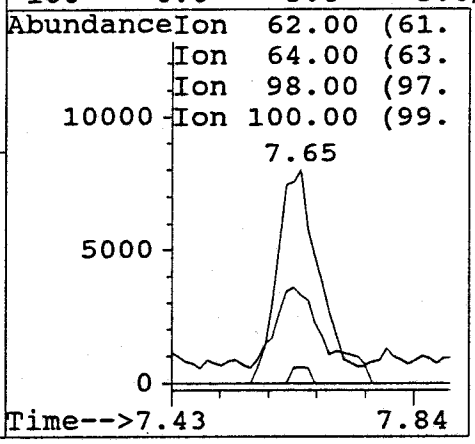


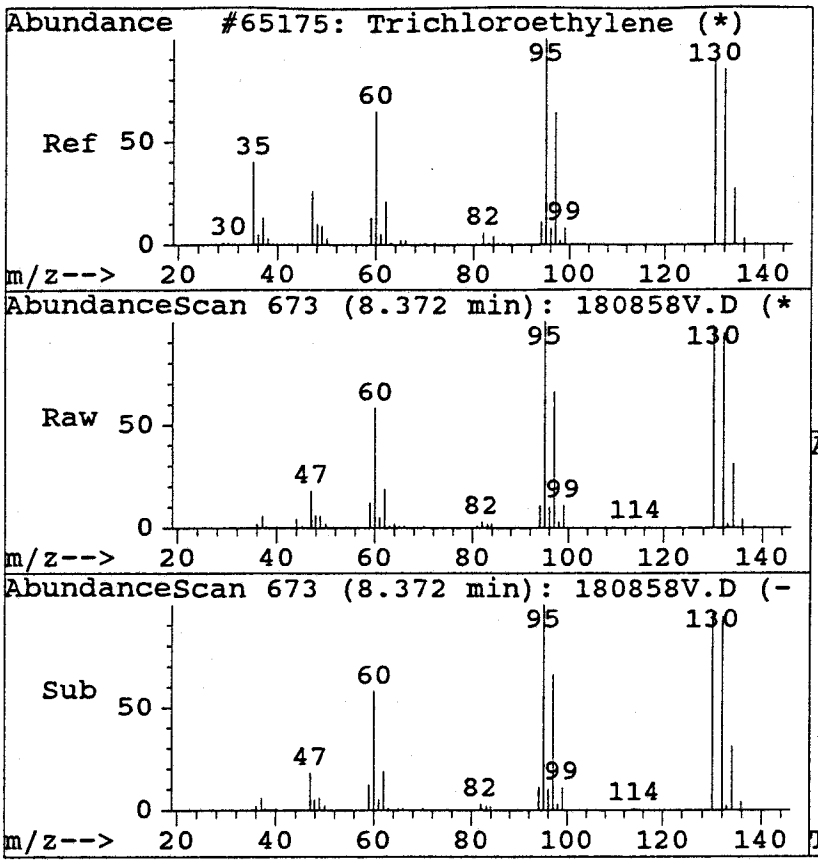


#40
1,2-Dichloroethane
Concen: 1.80 ug/l
RT: 7.65 min Scan# 613
Delta R.T. -0.03 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:62 Resp: 39353

Ion	Ratio	Lower	Upper
62	100		
64	32.5	24.6	37.0
98	7.2	5.4	8.2
100	0.0	3.8	5.6#

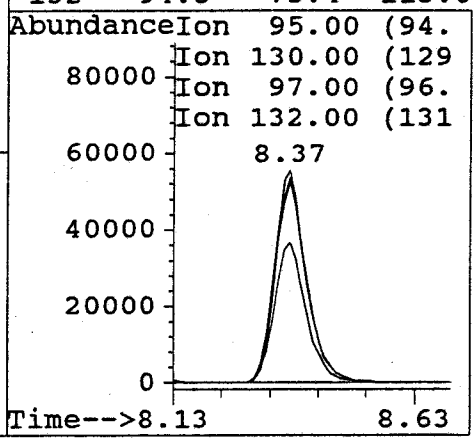


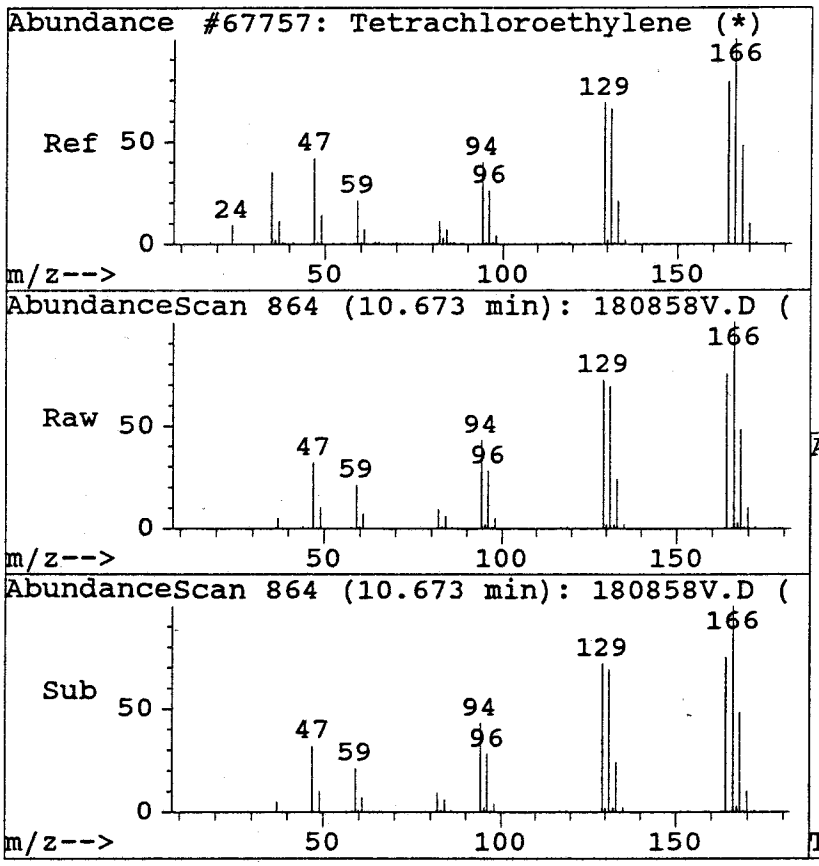


#41
Trichloroethene
Concen: 16.74 ug/l
RT: 8.37 min Scan# 673
Delta R.T. -0.03 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:95 Resp: 257089

Ion	Ratio	Lower	Upper
95	100		
130	96.5	80.0	120.0
97	65.9	53.8	80.8
132	94.5	75.4	113.0

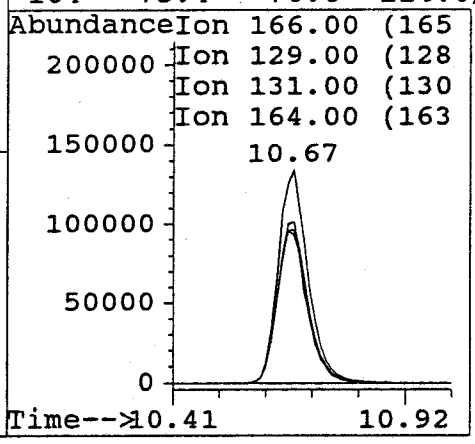




#52
Tetrachloroethene
Concen: 30.27 ug/l
RT: 10.67 min Scan# 864
Delta R.T. -0.04 min
Lab File: 180858V.D
Acq: 18 Jul 95 9:02 pm

Tgt Ion:166 Resp: 613361

Ion	Ratio	Lower	Upper
166	100		
129	71.7	75.4	113.0#
131	69.2	75.0	112.4#
164	75.4	76.0	114.0#

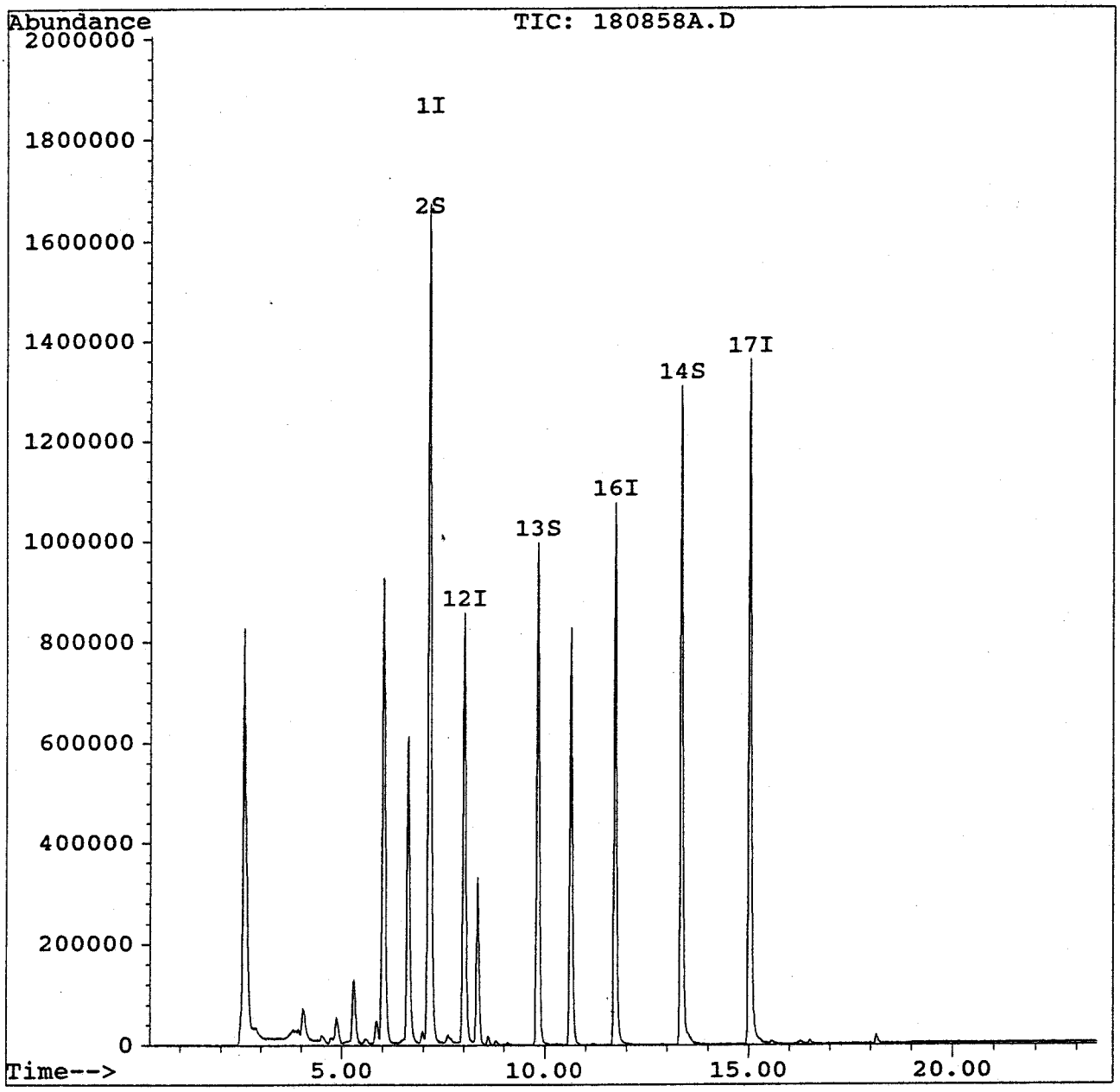


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180858A.D
Acq Time : 19 Jul 95 6:53 pm
Sample : MW-17 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 19:17 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180858A.D
Acq Time : 19 Jul 95 6:53 pm
Sample : MW-17 (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 19:17 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1664222	50.00	ug/l	-0.01
12) 1,4-Difluorobenzene	8.00	114	1469180	50.00	ug/l	-0.01
16) Chlorobenzene-d5	11.72	117	1313215	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.01	152	926130	50.00	ug/l	-0.02
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.13	113	904539	52.30	ug/l	104.60%
13) Toluene-d8	9.82	98	1504261	51.78	ug/l	103.56%
14) Bromofluorobenzene	13.34	174	911001	52.22	ug/l	104.44%
Target Compounds						**Qvalue**

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TRIP BLANK

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180859V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180859V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	12	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	1.5	J
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	3.6	JB
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TRIP BLANK

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180859V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180859V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

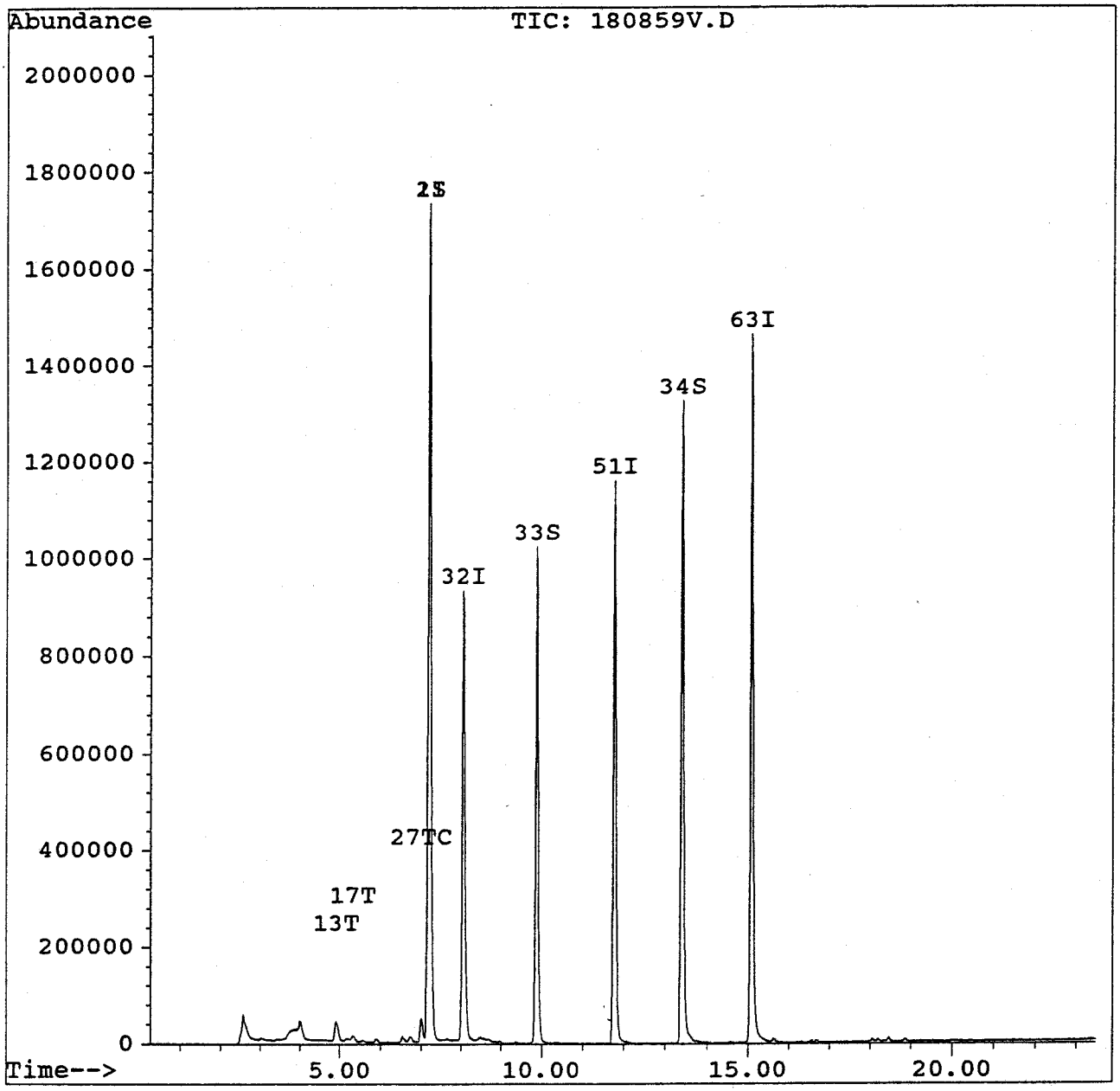
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180859V.D
Acq Time : 18 Jul 95 3:45 pm
Sample : TRIP BLANK (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 9:58 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

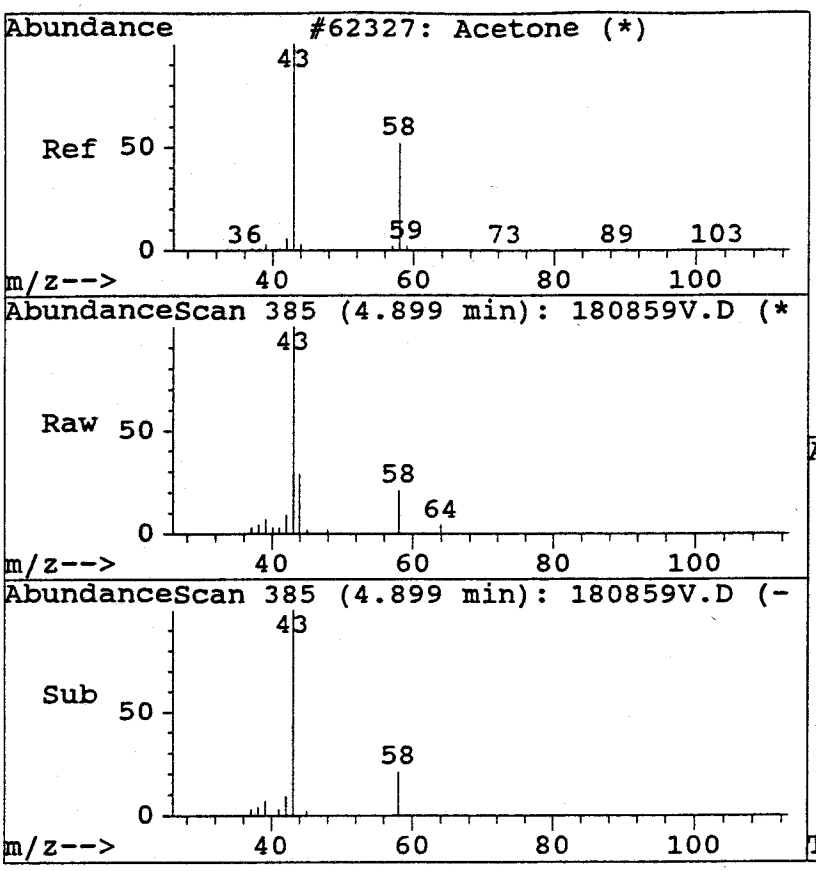
Data File : C:\HPCHEM\1\DATA\071895V\180859V.D
Acq Time : 18 Jul 95 3:45 pm
Sample : TRIP BLANK (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 9:58 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.19	168	1869661	50.00	ug/l		-0.02
32) 1,4-Difluorobenzene	8.04	114	1624186	50.00	ug/l		-0.03
51) Chlorobenzene-d5	11.77	117	1446108	50.00	ug/l		-0.03
63) 1,4-Dichlorobenzene-d4	15.07	152	1008216	50.00	ug/l		-0.03
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.19	113	934357	45.83	ug/l		91.66%
33) Toluene-d8	9.86	98	1587588	47.64	ug/l		95.28%
34) Bromofluorobenzene	13.39	174	962683	46.72	ug/l		93.44%
Target Compounds							Qvalue
13) Acetone	4.90	43	171803	11.82	ug/l		99
17) Methylene Chloride	5.32	84	13283	1.51	ug/l	#	87
27) Chloroform	7.00	83	91377	3.55	ug/l		92

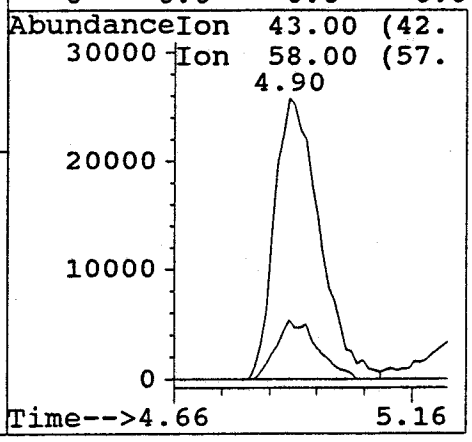
(#) = qualifier out of range (m) = manual integration

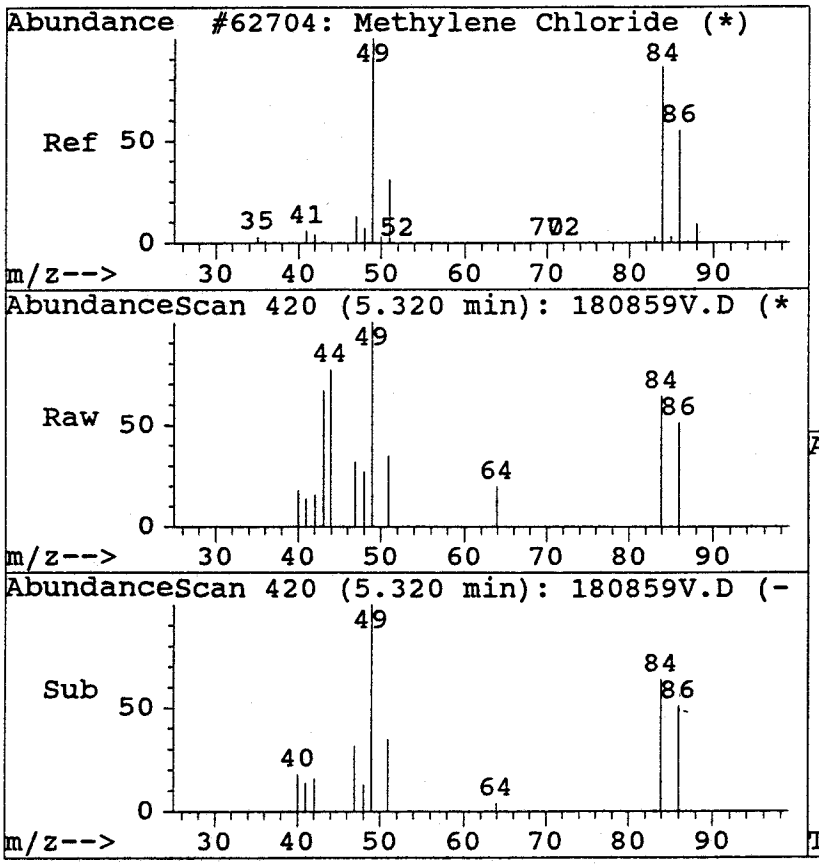


#13
Acetone
Concen: 11.82 ug/l
RT: 4.90 min Scan# 385
Delta R.T. -0.04 min
Lab File: 180859V.D
Acq: 18 Jul 95 3:45 pm

Tgt Ion:43 Resp: 171803

Ion	Ratio	Lower	Upper
43	100		
58	20.9	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

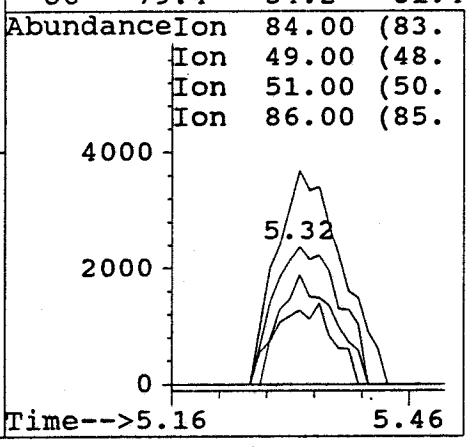


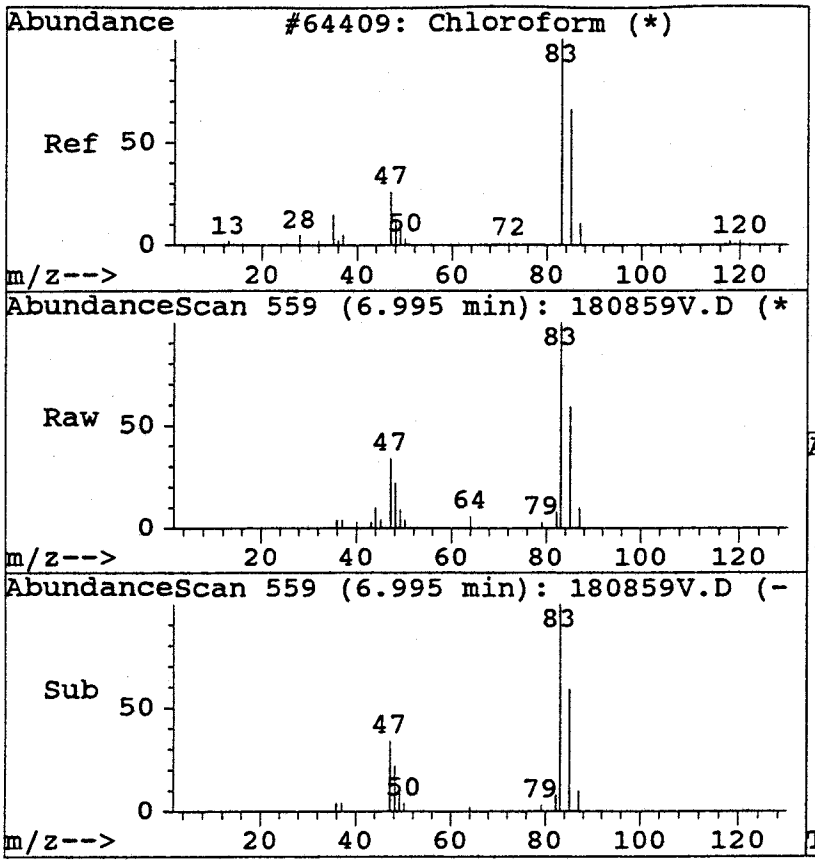


#17
Methylene Chloride
Concen: 1.51 ug/l
RT: 5.32 min Scan# 420
Delta R.T. -0.02 min
Lab File: 180859V.D
Acq: 18 Jul 95 3:45 pm

Tgt Ion:84 Resp: 13283

Ion	Ratio	Lower	Upper
84	100		
49	155.6	113.2	169.8
51	53.9	35.3	52.9#
86	79.4	54.2	81.4

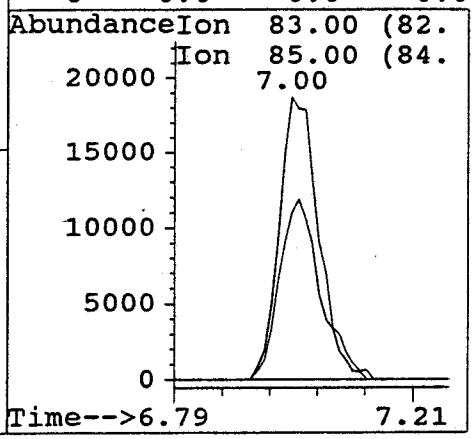




#27
Chloroform
Concen: 3.55 ug/l
RT: 7.00 min Scan# 559
Delta R.T. -0.04 min
Lab File: 180859V.D
Acq: 18 Jul 95 3:45 pm

Tgt Ion:83 Resp: 91377

Ion	Ratio	Lower	Upper
83	100		
85	58.8	52.2	78.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

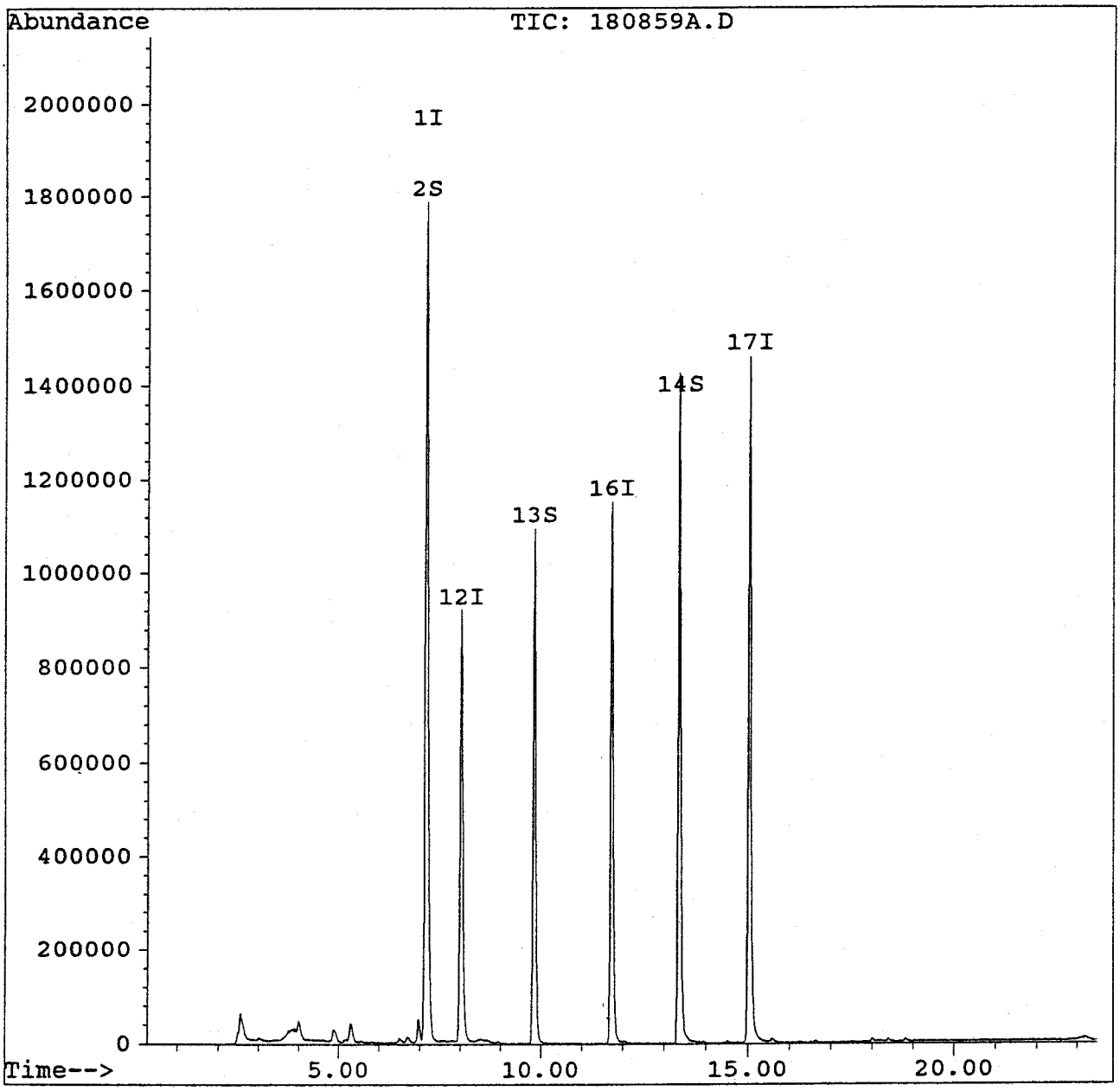


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180859A.D
Acq Time : 19 Jul 95 1:31 pm
Sample : TRIP BLANK (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 14:23 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180859A.D
Acq Time : 19 Jul 95 1:31 pm
Sample : TRIP BLANK (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 14:23 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.16	168	1890124	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	8.02	114	1627320	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.73	117	1441979	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	999280	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.15	113	987324	43.37	ug/l	86.74%
13) Toluene-d8	9.83	98	1655931	44.76	ug/l	89.51%
14) Bromofluorobenzene	13.36	174	1012433	46.16	ug/l	92.33%
Target Compounds						**Qvalue**

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 178

MW-1A

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180860V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180860V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	54	B
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	62	
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	1	J
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	19	
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	26	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	64	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-1A

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180860V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180860V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

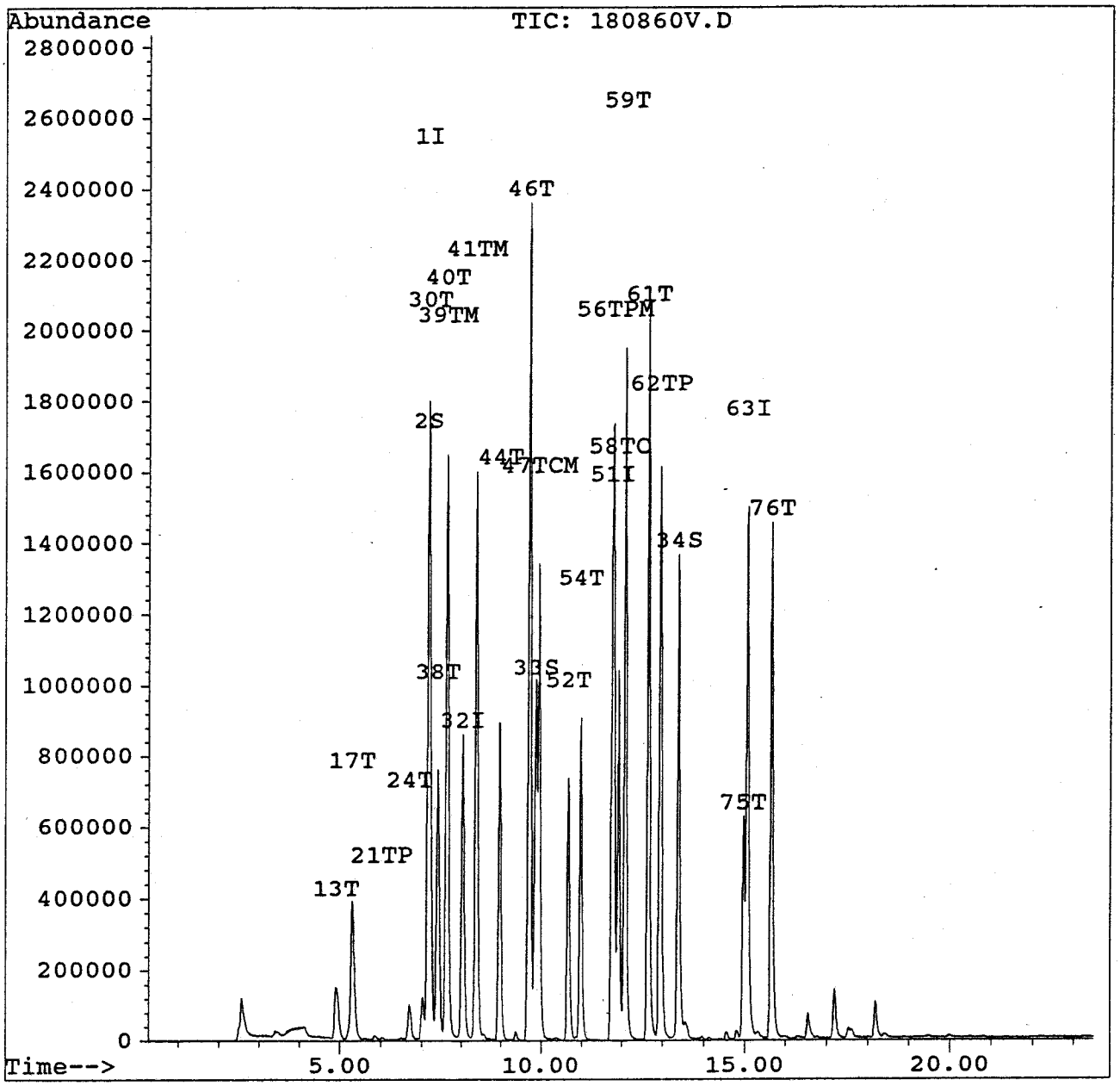
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	46	
000107-06-2	1,2-Dichloroethane	120	
000079-01-6	Trichloroethene	89	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	67	
000108-10-1	4-Methyl-2-pentanone	130	
000108-88-3	Toluene	60	
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	29	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	51	
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	47	
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	36	
000108-38-3	Xylene, m & p-	68	
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	77	
000075-25-2	Bromoform	80	
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	19	
000095-50-1	1,2-Dichlorobenzene	48	
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180860V.D
Acq Time : 18 Jul 95 9:38 pm
Sample : MW-1A (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 15:39 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration



Quantitation Report

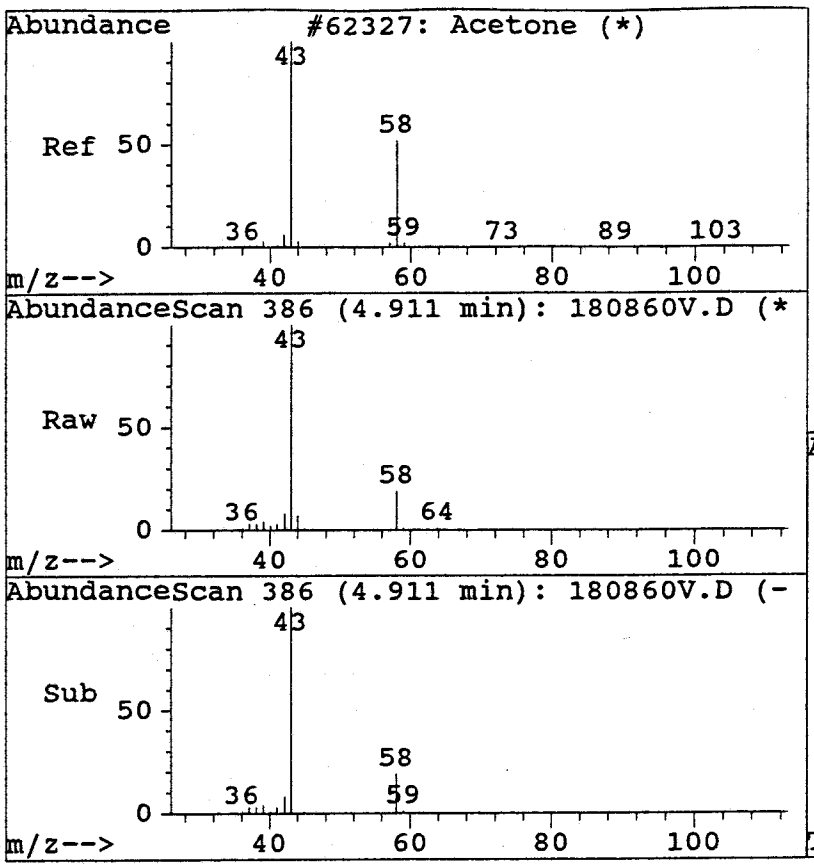
Data File : C:\HPCHEM\1\DATA\071895V\180860V.D
Acq Time : 18 Jul 95 9:38 pm
Sample : MW-1A (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 20 15:39 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.17	168	1714390	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1530635	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.76	117	1379727	50.00	ug/l		-0.03
63) 1,4-Dichlorobenzene-d4	15.05	152	978129	50.00	ug/l		-0.04
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.15	113	923821	49.42	ug/l		98.83%
33) Toluene-d8	9.86	98	1559968	49.67	ug/l		99.35%
34) Bromofluorobenzene	13.38	174	943685	48.60	ug/l		97.20%
Target Compounds							**Qvalue**
13) Acetone	4.91	43	725269	54.40	ug/l		96
17) Methylene Chloride	5.30	84	501203	61.98	ug/l		99
21) 1,1-Dichloroethane	6.02	63	17702	1.04	ug/l	#	100
24) 2-Butanone	6.69	43	326873	18.98	ug/l	#	91
30) 1,1,1-Trichloroethane	7.20	97	571357	26.11	ug/l	#	62
38) Carbon Tetrachloride	7.39	117	1201228	64.46	ug/l	m	99
39) Benzene	7.62	78	1109577	46.36	ug/l	#	74
40) 1,2-Dichloroethane	7.64	62	2458937	117.30	ug/l		97
41) Trichloroethene	8.36	95	1308858	88.94	ug/l		96
44) Bromodichloromethane	8.96	83	1391091	67.36	ug/l	#	1
46) 4-Methyl-2-pentanone	9.69	43	4170660	130.46	ug/l	m	100
47) Toluene	9.93	92	1176347	59.88	ug/l	#	63
52) Tetrachloroethene	10.66	166	570403	29.16	ug/l	#	75
54) Dibromochloromethane	10.98	129	1124826	50.68	ug/l		98
56) Chlorobenzene	11.80	112	1304997	47.33	ug/l	m	100
58) Ethylbenzene	11.92	106	469667	36.38	ug/l		100
59) Xylene, m & p-	12.09	106	1142053	67.69	ug/l		92
61) Styrene	12.64	104	2146450	77.36	ug/l	#	44
62) Bromoform	12.94	173	1909693	80.05	ug/l		99
75) 1,4-Dichlorobenzene	14.96	146	643394	19.03	ug/l	#	78
76) 1,2-Dichlorobenzene	15.65	146	1443905	48.44	ug/l		100

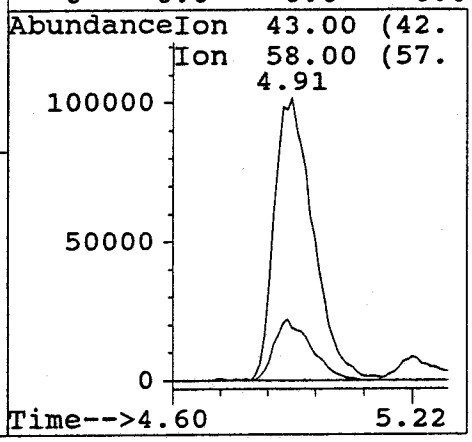
(#) = qualifier out of range (m) = manual integration

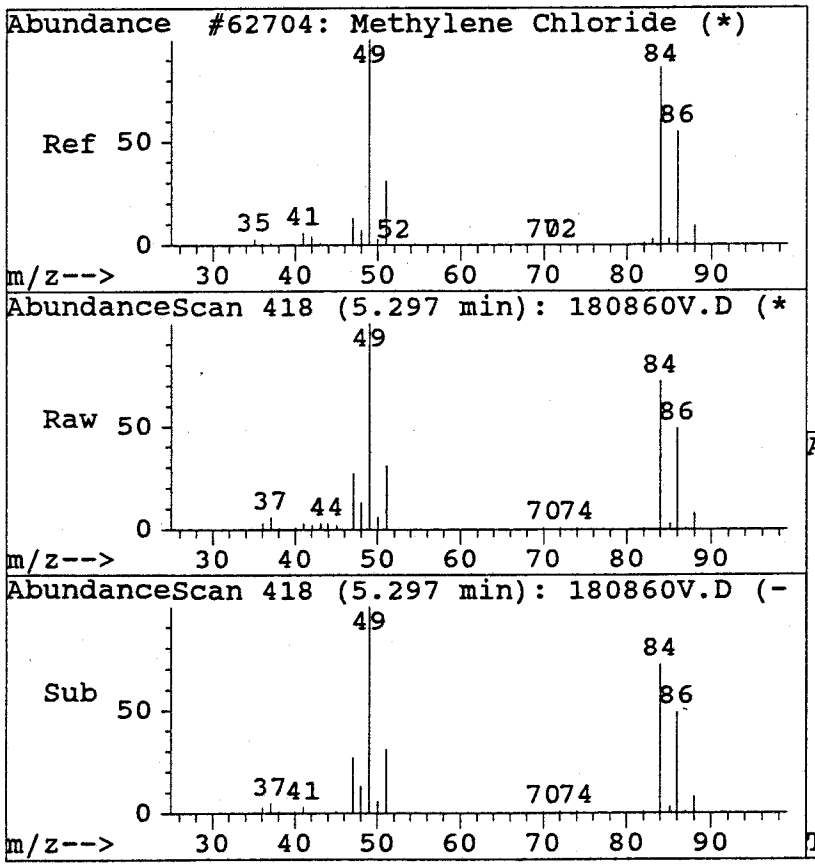


#13
Acetone
Concen: 54.40 ug/l
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:43 Resp: 725269

Ion	Ratio	Lower	Upper
43	100		
58	18.6	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

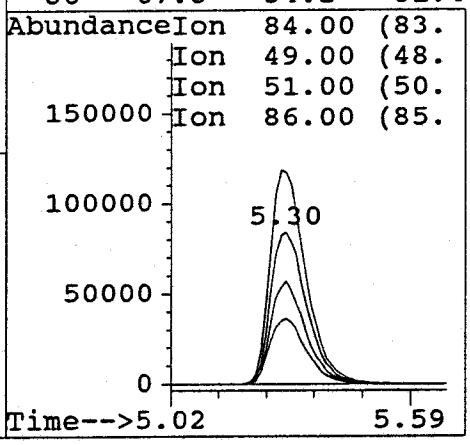


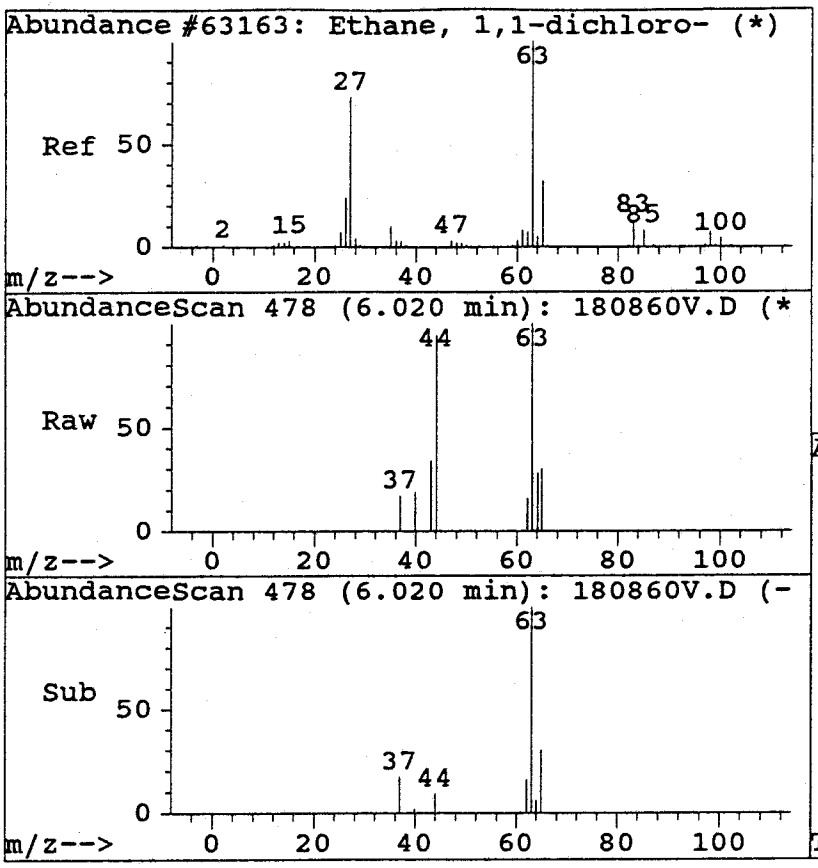


#17
Methylene Chloride
Concen: 61.98 ug/l
RT: 5.30 min Scan# 418
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:84 Resp: 501203

Ion	Ratio	Lower	Upper
84	100		
49	139.6	113.2	169.8
51	43.0	35.3	52.9
86	67.8	54.2	81.4

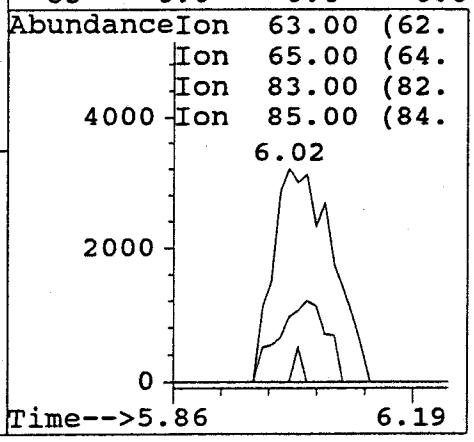


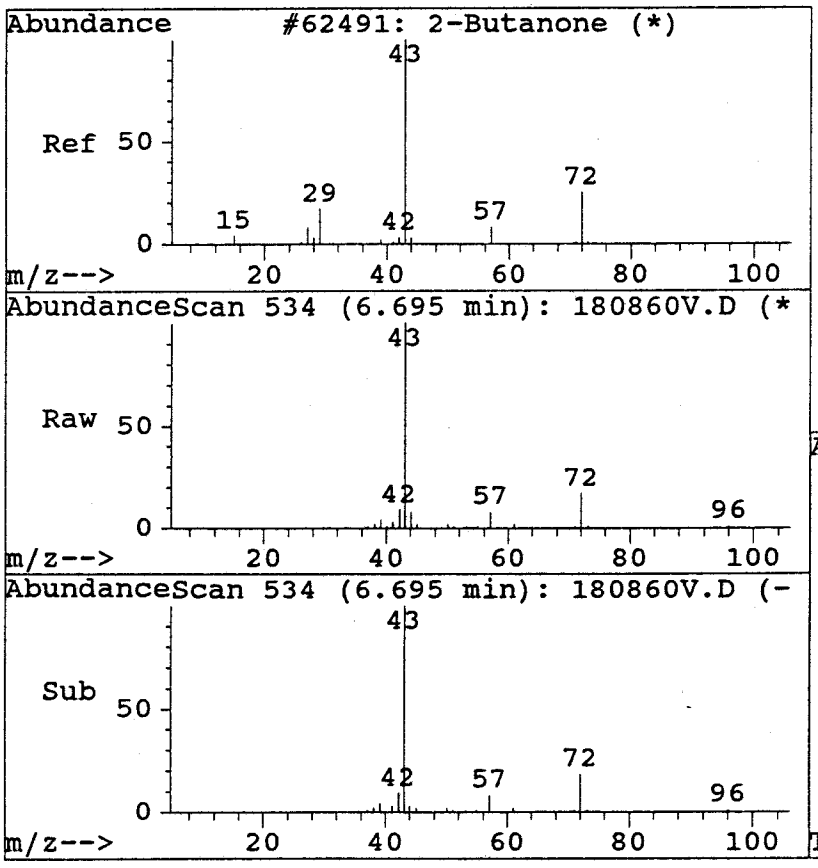


#21
1,1-Dichloroethane
Concen: 1.04 ug/l
RT: 6.02 min Scan# 478
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:63 Resp: 17702

Ion	Ratio	Lower	Upper
63	100		
65	30.1	0.0	0.0#
83	0.0	0.0	0.0
85	0.0	0.0	0.0

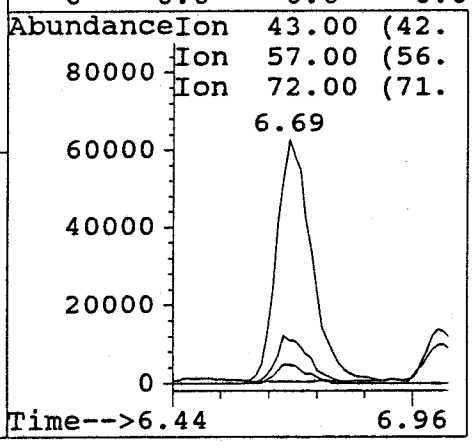


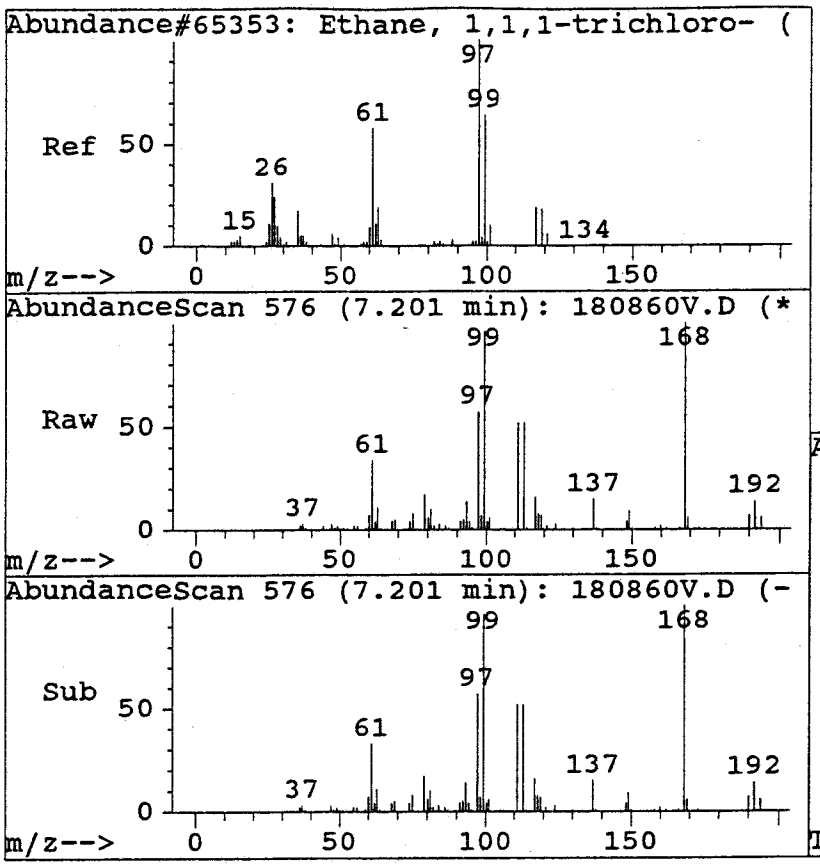


#24
2-Butanone
Concen: 18.98 ug/l
RT: 6.69 min Scan# 534
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:43 Resp: 326873

Ion	Ratio	Lower	Upper
43	100		
57	7.7	5.5	8.3
72	17.6	18.3	27.5#
0	0.0	0.0	0.0

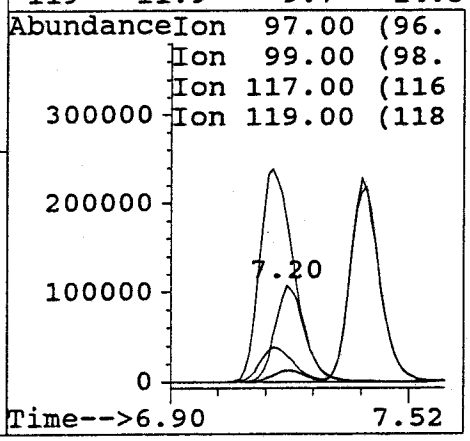


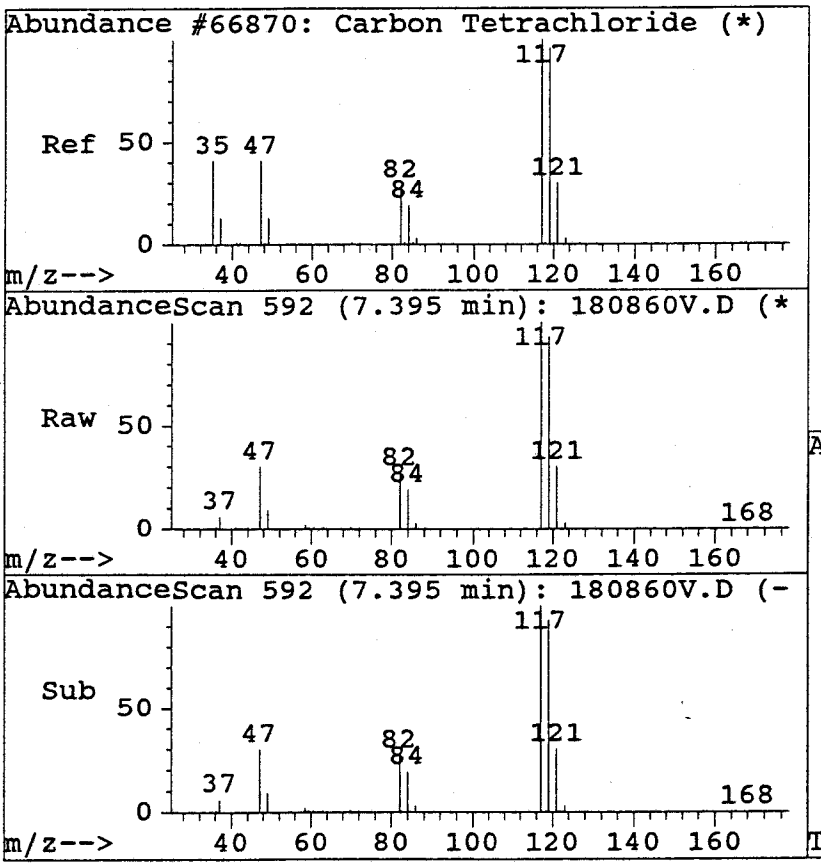


#30
1,1,1-Trichloroethane
Concen: 26.11 ug/l
RT: 7.20 min Scan# 576
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:97 Resp: 571357

Ion	Ratio	Lower	Upper
97	100		
99	166.8	93.1	139.7#
117	26.5	15.4	23.0#
119	11.9	9.7	14.5

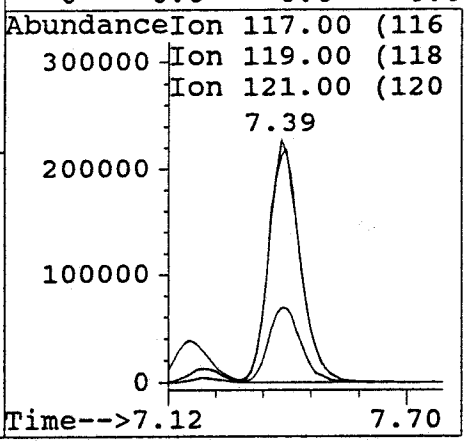


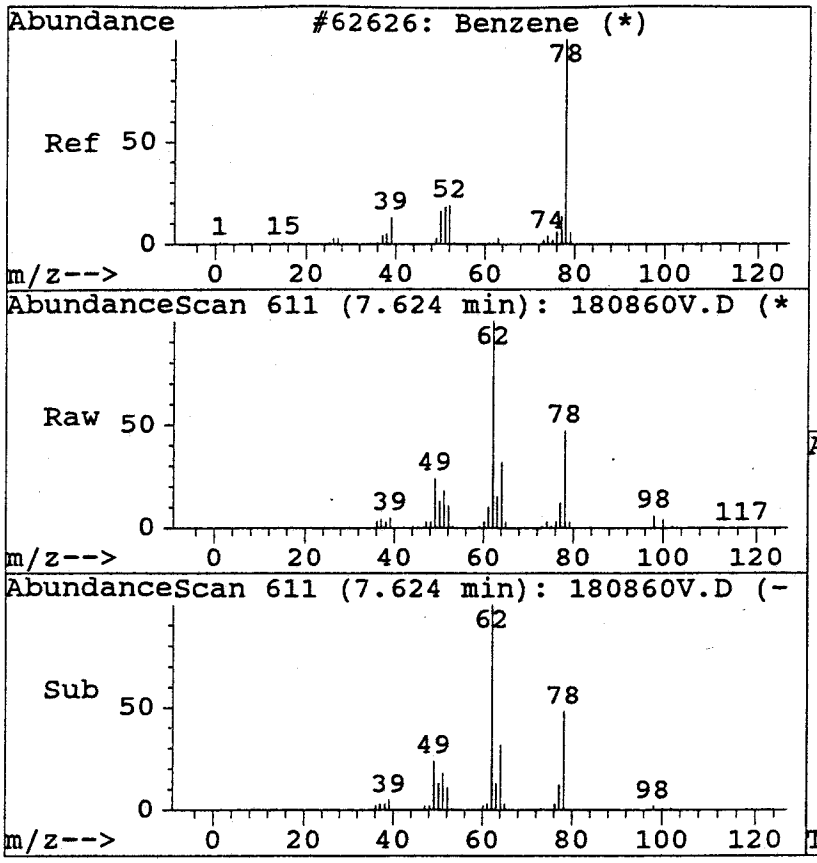


#38
Carbon Tetrachloride
Concen: 64.46 ug/l m
RT: 7.39 min Scan# 592
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:117 Resp: 1201228

Ion	Ratio	Lower	Upper
117	100		
119	96.1	76.0	114.0
121	30.3	24.0	36.0
0	0.0	0.0	0.0

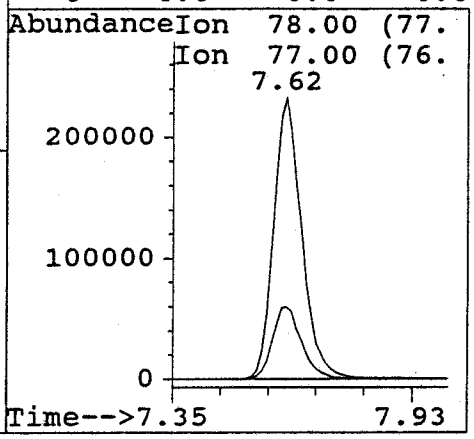


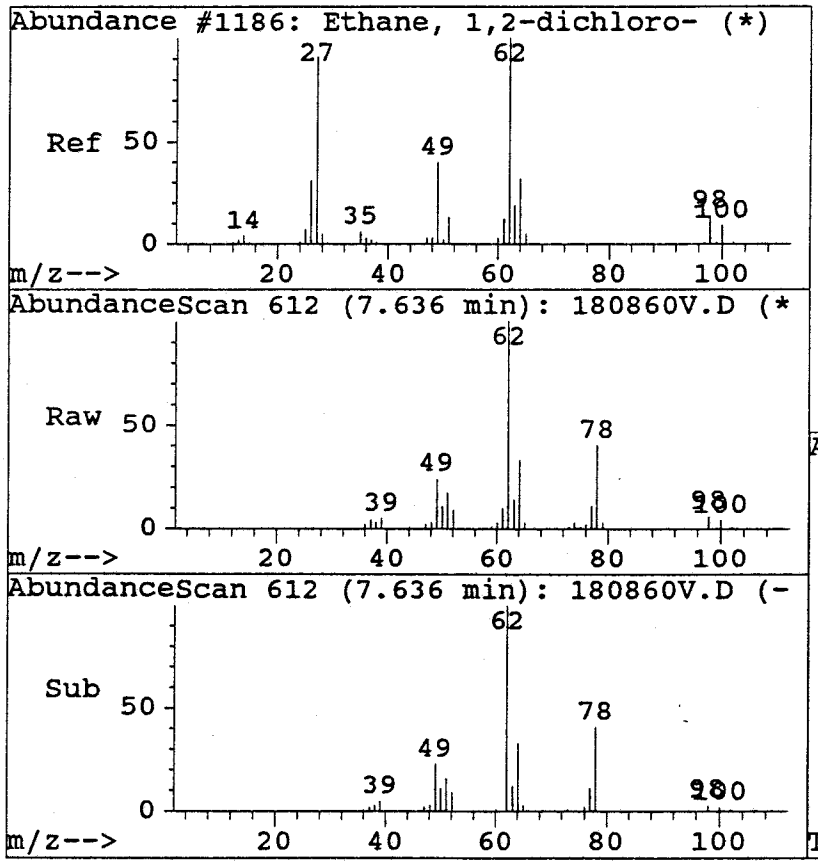


#39
Benzene
Concen: 46.36 ug/l
RT: 7.62 min Scan# 611
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:78 Resp: 1109577

Ion	Ratio	Lower	Upper
78	100		
77	25.6	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

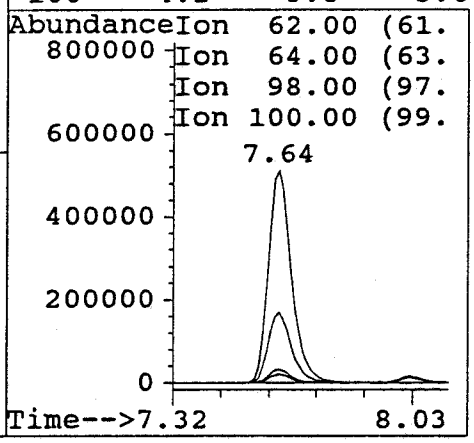


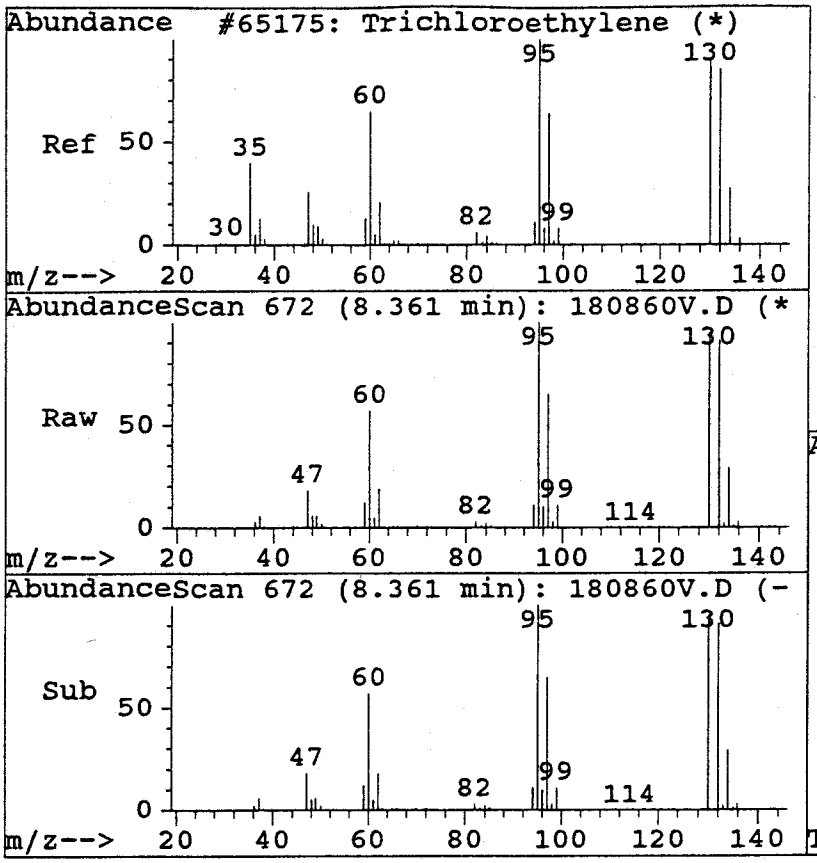


#40
1,2-Dichloroethane
Concen: 117.30 ug/l
RT: 7.64 min Scan# 612
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:62 Resp: 2458937

