United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

EPA-450/4-91-001
October 1990

Air

EPA

# 1989 URBAN AIR TOXICS MONITORING PROGRAM

U.S. Environmental Protection Agency
Region 5, Library (PL-12J)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590

EPA-450/4-91-001

# 1989 URBAN AIR TOXICS MONITORING PROGRAM

By

Robert A. McAllister
Wendy H. Moore
Joann Rice
Emily Bowles
Dave-Paul Dayton
Robert F. Jongleux
Raymond G. Merrill, Jr.
Joan T. Bursey

Radian Corporation
Research Triangle Park, NC 27709

EPA Contract No. 68D80014

EPA Contract Officers:

Neil J. Berg, Jr.
Office Of Air Quality Planning And Standards

And
Frank F. McElroy and Vinson L. Thompson
Atmospheric Research And Exposure Assessment Laboratory

Office Of Air Quality Planning And Standards
Office Of Air And Radiation
U. S. Environmental Protection Agency
Research Triangle Park, NC 27711

October 1990

U.S. Environmental Protection Agency
Region 5, Library (PL-12J)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590

This report has been reviewed by the Office Of Air Quality Planning And Standards, U. S. Environmental Protection Agency, and has been approved for publication as received from the contractor. Approval does not signify that the contents necessarily reflect the views and policies of the Agency, neither does mention of trade names or commercial products constitute endorsement or recommendation for use.

EPA-450/4-91-001

TABLE OF CONTENTS


| Section | | Page |
|---|---|---|
| | List of Figures | iv |
| | List of Tables | vi |
| | Symbols and Abbreviations | ix |
| 1.0 | SUMMARY | 1-1 |
| 2.0 | INTRODUCTION | 2-1 |
| 3.0 | URBAN AIR TOXICS TECHNICAL NOTES | 3-1 |
| | 3.1 Sampling Equipment | 3-1 |
| | 3.2 Sample Preseason Preparation and Certification | 3-4 |
| | 3.3 Sample Interface System | 3-5 |
| | 3.4 Calibration Standards Generation | 3-5 |
| | 3.5 Analysis | 3-9 |
| | 3.5.1 GC/MD Instrumentation | 3-9 |
| | 3.5.2 GC/MS Instrumentation | 3-9 |
| | 3.6 Canister Cleanup | 3-13 |
| 4.0 | RESULTS | 4-1 |
| | 4.1 Data Summary | 4-1 |
| | 4.1.1 Overall Data Summary by Compound | 4-3 |
| | 4.1.2 Site Specific Overall Data Summary | 4-5 |
| | 4.2 Precision | 4-21 |
| | 4.3 Accuracy | 4-27 |
| | 4.4 GC/MS Compound Identification Confirmation Results | 4-33 |
| | 4.5 Sample Completeness | 4-33 |
| | 4.6 Calibration Results | 4-37 |
| | 4.7 Canister Pressure | 4-37 |

TABLE OF CONTENTS (Continued)


| Section | | Page |
|---|---|---|
| 5.0 | DISCUSSION | 5-1 |
| 5.1 | Concentration Distributions | 5-1 |
| 5.2 | Correlation of Compound Concentrations | 5-9 |
| 5.3 | Ratios of Compound Concentrations | 5-24 |
| 6.0 | RECOMMENDATIONS | 6-1 |
| 6.1 | Canister Pressure and Elapsed Time Acceptance Criteria | 6-1 |
| 6.2 | Canister Cleanup Study | 6-1 |
| 6.3 | Instrument Detection Limit Study | 6-1 |
| 6.4 | Additional Target Compounds | 6-1 |
| 6.5 | Presampling Canister Data | 6-2 |
| 7.0 | REFERENCES | 7-1 |

APPENDICES

| | | |
|---|---|---|
| APPENDIX A: | Urban Air Toxics Monitoring Program Site Data Summaries for GC/MD Analyses | A1 |
| APPENDIX B: | Urban Air Toxics Monitoring Program AIRS Site Data | B1 |
| APPENDIX C: | Urban Air Toxics Monitoring Program Concentration Correlation Graphs | C1 |

## LIST OF FIGURES


| Figure | | Page |
|---|---|---|
| 3-1 | Perspective view of UATMP sampler | 3-2 |
| 3-2 | Sampling assembly for the UATMP | 3-3 |
| 3-3 | Gas chromatographic multidetector system | 3-6 |
| 3-4 | Interface sample valve configuration | 3-7 |
| 3-5 | Dynamic flow dilution apparatus | 3-8 |
| 3-6 | UATMP multiple detector configuration | 3-11 |
| 3-7 | Canister cleanup apparatus | 3-14 |
| 5-1 | Stem-and-leaf plot of 1,1,1-trichloroethane | 5-2 |
| 5-2 | Stem-and-leaf plot of carbon tetrachloride | 5-3 |
| 5-3 | Stem-and-leaf plot of toluene | 5-4 |
| 5-4 | Stem-and-leaf plot of styrene/o-xylene | 5-5 |
| 5-5 | Stem-and-leaf plot of m,p-xylene | 5-6 |
| 5-6 | Stem-and-leaf plot of ethylbenzene | 5-7 |
| 5-7 | Stem-and-leaf plot of benzene | 5-8 |
| 5-8 | Pearson correlation matrix for BRLA | 5-10 |
| 5-9 | Pearson correlation matrix for C4IL | 5-11 |
| 5-10 | Pearson correlation matrix for CANJ | 5-12 |
| 5-11 | Pearson correlation matrix for DLTX | 5-13 |
| 5-12 | Pearson correlation matrix for FLFL | 5-14 |
| 5-13 | Pearson correlation matrix for HITX | 5-15 |
| 5-14 | Pearson correlation matrix for MIFL | 5-16 |
| 5-15 | Pearson correlation matrix for S2MO | 5-17 |

LIST OF FIGURES (Continued)


| Figure | | Page |
|---|---|---|
| 5-16 | Pearson correlation matrix for SAIL . . . . . | 5-18 |
| 5-17 | Pearson correlation matrix for W1DC . . . . . | 5-19 |
| 5-18 | Pearson correlation matrix for W2DC . . . . . | 5-20 |
| 5-19 | Pearson correlation matrix for W1KS . . . . . | 5-21 |
| 5-20 | Pearson correlation matrix for W2KS . . . . . | 5-22 |

LIST OF TABLES


| Table | | Page |
|---|---|---|
| 1-1 | 1989 Urban Air Toxics Monitoring Program Sites | 1-2 |
| 1-2 | 1989 UATMP Estimated Instrument Detection Limits, GC/MD and GC/MS | 1-3 |
| 1-3 | 1989 UATMP Compound Identifications with GC/MD for All Sites | 1-4 |
| 3-1 | 1989 UATMP GC/MD Operating Conditions | 3-10 |
| 3-2 | 1989 UATMP GC/MS Operating Conditions | 3-12 |
| 4-1 | 1989 UATMP Ambient Air Samples and Analyses | 4-2 |
| 4-2 | 1989 UATMP Compound Identifications with GC/MD for All Sites | 4-4 |
| 4-3 | 1989 UATMP Frequency of Occurrence of Target Compounds | 4-6 |
| 4-4 | 1989 UATMP Compound Identifications with GC/MD for BRLA | 4-7 |
| 4-5 | 1989 UATMP Compound Identifications with GC/MD for C4IL | 4-8 |
| 4-6 | 1989 UATMP Compound Identifications with GC/MD for CANJ | 4-9 |
| 4-7 | 1989 UATMP Compound Identifications with GC/MD for DLTX | 4-10 |
| 4-8 | 1989 UATMP Compound Identifications with GC/MD for FLFL | 4-11 |
| 4-9 | 1989 UATMP Compound Identifications with GC/MD for H1TX | 4-12 |
| 4-10 | 1989 UATMP Compound Identifications with GC/MD for MIFL | 4-13 |
| 4-11 | 1989 UATMP Compound Identifications with GC/MD for PEFL | 4-14 |

LIST OF TABLES (Continued)


| Table | | Page |
|---|---|---|
| 4-12 | 1989 UATMP Compound Identifications with GC/MD for S2MO | 4-15 |
| 4-13 | 1989 UATMP Compound Identifications with GC/MD for SAIL | 4-16 |
| 4-14 | 1989 UATMP Compound Identifications with GC/MD for W1DC | 4-17 |
| 4-15 | 1989 UATMP Compound Identifications with GC/MD for W2DC | 4-18 |
| 4-16 | 1989 UATMP Compound Identifications with GC/MD for W1KS | 4-19 |
| 4-17 | 1989 UATMP Compound Identifications with GC/MD for W2KS | 4-20 |
| 4-18 | 1989 UATMP Overall Precision for Replicate Pairs | 4-22 |
| 4-19 | 1989 UATMP Replicate Statistics by Compound | 4-23 |
| 4-20 | 1989 UATMP Replicate Statistics | 4-24 |
| 4-21 | 1989 UATMP Overall Precision for Duplicate Pairs | 4-25 |
| 4-22 | 1989 UATMP Duplicate Statistics by Compound | 4-26 |
| 4-23 | 1989 UATMP Duplicate Statistics | 4-28 |
| 4-24 | 1989 UATMP GC/MD Audits | 4-29 |
| 4-25 | 1989 UATMP GC/MS Audits | 4-31 |
| 4-26 | 1989 UATMP Compound Identification Confirmation | 4-34 |
| 4-27 | 1989 UATMP Completeness | 4-35 |
| 4-28 | 1989 UATMP Invalidated Samples | 4-36 |
| 4-29 | 1989 UATMP Calibration Data for Flame Ionization Detector | 4-38 |

LIST OF TABLES (Continued)


| Table | | Page |
|---|---|---|
| 4-30 | 1989 UATMP Calibration Data for Photoionization Detector | 4-39 |
| 4-31 | 1989 UATMP Calibration Data for Electron Capture Detector | 4-40 |
| 4-32 | 1989 UATMP Canister Pressures After Sampling | 4-42 |
| 5-1 | 1989 UATMP Ratios for Benzene, Toluene, and Xylenes to Ethylbenzene | 5-25 |