Ion	Ratio	Lower	Upper
62	100		
64	33.1	24.6	37.0
98	6.5	5.4	8.2
100	4.2	3.8	5.6

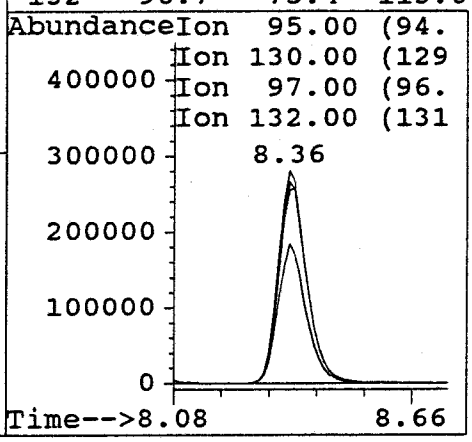


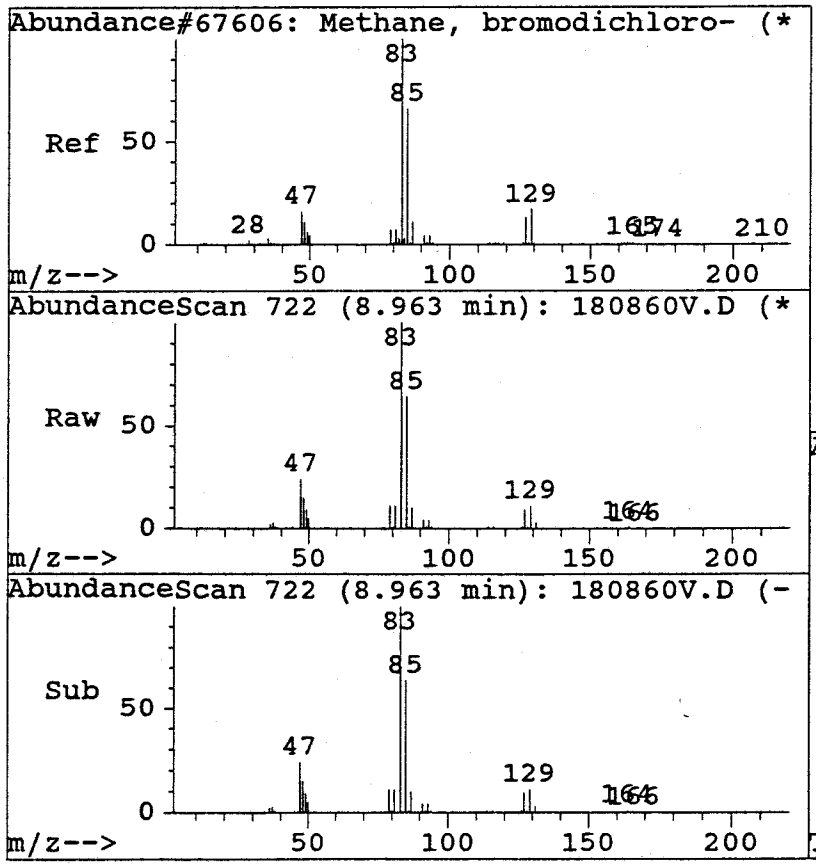


#41
Trichloroethene
Concen: 88.94 ug/l
RT: 8.36 min Scan# 672
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:95 Resp: 1308858

Ion	Ratio	Lower	Upper
95	100		
130	94.7	80.0	120.0
97	65.3	53.8	80.8
132	90.7	75.4	113.0

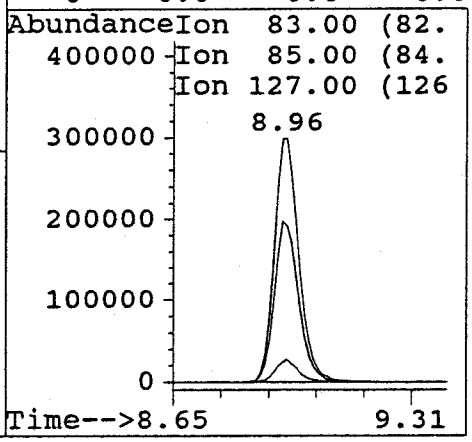


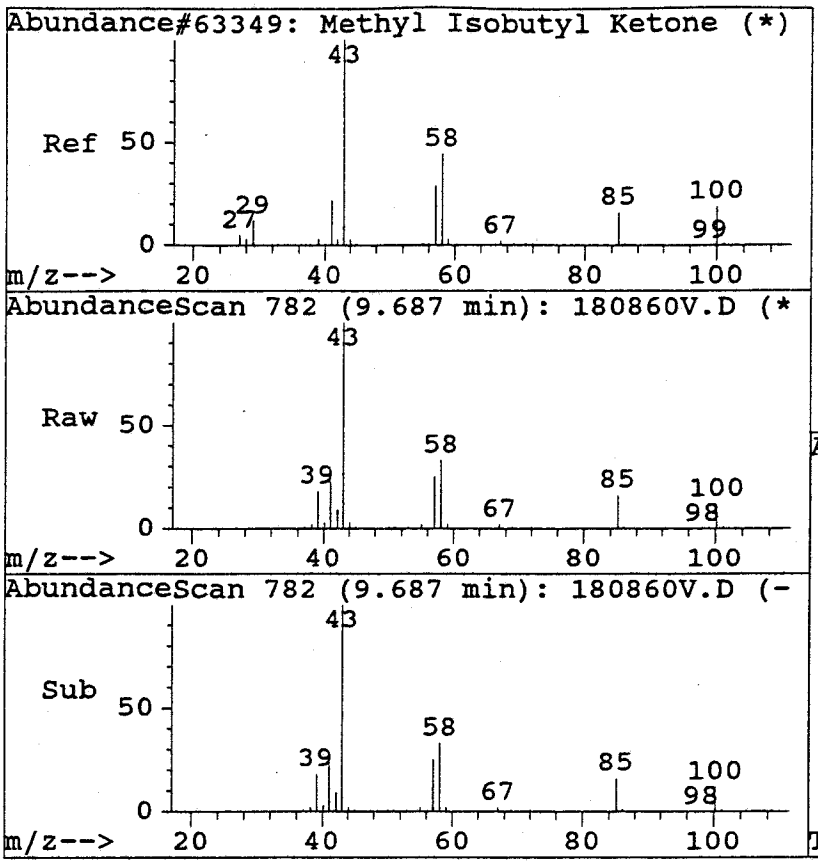


#44
Bromodichloromethane
Concen: 67.36 ug/l
RT: 8.96 min Scan# 722
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:83 Resp: 1391091

Ion	Ratio	Lower	Upper
83	100		
85	64.3	780.8	1171.2#
127	9.2	0.0	0.0#
0	0.0	0.0	0.0

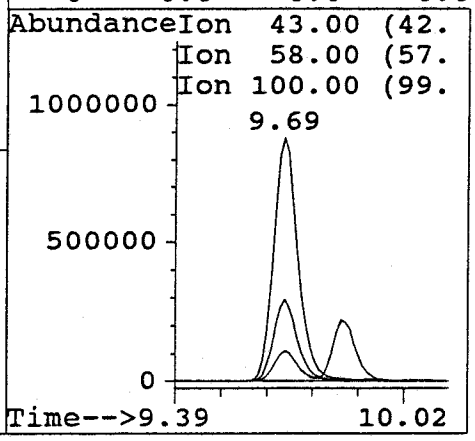


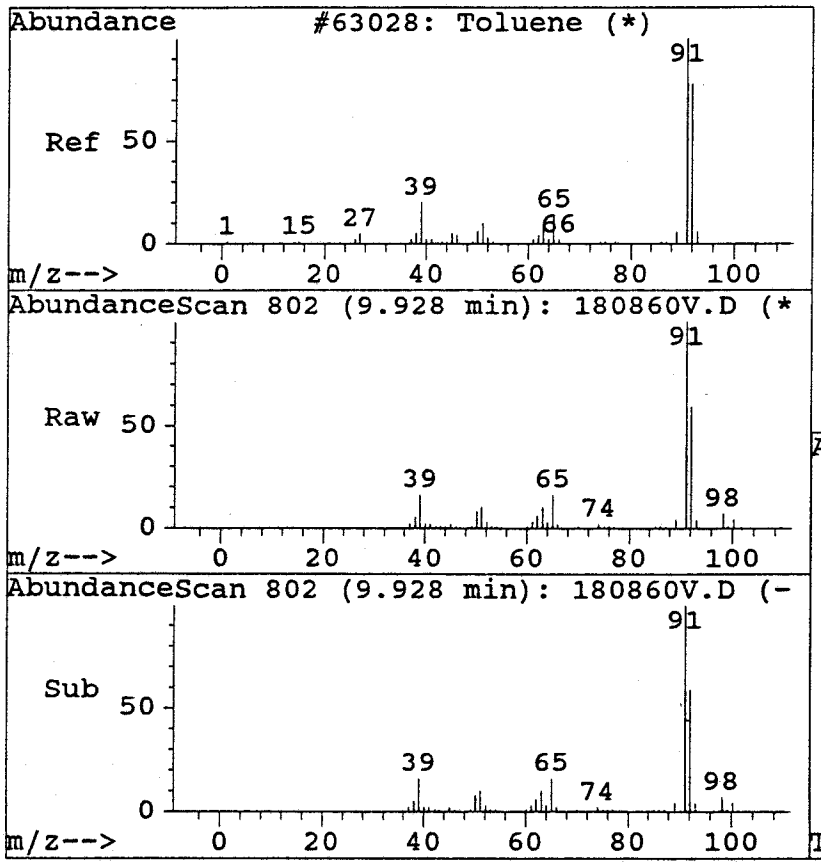


#46
4-Methyl-2-pentanone
Concen: 130.46 ug/l m
RT: 9.69 min Scan# 782
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:43 Resp: 4170660

Ion	Ratio	Lower	Upper
43	100		
58	33.4	0.0	0.0#
100	12.2	0.0	0.0#
0	0.0	0.0	0.0

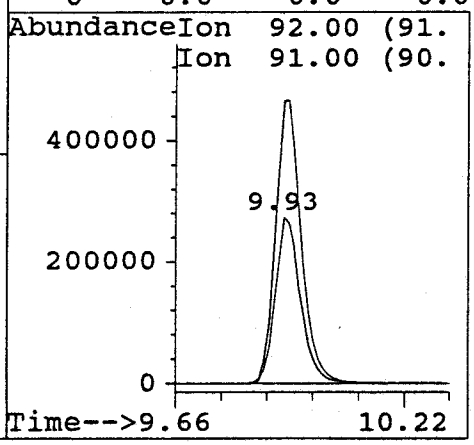


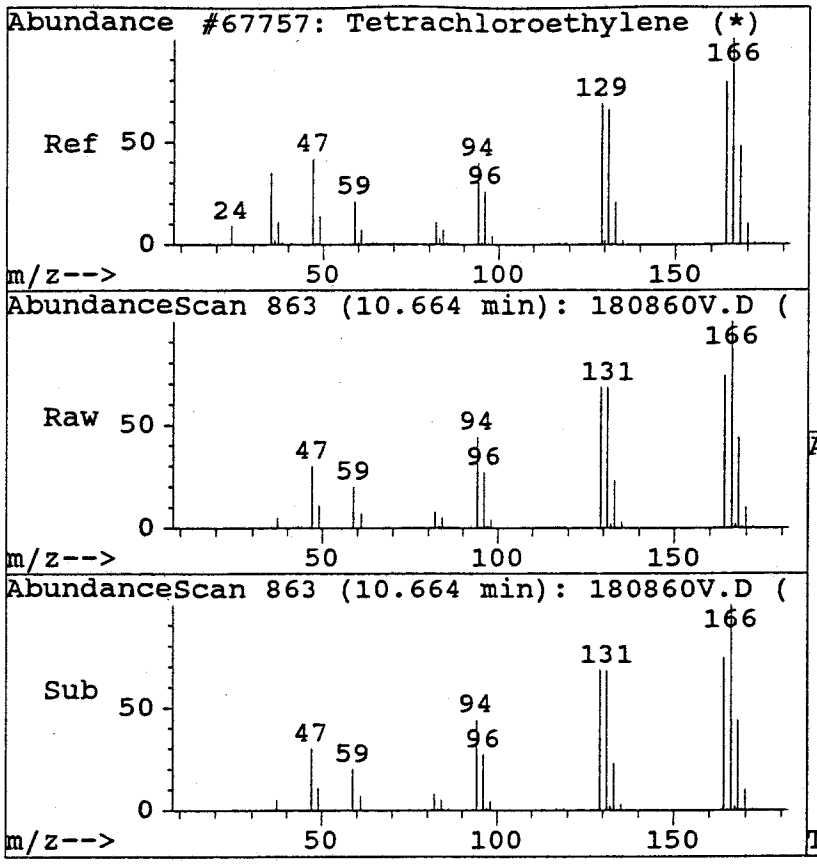


#47
Toluene
Concen: 59.88 ug/l
RT: 9.93 min Scan# 802
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:92 Resp: 1176347

Ion	Ratio	Lower	Upper
92	100		
91	170.5	102.2	153.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

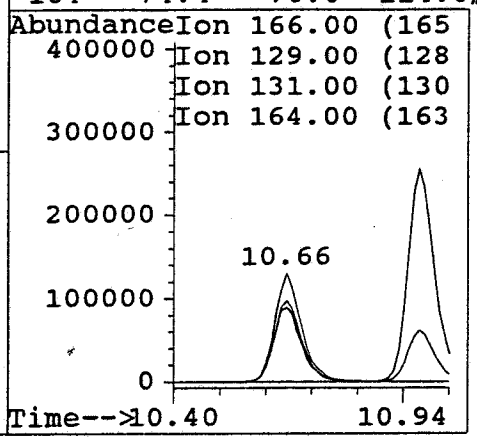


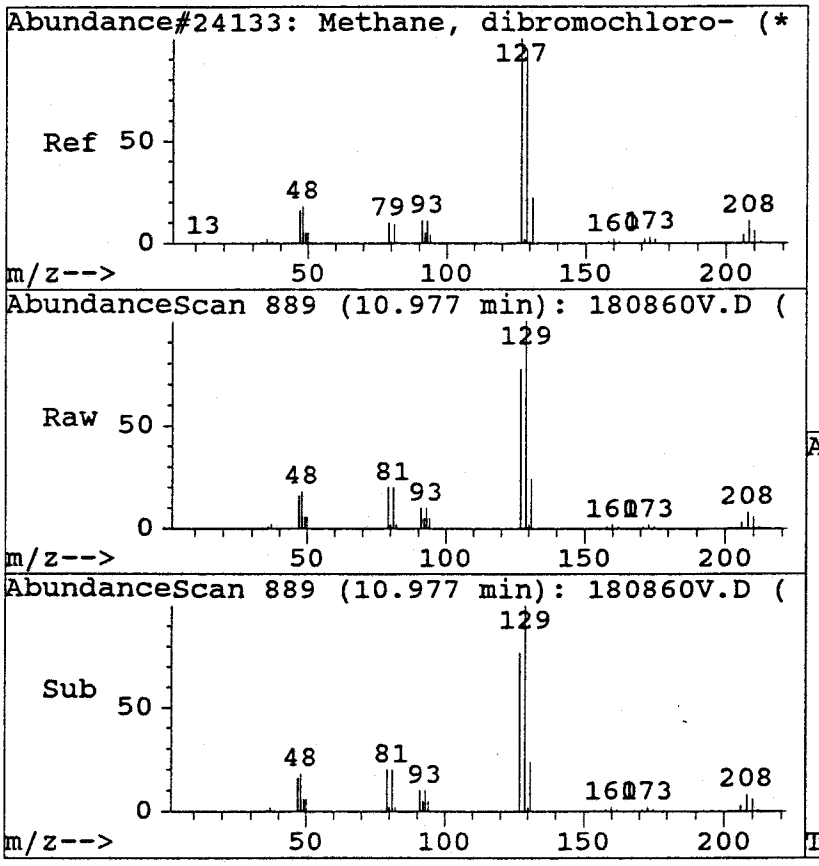


#52
Tetrachloroethene
Concen: 29.16 ug/l
RT: 10.66 min Scan# 863
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:166 Resp: 570403

Ion	Ratio	Lower	Upper
166	100		
129	68.4	75.4	113.0#
131	68.0	75.0	112.4#
164	74.4	76.0	114.0#

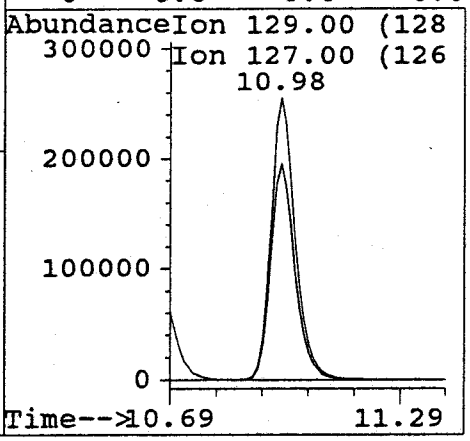


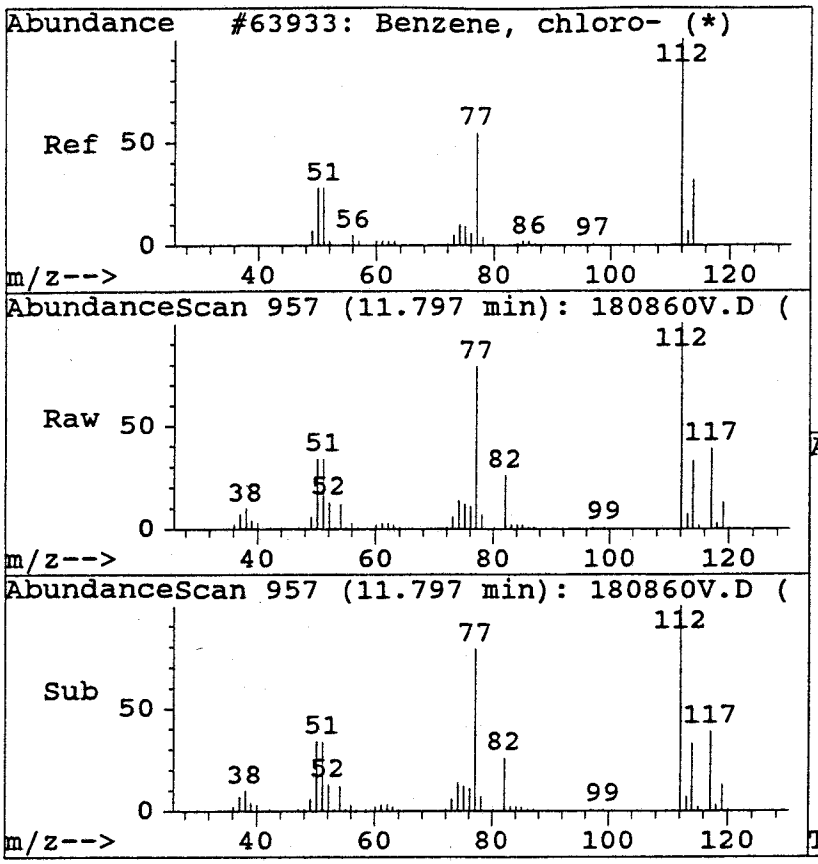


#54
Dibromochloromethane
Concen: 50.68 ug/l
RT: 10.98 min Scan# 889
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:129 Resp: 1124826

Ion	Ratio	Lower	Upper
129	100		
127	76.7	59.8	89.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

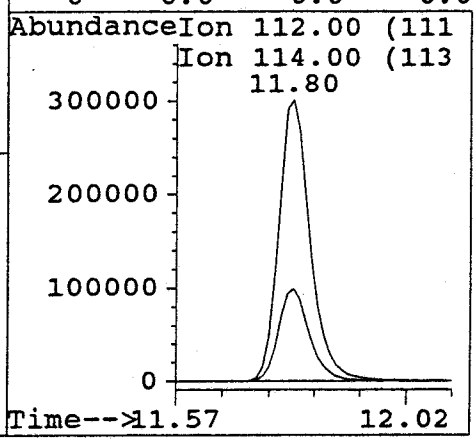


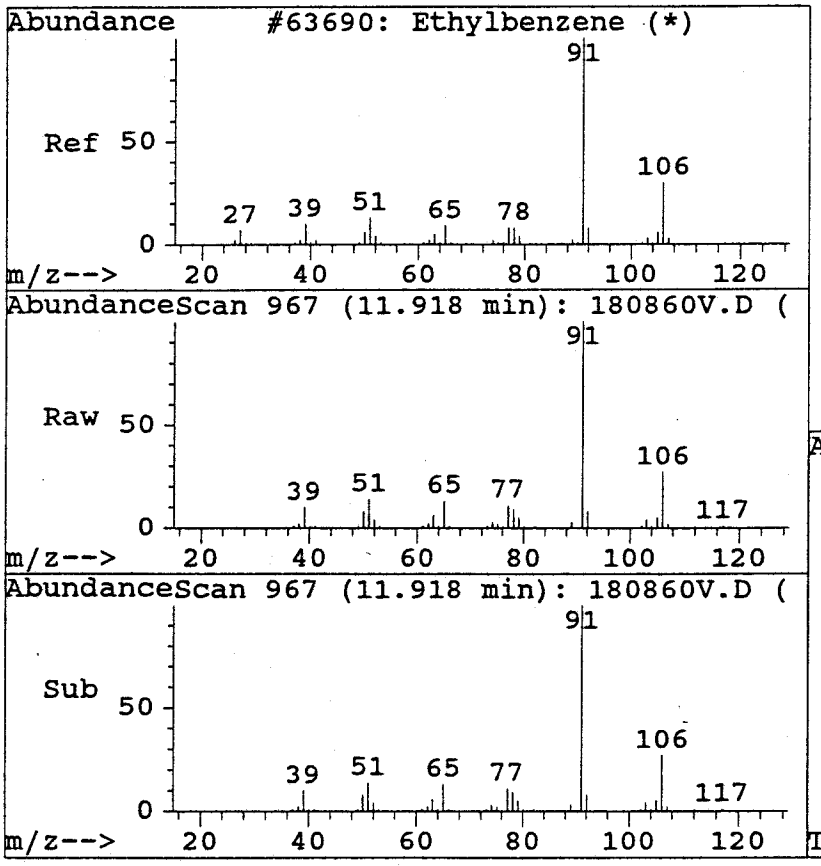


#56
Chlorobenzene
Concen: 47.33 ug/l m
RT: 11.80 min Scan# 957
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:112 Resp: 1304997

Ion	Ratio	Lower	Upper
112	100		
114	33.0	0.0	0.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

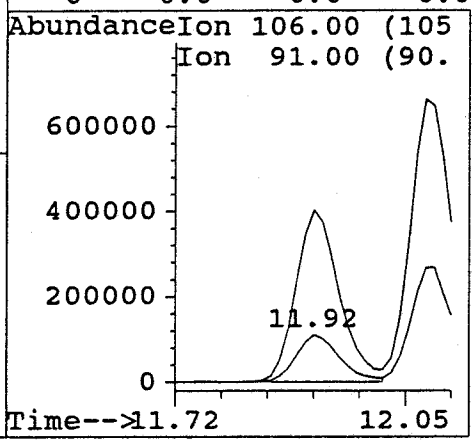


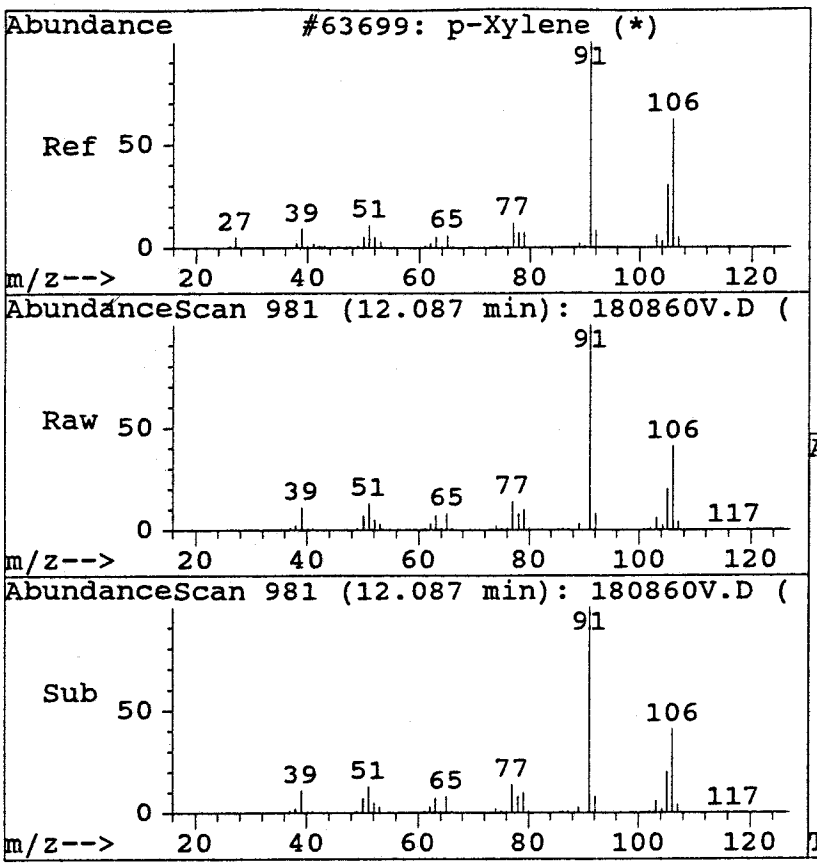


#58
Ethylbenzene
Concen: 36.38 ug/l
RT: 11.92 min Scan# 967
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:106 Resp: 469667

Ion	Ratio	Lower	Upper
106	100		
91	365.3	291.7	437.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

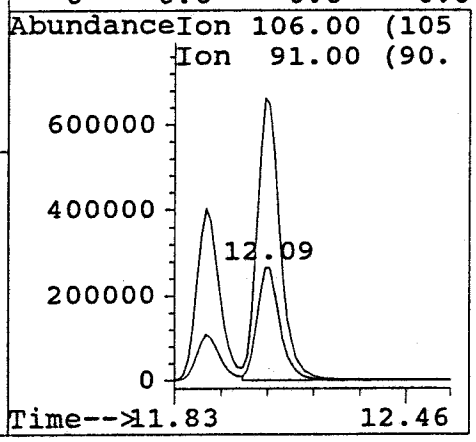


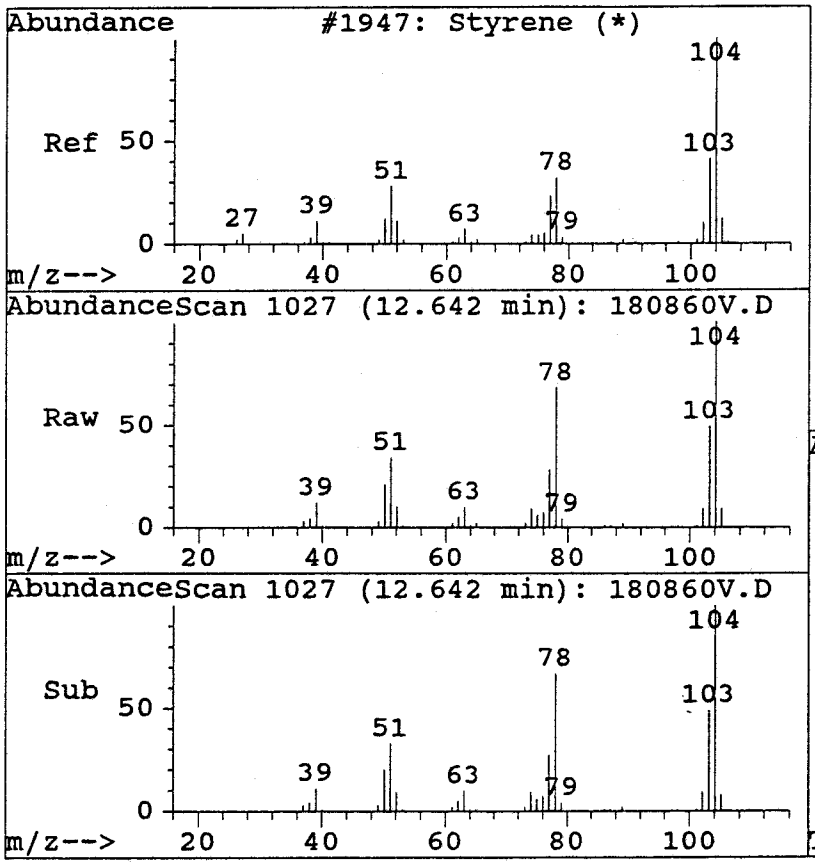


#59
Xylene, m & p-
Concen: 67.69 ug/l
RT: 12.09 min Scan# 981
Delta R.T. -0.02 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:106 Resp: 1142053

Ion	Ratio	Lower	Upper
106	100		
91	241.9	204.2	306.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

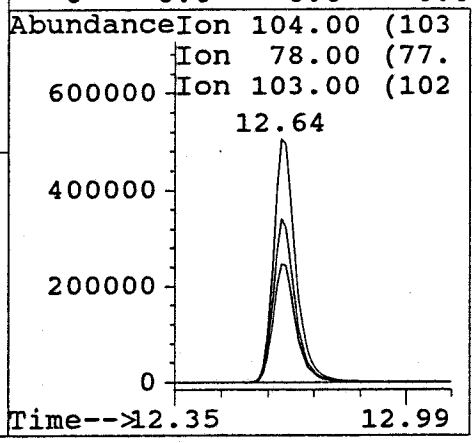


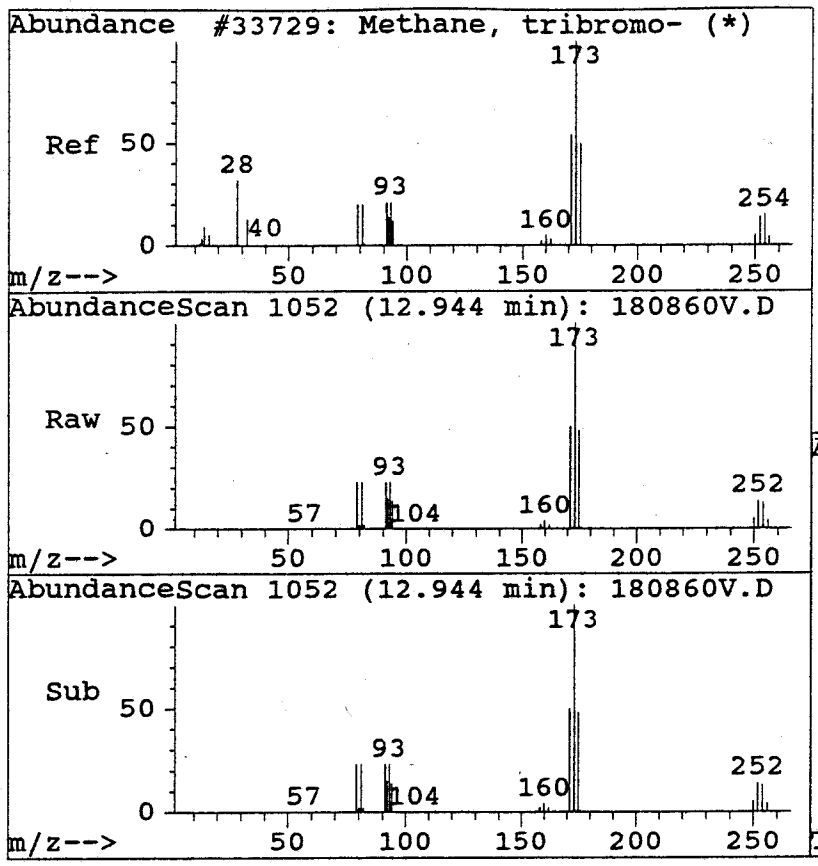


#61
Styrene
Concen: 77.36 ug/l
RT: 12.64 min Scan# 1027
Delta R.T. -0.05 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:104 Resp: 2146450

Ion	Ratio	Lower	Upper
104	100		
78	67.5	93.1	139.7#
103	48.8	99.6	149.4#
0	0.0	0.0	0.0

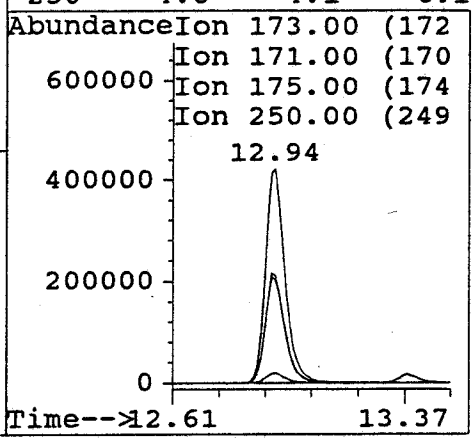


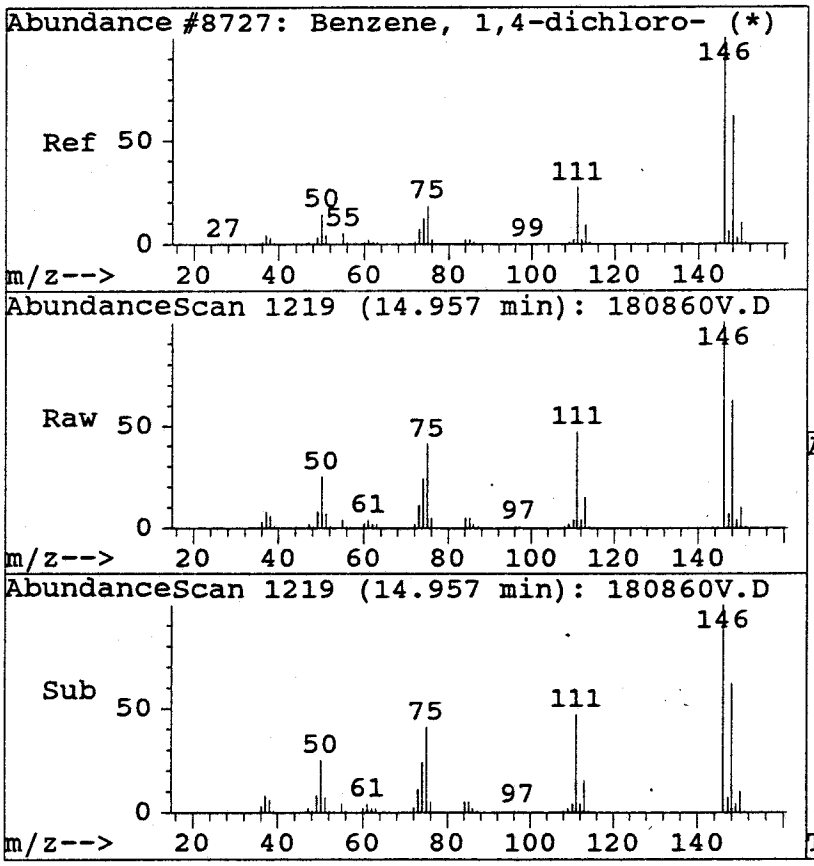


#62
Bromoform
Concen: 80.05 ug/l
RT: 12.94 min Scan# 1052
Delta R.T. -0.03 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:173 Resp: 1909693

Ion	Ratio	Lower	Upper
173	100		
171	49.7	40.2	60.2
175	47.9	38.9	58.3
250	4.8	4.1	6.1

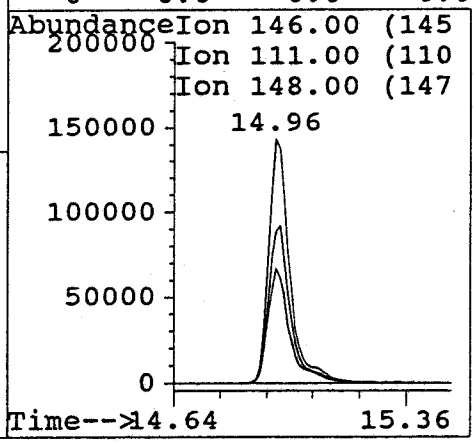


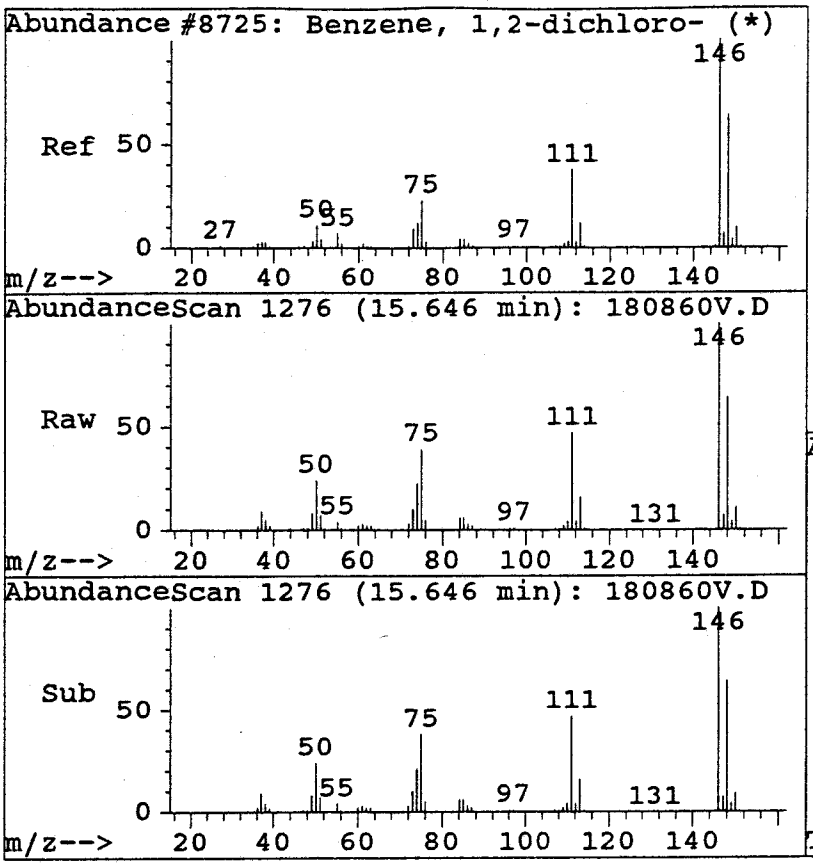


#75
1,4-Dichlorobenzene
Concen: 19.03 ug/l
RT: 14.96 min Scan# 1219
Delta R.T. -0.17 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:146 Resp: 643394

Ion	Ratio	Lower	Upper
146	100		
111	46.8	64.2	96.2#
148	61.9	48.4	72.6
0	0.0	0.0	0.0

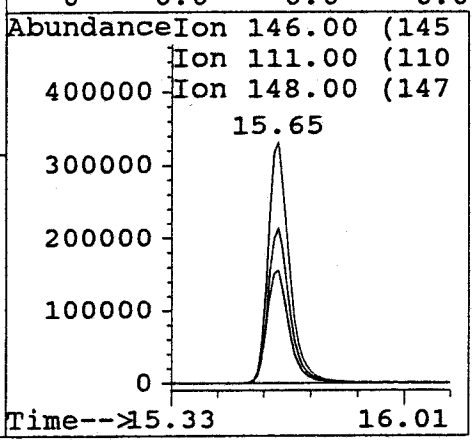




#76
1,2-Dichlorobenzene
Concen: 48.44 ug/l
RT: 15.65 min Scan# 1276
Delta R.T. -0.04 min
Lab File: 180860V.D
Acq: 18 Jul 95 9:38 pm

Tgt Ion:146 Resp: 1443905

Ion	Ratio	Lower	Upper
146	100		
111	46.9	37.3	55.9
148	64.5	51.5	77.3
0	0.0	0.0	0.0



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-2

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180880V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180880V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	170	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	5.8	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	4.6	JB
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	94	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	1300	D
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-2

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180880V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180880V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

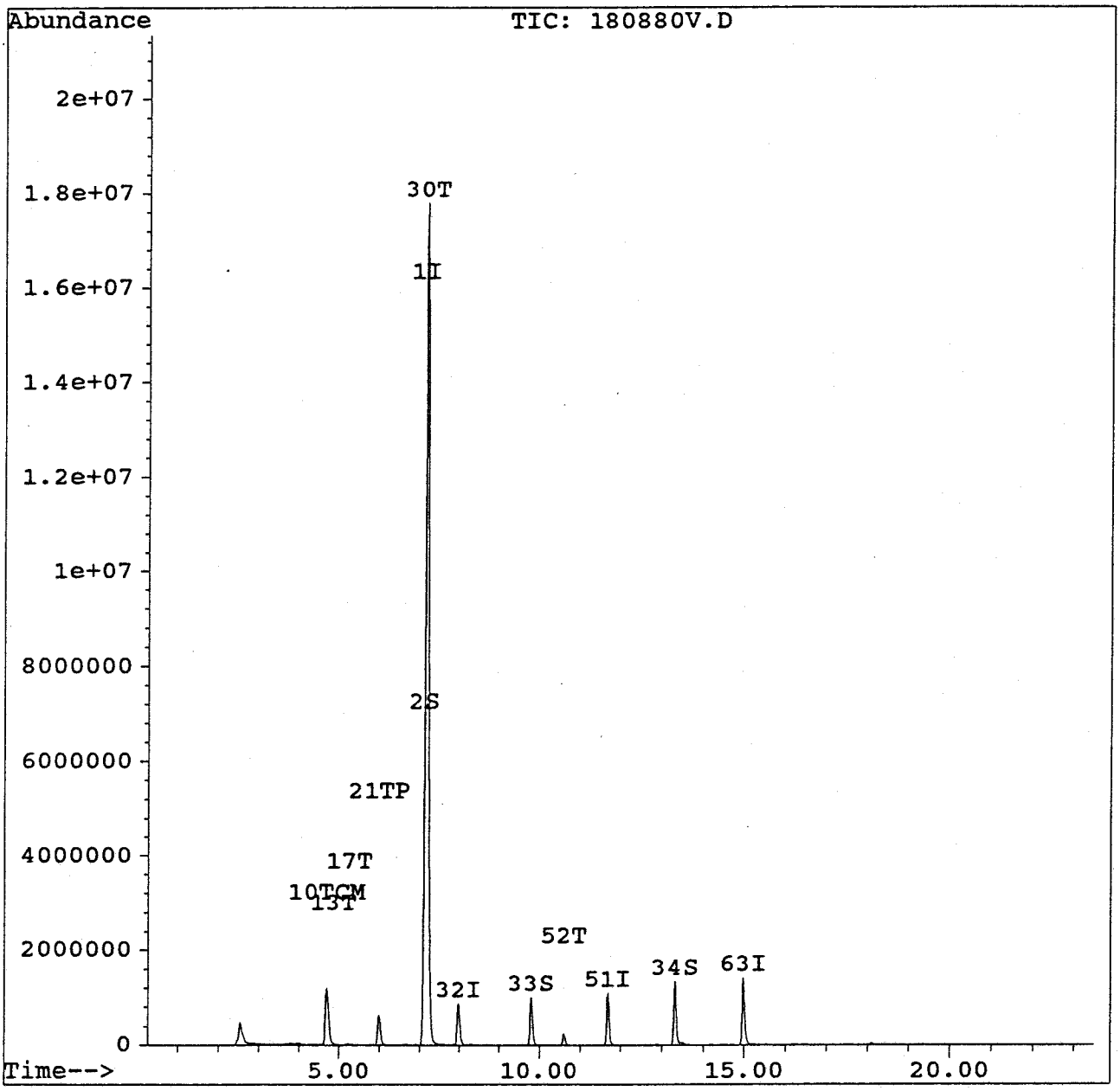
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	9.9	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180880V.D
Acq Time : 21 Jul 95 8:42 pm
Sample : MW-2 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 11:01 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration



Quantitation Report

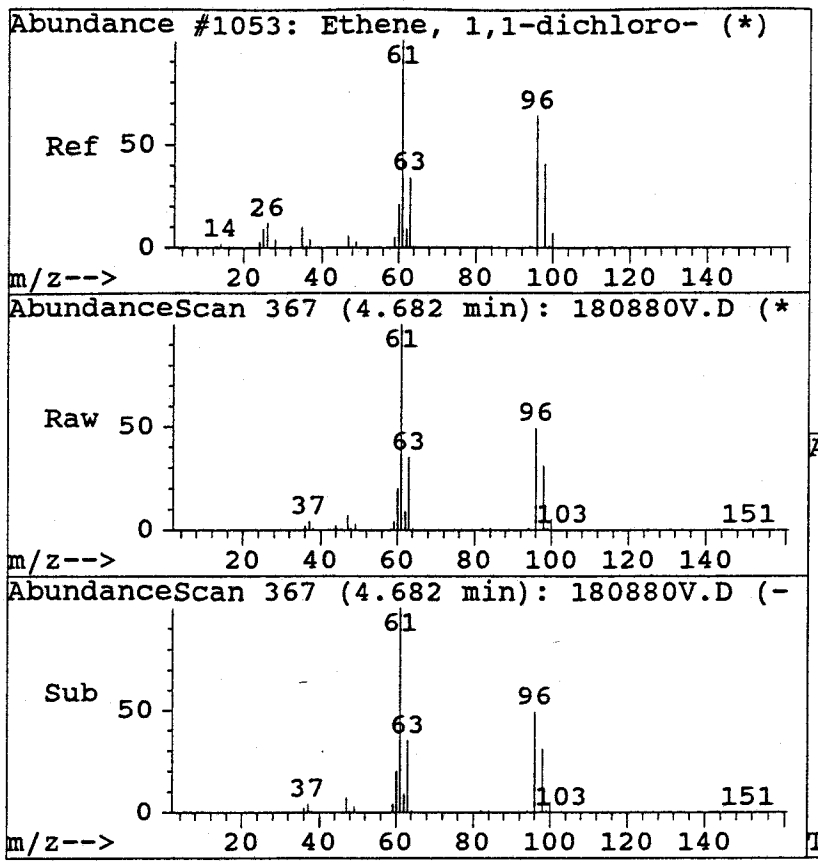
Data File : C:\HPCHEM\1\DATA\072195V\180880V.D
Acq Time : 21 Jul 95 8:42 pm
Sample : MW-2 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 11:01 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.12	168	1645216	50.00	ug/l	0.00
32) 1,4-Difluorobenzene	7.97	114	1511257	50.00	ug/l	0.00
51) Chlorobenzene-d5	11.69	117	1352199	50.00	ug/l	-0.01
63) 1,4-Dichlorobenzene-d4	14.98	152	971138	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.10	113	936530	52.14	ug/l	104.27%
33) Toluene-d8	9.78	98	1561418	49.78	ug/l	99.56%
34) Bromofluorobenzene	13.31	174	963063	48.24	ug/l	96.49%
Target Compounds						**Qvalue**
10) 1,1-Dichloroethene	4.68	96	1200985	169.98	ug/l	99
13) Acetone	4.86	43	74378	5.76	ug/l	95
17) Methylene Chloride	5.26	84	36039	4.61	ug/l	97
21) 1,1-Dichloroethane	5.98	63	1502437	93.83	ug/l m	100
30) 1,1,1-Trichloroethane	7.15	97	30730134	1460.86	ug/l #	60
52) Tetrachloroethene	10.60	166	190062	9.93	ug/l #	78

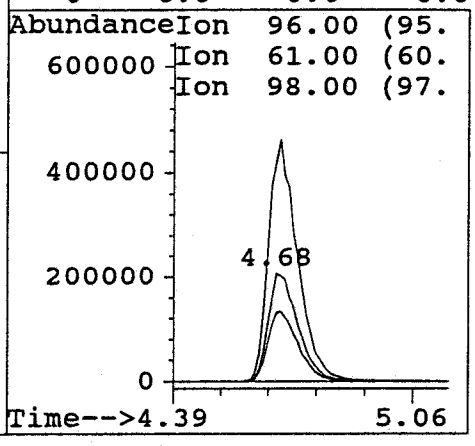
(#) = qualifier out of range (m) = manual integration

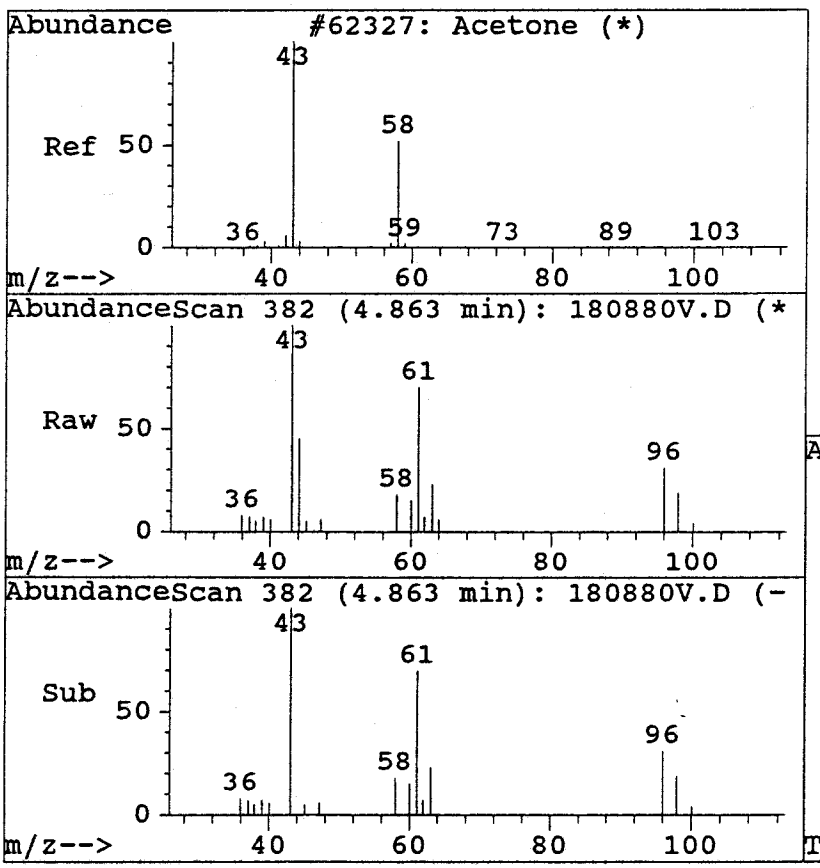


#10
1,1-Dichloroethene
Concen: 169.98 ug/l
RT: 4.68 min Scan# 367
Delta R.T. -0.00 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:96 Resp: 1200985

Ion	Ratio	Lower	Upper
96	100		
61	202.8	163.8	245.6
98	63.1	50.4	75.6
0	0.0	0.0	0.0

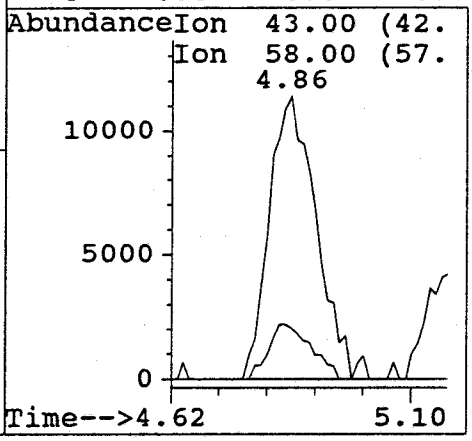


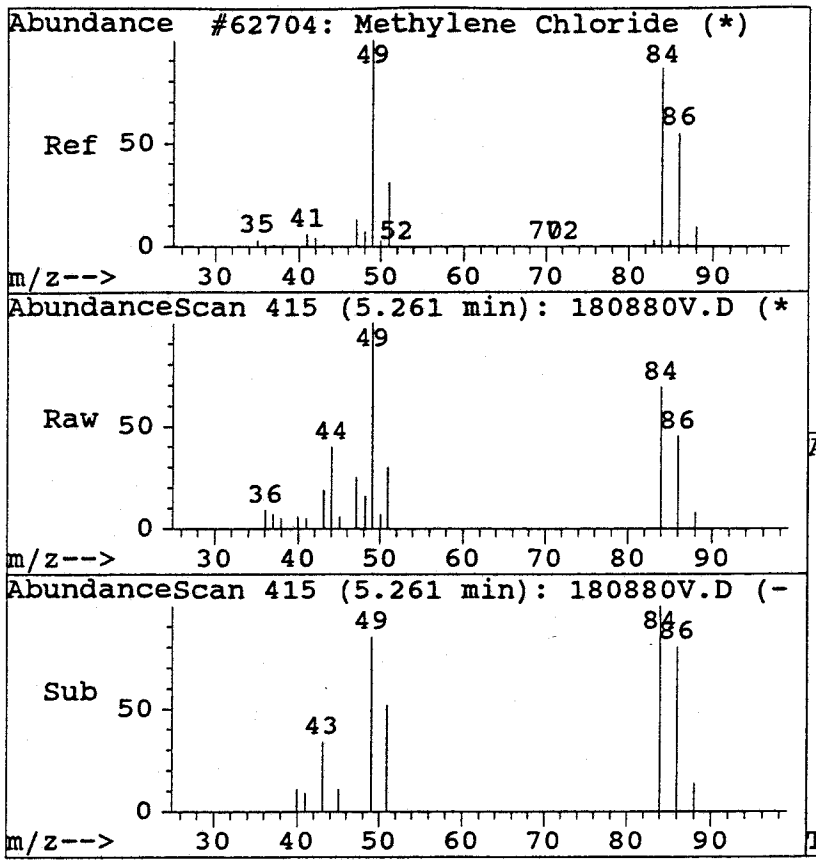


#13
Acetone
Concen: 5.76 ug/l
RT: 4.86 min Scan# 382
Delta R.T. -0.00 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:43 Resp: 74378

Ion	Ratio	Lower	Upper
43	100		
58	18.1	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

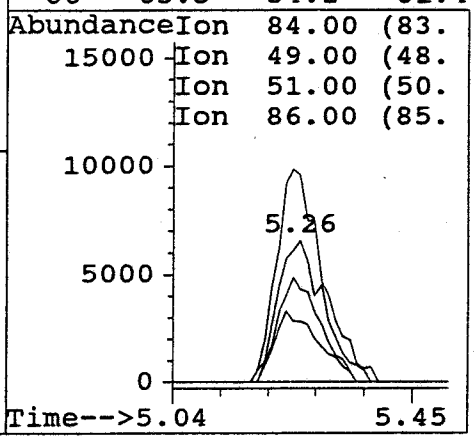


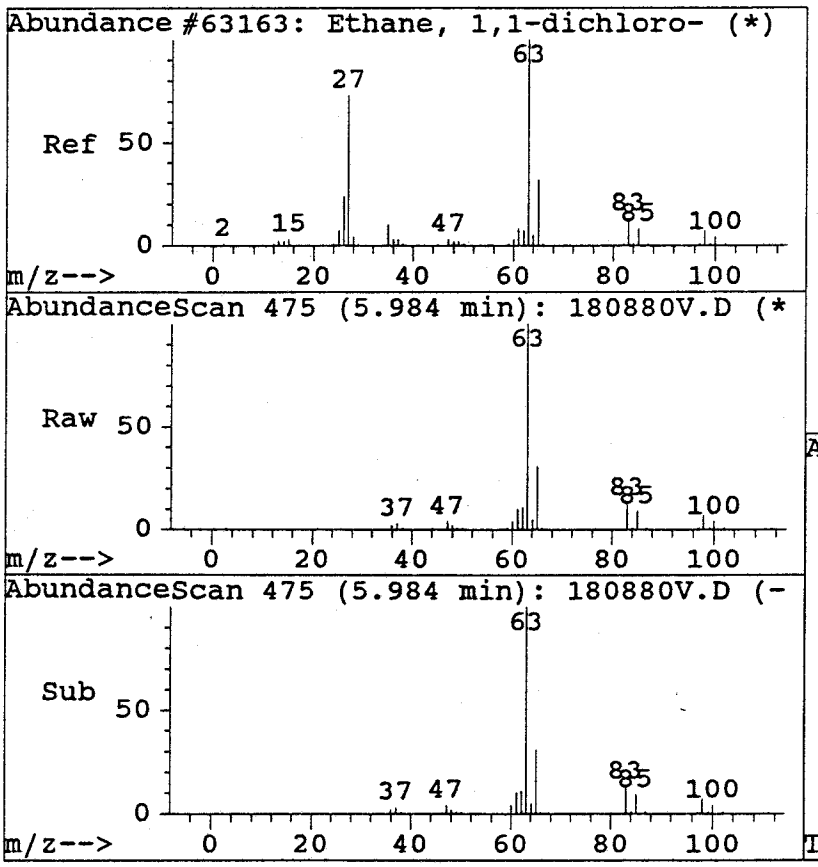


#17
Methylene Chloride
Concen: 4.61 ug/l
RT: 5.26 min Scan# 415
Delta R.T. 0.01 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:84 Resp: 36039

Ion	Ratio	Lower	Upper
84	100		
49	145.6	113.2	169.8
51	43.0	35.3	52.9
86	65.5	54.2	81.4

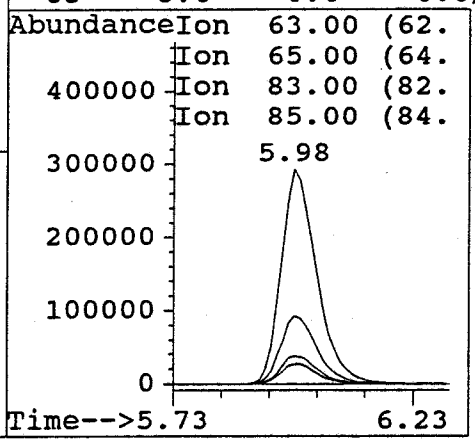


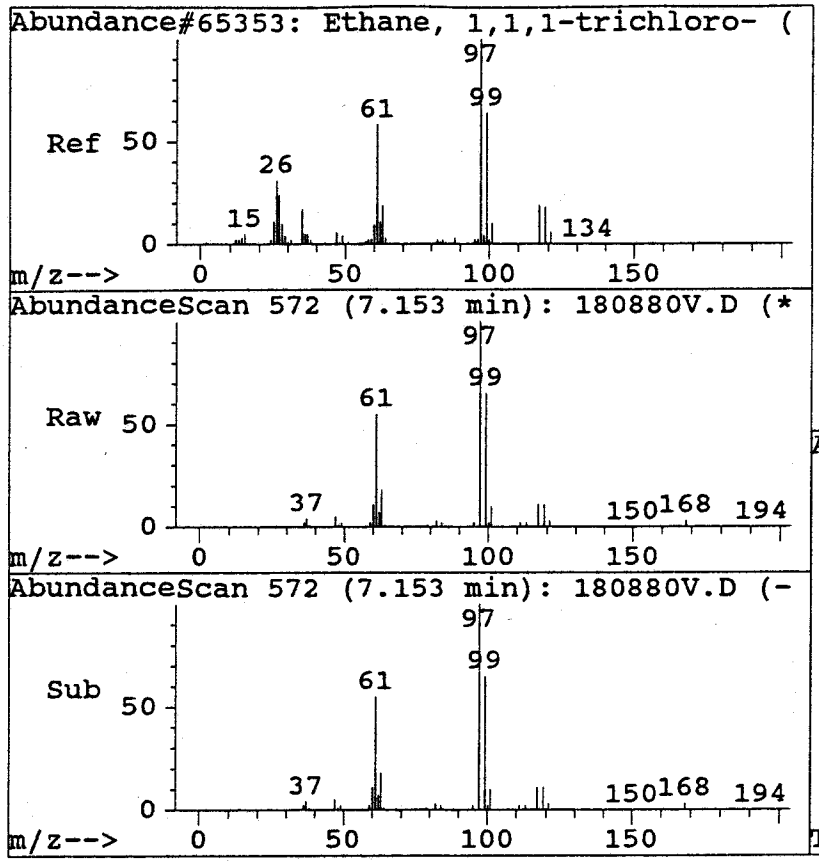


#21
1,1-Dichloroethane
Concen: 93.83 ug/l m
RT: 5.98 min Scan# 475
Delta R.T. -0.00 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:63 Resp: 1502437

Ion	Ratio	Lower	Upper
63	100		
65	31.4	0.0	0.0#
83	12.6	0.0	0.0#
85	8.6	0.0	0.0#

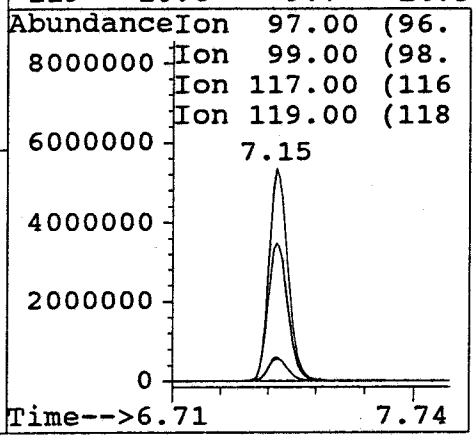


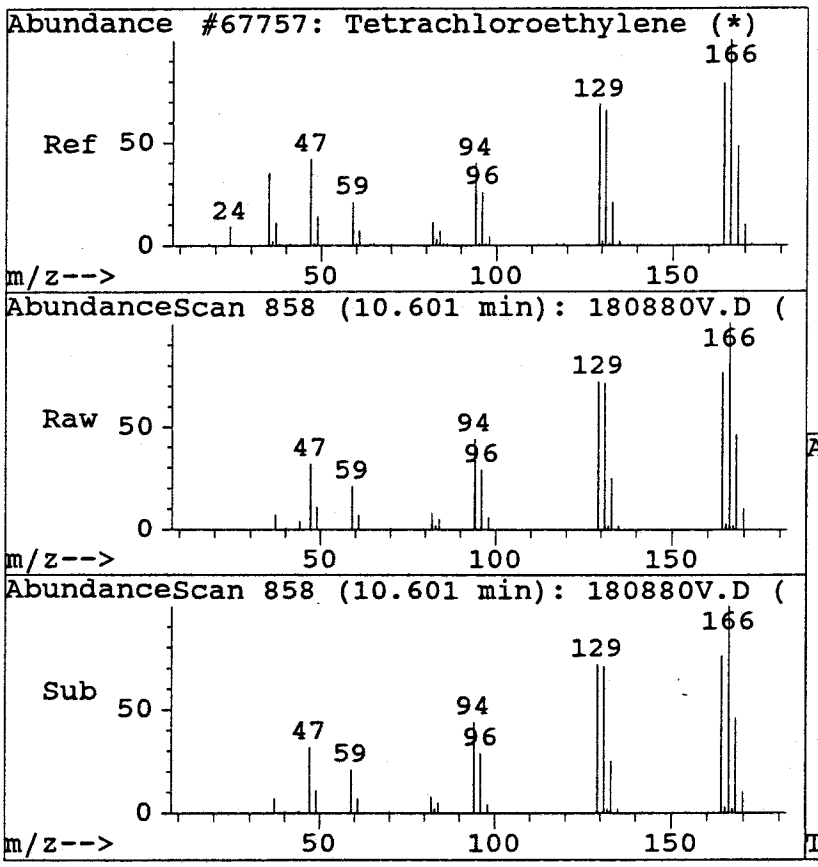


#30
1,1,1-Trichloroethane
Concen: 1460.86 ug/l
RT: 7.15 min Scan# 572
Delta R.T. -0.00 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:97 Resp:30730134

Ion	Ratio	Lower	Upper
97	100		
99	64.8	93.1	139.7#
117	11.4	15.4	23.0#
119	10.6	9.7	14.5

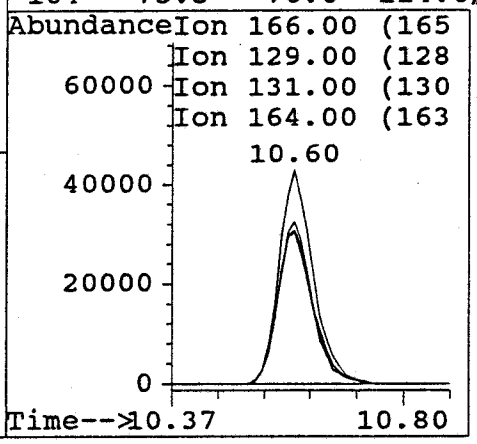




#52
Tetrachloroethene
Concen: 9.93 ug/l
RT: 10.60 min Scan# 858
Delta R.T. -0.01 min
Lab File: 180880V.D
Acq: 21 Jul 95 8:42 pm

Tgt Ion:166 Resp: 190062

Ion	Ratio	Lower	Upper
166	100		
129	71.7	75.4	113.0#
131	70.8	75.0	112.4#
164	75.5	76.0	114.0#