## SYMBOLS AND ABBREVIATIONS

| | |
|---|---|
| AC, A.C., or a.c. | area counts, generated from a gas chromatograph |
| A/D | analog to digital |
| ADELTA | absolute value of DELTA |
| AIRS | Aerometric Information Retrieval System |
| a.m. | ante meridiem |
| Apr | April |
| AREAL Laboratory | Atmospheric Research and Exposure Assessment |
| Aug | August |
| BRLA | Baton Rouge, Louisiana (AIRS No. 22-033-0004) |
| BTX | benzene, toluene, m/p-xylene |
| C4IL | Chicago, IL (AIRS No. 17-031-0060) |
| Cal., or Calib. | calibration |
| CANJ | Camden, NJ (AIRS No. 34-007-0003) |
| cm | centimeter |
| DLTX | Dallas, Texas (AIRS No. 48-113-0069) |
| DNPH | dinitrophenylhydrazine |
| Dup. | duplicate |
| e | base of natural logarithm, 2.71828... |
| ECD | electron capture detector |
| EPA | United States Environmental Protection Agency |
| F | Friday |
| FID | flame ionization detector |
| FLFL | Fort Lauderdale, Florida (AIRS No. 12-011-1003) |
| GC/ECD | gas chromatograph/electron capture detector |
| GC/FID | gas chromatograph/flame ionization detector |
| GC/MD | gas chromatograph/multiple detector |
| GC/MS | gas chromatograph/mass spectrometer |
| H | high level of confidence |
| HITX | Houston, Texas (AIRS No. 48-201-1034) |
| Hi-Vol | High-Volume (filter) |
| Hg | mercury |
| HPLC | high performance liquid chromatography |
| Hr | hour |
| i.d. | inside diameter |
| ID | identification |
| IDL | instrument detection limit |
| in. | inches |
| INST. | instrument |

| | |
|---|---|
| Jul | July |
| Jun | June |
| L | liter |
| L | low level of confidence |
| Lpm | liters per minute |
| m | meter |
| M | medium level of confidence |
| MAX | maximum |
| mb | megabyte |
| MDL | method detection limit |
| MID | multiple ion detection |
| MIFL | Miami, Florida (AIRS No. 12-025-4002) |
| MIN | minimum |
| min. | minute |
| mL | milliliter |
| mm | millimeter |
| NC | North Carolina |
| NMOC | Nonmethane organic compound |
| No. | Number |
| Oct | October |
| o.d. | outside diameter |
| Off. | Office |
| PDFID | cryogenic preconcentration and direct flame ionization detection |
| PEFL | Pensacola, Florida (AIRS No. 12-033-0004) |
| PID | photoionization detector |
| p.m. | post meridiem |
| ppb | parts per billion |
| ppbv | parts per billion by volume |
| ppm | parts per million |
| ppmC | parts per million by volume as carbon |
| ppmv | parts per million by volume |
| psi | pounds (force) per square inch |
| psig | pounds (force) per square inch gauge |
| QA | quality assurance |
| QAD | Quality Assurance Division (EPA) |
| QAPP | Quality Assurance Project Plan |
| QC | quality control |
| RT | retention time |
| RTP | Research Triangle Park |

| | |
|---|---|
| S2MO | St. Louis, Missouri (AIRS No. 29-510-0072) |
| SAIL | Sauget, Illinois (AIRS No. 17-163-1010) |
| SAROAD | Storage and Retrieval of Aerometric Data |
| Sep | September |
| SOP | standard operating procedure |
| STD | standard deviation |
| T | Tuesday |
| UATMP | Urban Air Toxics Monitoring Program |
| U.S. | United States |
| W1DC | Washington, DC (AIRS No. 11-001-0025) |
| W1KS | Wichita, Kansas (AIRS No. 20-173-0010) |
| W2DC | Washington, DC (AIRS No. 11-001-0039) |
| W2KS | Wichita, Kansas (AIRS No. 20-173-0007) |
| W | Wednesday |
| °C | degrees Celsius |
| °F | degrees Fahrenheit |
| %CV | percent coefficient of variation |
| %Diff | percent difference |
| $\mu g/m^3$ | microgram per standard cubic meter (at 25°C and 1.0 atmosphere) |
| $\mu m$ | micrometer |

# 1.0 SUMMARY

The Urban Air Toxics Monitoring Program (UATMP) was developed in 1987 by the United States Environmental Protection Agency (U.S. EPA). The data discussed in this report are from the analyses of samples collected during the 1989 program, from January 1989 through January 1990. During the 1989 program, 397 valid samples were collected in 6-liter (L) SUMMA®-treated canisters. These samples were collected from 14 sites in the United States every 12 days, for a 24-hour collection period.

Table 1-1 lists the 1989 UATMP sites, along with the EPA Region, the city in which the site is located, the Radian site code, the site numbers of the Storage and Retrieval of Aerometric Data (SAROAD) set, and the Aerometric Information Retrieval System (AIRS) number for the site. Six of the 1989 sites also participated in the 1988 UATMP: MIFL, C4IL, SAIL, DLTX, H1TX, and BRLA.

UATMP canister samples were analyzed by a gas chromatograph/multiple detector (GC/MD) system for 38 target organic compounds. The estimated instrument detection limits (IDLs) for each of the 38 compounds are listed in Table 1-2. A portion of the samples were also analyzed using a gas chromatograph/mass spectrometer (GC/MS) as identification confirmation of the GC/MD results. The estimated IDLs for GC/MS are also listed in Table 1-2. These estimated IDLs were used as guidelines for precision and quantitation only. Data were not excluded as a result of being below the estimated IDL.

Table 1-3 presents summary statistics for the 1989 UATMP compound identifications pooled for all the sites. Compound identifications and quantitation included all cases in which identification criteria of retention time and detector response ratio(s) were met, regardless of whether the compound concentration was above or below the IDLs given in Table 1-2. Several target compounds were identified in 100% of the samples analyzed--benzene, toluene, m/p-xylene, styrene/o-xylene, and ethylbenzene. Carbon tetrachloride and 1,1,1-trichloroethane were identified in 99.5% of the samples analyzed. The frequency of occurrence of target compounds dropped to 44.1% for tetrachloroethylene, and 40.3% for 1,3-butadiene. The remainder of the target compounds were identified less frequently.

The concentration ranges for target compounds, presented in Table 1-3 as minima and maxima, ranged from 0.01 parts per billion by volume (ppbv) to

TABLE 1-1. 1989 URBAN AIR TOXICS MONITORING PROGRAM SITES

| EPA Region | City | Radian Site Code | SAROAD Number | AIRS Number |
|---|---|---|---|---|
| II | Camden, NJ | CANJ | 31-0720-003 | 34-007-0003 |
| III | Washington, DC | W1DC | 09-0020-025 | 11-001-0025 |
| | Washington, DC | W2DC | 09-0020-039 | 11-001-0039 |
| IV | Miami, FL | MIFL | 10-2700-002 | 12-025-4002 |
| | Ft. Lauderdale, FL | FLFL | 10-1260-003 | 12-011-1003 |
| | Pensacola, FL | PEFL | 10-3540-004 | 12-033-0004 |
| V | Chicago, IL | C4IL | 14-1220-060 | 17-031-0060 |
| | Sauget, IL | SAIL | 14-6900-010 | 17-163-1010 |
| VI | Dallas, TX | DLTX | 45-1310-069 | 48-113-0069 |
| | Houston, TX | H1TX | 45-2560-034 | 48-201-1034 |
| | Baton Rouge, LA | BRLA | 19-0280-004 | 22-033-0004 |
| VII | Wichita, KS | W1KS | 17-3740-010 | 20-173-0010 |
| | Wichita, KS | W2KS | 17-3740-009 | 20-173-0007 |
| | St. Louis, MO | S2MO | 26-4280-072 | 29-510-0072 |

TABLE 1-2. 1989 UATMP ESTIMATED INSTRUMENT DETECTION LIMITS, GC/MD AND GC/MS

| Compound | GC/MD ppbv | GC/MS[a] ppbv |
|---|---|---|
| Acetylene | 1.00 | [b] |
| Propylene | 0.10 | 0.40 |
| 1,3-Butadiene | 0.10 | 0.57 |
| Vinyl chloride | 0.20 | 0.43 |
| Chloromethane | 0.20 | 0.56 |
| Chloroethane | 0.10 | 0.38 |
| Bromomethane | 0.20 | 0.25 |
| Methylene chloride | 0.11 | 0.31 |
| trans-1,2-Dichloroethylene | 0.04 | 0.39 |
| 1,1-Dichloroethane | 0.04 | 0.53 |
| Chloroprene | 0.06 | 0.57 |
| Bromochloromethane | 0.003 | 0.48 |
| Chloroform | 0.006 | 0.27 |
| 1,1,1-Trichloroethane | 0.001 | 0.70 |
| Carbon tetrachloride | 0.001 | 0.37 |
| 1,2-Dichloroethane | 0.04 | 0.59 |
| Benzene | 0.04 | 0.34 |
| Trichloroethylene | 0.004 | 0.37 |
| 1,2-Dichloropropane | 0.04 | 0.44 |
| Bromodichloromethane | 0.001 | 0.22 |
| trans-1,3-Dichloropropylene | 0.04 | 0.50 |
| Toluene | 0.02 | 0.50 |
| n-Octane | 0.03 | 0.29 |
| cis-1,3-Dichloropropylene | 0.04 | 0.80 |
| 1,1,2-Trichloroethane | 0.04 | 0.22 |
| Tetrachloroethylene | 0.07 | 0.32 |
| Dibromochloromethane | 0.001 | 0.25 |
| Chlorobenzene | 0.02 | 0.57 |
| Ethylbenzene | 0.02 | 0.72 |
| m/p-Xylene | 0.04 | 0.46 |
| Styrene | 0.02 | 0.46 |
| o-Xylene | 0.02 | 0.39 |
| Bromoform | 0.001 | 0.27 |
| 1,1,2,2-Tetrachloroethane | 0.002 | 0.37 |
| m-Dichlorobenzene | 0.02 | 0.28 |
| p-Dichlorobenzene | 0.09 | 0.56 |
| c-Dichlorobenzene | 0.02 | 0.37 |

[a] GC/MS operated in the multiple ion detection (MID) mode using a 512-milliliter (mL) sample, twice the volume of GC/MD samples.
[b] Below GC/MS scan range.