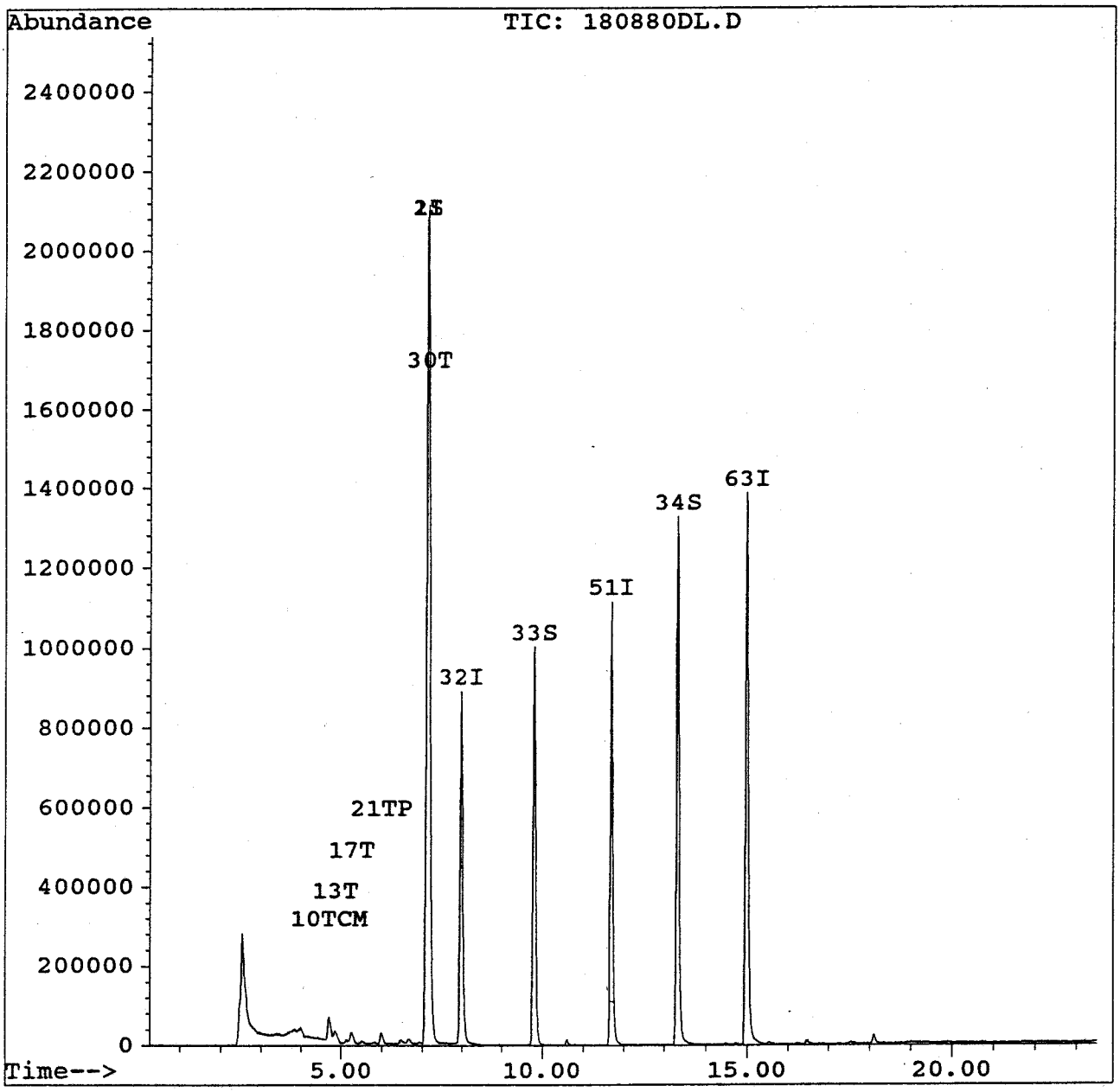


Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180880DL.D
Acq Time : 21 Jul 95 8:06 pm
Sample : MW-2DL (X25) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 8:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

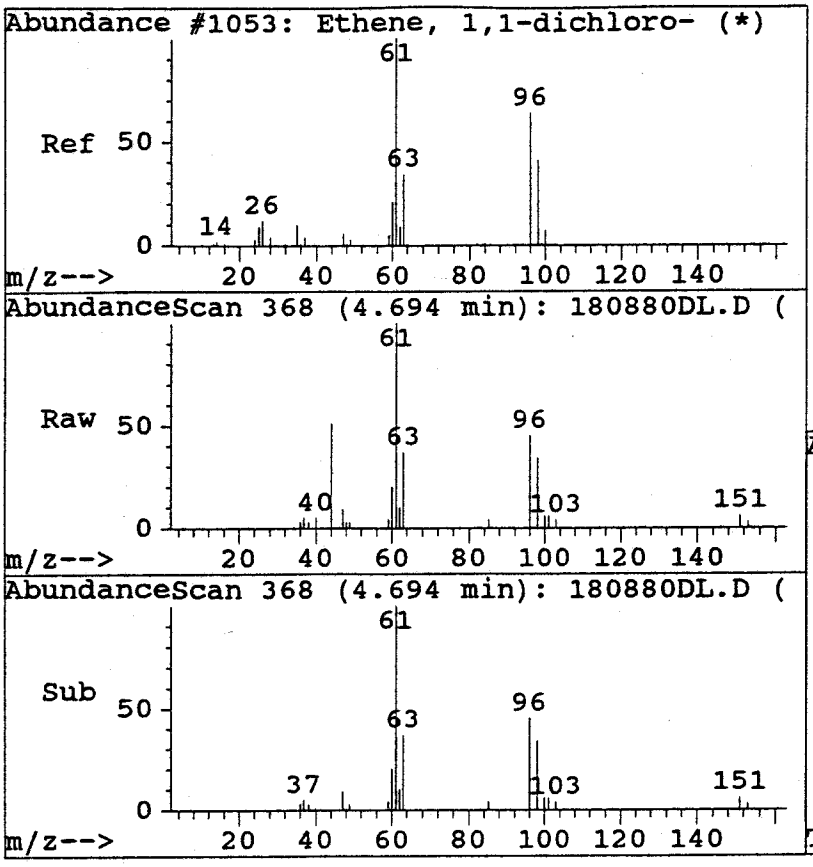
Data File : C:\HPCHEM\1\DATA\072195V\180880DL.D
Acq Time : 21 Jul 95 8:06 pm
Sample : MW-2DL (X25) (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 8:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.12	168	1784248	50.00	ug/l		0.00
32) 1,4-Difluorobenzene	7.97	114	1549004	50.00	ug/l		0.00
51) Chlorobenzene-d5	11.68	117	1371604	50.00	ug/l		-0.01
63) 1,4-Dichlorobenzene-d4	14.97	152	951053	50.00	ug/l		-0.01
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.12	113	915577	47.00	ug/l		94.00%
33) Toluene-d8	9.79	98	1541015	47.93	ug/l		95.87%
34) Bromofluorobenzene	13.31	174	918427	44.89	ug/l		89.77%
Target Compounds							Qvalue
10) 1,1-Dichloroethene	4.69	96	59499	7.77	ug/l	#	87
13) Acetone	4.85	43	122432	8.74	ug/l		99
17) Methylene Chloride	5.25	84	30951	3.65	ug/l		95
21) 1,1-Dichloroethane	5.98	63	69120	3.98	ug/l	#	100
30) 1,1,1-Trichloroethane	7.16	97	1434780	62.89	ug/l		84

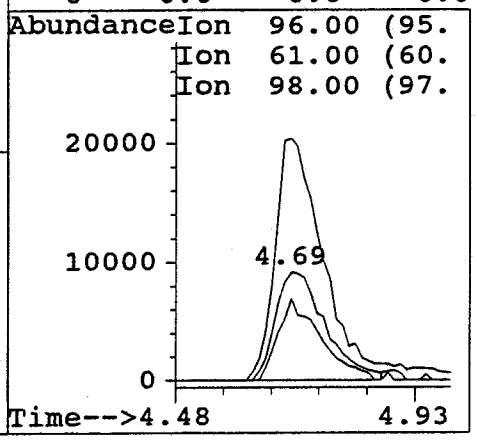
(#) = qualifier out of range (m) = manual integration

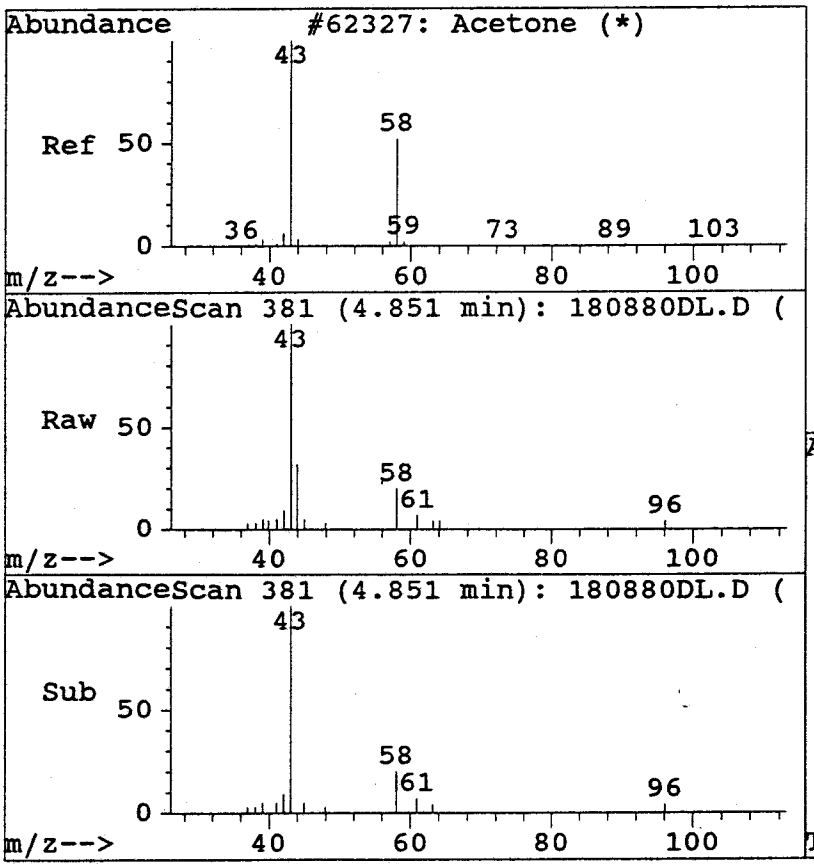


#10
1,1-Dichloroethene
Concen: 7.77 ug/l
RT: 4.69 min Scan# 368
Delta R.T. 0.01 min
Lab File: 180880DL.D
Acq: 21 Jul 95 8:06 pm

Tgt Ion:96 Resp: 59499

Ion	Ratio	Lower	Upper
96	100		
61	222.7	163.8	245.6
98	75.9	50.4	75.6#
0	0.0	0.0	0.0

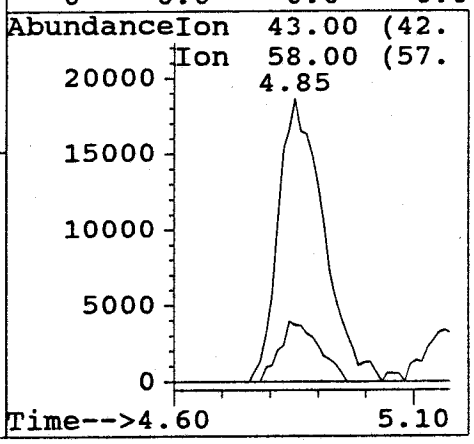


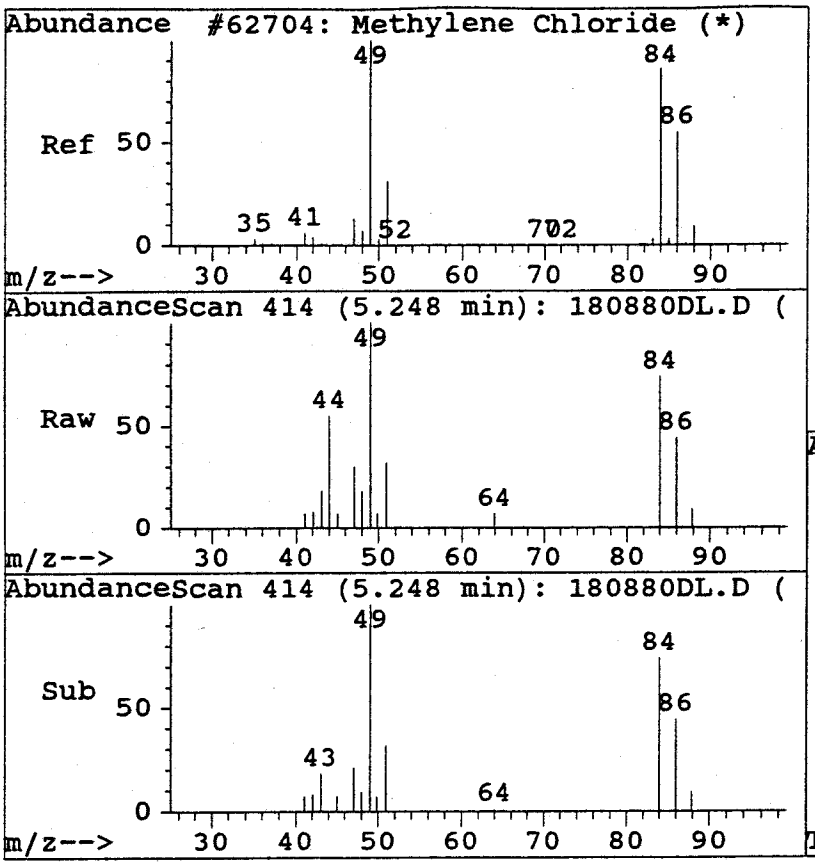


#13
Acetone
Concen: 8.74 ug/l
RT: 4.85 min Scan# 381
Delta R.T. -0.01 min
Lab File: 180880DL.D
Acq: 21 Jul 95 8:06 pm

Tgt Ion:43 Resp: 122432

Ion	Ratio	Lower	Upper
43	100		
58	19.9	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

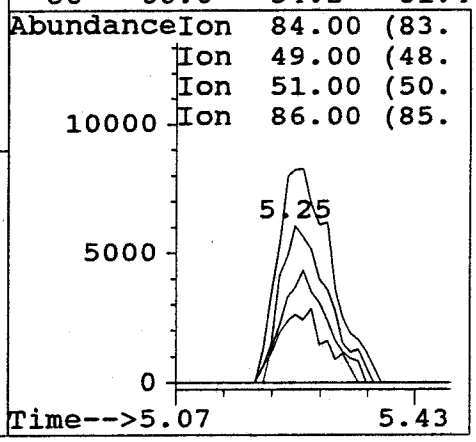


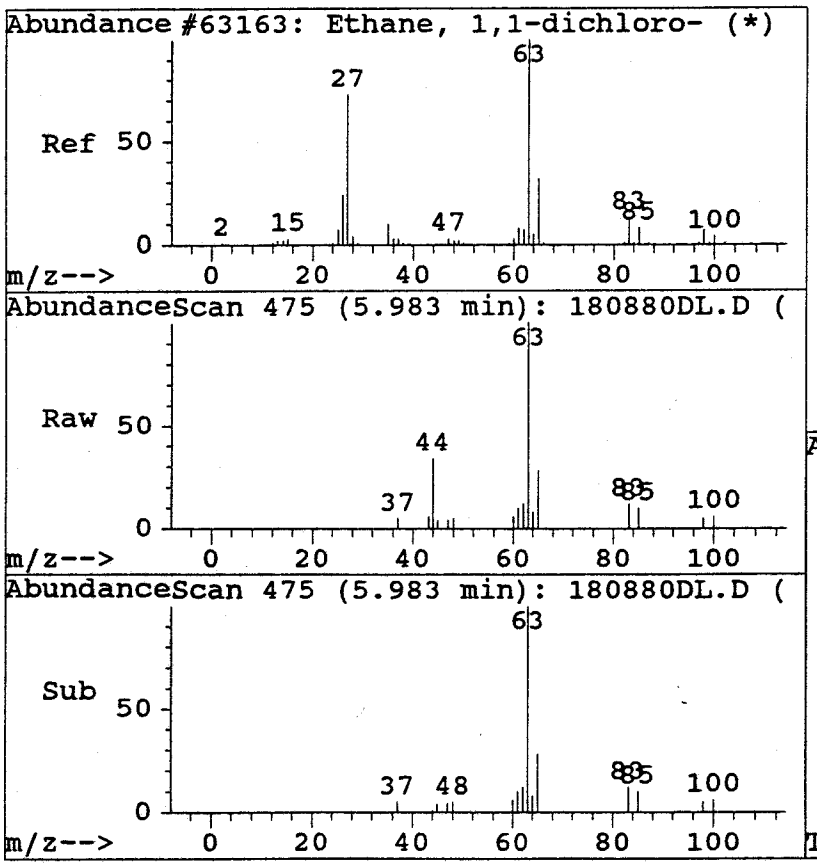


#17
Methylene Chloride
Concen: 3.65 ug/l
RT: 5.25 min Scan# 414
Delta R.T. -0.00 min
Lab File: 180880DL.D
Acq: 21 Jul 95 8:06 pm

Tgt Ion:84 Resp: 30951

Ion	Ratio	Lower	Upper
84	100		
49	136.0	113.2	169.8
51	43.1	35.3	52.9
86	60.0	54.2	81.4

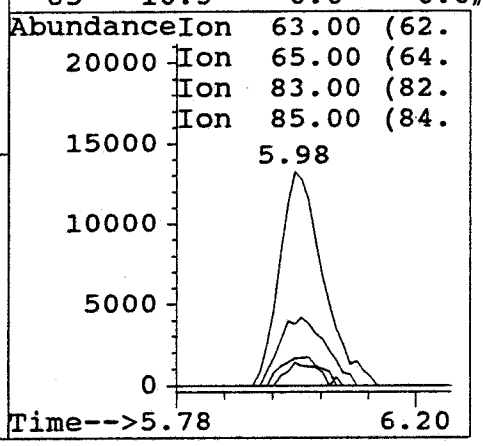


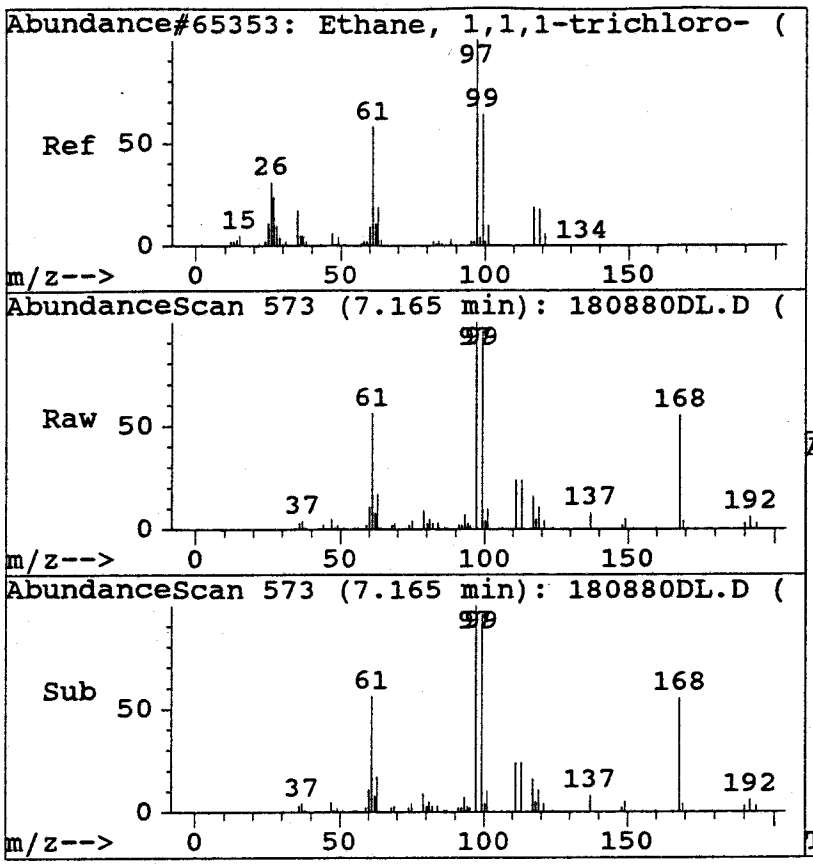


#21
1,1-Dichloroethane
Concen: 3.98 ug/l
RT: 5.98 min Scan# 475
Delta R.T. -0.00 min
Lab File: 180880DL.D
Acq: 21 Jul 95 8:06 pm

Tgt Ion:63 Resp: 69120

Ion	Ratio	Lower	Upper
63	100		
65	28.4	0.0	0.0#
83	12.3	0.0	0.0#
85	10.3	0.0	0.0#

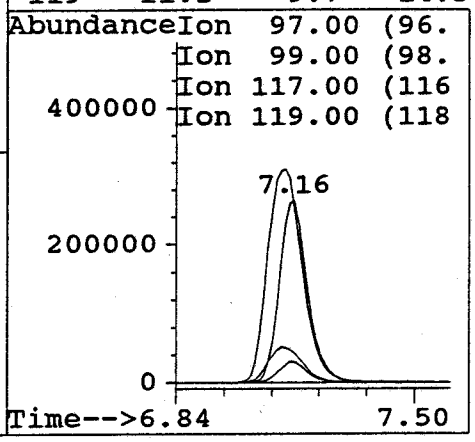




#30
1,1,1-Trichloroethane
Concen: 62.89 ug/l
RT: 7.16 min Scan# 573
Delta R.T. 0.01 min
Lab File: 180880DL.D
Acq: 21 Jul 95 8:06 pm

Tgt Ion:97 Resp: 1434780

Ion	Ratio	Lower	Upper
97	100		
99	95.6	93.1	139.7
117	16.4	15.4	23.0
119	11.2	9.7	14.5

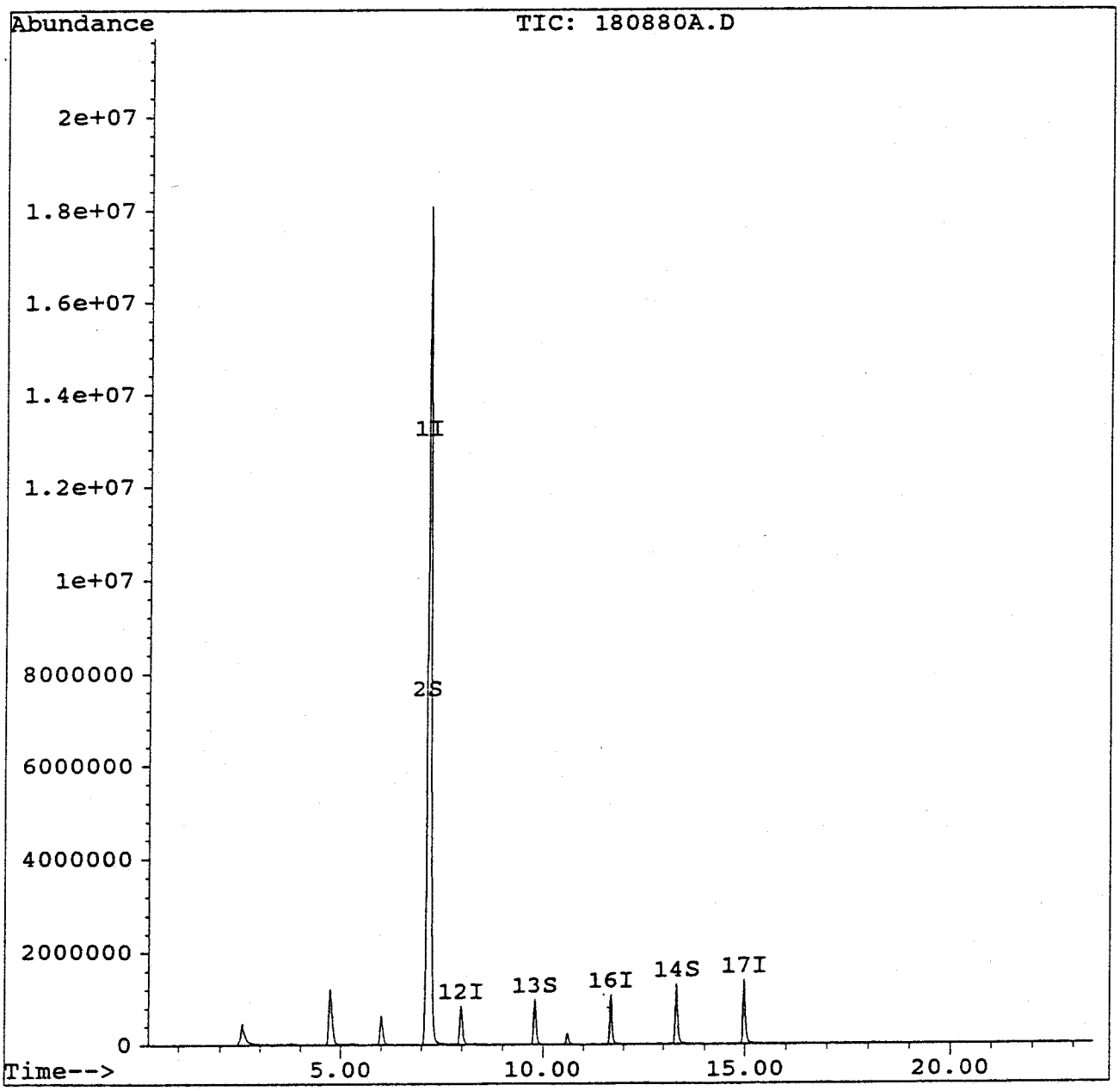


Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180880A.D
Acq Time : 21 Jul 95 9:17 pm
Sample : MW-2 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 21:41 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180880A.D
Acq Time : 21 Jul 95 9:17 pm
Sample : MW-2 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 21:41 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.13	168	1643023	50.00	ug/l	0.02
12) 1,4-Difluorobenzene	7.99	114	1497109	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.68	117	1350563	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	14.97	152	960843	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.12	113	914689	52.85	ug/l	105.71%
13) Toluene-d8	9.79	98	1502402	49.33	ug/l	98.66%
14) Bromofluorobenzene	13.31	174	929459	49.59	ug/l	99.19%
Target Compounds						Qvalue

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-4

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180881V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180881V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	6.4	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	3.1	JB
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-4

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180881V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180881V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

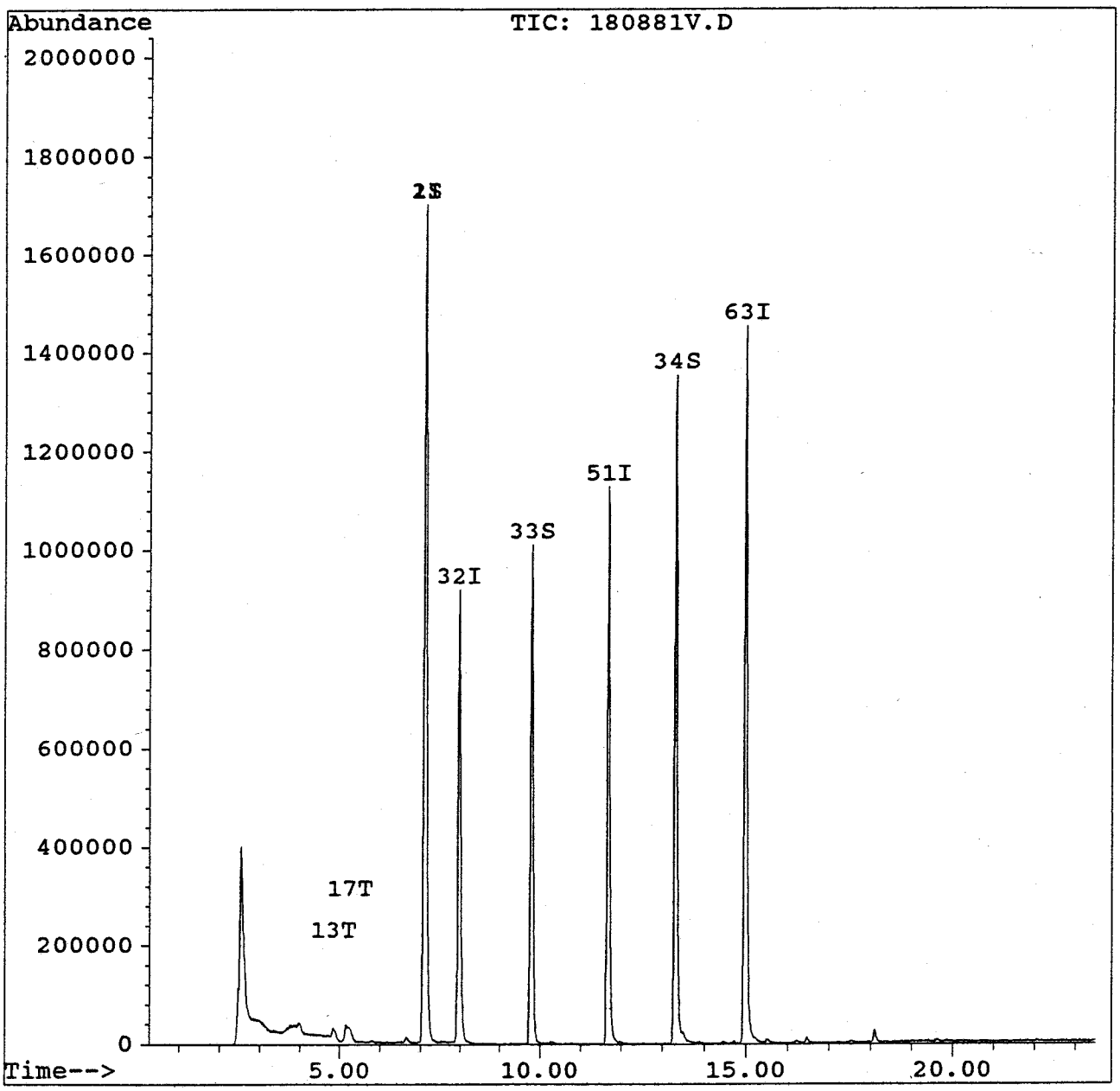
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180881V.D
Acq Time : 21 Jul 95 2:11 pm
Sample : MW-4 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



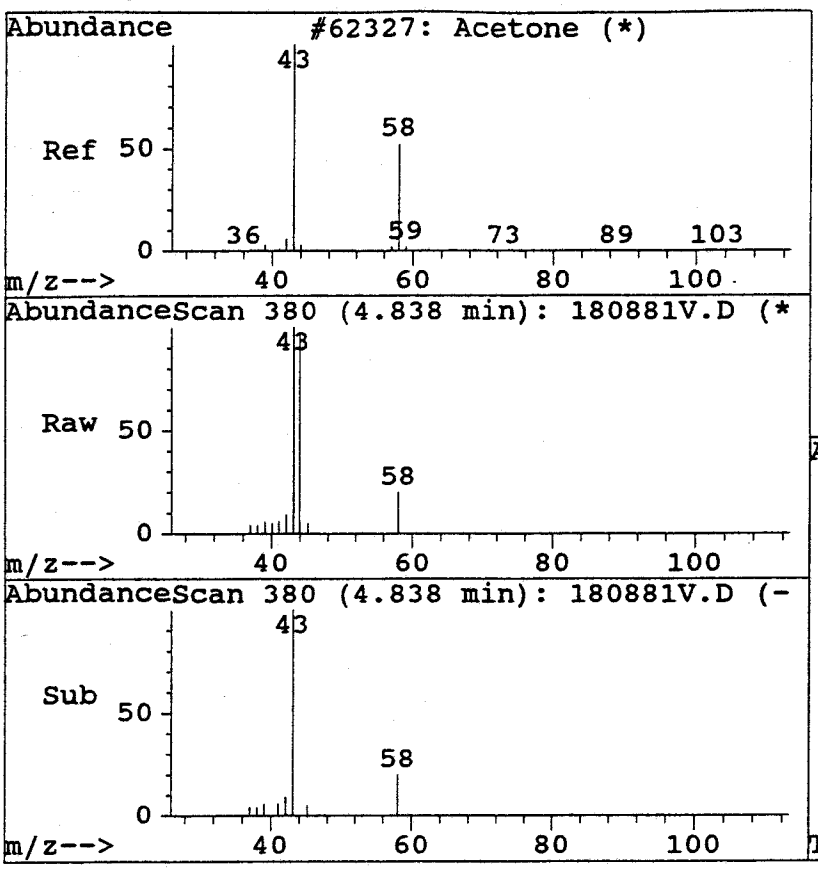
Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180881V.D
Acq Time : 21 Jul 95 2:11 pm
Sample : MW-4 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

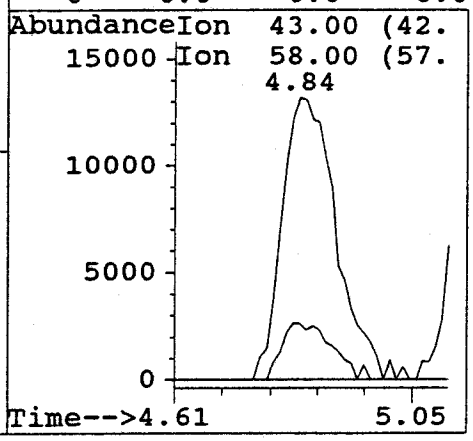
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.10	168	1809700	50.00	ug/l	-0.02
32) 1,4-Difluorobenzene	7.96	114	1587153	50.00	ug/l	-0.02
51) Chlorobenzene-d5	11.67	117	1395219	50.00	ug/l	-0.03
63) 1,4-Dichlorobenzene-d4	14.97	152	996154	50.00	ug/l	-0.01
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.10	113	912863	46.20	ug/l	92.40%
33) Toluene-d8	9.78	98	1561570	47.40	ug/l	94.81%
34) Bromofluorobenzene	13.30	174	946796	45.16	ug/l	90.32%
Target Compounds						**Qvalue**
13) Acetone	4.84	43	91390	6.43	ug/l	99
17) Methylene Chloride	5.25	84	26968	3.14	ug/l	92

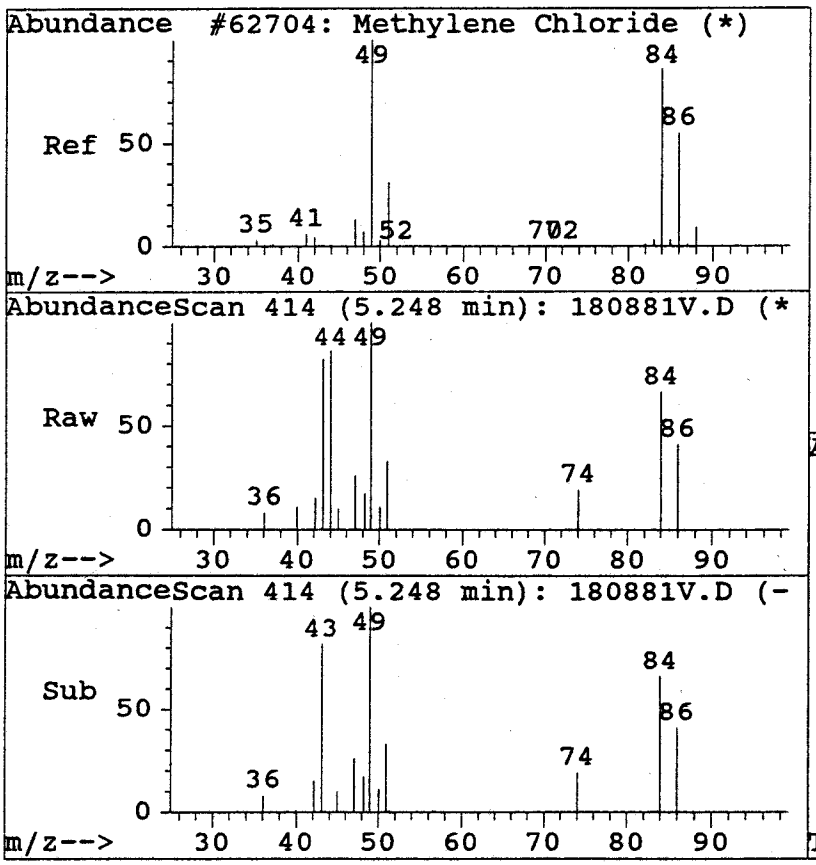


#13
Acetone
Concen: 6.43 ug/l
RT: 4.84 min Scan# 380
Delta R.T. -0.03 min
Lab File: 180881V.D
Acq: 21 Jul 95 2:11 pm

Tgt Ion:43 Resp: 91390

Ion	Ratio	Lower	Upper
43	100		
58	20.1	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

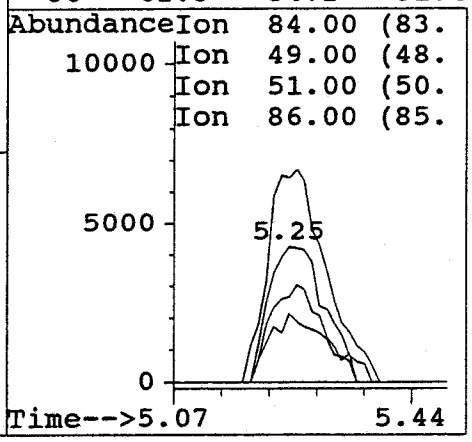




#17
Methylene Chloride
Concen: 3.14 ug/l
RT: 5.25 min Scan# 414
Delta R.T. -0.00 min
Lab File: 180881V.D
Acq: 21 Jul 95 2:11 pm

Tgt Ion:84 Resp: 26968

Ion	Ratio	Lower	Upper
84	100		
49	151.8	113.2	169.8
51	50.0	35.3	52.9
86	62.5	54.2	81.4

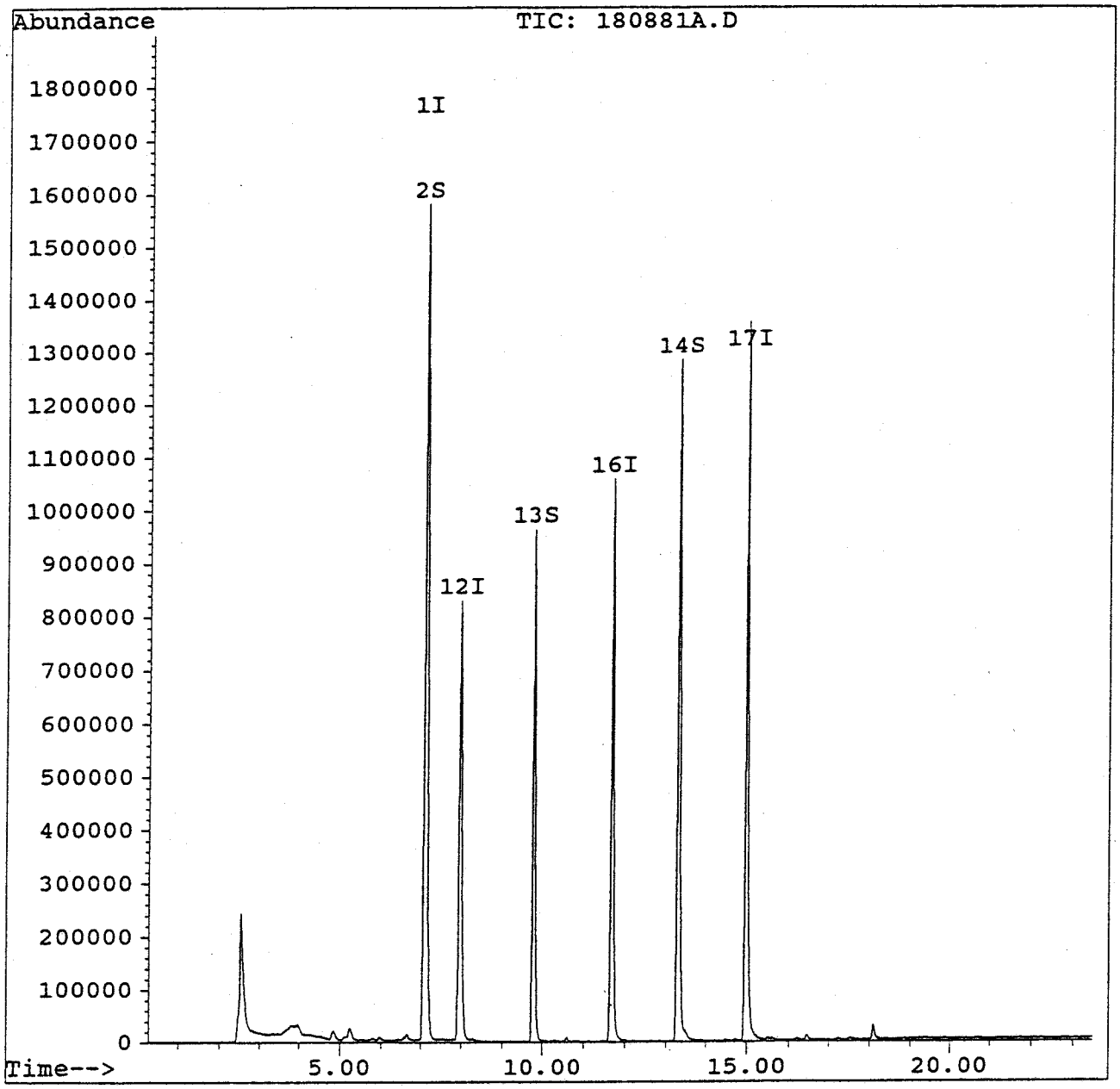


Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180881A.D
Acq Time : 21 Jul 95 5:09 pm
Sample : MW-4 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 17:33 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

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Data File : C:\HPCHEM\1\DATA\072195V\180881A.D
Acq Time : 21 Jul 95 5:09 pm
Sample : MW-4 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 17:33 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.10	168	1652701	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	7.96	114	1450178	50.00	ug/l	-0.02
16) Chlorobenzene-d5	11.67	117	1311076	50.00	ug/l	-0.02
17) 1,4-Dichlorobenzene-d4	14.97	152	920702	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.09	113	866261	49.76	ug/l	99.52%
13) Toluene-d8	9.78	98	1475332	50.01	ug/l	100.02%
14) Bromofluorobenzene	13.30	174	891191	49.09	ug/l	98.18%
Target Compounds						**Qvalue**

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

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. MW-9

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
000075-71-8	Dichlorodifluoromethane	2.8	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	21	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	6.2	
00067-64-1	Acetone	6.5	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	160	B
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	40	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	9.8	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. MW-9

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

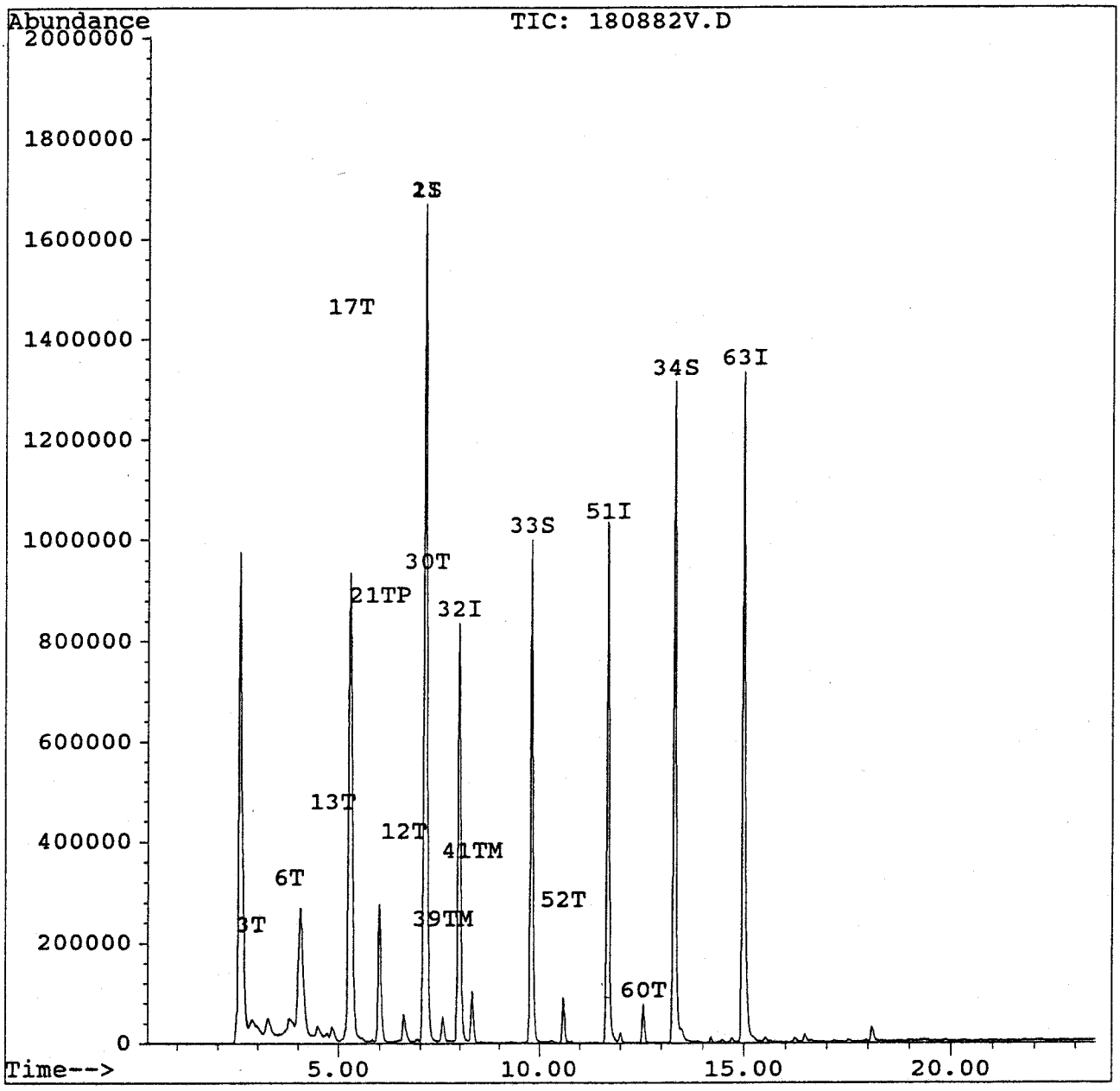
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	3.8	J
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	6	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	3.6	J
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	3	J
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882V.D
Acq Time : 21 Jul 95 2:46 pm
Sample : MW-9 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 11:03 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration



Quantitation Report

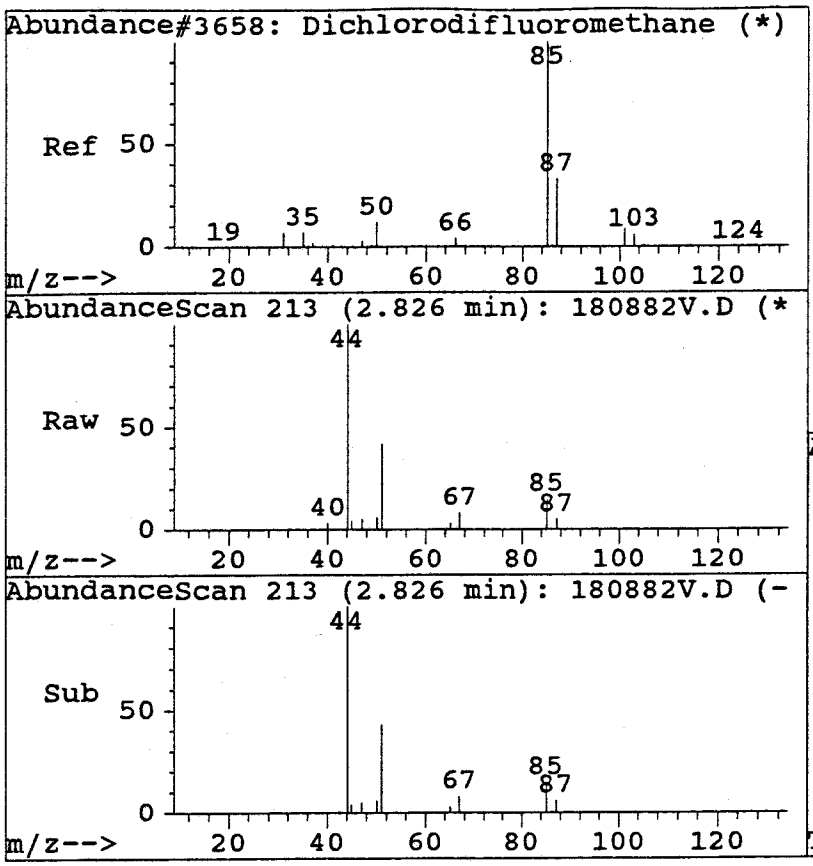
Data File : C:\HPCHEM\1\DATA\072195V\180882V.D
Acq Time : 21 Jul 95 2:46 pm
Sample : MW-9 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 11:03 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 31 10:21:03 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.11	168	1653002	50.00	ug/l		-0.02
32) 1,4-Difluorobenzene	7.96	114	1450266	50.00	ug/l		-0.02
51) Chlorobenzene-d5	11.69	117	1315549	50.00	ug/l		-0.01
63) 1,4-Dichlorobenzene-d4	14.98	152	914959	50.00	ug/l		0.00
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.11	113	888778	49.25	ug/l		98.49%
33) Toluene-d8	9.78	98	1507443	50.08	ug/l		100.16%
34) Bromofluorobenzene	13.30	174	906806	47.34	ug/l		94.67%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.83	85	31657	2.78	ug/l	m	92
6) Chloroethane	3.78	64	58107	20.86	ug/l		98
12) cis-1,2-Dichloroethene	6.59	96	49332	6.21	ug/l	#	79
13) Acetone	4.84	43	84404	6.51	ug/l		100
17) Methylene Chloride	5.26	84	1236911	157.58	ug/l		99
21) 1,1-Dichloroethane	5.98	63	638380	39.68	ug/l	#	100
30) 1,1,1-Trichloroethane	7.15	97	207815	9.83	ug/l	#	1
39) Benzene	7.56	78	82950	3.75	ug/l	#	79
41) Trichloroethene	8.30	95	82516	5.96	ug/l		98
52) Tetrachloroethene	10.59	166	67480	3.62	ug/l	#	77
60) Xylene, o-	12.55	106	45901	3.03	ug/l		84

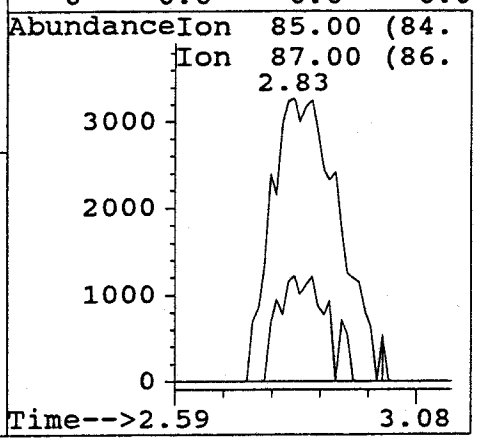
(#) = qualifier out of range (m) = manual integration

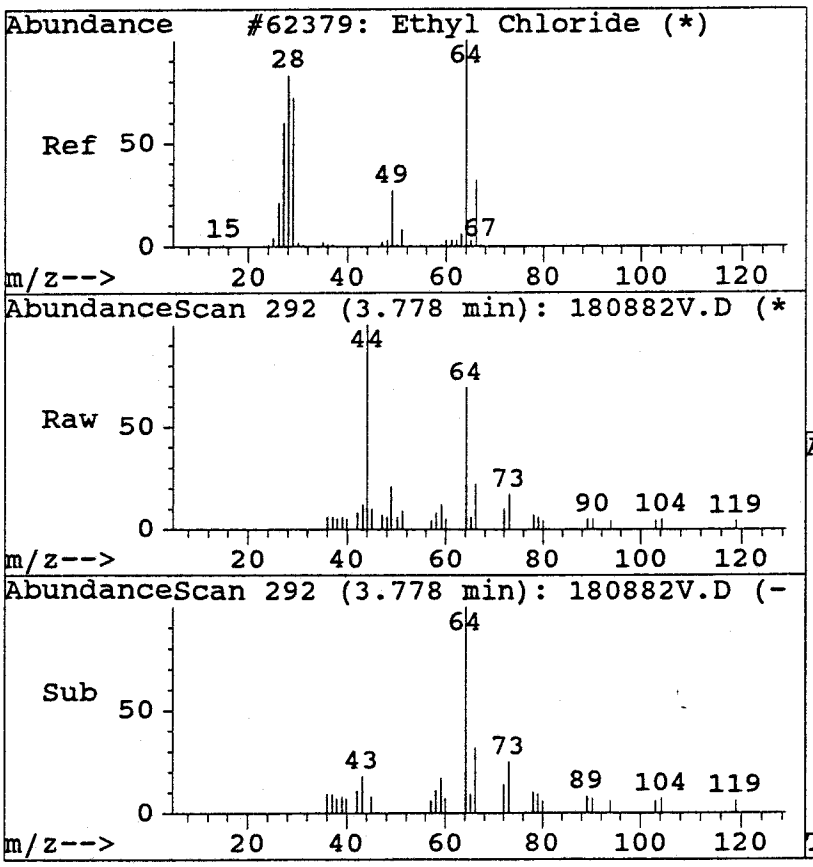


#3
Dichlorodifluoromethane
Concen: 2.78 ug/l m
RT: 2.83 min Scan# 213
Delta R.T. -0.01 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:85 Resp: 31657

Ion	Ratio	Lower	Upper
85	100		
87	37.4	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

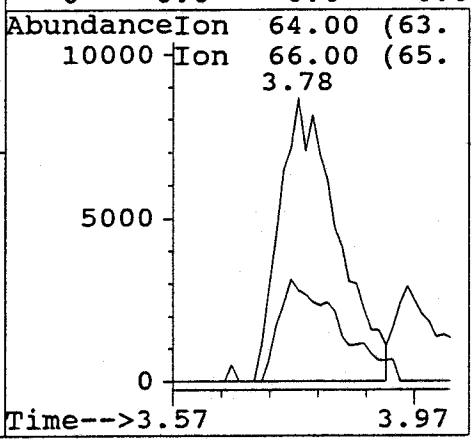


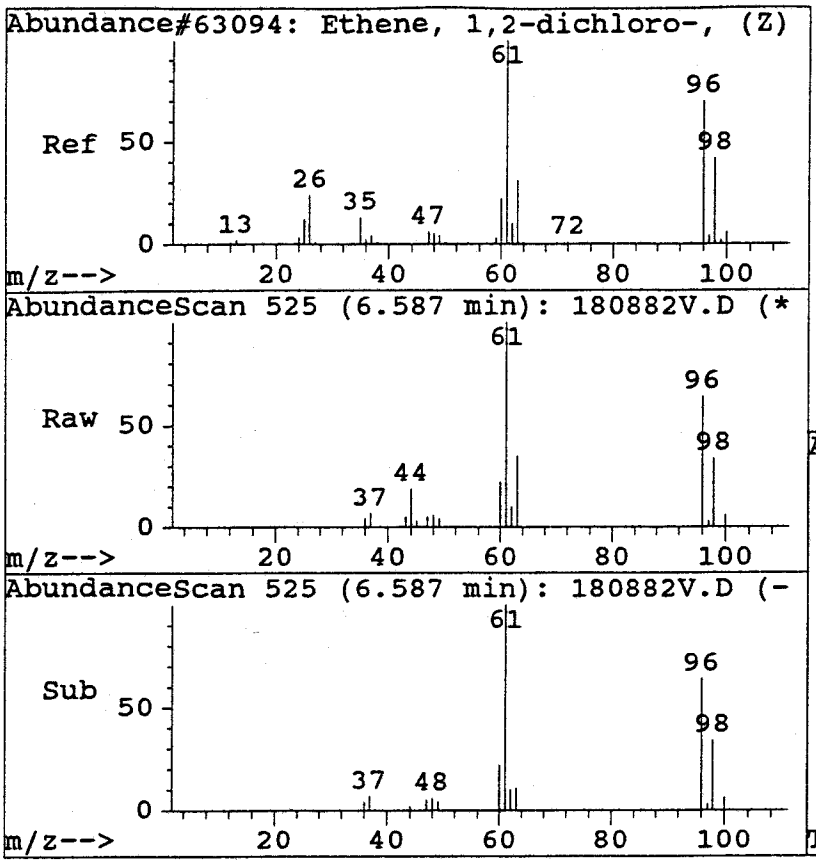


#6
Chloroethane
Concen: 20.86 ug/l
RT: 3.78 min Scan# 292
Delta R.T. -0.00 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:64 Resp: 58107

Ion	Ratio	Lower	Upper
64	100		
66	32.4	25.2	37.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

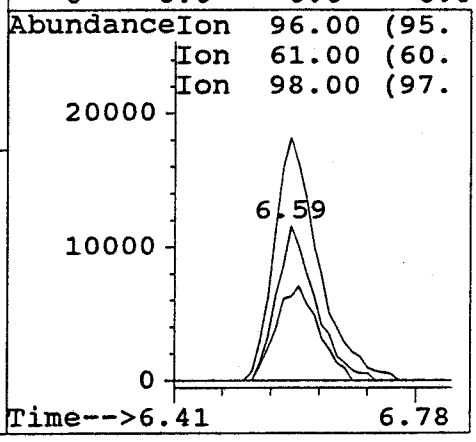


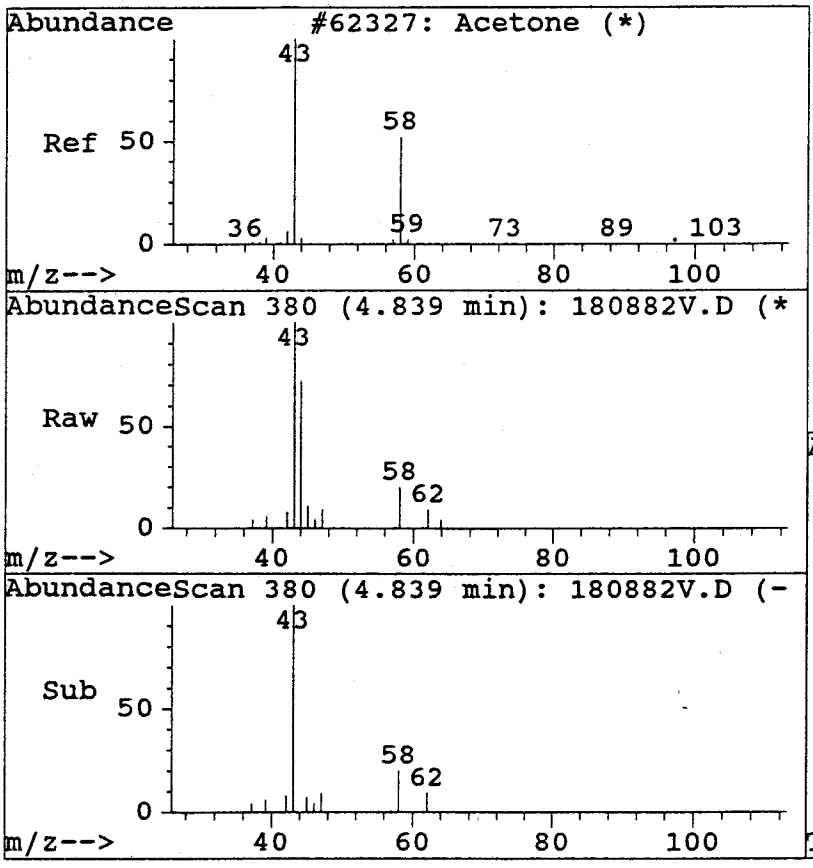


#12
cis-1,2-Dichloroethene
Concen: 6.21 ug/l
RT: 6.59 min Scan# 525
Delta R.T. -0.01 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:96 Resp: 49332

Ion	Ratio	Lower	Upper
96	100		
61	156.9	152.1	228.1
98	54.1	54.4	81.6#
0	0.0	0.0	0.0

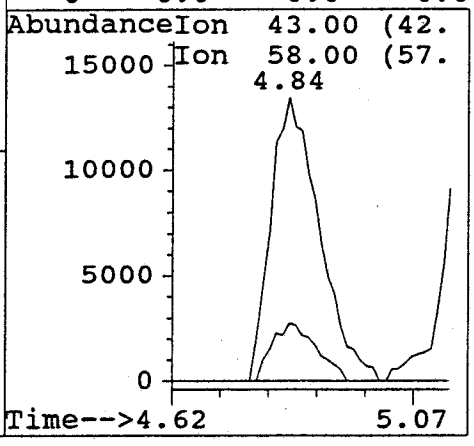


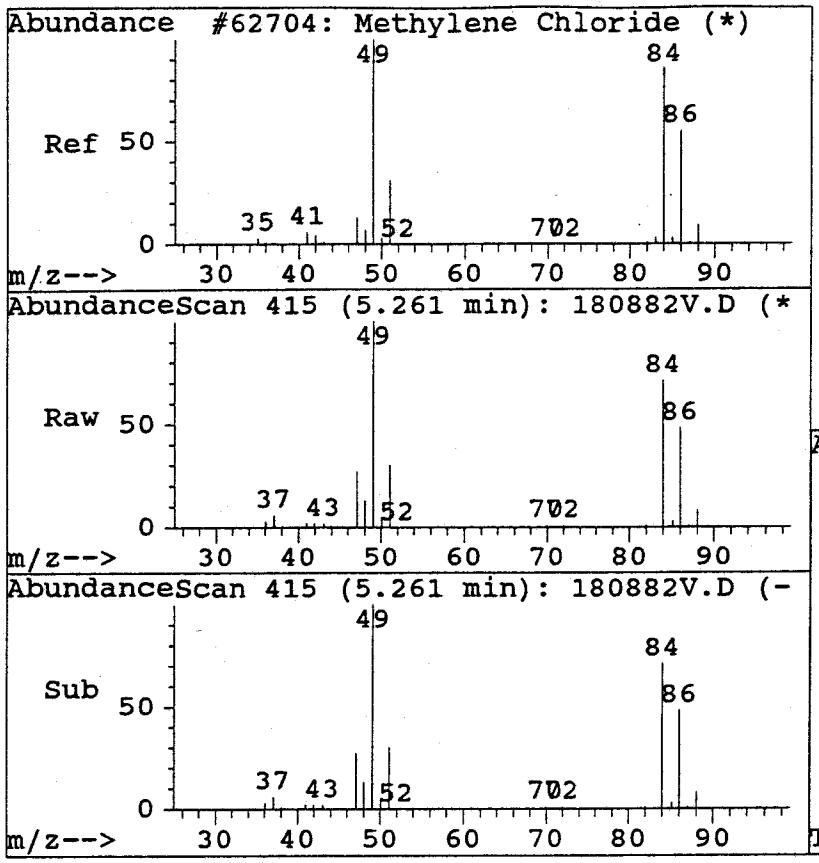


#13
Acetone
Concen: 6.51 ug/l
RT: 4.84 min Scan# 380
Delta R.T. -0.03 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:43 Resp: 84404

Ion	Ratio	Lower	Upper
43	100		
58	20.3	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

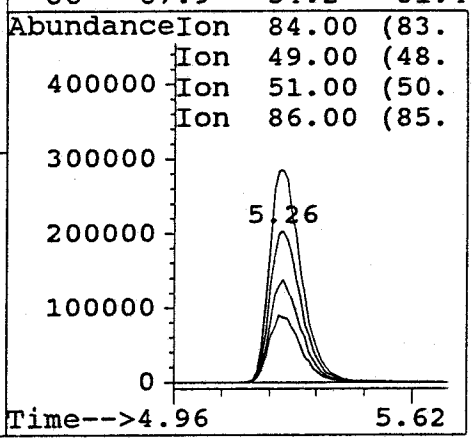


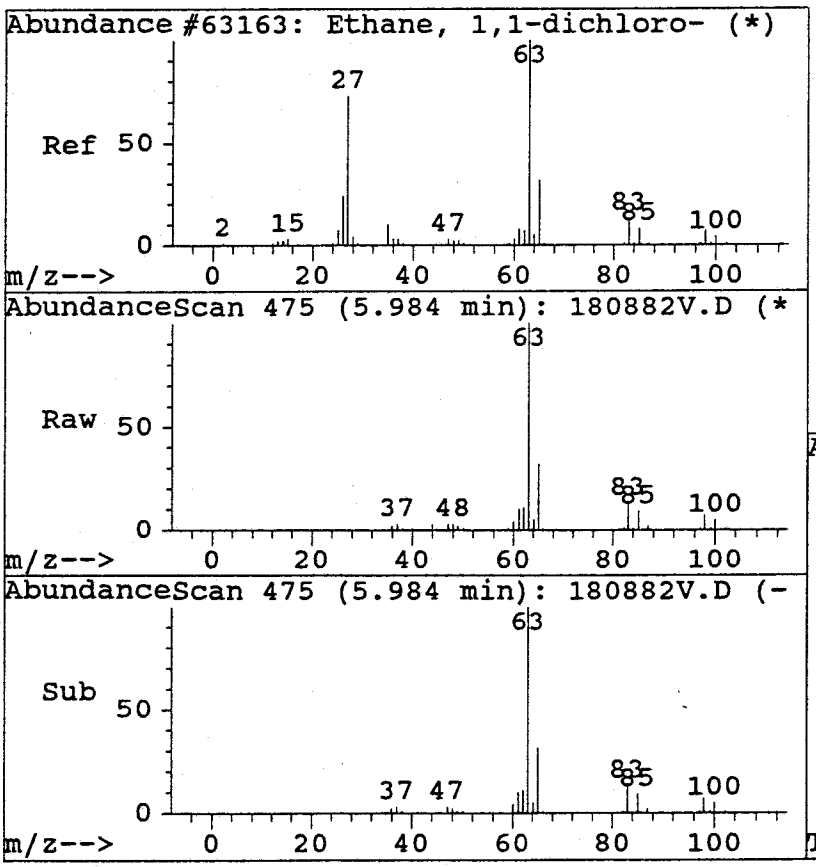


#17
Methylene Chloride
Concen: 157.58 ug/l
RT: 5.26 min Scan# 415
Delta R.T. 0.01 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:84 Resp: 1236911

Ion	Ratio	Lower	Upper
84	100		
49	139.9	113.2	169.8
51	42.6	35.3	52.9
86	67.9	54.2	81.4