## TABLE 1-3. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR ALL SITES

| Compound | Cases[a] No. | Cases[a] % Freq.[b] | Min. ppbv | Max. ppbv | Mean[c] ppbv | Mean[d] ppbv | Mean[e] ppbv | Median ppbv | STD[f] ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 52 | 13.1 | 0.45 | 36.82 | 6.17 | 1.24 | 0.81 | 2.55 | 8.71 |
| Propylene | 51 | 12.8 | 0.07 | 72.76 | 7.75 | 1.04 | 1.00 | 5.37 | 11.23 |
| 1,3-Butadiene | 160 | 40.3 | 0.04 | 4.78 | 0.46 | 0.21 | 0.18 | 0.27 | 0.55 |
| Vinyl chloride | 7 | 1.8 | 0.35 | 48.89 | 7.76 | 0.24 | 0.14 | 0.59 | 18.15 |
| Chloromethane | 2 | 0.5 | 0.03 | 12.10 | 6.06 | 0.13 | 0.03 | 6.06 | 8.53 |
| Chloroethane | 18 | 4.5 | 0.03 | 0.47 | 0.19 | 0.06 | 0.01 | 0.15 | 0.12 |
| Bromomethane | 9 | 2.3 | 0.03 | 2.92 | 0.63 | 0.11 | 0.01 | 0.11 | 0.96 |
| Methylene chloride | 35 | 8.8 | 1.06 | 17.26 | 6.27 | 0.60 | 0.55 | 4.98 | 4.23 |
| trans-1,2-Dichloroethylene | 14 | 3.5 | 0.03 | 2.06 | 0.59 | 0.04 | 0.02 | 0.20 | 0.66 |
| 1,1-Dichloroethane | 12 | 3.0 | 0.03 | 0.48 | 0.14 | 0.02 | 0.004 | 0.08 | 0.15 |
| Chloroprene | 120 | 30.2 | 0.01 | 4.91 | 0.31 | 0.11 | 0.09 | 0.12 | 0.55 |
| Bromochloromethane | 6 | 1.5 | 0.01 | 0.16 | 0.08 | 0.003 | 0.001 | 0.08 | 0.06 |
| Chloroform | 56 | 14.1 | 0.02 | 80.76 | 1.71 | 0.24 | 0.24 | 0.18 | 10.76 |
| 1,1,1-Trichloroethane | 395 | 99.5 | 0.18 | 65.57 | 1.14 | 1.13 | 1.13 | 0.50 | 3.75 |
| Carbon tetrachloride | 395 | 99.5 | 0.11 | 1.78 | 0.19 | 0.19 | 0.19 | 0.15 | 0.15 |
| 1,2-Dichloroethane | 7 | 1.8 | 0.04 | 0.21 | 0.08 | 0.02 | 0.001 | 0.06 | 0.06 |
| Benzene | 397 | 100.0 | 0.05 | 27.66 | 1.96 | 1.96 | 1.96 | 1.38 | 2.23 |
| Trichloroethylene | 174 | 43.8 | 0.01 | 5.60 | 0.55 | 0.24 | 0.24 | 0.23 | 0.81 |
| 1,2-Dichloropropane | 90 | 22.7 | 0.04 | 3.63 | 0.76 | 0.19 | 0.17 | 0.48 | 0.78 |
| Bromodichloromethane | 14 | 3.5 | 0.02 | 0.11 | 0.05 | 0.002 | 0.002 | 0.05 | 0.03 |
| t-1,3-Dichloropropylene | 7 | 1.8 | 0.02 | 0.45 | 0.11 | 0.02 | 0.002 | 0.05 | 0.16 |
| Toluene | 397 | 100.0 | 0.08 | 217.89 | 4.56 | 4.56 | 4.56 | 2.50 | 12.52 |
| n-Octane | 48 | 12.1 | 0.02 | 4.46 | 0.34 | 0.05 | 0.04 | 0.15 | 0.70 |
| n-Octane/trans-1,3-dichloropropylene | 36 | 9.1 | 0.01 | 1.22 | 0.19 | 0.04 | 0.02 | 0.11 | 0.25 |
| cis-1,3-Dichloropropylene | 13 | 3.3 | 0.01 | 1.30 | 0.29 | 0.03 | 0.01 | 0.23 | 0.33 |
| 1,1,2-Trichloroethane | 76 | 19.1 | 0.01 | 4.08 | 0.29 | 0.07 | 0.06 | 0.04 | 0.79 |
| Tetrachloroethylene | 175 | 44.1 | 0.01 | 5.81 | 0.35 | 0.18 | 0.16 | 0.20 | 0.59 |
| Dibromochloromethane | 1 | 0.3 | 0.02 | 0.02 | 0.02 | 0.001 | 0.0001 | 0.02 | 0.00 |
| Chlorobenzene | 98 | 24.7 | 0.01 | 11.72 | 0.49 | 0.13 | 0.12 | 0.20 | 1.37 |
| Ethylbenzene | 397 | 100.0 | 0.02 | 9.77 | 0.57 | 0.57 | 0.57 | 0.36 | 0.88 |
| m/p-Xylene | 397 | 100.0 | 0.09 | 50.50 | 3.16 | 3.16 | 3.16 | 1.95 | 4.56 |
| Styrene/o-xylene | 397 | 100.0 | 0.03 | 16.61 | 1.09 | 1.09 | 1.09 | 0.68 | 1.58 |
| Bromoform | 2 | 0.5 | 0.02 | 0.03 | 0.02 | 0.001 | 0.0001 | 0.02 | 0.01 |
| 1,1,2,2-Tetrachloroethane | 13 | 3.3 | 0.03 | 0.75 | 0.16 | 0.01 | 0.01 | 0.08 | 0.20 |
| m-Dichlorobenzene | 63 | 15.9 | 0.01 | 1.08 | 0.12 | 0.03 | 0.02 | 0.04 | 0.19 |
| p-Dichlorobenzene | 153 | 38.5 | 0.02 | 15.72 | 0.75 | 0.32 | 0.29 | 0.22 | 1.65 |
| o-Dichlorobenzene | 78 | 19.6 | 0.01 | 2.85 | 0.21 | 0.05 | 0.04 | 0.10 | 0.42 |

[a]A total of 397 samples were analyzed by GC/MD.
[b]Percent of the total samples analyzed in which the compound was identified.
[c]The arithmetic average concentration of all cases in which the compound was identified.
[d]The arithmetic average concentration of all samples, using half the IDL value for samples in which the compound was not identified.
[e]The arithmetic average concentration of all samples, using zero for samples in which the compound was not identified.
[f]The standard deviation (STD) of all cases in which the compound was identified.

217.89 ppbv. The maximum overall concentration of 217.89 ppbv was for toluene. Nine compounds had maximum concentrations below 1.0 ppbv. Table 1-3 also gives the medians, standard deviations, and three types of means, or averages, for the target compounds. Column six of Table 1-3 lists the mean, or the arithmetic average concentration, for each compound identified in each sample. In the next column, the mean is calculated using one-half the IDL (Table 1-2) for samples in which the compound was not identified. Finally, column eight of Table 1-3 gives the mean concentrations, using zero for samples in which the compound was not identified.

Although concentrations of air toxic pollutants have been shown to be approximately lognormally distributed[1-3], arithmetic averages (or means) have been used in this study. Means calculated in columns seven and eight may be viewed as annual means, because the overall time period of the data span about one year. Standard deviations given in Table 1-3 are calculated using only the cases in which the compound was identified.

Analytical precision was measured in terms of percent coefficient of variation (% CV) for repeated analyses of the same sample, and ranged from -23.1% to 41.8%, averaging -0.44 percent. Sampling and analysis precision was determined from analyses of duplicate samples. Percent CV for duplicates ranged from -14.1% to 57.9%, averaging -0.62 percent.

Accuracy was determined from six external audits conducted by the Quality Assurance Division (QAD) of the Atmospheric Research and Environmental Assessment Laboratory (AREAL) of the USEPA. The average bias calculated for each audited compound, ranged from -14.6% for ethylbenzene and bromomethane, to 21.5% for methylene chloride. The overall average bias for all audited compounds was -1.2 percent. Compound concentrations in the audit samples ranged from about 2 to 8 ppbv.

About 15% of the UATMP samples were analyzed by GC/MS to confirm the GC/MD analyses. Identifications were confirmed if both GC/MD and GC/MS identified, or did not identify, the compound. GC/MS confirmed 94.1% of the GC/MD results in the 1989 UATMP sample analyses.

The replicate and duplicate precision results, along with the audit bias results for determining accuracy, reflect the quality of the data presented in this report. The high percentage of GC/MS confirmed results indicates the reliability and the representativeness of the compound identifications and concentrations reported for UATMP.

## 2.0 INTRODUCTION

The UATMP was developed in 1987 to help state and local agencies determine if an air toxics problem existed and, if one existed, what was the nature and extent of it. Data from the UATMP are used in risk assessment models associated with toxic organic compounds. From its origin, the UATMP has been regarded as a screening program. That is, to assess the kinds of metals and organic compounds, and their relative concentrations, which may be in urban atmospheres. Because there may be hundreds of these substances in urban environments, and because it is not possible to measure all of them in small samples, the UATMP was deliberately structured to confine analysis of the samples to a limited number of compounds which were of special concern to health professionals.

Nonmethane organic compound (NMOC) and 3-hour air toxics monitoring programs for 1989 are companion programs to UATMP. Sampling for the NMOC and 3-hour air toxics monitoring programs began on June 6, 1989, and completed on September 29, 1989. The results of the NMOC and 3-hour air toxics monitoring programs are presented in a separate report.[1]

The UATMP consists of three analytical fractions: filter samples to be analyzed for selected metals and benzo(a)pyrene, dinitrophenylhydrazine (DNPH) cartridges samples for collection of carbonyl compounds, and canister samples to be analyzed for 38 gaseous organic compounds. The DNPH cartridges are also called "aldehyde cartridges," although both aldehydes (formaldehyde and acetaldehyde) and a ketone (acetone) are quantitatively derivatized. Throughout the remainder of this report, the DNPH cartridges will be referred to as the aldehyde cartridges. The results from canister samples will be presented and discussed in this report. The results from the aldehyde cartridge samples and the high-volume (Hi-Vol) filter samples will be presented in separate reports.

The samples for each analytical fraction were collected simultaneously, i.e., timers were programmed to start Hi-Vol filters, to start pumps that draw air through cartridges that trap carbonyl compounds, and to open a valve to start the canister sampling--all beginning at midnight on each scheduled day. Samples were collected from January 16, 1989, through January 23, 1990, on a 12-day cycle, for the 1989 UATMP. Hi-Vol filter samples were sent by site personnel directly to the U.S. EPA for analysis. Aldehyde cartridges and the

UATMP 6-L canisters were returned to Radian's Research Triangle Park (RTP), NC, laboratory. The aldehyde cartridges were transported to the U.S. EPA for analysis, and the UATMP samples were analyzed by Radian.

Section 3.0 presents the descriptions of the UATMP field sampling equipment, the GC/MD and GC/MS analytical equipment, the standards preparation apparatus, and the canister cleanup system. Section 4.0 summarizes the analytical results obtained for the 1989 UATMP, and Section 5.0 discusses the data characterizations for the UATMP results. Section 6.0 gives recommendations for future programs, and Section 7.0 provides the references cited.

# 3.0 URBAN AIR TOXICS TECHNICAL NOTES

This section presents descriptions of the equipment and procedures used in the 1989 UATMP. The sampling equipment, sample interface, analytical systems, compound identification and confirmation procedures, calibration standard generation apparatus, and the canister cleaning system are detailed in this section.

## 3.1 SAMPLING EQUIPMENT

A perspective view of the UATMP sampler is given in Figure 3-1, and Figure 3-2 shows the detailed layout of the sample lines, flow controller, and the other components of the UATMP sampler. The sampler was designed to obtain a 24-hour integrated ambient air sample in an evacuated stainless steel canister. Separate sample lines are used for the ambient air sample and for the aldehyde sample cartridges. The aldehyde sample lines are heated from the inlet to the aldehyde cartridges.

The aldehyde sample cartridges were prepared by an EPA Mobile Source Branch on-site contractor and sent to Radian Corporation's RTP laboratory for shipment to the UATMP sites. Each aldehyde cartridge was given a unique serial number. Three cartridges, one blank and two duplicates, were enclosed with each canister sent to the sites. After ambient air sample collection was complete, site operators returned the aldehyde cartridges to the Radian laboratory in the canister shipment container along with sample canisters and sample custody records. The aldehyde cartridges were transferred to the U.S. EPA AREAL for analysis. The aldehyde results have been reported in a separate report.

The UATMP samplers were set to begin drawing air at a flow rate of 150 mL/minute (min.) through the sample inlet and sample lines about six hours before the air was directed into the evacuated sample canister(s). This procedure ensured that once the flow in the sample line was directed into the canister, the sample line had been well conditioned with ambient air. The sample flow rate into the 6-L canister was controlled at approximately 3.5 mL/min. The resulting pressure in the canister after 24 hours was approximately 1.0 to 5.0 inches (in.) mercury (Hg) vacuum. Section 4.7 presents and discusses the actual canister pressure distribution after the canisters were received in Radian's RTP laboratory. The method of sampling

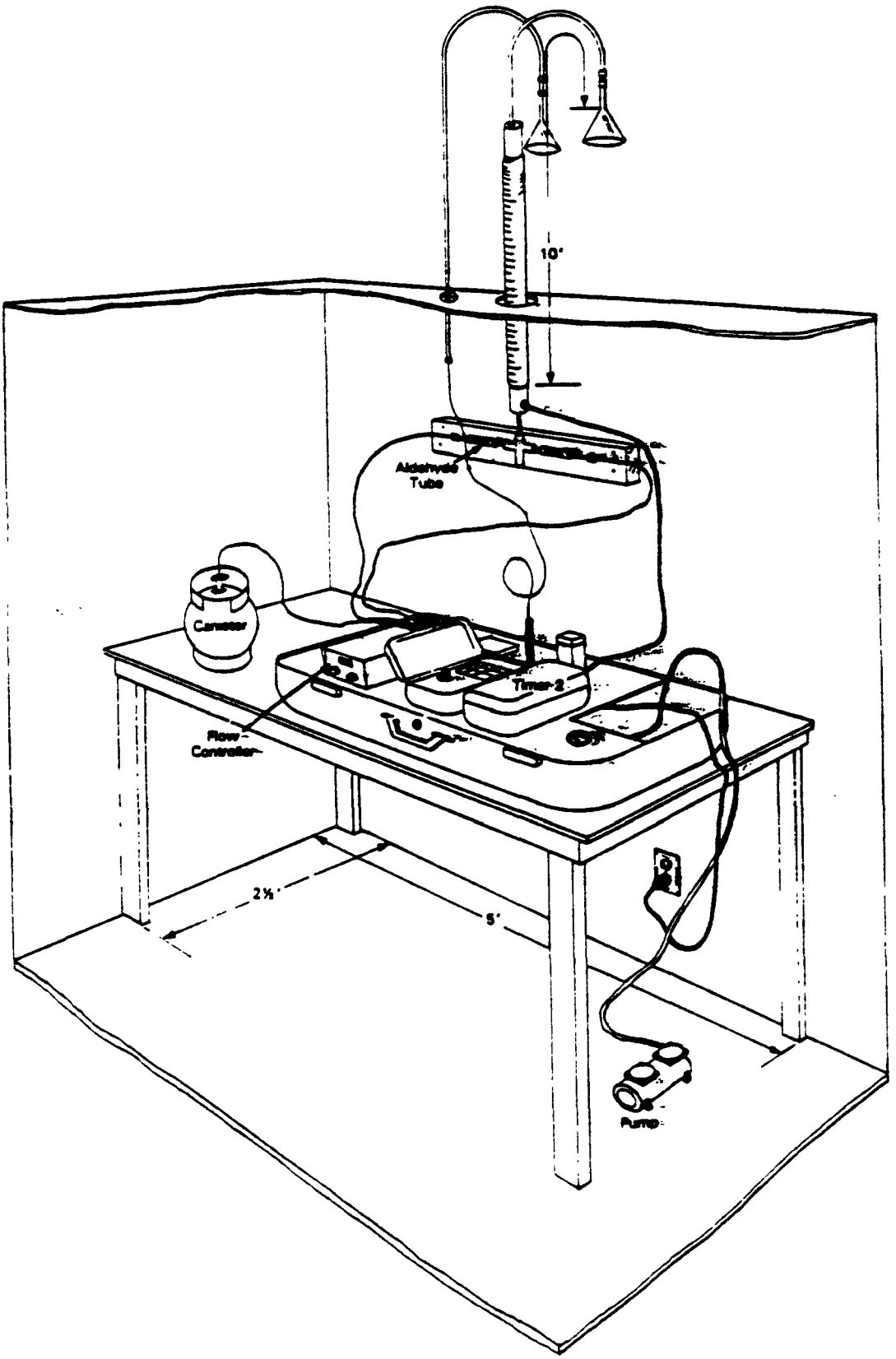



Figure 3-1. Perspective view of UATMP sampler.

1692427R

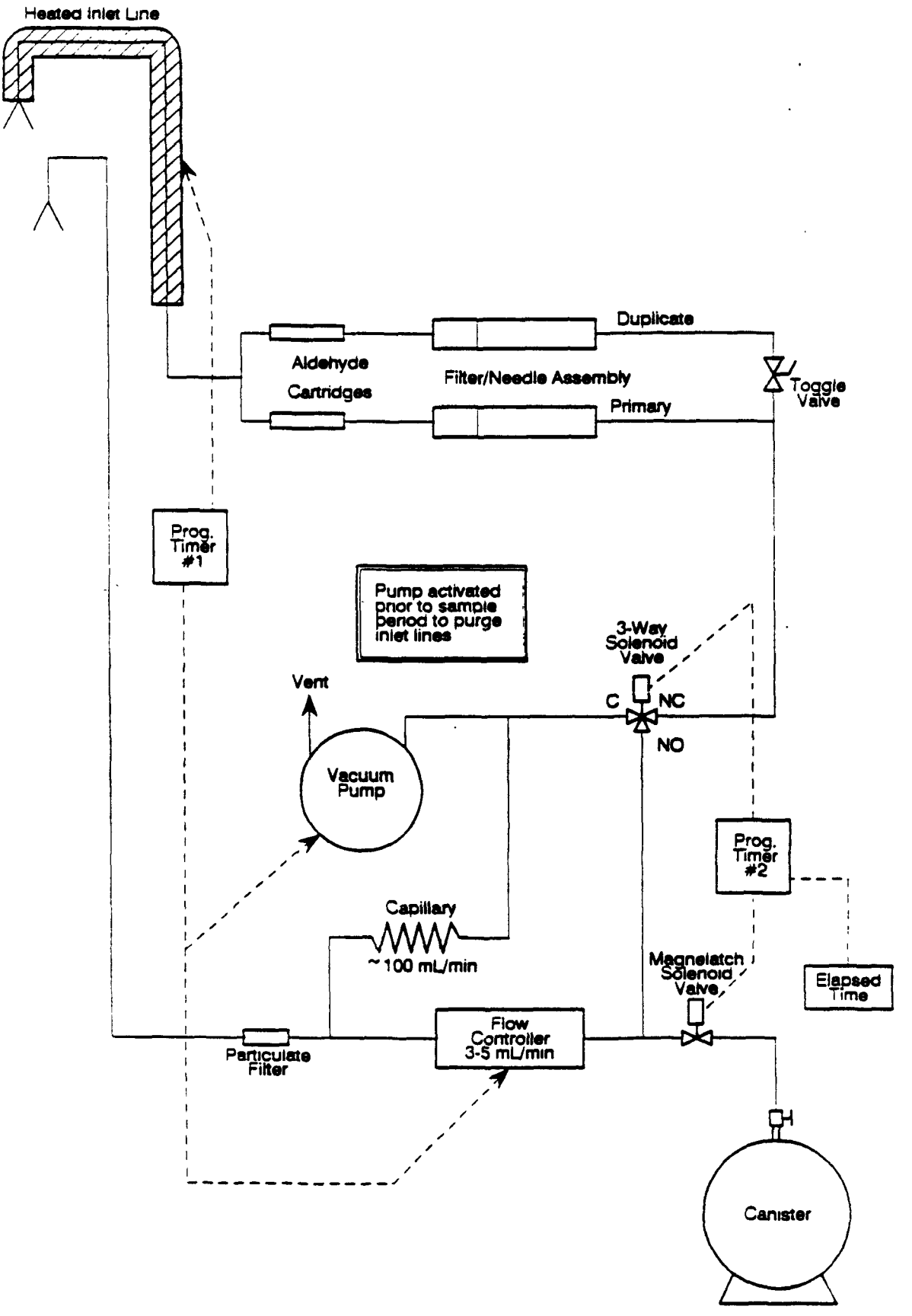



Figure 3-2. Sampling assembly for the UATMP.

1582404R

operated on a slip-stream approach with the canister under vacuum (about 29.72 in. Hg vacuum) to avoid potential contamination from the pump.

## 3.2 SAMPLER PRESEASON PREPARATION AND CERTIFICATION

The UATMP samplers were cleaned and prepared for deployment to the field sites prior to the 1990 season. The samplers used in the 1988 program were returned from the field sites to the Radian RTP laboratory for refurbishment. The refurbishment involved cleaning and extensive checks of the electrical and mechanical components of the sampler. Any worn or damaged parts were replaced. The samplers were then reassembled and leak checked. Flow rates for the aldehyde and canister subsystems were checked against a primary flow standard.

All samplers were cleaned through an extended purge with humidified zero air following the TO-14 procedure for humid zero air certification.[4] Because of the large air volume required to purge the samplers, a temporary dedicated zero certification manifold was utilized. After the samplers were prepared and purged, a final analysis of the humid zero purge air was performed to serve as part of the permanent record of any residual contaminant levels for the UATMP target compounds. Background levels from zero air and the canister were measured and subtracted from the certification samples collected through each sampler unit. All analyses were performed on the GC/MD analytical system dedicated to the UATMP program. Each sampler collected a 24-hour sample in its standard operating mode from the zero air manifold.

Acceptance criteria for the cleaned and blanked canisters used for the sampler zero check were approximately 0.2 ppbv per target compound or the compound IDL, whichever was higher. The majority of the samplers deployed to the field met the criteria of 0.2 ppbv per target analyte and 25 ppbv total for all species as measured by the flame ionization detector (FID) of the GC/MD analytical system. The total of 25 ppbv was based on total area counts, including target compounds arbitrarily using an average response factor of 0.001 ppbv/area count. Some of the samplers exhibited residual peaks that were attributed to acetonitrile contamination from the aldehyde subsystem. Because the residual peak(s) did not interfere with the UATMP target analytes, field deployment was recommended and implemented by the project team.

## 3.3 SAMPLE INTERFACE SYSTEM

Figure 3-3 shows the UATMP GC/MD system that includes the Sample Interface System, the Analytical System, and the Data System. Figure 3-4 diagrams the sample valve configurations of the interface system. The upper half of Figure 3-4 shows the configuration of the interface system valve for the loading of sample through Trap 1 in which the organic compounds in the sample are condensed (trapped) by flowing through a 1/8-in. stainless steel glass-head-filled trap that is immersed in liquid argon. The lower half of Figure 3-4 shows the sample interface system valve in the position for injecting the cryogenically trapped sample onto the column in the GC/MD. In the latter mode, the argon is removed from around the trap, and the trap is heated to about 200 degress celsius (°C).

The sample interface withdraws a constant sample volume of 256 mL from the sample canister and preconcentrates the sample by cryogenic trapping (see Load Trap 1 in Figure 3-4). Following sample preconcentration, the eight-port sampling valve is placed in the inject position (Inject Trap 1 in Figure 3-4) and the sample trap is rapidly heated. Helium carrier gas transports the trapped sample directly onto the column.

Initial calibration of the GC/MD system showed that the sample interface system provides a consistent sample volume with a precision (percent coefficiency of variation, % CV) of less than 3.0 percent.