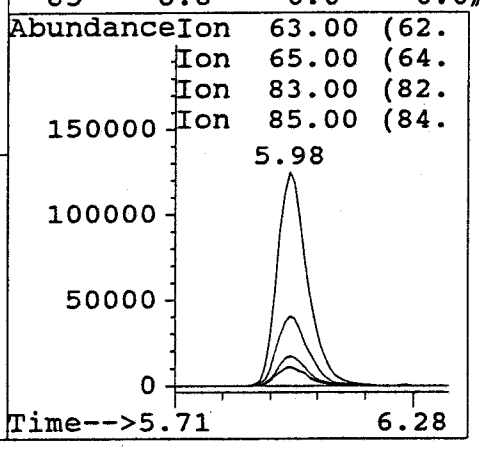


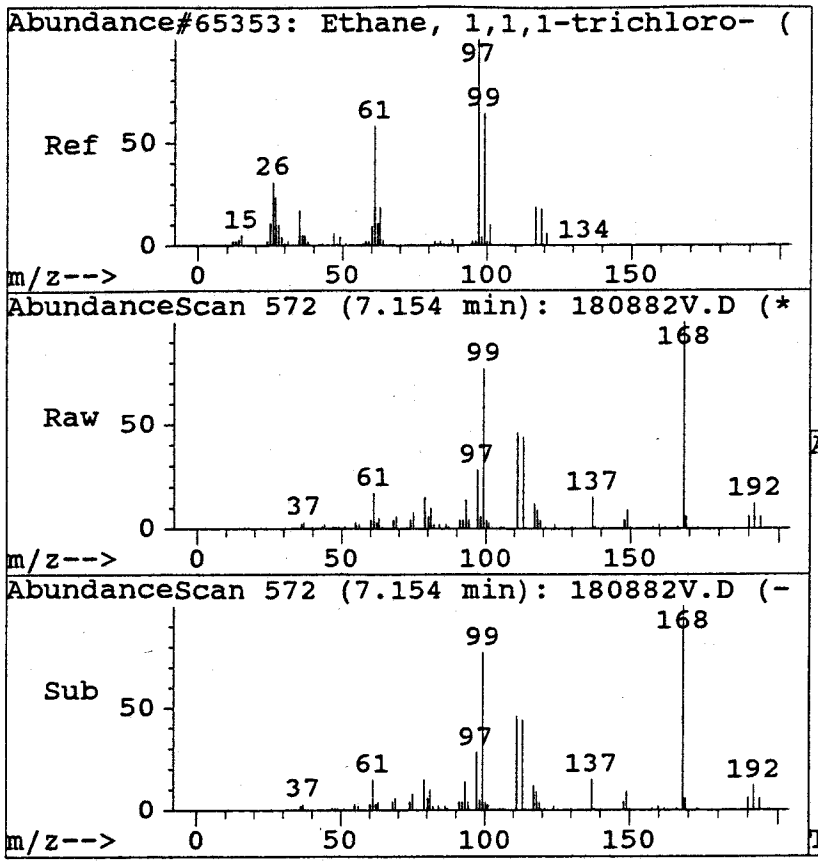


#21
1,1-Dichloroethane
Concen: 39.68 ug/l
RT: 5.98 min Scan# 475
Delta R.T. -0.00 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:63 Resp: 638380

Ion	Ratio	Lower	Upper
63	100		
65	32.4	0.0	0.0#
83	13.4	0.0	0.0#
85	8.8	0.0	0.0#

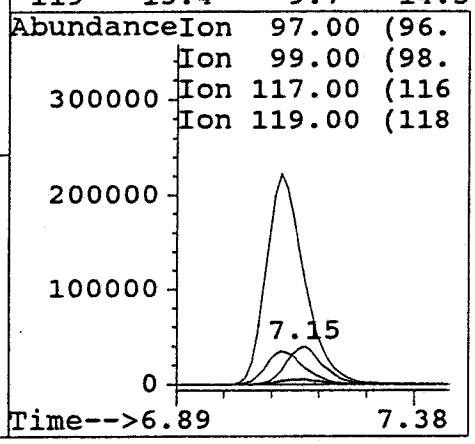


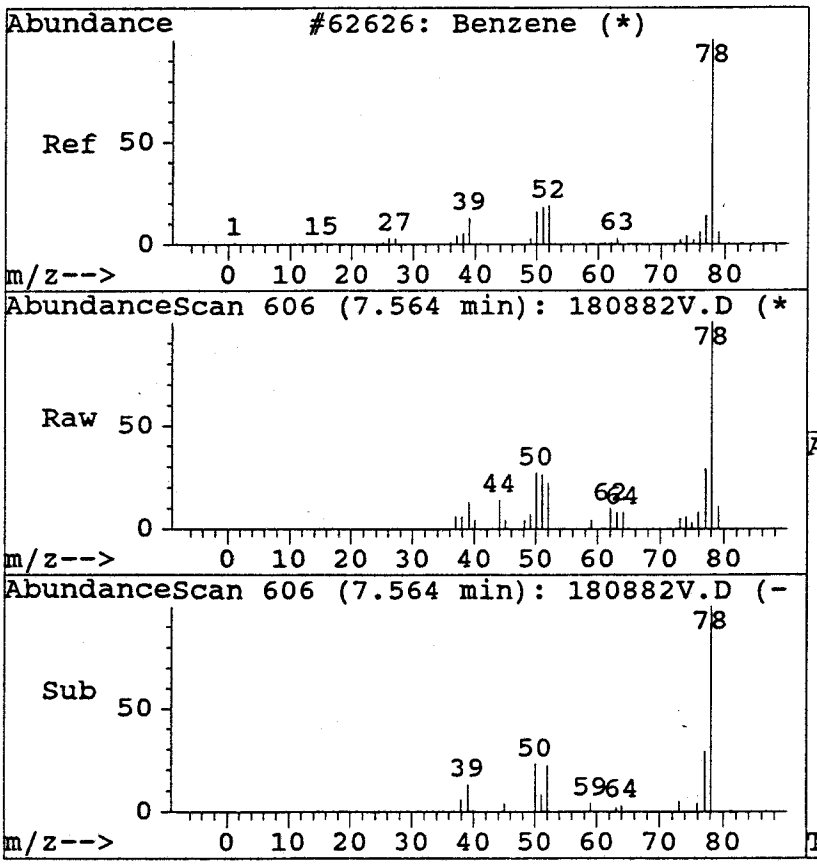


#30
1,1,1-Trichloroethane
Concen: 9.83 ug/l
RT: 7.15 min Scan# 572
Delta R.T. -0.00 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:97 Resp: 207815

Ion	Ratio	Lower	Upper
97	100		
99	270.6	93.1	139.7#
117	43.2	15.4	23.0#
119	13.4	9.7	14.5

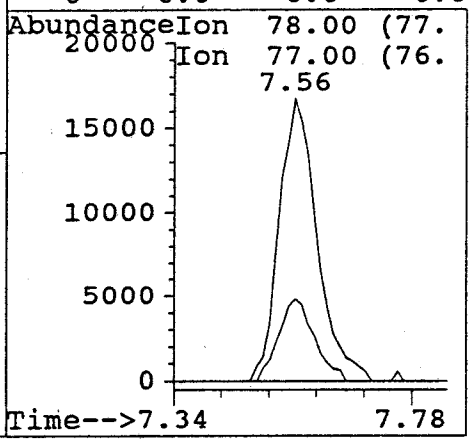


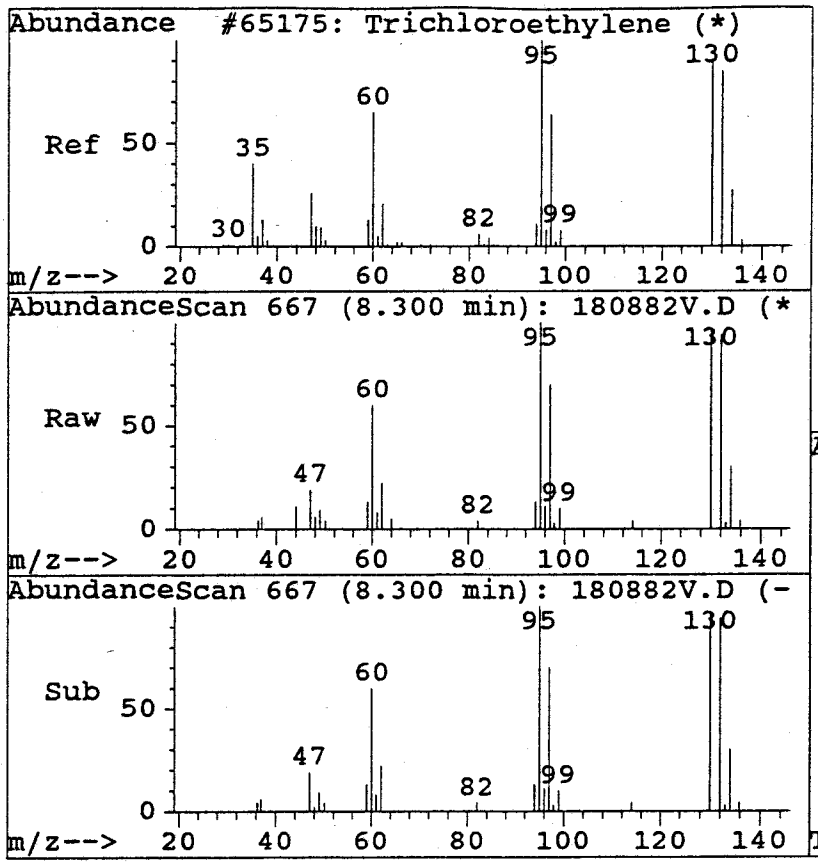


#39
Benzene
Concen: 3.75 ug/l
RT: 7.56 min Scan# 606
Delta R.T. -0.02 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:78 Resp: 82950

Ion	Ratio	Lower	Upper
78	100		
77	28.7	33.7	50.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

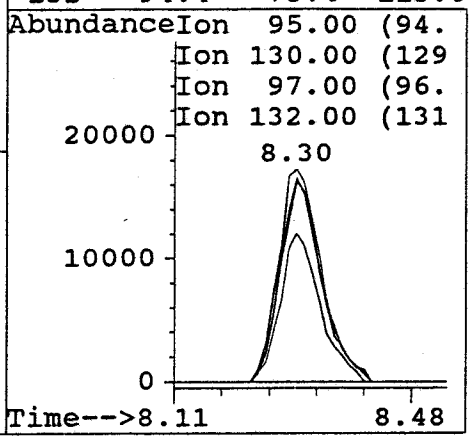


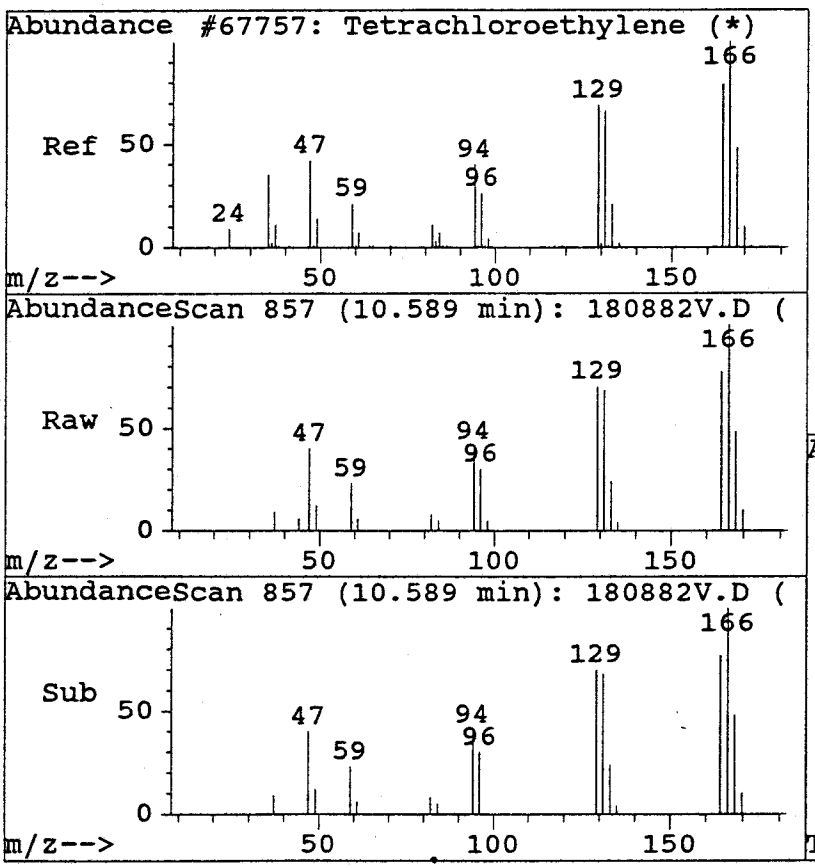


#41
Trichloroethene
Concen: 5.96 ug/l
RT: 8.30 min Scan# 667
Delta R.T. -0.02 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:95 Resp: 82516

Ion	Ratio	Lower	Upper
95	100		
130	96.0	80.0	120.0
97	69.8	53.8	80.8
132	94.4	75.4	113.0

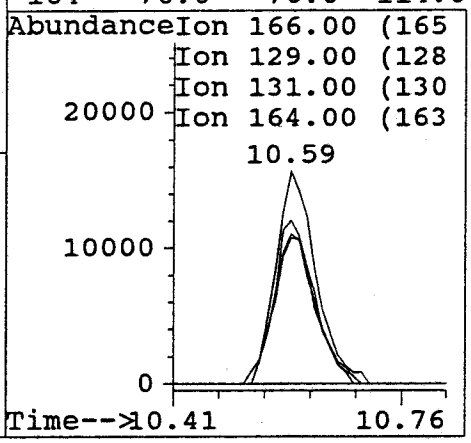


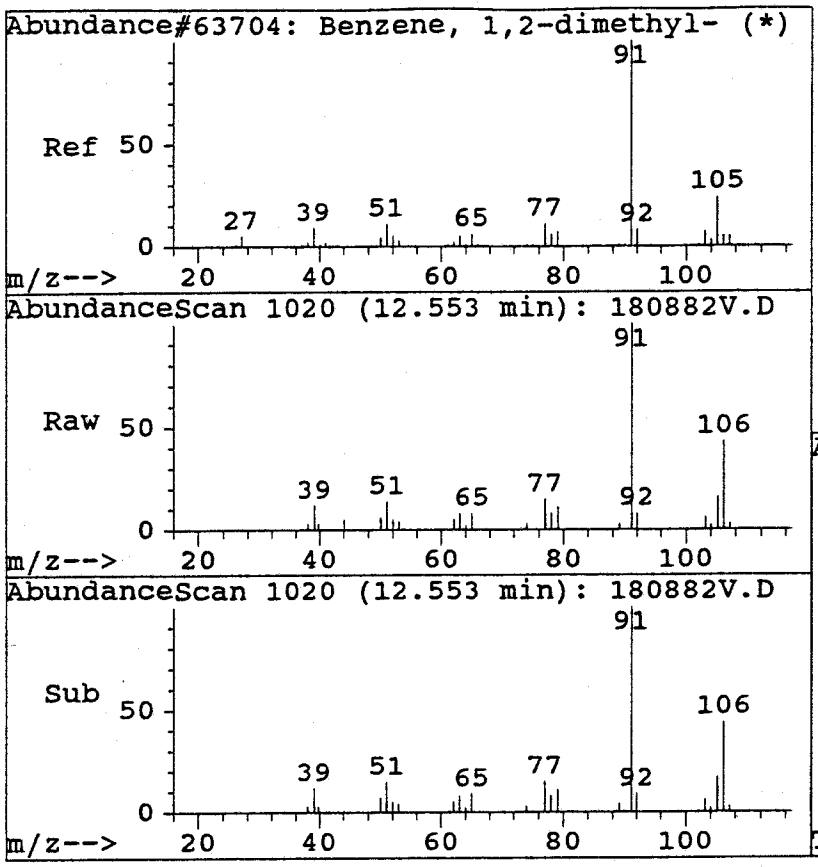


#52
Tetrachloroethene
Concen: 3.62 ug/l
RT: 10.59 min Scan# 857
Delta R.T. -0.02 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:166 Resp: 67480

Ion	Ratio	Lower	Upper
166	100		
129	70.1	75.4	113.0#
131	68.4	75.0	112.4#
164	76.6	76.0	114.0

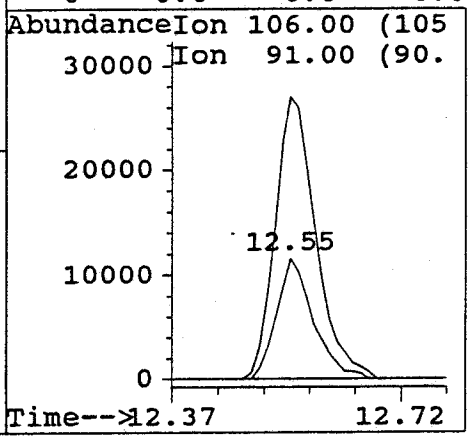




#60
Xylene, o-
Concen: 3.03 ug/l
RT: 12.55 min Scan# 1020
Delta R.T. -0.01 min
Lab File: 180882V.D
Acq: 21 Jul 95 2:46 pm

Tgt Ion:106 Resp: 45901

Ion	Ratio	Lower	Upper
106	100		
91	233.3	209.2	313.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

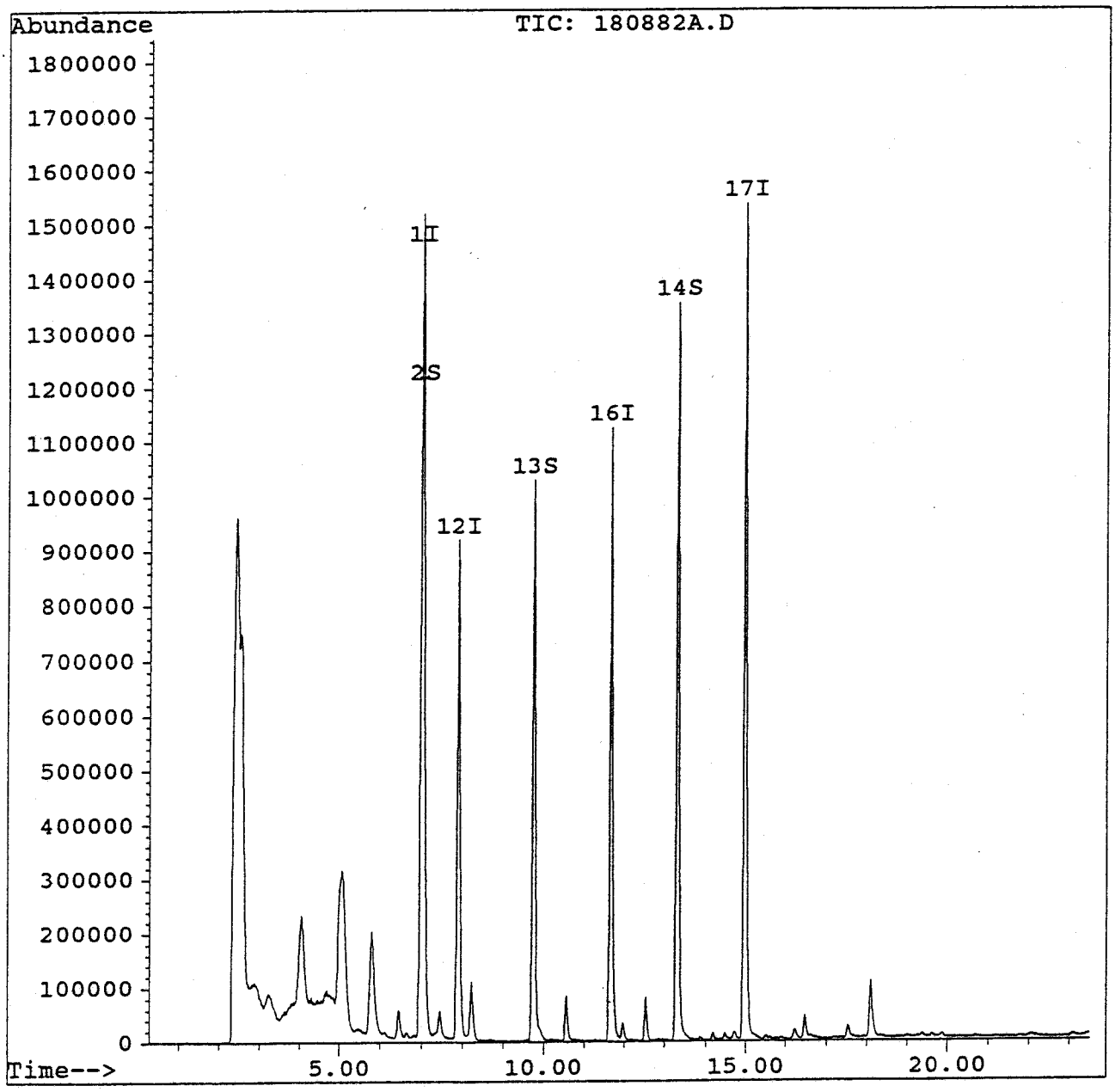


Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882A.D
Acq Time : 21 Jul 95 5:45 pm
Sample : MW-9 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 18:09 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882A.D
Acq Time : 21 Jul 95 5:45 pm
Sample : MW-9 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 18:09 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.99	168	1824288	50.00	ug/l	-0.12
12) 1,4-Difluorobenzene	7.88	114	1611237	50.00	ug/l	-0.09
16) Chlorobenzene-d5	11.66	117	1486454	50.00	ug/l	-0.03
17) 1,4-Dichlorobenzene-d4	14.96	152	1058003	50.00	ug/l	-0.02
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.04	113	937633	48.80	ug/l	97.59%
13) Toluene-d8	9.74	98	1667950	50.89	ug/l	101.77%
14) Bromofluorobenzene	13.28	174	985855	48.88	ug/l	97.75%
Target Compounds						Qvalue

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
MW-12

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180883V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180883V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	4	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	6.4	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	3.6	J
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	42	
00067-64-1	Acetone	7.8	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	5.9	B
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	16	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 227

MW-12

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180883V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180883V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

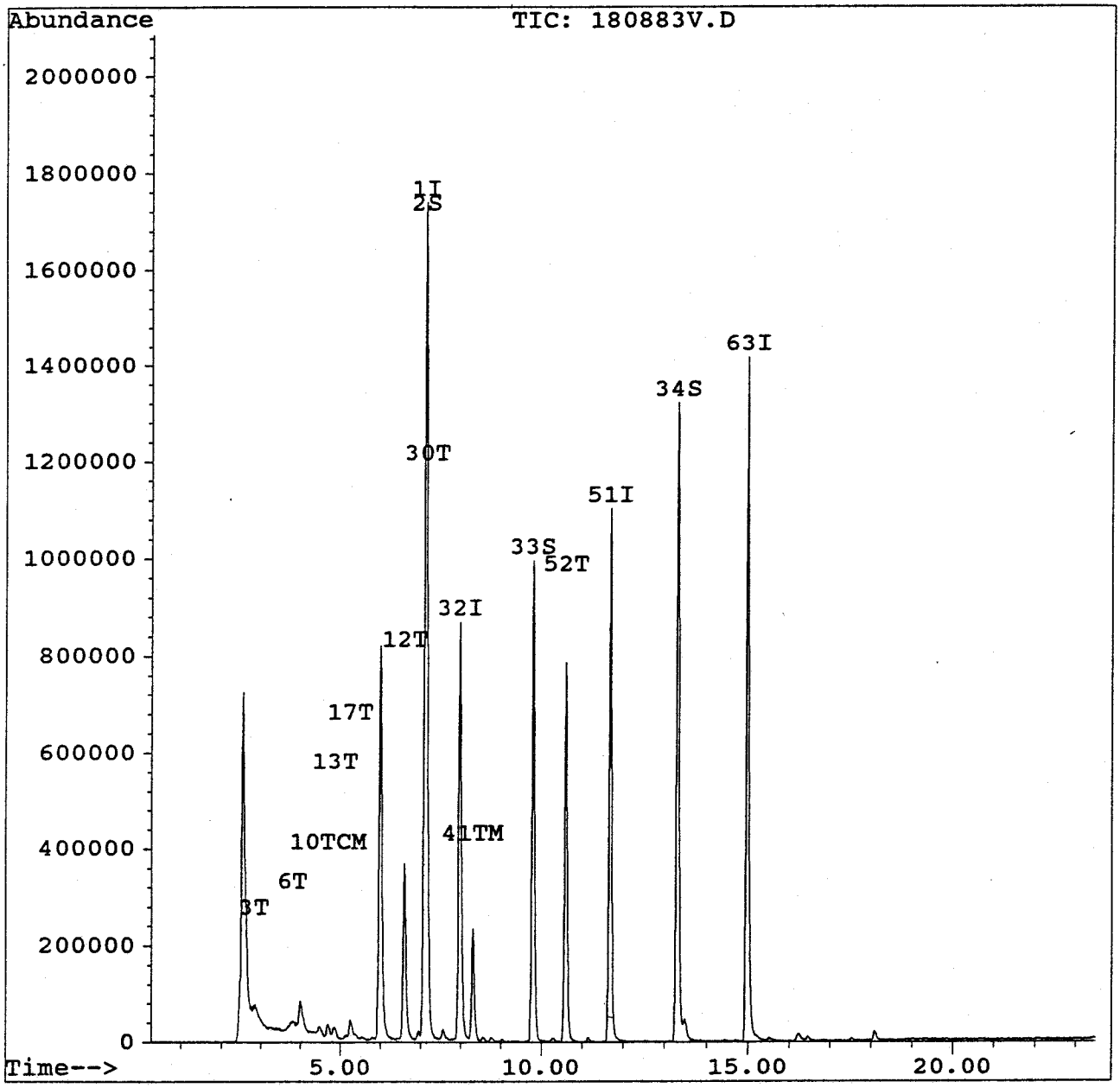
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	13	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	31	
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180883V.D
Acq Time : 21 Jul 95 4:33 pm
Sample : MW-12 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 8:41 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180883V.D
Acq Time : 21 Jul 95 4:33 pm
Sample : MW-12 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 22 8:41 1995

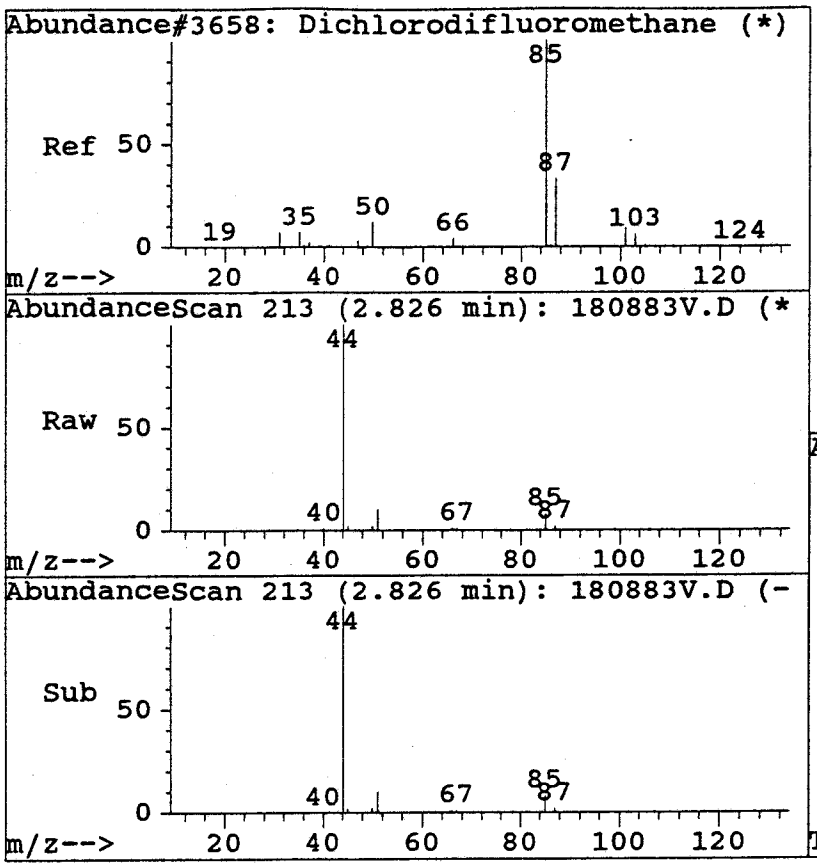
Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.11	168	1767608	50.00	ug/l		-0.01
32) 1,4-Difluorobenzene	7.96	114	1536453	50.00	ug/l		-0.02
51) Chlorobenzene-d5	11.67	117	1362504	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	14.96	152	956792	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.09	113	899748	46.62	ug/l		93.24%
33) Toluene-d8	9.77	98	1529756	47.97	ug/l		95.94%
34) Bromofluorobenzene	13.29	174	915431	45.11	ug/l		90.21%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.83	85	48172	3.96	ug/l	m	83
6) Chloroethane	3.79	64	19128	6.42	ug/l	m	79
10) 1,1-Dichloroethene	4.68	96	27301	3.60	ug/l		98
12) cis-1,2-Dichloroethene	6.59	96	357281	42.09	ug/l		87
13) Acetone	4.85	43	107676	7.76	ug/l		96
17) Methylene Chloride	5.24	84	49093	5.85	ug/l		92
30) 1,1,1-Trichloroethane	7.14	97	366797	16.23	ug/l	#	26
41) Trichloroethene	8.29	95	195807	13.35	ug/l		95
52) Tetrachloroethene	10.59	166	607416	31.49	ug/l	#	79

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

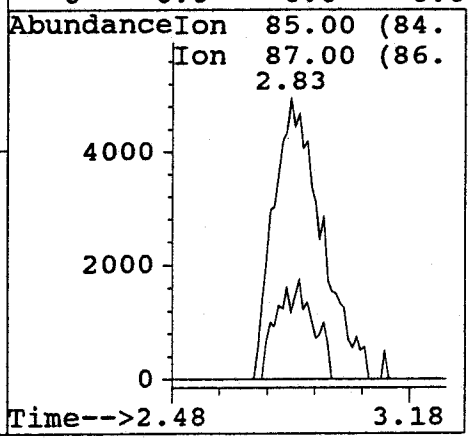
230

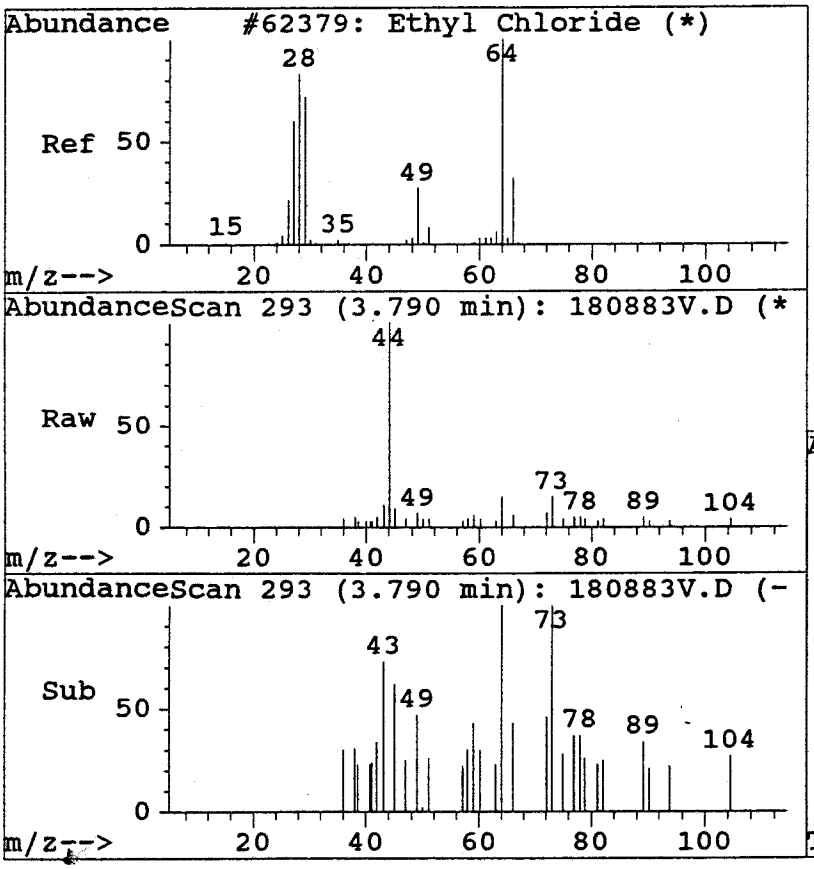


#3
Dichlorodifluoromethane
Concen: 3.96 ug/l m
RT: 2.83 min Scan# 213
Delta R.T. -0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:85 Resp: 48172

Ion	Ratio	Lower	Upper
85	100		
87	23.4	26.2	39.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

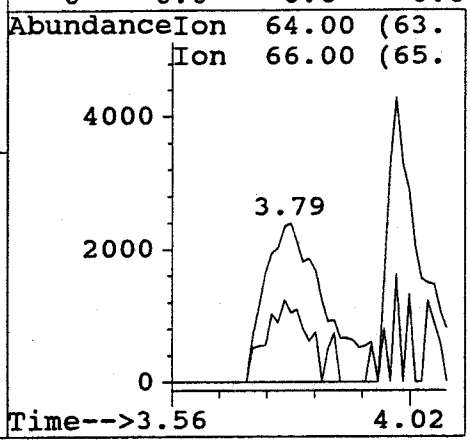


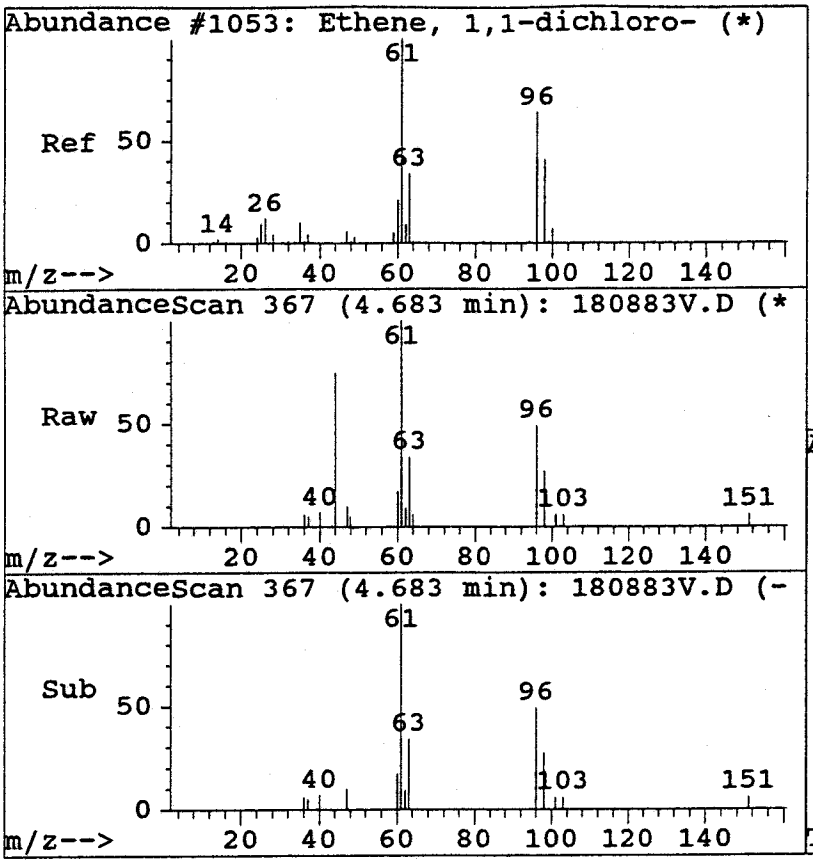


#6
Chloroethane
Concen: 6.42 ug/l m
RT: 3.79 min Scan# 293
Delta R.T. 0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:64 Resp: 19128

Ion	Ratio	Lower	Upper
64	100		
66	43.4	25.2	37.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

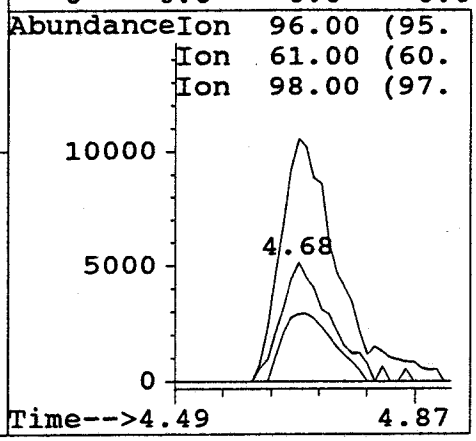


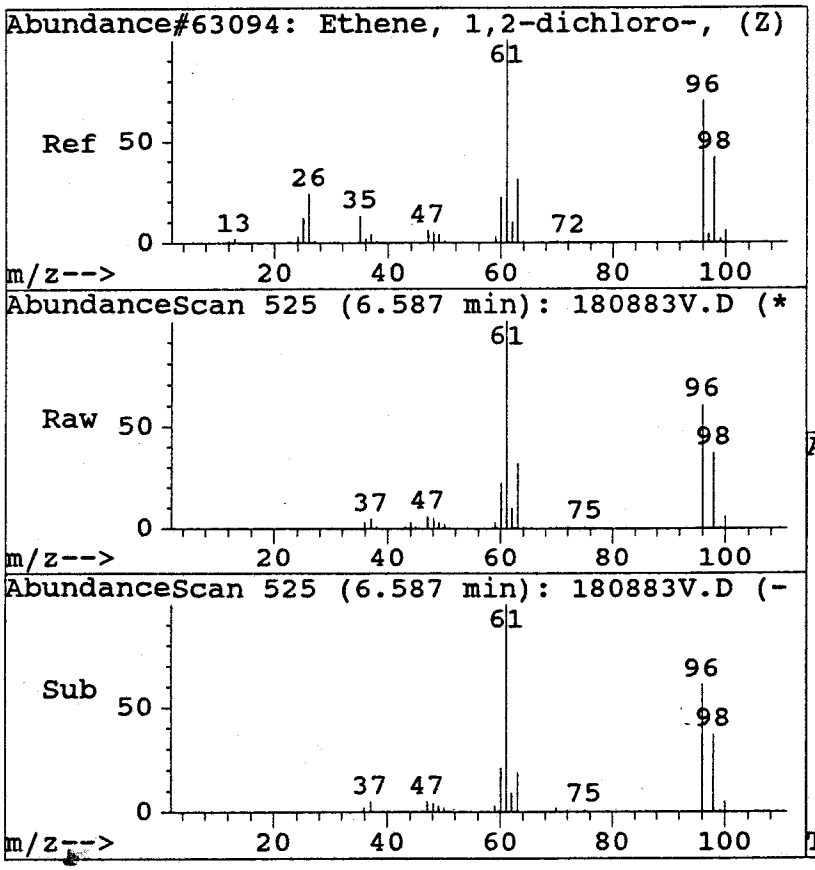


#10
1,1-Dichloroethene
Concen: 3.60 ug/l
RT: 4.68 min Scan# 367
Delta R.T. -0.00 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:96 Resp: 27301

Ion	Ratio	Lower	Upper
96	100		
61	205.4	163.8	245.6
98	56.4	50.4	75.6
0	0.0	0.0	0.0

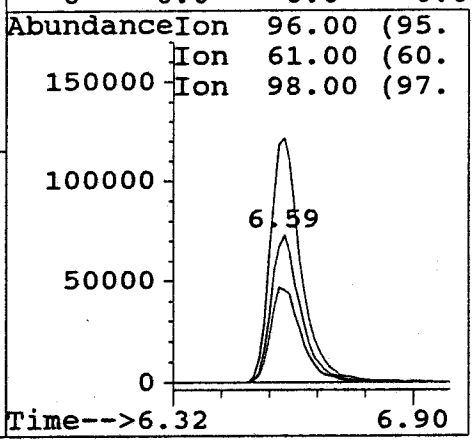


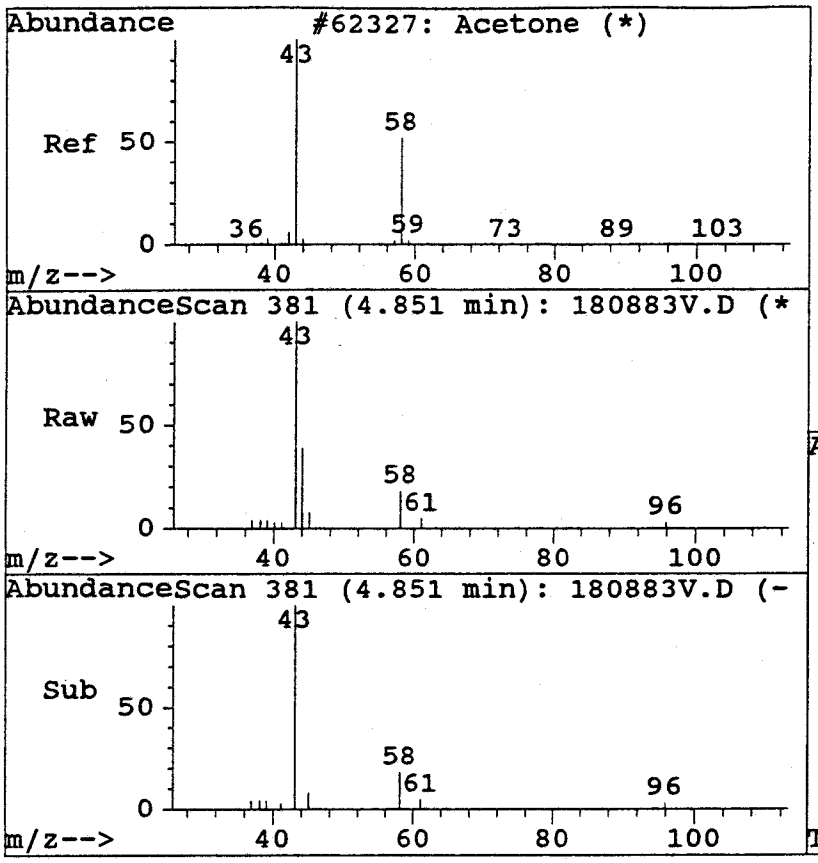


#12
cis-1,2-Dichloroethene
Concen: 42.09 ug/l
RT: 6.59 min Scan# 525
Delta R.T. -0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:96 Resp: 357281

Ion	Ratio	Lower	Upper
96	100		
61	167.0	152.1	228.1
98	62.3	54.4	81.6
0	0.0	0.0	0.0

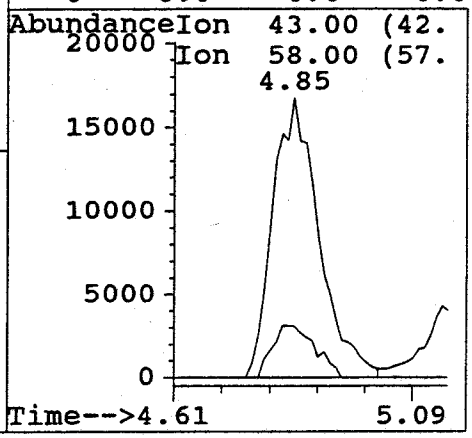


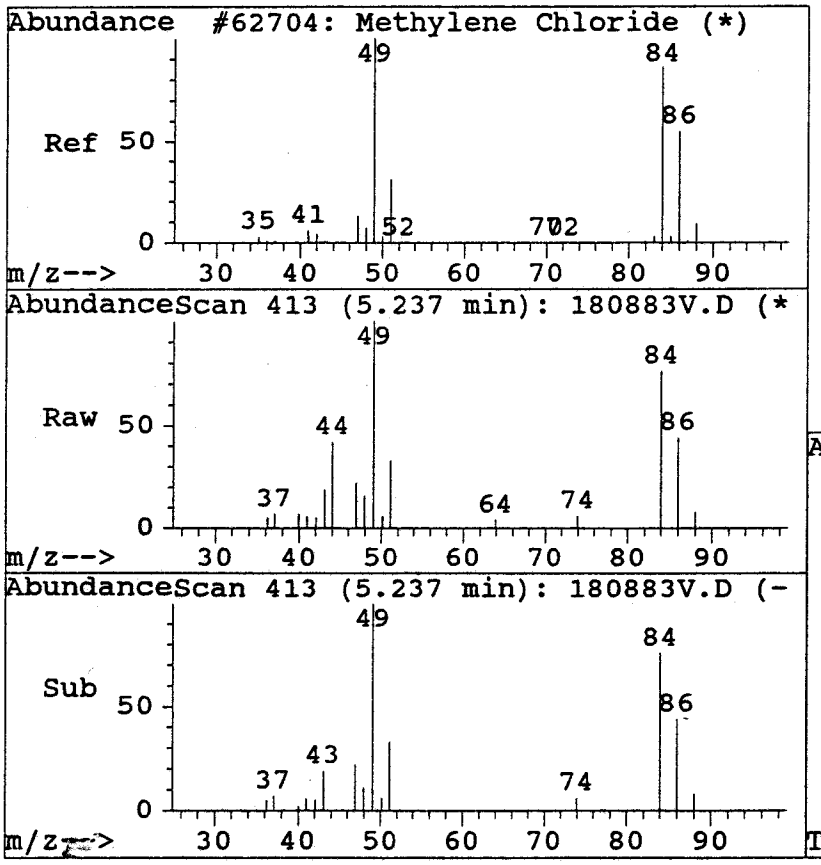


#13
Acetone
Concen: 7.76 ug/l
RT: 4.85 min Scan# 381
Delta R.T. -0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:43 Resp: 107676

Ion	Ratio	Lower	Upper
43	100		
58	18.4	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

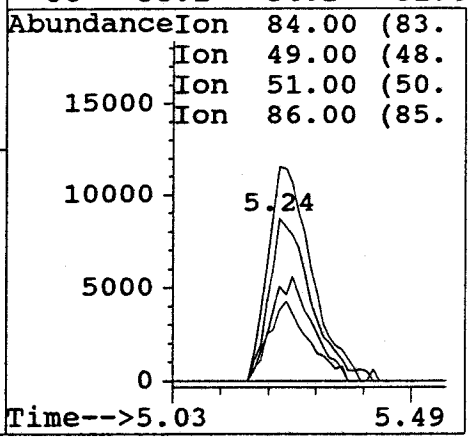


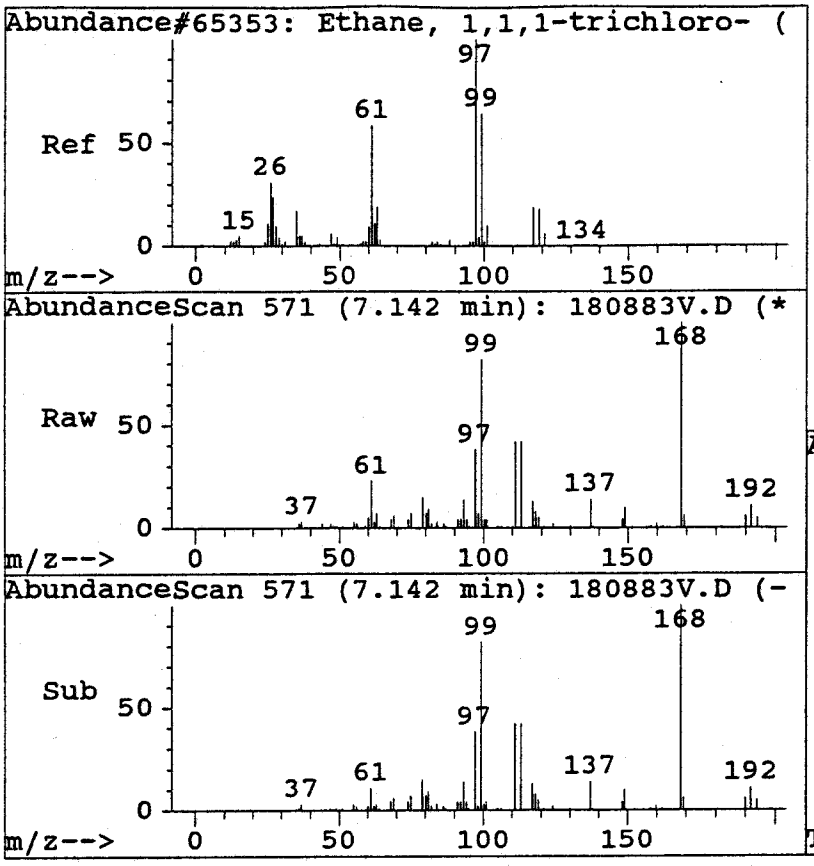


#17
Methylene Chloride
Concen: 5.85 ug/l
RT: 5.24 min Scan# 413
Delta R.T. -0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:84 Resp: 49093

Ion	Ratio	Lower	Upper
84	100		
49	132.3	113.2	169.8
51	43.6	35.3	52.9
86	58.1	54.2	81.4

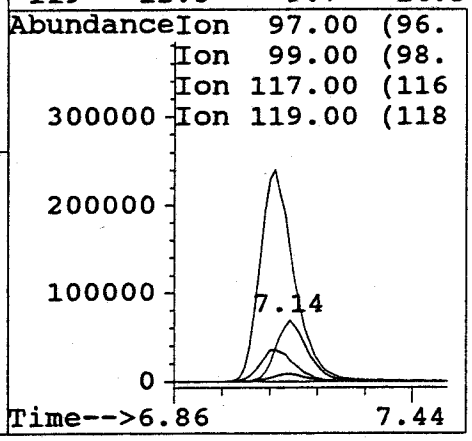


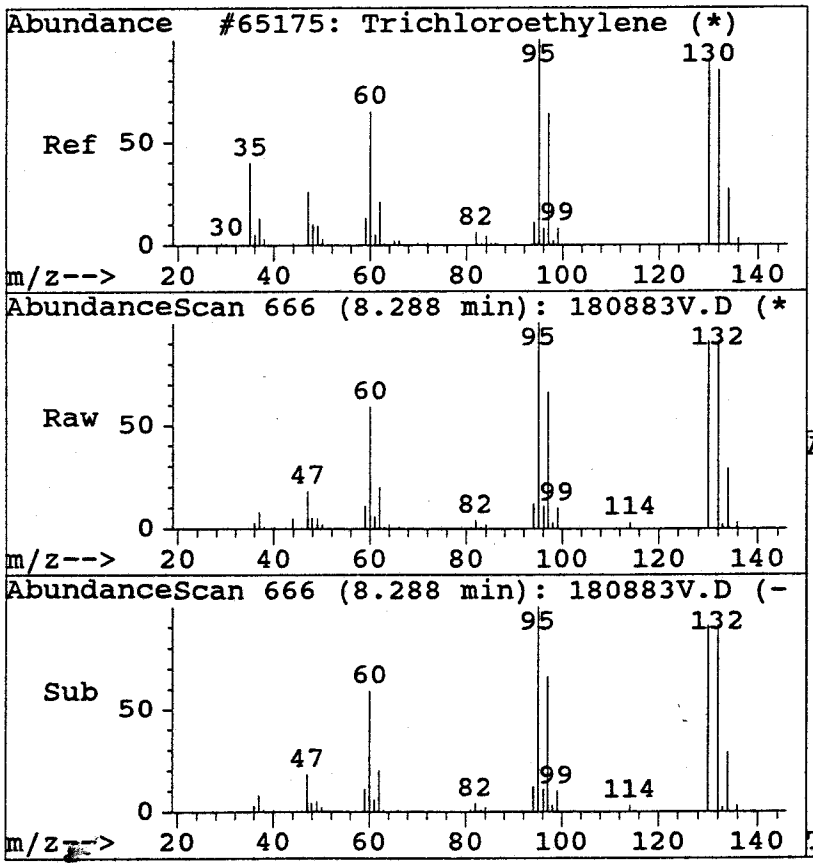


#30
1,1,1-Trichloroethane
Concen: 16.23 ug/l
RT: 7.14 min Scan# 571
Delta R.T. -0.01 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:97 Resp: 366797

Ion	Ratio	Lower	Upper
97	100		
99	212.9	93.1	139.7#
117	34.2	15.4	23.0#
119	12.3	9.7	14.5

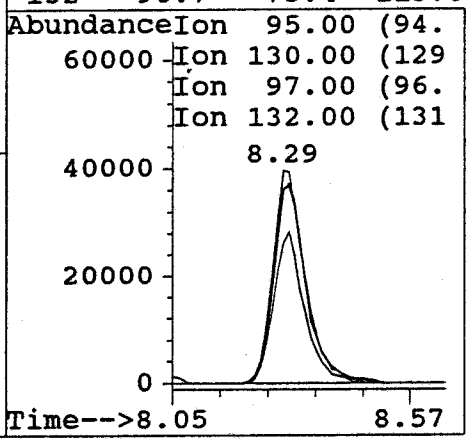


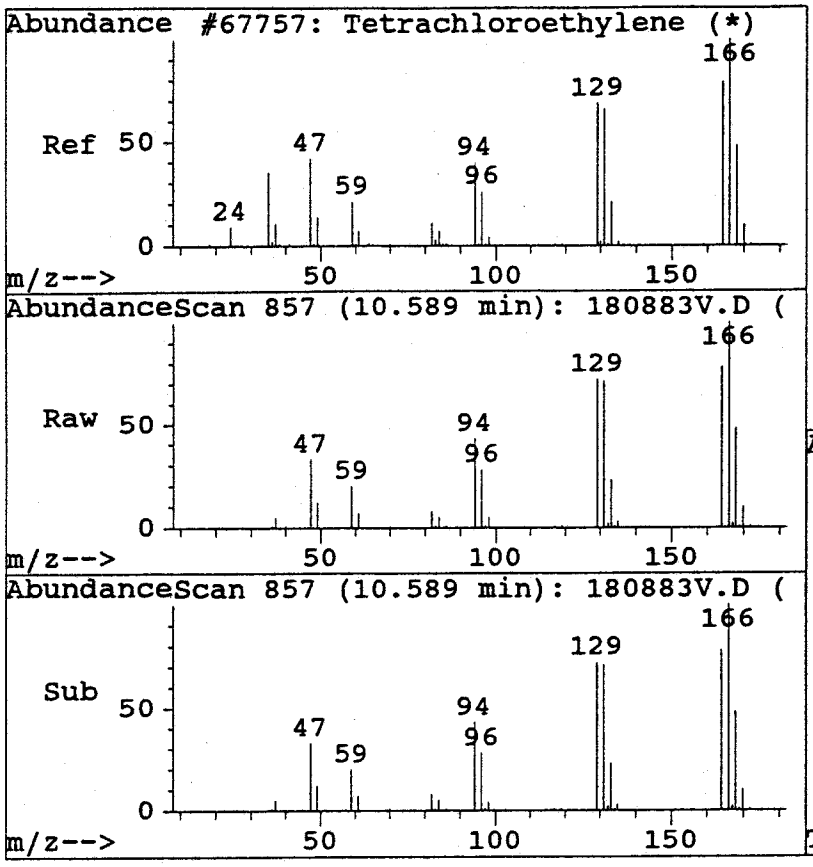


#41
Trichloroethene
Concen: 13.35 ug/l
RT: 8.29 min Scan# 666
Delta R.T. -0.03 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:95 Resp: 195807

Ion	Ratio	Lower	Upper
95	100		
130	91.4	80.0	120.0
97	66.3	53.8	80.8
132	90.7	75.4	113.0

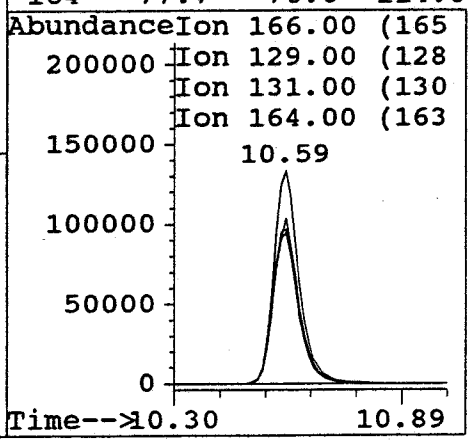




#52
Tetrachloroethene
Concen: 31.49 ug/l
RT: 10.59 min Scan# 857
Delta R.T. -0.02 min
Lab File: 180883V.D
Acq: 21 Jul 95 4:33 pm

Tgt Ion:166 Resp: 607416

Ion	Ratio	Lower	Upper
166	100		
129	72.4	75.4	113.0#
131	71.1	75.0	112.4#
164	77.7	76.0	114.0



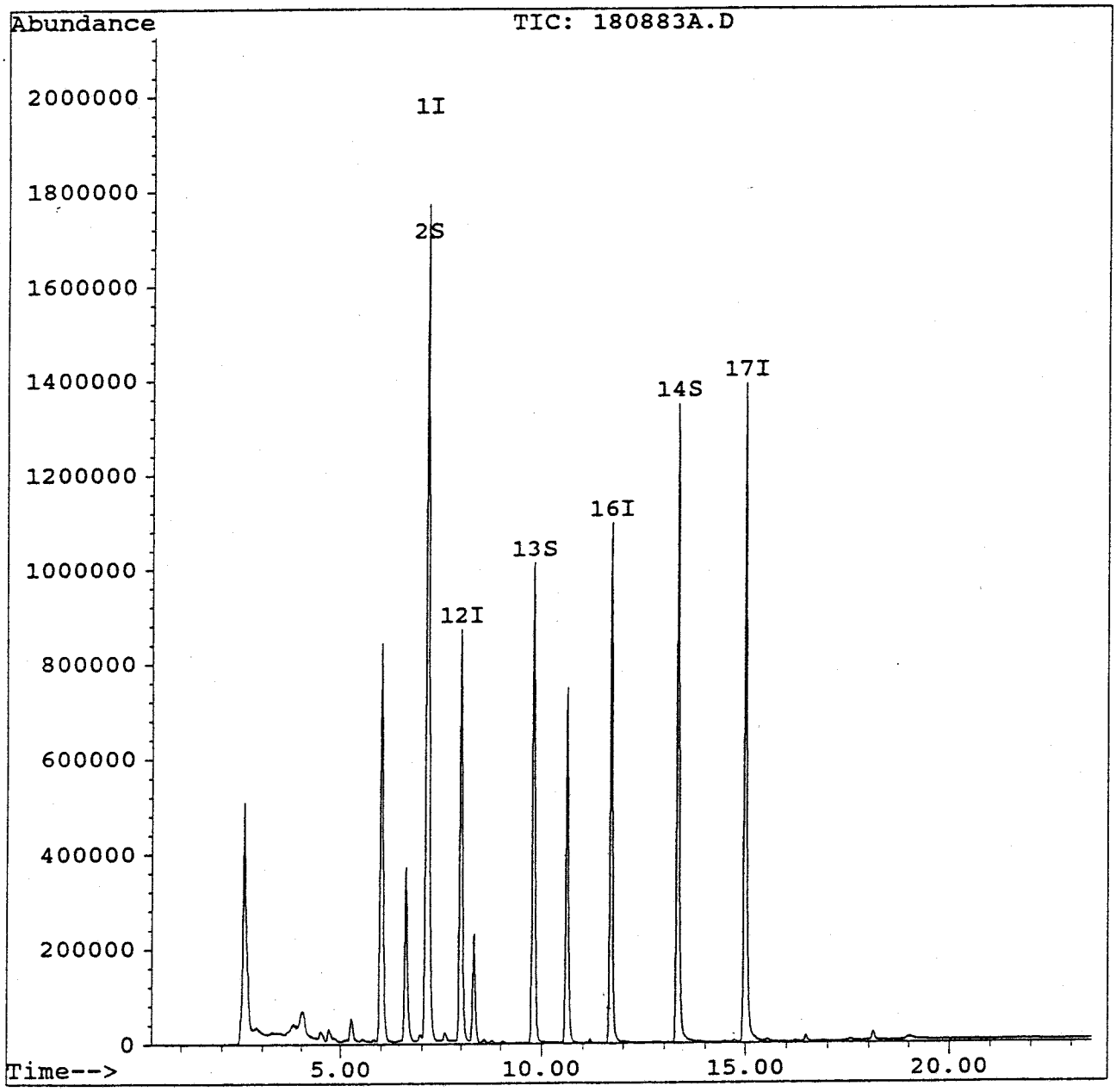
Z35

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180883A.D
Acq Time : 21 Jul 95 7:31 pm
Sample : MW-12 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 19:55 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180883A.D
Acq Time : 21 Jul 95 7:31 pm
Sample : MW-12 (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 19:55 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.12	168	1712270	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	7.97	114	1511226	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.69	117	1352896	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	14.97	152	948159	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.11	113	930685	51.60	ug/l	103.20%
13) Toluene-d8	9.79	98	1581167	51.43	ug/l	102.86%
14) Bromofluorobenzene	13.31	174	961590	50.83	ug/l	101.66%
Target Compounds						Qvalue

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TRIP BLK 2

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180884V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180884V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	15	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	2.5	JB
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	3.7	J
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TRIP BLK 2

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180884V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180884V.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

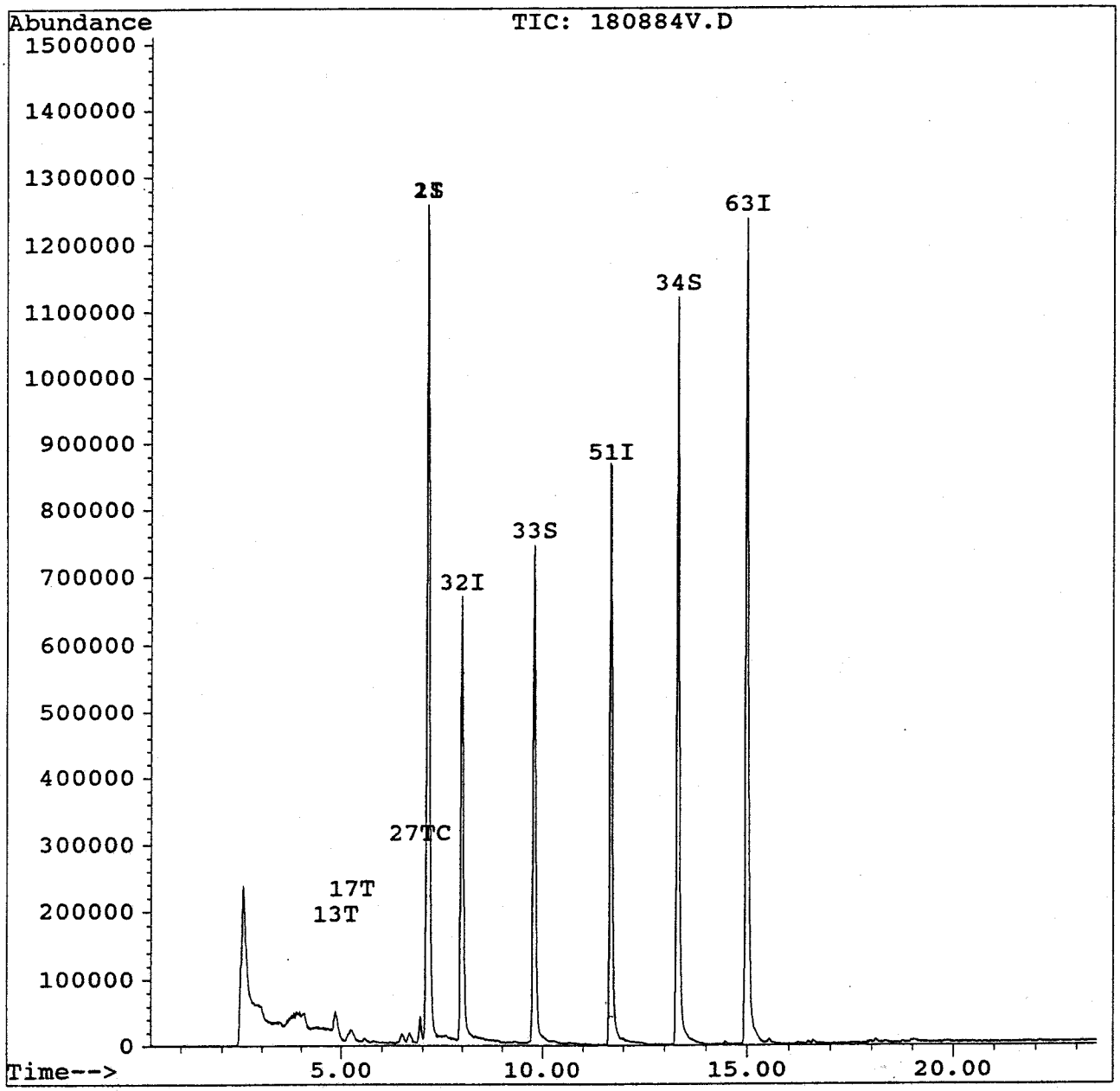
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180884V.D
Acq Time : 21 Jul 95 12:25 pm
Sample : TRIP BLANK 2 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:12 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

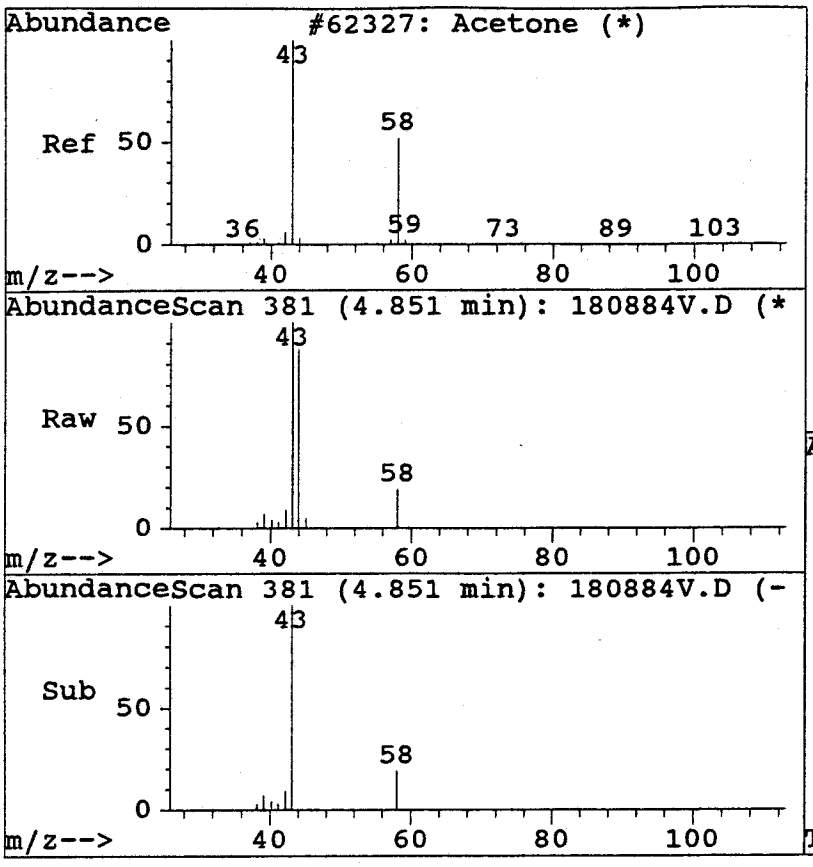
Data File : C:\HPCHEM\1\DATA\072195V\180884V.D
Acq Time : 21 Jul 95 12:25 pm
Sample : TRIP BLANK 2 (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:12 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.12	168	1314210	50.00	ug/l	0.00
32) 1,4-Difluorobenzene	7.97	114	1210569	50.00	ug/l	0.00
51) Chlorobenzene-d5	11.68	117	1157911	50.00	ug/l	-0.01
63) 1,4-Dichlorobenzene-d4	14.97	152	898263	50.00	ug/l	-0.01
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.12	113	713034	49.69	ug/l	99.38%
33) Toluene-d8	9.78	98	1218009	48.48	ug/l	96.95%
34) Bromofluorobenzene	13.30	174	817188	51.10	ug/l	102.21%
Target Compounds						**Qvalue**
13) Acetone	4.85	43	151781	14.71	ug/l	97
17) Methylene Chloride	5.26	84	15710	2.52	ug/l	93
27) Chloroform	6.93	83	68202	3.73	ug/l	96

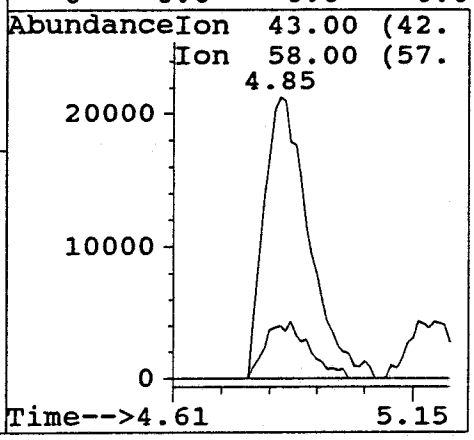
(#) = qualifier out of range (m) = manual integration

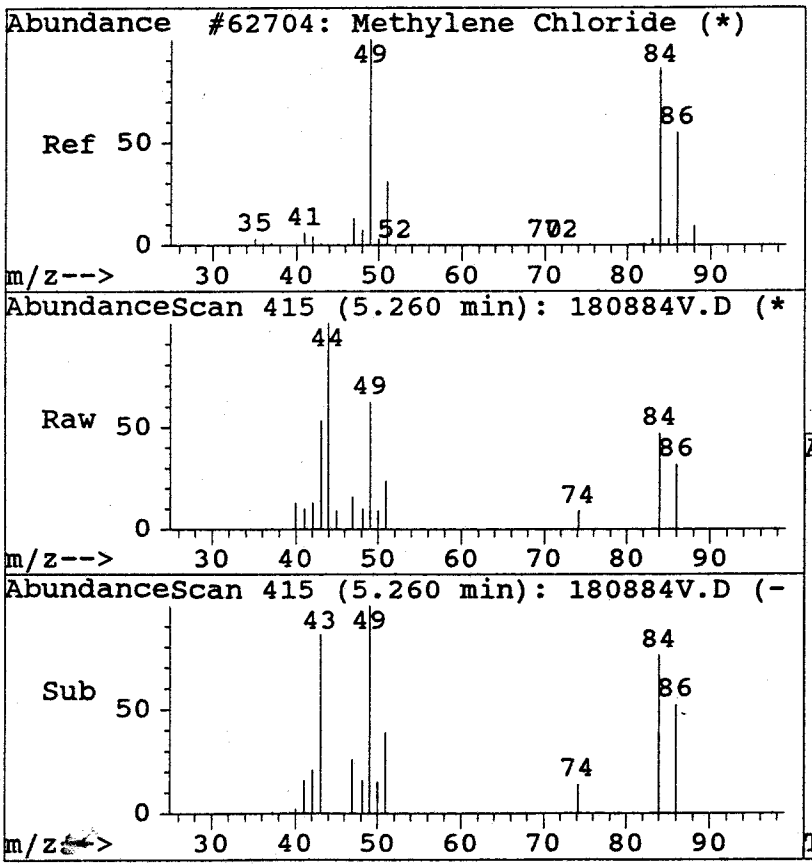


#13
Acetone
Concen: 14.71 ug/l
RT: 4.85 min Scan# 381
Delta R.T. -0.01 min
Lab File: 180884V.D
Acq: 21 Jul 95 12:25 pm

Tgt Ion:43 Resp: 151781

Ion	Ratio	Lower	Upper
43	100		
58	18.8	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

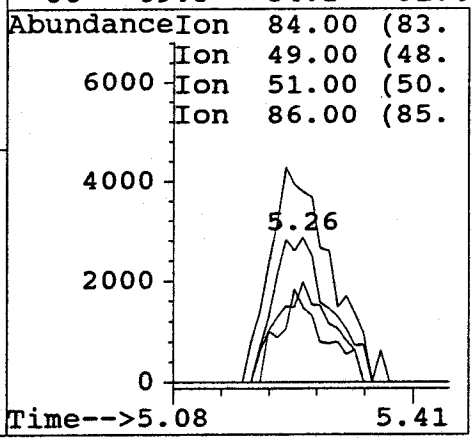


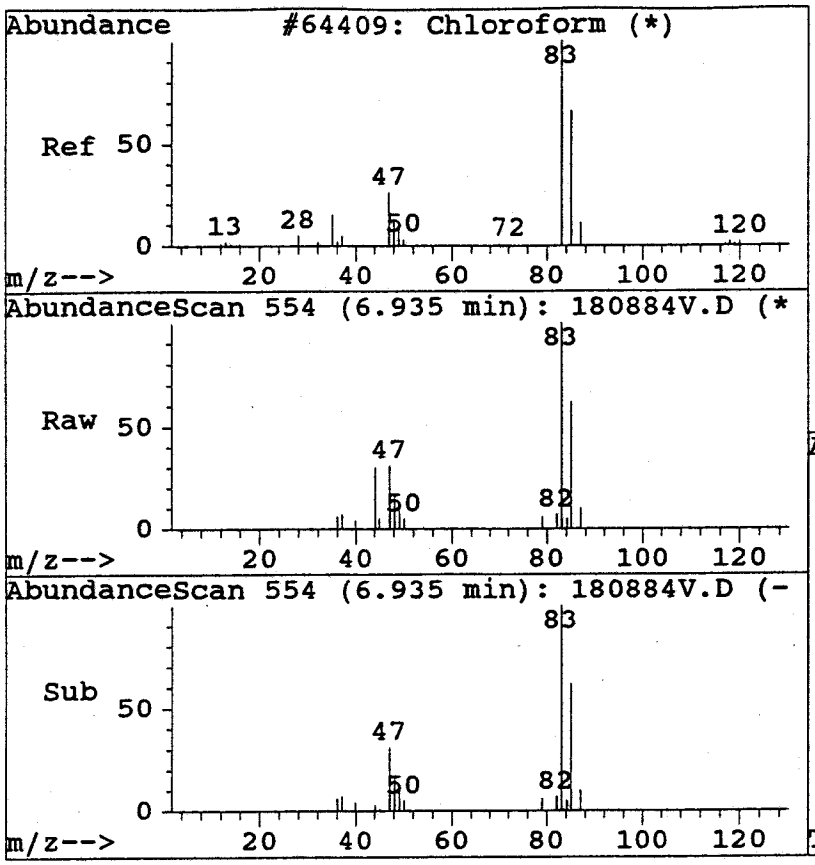


#17
Methylene Chloride
Concen: 2.52 ug/l
RT: 5.26 min Scan# 415
Delta R.T. 0.01 min
Lab File: 180884V.D
Acq: 21 Jul 95 12:25 pm

Tgt Ion:84 Resp: 15710

Ion	Ratio	Lower	Upper
84	100		
49	132.3	113.2	169.8
51	52.0	35.3	52.9
86	69.3	54.2	81.4

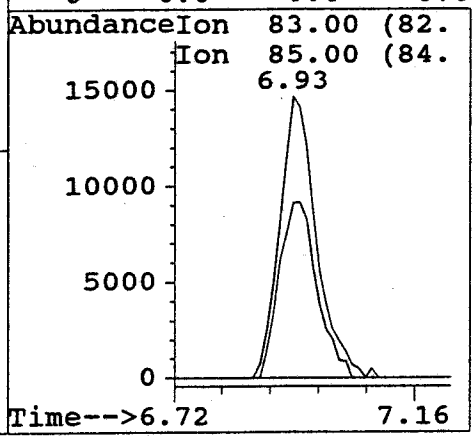




#27
Chloroform
Concen: 3.73 ug/l
RT: 6.93 min Scan# 554
Delta R.T. -0.00 min
Lab File: 180884V.D
Acq: 21 Jul 95 12:25 pm

Tgt Ion:83 Resp: 68202

Ion	Ratio	Lower	Upper
83	100		
85	62.2	52.2	78.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Standards Data

- Initial Calibration Summary (Form VI)
- Initial Calibration Raw Data
  - * Chromatograms
  - * Quantitation Reports

- Continuing Calibration Summary (Form VII)
- Continuing Calibration Raw Data
  - * Chromatograms
  - * Quantitation Reports

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

Response Factor Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:48:33 1995
Response via : Initial Calibration

Calibration Files
10 =2VCAL010.D 20 =2VCAL020.D 50 =2VCAL050.D
100 =2VCAL100.D 200 =2VCAL200.D

		Compound	10	20	50	100	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD						
2)	S	Dibromofluoromethane	0.598	0.542	0.548	0.572	0.751	0.602	14.29
3)	T	Allyl Chloride	0.099	0.096	0.102	0.104	0.108	0.102	4.38
4)	T	Acetonitrile	0.309	0.274	0.227	0.199	0.128	0.228	30.67
5)	T	Acrylonitrile	0.168	0.162	0.148	0.144	0.121	0.149	12.34
6)	T	Acrolein	0.058	0.055	0.051	0.045	0.034	0.049	#19.73
7)	T	Chloroprene	0.345	0.355	0.363	0.368	0.381	0.363	3.79
8)	T	Propionitrile	0.117	0.091	0.079	0.070	0.060	0.083	#26.45
9)	T	Methacrylonitrile	0.122	0.126	0.121	0.115	0.091	0.115	12.09
10)	T	Methyl Methacrylate	0.330	0.376	0.372	0.383	0.316	0.355	8.54
11)	T	Isobutanol	0.170	0.141	0.107	0.086	0.072	0.115	35.03
12)	I	1,4-Difluorobenzene	ISTD						
13)	S	Toluene-d8	1.109	1.044	1.003	1.013	1.515	1.137	18.94
14)	S	Bromofluorobenzene	0.706	0.635	0.601	0.601	0.826	0.674	14.15
15)	T	Ethyl methacrylate	0.651	0.725	0.713	0.684	0.642	0.683	5.36
[illegible])	I	Chlorobenzene-d5	ISTD						
17)	I	1,4-Dichlorobenzene-d4	ISTD						
18)	T	trans-1,4-Dichloro-2-bute	0.266	0.293	0.320	0.351	0.352	0.316	11.82

(#) = Out of Range

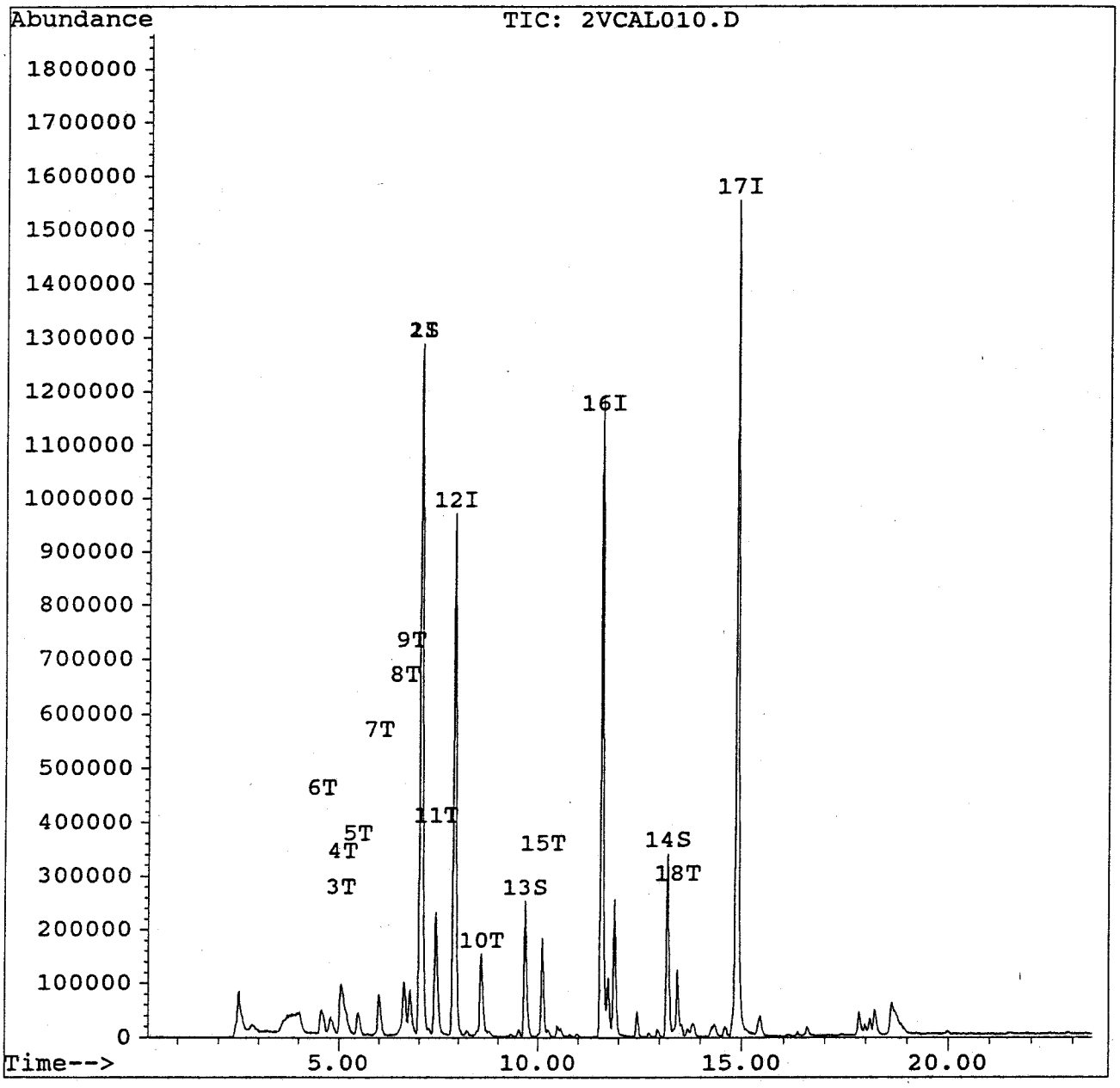
DAASHORT.M Mon Jul 17 09:49:40 1995 MS5970-A

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL010.D
Acq Time : 14 Jul 95 2:06 pm
Sample : VOA ICAL 10/50 ppb MIX 02
Misc : VOA ICAL #2
Quant Time: Jul 17 9:04 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL010.D
Acq Time : 14 Jul 95 2:06 pm
Sample : VOA ICAL 10/50 ppb MIX 02
Misc : VOA ICAL #2
Quant Time: Jul 17 9:04 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.03	168	1894851	50.00	ug/l		0.00
12) 1,4-Difluorobenzene	7.88	114	1707835	50.00	ug/l		-0.01
16) Chlorobenzene-d5	11.58	117	1517824	50.00	ug/l		-0.02
17) 1,4-Dichlorobenzene-d4	14.86	152	1047245	50.00	ug/l		-0.02
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.03	113	226596	10.28	ug/l		20.55%
13) Toluene-d8	9.67	98	378910	10.30	ug/l		20.61%
14) Bromofluorobenzene	13.19	174	241270	10.72	ug/l		21.44%
Target Compounds							**Qvalue**
3) Allyl Chloride	5.04	76	37515	9.38	ug/l		87
4) Acetonitrile	5.08	40	117187	19.80	ug/l	#	24
5) Acrylonitrile	5.47	53	63786	14.99	ug/l		96
6) Acrolein	4.56	56	109638	49.82	ug/l		90
7) Chloroprene	6.00	53	130714	9.40	ug/l		95
8) Propionitrile	6.62	54	221969	113.04	ug/l		95
9) Methacrylonitrile	6.77	67	46179	11.25	ug/l		81
10) Methyl Methacrylate	8.58	69	125028	9.27	ug/l	#	81
11) Isobutanol	7.41	43	323027	174.72	ug/l	#	90
15) Ethyl methacrylate	10.11	69	222417	9.34	ug/l	#	72
18) trans-1,4-Dichloro-2-buten	13.43	53	55657	9.43	ug/l	#	60

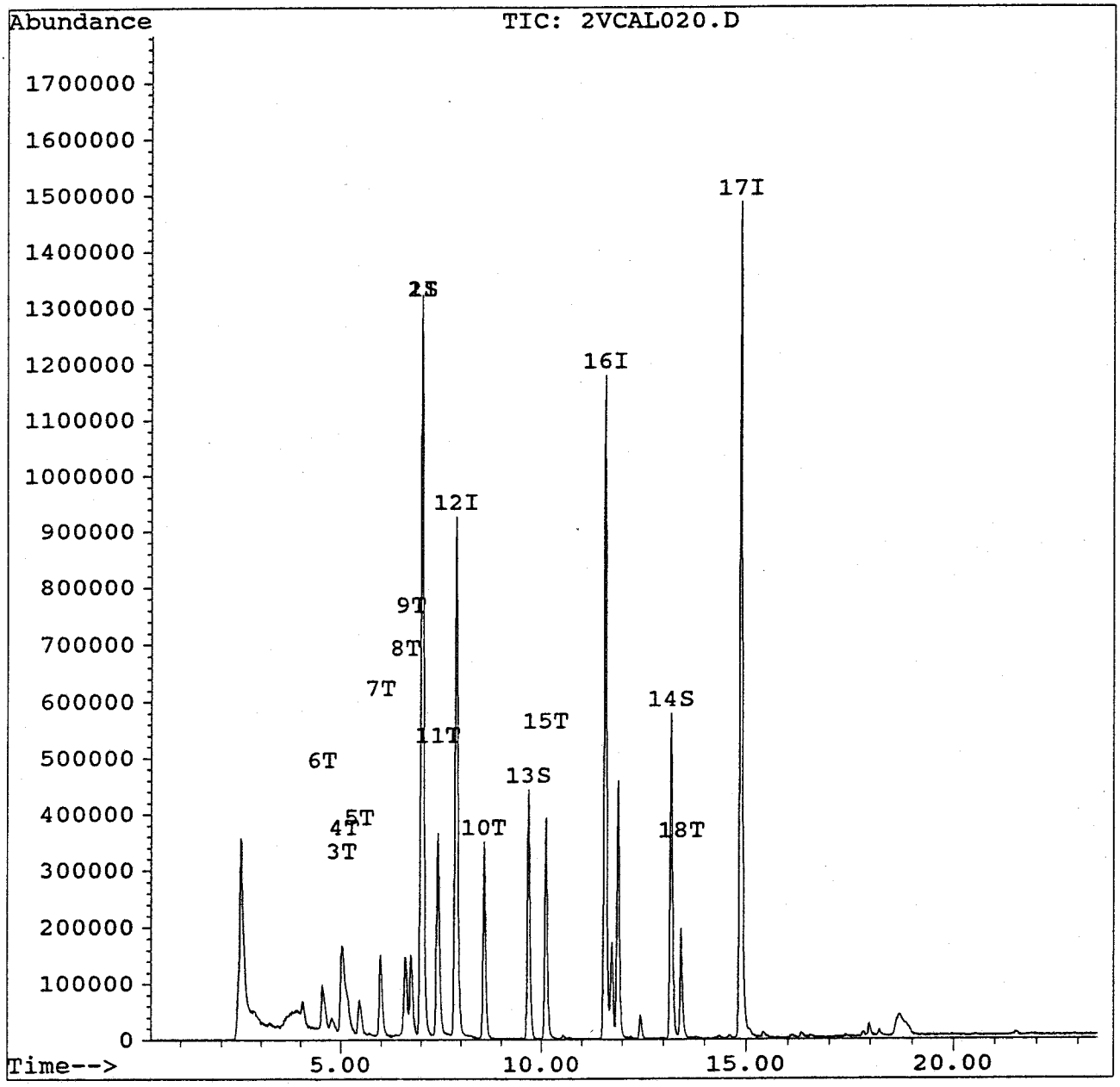
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL020.D
Acq Time : 14 Jul 95 2:42 pm
Sample : VOA ICAL 20/100 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:04 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL020.D
Acq Time : 14 Jul 95 2:42 pm
Sample : VOA ICAL 20/100 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:04 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.02	168	1823552	50.00	ug/l		-0.01
12) 1,4-Difluorobenzene	7.87	114	1623792	50.00	ug/l		-0.03
16) Chlorobenzene-d5	11.57	117	1452606	50.00	ug/l		-0.03
17) 1,4-Dichlorobenzene-d4	14.86	152	1029063	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.02	113	395030	18.61	ug/l		37.23%
13) Toluene-d8	9.67	98	677904	19.39	ug/l		38.77%
14) Bromofluorobenzene	13.18	174	412309	19.27	ug/l		38.53%
Target Compounds							Qvalue
3) Allyl Chloride	5.02	76	70134	18.22	ug/l		90
4) Acetonitrile	5.08	40	199964	35.10	ug/l	#	16
5) Acrylonitrile	5.47	53	118162	28.85	ug/l		96
6) Acrolein	4.54	56	200815	94.81	ug/l	#	94
7) Chloroprene	6.00	53	258973	19.36	ug/l		98
8) Propionitrile	6.61	54	332522	175.97	ug/l		96
9) Methacrylonitrile	6.76	67	91762	23.23	ug/l		78
10) Methyl Methacrylate	8.57	69	274345	21.14	ug/l	#	82
11) Isobutanol	7.41	43	513449	288.57	ug/l	#	91
15) Ethyl methacrylate	10.10	69	470990	20.80	ug/l	#	71
18) trans-1,4-Dichloro-2-buten	13.43	53	120505	20.78	ug/l	#	42

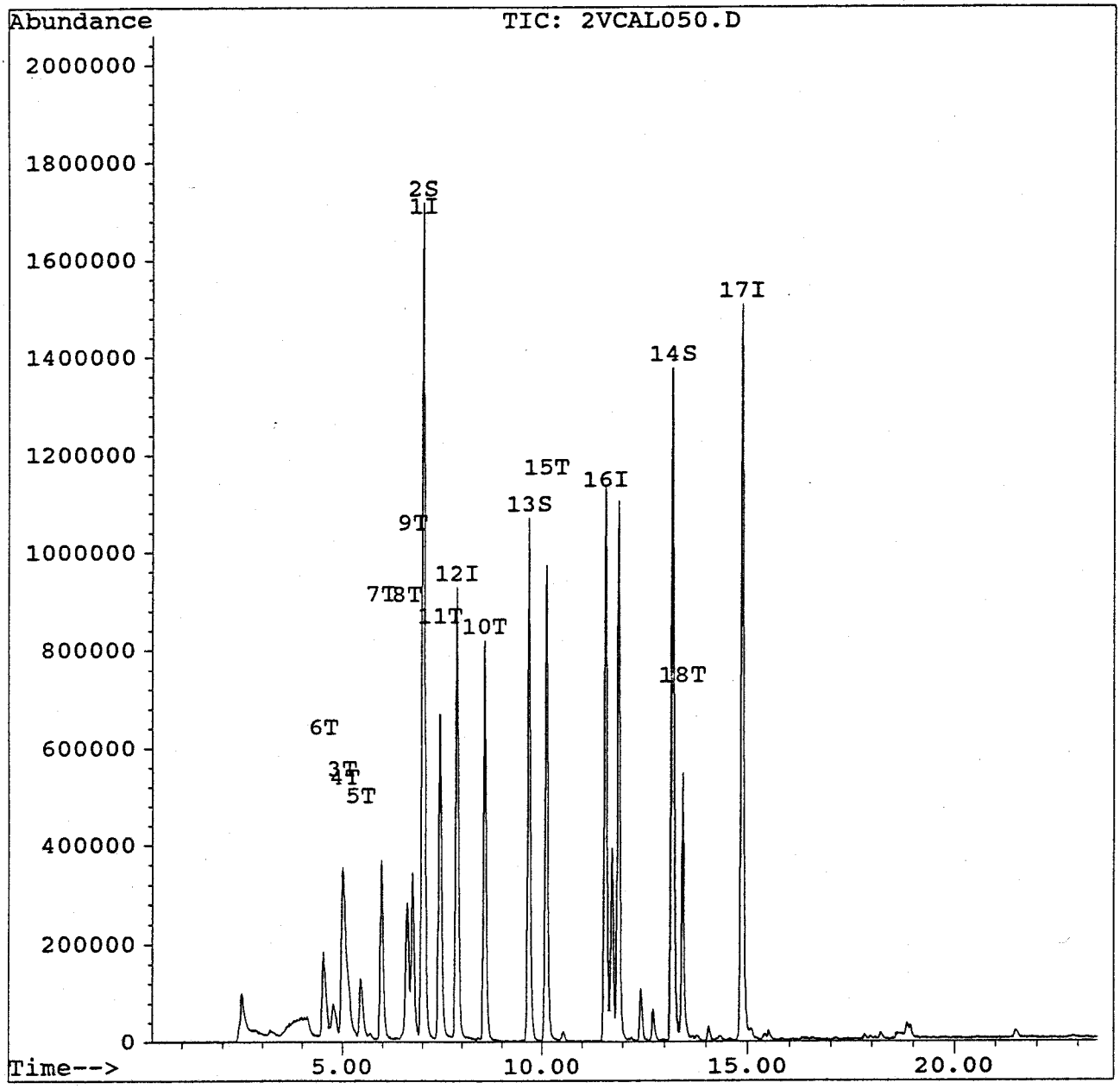
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL050.D
Acq Time : 14 Jul 95 3:20 pm
Sample : VOA ICAL 50/250 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:05 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL050.D
Acq Time : 14 Jul 95 3:20 pm
Sample : VOA ICAL 50/250 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:05 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.01	168	1785888	50.00	ug/l		-0.02
12) 1,4-Difluorobenzene	7.86	114	1615208	50.00	ug/l		-0.04
16) Chlorobenzene-d5	11.57	117	1442366	50.00	ug/l		-0.03
17) 1,4-Dichlorobenzene-d4	14.85	152	1017236	50.00	ug/l		-0.03
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.00	113	979095	47.11	ug/l		94.22%
13) Toluene-d8	9.66	98	1619885	46.57	ug/l		93.15%
14) Bromofluorobenzene	13.18	174	970977	45.61	ug/l		91.22%
Target Compounds							Qvalue
3) Allyl Chloride	5.00	76	182893	48.52	ug/l		84
4) Acetonitrile	5.06	40	405741	72.72	ug/l	#	31
5) Acrylonitrile	5.45	53	263714	65.76	ug/l		97
6) Acrolein	4.53	56	453109	218.44	ug/l		98
7) Chloroprene	5.97	53	649091	49.54	ug/l		97
8) Propionitrile	6.61	54	703066	379.91	ug/l		96
9) Methacrylonitrile	6.74	67	215335	55.67	ug/l		80
10) Methyl Methacrylate	8.57	69	663833	52.24	ug/l	#	83
11) Isobutanol	7.43	43	958181	549.88	ug/l	#	90
15) Ethyl methacrylate	10.10	69	1152155	51.15	ug/l	#	70
18) trans-1,4-Dichloro-2-buten	13.43	53	325993	56.86	ug/l	#	53

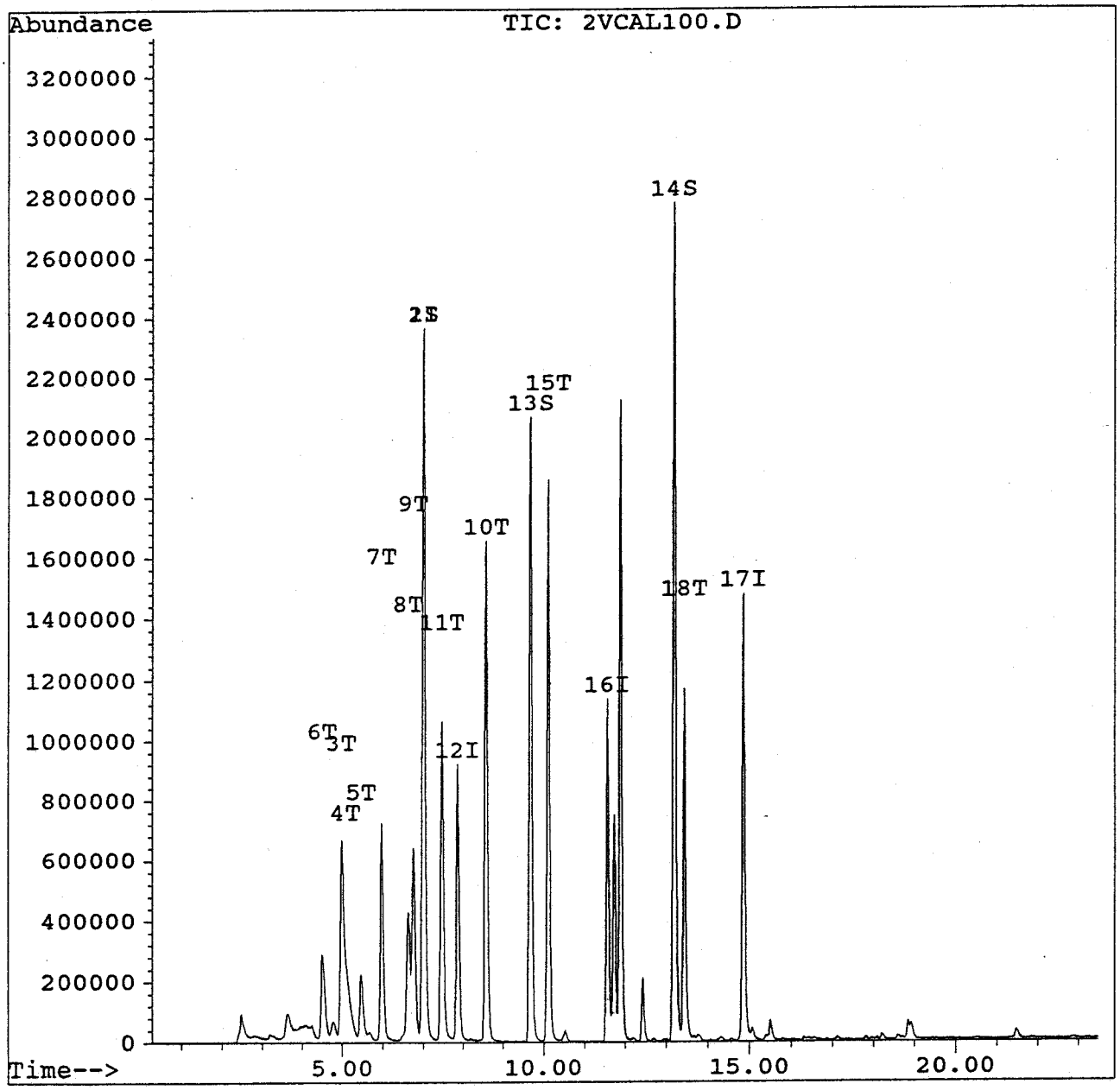
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL100.D
Acq Time : 14 Jul 95 3:57 pm
Sample : VOA ICAL 100/500 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:05 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL100.D
Acq Time : 14 Jul 95 3:57 pm
Sample : VOA ICAL 100/500 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:05 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.00	168	1735274	50.00	ug/l		-0.03
12) 1,4-Difluorobenzene	7.86	114	1600699	50.00	ug/l		-0.04
16) Chlorobenzene-d5	11.56	117	1428909	50.00	ug/l		-0.04
17) 1,4-Dichlorobenzene-d4	14.85	152	1002397	50.00	ug/l		-0.03
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.00	113	1986455	98.37	ug/l		196.74%
13) Toluene-d8	9.67	98	3243845	94.11	ug/l		188.22%
14) Bromofluorobenzene	13.17	174	1923398	91.17	ug/l		182.34%
Target Compounds							Qvalue
3) Allyl Chloride	4.97	76	361452	98.69	ug/l		81
4) Acetonitrile	5.07	40	690258	127.33	ug/l	#	14
5) Acrylonitrile	5.46	53	501278	128.64	ug/l		93
6) Acrolein	4.49	56	789020	391.47	ug/l		97
7) Chloroprene	5.96	53	1277514	100.35	ug/l		100
8) Propionitrile	6.63	54	1217204	676.91	ug/l		96
9) Methacrylonitrile	6.76	67	398817	106.11	ug/l		84
10) Methyl Methacrylate	8.57	69	1330426	107.75	ug/l	#	83
11) Isobutanol	7.46	43	1494274	882.55	ug/l	#	91
15) Ethyl methacrylate	10.10	69	2191296	98.17	ug/l	#	72
18) trans-1,4-Dichloro-2-buten	13.43	53	703672	124.54	ug/l	#	54

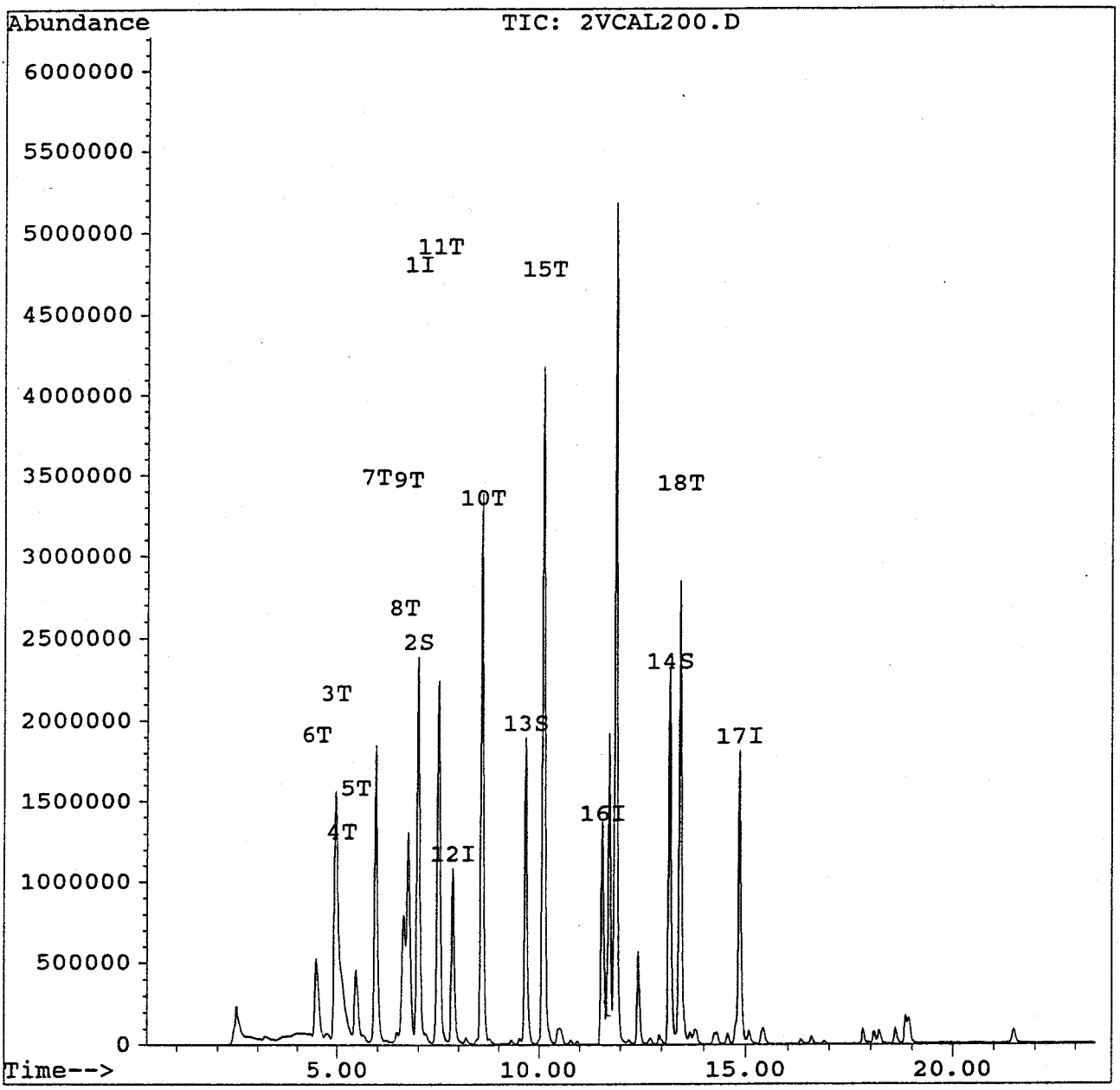
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL200.D
Acq Time : 14 Jul 95 4:35 pm
Sample : VOA ICAL 200/1000 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:06 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\2VCAL200.D
Acq Time : 14 Jul 95 4:35 pm
Sample : VOA ICAL 200/1000 ppb MIX 02
Misc : VOA ICAL#2
Quant Time: Jul 17 9:06 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 14 10:53:00 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.99	168	2185532	50.00	ug/l	-0.04
12) 1,4-Difluorobenzene	7.85	114	1955020	50.00	ug/l	-0.04
16) Chlorobenzene-d5	11.56	117	1735223	50.00	ug/l	-0.03
17) 1,4-Dichlorobenzene-d4	14.85	152	1189413	50.00	ug/l	-0.03
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	6.99	113	1641375	64.54	ug/l	129.07%
13) Toluene-d8	9.66	98	2961404	70.34	ug/l	140.69%
14) Bromofluorobenzene	13.18	174	1614964	62.68	ug/l	125.35%
Target Compounds						**Qvalue**
3) Allyl Chloride	4.95	76	940842	203.97	ug/l #	80
4) Acetonitrile	5.10	40	1122874	164.46	ug/l #	1
5) Acrylonitrile	5.45	53	1058019	215.57	ug/l	97
6) Acrolein	4.47	56	1468462	578.48	ug/l	98
7) Chloroprene	5.94	53	3334181	207.94	ug/l	99
8) Propionitrile	6.64	54	2619272	1156.53	ug/l	97
9) Methacrylonitrile	6.75	67	795493	168.04	ug/l #	81
10) Methyl Methacrylate	8.57	69	2761783	177.59	ug/l #	81
11) Isobutanol	7.50	43	3129829	1467.71	ug/l #	90
15) Ethyl methacrylate	10.09	69	5022162	184.21	ug/l #	69
18) trans-1,4-Dichloro-2-buten	13.42	53	1673397	249.61	ug/l #	56

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

Response Factor Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:41:04 1995
Response via : Initial Calibration

Calibration Files
10 =1VCAL010.D 20 =1VCAL020.D 50 =1VCAL050.D
100 =1VCAL100.D 200 =1VCAL200.D

		Compound	10	20	50	100	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD						
2)	S	Dibromofluoromethane	0.596	0.570	0.580	0.594	0.597	0.587	2.06
3)	T	Dichlorodifluoromethane	0.398	0.382	0.369	0.376	0.364	0.378	3.46
4)	TP	Chloromethane	0.193	0.171	0.160	0.157	0.153	0.167	9.72
5)	TC	Vinyl Chloride	0.187	0.178	0.175	0.176	0.175	0.178	2.83
6)	T	Chloroethane	0.098	0.104	0.101	0.101	0.095	0.100#	3.29
7)	T	Bromomethane	0.167	0.173	0.169	0.179	0.182	0.174	3.74
8)	T	Trichlorofluoromethane	0.713	0.540	0.423	0.409	0.379	0.493	27.91
9)	TCM	1,1-Dichloroethene	0.249	0.245	0.240	0.246	0.094	0.215	31.44
10)	T	trans-1,2-Dichloroethene	0.238	0.240	0.237	0.249	0.248	0.243	2.32
11)	T	cis-1,2-Dichloroethene	0.270	0.270	0.262	0.281	0.272	0.271	2.52
12)	T	Acetone	0.602	0.490	0.411	0.401	0.336	0.448	22.77
13)	T	Iodomethane	0.672	0.698	0.711	0.713	0.683	0.695	2.60
14)	T	Carbon Disulfide	0.546	0.559	0.604	0.652	0.640	0.600	7.90
15)	T	Methylene Chloride	0.324	0.290	0.265	0.271	0.268	0.284	8.67
16)	T	Vinyl Acetate	0.429	0.486	0.554	0.572	0.606	0.529	13.42
17)	TP	1,1-Dichloroethane	0.560	0.542	0.530	0.565	0.562	0.552	2.75
18)	T	2,2-Dichloropropane	0.477	0.481	0.477	0.513	0.503	0.490	3.45
19)	T	2-Butanone	0.549	0.495	0.429	0.478	0.466	0.484	9.08
20)	T	Bromochloromethane	0.224	0.226	0.219	0.222	0.219	0.222	1.47
21)	TC	Chloroform	0.735	0.733	0.711	0.733	0.728	0.728	1.34
22)	T	1,1,1-Trichloroethane	0.647	0.674	0.649	0.674	0.659	0.660	2.00
23)	I	1,4-Difluorobenzene	ISTD						
24)	S	Toluene-d8	1.143	1.027	1.025	1.016	1.005	1.043	5.40
25)	S	Bromofluorobenzene	0.724	0.639	0.630	0.622	0.618	0.647	6.80
26)	T	1,1-Dichloropropene	0.165	0.164	0.156	0.157	0.151	0.159	3.66
27)	T	cis-1,3-Dichloropropene	0.519	0.546	0.545	0.587	0.595	0.558	5.72
28)	T	trans-1,3-Dichloropropene	0.504	0.526	0.539	0.585	0.594	0.549	7.00
29)	T	Carbon Tetrachloride	0.560	0.589	0.616	0.659	0.648	0.614	6.68
30)	TM	Benzene	0.872	0.829	0.787	0.806	0.784	0.816	4.45
31)	T	1,2-Dichloroethane	0.775	0.755	0.705	0.728	0.705	0.734	4.24
32)	TM	Trichloroethene	0.526	0.518	0.468	0.481	0.469	0.492	5.61
33)	TC	1,2-Dichloropropane	0.370	0.373	0.354	0.371	0.362	0.366	2.10
34)	T	Dibromomethane	0.456	0.461	0.442	0.458	0.450	0.453	1.60
35)	T	Bromodichloromethane	0.645	0.674	0.695	0.747	0.751	0.702	6.57
36)	T	2-Chloroethyl vinyl ether	0.370	0.373	0.354	0.371	0.362	0.366	2.10
37)	T	4-Methyl-2-pentanone	1.029	1.050	1.005	1.071	1.047	1.040	2.42
38)	TCM	Toluene	0.658	0.652	0.625	0.638	0.618	0.638	2.71
39)	T	1,1,2-Trichloroethane	0.365	0.364	0.351	0.369	0.361	0.362	1.82
40)	T	1,2-Dibromoethane	0.696	0.705	0.687	0.720	0.721	0.706	2.11
41)	I	Chlorobenzene-d5	ISTD						

(#) = Out of Range

Response Factor Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:41:04 1995
Response via : Initial Calibration

Calibration Files
10 =1VCAL010.D 20 =1VCAL020.D 50 =1VCAL050.D
100 =1VCAL100.D 200 =1VCAL200.D

		Compound	10	20	50	100	200	Avg	%RSD
42)	T	Tetrachloroethene	0.741	0.701	0.678	0.689	0.652	0.692	4.74
43)	T	1,3-Dichloropropane	0.784	0.771	0.739	0.761	0.731	0.757	2.89
44)	T	Dibromochloromethane	0.690	0.721	0.768	0.835	0.832	0.769	8.44
45)	T	2-Hexanone	1.115	1.082	1.040	1.129	1.071	1.087	3.28
46)	TPM	Chlorobenzene	1.052	0.990	0.958	0.996	0.956	0.990	3.94
47)	T	1,1,1,2-Tetrachloroethane	0.530	0.540	0.549	0.581	0.563	0.552	3.61
48)	TC	Ethylbenzene	0.487	0.460	0.444	0.443	0.422	0.451	5.40
49)	T	Xylene, m & p-	0.618	0.583	0.563	0.582	0.549	0.579	4.49
50)	T	Xylene, o-	0.585	0.553	0.544	0.552	0.525	0.552	3.91
51)	T	Styrene	0.944	0.920	0.922	0.963	0.932	0.936	1.89
52)	TP	Bromoform	0.668	0.712	0.796	0.887	0.904	0.793	13.12#
53)	I	1,4-Dichlorobenzene-d4	ISTD						
54)	T	Isopropylbenzene	0.658	0.611	0.592	0.609	0.595	0.613	4.37
55)	T	n-Propylbenzene	3.020	2.869	2.784	2.920	2.818	2.882	3.22
56)	T	1,3,5-Trimethylbenzene	0.968	0.918	0.901	0.928	0.900	0.923	2.98
57)	T	1,2,4-Trimethylbenzene	1.038	1.006	0.981	0.987	0.965	0.996	2.79
58)	TP	1,1,2,2-Tetrachloroethane	1.176	1.170	1.242	1.324	1.326	1.248	6.13
59)	T	Bromobenzene	0.925	0.892	0.865	0.885	0.851	0.884	3.20
60)	T	1,2,3-Trichloropropane	1.408	1.360	1.293	1.334	1.274	1.334	4.01
61)	T	2-Chlorotoluene	0.606	0.577	0.556	0.569	0.565	0.575	3.32
62)	T	4-Chlorotoluene	0.644	0.603	0.598	0.569	0.578	0.599	4.86
63)	T	1,3-Dichlorobenzene	1.433	1.374	1.305	1.354	1.333	1.360	3.55
64)	T	1,4-Dichlorobenzene	1.666	1.567	1.507	1.522	1.486	1.550	4.62
65)	T	1,2-Dichlorobenzene	1.456	1.384	1.318	1.364	1.313	1.367	4.25
66)	T	tert-Butylbenzene	2.325	2.168	2.129	2.193	2.143	2.192	3.58
67)	T	sec-Butylbenzene	3.074	2.874	2.792	2.903	2.842	2.897	3.70
68)	T	p-Isopropyltoluene	2.600	2.403	2.379	2.407	2.302	2.418	4.55
69)	t	n-Butylbenzene	2.481	2.337	2.300	2.391	2.367	2.375	2.88
70)	T	1,2-Dibromo-3-chloropropa	0.676	0.689	0.740	0.830	0.816	0.750	9.46
71)	T	1,2,4-Trichlorobenzene	1.249	1.253	1.234	1.308	1.301	1.269	2.64
72)	T	1,2,3-Trichlorobenzene	1.279	1.275	1.241	1.301	1.286	1.277	1.72
73)	T	Hexachlorobutadiene	1.172	1.098	1.108	1.146	1.108	1.127	2.78
74)	T	Naphthalene	2.506	2.537	2.587	2.811	2.834	2.655	5.86

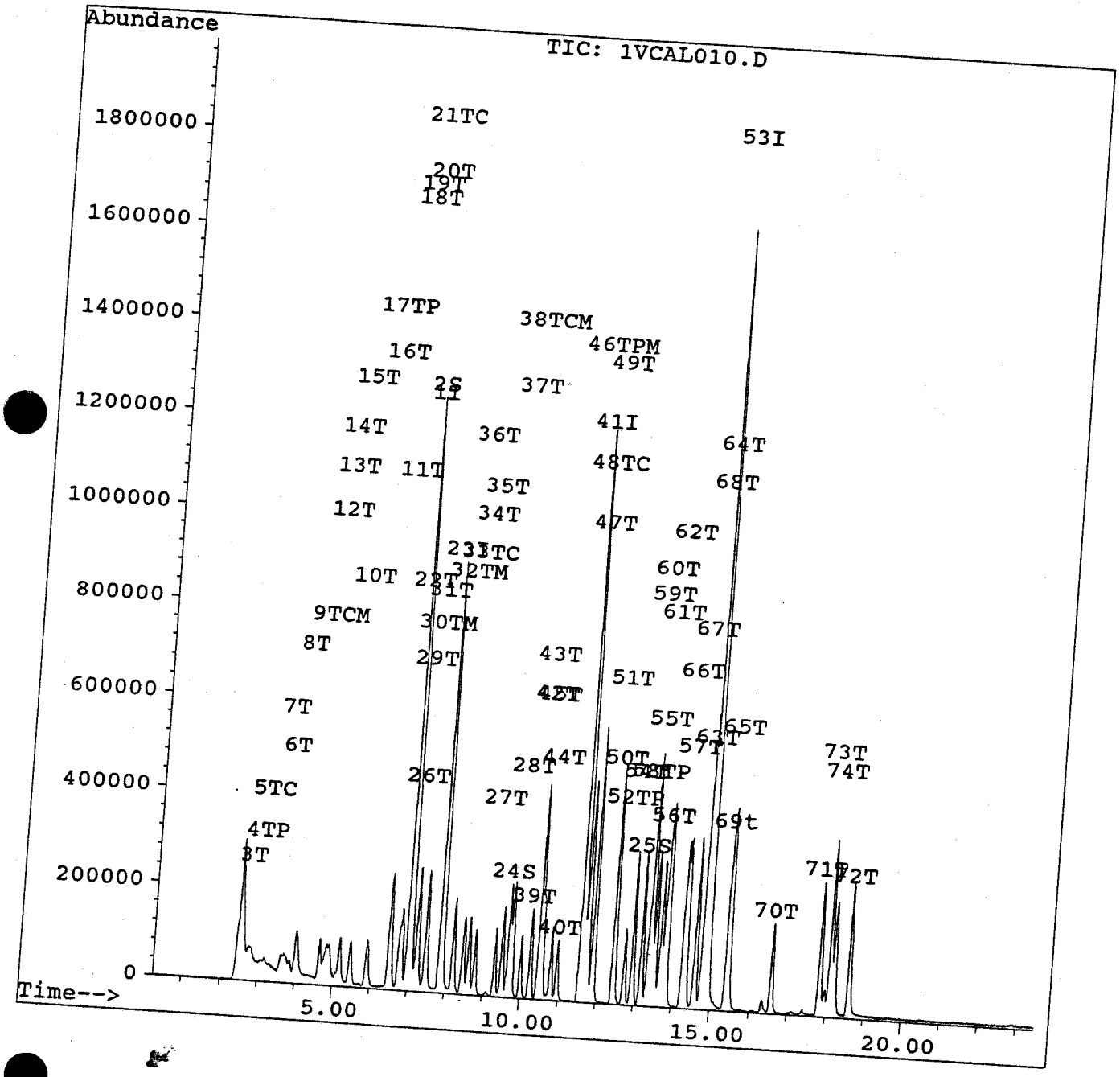
(#) = Out of Range

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL010.D
Acq Time : 14 Jul 95 6:27 pm
Sample : VOA ICAL 10 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL010.D
Acq Time : 14 Jul 95 6:27 pm
Sample : VOA ICAL 10 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.02	168	1787490	50.00	ug/l		-0.02
23) 1,4-Difluorobenzene	7.87	114	1604318	50.00	ug/l		-0.03
41) Chlorobenzene-d5	11.56	117	1391643	50.00	ug/l		-0.03
53) 1,4-Dichlorobenzene-d4	14.85	152	1003983	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.01	113	213228	11.15	ug/l		22.29%
24) Toluene-d8	9.66	98	366591	10.97	ug/l		21.94%
25) Bromofluorobenzene	13.19	174	232282	11.54	ug/l		23.08%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.74	85	142136	10.81	ug/l		100
4) Chloromethane	3.08	50	69057	12.37	ug/l		93
5) Vinyl Chloride	3.18	62	66910	10.95	ug/l		93
6) Chloroethane	3.71	64	34903	9.93	ug/l		100
7) Bromomethane	3.61	94	59752	9.70	ug/l		95
8) Trichlorofluoromethane	4.00	101	255002	15.69	ug/l		96
9) 1,1-Dichloroethene	4.62	96	88930	10.43	ug/l		95
10) trans-1,2-Dichloroethene	5.47	96	85214	10.09	ug/l		97
11) cis-1,2-Dichloroethene	6.50	96	96666	10.09	ug/l		92
12) Acetone	4.77	43	215191	19.23	ug/l		96
13) Iodomethane	4.84	142	240117	11.87	ug/l		98
14) Carbon Disulfide	4.90	76	195220	9.58	ug/l		98
15) Methylene Chloride	5.18	84	115933	11.22	ug/l		99
16) Vinyl Acetate	5.95	43	153313	7.91	ug/l		98
17) 1,1-Dichloroethane	5.90	63	200115	10.80	ug/l		98
18) 2,2-Dichloropropane	6.50	77	170597	9.40	ug/l		95
19) 2-Butanone	6.54	43	196395	12.58	ug/l		96
20) Bromochloromethane	6.77	128	80073	10.94	ug/l		97
21) Chloroform	6.83	83	262608	11.00	ug/l		100
22) 1,1,1-Trichloroethane	7.06	97	231126	10.66	ug/l	#	1
26) 1,1-Dichloropropene	7.24	77	52812	10.78	ug/l	#	74
27) cis-1,3-Dichloropropene	9.31	75	166372	9.53	ug/l		99
28) trans-1,3-Dichloropropene	10.00	75	161625	9.30	ug/l		100
29) Carbon Tetrachloride	7.24	117	179556	10.02	ug/l		94
30) Benzene	7.47	78	279799	10.86	ug/l		98
31) 1,2-Dichloroethane	7.48	62	248776	10.99	ug/l		96
32) Trichloroethene	8.19	95	168729	11.02	ug/l		97
33) 1,2-Dichloropropane	8.46	63	118682	10.05	ug/l		99
34) Dibromomethane	8.60	93	146176	10.44	ug/l		87
35) Bromodichloromethane	8.78	83	206928	9.42	ug/l		97
36) 2-Chloroethyl vinyl ether	8.46	63	118682	10.05	ug/l		99
37) 4-Methyl-2-pentanone	9.51	43	330058	10.15	ug/l	#	86
38) Toluene	9.75	92	211267	10.30	ug/l		100

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL010.D
Acq Time : 14 Jul 95 6:27 pm
Sample : VOA ICAL 10 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:31 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,1,2-Trichloroethane	10.25	83	117237	10.19	ug/l		94
40)	1,2-Dibromoethane	10.95	107	223478	10.26	ug/l		97
42)	Tetrachloroethene	10.47	166	206318	10.26	ug/l	#	79
43)	1,3-Dichloropropane	10.47	76	218122	10.40	ug/l		91
44)	Dibromochloromethane	10.79	129	191982	8.77	ug/l		95
45)	2-Hexanone	10.56	43	310287	10.54	ug/l	#	93
46)	Chlorobenzene	11.59	112	292866	10.48	ug/l		99
47)	1,1,1,2-Tetrachloroethane	11.70	131	147480	9.53	ug/l		99
48)	Ethylbenzene	11.73	106	135661	10.42	ug/l		87
49)	Xylene, m & p-	11.88	106	343747	20.75	ug/l		95
50)	Xylene, o-	12.44	106	162823	10.39	ug/l		98
51)	Styrene	12.45	104	262861	9.74	ug/l		99
52)	Bromoform	12.74	173	185878	8.06	ug/l		97
54)	Isopropylbenzene	12.96	120	132151	10.61	ug/l		90
55)	n-Propylbenzene	13.54	91	606367	10.16	ug/l		96
56)	1,3,5-Trimethylbenzene	13.78	120	194286	10.18	ug/l		87
57)	1,2,4-Trimethylbenzene	14.32	120	208368	10.08	ug/l		100
58)	1,1,2,2-Tetrachloroethane	13.36	83	236076	8.45	ug/l		99
59)	Bromobenzene	13.40	156	185674	10.00	ug/l		96
60)	1,2,3-Trichloropropane	13.43	75	282694	10.01	ug/l	#	74
61)	2-Chlorotoluene	13.67	126	121706	10.34	ug/l		93
62)	4-Chlorotoluene	13.83	126	129401	10.31	ug/l	m	93
63)	1,3-Dichlorobenzene	14.76	146	287642	9.72	ug/l	#	91
64)	1,4-Dichlorobenzene	14.89	146	334570	10.05	ug/l		97
65)	1,2-Dichlorobenzene	15.43	146	292330	9.84	ug/l		98
66)	tert-Butylbenzene	14.26	119	466908	10.30	ug/l		95
67)	sec-Butylbenzene	14.57	105	617254	10.40	ug/l		98
68)	p-Isopropyltoluene	14.78	119	522073	10.34	ug/l		98
69)	n-Butylbenzene	15.38	91	498183	10.20	ug/l		97
70)	1,2-Dibromo-3-chloropropan	16.58	75	135802	9.11	ug/l		89
71)	1,2,4-Trichlorobenzene	17.83	180	250721	9.41	ug/l		94
72)	1,2,3-Trichlorobenzene	18.62	180	256911	9.66	ug/l		93
73)	Hexachlorobutadiene	18.10	225	235290	10.29	ug/l		95
74)	Naphthalene	18.20	128	503269	8.96	ug/l		99

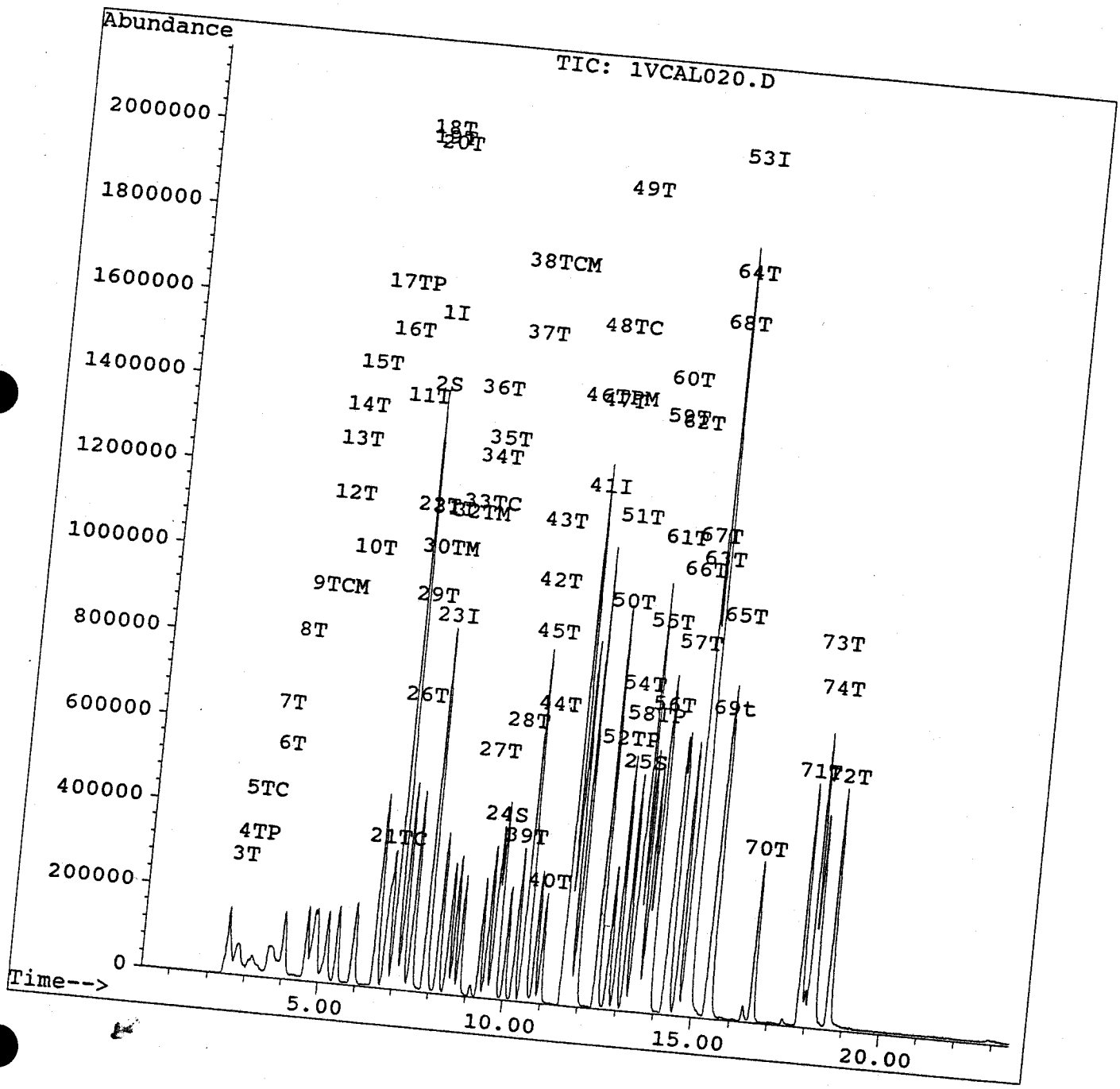
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL020.D
Acq Time : 14 Jul 95 7:05 pm
Sample : VOA ICAL 20 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:33 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



1VCAL020.D DAASHORT.M Mon Jul 17 09:54:39 1995 MS5970-APage 3

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL020.D
Acq Time : 14 Jul 95 7:05 pm
Sample : VOA ICAL 20 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:33 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.02	168	1686265	50.00	ug/l		-0.01
23) 1,4-Difluorobenzene	7.87	114	1513368	50.00	ug/l		-0.03
41) Chlorobenzene-d5	11.56	117	1348741	50.00	ug/l		-0.03
53) 1,4-Dichlorobenzene-d4	14.86	152	979984	50.00	ug/l		-0.02
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.01	113	384367	21.30	ug/l		42.60%
24) Toluene-d8	9.67	98	621422	19.71	ug/l		39.43%
25) Bromofluorobenzene	13.18	174	386922	20.38	ug/l		40.76%
Target Compounds							**Qvalue**
3) Dichlorodifluoromethane	2.78	85	257629	20.77	ug/l		97
4) Chloromethane	3.08	50	115426	21.93	ug/l		100
5) Vinyl Chloride	3.18	62	120072	20.82	ug/l		95
6) Chloroethane	3.72	64	69904	21.09	ug/l		99
7) Bromomethane	3.62	94	116590	20.07	ug/l		87
8) Trichlorofluoromethane	4.00	101	364267	23.76	ug/l		97
9) 1,1-Dichloroethene	4.62	96	165473	20.57	ug/l		97
10) trans-1,2-Dichloroethene	5.47	96	162099	20.35	ug/l		99
11) cis-1,2-Dichloroethene	6.50	96	182275	20.16	ug/l		92
12) Acetone	4.78	43	330363	31.30	ug/l		94
13) Iodomethane	4.83	142	470476	24.65	ug/l		99
14) Carbon Disulfide	4.90	76	376851	19.61	ug/l		99
15) Methylene Chloride	5.17	84	195899	20.10	ug/l		97
16) Vinyl Acetate	5.95	43	327920	17.93	ug/l		97
17) 1,1-Dichloroethane	5.90	63	365767	20.92	ug/l		99
18) 2,2-Dichloropropane	6.50	77	324498	18.96	ug/l		96
19) 2-Butanone	6.54	43	334126	22.69	ug/l		99
20) Bromochloromethane	6.76	128	152487	22.08	ug/l		91
21) Chloroform	6.83	83	494537	21.95	ug/l		99
22) 1,1,1-Trichloroethane	7.06	97	454783	22.24	ug/l	#	54
26) 1,1-Dichloropropene	7.23	77	99216	21.46	ug/l		84
27) cis-1,3-Dichloropropene	9.32	75	330674	20.07	ug/l		99
28) trans-1,3-Dichloropropene	10.00	75	318662	19.44	ug/l		97
29) Carbon Tetrachloride	7.25	117	356261	21.08	ug/l		96
30) Benzene	7.47	78	502093	20.65	ug/l		99
31) 1,2-Dichloroethane	7.47	62	457256	21.42	ug/l		96
32) Trichloroethene	8.21	95	313444	21.70	ug/l		96
33) 1,2-Dichloropropane	8.46	63	225738	20.26	ug/l		98
34) Dibromomethane	8.62	93	278860	21.12	ug/l		94
35) Bromodichloromethane	8.79	83	408226	19.70	ug/l		98
36) 2-Chloroethyl vinyl ether	8.46	63	225738	20.26	ug/l		94
37) 4-Methyl-2-pentanone	9.51	43	635474	20.72	ug/l	#	84
38) Toluene	9.76	92	394737	20.40	ug/l		97

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL020.D
Acq Time : 14 Jul 95 7:05 pm
Sample : VOA ICAL 20 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:33 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) 1,1,2-Trichloroethane	10.26	83	220127	20.28	ug/l		97
40) 1,2-Dibromoethane	10.96	107	427025	20.77	ug/l		92
42) Tetrachloroethene	10.49	166	378327	19.40	ug/l	#	77
43) 1,3-Dichloropropane	10.47	76	416101	20.47	ug/l		98
44) Dibromochloromethane	10.79	129	389167	18.33	ug/l		97
45) 2-Hexanone	10.56	43	583493	20.45	ug/l	#	93
46) Chlorobenzene	11.61	112	534212	19.73	ug/l		99
47) 1,1,1,2-Tetrachloroethane	11.70	131	291381	19.42	ug/l		98
48) Ethylbenzene	11.73	106	248205	19.67	ug/l		91
49) Xylene, m & p-	11.89	106	628528	39.14	ug/l		91
50) Xylene, o-	12.44	106	298111	19.62	ug/l		99
51) Styrene	12.45	104	496359	18.97	ug/l		97
52) Bromoform	12.74	173	383960	17.18	ug/l		97
54) Isopropylbenzene	12.96	120	239403	19.70	ug/l		93
55) n-Propylbenzene	13.53	91	1124443	19.31	ug/l		99
56) 1,3,5-Trimethylbenzene	13.78	120	359695	19.31	ug/l		93
57) 1,2,4-Trimethylbenzene	14.32	120	394466	19.55	ug/l		96
58) 1,1,2,2-Tetrachloroethane	13.35	83	458443	16.82	ug/l		96
59) Bromobenzene	13.42	156	349581	19.29	ug/l		92
60) 1,2,3-Trichloropropane	13.42	75	533044	19.34	ug/l		89
61) 2-Chlorotoluene	13.68	126	226375	19.71	ug/l		82
62) 4-Chlorotoluene	13.83	126	236229	19.28	ug/l	m	82
63) 1,3-Dichlorobenzene	14.76	146	538693	18.65	ug/l	#	88
64) 1,4-Dichlorobenzene	14.88	146	614114	18.90	ug/l		95
65) 1,2-Dichlorobenzene	15.44	146	542384	18.69	ug/l		99
66) tert-Butylbenzene	14.26	119	849999	19.22	ug/l		97
67) sec-Butylbenzene	14.58	105	1126490	19.45	ug/l		100
68) p-Isopropyltoluene	14.78	119	942005	19.11	ug/l		98
69) n-Butylbenzene	15.39	91	916019	19.21	ug/l		98
70) 1,2-Dibromo-3-chloropropan	16.57	75	269905	18.55	ug/l		92
71) 1,2,4-Trichlorobenzene	17.82	180	491146	18.89	ug/l		94
72) 1,2,3-Trichlorobenzene	18.61	180	499910	19.26	ug/l		96
73) Hexachlorobutadiene	18.09	225	430602	19.29	ug/l		98
74) Naphthalene	18.21	128	994668	18.14	ug/l		99