## 3.4 CALIBRATION STANDARDS GENERATION

Calibration standards were generated with a dynamic flow dilution apparatus shown in Figure 3-5. The flow dilution system uses vendor-certified gases (±5%) and dilutes them with zero-grade air that has been routed through a catalytic oxidizer and then humidified with HPLC-grade water. The gases are mixed in a SUMMA®-treated mixing sphere prior to flowing into an evacuated canister. One dilution stream of the zero-grade air is routed through a SUMMA®-treated bubbler containing HPLC-grade water to humidify it, and the other stream is not humidified. The dilution air streams are then brought together for mixing with the streams from three certified standard cylinders. Flow rates from all streams are gauged and controlled by mass flow controllers. The split air dilution streams are metered by wet and dry

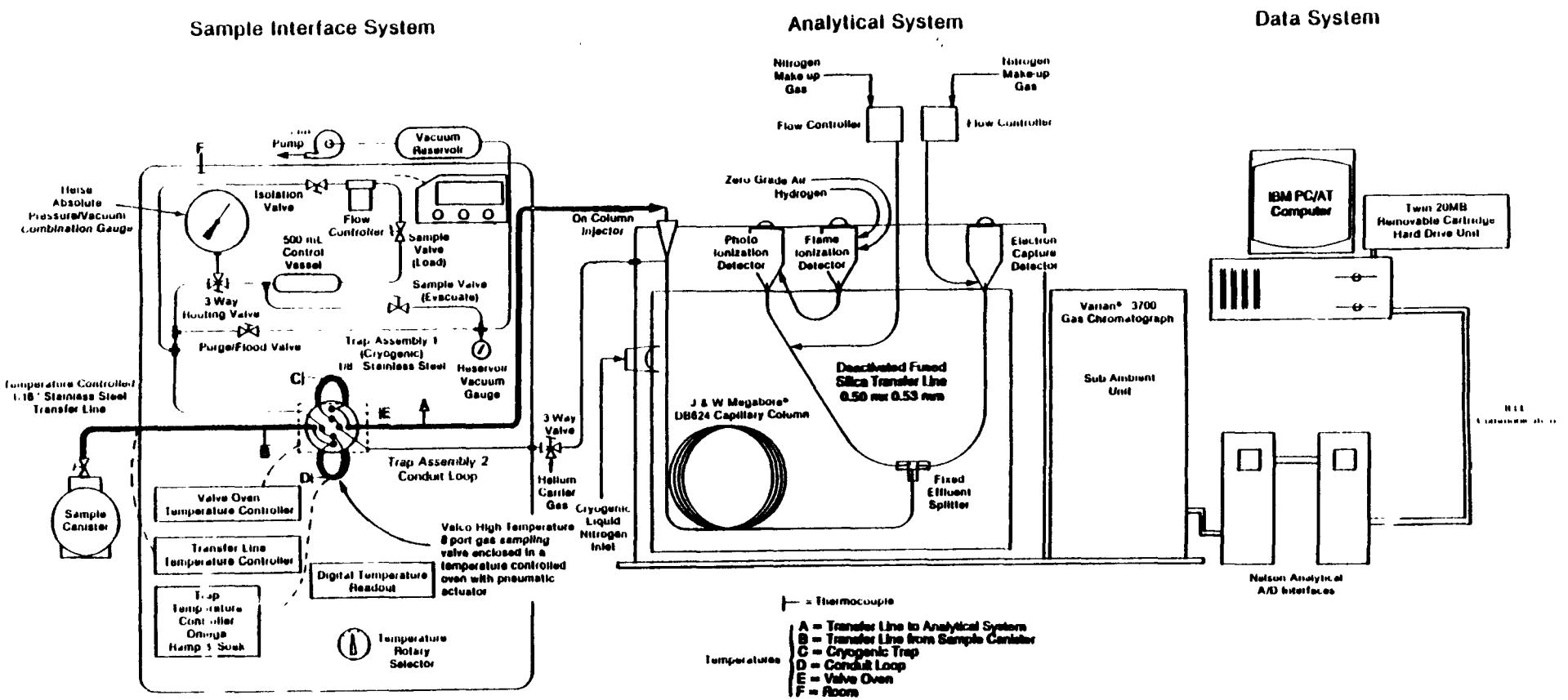
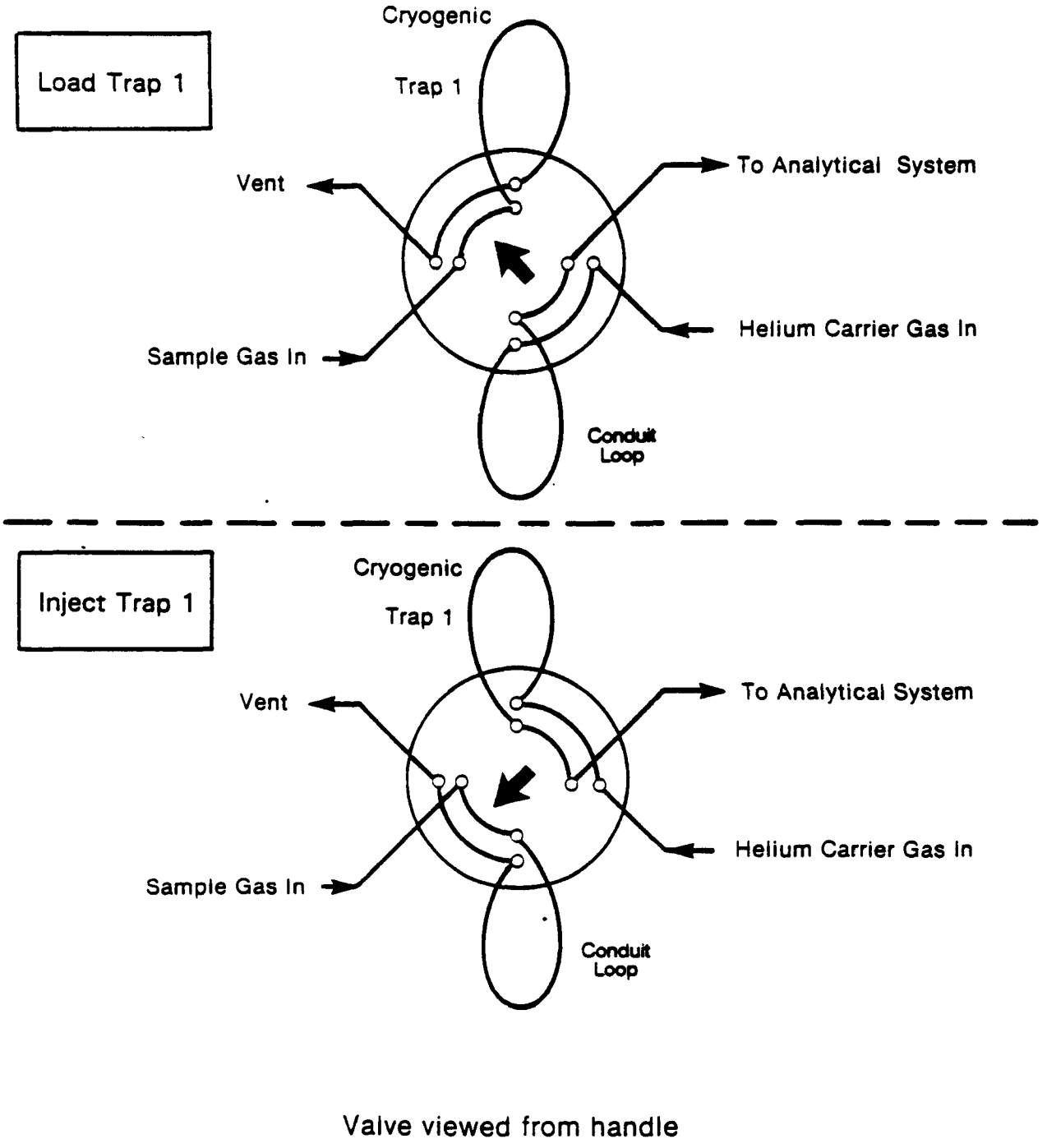



Figure 3-3. Gas chromatographic multiple detector system.

1281788R




9870533R

Figure 3-4. Interface sample valve configuration.

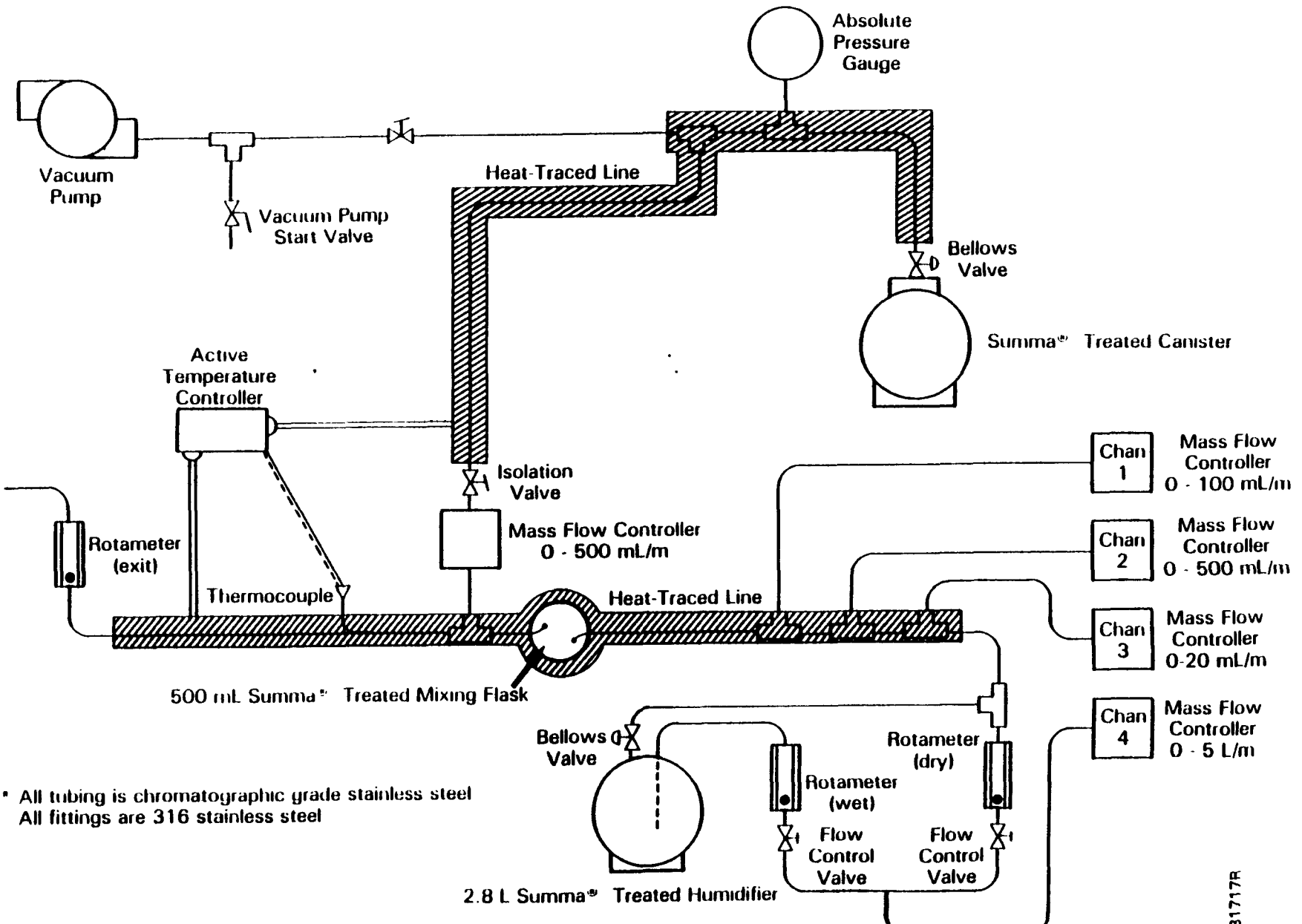



Figure 3-5. Dynamic flow dilution apparatus.

rotameters from the humidified and unhumidified dilution air streams, respectively. The lines and the mixing flask containing the diluted gases are heated to 100°C to prevent condensation of liquids on the surfaces and to reduce adsorption of organic compounds on the surfaces.