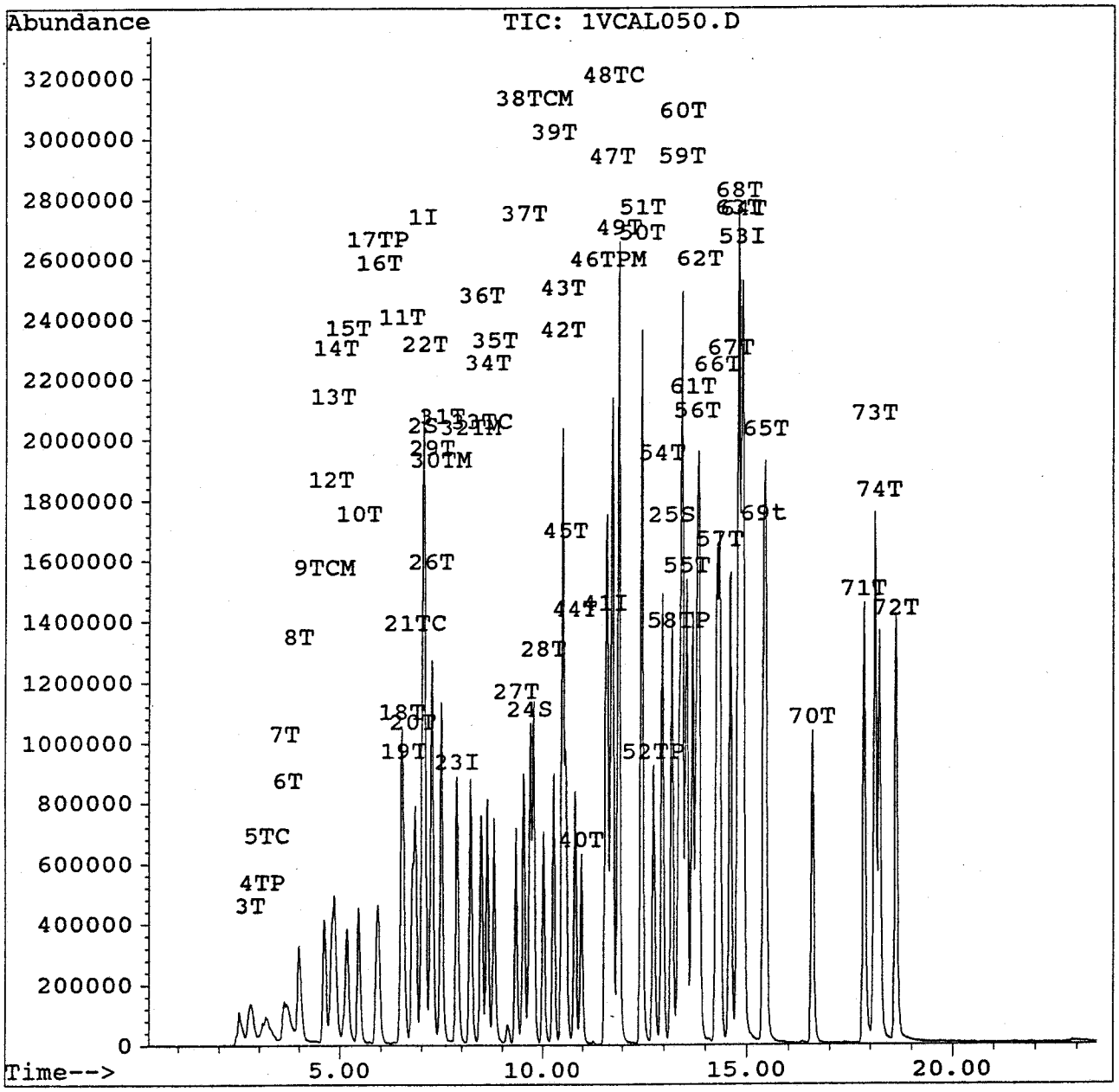
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL050.D
Acq Time : 14 Jul 95 7:41 pm
Sample : VOA ICAL 50 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:34 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL050.D
Acq Time : 14 Jul 95 7:41 pm
Sample : VOA ICAL 50 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:34 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.01	168	1727245	50.00	ug/l		-0.02
23) 1,4-Difluorobenzene	7.87	114	1561911	50.00	ug/l		-0.02
41) Chlorobenzene-d5	11.56	117	1367413	50.00	ug/l		-0.02
53) 1,4-Dichlorobenzene-d4	14.85	152	1002954	50.00	ug/l		-0.03
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.01	113	1001417	54.18	ug/l		108.36%
24) Toluene-d8	9.67	98	1601167	49.22	ug/l		98.43%
25) Bromofluorobenzene	13.18	174	983398	50.18	ug/l		100.37%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.78	85	636493	50.09	ug/l		95
4) Chloromethane	3.08	50	275880	51.16	ug/l		95
5) Vinyl Chloride	3.19	62	302754	51.26	ug/l		98
6) Chloroethane	3.71	64	175163	51.59	ug/l		94
7) Bromomethane	3.62	94	291604	49.00	ug/l		98
8) Trichlorofluoromethane	3.98	101	730565	46.51	ug/l		97
9) 1,1-Dichloroethene	4.60	96	414320	50.27	ug/l		98
10) trans-1,2-Dichloroethene	5.46	96	410000	50.25	ug/l		94
11) cis-1,2-Dichloroethene	6.49	96	452124	48.82	ug/l		99
12) Acetone	4.77	43	710582	65.72	ug/l		99
13) Iodomethane	4.80	142	1228854	62.85	ug/l		99
14) Carbon Disulfide	4.88	76	1042887	52.99	ug/l		100
15) Methylene Chloride	5.18	84	458445	45.93	ug/l		98
16) Vinyl Acetate	5.94	43	956099	51.05	ug/l		98
17) 1,1-Dichloroethane	5.89	63	914758	51.09	ug/l		97
18) 2,2-Dichloropropane	6.51	77	823315	46.96	ug/l		100
19) 2-Butanone	6.55	43	741812	49.19	ug/l		97
20) Bromochloromethane	6.77	128	377715	53.39	ug/l		100
21) Chloroform	6.83	83	1228070	53.22	ug/l		97
22) 1,1,1-Trichloroethane	7.06	97	1120580	53.50	ug/l		94
26) 1,1-Dichloropropene	7.23	77	244235	51.18	ug/l	#	82
27) cis-1,3-Dichloropropene	9.33	75	850534	50.02	ug/l		99
28) trans-1,3-Dichloropropene	10.01	75	842063	49.78	ug/l		96
29) Carbon Tetrachloride	7.24	117	962421	55.18	ug/l		99
30) Benzene	7.46	78	1228777	48.97	ug/l		97
31) 1,2-Dichloroethane	7.48	62	1101344	49.99	ug/l		99
32) Trichloroethene	8.20	95	730253	48.99	ug/l		97
33) 1,2-Dichloropropane	8.46	63	553529	48.13	ug/l		99
34) Dibromomethane	8.62	93	691034	50.71	ug/l		94
35) Bromodichloromethane	8.79	83	1084844	50.72	ug/l		96
36) 2-Chloroethyl vinyl ether	8.46	63	553529	48.13	ug/l		93
37) 4-Methyl-2-pentanone	9.51	43	1568977	49.56	ug/l	#	87
38) Toluene	9.75	92	975852	48.86	ug/l		100

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL050.D
Acq Time : 14 Jul 95 7:41 pm
Sample : VOA ICAL 50 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:34 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) 1,1,2-Trichloroethane	10.25	83	548881	48.99	ug/l		93
40) 1,2-Dibromoethane	10.96	107	1072953	50.58	ug/l		98
42) Tetrachloroethene	10.48	166	927330	46.91	ug/l	#	79
43) 1,3-Dichloropropane	10.48	76	1010200	49.01	ug/l		99
44) Dibromochloromethane	10.79	129	1050854	48.83	ug/l		100
45) 2-Hexanone	10.56	43	1421667	49.14	ug/l	#	94
46) Chlorobenzene	11.60	112	1309325	47.70	ug/l		100
47) 1,1,1,2-Tetrachloroethane	11.71	131	750102	49.31	ug/l		99
48) Ethylbenzene	11.73	106	607011	47.46	ug/l		91
49) Xylene, m & p-	11.89	106	1538947	94.52	ug/l		88
50) Xylene, o-	12.45	106	743672	48.27	ug/l		94
51) Styrene	12.46	104	1260388	47.51	ug/l		98
52) Bromoform	12.75	173	1088617	48.06	ug/l		98
54) Isopropylbenzene	12.95	120	593291	47.70	ug/l		93
55) n-Propylbenzene	13.53	91	2791798	46.84	ug/l		99
56) 1,3,5-Trimethylbenzene	13.79	120	904071	47.42	ug/l		96
57) 1,2,4-Trimethylbenzene	14.33	120	983835	47.63	ug/l		96
58) 1,1,2,2-Tetrachloroethane	13.35	83	1245432	44.65	ug/l		99
59) Bromobenzene	13.41	156	867543	46.76	ug/l		97
60) 1,2,3-Trichloropropane	13.43	75	1296524	45.96	ug/l		89
61) 2-Chlorotoluene	13.68	126	557994	47.47	ug/l		99
62) 4-Chlorotoluene	13.84	126	599999	47.85	ug/l	m	99
63) 1,3-Dichlorobenzene	14.77	146	1308620	44.27	ug/l	#	94
64) 1,4-Dichlorobenzene	14.89	146	1511558	45.45	ug/l		98
65) 1,2-Dichlorobenzene	15.44	146	1321665	44.51	ug/l		95
66) tert-Butylbenzene	14.26	119	2134898	47.16	ug/l		99
67) sec-Butylbenzene	14.59	105	2800272	47.23	ug/l		99
68) p-Isopropyltoluene	14.78	119	2386113	47.30	ug/l		100
69) n-Butylbenzene	15.38	91	2306511	47.26	ug/l		98
70) 1,2-Dibromo-3-chloropropan	16.58	75	742198	49.83	ug/l		94
71) 1,2,4-Trichlorobenzene	17.83	180	1237322	46.50	ug/l		97
72) 1,2,3-Trichlorobenzene	18.62	180	1245057	46.87	ug/l		97
73) Hexachlorobutadiene	18.10	225	1110979	48.63	ug/l		99
74) Naphthalene	18.21	128	2594706	46.23	ug/l		99

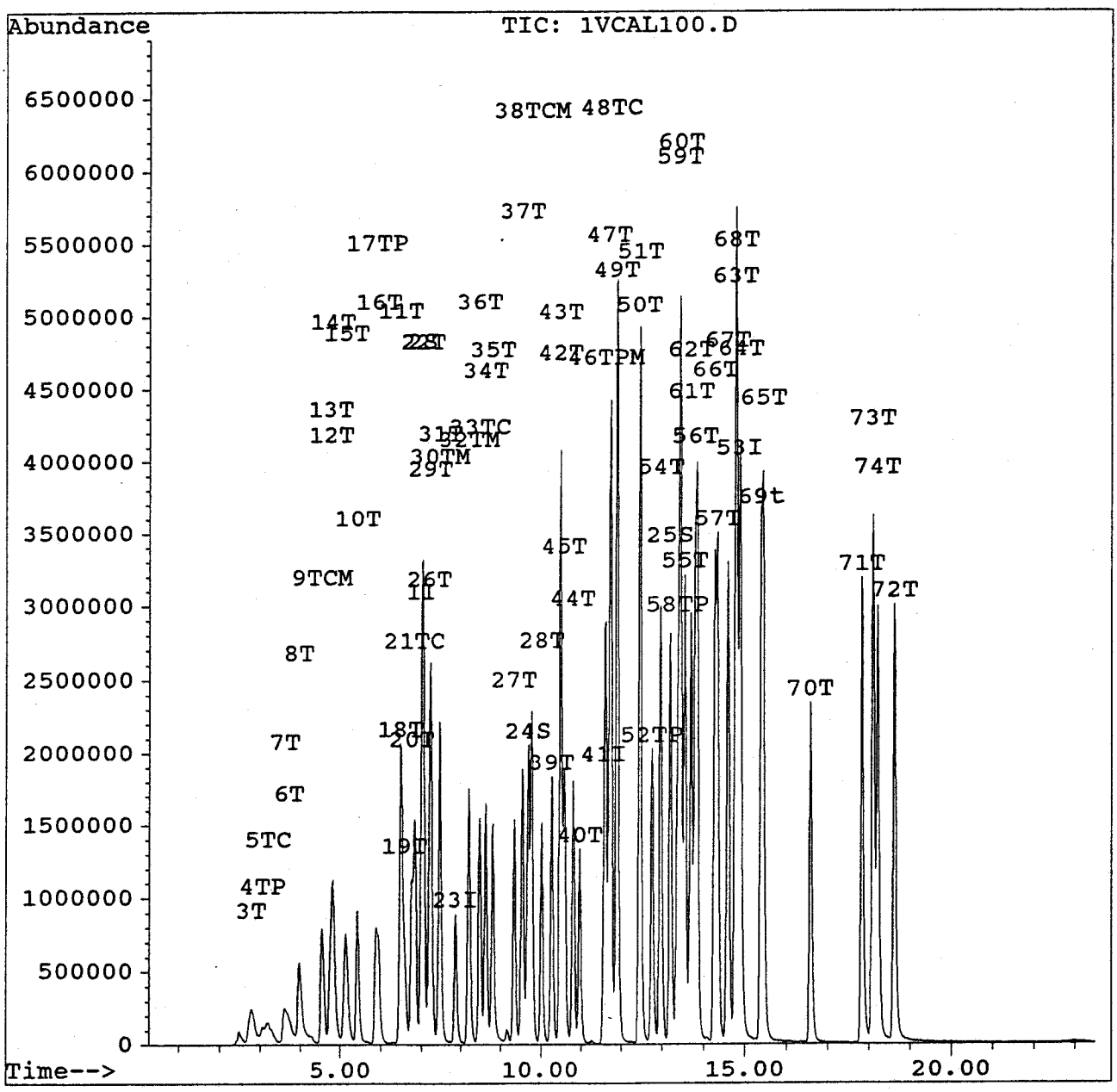
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL100.D
Acq Time : 14 Jul 95 8:18 pm
Sample : VOA ICAL 100 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:24 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL100.D
Acq Time : 14 Jul 95 8:18 pm
Sample : VOA ICAL 100 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:24 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.00	168	1712016	50.00	ug/l		-0.03
23) 1,4-Difluorobenzene	7.86	114	1560999	50.00	ug/l		-0.03
41) Chlorobenzene-d5	11.57	117	1372177	50.00	ug/l		-0.02
53) 1,4-Dichlorobenzene-d4	14.86	152	1013919	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.02	113	2033023	110.97	ug/l		221.94%
24) Toluene-d8	9.67	98	3171996	97.55	ug/l		195.11%
25) Bromofluorobenzene	13.19	174	1941890	99.15	ug/l		198.31%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.79	85	1289042	102.35	ug/l		98
4) Chloromethane	3.07	50	538597	100.77	ug/l		92
5) Vinyl Chloride	3.20	62	604047	103.18	ug/l		97
6) Chloroethane	3.72	64	347111	103.14	ug/l		91
7) Bromomethane	3.61	94	612242	103.80	ug/l		98
8) Trichlorofluoromethane	3.96	101	1401920	90.05	ug/l		96
9) 1,1-Dichloroethene	4.54	96	841018	102.96	ug/l		98
10) trans-1,2-Dichloroethene	5.42	96	852908	105.45	ug/l		96
11) cis-1,2-Dichloroethene	6.48	96	961946	104.78	ug/l		96
12) Acetone	4.77	43	1373472	128.16	ug/l		97
13) Iodomethane	4.76	142	2441736	125.99	ug/l		98
14) Carbon Disulfide	4.81	76	2233541	114.49	ug/l		99
15) Methylene Chloride	5.13	84	927884	93.79	ug/l		95
16) Vinyl Acetate	5.94	43	1958640	105.51	ug/l		100
17) 1,1-Dichloroethane	5.88	63	1934530	109.00	ug/l		99
18) 2,2-Dichloropropane	6.48	77	1757889	101.17	ug/l		99
19) 2-Butanone	6.58	43	1638308	109.60	ug/l		99
20) Bromochloromethane	6.76	128	759101	108.25	ug/l		95
21) Chloroform	6.83	83	2508517	109.68	ug/l		98
22) 1,1,1-Trichloroethane	7.04	97	2306518	111.09	ug/l		84
26) 1,1-Dichloropropene	7.21	77	490630	102.88	ug/l	#	81
27) cis-1,3-Dichloropropene	9.32	75	1831586	107.79	ug/l		99
28) trans-1,3-Dichloropropene	10.01	75	1824811	107.94	ug/l		99
29) Carbon Tetrachloride	7.23	117	2056447	117.98	ug/l		98
30) Benzene	7.46	78	2517373	100.39	ug/l		99
31) 1,2-Dichloroethane	7.48	62	2272479	103.21	ug/l		98
32) Trichloroethene	8.20	95	1500234	100.70	ug/l		97
33) 1,2-Dichloropropane	8.47	63	1156765	100.64	ug/l		100
34) Dibromomethane	8.61	93	1430347	105.02	ug/l		96
35) Bromodichloromethane	8.79	83	2333553	109.17	ug/l		96
36) 2-Chloroethyl vinyl ether	8.47	63	1156765	100.64	ug/l		96
37) 4-Methyl-2-pentanone	9.53	43	3345173	105.73	ug/l	#	84
38) Toluene	9.76	92	1992798	99.84	ug/l		97

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL100.D
Acq Time : 14 Jul 95 8:18 pm
Sample : VOA ICAL 100 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:24 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,1,2-Trichloroethane	10.27	83	1151007	102.79	ug/l		96
40)	1,2-Dibromoethane	10.97	107	2249323	106.09	ug/l		98
42)	Tetrachloroethene	10.48	166	1891755	95.37	ug/l	#	79
43)	1,3-Dichloropropane	10.48	76	2087890	100.95	ug/l		99
44)	Dibromochloromethane	10.80	129	2290618	106.07	ug/l		98
45)	2-Hexanone	10.58	43	3099135	106.74	ug/l	#	96
46)	Chlorobenzene	11.61	112	2732694	99.20	ug/l		99
47)	1,1,1,2-Tetrachloroethane	11.70	131	1594270	104.43	ug/l		96
48)	Ethylbenzene	11.74	106	1216166	94.75	ug/l		88
49)	Xylene, m & p-	11.89	106	3194752	195.54	ug/l		91
50)	Xylene, o-	12.44	106	1514985	98.00	ug/l		98
51)	Styrene	12.46	104	2641511	99.23	ug/l		100
52)	Bromoform	12.74	173	2433230	107.04	ug/l		98
54)	Isopropylbenzene	12.96	120	1234226	98.16	ug/l		93
55)	n-Propylbenzene	13.54	91	5922174	98.28	ug/l		98
56)	1,3,5-Trimethylbenzene	13.78	120	1882277	97.66	ug/l		97
57)	1,2,4-Trimethylbenzene	14.33	120	2001767	95.87	ug/l		97
58)	1,1,2,2-Tetrachloroethane	13.36	83	2685454	95.23	ug/l		99
59)	Bromobenzene	13.42	156	1795380	95.73	ug/l		97
60)	1,2,3-Trichloropropane	13.43	75	2704797	94.85	ug/l		84
61)	2-Chlorotoluene	13.69	126	1154362	97.13	ug/l		96
62)	4-Chlorotoluene	13.69	126	1154362	91.07	ug/l		96
63)	1,3-Dichlorobenzene	14.76	146	2745377	91.88	ug/l	#	93
64)	1,4-Dichlorobenzene	14.90	146	3086160	91.79	ug/l		98
65)	1,2-Dichlorobenzene	15.44	146	2766927	92.18	ug/l		97
66)	tert-Butylbenzene	14.27	119	4447374	97.18	ug/l		99
67)	sec-Butylbenzene	14.58	105	5887456	98.23	ug/l		100
68)	p-Isopropyltoluene	14.79	119	4881674	95.71	ug/l		99
69)	n-Butylbenzene	15.39	91	4849446	98.29	ug/l		98
70)	1,2-Dibromo-3-chloropropan	16.58	75	1683805	111.82	ug/l		91
71)	1,2,4-Trichlorobenzene	17.83	180	2652921	98.62	ug/l		98
72)	1,2,3-Trichlorobenzene	18.62	180	2637977	98.23	ug/l		99
73)	Hexachlorobutadiene	18.10	225	2324744	100.65	ug/l		97
74)	Naphthalene	18.21	128	5699515	100.45	ug/l		100

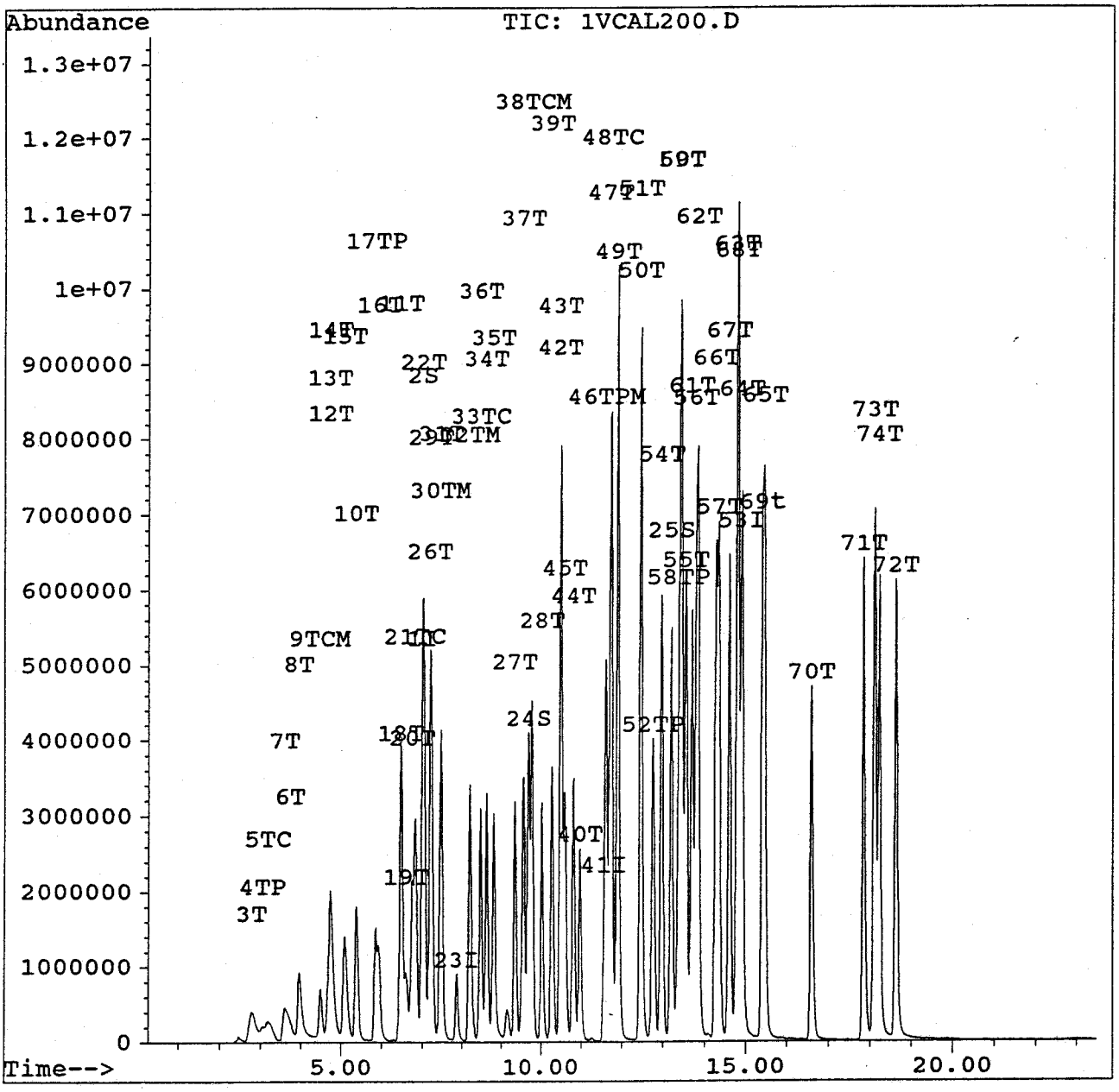
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL200.D
Acq Time : 14 Jul 95 8:54 pm
Sample : VOA ICAL 200 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:40 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL200.D
Acq Time : 14 Jul 95 8:54 pm
Sample : VOA ICAL 200 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:40 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.99	168	1736758	50.00	ug/l		-0.04
23) 1,4-Difluorobenzene	7.87	114	1616489	50.00	ug/l		-0.03
41) Chlorobenzene-d5	11.56	117	1434706	50.00	ug/l		-0.02
53) 1,4-Dichlorobenzene-d4	14.87	152	1043192	50.00	ug/l		0.00
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.01	113	4149917	223.29	ug/l		446.57%
24) Toluene-d8	9.68	98	6495863	192.92	ug/l		385.85%
25) Bromofluorobenzene	13.20	174	3997818	197.12	ug/l		394.25%
Target Compounds							**Qvalue**
3) Dichlorodifluoromethane	2.79	85	2530233	198.03	ug/l		98
4) Chloromethane	3.06	50	1061098	195.70	ug/l		93
5) Vinyl Chloride	3.19	62	1216073	204.77	ug/l		100
6) Chloroethane	3.73	64	663290	194.27	ug/l		93
7) Bromomethane	3.60	94	1267243	211.78	ug/l		100
8) Trichlorofluoromethane	3.95	101	2630780	166.58	ug/l		96
9) 1,1-Dichloroethene	4.47	96	653630	78.88	ug/l		88
10) trans-1,2-Dichloroethene	5.36	96	1725997	210.36	ug/l		95
11) cis-1,2-Dichloroethene	6.47	96	1891869	203.14	ug/l		90
12) Acetone	4.72	43	2331621	214.46	ug/l		97
13) Iodomethane	4.71	142	4742174	241.20	ug/l		97
14) Carbon Disulfide	4.72	76	4449095	224.82	ug/l		100
15) Methylene Chloride	5.07	84	1864733	185.80	ug/l		97
16) Vinyl Acetate	5.93	43	4206664	223.37	ug/l		100
17) 1,1-Dichloroethane	5.85	63	3902564	216.76	ug/l		99
18) 2,2-Dichloropropane	6.46	77	3496211	198.34	ug/l		99
19) 2-Butanone	6.61	43	3240214	213.69	ug/l		95
20) Bromochloromethane	6.75	128	1518913	213.51	ug/l		94
21) Chloroform	6.82	83	5055884	217.91	ug/l		98
22) 1,1,1-Trichloroethane	7.03	97	4575084	217.22	ug/l	#	74
26) 1,1-Dichloropropene	7.20	77	974021	197.23	ug/l	#	86
27) cis-1,3-Dichloropropene	9.33	75	3847632	218.65	ug/l		97
28) trans-1,3-Dichloropropene	10.02	75	3838700	219.27	ug/l		100
29) Carbon Tetrachloride	7.21	117	4186881	231.96	ug/l		99
30) Benzene	7.44	78	5071713	195.32	ug/l		98
31) 1,2-Dichloroethane	7.47	62	4558111	199.90	ug/l		97
32) Trichloroethene	8.19	95	3034787	196.70	ug/l		99
33) 1,2-Dichloropropane	8.47	63	2338191	196.44	ug/l		99
34) Dibromomethane	8.61	93	2912386	206.49	ug/l		93
35) Bromodichloromethane	8.80	83	4854259	219.29	ug/l		98
36) 2-Chloroethyl vinyl ether	8.47	63	2338191	196.44	ug/l		99
37) 4-Methyl-2-pentanone	9.53	43	6772605	206.70	ug/l	#	82
38) Toluene	9.76	92	3995286	193.30	ug/l		95

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071495V\1VCAL200.D
Acq Time : 14 Jul 95 8:54 pm
Sample : VOA ICAL 200 ppb MIX 01
Misc : VOA ICAL #1
Quant Time: Jul 17 9:40 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,1,2-Trichloroethane	10.26	83	2331348	201.05	ug/l		95
40)	1,2-Dibromoethane	10.97	107	4661351	212.30	ug/l		96
42)	Tetrachloroethene	10.48	166	3741397	180.39	ug/l	m	78
43)	1,3-Dichloropropane	10.48	76	4197112	194.09	ug/l	m	99
44)	Dibromochloromethane	10.80	129	4775810	211.52	ug/l	m	97
45)	2-Hexanone	10.59	43	6146920	202.49	ug/l	m	96
46)	Chlorobenzene	11.61	112	5487894	190.54	ug/l	m	100
47)	1,1,1,2-Tetrachloroethane	11.71	131	3229779	202.34	ug/l	m	99
48)	Ethylbenzene	11.75	106	2420421	180.36	ug/l	m	97
49)	Xylene, m & p-	11.89	106	6295581	368.54	ug/l	m	84
50)	Xylene, o-	12.45	106	3015596	186.56	ug/l	m	95
51)	Styrene	12.46	104	5347772	192.15	ug/l	m	97
52)	Bromoform	12.75	173	5185978	218.20	ug/l	m	97
54)	Isopropylbenzene	12.96	120	2480909	191.78	ug/l		98
55)	n-Propylbenzene	13.55	91	11760262	189.69	ug/l		100
56)	1,3,5-Trimethylbenzene	13.79	120	3756879	189.46	ug/l		86
57)	1,2,4-Trimethylbenzene	14.34	120	4028437	187.51	ug/l		94
58)	1,1,2,2-Tetrachloroethane	13.37	83	5534497	190.76	ug/l		98
59)	Bromobenzene	13.43	156	3549616	183.96	ug/l		92
60)	1,2,3-Trichloropropane	13.44	75	5316348	181.19	ug/l		80
61)	2-Chlorotoluene	13.69	126	2358040	192.85	ug/l		100
62)	4-Chlorotoluene	13.84	126	2413638	185.08	ug/l	m	100
63)	1,3-Dichlorobenzene	14.77	146	5560382	180.86	ug/l	#	92
64)	1,4-Dichlorobenzene	14.91	146	6201524	179.27	ug/l		99
65)	1,2-Dichlorobenzene	15.45	146	5480198	177.45	ug/l		98
66)	tert-Butylbenzene	14.28	119	8944295	189.96	ug/l		97
67)	sec-Butylbenzene	14.59	105	11860546	192.34	ug/l		100
68)	p-Isopropyltoluene	14.80	119	9606536	183.07	ug/l		100
69)	n-Butylbenzene	15.39	91	9876711	194.57	ug/l		99
70)	1,2-Dibromo-3-chloropropan	16.59	75	3406714	219.90	ug/l		94
71)	1,2,4-Trichlorobenzene	17.84	180	5428721	196.14	ug/l		99
72)	1,2,3-Trichlorobenzene	18.62	180	5365946	194.20	ug/l		98
73)	Hexachlorobutadiene	18.11	225	4624356	194.60	ug/l		99
74)	Naphthalene	18.22	128	11826859	202.59	ug/l		100

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:00:03 1995
Response via : Initial Calibration

Continuing Calibration File: 1VSTD02.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	110
2	S	Dibromofluoromethane	0.587	0.545	7.2	103
3	T	Dichlorodifluoromethane	0.378	0.339	10.2	101
4	TP	Chloromethane	0.167	0.136	18.4	94
5	TC	Vinyl Chloride	0.178	0.153	14.5	96
6	T	Chloroethane	0.100	0.092#	8.2	99
7	T	Bromomethane	0.174	0.172	0.9	112
8	T	Trichlorofluoromethane	0.493	0.408	17.2	106
9	TCM	1,1-Dichloroethene	0.215	0.227	-5.7	104
10	T	trans-1,2-Dichloroethene	0.243	0.226	7.0	104
11	T	cis-1,2-Dichloroethene	0.271	0.269	0.8	113
12	T	Acetone	0.448	0.389	13.2	104
13	T	Iodomethane	0.695	0.625	10.1	96
14	T	Carbon Disulfide	0.600	0.540	10.0	98
15	T	Methylene Chloride	0.284	0.236	16.9	98
16	T	Vinyl Acetate	0.529	0.522	1.3	104
17	TP	1,1-Dichloroethane	0.552	0.497	10.0	103
18	T	2,2-Dichloropropane	0.490	0.520	-6.0	120
19	T	2-Butanone	0.484	0.502	-3.8	128
20	T	Bromochloromethane	0.222	0.206	7.1	104
21	TC	Chloroform	0.728	0.689	5.4	106
22	T	1,1,1-Trichloroethane	0.660	0.638	3.4	108
23	I	1,4-Difluorobenzene	1.000	1.000	0.0	107
24	S	Toluene-d8	1.043	1.026	1.6	107
25	S	Bromofluorobenzene	0.647	0.634	1.9	108
26	T	1,1-Dichloropropene	0.159	0.155	2.1	106
27	T	cis-1,3-Dichloropropene	0.558	0.563	-0.9	110
28	T	trans-1,3-Dichloropropene	0.549	0.567	-3.2	112
29	T	Carbon Tetrachloride	0.614	0.609	0.9	106
30	TM	Benzene	0.816	0.782	4.2	106
31	T	1,2-Dichloroethane	0.734	0.685	6.7	104
32	TM	Trichloroethene	0.492	0.481	2.3	110
33	TC	1,2-Dichloropropane	0.366	0.352	3.7#	106
34	T	Dibromomethane	0.453	0.394	13.1	95
35	T	Bromodichloromethane	0.702	0.675	4.0	104
36	T	2-Chloroethyl vinyl ether	0.366	0.352	3.7	106
37	T	4-Methyl-2-pentanone	1.040	1.044	-0.4	111
38	TCM	Toluene	0.638	0.642	-0.5#	110
39	T	1,1,2-Trichloroethane	0.362	0.363	-0.2	110
40	T	1,2-Dibromoethane	0.706	0.690	2.3	107
41	I	Chlorobenzene-d5	1.000	1.000	0.0	107

(#) = Out of Range

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:00:03 1995
Response via : Initial Calibration

Continuing Calibration File: 1VSTD02.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
42	T	Tetrachloroethene	0.692	0.709	-2.4	111
43	T	1,3-Dichloropropane	0.757	0.760	-0.4	110
44	T	Dibromochloromethane	0.769	0.804	-4.5	111
45	T	2-Hexanone	1.087	1.117	-2.8	114
46	TPM	Chlorobenzene	0.990	0.999	-0.9	111
47	T	1,1,1,2-Tetrachloroethane	0.552	0.581	-5.3	113
48	TC	Ethylbenzene	0.451	0.468	-3.7	112
49	T	Xylene, m & p-	0.579	0.611	-5.7	116
50	T	Xylene, o-	0.552	0.572	-3.6	112
51	T	Styrene	0.936	1.005	-7.4	116
52	TP	Bromoform	0.793	0.865	-9.0	116
53	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104
54	T	Isopropylbenzene	0.613	0.650	-6.0	115
55	T	n-Propylbenzene	2.882	3.106	-7.8	116
56	T	1,3,5-Trimethylbenzene	0.923	1.002	-8.6	116
57	T	1,2,4-Trimethylbenzene	0.996	1.089	-9.4	116
58	TP	1,1,2,2-Tetrachloroethane	1.248	1.380	-10.6	116
59	T	Bromobenzene	0.884	0.969	-9.7	117
60	T	1,2,3-Trichloropropane	1.334	1.420	-6.5	115
61	T	2-Chlorotoluene	0.575	0.611	-6.2	114
62	T	4-Chlorotoluene	0.599	0.656	-9.5	114
63	T	1,3-Dichlorobenzene	1.360	1.512	-11.2	121
64	T	1,4-Dichlorobenzene	1.550	1.728	-11.5	120
65	T	1,2-Dichlorobenzene	1.367	1.524	-11.5	121
66	T	tert-Butylbenzene	2.192	2.377	-8.5	116
67	T	sec-Butylbenzene	2.897	3.133	-8.1	117
68	T	p-Isopropyltoluene	2.418	2.701	-11.7	118
69	t	n-Butylbenzene	2.375	2.625	-10.5	119
70	T	1,2-Dibromo-3-chloropropane	0.750	0.844	-12.5	119
71	T	1,2,4-Trichlorobenzene	1.269	1.507	-18.8	127
72	T	1,2,3-Trichlorobenzene	1.277	1.508	-18.2	127
73	T	Hexachlorobutadiene	1.127	1.323	-17.4	125
74	T	Naphthalene	2.655	3.230	-21.6	130

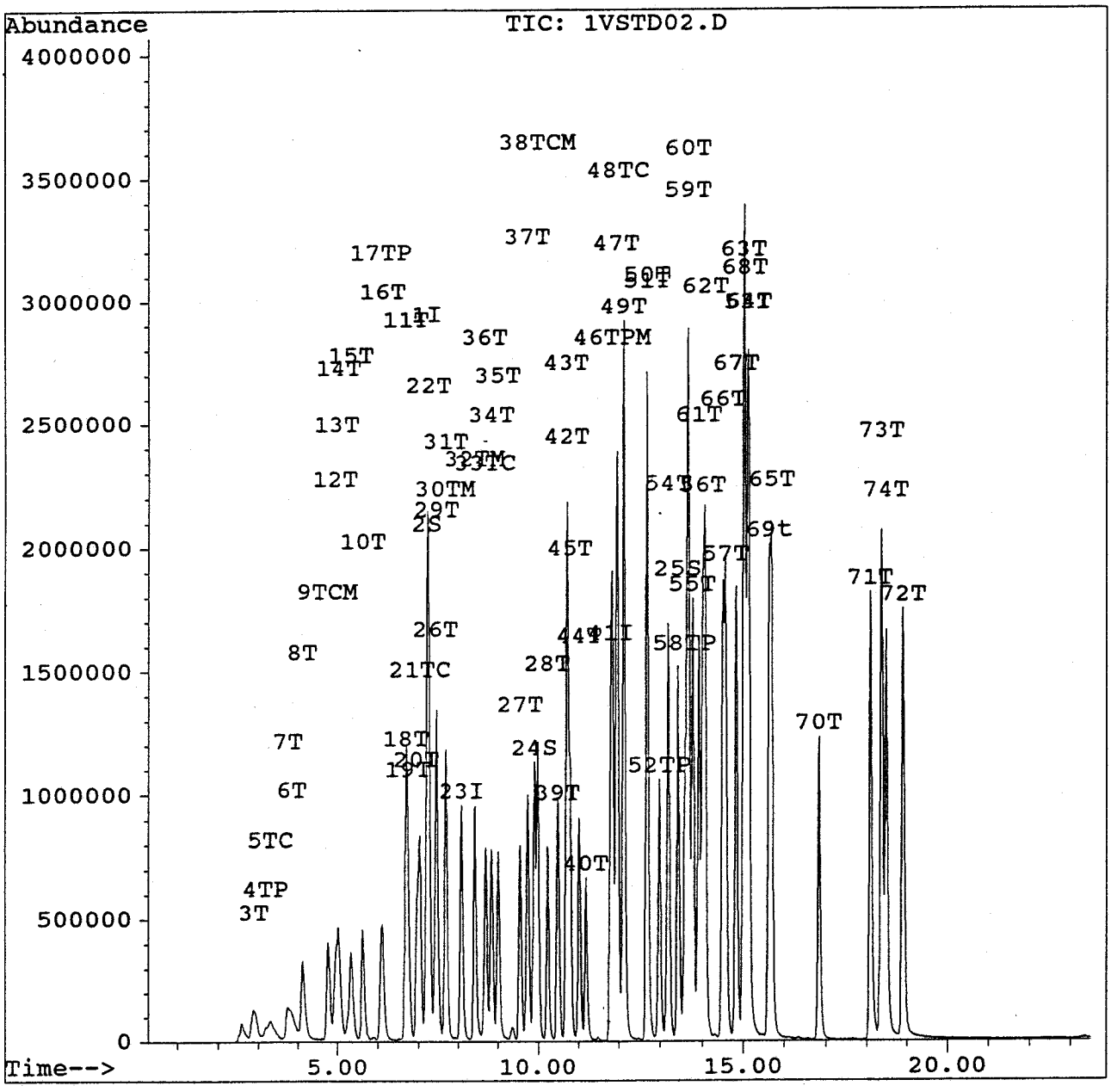
(#) = Out of Range SPCC's out = 0 CCC's out = 2

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\1VSTD02.D
Acq Time : 18 Jul 95 12:22 pm
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/18/95
Quant Time: Jul 18 12:59 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:00:03 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\1VSTD02.D
Acq Time : 18 Jul 95 12:22 pm
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/18/95
Quant Time: Jul 18 12:59 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:00:03 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.21	168	1897182	50.00	ug/l		0.17
23) 1,4-Difluorobenzene	8.08	114	1667981	50.00	ug/l		0.18
41) Chlorobenzene-d5	11.79	117	1456316	50.00	ug/l		0.21
53) 1,4-Dichlorobenzene-d4	15.10	152	1045908	50.00	ug/l		0.22
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.21	113	1034399	46.41	ug/l		92.81%
24) Toluene-d8	9.89	98	1711100	49.18	ug/l		98.36%
25) Bromofluorobenzene	13.41	174	1058012	49.05	ug/l		98.10%
Target Compounds							**Qvalue**
3) Dichlorodifluoromethane	2.89	85	643703	44.91	ug/l		99
4) Chloromethane	3.19	50	258328	40.81	ug/l		97
5) Vinyl Chloride	3.31	62	289395	42.76	ug/l		95
6) Chloroethane	3.84	64	174067	45.92	ug/l		92
7) Bromomethane	3.74	94	327056	49.54	ug/l		97
8) Trichlorofluoromethane	4.11	101	774075	41.39	ug/l		97
9) 1,1-Dichloroethene	4.74	96	430574	52.85	ug/l		92
10) trans-1,2-Dichloroethene	5.63	96	428271	46.50	ug/l		91
11) cis-1,2-Dichloroethene	6.69	96	510421	49.61	ug/l		99
12) Acetone	4.94	43	737709	43.40	ug/l		100
13) Iodomethane	4.97	142	1185773	44.95	ug/l		99
14) Carbon Disulfide	5.02	76	1024969	45.00	ug/l		100
15) Methylene Chloride	5.34	84	447401	41.53	ug/l		97
16) Vinyl Acetate	6.12	43	990717	49.34	ug/l		99
17) 1,1-Dichloroethane	6.07	63	942248	45.01	ug/l		99
18) 2,2-Dichloropropane	6.69	77	986418	53.02	ug/l		100
19) 2-Butanone	6.75	43	952734	51.90	ug/l		98
20) Bromochloromethane	6.95	128	391006	46.46	ug/l		98
21) Chloroform	7.04	83	1306479	47.31	ug/l		100
22) 1,1,1-Trichloroethane	7.25	97	1210767	48.32	ug/l		97
26) 1,1-Dichloropropene	7.42	77	258794	48.94	ug/l		86
27) cis-1,3-Dichloropropene	9.54	75	939405	50.45	ug/l		99
28) trans-1,3-Dichloropropene	10.21	75	945458	51.58	ug/l		95
29) Carbon Tetrachloride	7.45	117	1015411	49.57	ug/l		95
30) Benzene	7.67	78	1304015	47.92	ug/l		98
31) 1,2-Dichloroethane	7.68	62	1142217	46.66	ug/l		98
32) Trichloroethene	8.40	95	801832	48.83	ug/l		95
33) 1,2-Dichloropropane	8.67	63	587446	48.13	ug/l		100
34) Dibromomethane	8.82	93	657545	43.47	ug/l		98
35) Bromodichloromethane	8.99	83	1125163	48.02	ug/l		97
36) 2-Chloroethyl vinyl ether	8.67	63	587446	48.13	ug/l		99
37) 4-Methyl-2-pentanone	9.72	43	1741880	50.19	ug/l	#	84
38) Toluene	9.97	92	1070428	50.27	ug/l		99

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\1VSTD02.D
Acq Time : 18 Jul 95 12:22 pm
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/18/95
Quant Time: Jul 18 12:59 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:00:03 1995
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,1,2-Trichloroethane	10.48	83	604854	50.10	ug/l		95
40)	1,2-Dibromoethane	11.18	107	1150528	48.85	ug/l		99
42)	Tetrachloroethene	10.71	166	1032246	51.19	ug/l	#	76
43)	1,3-Dichloropropane	10.70	76	1106951	50.19	ug/l		100
44)	Dibromochloromethane	11.01	129	1171268	52.27	ug/l		97
45)	2-Hexanone	10.78	43	1627325	51.39	ug/l	#	94
46)	Chlorobenzene	11.83	112	1455217	50.45	ug/l		99
47)	1,1,1,2-Tetrachloroethane	11.93	131	846788	52.63	ug/l		98
48)	Ethylbenzene	11.96	106	681343	51.84	ug/l		97
49)	Xylene, m & p-	12.11	106	1780864	105.66	ug/l		97
50)	Xylene, o-	12.68	106	832823	51.82	ug/l		98
51)	Styrene	12.69	104	1464314	53.71	ug/l		99
52)	Bromoform	12.98	173	1259071	54.50	ug/l		98
54)	Isopropylbenzene	13.18	120	679503	53.02	ug/l		95
55)	n-Propylbenzene	13.76	91	3248209	53.88	ug/l		99
56)	1,3,5-Trimethylbenzene	14.01	120	1048040	54.28	ug/l		98
57)	1,2,4-Trimethylbenzene	14.56	120	1139340	54.71	ug/l		99
58)	1,1,2,2-Tetrachloroethane	13.58	83	1443359	55.31	ug/l		99
59)	Bromobenzene	13.66	156	1013390	54.83	ug/l		98
60)	1,2,3-Trichloropropane	13.66	75	1485171	53.24	ug/l		87
61)	2-Chlorotoluene	13.91	126	638790	53.12	ug/l		100
62)	4-Chlorotoluene	14.07	126	685858	54.77	ug/l	m	100
63)	1,3-Dichlorobenzene	15.00	146	1580935	55.59	ug/l	#	92
64)	1,4-Dichlorobenzene	15.13	146	1807434	55.76	ug/l		97
65)	1,2-Dichlorobenzene	15.69	146	1593612	55.73	ug/l		96
66)	tert-Butylbenzene	14.50	119	2486603	54.24	ug/l		97
67)	sec-Butylbenzene	14.82	105	3276914	54.07	ug/l		99
68)	p-Isopropyltoluene	15.02	119	2825021	55.84	ug/l		98
69)	n-Butylbenzene	15.63	91	2745795	55.26	ug/l		99
70)	1,2-Dibromo-3-chloropropan	16.82	75	883081	56.26	ug/l		96
71)	1,2,4-Trichlorobenzene	18.09	180	1576635	59.40	ug/l		95
72)	1,2,3-Trichlorobenzene	18.90	180	1577596	59.08	ug/l		97
73)	Hexachlorobutadiene	18.37	225	1383218	58.70	ug/l		100
74)	Naphthalene	18.48	128	3377905	60.82	ug/l		99

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:45:43 1995
Response via : Initial Calibration

Continuing Calibration File: 2VSTD02.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	88
2	S	Dibromofluoromethane	0.602	0.527	12.5	61
3	T	Allyl Chloride	0.102	0.097#	5.2	20#
4	T	Acetonitrile	0.228	0.173	24.0	29#
5	T	Acrylonitrile	0.149	0.132	11.5	24#
6	T	Acrolein	0.049	0.045#	7.5	29#
7	T	Chloroprene	0.363	0.339	6.6	19#
8	T	Propionitrile	0.083	0.075#	10.1	27#
9	T	Methacrylonitrile	0.115	0.119	-3.3	29#
10	T	Methyl Methacrylate	0.355	0.320	10.0	22#
11	T	Isobutanol	0.115	0.076#	34.1#	23#
12	I	1,4-Difluorobenzene	1.000	1.000	0.0	86
13	S	Toluene-d8	1.137	1.003	11.8	57
14	S	Bromofluorobenzene	0.674	0.614	8.8	64
15	T	Ethyl methacrylate	0.683	0.675	1.3	23#
16	I	Chlorobenzene-d5	1.000	1.000	0.0	86
17	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87
18	T	trans-1,4-Dichloro-2-butene	0.316	0.310	1.9	19#

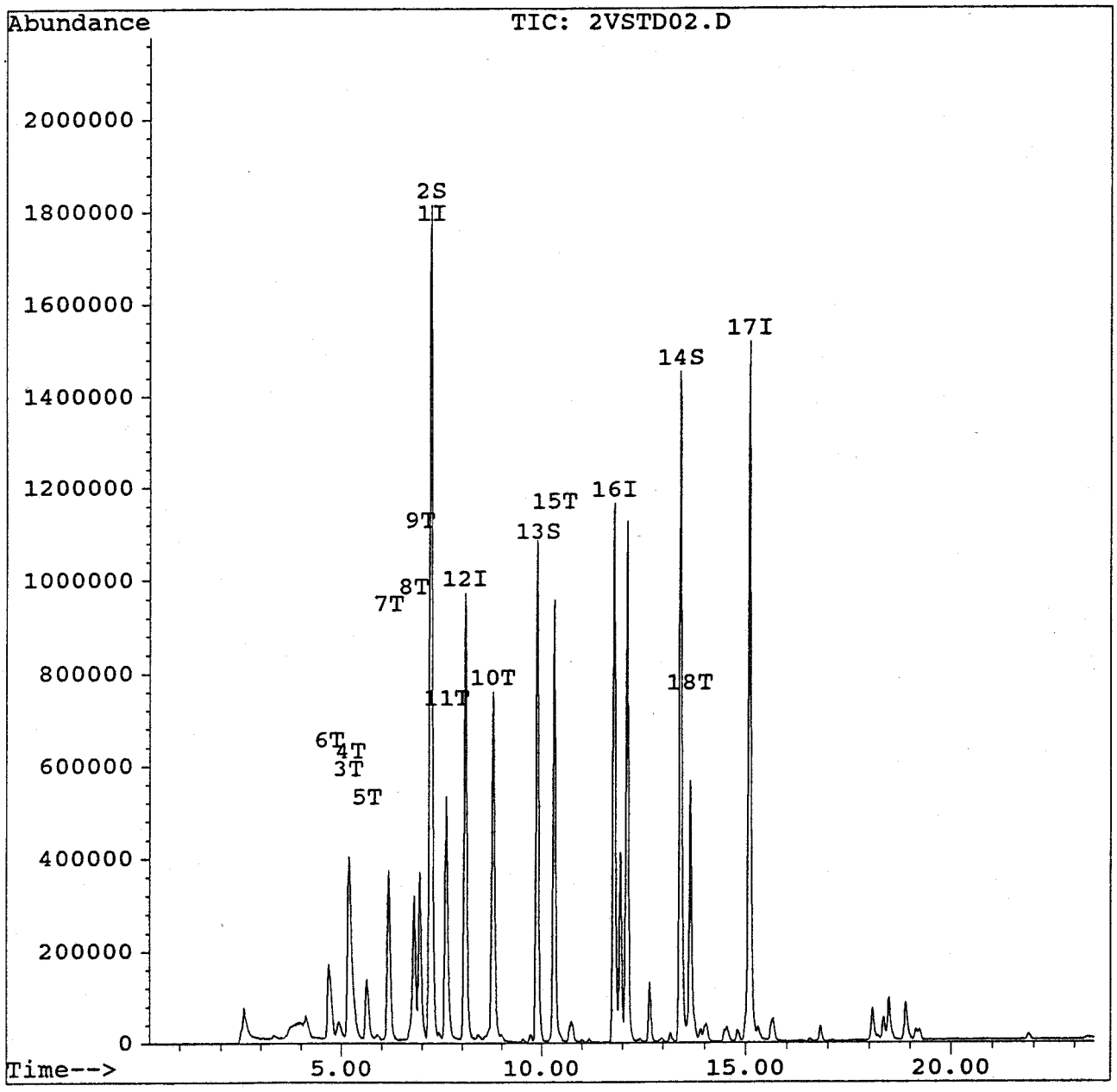
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\2VSTD02.D
Acq Time : 18 Jul 95 1:16 pm
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/18/95
Quant Time: Jul 18 13:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\2VSTD02.D
Acq Time : 18 Jul 95 1:16 pm
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/18/95
Quant Time: Jul 18 13:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Mon Jul 17 09:49:08 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.22	168	1915110	50.00	ug/l		0.18
12) 1,4-Difluorobenzene	8.06	114	1676472	50.00	ug/l		0.17
16) Chlorobenzene-d5	11.79	117	1486605	50.00	ug/l		0.19
17) 1,4-Dichlorobenzene-d4	15.08	152	1030350	50.00	ug/l		0.20
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.20	113	1009276	43.75	ug/l		87.51%
13) Toluene-d8	9.88	98	1681320	44.11	ug/l		88.22%
14) Bromofluorobenzene	13.40	174	1030127	45.59	ug/l		91.19%
Target Compounds							**Qvalue**
3) Allyl Chloride	5.17	76	184886	47.39	ug/l		86
4) Acetonitrile	5.21	40	331217	38.00	ug/l	#	59
5) Acrylonitrile	5.62	53	251952	44.24	ug/l		96
6) Acrolein	4.68	56	429897	231.20	ug/l		91
7) Chloroprene	6.17	53	648362	46.69	ug/l		99
8) Propionitrile	6.79	54	717928	224.68	ug/l		96
9) Methacrylonitrile	6.94	67	227192	51.66	ug/l		81
10) Methyl Methacrylate	8.76	69	612609	45.00	ug/l	#	81
11) Isobutanol	7.60	43	727013	164.69	ug/l	#	92
15) Ethyl methacrylate	10.30	69	1130897	49.36	ug/l	#	70
18) trans-1,4-Dichloro-2-buten	13.64	53	319771	49.05	ug/l	#	53

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Initial Calibration

Continuing Calibration File: 1VSTD03.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	103
2	S	Dibromofluoromethane	0.587	0.561	4.4	99
3	T	Dichlorodifluoromethane	0.378	0.358	5.3	100
4	TP	Chloromethane	0.167	0.140	16.3	90
5	TC	Vinyl Chloride	0.178	0.156	12.3	92
6	T	Chloroethane	0.100	0.092#	7.5	94
7	T	Bromomethane	0.174	0.158	9.1	96
8	T	Trichlorofluoromethane	0.493	0.430	12.7	105
9	TCM	1,1-Dichloroethene	0.215	0.228	-6.3	98
10	T	trans-1,2-Dichloroethene	0.243	0.227	6.4	98
11	T	cis-1,2-Dichloroethene	0.271	0.257	5.3	101
12	T	Acetone	0.448	0.408	9.0	102
13	T	Iodomethane	0.695	0.671	3.4	97
14	T	Carbon Disulfide	0.600	0.534	11.0	91
15	T	Methylene Chloride	0.284	0.249	12.2	96
16	T	Vinyl Acetate	0.529	0.535	-1.1	99
17	TP	1,1-Dichloroethane	0.552	0.515	6.7	100
18	T	2,2-Dichloropropane	0.490	0.515	-5.0	111
19	T	2-Butanone	0.484	0.461	4.7	110
20	T	Bromochloromethane	0.222	0.213	4.0	100
21	TC	Chloroform	0.728	0.705	3.2	102
22	T	1,1,1-Trichloroethane	0.660	0.656	0.7	104
23	I	1,4-Difluorobenzene	1.000	1.000	0.0	100
24	S	Toluene-d8	1.043	1.061	-1.7	104
25	S	Bromofluorobenzene	0.647	0.663	-2.5	105
26	T	1,1-Dichloropropene	0.159	0.161	-1.3	103
27	T	cis-1,3-Dichloropropene	0.558	0.578	-3.6	106
28	T	trans-1,3-Dichloropropene	0.549	0.581	-5.7	108
29	T	Carbon Tetrachloride	0.614	0.642	-4.6	104
30	TM	Benzene	0.816	0.800	1.9	102
31	T	1,2-Dichloroethane	0.734	0.715	2.5	101
32	TM	Trichloroethene	0.492	0.484	1.6	104
33	TC	1,2-Dichloropropane	0.366	0.371	-1.5#	105
34	T	Dibromomethane	0.453	0.443	2.3	100
35	T	Bromodichloromethane	0.702	0.726	-3.4	105
36	T	2-Chloroethyl vinyl ether	0.366	0.371	-1.5	105
37	T	4-Methyl-2-pentanone	1.040	1.075	-3.4	107
38	TCM	Toluene	0.638	0.667	-4.4#	107
39	T	1,1,2-Trichloroethane	0.362	0.372	-2.8	106
40	T	1,2-Dibromoethane	0.706	0.718	-1.6	104
41	I	Chlorobenzene-d5	1.000	1.000	0.0	100

(#) = Out of Range

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Initial Calibration

Continuing Calibration File: 1VSTD03.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

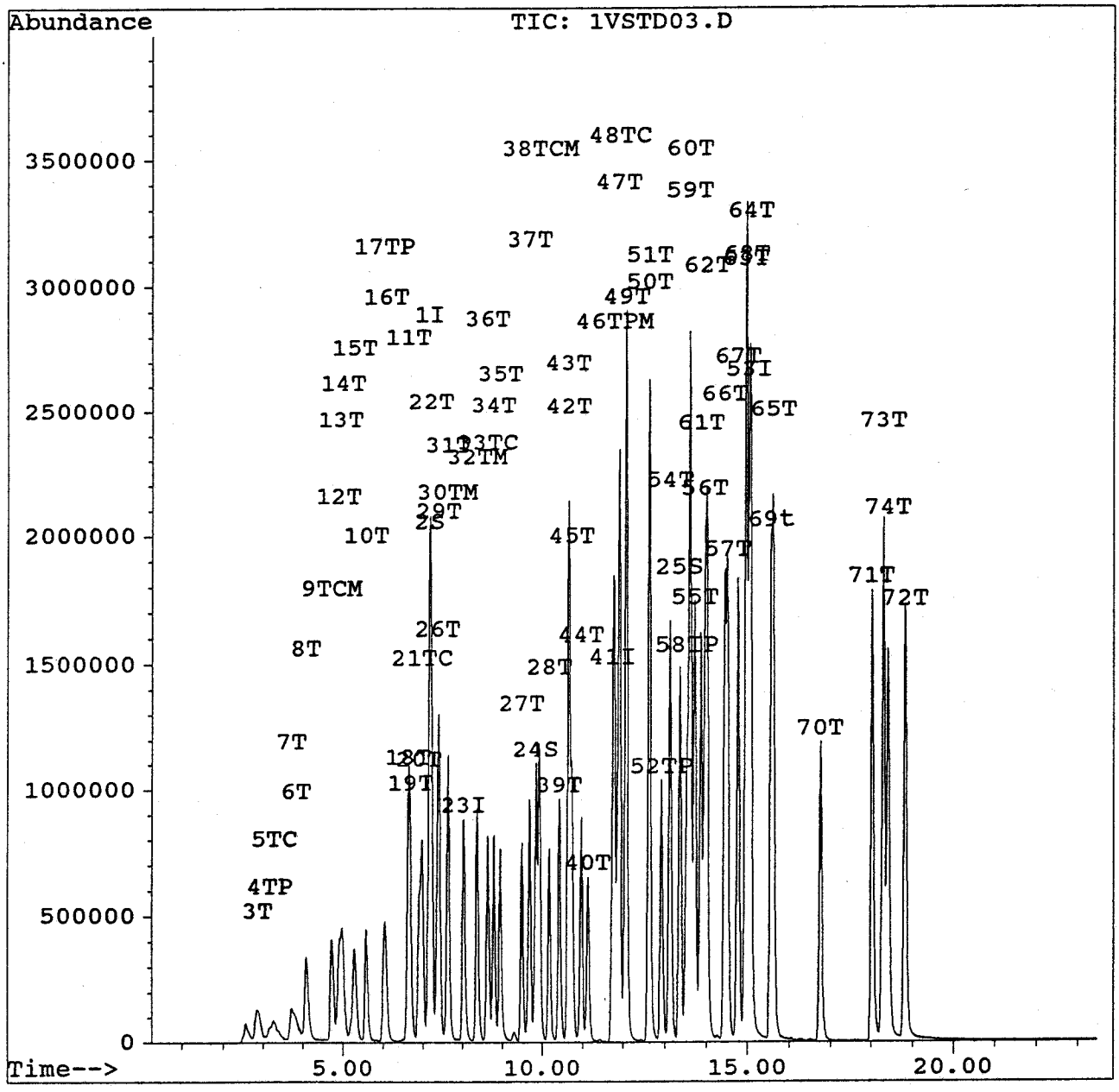
		Compound	AvgRRF	CCRRF	%Dev	Area%
42	T	Tetrachloroethene	0.692	0.734	-6.0	109
43	T	1,3-Dichloropropane	0.757	0.784	-3.5	107
44	T	Dibromochloromethane	0.769	0.821	-6.7	107
45	T	2-Hexanone	1.087	1.156	-6.3	112
46	TPM	Chlorobenzene	0.990	1.027	-3.7	108
47	T	1,1,1,2-Tetrachloroethane	0.552	0.599	-8.5	110
48	TC	Ethylbenzene	0.451	0.490	-8.6	111
49	T	Xylene, m & p-	0.579	0.629	-8.7	112
50	T	Xylene, o-	0.552	0.590	-6.9	109
51	T	Styrene	0.936	1.029	-9.9	112
52	TP	Bromoform	0.793	0.877	-10.5	111
53	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102
54	T	Isopropylbenzene	0.613	0.655	-6.9	113
55	T	n-Propylbenzene	2.882	3.147	-9.2	115
56	T	1,3,5-Trimethylbenzene	0.923	1.008	-9.2	114
57	T	1,2,4-Trimethylbenzene	0.996	1.093	-9.8	113
58	TP	1,1,2,2-Tetrachloroethane	1.248	1.376	-10.3	113
59	T	Bromobenzene	0.884	0.958	-8.5	113
60	T	1,2,3-Trichloropropane	1.334	1.414	-6.0	111
61	T	2-Chlorotoluene	0.575	0.605	-5.2	111
62	T	4-Chlorotoluene	0.599	0.663	-10.7	113
63	T	1,3-Dichlorobenzene	1.360	1.522	-11.9	119
64	T	1,4-Dichlorobenzene	1.550	1.723	-11.2	116
65	T	1,2-Dichlorobenzene	1.367	1.527	-11.7	118
66	T	tert-Butylbenzene	2.192	2.394	-9.2	114
67	T	sec-Butylbenzene	2.897	3.166	-9.3	115
68	T	p-Isopropyltoluene	2.418	2.694	-11.4	115
69	t	n-Butylbenzene	2.375	2.667	-12.3	118
70	T	1,2-Dibromo-3-chloropropane	0.750	0.829	-10.5	114
71	T	1,2,4-Trichlorobenzene	1.269	1.475	-16.2	122
72	T	1,2,3-Trichlorobenzene	1.277	1.473	-15.4	121
73	T	Hexachlorobutadiene	1.127	1.314	-16.6	121
74	T	Naphthalene	2.655	3.030	-14.1	119

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\1VSTD03.D
Acq Time : 19 Jul 95 10:08 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/19/95
Quant Time: Jul 19 10:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\1VSTD03.D
Acq Time : 19 Jul 95 10:08 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/19/95
Quant Time: Jul 19 10:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.14	168	1774027	50.00	ug/l		-0.06
23) 1,4-Difluorobenzene	8.01	114	1562417	50.00	ug/l		-0.06
41) Chlorobenzene-d5	11.73	117	1373575	50.00	ug/l		-0.06
53) 1,4-Dichlorobenzene-d4	15.02	152	1020127	50.00	ug/l		-0.08
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.14	113	995773	47.78	ug/l		95.55%
24) Toluene-d8	9.82	98	1657260	50.85	ug/l		101.70%
25) Bromofluorobenzene	13.35	174	1035852	51.27	ug/l		102.53%
Target Compounds							**Qvalue**
3) Dichlorodifluoromethane	2.86	85	634771	47.36	ug/l		97
4) Chloromethane	3.18	50	247719	41.85	ug/l		90
5) Vinyl Chloride	3.28	62	277630	43.87	ug/l		97
6) Chloroethane	3.81	64	163932	46.25	ug/l		99
7) Bromomethane	3.71	94	280630	45.45	ug/l		97
8) Trichlorofluoromethane	4.07	101	763676	43.67	ug/l		97
9) 1,1-Dichloroethene	4.71	96	404906	53.15	ug/l		98
10) trans-1,2-Dichloroethene	5.58	96	403207	46.82	ug/l		91
11) cis-1,2-Dichloroethene	6.63	96	455603	47.36	ug/l		97
12) Acetone	4.88	43	723257	45.50	ug/l		96
13) Iodomethane	4.92	142	1191062	48.28	ug/l		97
14) Carbon Disulfide	5.00	76	947713	44.50	ug/l		99
15) Methylene Chloride	5.27	84	442366	43.91	ug/l		98
16) Vinyl Acetate	6.07	43	949232	50.55	ug/l		100
17) 1,1-Dichloroethane	6.02	63	912819	46.63	ug/l		98
18) 2,2-Dichloropropane	6.63	77	913355	52.50	ug/l		99
19) 2-Butanone	6.69	43	817924	47.65	ug/l		96
20) Bromochloromethane	6.89	128	377788	48.00	ug/l		94
21) Chloroform	6.96	83	1249834	48.40	ug/l		97
22) 1,1,1-Trichloroethane	7.19	97	1163048	49.64	ug/l		96
26) 1,1-Dichloropropene	7.36	77	250796	50.63	ug/l	#	80
27) cis-1,3-Dichloropropene	9.47	75	903294	51.79	ug/l		100
28) trans-1,3-Dichloropropene	10.16	75	907432	52.85	ug/l		98
29) Carbon Tetrachloride	7.39	117	1003572	52.30	ug/l		96
30) Benzene	7.60	78	1250520	49.06	ug/l		98
31) 1,2-Dichloroethane	7.62	62	1117838	48.75	ug/l		97
32) Trichloroethene	8.35	95	756921	49.21	ug/l		97
33) 1,2-Dichloropropane	8.62	63	580311	50.76	ug/l		98
34) Dibromomethane	8.76	93	692473	48.87	ug/l		94
35) Bromodichloromethane	8.93	83	1134619	51.69	ug/l		99
36) 2-Chloroethyl vinyl ether	8.62	63	580311	50.76	ug/l		98
37) 4-Methyl-2-pentanone	9.67	43	1680164	51.68	ug/l	#	84
38) Toluene	9.92	92	1041484	52.22	ug/l		96