The system is evacuated with a vacuum pump while the closed canister is connected. A precision absolute pressure gauge measures the canister pressure before and after filling. The lines leading to the canister and to the mixing sphere are flushed for at least 15 minutes with the diluted standard gases before being connected to the canister for filling.

## 3.5 ANALYSIS

UATMP samples are analyzed for 38 target compounds by the GC/MD system. Having simultaneous detector responses from the electron caputre detector (ECD), photoionization detector (PID), and the FID allows the analyst to identify target compounds with greater accuracy. Quantitation is done primarily using the FID response, although the ECD is used for quantitation of most halogenated compounds. About 15% of the 1989 UATMP samples were also analyzed for compound identification confirmation by GC/MS, operating in the MID mode.

### 3.5.1 GC/MD Instrumentation

The gas chromatograph used with the multiple detector system is a VARIAN 3700. The operating conditions for the GC/MD system are given in Table 3-1. Figure 3-6 shows the multiple detector system arrangement. The oven of the gas chromatograph, which contains the DB-624 capillary column, is cooled to -30°C with liquid nitrogen at the beginning of the sample injection. The -30°C temperature remains constant for one minute, and then the temperature is increased at the rate of 3°C per minute, to a final temperature of 200°C. The column effluent is routed through a 1:10 fixed splitter that divides the flow to the ECD and the PID/FID. The smaller gas stream from the splitter goes to the ECD, and the larger fraction goes first to the PID and then the FID.

### 3.5.2 GC/MS Instrumentation

A total of 53 UATMP samples were analyzed by GC/MS using a FINNIGAN 4500 operating primarily in the MID mode. The GC/MS operating conditions are given in Table 3-2. The full-scan mode was used occasionally to detect non-target

TABLE 3-1. 1989 UATMP GC/MD OPERATING CONDITIONS

| Parameter | Operating Value |
|---|---|
| Sample Volume | 256 mL |
| J&W Megabore® DB-624 Capillary Column | |
| Length | 30 m |
| Inside Diameter | 0.53 mm |
| Oven Temperature | -30°C for 1 min. Temperature programmed at 3°C/min. to 200°C |
| Film Thickness | 3 μm |
| Injector Oven Temperature | 200°C |
| Detector Temperatures | |
| FID | 250°C |
| PID | 225°C |
| ECD | 250°C |
| Gas Flow Rates | |
| Helium Carrier Gas | 5 mL/min. |
| $N_2$ Make-up | 25 mL/min. |
| $H_2$ to FID | 30 mL/min. |
| Air to FID | 300 mL/min. |

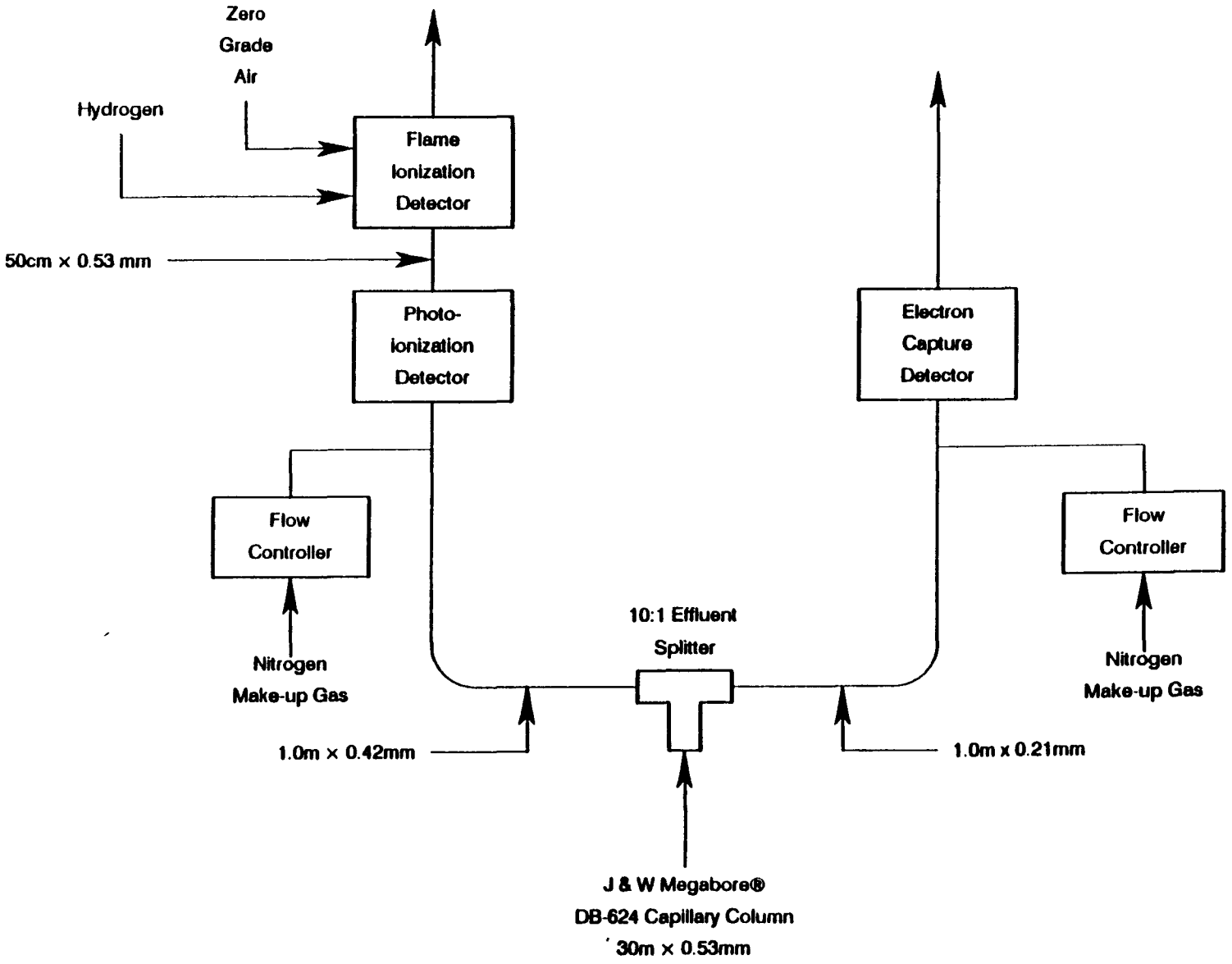



Figure 3-6. UATMP multiple detector configuration.

1592424R

TABLE 3-2. 1989 UATMP GC/MS OPERATING CONDITIONS

| Parameter | Operating Value |
|---|---|
| Sample Volume | 512 mL |
| J&W Megabore® DB-624 Capillary Column | |
| Length | 30 m |
| Inside Diameter | 0.53 mm |
| Oven Temperature | 10°C for 5 min.<br>Temperature programmed at 6°C/min. to 220°C |
| Film Thickness | 3 μm |
| Injector Oven Temperature | 110°C |
| Separator Temperature | 220°C |
| Manifold Temperature | 100°C |
| Gas Flow Rates | |
| Helium Carrier Gas | 10 mL/min. |
| Helium Make-up | 20 mL/min. |

compounds when an interference was suspected or apparent. The MID mode was used for all other confirmation analyses.

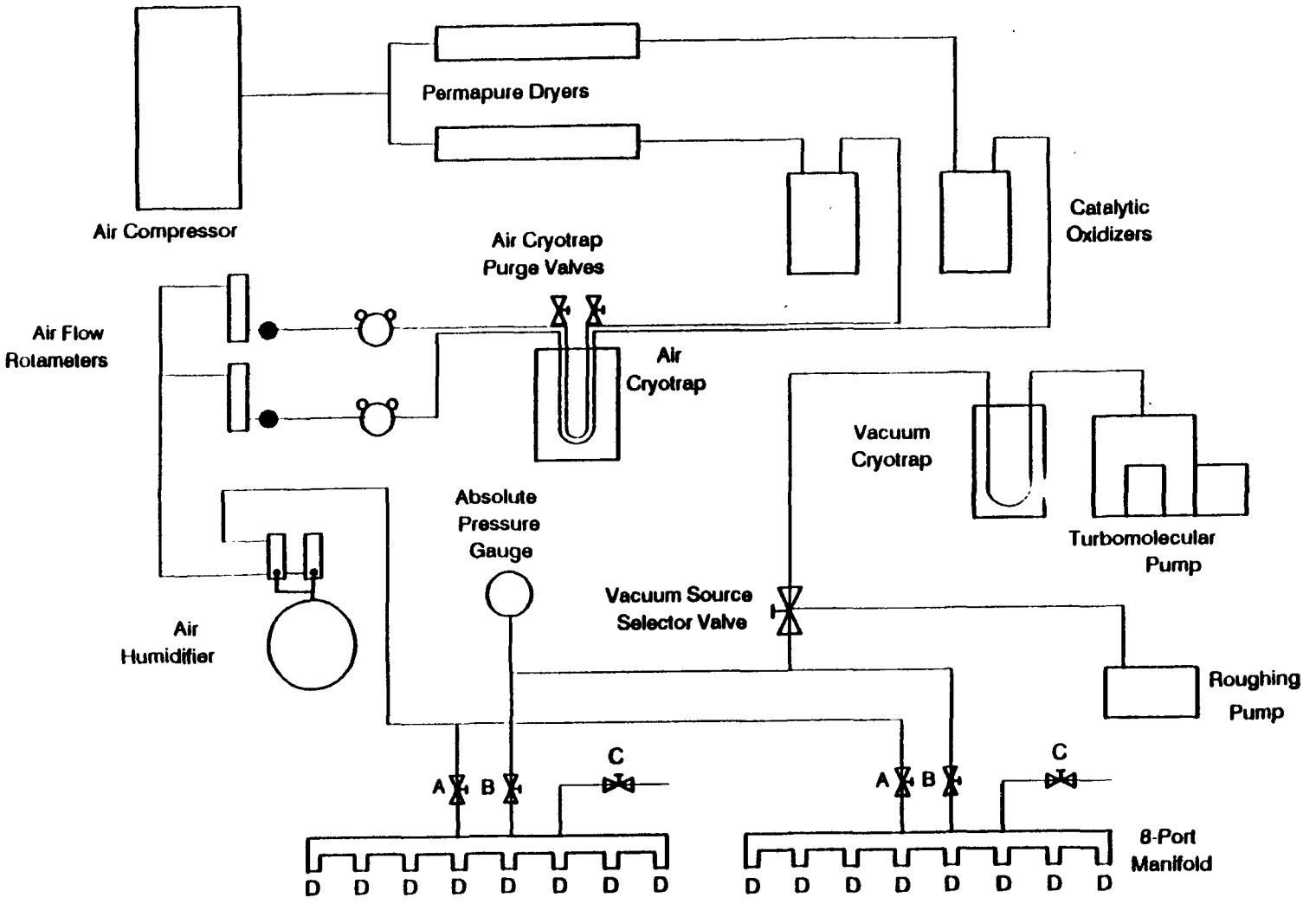
## 3.6 CANISTER CLEANUP

The sample canister cleanup system used for the 1989 UATMP is the same as the one described in the 1989 NMOC and 1989 UATMP Quality Assurance Project Plans (QAPPs)[2,3] and the 1989 NMOC Monitoring Program.[1] The canister cleanup apparatus diagram is shown in Figure 3-7.