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\1VSTD03.D
Acq Time : 19 Jul 95 10:08 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/19/95
Quant Time: Jul 19 10:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,1,2-Trichloroethane	10.42	83	581458	51.41	ug/l		97
40)	1,2-Dibromoethane	11.13	107	1121198	50.82	ug/l		100
42)	Tetrachloroethene	10.65	166	1007927	52.99	ug/l	#	79
43)	1,3-Dichloropropane	10.63	76	1076250	51.74	ug/l		98
44)	Dibromochloromethane	10.96	129	1127435	53.35	ug/l		97
45)	2-Hexanone	10.72	43	1587465	53.15	ug/l	#	93
46)	Chlorobenzene	11.77	112	1410383	51.84	ug/l		100
47)	1,1,1,2-Tetrachloroethane	11.88	131	823015	54.23	ug/l		96
48)	Ethylbenzene	11.90	106	672880	54.28	ug/l		87
49)	Xylene, m & p-	12.06	106	1728335	108.72	ug/l		93
50)	Xylene, o-	12.61	106	810523	53.47	ug/l		96
51)	Styrene	12.63	104	1413198	54.95	ug/l		100
52)	Bromoform	12.92	173	1204259	55.27	ug/l		98
54)	Isopropylbenzene	13.12	120	668215	53.45	ug/l		99
55)	n-Propylbenzene	13.71	91	3210479	54.60	ug/l		100
56)	1,3,5-Trimethylbenzene	13.94	120	1028045	54.59	ug/l		96
57)	1,2,4-Trimethylbenzene	14.50	120	1115124	54.90	ug/l		99
58)	1,1,2,2-Tetrachloroethane	13.52	83	1403938	55.16	ug/l		98
59)	Bromobenzene	13.59	156	977474	54.23	ug/l		95
60)	1,2,3-Trichloropropane	13.59	75	1442039	53.00	ug/l		92
61)	2-Chlorotoluene	13.86	126	616801	52.59	ug/l		96
62)	4-Chlorotoluene	14.00	126	675844	55.34	ug/l	m	96
63)	1,3-Dichlorobenzene	14.94	146	1552658	55.97	ug/l	#	94
64)	1,4-Dichlorobenzene	15.06	146	1757758	55.60	ug/l		99
65)	1,2-Dichlorobenzene	15.61	146	1557985	55.86	ug/l		97
66)	tert-Butylbenzene	14.43	119	2442397	54.62	ug/l		97
67)	sec-Butylbenzene	14.75	105	3229611	54.64	ug/l		98
68)	p-Isopropyltoluene	14.96	119	2747933	55.69	ug/l		99
69)	n-Butylbenzene	15.56	91	2721030	56.15	ug/l		99
70)	1,2-Dibromo-3-chloropropan	16.76	75	846117	55.27	ug/l		95
71)	1,2,4-Trichlorobenzene	18.01	180	1504746	58.12	ug/l		96
72)	1,2,3-Trichlorobenzene	18.82	180	1502931	57.70	ug/l		98
73)	Hexachlorobutadiene	18.29	225	1340300	58.31	ug/l		99
74)	Naphthalene	18.41	128	3090900	57.06	ug/l		99

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Initial Calibration

Continuing Calibration File: 2VSTD03.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	87
2	S	Dibromofluoromethane	0.602	0.520	13.7	60
3	T	Allyl Chloride	0.102	0.098#	3.8	20#
4	T	Acetonitrile	0.228	0.182	19.9	31#
5	T	Acrylonitrile	0.149	0.127	14.8	23#
6	T	Acrolein	0.049	0.045#	8.3	29#
7	T	Chloroprene	0.363	0.346	4.7	20#
8	T	Propionitrile	0.083	0.071#	15.1	26#
9	T	Methacrylonitrile	0.115	0.119	-3.3	28#
10	T	Methyl Methacrylate	0.355	0.312	12.2	22#
11	T	Isobutanol	0.115	0.077#	32.8#	24#
12	I	1,4-Difluorobenzene	1.000	1.000	0.0	86
13	S	Toluene-d8	1.137	0.989	13.0	56
14	S	Bromofluorobenzene	0.674	0.594	11.9	62
15	T	Ethyl methacrylate	0.683	0.674	1.4	23#
16	I	Chlorobenzene-d5	1.000	1.000	0.0	85
17	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87
18	T	trans-1,4-Dichloro-2-butene	0.316	0.324	-2.3	20#

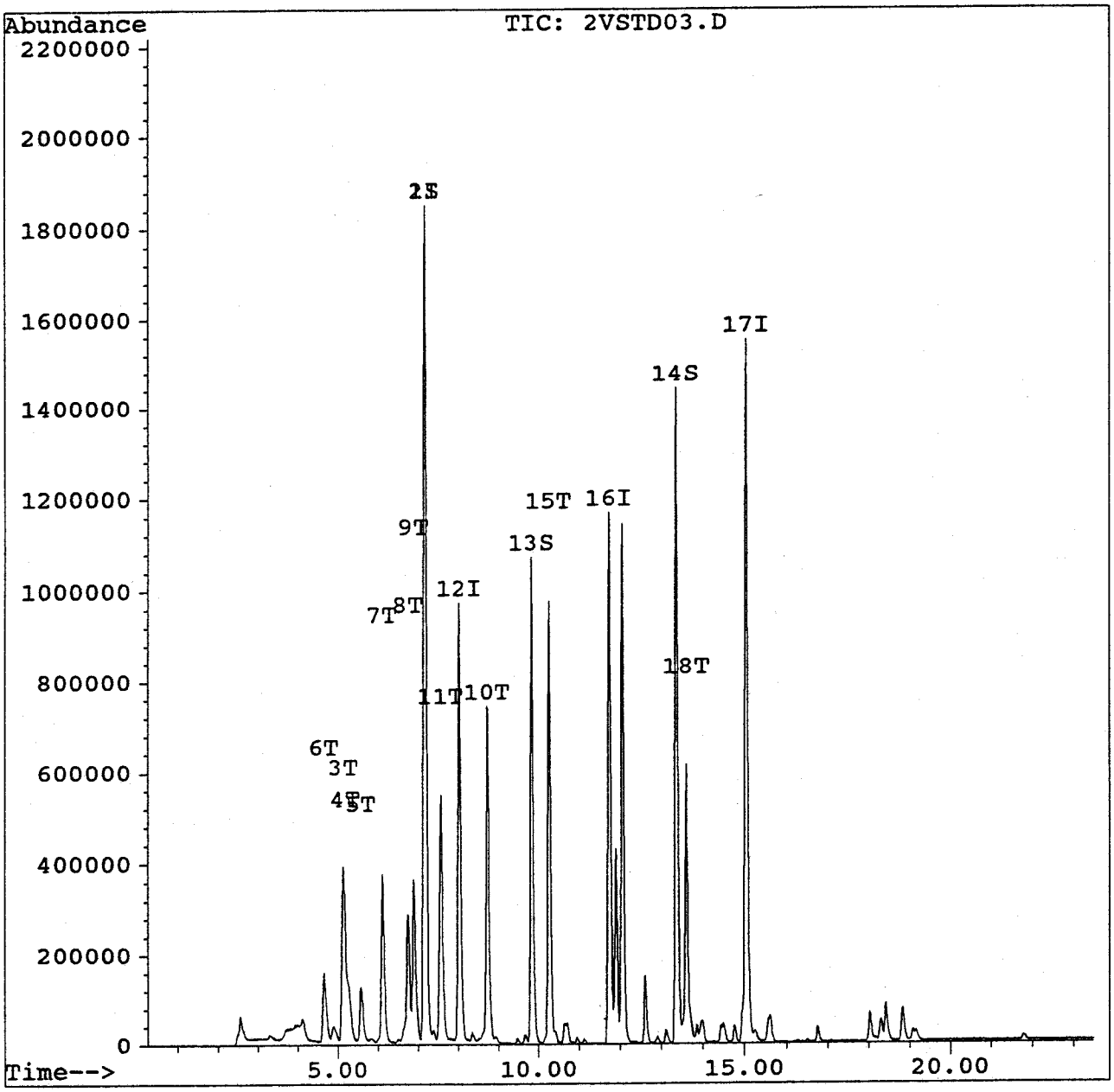
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\2VSTD03.D
Acq Time : 19 Jul 95 11:54 am
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/19/95
Quant Time: Jul 19 12:22 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:45:43 1995
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\2VSTD03.D
Acq Time : 19 Jul 95 11:54 am
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/19/95
Quant Time: Jul 19 12:22 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 13:45:43 1995
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.16	168	1902372	50.00	ug/l		-0.06
12) 1,4-Difluorobenzene	8.01	114	1680500	50.00	ug/l		-0.05
16) Chlorobenzene-d5	11.72	117	1476191	50.00	ug/l		-0.06
17) 1,4-Dichlorobenzene-d4	15.03	152	1036783	50.00	ug/l		-0.05
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.16	113	988474	43.14	ug/l		86.28%
13) Toluene-d8	9.82	98	1661523	43.49	ug/l		86.97%
14) Bromofluorobenzene	13.35	174	997758	44.06	ug/l		88.11%
Target Compounds							**Qvalue**
3) Allyl Chloride	5.13	76	186391	48.09	ug/l		87
4) Acetonitrile	5.19	40	346862	40.06	ug/l	#	26
5) Acrylonitrile	5.58	53	241076	42.61	ug/l		98
6) Acrolein	4.65	56	423301	229.18	ug/l		98
7) Chloroprene	6.11	53	657402	47.65	ug/l		92
8) Propionitrile	6.75	54	673707	212.25	ug/l		97
9) Methacrylonitrile	6.89	67	225738	51.67	ug/l		77
10) Methyl Methacrylate	8.71	69	593950	43.92	ug/l	#	81
11) Isobutanol	7.55	43	736416	167.93	ug/l	#	90
15) Ethyl methacrylate	10.25	69	1132332	49.31	ug/l	#	71
18) trans-1,4-Dichloro-2-buten	13.59	53	335660	51.17	ug/l	#	54

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Sat Jul 22 10:43:24 1995
Response via : Continuing Calibration

Continuing Calibration File: 1VSTD05.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	106
2	S	Dibromofluoromethane	0.587	0.546	7.1	100
3	T	Dichlorodifluoromethane	0.378	0.344	8.9	99
4	TP	Chloromethane	0.167	0.135	19.1	89
5	TC	Vinyl Chloride	0.178	0.148	16.8	90
6	T	Chloroethane	0.100	0.084#	15.6	88
7	T	Bromomethane	0.174	0.134	23.1	84
8	T	Trichlorofluoromethane	0.493	0.408	17.2	102
9	TCM	1,1-Dichloroethene	0.215	0.215	0.0	95
10	T	trans-1,2-Dichloroethene	0.243	0.216	11.0	96
11	T	cis-1,2-Dichloroethene	0.271	0.240	11.4	97
12	T	Acetone	0.448	0.392	12.4	101
13	T	Iodomethane	0.695	0.604	13.1	90
14	T	Carbon Disulfide	0.600	0.490	18.4	86
15	T	Methylene Chloride	0.284	0.237	16.4	95
16	T	Vinyl Acetate	0.529	0.502	5.1	96
17	TP	1,1-Dichloroethane	0.552	0.487	11.8	97
18	T	2,2-Dichloropropane	0.490	0.498	-1.5	111
19	T	2-Butanone	0.484	0.433	10.5	107
20	T	Bromochloromethane	0.222	0.200	10.0	97
21	TC	Chloroform	0.728	0.695	4.5	104
22	T	1,1,1-Trichloroethane	0.660	0.639	3.2	104
23	I	1,4-Difluorobenzene	1.000	1.000	0.0	101
24	S	Toluene-d8	1.043	1.038	0.5	102
25	S	Bromofluorobenzene	0.647	0.660	-2.1	106
26	T	1,1-Dichloropropene	0.159	0.156	1.6	101
27	T	cis-1,3-Dichloropropene	0.558	0.561	-0.4	104
28	T	trans-1,3-Dichloropropene	0.549	0.567	-3.3	106
29	T	Carbon Tetrachloride	0.614	0.659	-7.3	108
30	TM	Benzene	0.816	0.763	6.5	98
31	T	1,2-Dichloroethane	0.734	0.707	3.6	101
32	TM	Trichloroethene	0.492	0.477	3.1	103
33	TC	1,2-Dichloropropane	0.366	0.361	1.3#	103
34	T	Dibromomethane	0.453	0.435	4.0	99
35	T	Bromodichloromethane	0.702	0.712	-1.3	103
36	T	2-Chloroethyl vinyl ether	0.366	0.361	1.3	103
37	T	4-Methyl-2-pentanone	1.040	1.031	0.9	103
38	TCM	Toluene	0.638	0.636	0.3#	103
39	T	1,1,2-Trichloroethane	0.362	0.358	1.1	103
40	T	1,2-Dibromoethane	0.706	0.693	1.8	102
41	I	Chlorobenzene-d5	1.000	1.000	0.0	101

(#) = Out of Range

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Sat Jul 22 10:43:24 1995
Response via : Continuing Calibration

Continuing Calibration File: 1VSTD05.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
42	T	Tetrachloroethene	0.692	0.708	-2.2	105
43	T	1,3-Dichloropropane	0.757	0.753	0.6	103
44	T	Dibromochloromethane	0.769	0.809	-5.2	106
45	T	2-Hexanone	1.087	1.107	-1.8	107
46	TPM	Chlorobenzene	0.990	1.006	-1.5	106
47	T	1,1,1,2-Tetrachloroethane	0.552	0.593	-7.4	109
48	TC	Ethylbenzene	0.451	0.464	-2.8	105
49	T	Xylene, m & p-	0.579	0.607	-4.9	109
50	T	Xylene, o-	0.552	0.577	-4.5	107
51	T	Styrene	0.936	0.995	-6.3	109
52	TP	Bromoform	0.793	0.870	-9.6	110
53	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104
54	T	Isopropylbenzene	0.613	0.616	-0.5	109
55	T	n-Propylbenzene	2.882	3.024	-4.9	113
56	T	1,3,5-Trimethylbenzene	0.923	0.950	-2.9	110
57	T	1,2,4-Trimethylbenzene	0.996	1.036	-4.1	110
58	TP	1,1,2,2-Tetrachloroethane	1.248	1.289	-3.4	108
59	T	Bromobenzene	0.884	0.910	-3.0	110
60	T	1,2,3-Trichloropropane	1.334	1.341	-0.5	108
61	T	2-Chlorotoluene	0.575	0.590	-2.7	111
62	T	4-Chlorotoluene	0.599	0.629	-5.1	110
63	T	1,3-Dichlorobenzene	1.360	1.446	-6.3	116
64	T	1,4-Dichlorobenzene	1.550	1.665	-7.4	115
65	T	1,2-Dichlorobenzene	1.367	1.457	-6.6	115
66	T	tert-Butylbenzene	2.192	2.302	-5.0	113
67	T	sec-Butylbenzene	2.897	3.057	-5.5	114
68	T	p-Isopropyltoluene	2.418	2.615	-8.1	115
69	t	n-Butylbenzene	2.375	2.566	-8.0	116
70	T	1,2-Dibromo-3-chloropropane	0.750	0.805	-7.2	113
71	T	1,2,4-Trichlorobenzene	1.269	1.437	-13.2	121
72	T	1,2,3-Trichlorobenzene	1.277	1.443	-13.0	121
73	T	Hexachlorobutadiene	1.127	1.284	-14.0	121
74	T	Naphthalene	2.655	2.908	-9.5	117

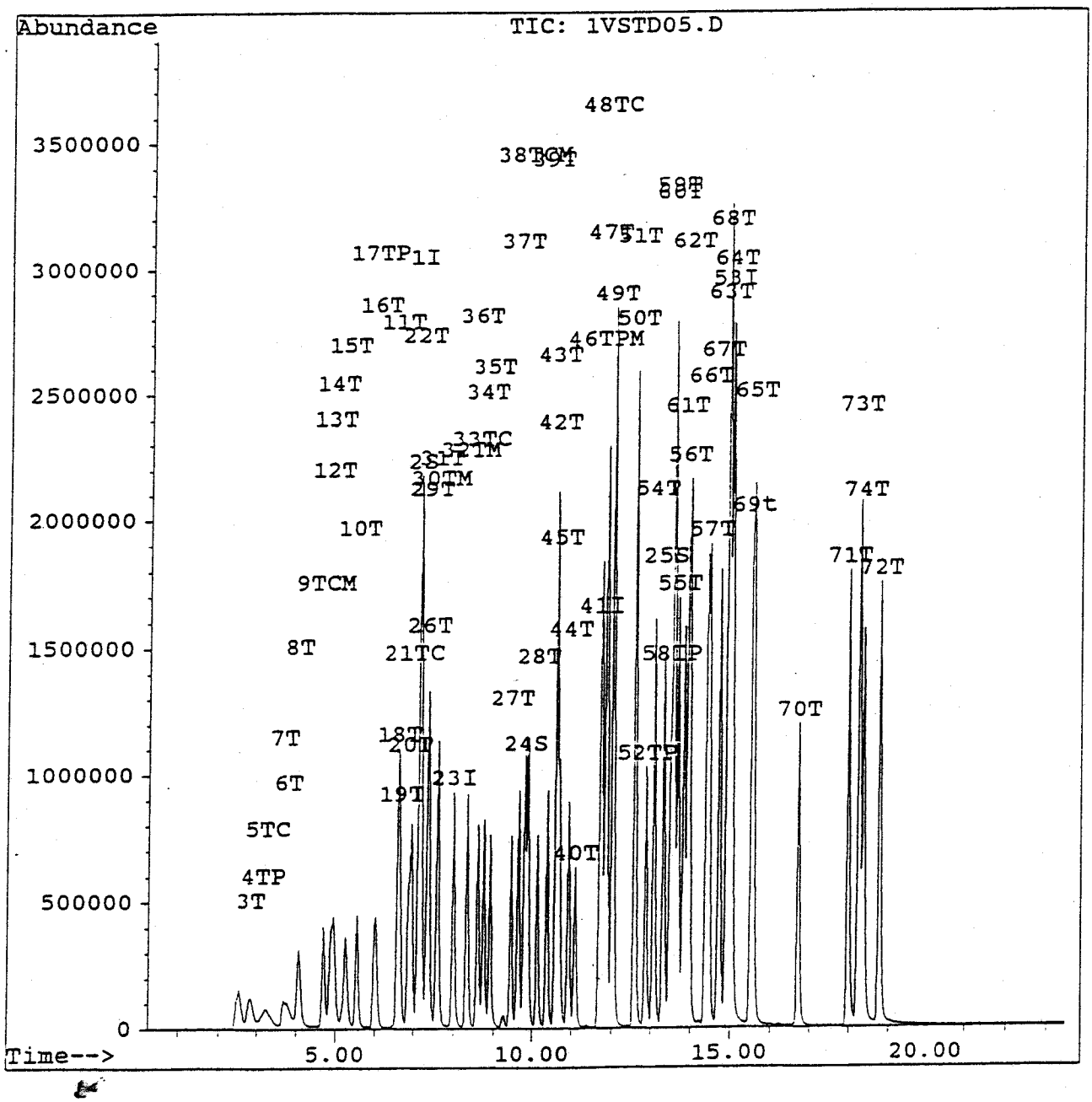
(#) = Out of Range SPCC's out = 0 CCC's out = 2

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\1VSTD05.D
Acq Time : 21 Jul 95 10:22 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/21/95
Quant Time: Jul 21 11:11 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\1VSTD05.D
Acq Time : 21 Jul 95 10:22 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/21/95
Quant Time: Jul 21 11:11 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.12	168	1829466	50.00	ug/l		-0.01
23) 1,4-Difluorobenzene	7.98	114	1574802	50.00	ug/l		-0.01
41) Chlorobenzene-d5	11.70	117	1378766	50.00	ug/l		0.00
53) 1,4-Dichlorobenzene-d4	14.98	152	1046152	50.00	ug/l		-0.01
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.12	113	998736	49.85	ug/l		99.69%
24) Toluene-d8	9.80	98	1634250	50.81	ug/l		101.62%
25) Bromofluorobenzene	13.31	174	1040085	51.14	ug/l		102.28%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.84	85	629744	50.68	ug/l		98
4) Chloromethane	3.15	50	246881	52.59	ug/l	#	85
5) Vinyl Chloride	3.25	62	271436	49.42	ug/l		99
6) Chloroethane	3.78	64	154173	47.76	ug/l		90
7) Bromomethane	3.67	94	244681	44.33	ug/l		99
8) Trichlorofluoromethane	4.04	101	746777	51.62	ug/l		98
9) 1,1-Dichloroethene	4.68	96	392830	49.82	ug/l		96
10) trans-1,2-Dichloroethene	5.54	96	395140	49.64	ug/l		98
11) cis-1,2-Dichloroethene	6.60	96	439286	48.62	ug/l		97
12) Acetone	4.86	43	717991	49.16	ug/l		98
13) Iodomethane	4.89	142	1105505	46.53	ug/l		99
14) Carbon Disulfide	4.96	76	896427	45.87	ug/l		100
15) Methylene Chloride	5.25	84	434368	48.44	ug/l		98
16) Vinyl Acetate	6.05	43	918372	48.37	ug/l		100
17) 1,1-Dichloroethane	5.99	63	890235	49.11	ug/l		99
18) 2,2-Dichloropropane	6.60	77	910310	49.80	ug/l		99
19) 2-Butanone	6.66	43	791893	50.62	ug/l		96
20) Bromochloromethane	6.87	128	365326	48.68	ug/l		96
21) Chloroform	6.94	83	1272141	50.31	ug/l		100
22) 1,1,1-Trichloroethane	7.16	97	1169576	50.41	ug/l		97
26) 1,1-Dichloropropene	7.33	77	245756	49.72	ug/l	#	78
27) cis-1,3-Dichloropropene	9.44	75	882912	49.74	ug/l		98
28) trans-1,3-Dichloropropene	10.13	75	893559	50.18	ug/l		100
29) Carbon Tetrachloride	7.35	117	1037860	49.17	ug/l		100
30) Benzene	7.58	78	1200976	49.44	ug/l		100
31) 1,2-Dichloroethane	7.59	62	1113326	51.57	ug/l		97
32) Trichloroethene	8.32	95	751436	49.24	ug/l		99
33) 1,2-Dichloropropane	8.58	63	568525	53.67	ug/l		98
34) Dibromomethane	8.74	93	685417	53.43	ug/l		96
35) Bromodichloromethane	8.91	83	1120940	51.04	ug/l		97
36) 2-Chloroethyl vinyl ether	8.58	63	568525	53.67	ug/l		98
37) 4-Methyl-2-pentanone	9.63	43	1623574	49.99	ug/l	#	83
38) Toluene	9.89	92	1002095	50.23	ug/l		95

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\1VSTD05.D
Acq Time : 21 Jul 95 10:22 am
Sample : VOA STANDARD #1 50 ppb
Misc : VOA STD #1 FOR 7/21/95
Quant Time: Jul 21 11:11 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) 1,1,2-Trichloroethane	10.38	83	563846	49.78	ug/l		94
40) 1,2-Dibromoethane	11.09	107	1092086	49.96	ug/l		97
42) Tetrachloroethene	10.61	166	976110	49.62	ug/l	#	78
43) 1,3-Dichloropropane	10.60	76	1037968	49.78	ug/l		97
44) Dibromochloromethane	10.92	129	1115419	49.68	ug/l		96
45) 2-Hexanone	10.68	43	1526147	49.55	ug/l	#	95
46) Chlorobenzene	11.73	112	1386417	50.16	ug/l		99
47) 1,1,1,2-Tetrachloroethane	11.83	131	817702	49.60	ug/l		97
48) Ethylbenzene	11.85	106	639303	49.53	ug/l		92
49) Xylene, m & p-	12.01	106	1673731	100.60	ug/l		92
50) Xylene, o-	12.57	106	795110	49.63	ug/l		99
51) Styrene	12.58	104	1371359	49.27	ug/l		99
52) Bromoform	12.87	173	1198840	49.23	ug/l		97
54) Isopropylbenzene	13.08	120	643956	48.54	ug/l		92
55) n-Propylbenzene	13.67	91	3163959	49.20	ug/l		100
56) 1,3,5-Trimethylbenzene	13.91	120	993756	48.46	ug/l		96
57) 1,2,4-Trimethylbenzene	14.45	120	1083835	48.78	ug/l		99
58) 1,1,2,2-Tetrachloroethane	13.47	83	1348826	48.67	ug/l		97
59) Bromobenzene	13.54	156	951675	49.64	ug/l		99
60) 1,2,3-Trichloropropane	13.56	75	1402422	49.26	ug/l		86
61) 2-Chlorotoluene	13.81	126	617408	49.51	ug/l		98
62) 4-Chlorotoluene	13.96	126	658266	49.32	ug/l	m	98
63) 1,3-Dichlorobenzene	14.89	146	1512590	48.30	ug/l	#	92
64) 1,4-Dichlorobenzene	15.02	146	1741373	50.34	ug/l		98
65) 1,2-Dichlorobenzene	15.56	146	1524651	49.90	ug/l		99
66) tert-Butylbenzene	14.39	119	2407922	49.18	ug/l		99
67) sec-Butylbenzene	14.71	105	3197811	48.95	ug/l		100
68) p-Isopropyltoluene	14.91	119	2735656	49.24	ug/l		99
69) n-Butylbenzene	15.52	91	2684079	48.89	ug/l		99
70) 1,2-Dibromo-3-chloropropan	16.71	75	841786	49.54	ug/l		94
71) 1,2,4-Trichlorobenzene	17.96	180	1503260	49.90	ug/l		96
72) 1,2,3-Trichlorobenzene	18.76	180	1509565	49.65	ug/l		98
73) Hexachlorobutadiene	18.24	225	1343400	48.87	ug/l		98
74) Naphthalene	18.35	128	3042349	48.77	ug/l		99

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

Continuing Calibration Report MS5970.A

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Sat Jul 22 10:48:04 1995
Response via : Continuing Calibration

Continuing Calibration File: 2VSTD05.D

Min. RRF : 0.100 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRRF	CCRRF	%Dev	Area%
1	I	Pentafluorobenzene	1.000	1.000	0.0	86
2	S	Dibromofluoromethane	0.602	0.527	12.5	60
3	T	Allyl Chloride	0.102	0.098#	3.9	20#
4	T	Acetonitrile	0.228	0.202	11.1	34#
5	T	Acrylonitrile	0.149	0.139	6.6	25#
6	T	Acrolein	0.049	0.045#	8.2	29#
7	T	Chloroprene	0.363	0.351	3.3	20#
8	T	Propionitrile	0.083	0.072#	13.6	26#
9	T	Methacrylonitrile	0.115	0.117	-2.3	28#
10	T	Methyl Methacrylate	0.355	0.347	2.4	24#
11	T	Isobutanol	0.115	0.092#	19.8	28#
12	I	1,4-Difluorobenzene	1.000	1.000	0.0	83
13	S	Toluene-d8	1.137	1.017	10.5	56
14	S	Bromofluorobenzene	0.674	0.626	7.1	63
15	T	Ethyl methacrylate	0.683	0.701	-2.6	23#
16	I	Chlorobenzene-d5	1.000	1.000	0.0	84
17	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	86
18	T	trans-1,4-Dichloro-2-butene	0.316	0.362	-14.5	22#

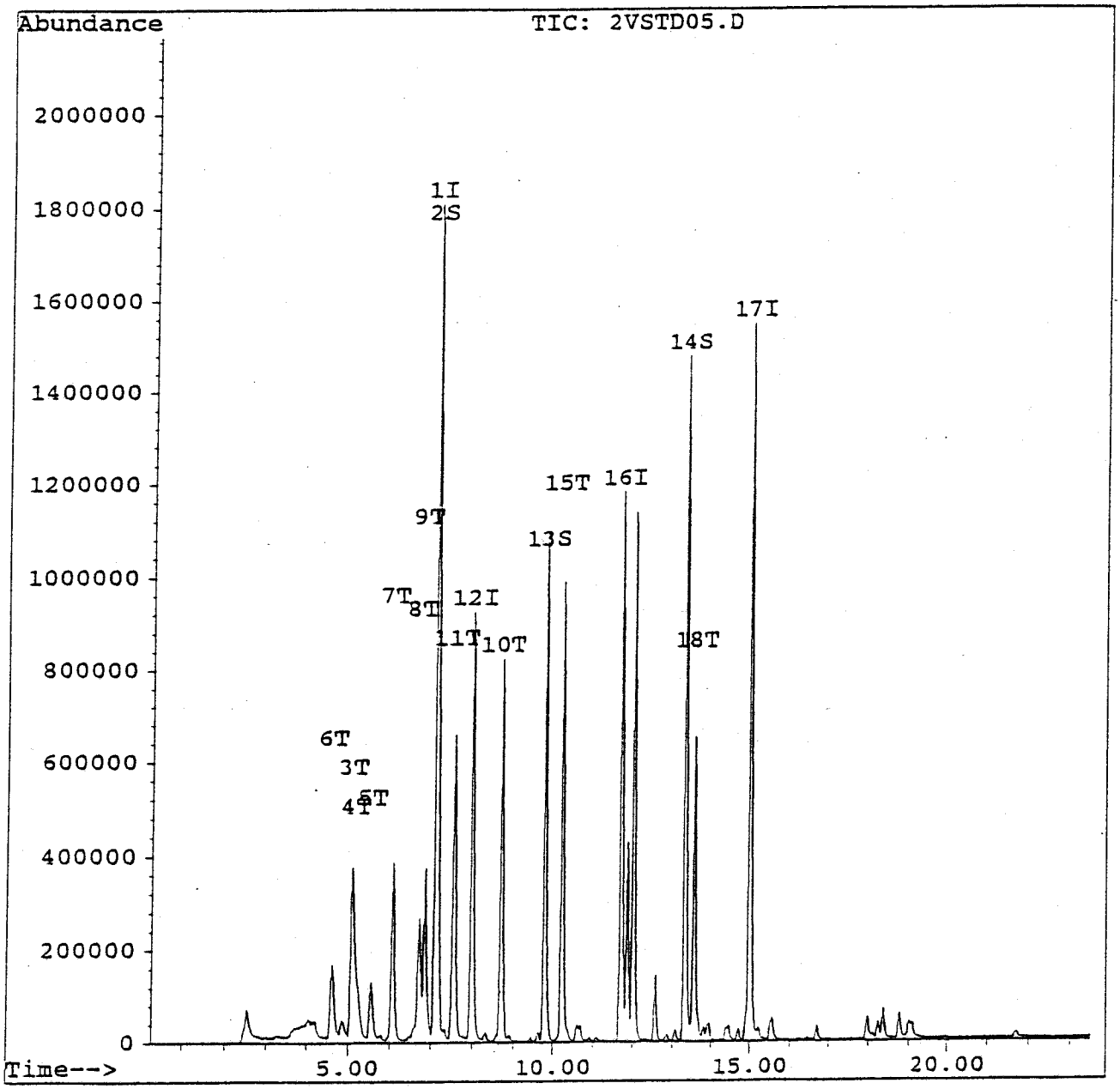
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\2VSTD05.D
Acq Time : 21 Jul 95 10:57 am
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/21/95
Quant Time: Jul 21 11:25 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Thu Jul 20 12:05:53 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\2VSTD05.D
Acq Time : 21 Jul 95 10:57 am
Sample : VOA STANDARD #2 50 ppb
Misc : VOA STD #2 FOR 7/21/95
Quant Time: Jul 21 11:25 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Thu Jul 20 12:05:53 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.11	168	1882747	50.00	ug/l		-0.04
12) 1,4-Difluorobenzene	7.98	114	1620660	50.00	ug/l		-0.02
16) Chlorobenzene-d5	11.69	117	1463034	50.00	ug/l		-0.01
17) 1,4-Dichlorobenzene-d4	14.98	152	1020156	50.00	ug/l		-0.01
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.12	113	991576	49.94	ug/l		99.87%
13) Toluene-d8	9.80	98	1648457	50.95	ug/l		101.91%
14) Bromofluorobenzene	13.31	174	1014428	49.32	ug/l		98.63%
Target Compounds							Qvalue
3) Allyl Chloride	5.08	76	184392	49.94	ug/l		83
4) Acetonitrile	5.15	40	380749	57.09	ug/l	#	17
5) Acrylonitrile	5.55	53	261509	55.91	ug/l		93
6) Acrolein	4.60	56	419697	259.12	ug/l		95
7) Chloroprene	6.07	53	660397	51.18	ug/l		99
8) Propionitrile	6.72	54	678631	258.85	ug/l		98
9) Methacrylonitrile	6.85	67	221191	50.65	ug/l		83
10) Methyl Methacrylate	8.68	69	652801	55.27	ug/l	#	81
11) Isobutanol	7.54	43	870510	300.48	ug/l	#	91
15) Ethyl methacrylate	10.22	69	1136526	51.95	ug/l	#	75
18) trans-1,4-Dichloro-2-buten	13.55	53	369351	51.66	ug/l	#	50

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

Raw QC Data

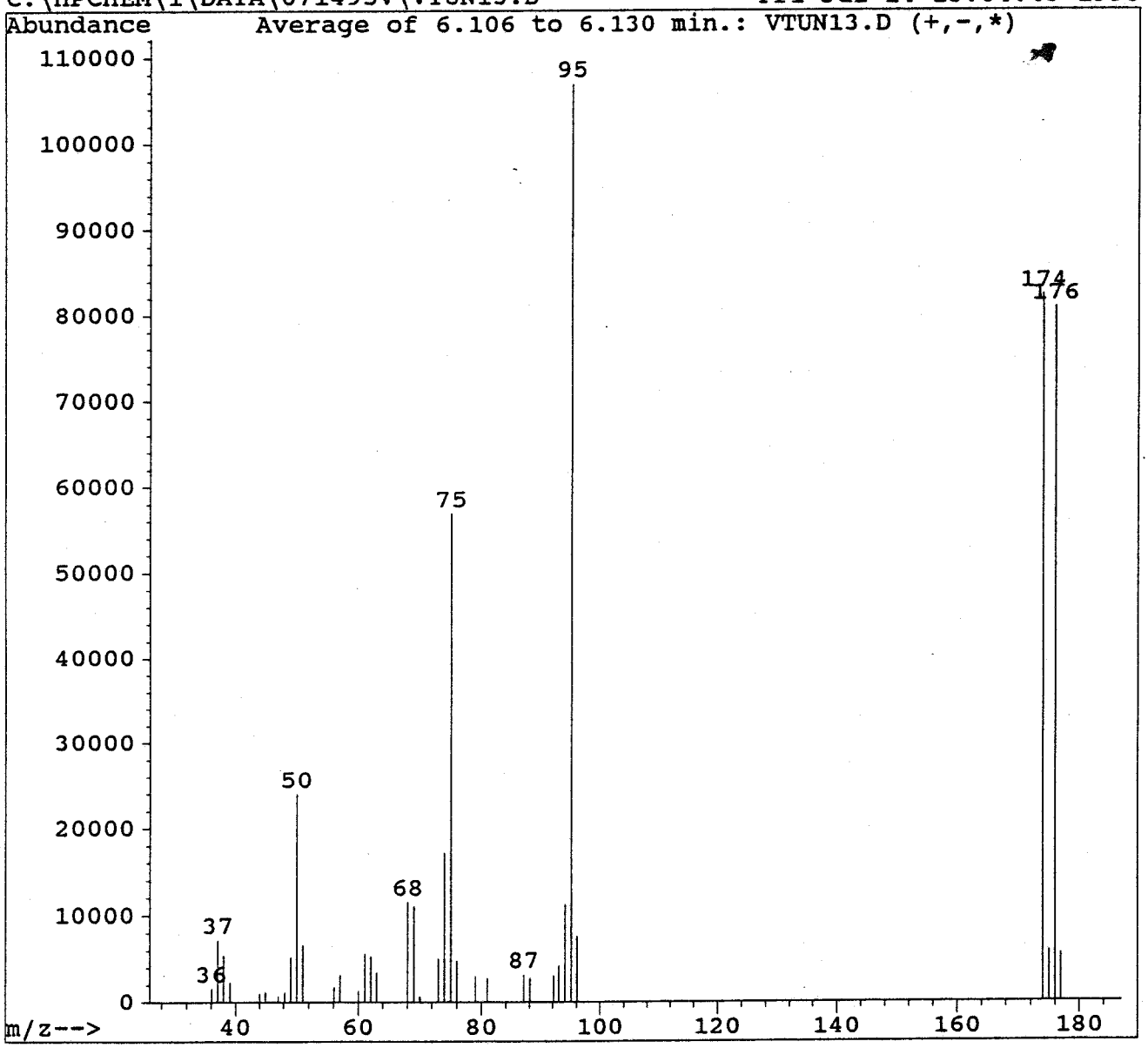
- BFB Spectra
- Blank Data (Form I)
  - * Chromatograms
  - * Quantitation Reports
  - * Target Compound Spectra
  - * TIC Spectra

- Matrix Spike/Duplicate Spike Data (Form I)
  - * Chromatograms
  - * Quantitation Reports

Watauga County Landfill
Watauga County, North Carolina
1st Semi-annual Assessment Monitoring
SDG #180851

BFB 624 Results

C:\HPCHEM\1\DATA\071495V\VTUN13.D Fri Jul 14 13:04:43 1995

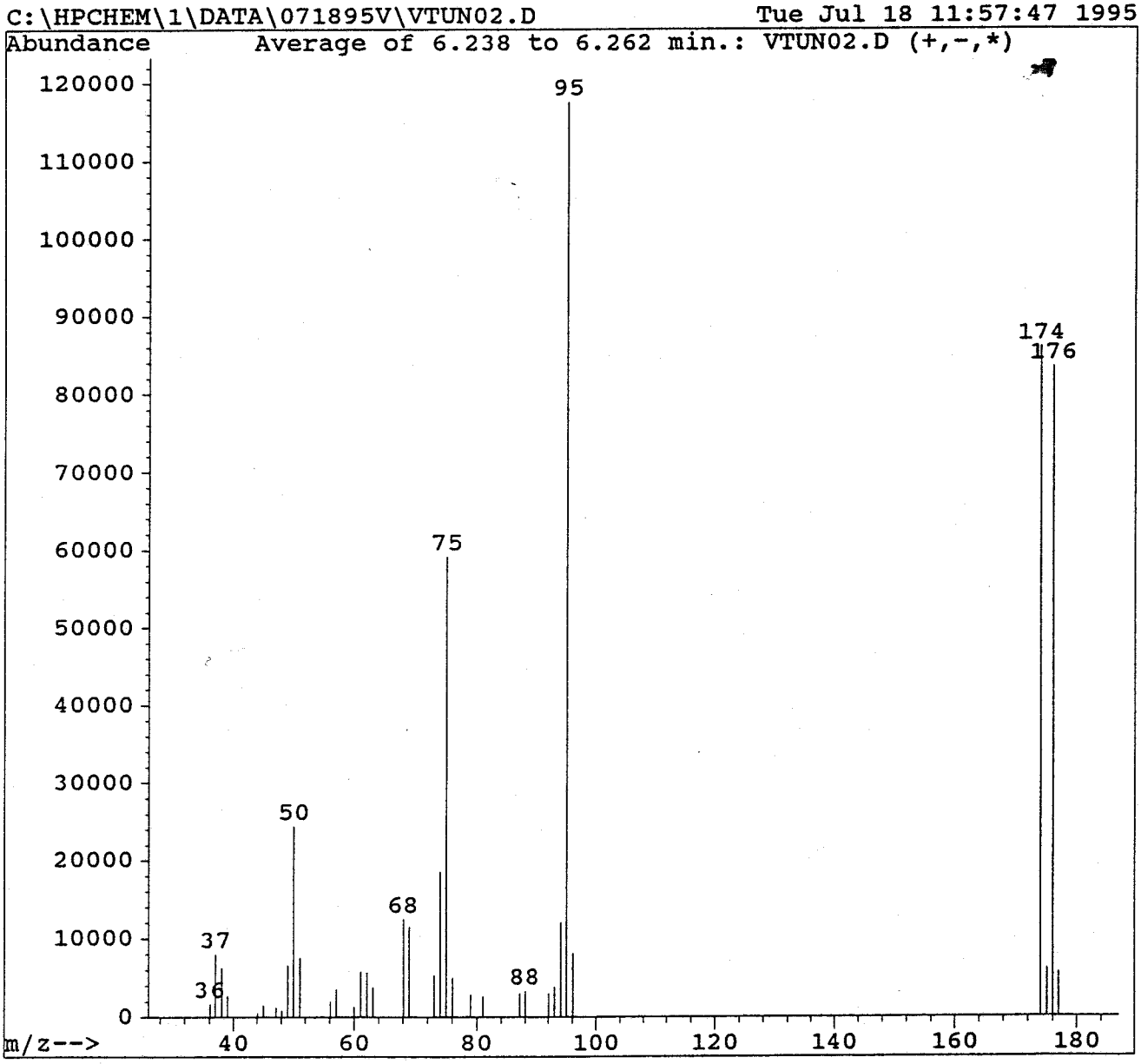


Peak Apex is scan: 258
Average of 3 scans: 257,258,259 minus background scan 250

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
50	95	15	40	22.4	PASS
75	95	30	60	53.2	PASS
95	95	100	100	100.0	PASS
96	95	5	9	7.1	PASS
173	174	0	2	0.0	PASS
174	95	50	100	77.2	PASS
175	174	5	9	7.1	PASS
176	174	95	101	98.1	PASS
177	176	5	9	6.9	PASS

BFB 624 Results

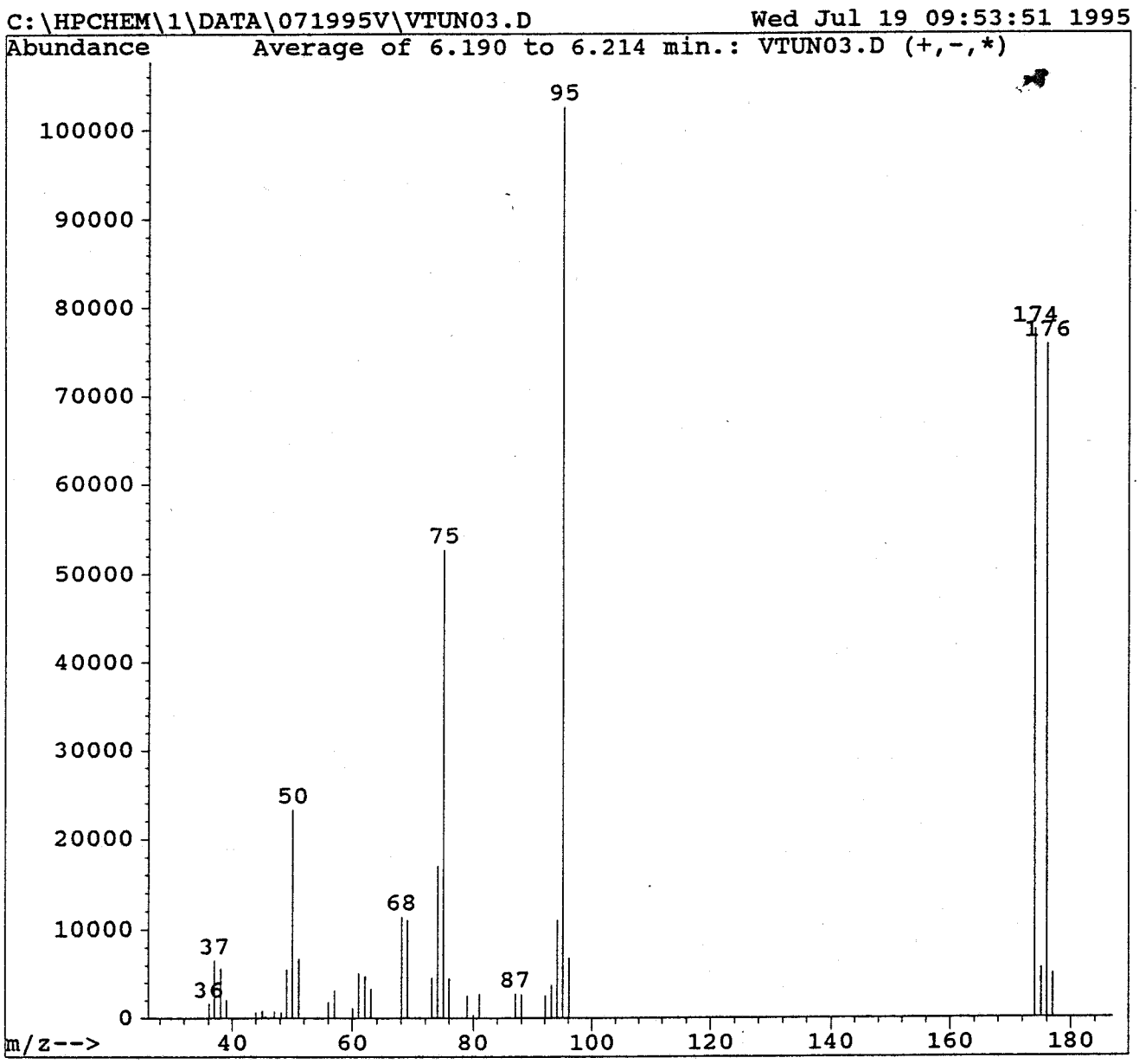
C:\HPCHEM\1\DATA\071895V\VTUN02.D Tue Jul 18 11:57:47 1995



Peak Apex is scan: 269
Average of 3 scans: 268,269,270 minus background scan 261

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
50	95	15	40	20.8	PASS
75	95	30	60	50.3	PASS
95	95	100	100	100.0	PASS
96	95	5	9	6.8	PASS
173	174	0	2	0.0	PASS
174	95	50	100	73.2	PASS
175	174	5	9	7.1	PASS
176	174	95	101	97.0	PASS
177	176	5	9	6.6	PASS

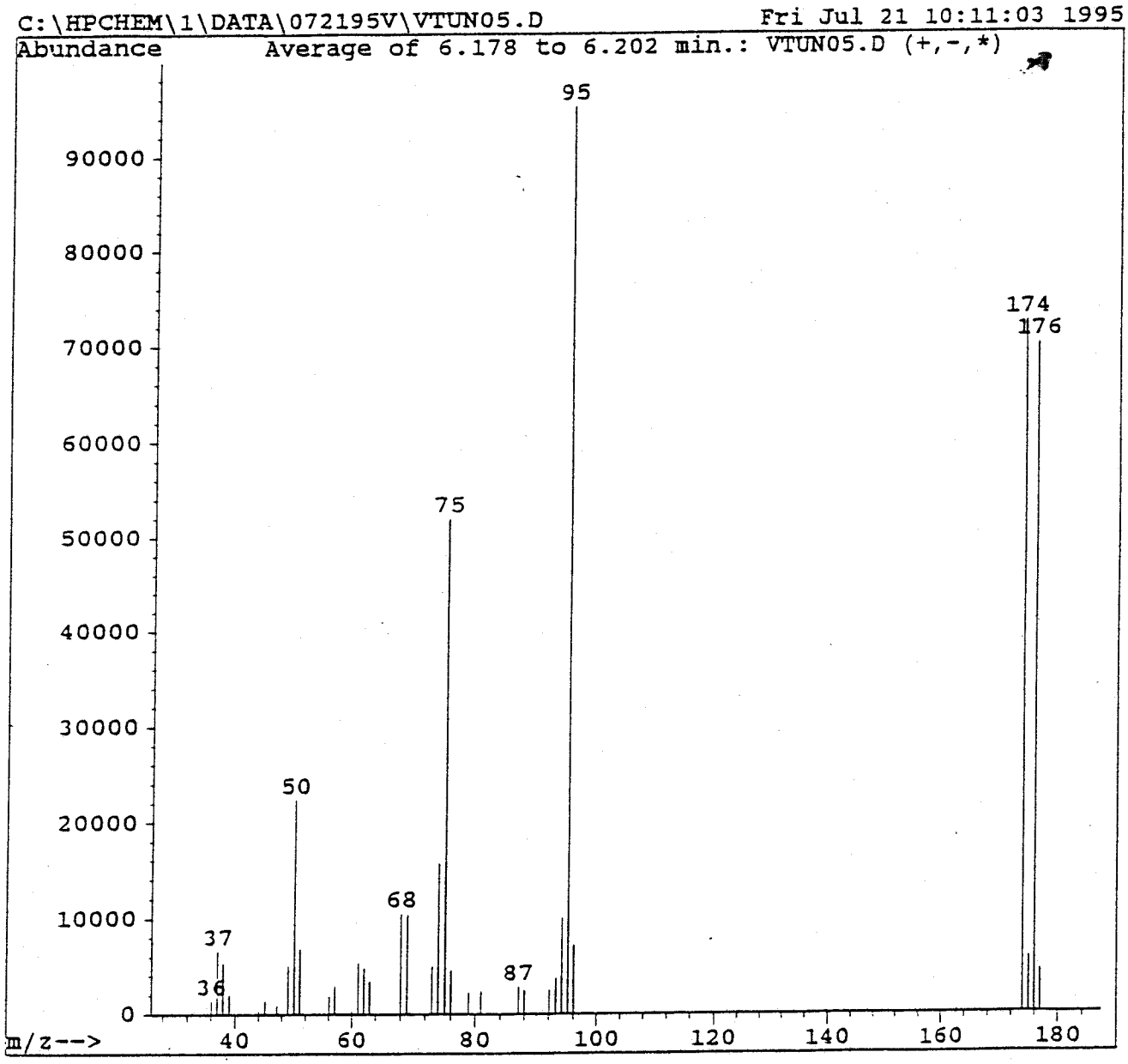
BFB 624 Results



Peak Apex is scan: 265
Average of 3 scans: 264,265,266 minus background scan 257

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
50	95	15	40	22.7	PASS
75	95	30	60	51.4	PASS
95	95	100	100	100.0	PASS
96	95	5	9	6.7	PASS
173	174	0	2	0.0	PASS
174	95	50	100	75.5	PASS
175	174	5	9	7.3	PASS
176	174	95	101	97.9	PASS
177	176	5	9	6.7	PASS

BFB 624 Results



Peak Apex is scan: 264
Average of 3 scans: 263,264,265 minus background scan 257

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
50	95	15	40	23.5	PASS
75	95	30	60	54.6	PASS
95	95	100	100	100.0	PASS
96	95	5	9	7.5	PASS
173	174	0	2	0.0	PASS
174	95	50	100	76.2	PASS
175	174	5	9	8.0	PASS
176	174	95	101	96.7	PASS
177	176	5	9	6.3	PASS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. VBLK02

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK02.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	24	J
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	5	U
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	3.7	J
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. VBLK02

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK02.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

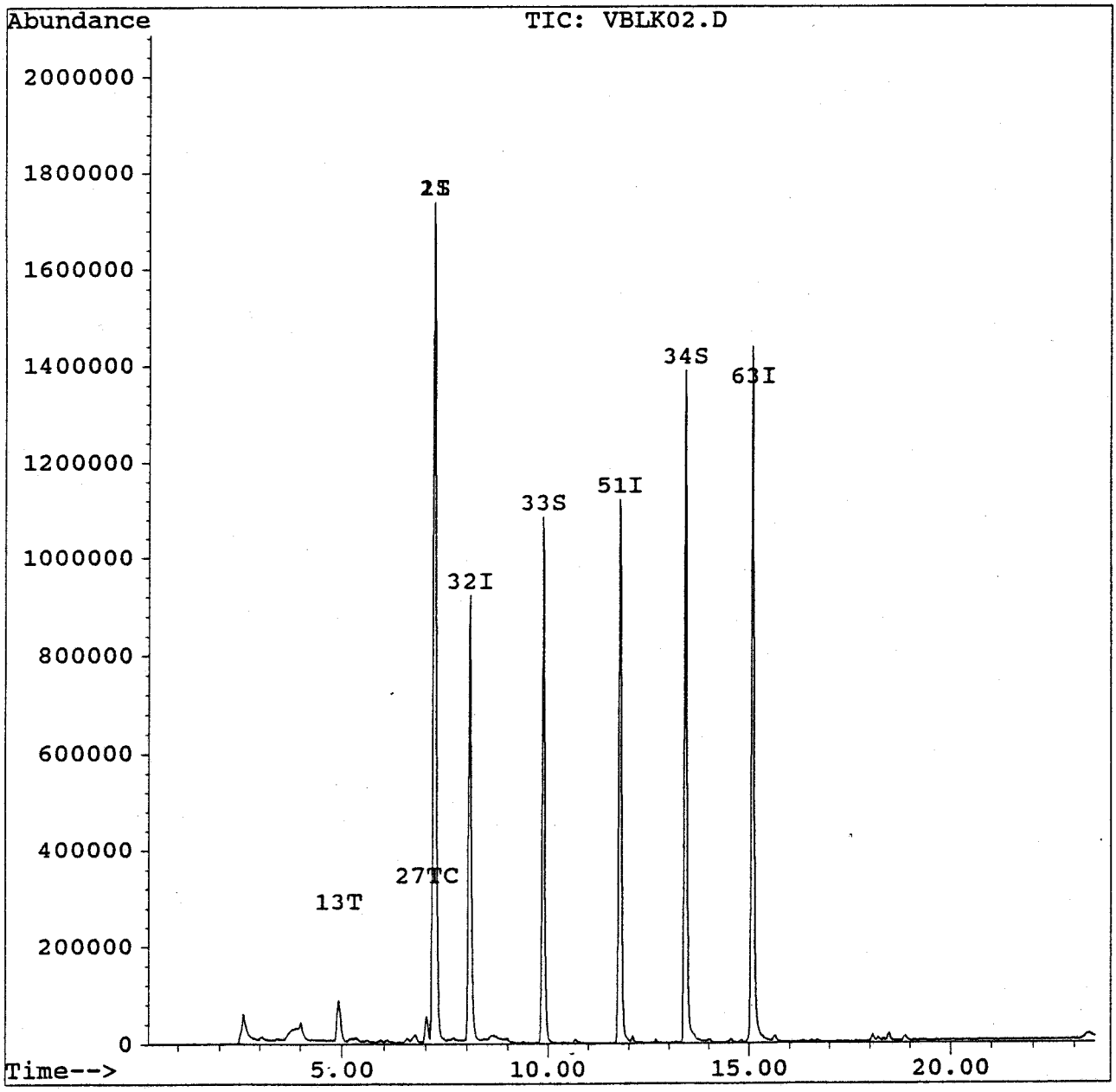
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\VBLK02.D
Acq Time : 18 Jul 95 2:58 pm
Sample : VOA BLANK #2
Misc : VOA BLK FOR 7/18/95
Quant Time: Jul 18 15:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 14:13:26 1995
Response via : Single Level Calibration



Quantitation Report

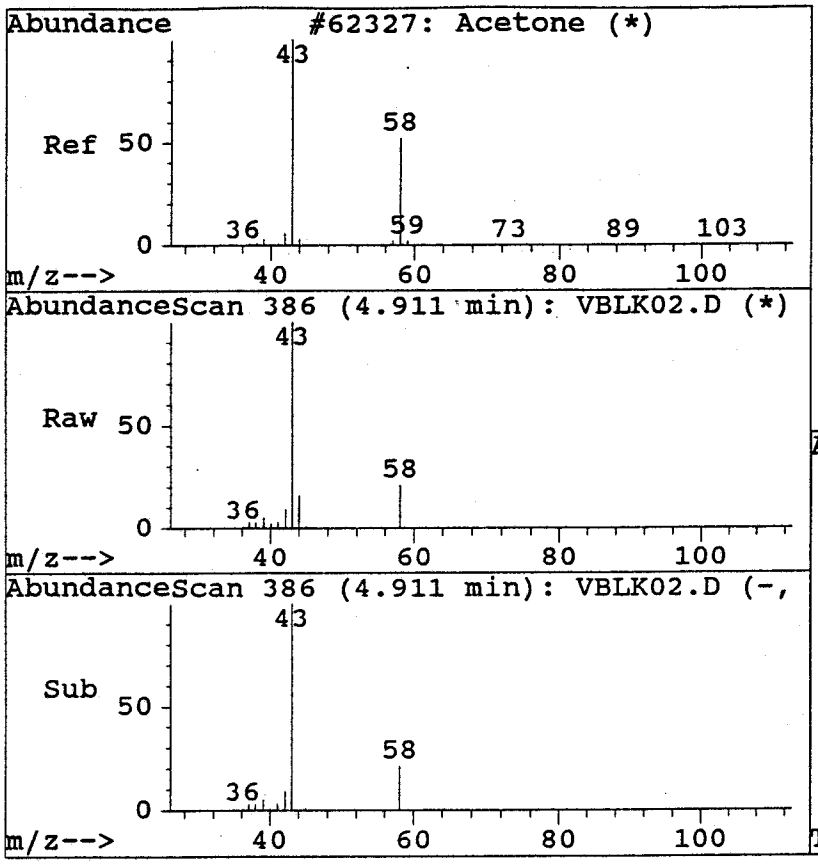
Data File : C:\HPCHEM\1\DATA\071895V\VBLK02.D
Acq Time : 18 Jul 95 2:58 pm
Sample : VOA BLANK #2
Misc : VOA BLK FOR 7/18/95
Quant Time: Jul 18 15:50 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 14:13:26 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.20	168	1836903	50.00	ug/l		0.00
32) 1,4-Difluorobenzene	8.06	114	1628230	50.00	ug/l		-0.02
51) Chlorobenzene-d5	11.77	117	1427238	50.00	ug/l		-0.03
63) 1,4-Dichlorobenzene-d4	15.08	152	1000754	50.00	ug/l		-0.01
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.20	113	966175	48.23	ug/l		96.47%
33) Toluene-d8	9.86	98	1631132	48.83	ug/l		97.65%
34) Bromofluorobenzene	13.39	174	992393	48.04	ug/l		96.09%
Target Compounds							Qvalue
13) Acetone	4.91	43	345796	24.21	ug/l	m	99
27) Chloroform	7.02	83	93834	3.71	ug/l		98

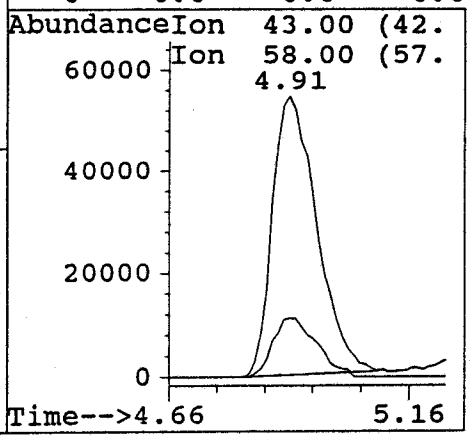
(#) = qualifier out of range (m) = manual integration

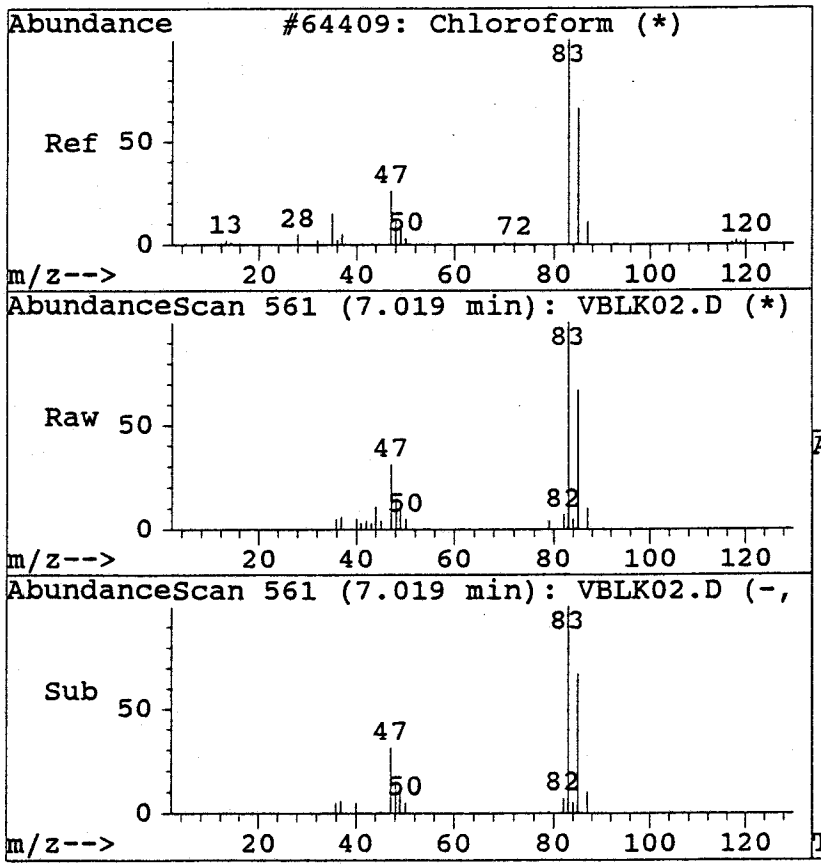


#13
Acetone
Concen: 24.21 ug/l m
RT: 4.91 min Scan# 386
Delta R.T. -0.03 min
Lab File: VBLK02.D
Acq: 18 Jul 95 2:58 pm

Tgt Ion:43 Resp: 345796

Ion	Ratio	Lower	Upper
43	100		
58	20.8	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

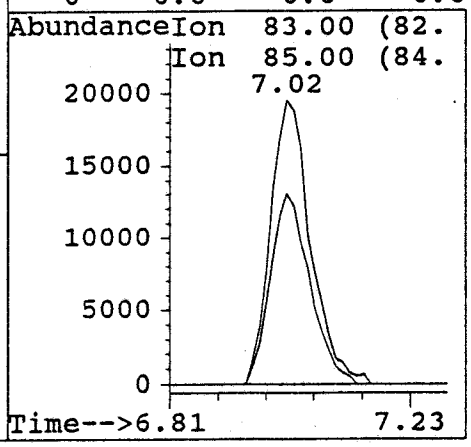




#27
Chloroform
Concen: 3.71 ug/l
RT: 7.02 min Scan# 561
Delta R.T. -0.02 min
Lab File: VBLK02.D
Acq: 18 Jul 95 2:58 pm

Tgt Ion:83 Resp: 93834

Ion	Ratio	Lower	Upper
83	100		
85	66.8	52.2	78.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
VBLK03

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK03.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/19/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	6.5	J
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	15	
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. VBLK03

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK03.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/19/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

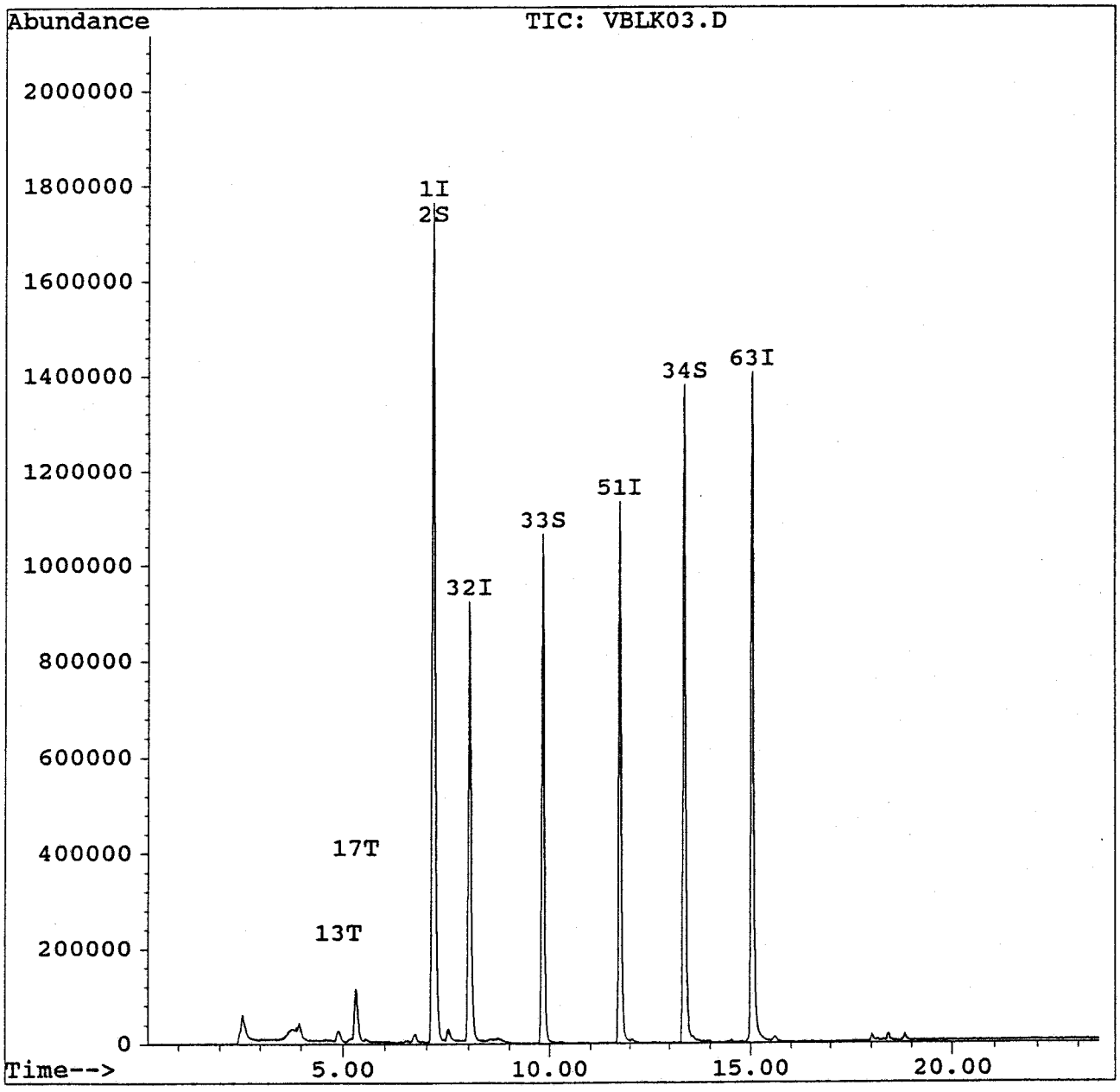
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\VBLK03.D
Acq Time : 19 Jul 95 12:43 pm
Sample : VOA BLANK #2 3 RRW
Misc : VOA BLK FOR 7/19/95
Quant Time: Jul 19 14:20 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration



Quantitation Report

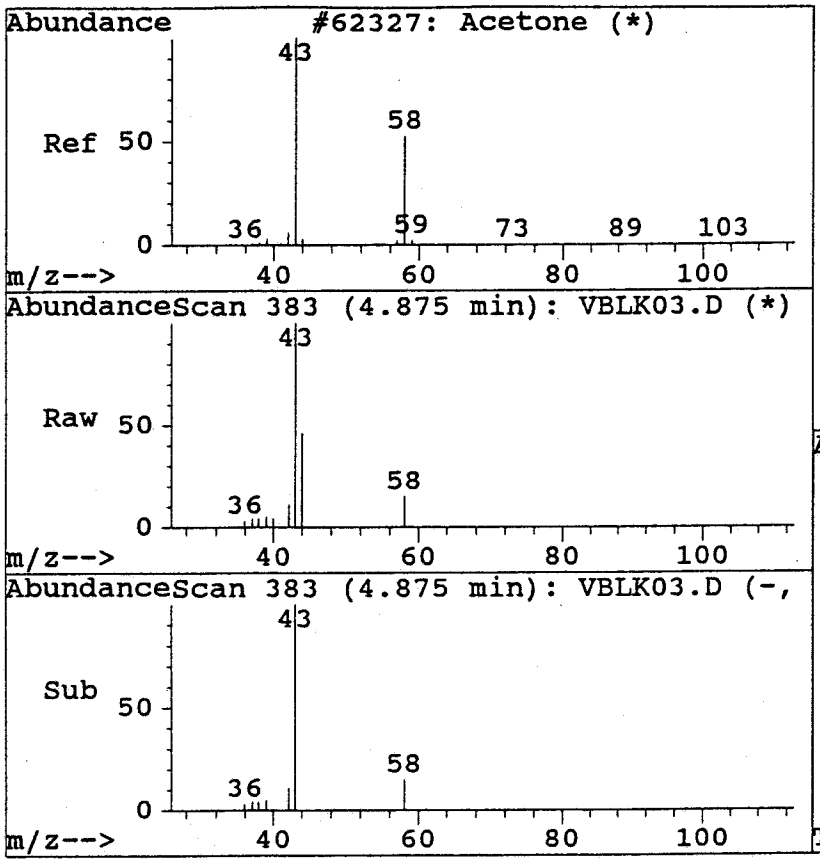
Data File : C:\HPCHEM\1\DATA\071995V\VBLK03.D
Acq Time : 19 Jul 95 12:43 pm
Sample : VOA BLANK #23 RRW
Misc : VOA BLK FOR 7/19/95
Quant Time: Jul 19 14:20 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:28:31 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.16	168	1853731	50.00	ug/l		0.02
32) 1,4-Difluorobenzene	8.02	114	1612002	50.00	ug/l		0.00
51) Chlorobenzene-d5	11.73	117	1406446	50.00	ug/l		0.00
63) 1,4-Dichlorobenzene-d4	15.03	152	979556	50.00	ug/l		0.01
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.15	113	960834	46.17	ug/l		92.34%
33) Toluene-d8	9.83	98	1631875	47.72	ug/l		95.44%
34) Bromofluorobenzene	13.36	174	987760	46.21	ug/l		92.42%
Target Compounds							**Qvalue**
13) Acetone	4.87	43	97606	6.46	ug/l	#	89
17) Methylene Chloride	5.30	84	139903	15.13	ug/l		87

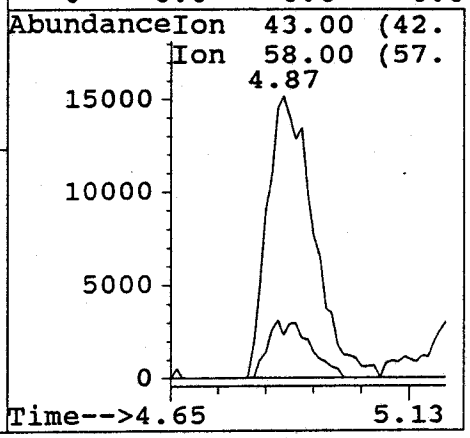
(#) = qualifier out of range (m) = manual integration

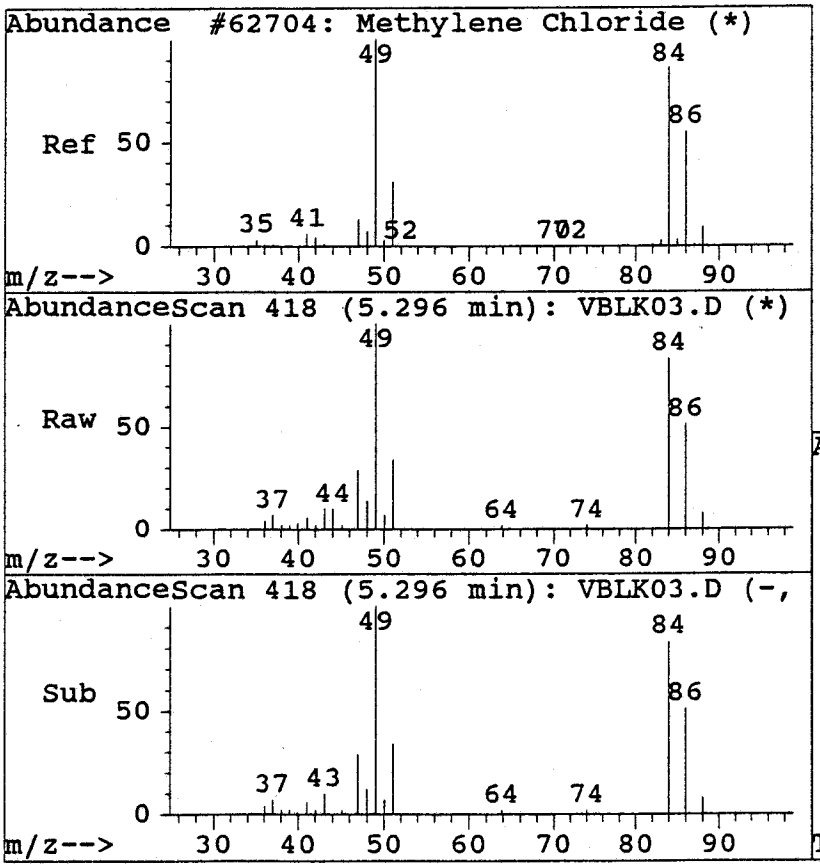


#13
Acetone
Concen: 6.46 ug/l
RT: 4.87 min Scan# 383
Delta R.T. -0.00 min
Lab File: VBLK03.D
Acq: 19 Jul 95 12:43 pm

Tgt Ion:43 Resp: 97606

Ion	Ratio	Lower	Upper
43	100		
58	15.3	16.3	24.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

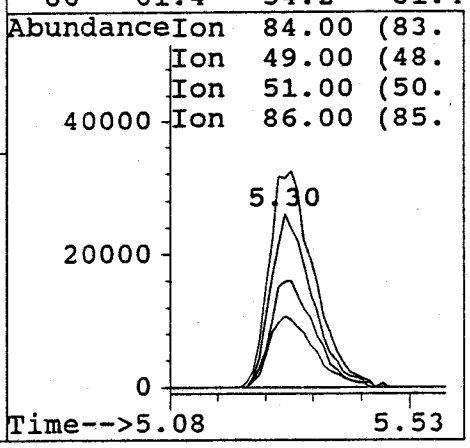




#17
Methylene Chloride
Concen: 15.13 ug/l
RT: 5.30 min Scan# 418
Delta R.T. 0.02 min
Lab File: VBLK03.D
Acq: 19 Jul 95 12:43 pm

Tgt Ion:84 Resp: 139903

Ion	Ratio	Lower	Upper
84	100		
49	120.4	113.2	169.8
51	41.1	35.3	52.9
86	61.4	54.2	81.4



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
VBLK05

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK05.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	5	U
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	7.3	J
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	7	
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. VBLK05

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: VBLK05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VBLK05.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

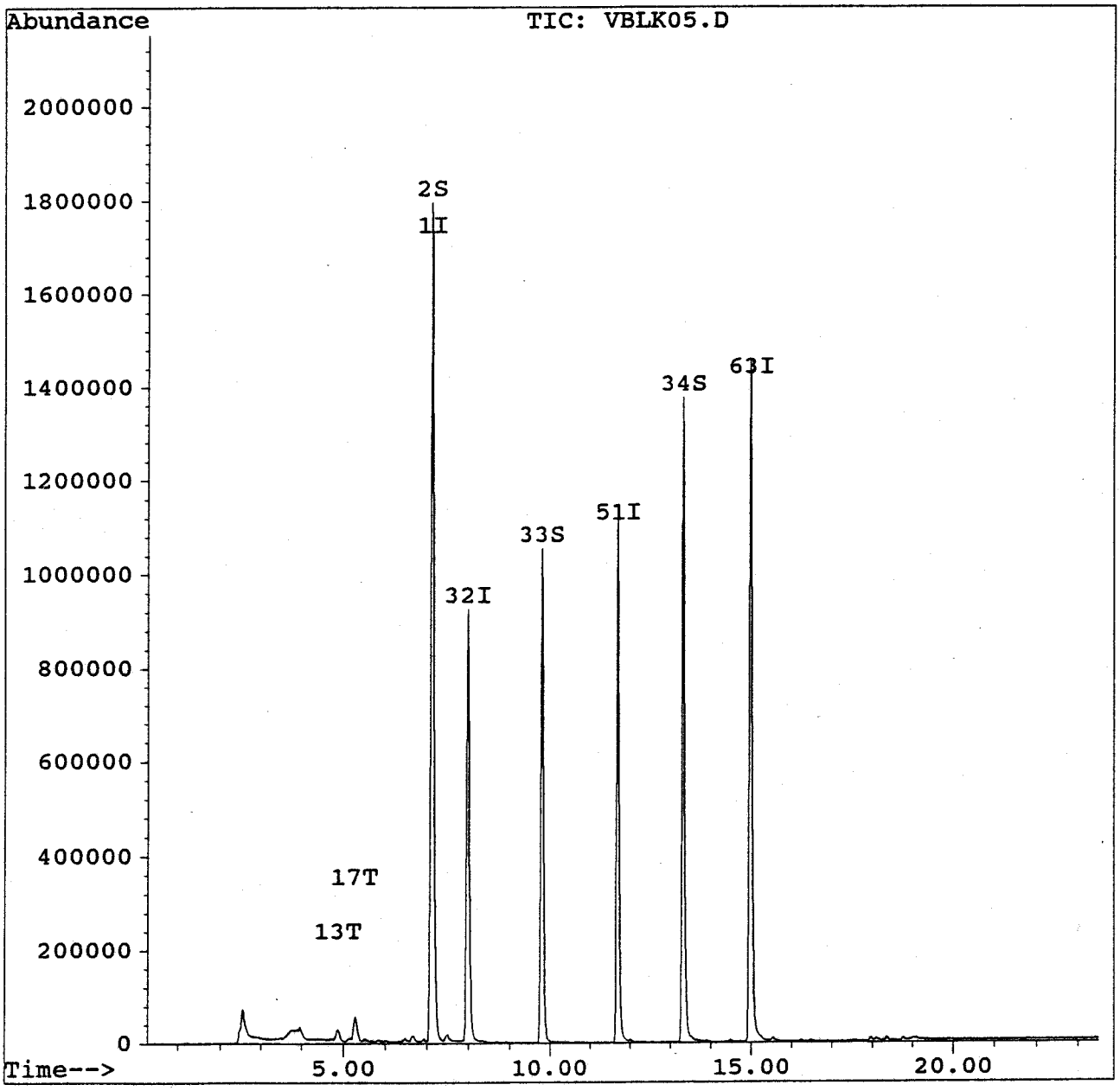
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	5	U
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	5	U
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	5	U
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	5	U
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\VBLK05.D
Acq Time : 21 Jul 95 11:34 am
Sample : VOA BLANK #25 RW
Misc : VOA BLK FOR 7/21/95
Quant Time: Jul 21 16:02 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

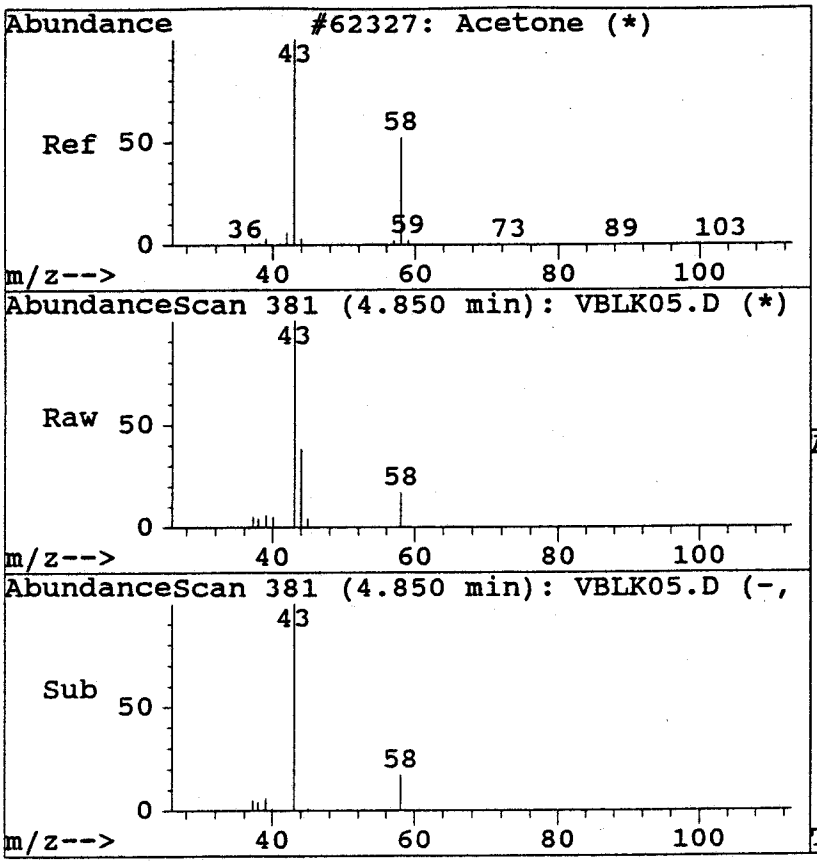
Data File : C:\HPCHEM\1\DATA\072195V\VBLK05.D
Acq Time : 21 Jul 95 11:34 am
Sample : VOA BLANK #25 pr
Misc : VOA BLK FOR 7/21/95
Quant Time: Jul 21 16:02 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.13	168	1857430	50.00	ug/l	0.00
32) 1,4-Difluorobenzene	7.98	114	1599898	50.00	ug/l	0.00
51) Chlorobenzene-d5	11.69	117	1426654	50.00	ug/l	0.00
63) 1,4-Dichlorobenzene-d4	14.98	152	1006119	50.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.12	113	935277	46.12	ug/l	92.24%
33) Toluene-d8	9.79	98	1581074	47.61	ug/l	95.23%
34) Bromofluorobenzene	13.31	174	972222	46.00	ug/l	92.01%
Target Compounds						**Qvalue**
13) Acetone	4.85	43	106072	7.28	ug/l	93
17) Methylene Chloride	5.26	84	61455	6.97	ug/l	92

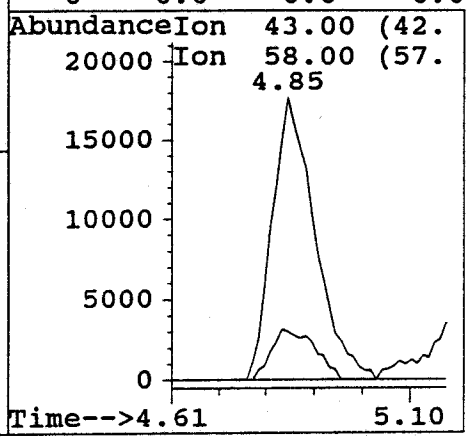
(#) = qualifier out of range (m) = manual integration

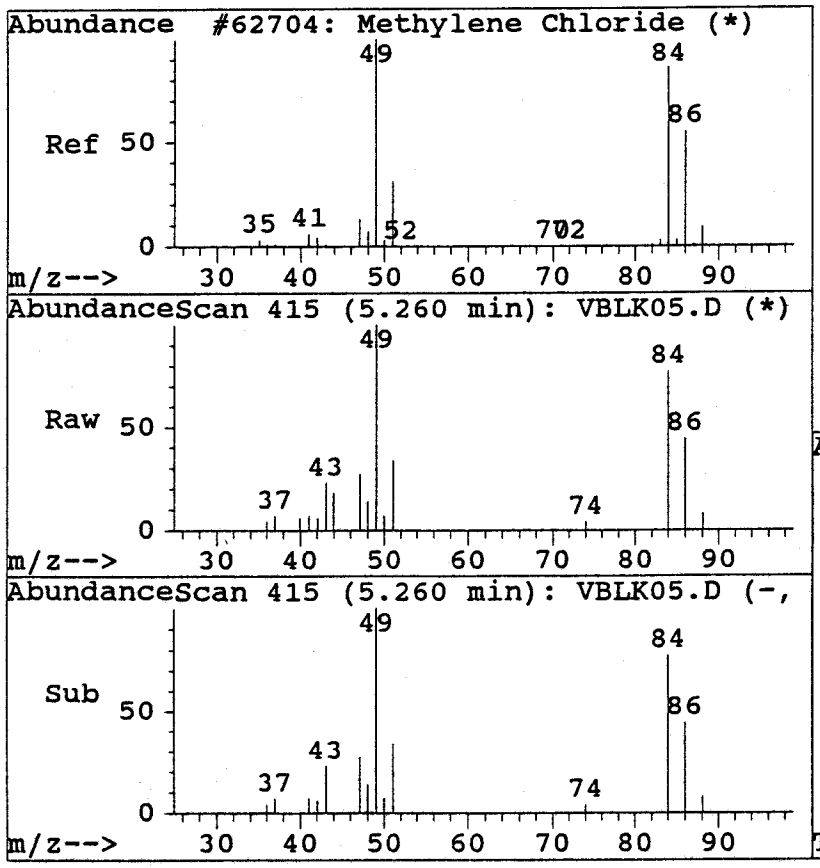


#13
Acetone
Concen: 7.28 ug/l
RT: 4.85 min Scan# 381
Delta R.T. -0.01 min
Lab File: VBLK05.D
Acq: 21 Jul 95 11:34 am

Tgt Ion:43 Resp: 106072

Ion	Ratio	Lower	Upper
43	100		
58	16.9	16.3	24.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

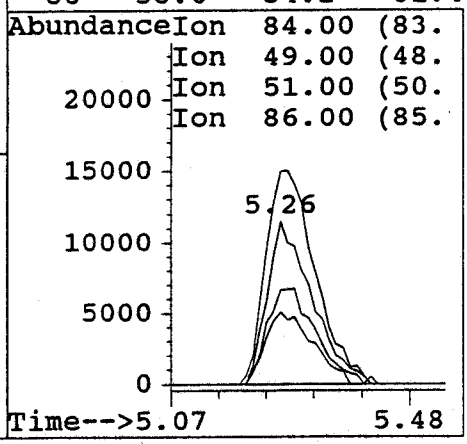




#17
Methylene Chloride
Concen: 6.97 ug/l
RT: 5.26 min Scan# 415
Delta R.T. 0.01 min
Lab File: VBLK05.D
Acq: 21 Jul 95 11:34 am

Tgt Ion:84 Resp: 61455

Ion	Ratio	Lower	Upper
84	100		
49	130.6	113.2	169.8
51	44.1	35.3	52.9
86	58.0	54.2	81.4



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. MW-1MS

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851VS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851VS.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	41	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	9.6	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	49	
000075-09-2	Methylene Chloride	8.1	
00107-13-1	Acrylonitrile	10	U
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 317

MW-1MS

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851VS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851VS.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

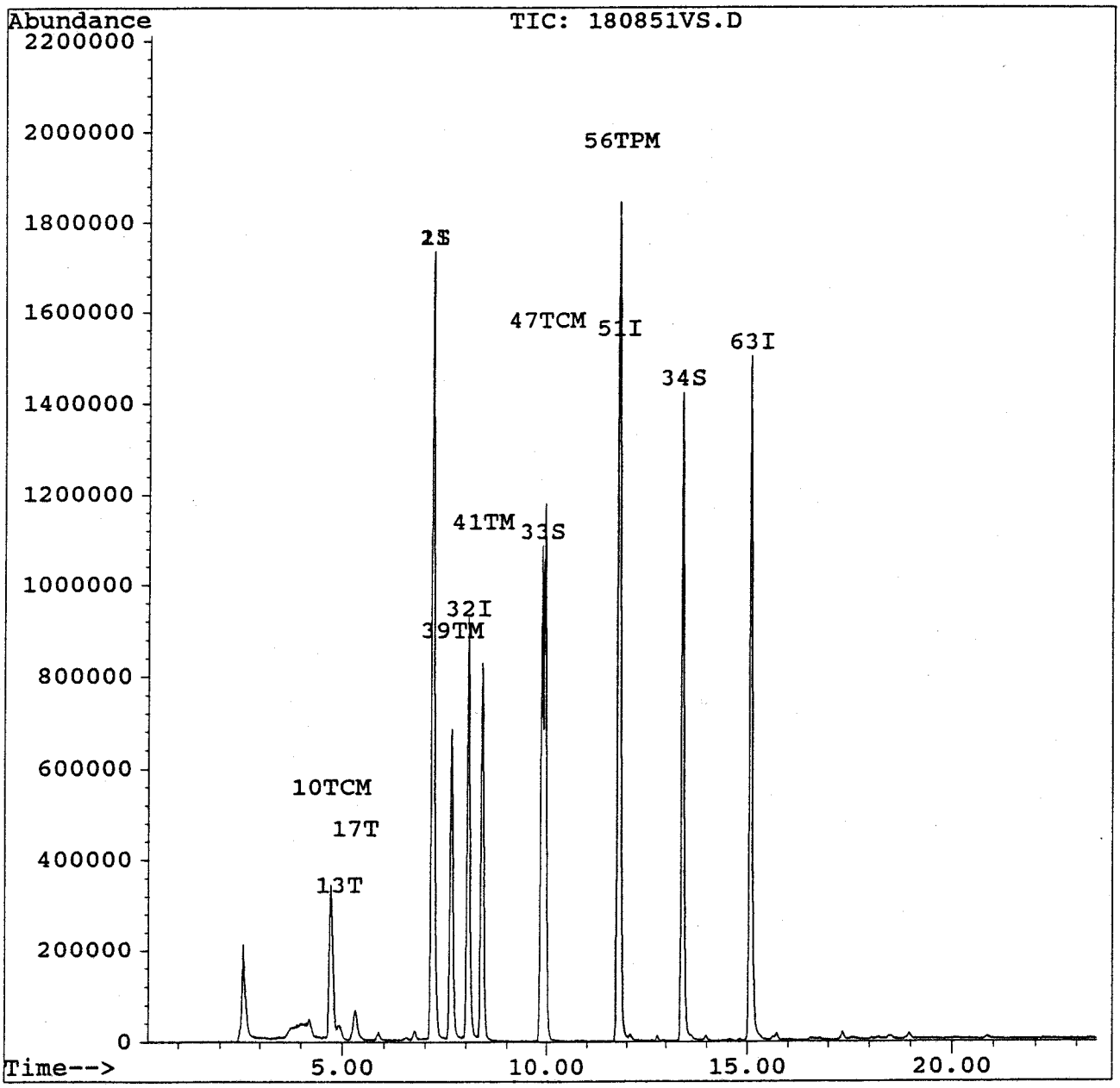
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	50	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	43	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	50	
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	47	
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180851VS.D
Acq Time : 18 Jul 95 4:56 pm
Sample : MW-1MS (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:06 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 14:13:26 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180851VS.D
Acq Time : 18 Jul 95 4:56 pm
Sample : MW-1MS (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:06 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Tue Jul 18 14:13:26 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.18	168	1816159	50.00	ug/l		-0.03
32) 1,4-Difluorobenzene	8.05	114	1628363	50.00	ug/l		-0.03
51) Chlorobenzene-d5	11.77	117	1464370	50.00	ug/l		-0.03
63) 1,4-Dichlorobenzene-d4	15.07	152	1021490	50.00	ug/l		-0.02
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.18	113	971674	49.06	ug/l		98.13%
33) Toluene-d8	9.87	98	1664272	49.81	ug/l		99.63%
34) Bromofluorobenzene	13.40	174	991108	47.98	ug/l		95.96%
Target Compounds							Qvalue
10) 1,1-Dichloroethene	4.71	96	338470	41.06	ug/l		89
13) Acetone	4.90	43	135921	9.62	ug/l		95
17) Methylene Chloride	5.30	84	68938	8.05	ug/l		95
39) Benzene	7.64	78	1266867	49.76	ug/l	#	75
41) Trichloroethene	8.37	95	675879	43.17	ug/l		95
47) Toluene	9.95	92	1035279	49.53	ug/l	#	59
56) Chlorobenzene	11.81	112	1380914	47.19	ug/l	m	100

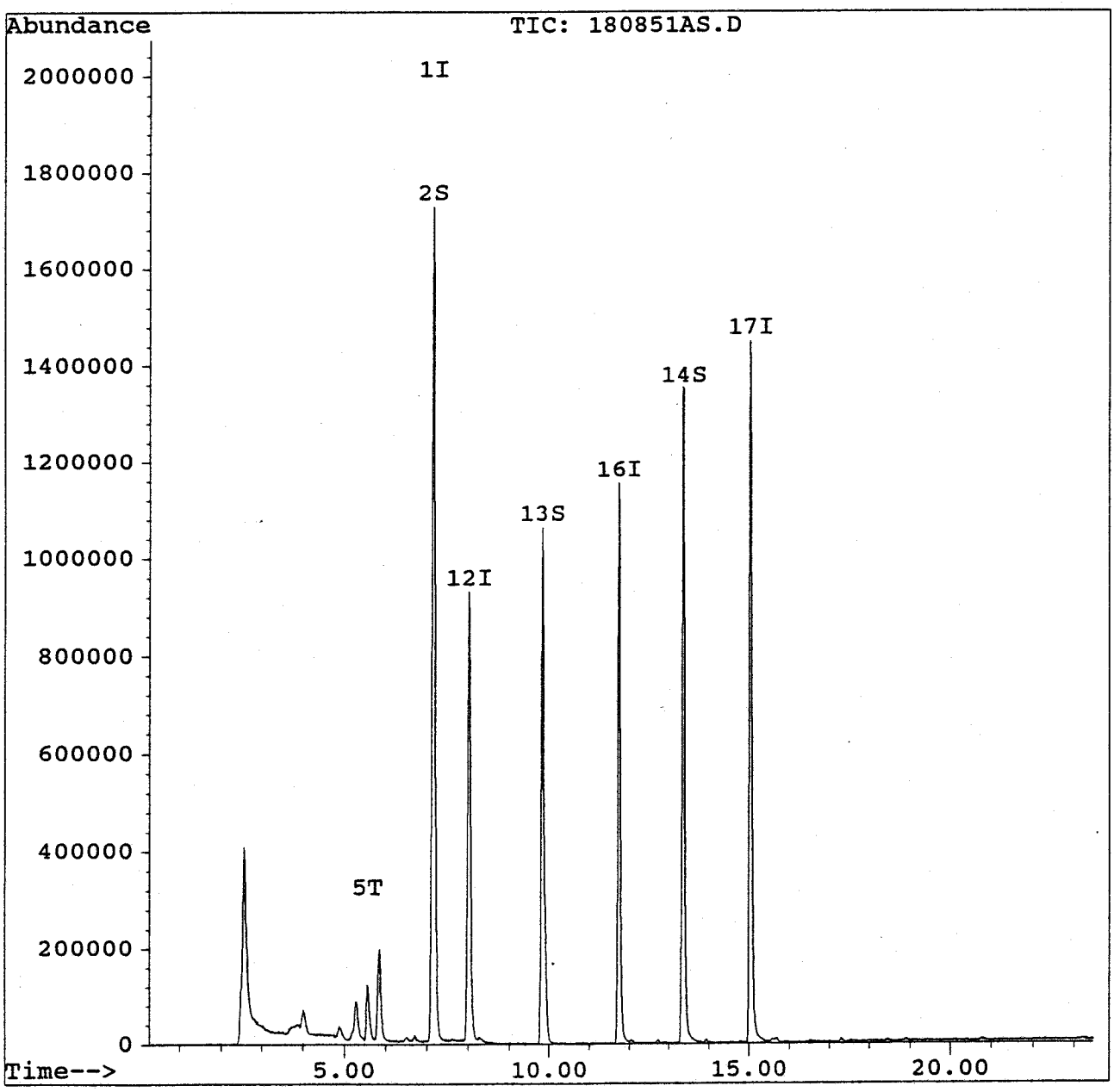
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851AS.D
Acq Time : 19 Jul 95 2:48 pm
Sample : MW-1MS (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:18 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851AS.D
Acq Time : 19 Jul 95 2:48 pm
Sample : MW-1MS (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:18 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.15	168	1835778	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	8.01	114	1605839	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.73	117	1413154	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	999901	50.00	ug/l	-0.01
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.14	113	935541	49.04	ug/l	98.08%
13) Toluene-d8	9.83	98	1602580	50.47	ug/l	100.94%
14) Bromofluorobenzene	13.36	174	947373	49.68	ug/l	99.36%
Target Compounds						**Qvalue**
5) Acrylonitrile	5.56	53	229736	49.38	ug/l	96

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. MW-1MSD

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851VD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851VD.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	5	U
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	5	U
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	41	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	5	U
00067-64-1	Acetone	7.1	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	8.2	
00107-13-1	Acrylonitrile	55	
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	5	U
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	5	U
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 323

MW-1MSD

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180851VD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180851VD.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/18/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

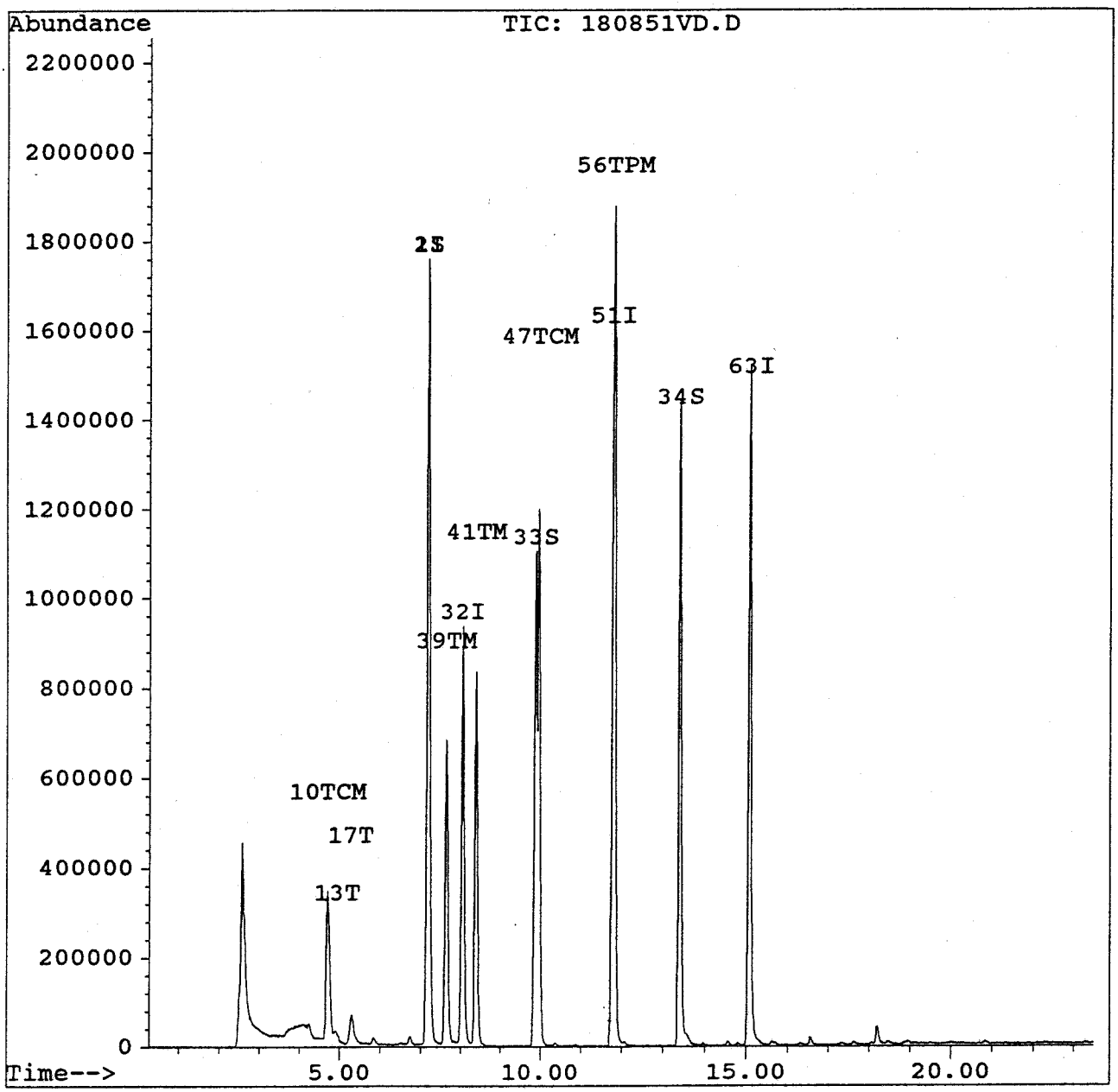
CAS No.	Compound		Q
000071-43-2	Benzene	50	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	43	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	49	
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	5	U
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	47	
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	5	U
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180851VD.D
Acq Time : 18 Jul 95 5:31 pm
Sample : MW-1MSD (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:15 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071895V\180851VD.D
Acq Time : 18 Jul 95 5:31 pm
Sample : MW-1MSD (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 10:15 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAALONG.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 11:01:48 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.17	168	1866832	50.00	ug/l		-0.04
32) 1,4-Difluorobenzene	8.03	114	1663357	50.00	ug/l		-0.04
51) Chlorobenzene-d5	11.77	117	1486313	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	15.07	152	1032152	50.00	ug/l		-0.02
System Monitoring Compounds							**%Recovery**
2) Dibromofluoromethane	7.17	113	993732	48.82	ug/l		97.63%
33) Toluene-d8	9.87	98	1709536	50.09	ug/l		100.19%
34) Bromofluorobenzene	13.40	174	1017335	48.21	ug/l		96.42%
Target Compounds							**Qvalue**
10) 1,1-Dichloroethene	4.69	96	343924	40.59	ug/l		91
13) Acetone	4.92	43	102705	7.07	ug/l		99
17) Methylene Chloride	5.27	84	72456	8.23	ug/l		95
39) Benzene	7.62	78	1298472	49.93	ug/l	#	76
41) Trichloroethene	8.37	95	689679	43.13	ug/l		95
47) Toluene	9.95	92	1051864	49.27	ug/l	#	60
56) Chlorobenzene	11.81	112	1410015	47.47	ug/l	m	100

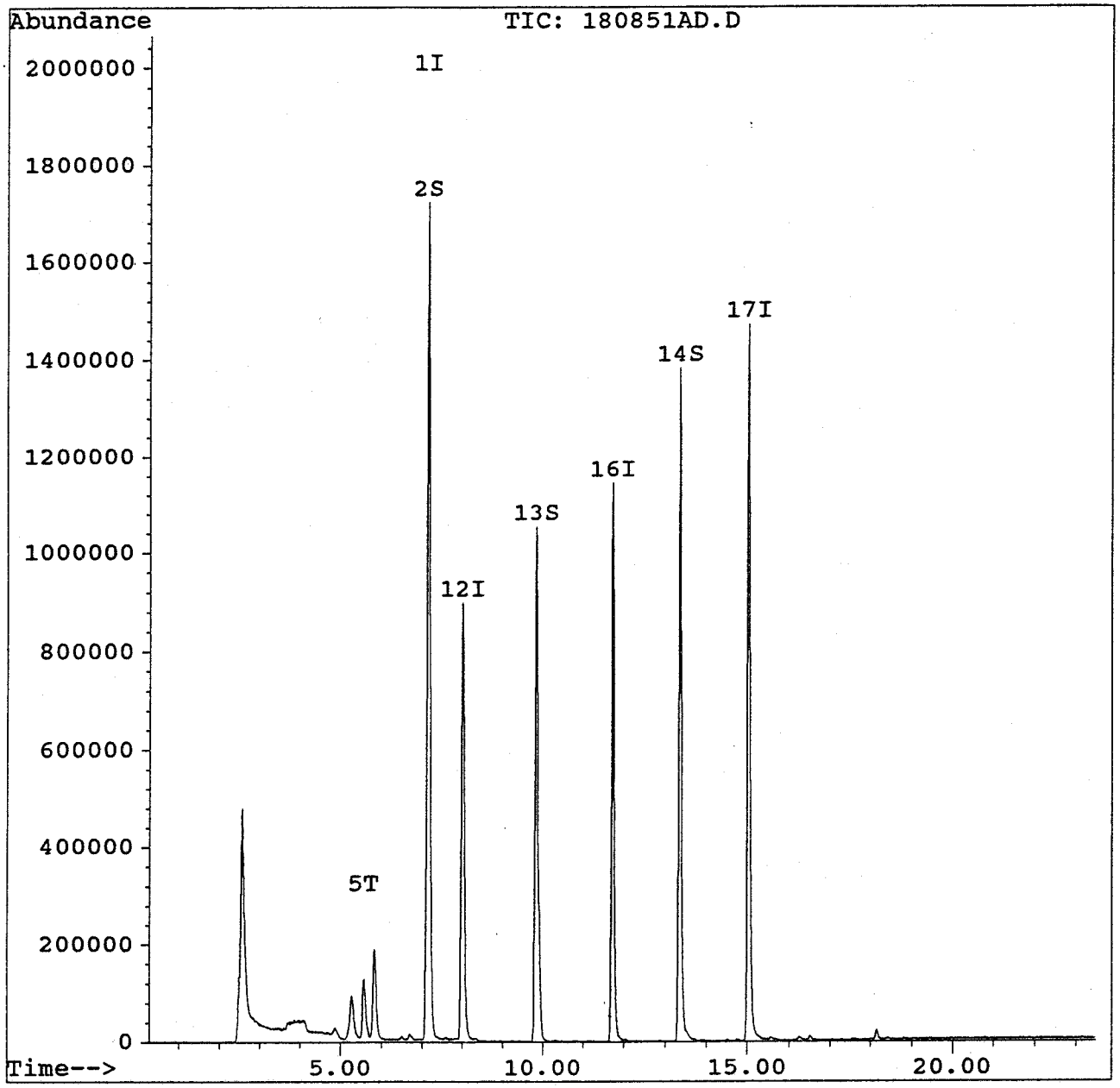
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851AD.D
Acq Time : 19 Jul 95 3:23 pm
Sample : MW-1MSD (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:18 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\071995V\180851AD.D
Acq Time : 19 Jul 95 3:23 pm
Sample : MW-1MSD (AC / AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 19 16:18 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Wed Jul 19 12:26:01 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.14	168	1830469	50.00	ug/l	-0.02
12) 1,4-Difluorobenzene	8.00	114	1607774	50.00	ug/l	-0.02
16) Chlorobenzene-d5	11.72	117	1436328	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	15.02	152	995230	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.14	113	924860	48.62	ug/l	97.24%
13) Toluene-d8	9.82	98	1605364	50.50	ug/l	100.99%
14) Bromofluorobenzene	13.35	174	953049	49.92	ug/l	99.84%
Target Compounds						Qvalue
5) Acrylonitrile	5.56	53	253839	54.72	ug/l	98

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 328

MW-9MS

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGALocation: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882VS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882VS.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	2.7	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	21	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	40	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	6	
00067-64-1	Acetone	9.4	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	160	B
00107-13-1	Acrylonitrile	56	
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	5	U
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	9.1	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	68	
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 329

MW-9MS

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882VS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882VS.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

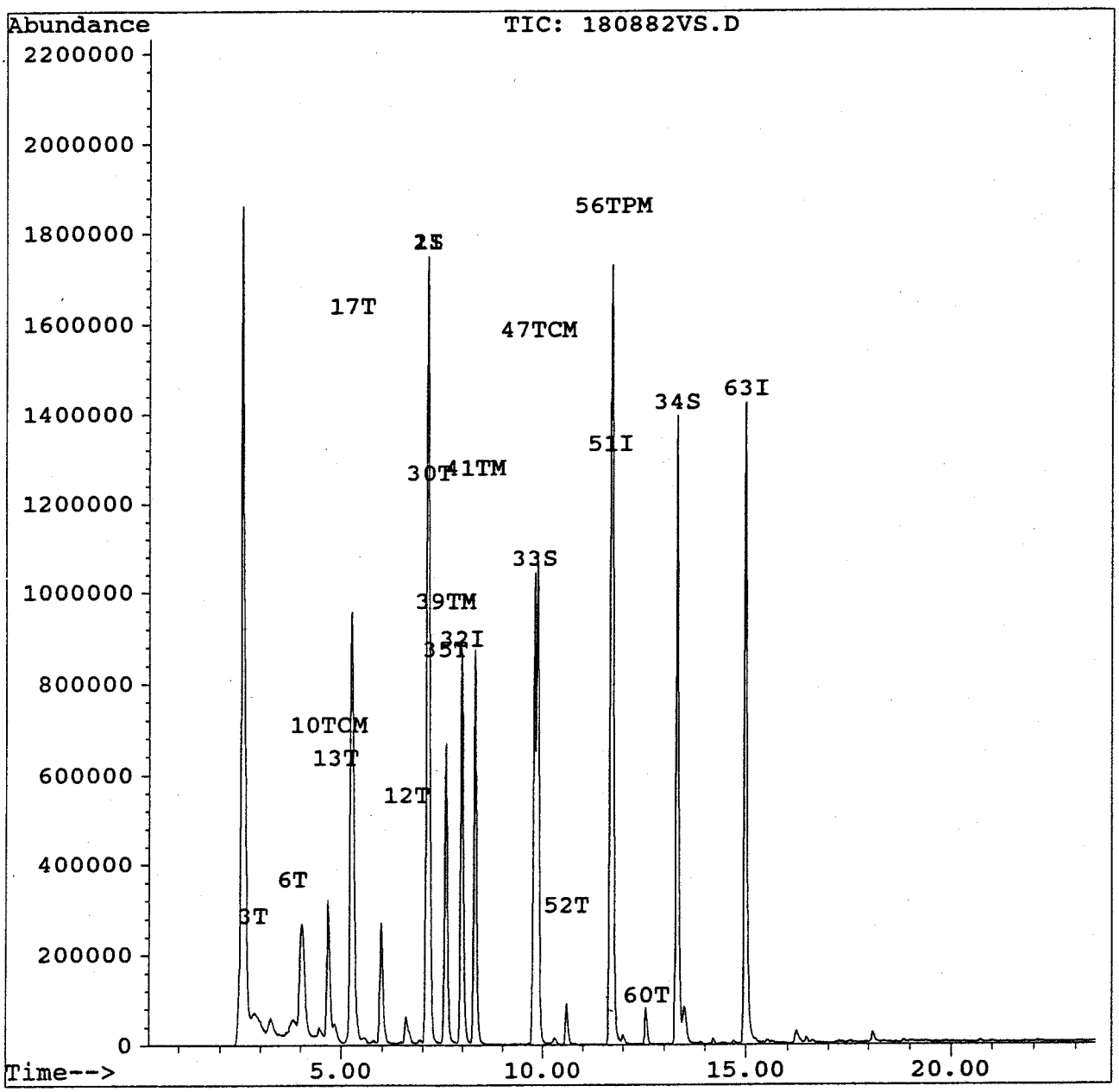
CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000071-43-2	Benzene	52	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	49	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	48	
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	3.5	J
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	45	
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	2.9	J
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882VS.D
Acq Time : 21 Jul 95 3:22 pm
Sample : MW-9MS (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882VS.D
Acq Time : 21 Jul 95 3:22 pm
Sample : MW-9MS (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:42 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.11	168	1774934	50.00	ug/l		-0.01
32) 1,4-Difluorobenzene	7.98	114	1554963	50.00	ug/l		0.00
51) Chlorobenzene-d5	11.67	117	1401873	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	14.98	152	983520	50.00	ug/l		0.00
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.11	113	926093	47.79	ug/l		95.58%
33) Toluene-d8	9.78	98	1579461	48.94	ug/l		97.88%
34) Bromofluorobenzene	13.30	174	952419	46.37	ug/l		92.74%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.81	85	33433	2.74	ug/l	m	91
6) Chloroethane	3.79	64	62500	20.89	ug/l		95
10) 1,1-Dichloroethene	4.68	96	305411	40.07	ug/l		99
12) cis-1,2-Dichloroethene	6.60	96	51515	6.04	ug/l	#	71
13) Acetone	4.85	43	130478	9.37	ug/l		99
17) Methylene Chloride	5.25	84	1319674	156.57	ug/l		98
30) 1,1,1-Trichloroethane	7.14	97	206807	9.11	ug/l	#	1
35) 1,1-Dichloropropene	7.55	77	328363	67.66	ug/l	#	100
39) Benzene	7.56	78	1238017	52.20	ug/l	#	74
41) Trichloroethene	8.30	95	721655	48.63	ug/l		97
47) Toluene	9.87	92	947727	47.89	ug/l	#	60
52) Tetrachloroethene	10.59	166	68506	3.45	ug/l	#	79
56) Chlorobenzene	11.72	112	1278149	45.34	ug/l	m	100
60) Xylene, o-	12.57	106	46424	2.87	ug/l		97

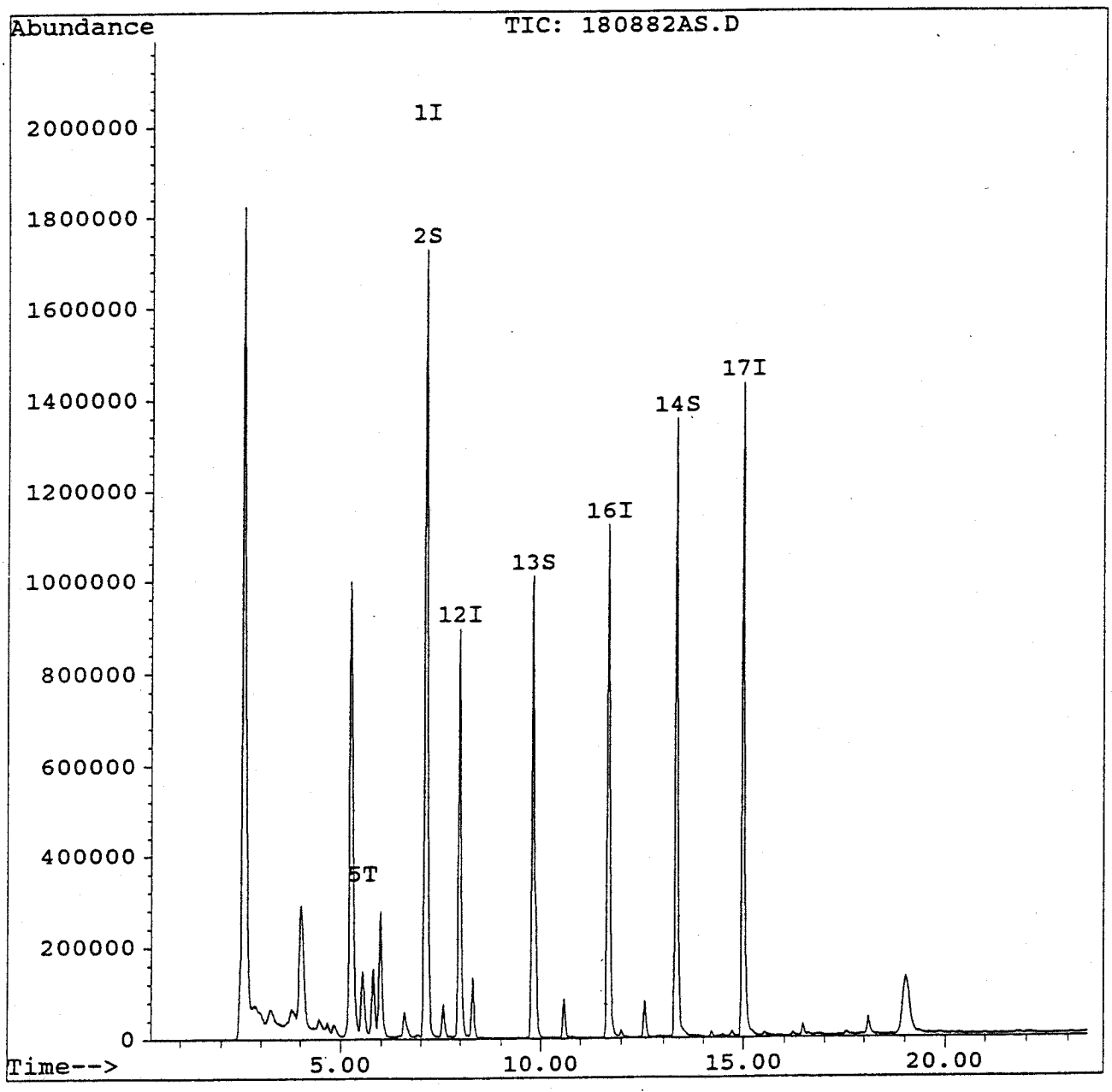
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882AS.D
Acq Time : 21 Jul 95 6:21 pm
Sample : MW-9MS (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 18:45 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882AS.D
Acq Time : 21 Jul 95 6:21 pm
Sample : MW-9MS (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 18:45 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.11	168	1745904	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	7.96	114	1556194	50.00	ug/l	-0.01
16) Chlorobenzene-d5	11.67	117	1390240	50.00	ug/l	-0.01
17) 1,4-Dichlorobenzene-d4	14.96	152	982868	50.00	ug/l	-0.02
System Monitoring Compounds						**%Recovery**
2) Dibromofluoromethane	7.11	113	898100	48.84	ug/l	97.67%
13) Toluene-d8	9.78	98	1530319	48.34	ug/l	96.68%
14) Bromofluorobenzene	13.30	174	929591	47.72	ug/l	95.43%
Target Compounds						**Qvalue**
5) Acrylonitrile	5.54	53	273541	56.40	ug/l	99

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 334

MW-9MSD

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882VD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882VD.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
000075-71-8	Dichlorodifluoromethane	2.6	J
000074-87-3	Chloromethane	5	U
000075-01-4	Vinyl Chloride	5	U
000075-00-3	Chloroethane	20	
000074-83-9	Bromomethane	5	U
000075-69-4	Trichlorofluoromethane	5	U
00107-05-1	Allyl Chloride	10	U
000075-35-4	1,1-Dichloroethene	42	
000156-60-5	trans-1,2-Dichloroethene	5	U
000156-59-2	cis-1,2-Dichloroethene	6	
00067-64-1	Acetone	9.7	JB
000074-88-4	Iodomethane	10	U
000075-15-0	Carbon Disulfide	5	U
107-13-1	Acetonitrile	10	U
000075-09-2	Methylene Chloride	160	B
00107-13-1	Acrylonitrile	54	
107-02-8	Acrolein	50	U
000108-05-4	Vinyl Acetate	10	U
000075-34-4	1,1-Dichloroethane	38	
126-99-8	Chloroprene	5	U
000594-20-7	2,2-Dichloropropane	5	U
000078-93-3	2-Butanone	10	U
107-12-0	Propionitrile	50	U
000074-97-5	Bromochloromethane	5	U
000067-66-3	Chloroform	5	U
126-98-7	Methacrylonitrile	10	U
80-62-6	Methyl Methacrylate	10	U
000071-55-6	1,1,1-Trichloroethane	8.8	
513-36-0	Isobutanol	50	U
000563-58-6	1,1-Dichloropropene	72	
010061-01-5	cis-1,3-Dichloropropene	5	U
010061-02-6	trans-1,3-Dichloropropene	5	U
000056-23-5	Carbon Tetrachloride	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 335

MW-9MSD

Lab Name: ETSAS Contract:

Project No.: 6520-21 Site: WATAUGA Location: WATAUGA CO Group: 180851V

Matrix: (soil/water) WATER Lab Sample ID: 180882VD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 180882VD.D

Level: (low/med) Date Received: 7/13/95

% Moisture: not dec. Date Analyzed: 7/21/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

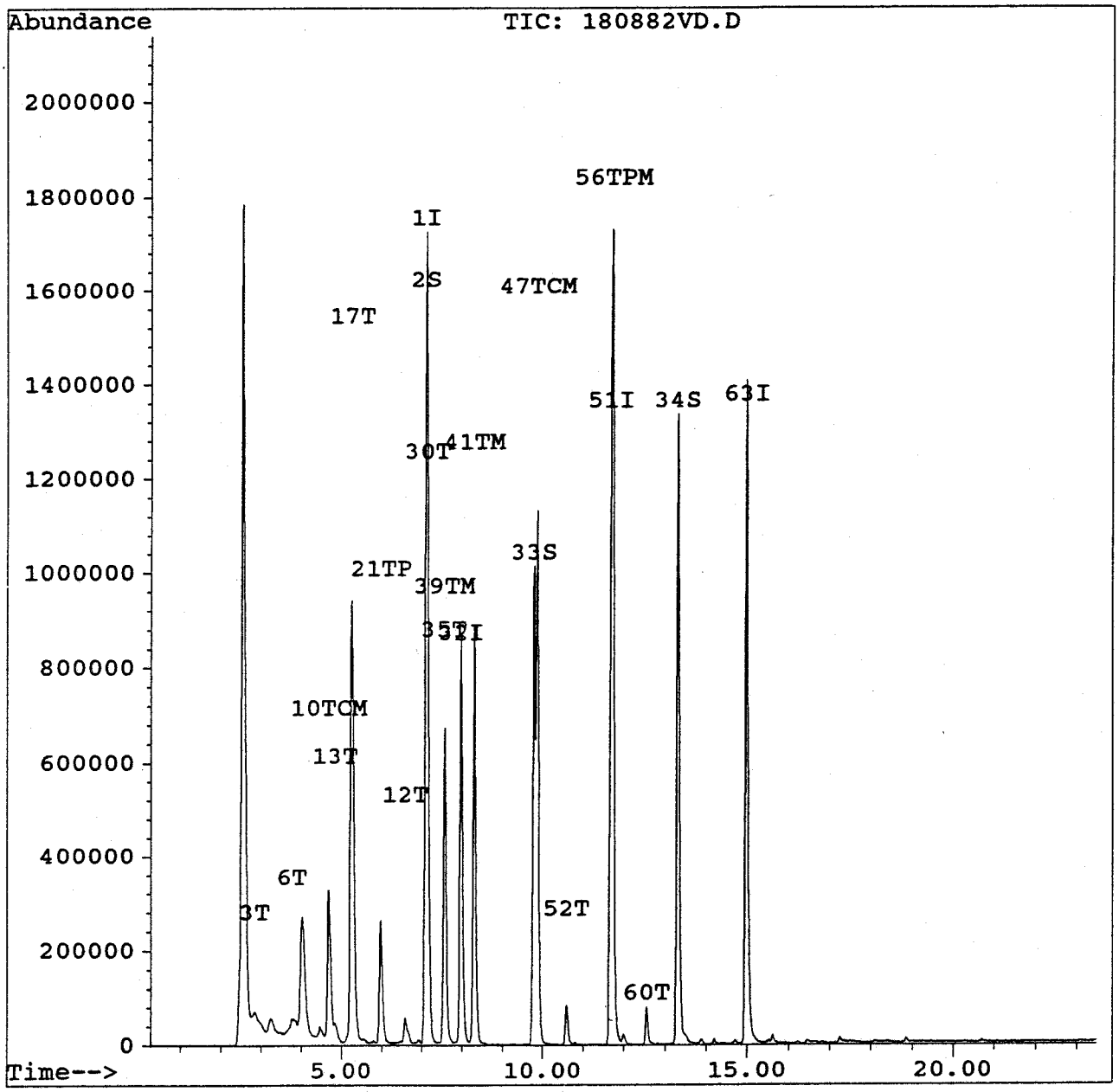
CAS No.	Compound		Q
000071-43-2	Benzene	55	
000107-06-2	1,2-Dichloroethane	5	U
000079-01-6	Trichloroethene	51	
000078-87-5	1,2-Dichloropropane	5	U
000074-95-3	Dibromomethane	5	U
000075-27-4	Bromodichloromethane	5	U
000108-10-1	4-Methyl-2-pentanone	10	U
000108-88-3	Toluene	51	
00097-63-2	Ethyl methacrylate	5	U
000079-00-5	1,1,2-Trichloroethane	5	U
000106-93-4	1,2-Dibromoethane	5	U
000127-18-4	Tetrachloroethene	3.4	J
000142-28-9	1,3-Dichloropropane	5	U
000124-48-1	Dibromochloromethane	5	U
000591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	48	
000630-20-6	1,1,1,2-Tetrachloroethane	5	U
000100-41-4	Ethylbenzene	5	U
000108-38-3	Xylene, m & p-	5	U
000095-47-6	Xylene, o-	2.9	J
000100-42-5	Styrene	5	U
000075-25-2	Bromoform	5	U
00079-34-5	1,1,2,2-Tetrachloroethane	5	U
000096-18-4	1,2,3-Trichloropropane	5	U
00110-57-6	trans-1,4-Dichloro-2-butene	5	U
000541-73-1	1,3-Dichlorobenzene	5	U
000106-46-7	1,4-Dichlorobenzene	5	U
000095-50-1	1,2-Dichlorobenzene	5	U
000096-12-8	1,2-Dibromo-3-chloropropane	5	U
000120-82-1	1,2,4-Trichlorobenzene	5	U
000087-68-3	Hexachlorobutadiene	5	U
000091-20-3	Naphthalene	10	U

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882VD.D
Acq Time : 21 Jul 95 3:57 pm
Sample : MW-9MSD (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:46 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882VD.D
Acq Time : 21 Jul 95 3:57 pm
Sample : MW-9MSD (8260)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 16:46 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : c:\HPCHEM\1\METHODS\MASTER.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:11:49 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	7.11	168	1704813	50.00	ug/l		-0.02
32) 1,4-Difluorobenzene	7.97	114	1504486	50.00	ug/l		0.00
51) Chlorobenzene-d5	11.67	117	1354601	50.00	ug/l		-0.02
63) 1,4-Dichlorobenzene-d4	14.98	152	955784	50.00	ug/l		0.00
System Monitoring Compounds							%Recovery
2) Dibromofluoromethane	7.09	113	904115	48.57	ug/l		97.15%
33) Toluene-d8	9.78	98	1545665	49.50	ug/l		99.00%
34) Bromofluorobenzene	13.30	174	928306	46.71	ug/l		93.42%
Target Compounds							Qvalue
3) Dichlorodifluoromethane	2.85	85	30830	2.63	ug/l	m	92
6) Chloroethane	3.77	64	58455	20.34	ug/l		95
10) 1,1-Dichloroethene	4.68	96	310528	42.41	ug/l		95
12) cis-1,2-Dichloroethene	6.60	96	48769	5.96	ug/l	#	69
13) Acetone	4.84	43	129771	9.70	ug/l		98
17) Methylene Chloride	5.26	84	1267603	156.58	ug/l		97
21) 1,1-Dichloroethane	5.99	63	622517	37.52	ug/l	#	100
30) 1,1,1-Trichloroethane	7.14	97	192376	8.83	ug/l	#	1
35) 1,1-Dichloropropene	7.55	77	339986	72.40	ug/l	#	100
39) Benzene	7.56	78	1260463	54.93	ug/l	#	75
41) Trichloroethene	8.30	95	727535	50.67	ug/l		98
47) Toluene	9.87	92	975661	50.96	ug/l	#	59
52) Tetrachloroethene	10.60	166	65402	3.41	ug/l	#	76
56) Chlorobenzene	11.72	112	1312369	48.17	ug/l	m	100
60) Xylene, o-	12.55	106	44582	2.85	ug/l		97

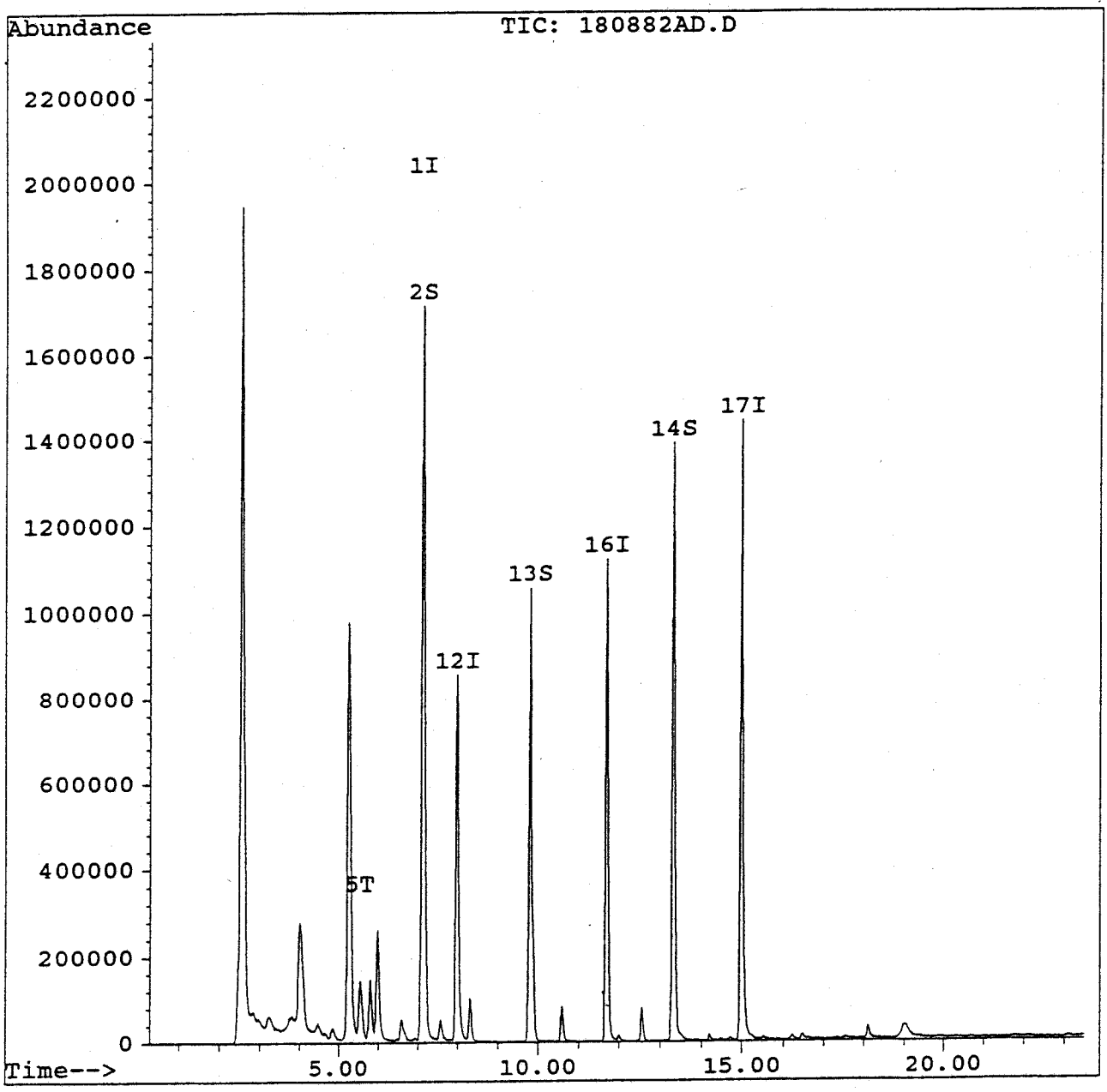
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882AD.D
Acq Time : 21 Jul 95 6:56 pm
Sample : MW-9MSD (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 19:20 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\072195V\180882AD.D
Acq Time : 21 Jul 95 6:56 pm
Sample : MW-9MSD (AC/AC)
Misc : WATAUGA COUNTY
Quant Time: Jul 21 19:20 1995

Operator: RRW
Inst : MS5970.A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\DAASHORT.M
Title : EPA 8260 Volatiles (5 point calibration)
Last Update : Fri Jul 21 11:28:42 1995
Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.11	168	1793441	50.00	ug/l	0.00
12) 1,4-Difluorobenzene	7.98	114	1563857	50.00	ug/l	0.00
16) Chlorobenzene-d5	11.69	117	1392911	50.00	ug/l	0.00
17) 1,4-Dichlorobenzene-d4	14.98	152	961218	50.00	ug/l	0.00
System Monitoring Compounds						%Recovery
2) Dibromofluoromethane	7.11	113	942823	49.91	ug/l	99.82%
13) Toluene-d8	9.78	98	1597897	50.23	ug/l	100.45%
14) Bromofluorobenzene	13.30	174	964877	49.29	ug/l	98.57%
Target Compounds						Qvalue
5) Acrylonitrile	5.53	53	267539	53.70	ug/l	96

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