To clean the UATMP canisters, a bank of eight canisters is connected to each manifold shown in Figure 3-7. The valve on each canister is opened, with the shutoff valves and the bellows valves closed. The vacuum pump is started and one of the bellows valves is opened, drawing a vacuum on the canisters connected to the corresponding manifold. After reaching 5-mm Hg absolute pressure as indicated on the absolute pressure gauge, the vacuum is maintained for 30 minutes. The bellows valve is then closed. Next, air that has been filtered, dried, and cleaned, and then humidified at about 80% humidity is introduced to the evacuated canisters until the pressure reaches 20 pounds (force) per square inch gauge (psig). The canisters are filled from the clean air system at the rate of 12.0 L/min. This flow rate is the result of 6.0 L/min. passing through each catalytic oxidizer. A flow rate of 6.0 L/min. is recommended by the manufacturer as the highest flow rate at which the catalytic oxidizers eliminate hydrocarbons with a minimum 99.7% efficiency.

When the first manifold has completed the evacuation phase and is being pressurized, the second manifold is then subjected to vacuum by opening its bellows valve. After 15 min., the second manifold is isolated from the vacuum and connected to the cleaned, dried, and then humidified air. The first manifold of canisters is then taken through a second cycle of evacuation and pressurization. Each manifold bank of eight canisters is subjected to these cleanup cycles.

During the third vacuum/pressurization cycle, the canisters are pressurized to 20 psig with air that has been filtered, dried, cleaned, and then humidified air. Each UATMP canister is blanked by the cryogenic preconcentration and direct flame ionization detection (PDFID) method. If the total NMOC determined by PDFID is less than 0.020 parts per million by volume as carbon (ppmC), the eight canisters on the manifold are considered clean.




A. Manifold Air Pressure Valve
B. Manifold Vacuum Valve
C. Manifold Pressure Release Valve
D. Manifold Port for Connecting Canisters to be Cleaned

Figure 3-7. Canister cleanup apparatus.

3304288R

Finally, the canisters are again evacuated to 5-mm Hg pressure absolute, capped under vacuum, and packed into containers to be shipped to the field sites.

The UATMP canisters were designated from the start of the program for a specific site. UATMP canisters from a given site are returned after analysis and cleanup to the same site for the next sample.

# 4.0 RESULTS

## 4.1 DATA SUMMARY

This section summarizes the GC/MD analytical results. Data for each sample, including site code, sample date, compounds identified, concentrations for each identified compound, and the identification confidence level, are tabulated in Appendix A. The site code descriptions, as listed in the AIRS database, are given in Appendix B.

Table 4-1 summarizes the number of 1989 UATMP canister samples for each site and the analyses performed. The second column of Table 4-1 is the number of valid canister samples taken at each UATMP site. The third and fourth columns show the number of duplicate pairs and replicate analyses pairs for each site, respectively. At least one pair of duplicate canisters was attempted each quarter for each site, excluding Pensacola, FL (PEFL). Sampling at the PFEL site was unable to begin at the same time as the other 1989 UATMP sites, and it was not sampling a sufficient period of time in 1989 to have a GC/MS confirmation analysis scheduled. As observed in Table 4-1, the duplicate samples were not always valid, therefore, the number of duplicates is lower for some sites. Replicate analyses were performed on each duplicate canister sample to measure sampling and analysis precision. The total number of GC/MS analyses are shown in column five of Table 4-1. Finally, the total number of GC/MS confirmation analyses are shown in the last column of the table.

The reported concentrations were frequently below the IDLs listed in Table 1-2. However, each identified compound was reported and quantified, even if the concentration was below its estimated IDL. All the compound identifications in the tables of Appendix A show the level of confidence in the identification--low (L), medium (M), and high (H). Compounds were identified in the UATMP study by retention times and detector response ratios. If a compound in the sample was within a retention time window (average retention time ± about 10%) for a target compound, the response ratio for the target compound in the sample was compared to an average response ratio for the target compound in the standard. The response ratios are the ratios of area count responses from two detectors, e.g., ECD and the FID in the GC/MD analytical instrument. The precision (percent coefficient of variation, % CV) was calculated for the compound response ratio in the sample and the compound

TABLE 4-1. 1989 UATMP AMBIENT AIR SAMPLES AND ANALYSES

| Site Code | No. of Valid Samples | GC/MD Analyses | | Total GC/MD Analyses | Total GC/MS Analyses |
|---|---|---|---|---|---|
| | | Duplicate Pairs | Replicate Pairs | | |
| BRLA | 31 | 4 | 4 | 39 | 5 |
| C4IL | 27 | 1 | 1 | 29 | 4 |
| CANJ | 32 | 4 | 4 | 40 | 4 |
| DLTX | 25 | 4 | 4 | 33 | 1 |
| FLFL | 31 | 3 | 3 | 37 | 6 |
| H1TX | 34 | 3 | 3 | 40 | 4 |
| MIFL | 33 | 6 | 6 | 45 | 6 |
| PEFL | 7 | 1 | 1 | 9 | 0 |
| S2MO | 30 | 3 | 3 | 36 | 5 |
| SAIL | 31 | 4 | 4 | 39 | 4 |
| W1DC | 27 | 4 | 4 | 35 | 2 |
| W2DC | 27 | 4 | 4 | 35 | 3 |
| W1KS | 31 | 4 | 4 | 39 | 5 |
| W2KS | 31 | 3 | 3 | 37 | 4 |
| Total | 397 | 48 | 48 | 493 | 53 |

response ratio in the standard. If the precision was within ±20 % CV, the compound was identified with a high level of confidence (H). If the precision was between ±20 and ±35 % CV, the compound was identified with a medium level of confidence (M). If the precision was between ±35 and ±40 % CV, the compound was identified with a low level of confidence (L). Compounds with response ratios outside ±40 % CV were usually not identified, unless there was additional evidence to indicate the compound was actually in the sample.

Sample concentration results are grouped in two ways, by compound and by site, and are discussed in the following subsections, 4.1.1 and 4.1.2, respectively. For each target compound identified at all of the 14 sites, summary concentrations are given as minima, maxima, and means. Site-specific data summaries show which target compounds were identified in samples from each site, and give minimum, maximum, and mean concentrations.

4.1.1 Overall Data Summary by Compound

Table 4-2 presents the UATMP target compounds identified for all the sites. The number of cases of identification for each compound is given, along with the frequency at which they were identified. The frequency of occurrence is expressed as a percent of the 397 total GC/MD analyses. Samples collected in duplicate actually reflect only one sampling event, but result in two analyses. Since duplicate samples were also analyzed in replicate, this results in a total of four analyses from one sampling event. To avoid any bias in the data by counting four results from one sampling event, the duplicate and replicate results for each compound identified were averaged. This average result was used in the statistical summaries and the frequency calculations. If a compound was identified in less than all four analyses, the results were averaged for the analyses in which it was identified.

Benzene, toluene, m/p-xylene, styrene/o-xylene, and ethylbenzene were identified in each of the 397 GC/MD samples. In addition, 1,1,1-trichloroethane and carbon tetrachloride were reported in 395 out of the 397 total samples. m-Xylene and p-xylene coelute on the analytical column used in the GC/MD system. These compounds were reported together, because it was not possible to distinguish whether one or both compounds were present in the sample. This was also the situation with o-xylene and styrene. n-Octane and trans-1,3-dichloropropylene were coeluted only during the third and fourth

## TABLE 4-2. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR ALL SITES

| Compound | Cases[a] No. | Cases[a] % Freq.[b] | Min. ppbv | Max. ppbv | Mean[c] ppbv | Mean[c] µg/m³ | Mean[d] ppbv | Mean[e] ppbv | Median ppbv | STD[f] ppbv |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 52 | 13.1 | 0.45 | 36.82 | 6.17 | 6.68 | 1.24 | 0.81 | 2.55 | 8.71 |
| Propylene | 51 | 12.8 | 0.07 | 72.76 | 7.75 | 13.55 | 1.04 | 1.00 | 5.37 | 11.23 |
| 1,3-Butadiene | 160 | 40.3 | 0.04 | 4.78 | 0.46 | 1.03 | 0.21 | 0.18 | 0.27 | 0.55 |
| Vinyl chloride | 7 | 1.8 | 0.35 | 48.89 | 7.76 | 20.16 | 0.24 | 0.14 | 0.59 | 18.15 |
| Chloromethane | 2 | 0.5 | 0.03 | 12.10 | 6.06 | 12.73 | 0.13 | 0.03 | 6.06 | 8.53 |
| Chloroethane | 18 | 4.5 | 0.03 | 0.47 | 0.19 | 0.50 | 0.06 | 0.01 | 0.15 | 0.12 |
| Bromomethane | 9 | 2.3 | 0.03 | 2.92 | 0.63 | 2.48 | 0.11 | 0.01 | 0.11 | 0.96 |
| Methylene chloride | 35 | 8.8 | 1.06 | 17.26 | 6.27 | 22.14 | 0.60 | 0.55 | 4.98 | 4.23 |
| trans-1,2-Dichloroethylene | 14 | 3.5 | 0.03 | 2.06 | 0.59 | 2.37 | 0.04 | 0.02 | 0.20 | 0.66 |
| 1,1-Dichloroethane | 12 | 3.0 | 0.03 | 0.48 | 0.14 | 0.57 | 0.02 | 0.004 | 0.08 | 0.15 |
| Chloroprene | 120 | 30.2 | 0.01 | 4.91 | 0.31 | 1.14 | 0.11 | 0.09 | 0.12 | 0.55 |
| Bromochloromethane | 6 | 1.5 | 0.01 | 0.16 | 0.08 | 0.45 | 0.003 | 0.001 | 0.08 | 0.06 |
| Chloroform | 56 | 14.1 | 0.02 | 80.76 | 1.71 | 8.49 | 0.24 | 0.24 | 0.18 | 10.76 |
| 1,1,1-Trichloroethane | 395 | 99.5 | 0.18 | 65.57 | 1.14 | 6.32 | 1.13 | 1.13 | 0.50 | 3.75 |
| Carbon tetrachloride | 395 | 99.5 | 0.11 | 1.78 | 0.19 | 1.21 | 0.19 | 0.19 | 0.15 | 0.15 |
| 1,2-Dichloroethane | 7 | 1.8 | 0.04 | 0.21 | 0.08 | 0.34 | 0.02 | 0.001 | 0.06 | 0.06 |
| Benzene | 397 | 100.0 | 0.05 | 27.66 | 1.96 | 6.35 | 1.96 | 1.96 | 1.38 | 2.23 |
| Trichloroethylene | 174 | 43.8 | 0.01 | 5.60 | 0.55 | 2.99 | 0.24 | 0.24 | 0.23 | 0.81 |
| 1,2-Dichloropropane | 90 | 22.7 | 0.04 | 3.63 | 0.76 | 3.58 | 0.19 | 0.17 | 0.48 | 0.78 |
| Bromodichloromethane | 14 | 3.5 | 0.02 | 0.11 | 0.05 | 0.36 | 0.002 | 0.002 | 0.05 | 0.03 |
| t-1,3-Dichloropropylene | 7 | 1.8 | 0.02 | 0.45 | 0.11 | 0.53 | 0.02 | 0.002 | 0.05 | 0.16 |
| Toluene | 397 | 100.0 | 0.08 | 217.89 | 4.56 | 17.49 | 4.56 | 4.56 | 2.50 | 12.52 |
| n-Octane | 48 | 12.1 | 0.02 | 4.46 | 0.34 | 1.62 | 0.05 | 0.04 | 0.15 | 0.70 |
| n-Octane/trans-1,3-dichloropropylene | 36 | 9.1 | 0.01 | 1.22 | 0.19 | 0.87 | 0.04 | 0.02 | 0.11 | 0.25 |
| cis-1,3-Dichloropropylene | 13 | 3.3 | 0.01 | 1.30 | 0.29 | 2.69 | 0.03 | 0.01 | 0.23 | 0.33 |
| 1,1,2-Trichloroethane | 76 | 19.1 | 0.01 | 4.08 | 0.29 | 1.61 | 0.07 | 0.06 | 0.04 | 0.79 |
| Tetrachloroethylene | 175 | 44.1 | 0.01 | 5.81 | 0.35 | 2.44 | 0.18 | 0.16 | 0.20 | 0.59 |
| Dibromochloromethane | 1 | 0.3 | 0.02 | 0.02 | 0.02 | 0.17 | 0.001 | 0.0001 | 0.02 | 0.00 |
| Chlorobenzene | 98 | 24.7 | 0.01 | 11.72 | 0.49 | 2.28 | 0.13 | 0.12 | 0.20 | 1.37 |
| Ethylbenzene | 397 | 100.0 | 0.02 | 9.77 | 0.57 | 2.52 | 0.57 | 0.57 | 0.36 | 0.88 |
| m/p-Xylene | 397 | 100.0 | 0.09 | 50.50 | 3.16 | 27.89 | 3.16 | 3.16 | 1.95 | 4.56 |
| Styrene/o-xylene | 397 | 100.0 | 0.03 | 16.61 | 1.09 | 9.56 | 1.09 | 1.09 | 0.68 | 1.58 |
| Bromoform | 2 | 0.5 | 0.02 | 0.03 | 0.02 | 0.24 | 0.001 | 0.0001 | 0.02 | 0.01 |
| 1,1,2,2-Tetrachloroethane | 13 | 3.3 | 0.03 | 0.75 | 0.16 | 1.13 | 0.01 | 0.01 | 0.08 | 0.20 |
| m-Dichlorobenzene | 63 | 15.9 | 0.01 | 1.08 | 0.12 | 0.75 | 0.03 | 0.02 | 0.04 | 0.19 |
| p-Dichlorobenzene | 153 | 38.5 | 0.02 | 15.72 | 0.75 | 4.60 | 0.32 | 0.29 | 0.22 | 1.65 |
| o-Dichlorobenzene | 78 | 19.6 | 0.01 | 2.85 | 0.21 | 1.28 | 0.05 | 0.04 | 0.10 | 0.42 |

[a] A total of 397 samples were analyzed by GC/MD.
[b] Percent of the total samples analyzed in which the compound was identified.
[c] The arithmetic average concentration of all cases in which the compound was identified.
[d] The arithmetic average concentration of all samples, using half the MDL value for samples in which the compound was not identified.
[e] The arithmetic average concentration of all samples, using zero for samples in which the compound was not identified.
[f] The standard deviation of all cases in which the compound was identified.

quarters of 1990. On July 25, 1990, the chromatography column (DB-624) was replaced because bleeding from the column was causing excess coating on thePID with concomitant loss of sensitivity. The new column (another DB-624) eliminated the bleeding problem on the PID but resulted in coelution of n-octane and trans-1,3-dichloropropylene. These two compounds, therefore, are listed separately and as coeluters, since they could be distinguished from one another for part of the year. Dibromochloromethane was identified in only one of the 1989 UATMP samples, and chloromethane and bromoform were seen only twice. Reported concentrations of the target compounds ranged from 0.01 ppbv for 10 compounds to 218 ppbv for toluene. Average concentrations ranged from 0.02 ppbv for dibromochloromethane to 7.76 ppbv for vinyl chloride. The concentration range for each compound is given as minimum and maximum. The average concentration for each compound identified is expressed in parts per billion by volume and micrograms per standard cubic meter ($\mu g/m^3$) at 20°C. In the latter dimensions, the cubic-meter term is a "standard" cubic meter calculated at 25°C and 1.0 atmosphere pressure.

Table 4-3 groups the compounds by frequency of occurrence for the target compounds in the UATMP samples. The most obvious feature of these results is the large gap in frequency of occurrence between 99.5% for 1,1,1-trichloroethane and carbon tetrachloride, and 44.1% for tetrachloroethylene. This phenomenon may suggest that the target compounds in the 99.5 to 100% group are significantly more stable in ambient air than all the other UATMP target compounds. All the halogenated methane compounds containing bromide radicals fall in the frequency-of-occurrence range of less than 3.5 percent. This may be a reflection of the low concentrations of bromine and bromine derivatives in ambient urban air.

4.1.2 Site-Specific Overall Data Summary

Site-specific compound identifications by GC/MD are presented in Tables 4-4 through 4-17. The "cases" column is the number of samples in which the compound was identified at a particular site. Concentration ranges are given in terms of minima and maxima for each compound. The mean, or average, concentrations are reported in the fifth through eighth columns of each table. Means are calculated in the same way as discussed in Table 4-3. Medians and standard deviations of the identified concentrations found in the

TABLE 4-3. 1989 UATMP FREQUENCY OF OCCURRENCE OF TARGET COMPOUNDS

| Range for Frequency of Occurrence | Target Compounds | |
|---|---|---|
| 100 to 99.5% | 1,1,1-Trichloroethane<br>Carbon tetrachloride<br>Benzene<br>Toluene | Ethylbenzene<br>m/p-Xylene<br>Styrene/o-xylene |
| 45 to 20% | 1,3-Butadiene<br>Chloroprene<br>Trichloroethylene<br>1,2-Dichloropropane | Tetrachloroethylene<br>Chlorobenzene<br>p-Dichlorobenzene |
| 19 to 8% | Acetylene<br>Propylene<br>Methylene Chloride<br>Chloroform<br>n-Octane/trans-1,3-dichloropropylene | n-Octane<br>1,1,2-Trichloroethane<br>m-Dichlorobenzene<br>o-Dichlorobenzene |
| 7 to >0% | Vinyl Chloride<br>Chloromethane<br>Chloroethane<br>Bromomethane<br>trans-1,2-Dichloroethylene<br>1,1-Dichloroethane<br>Bromochloromethane | 1,2-Dichloroethane<br>Bromodichloromethane<br>trans-1,3-Dichloropropylene<br>cis-1,3-Dichloropropylene<br>Dibromochloromethane<br>Bromoform<br>1,1,2,2-Tetrachloroethane |

TABLE 4-4. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR BRLA

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 3 | 2.93 | 4.92 | 4.16 | 4.50 | 0.85 | 0.40 | 4.63 | 1.08 |
| Propylene | 1 | 72.76 | 72.76 | 72.76 | 127.28 | 2.40 | 2.35 | 72.76 | 0.00 |
| 1,3-Butadiene | 11 | 0.08 | 4.78 | 1.01 | 2.27 | 0.39 | 0.36 | 0.74 | 1.34 |
| Vinyl chloride | 3 | 0.35 | 1.92 | 0.90 | 2.33 | 0.18 | 0.09 | 0.42 | 0.89 |
| Chloroethane | 2 | 0.06 | 0.31 | 0.19 | 0.49 | 0.06 | 0.01 | 0.19 | 0.18 |
| Chloroprene | 7 | 0.02 | 0.62 | 0.23 | 0.83 | 0.07 | 0.05 | 0.13 | 0.20 |
| Bromochloromethane | 3 | 0.01 | 0.12 | 0.06 | 0.32 | 0.01 | 0.01 | 0.05 | 0.06 |
| Chloroform | 12 | 0.05 | 1.34 | 0.27 | 1.35 | 0.11 | 0.11 | 0.16 | 0.35 |
| 1,1,1-Trichloroethane | 31 | 0.20 | 5.30 | 0.49 | 2.72 | 0.49 | 0.49 | 0.31 | 0.90 |
| Carbon tetrachloride | 31 | 0.12 | 0.49 | 0.20 | 1.31 | 0.20 | 0.20 | 0.18 | 0.08 |
| Benzene | 31 | 0.62 | 2.98 | 1.62 | 5.25 | 1.62 | 1.62 | 1.60 | 0.67 |
| Trichloroethylene | 6 | 0.02 | 0.45 | 0.13 | 0.73 | 0.03 | 0.03 | 0.06 | 0.16 |
| 1,2-Dichloropropane | 7 | 0.57 | 1.81 | 1.12 | 5.25 | 0.27 | 0.25 | 0.90 | 0.57 |
| Bromodichloromethane | 2 | 0.04 | 0.09 | 0.06 | 0.43 | 0.005 | 0.004 | 0.06 | 0.03 |
| trans-1,3-Dichloropropylene | 1 | 0.05 | 0.05 | 0.05 | 0.23 | 0.02 | 0.002 | 0.05 | 0.00 |
| Toluene | 31 | 0.61 | 4.35 | 1.88 | 7.18 | 1.88 | 1.88 | 1.74 | 0.91 |
| n-Octane | 4 | 0.17 | 0.51 | 0.33 | 1.58 | 0.06 | 0.04 | 0.33 | 0.18 |
| n-Octane/trans-1,3-dichloropropylene | 2 | 0.02 | 0.35 | 0.19 | 0.85 | 0.03 | 0.01 | 0.19 | 0.23 |
| cis-1,3-dichloropropylene | 2 | 0.07 | 0.28 | 0.18 | 1.64 | 0.03 | 0.01 | 0.18 | 0.15 |
| 1,1,2-Trichloroethane | 2 | 0.02 | 0.03 | 0.02 | 0.14 | 0.02 | 0.002 | 0.02 | 0.01 |
| Tetrachloroethylene | 16 | 0.05 | 0.36 | 0.17 | 1.15 | 0.10 | 0.09 | 0.14 | 0.10 |
| Chlorobenzene | 8 | 0.02 | 0.43 | 0.10 | 0.48 | 0.03 | 0.03 | 0.05 | 0.14 |
| Ethylbenzene | 31 | 0.12 | 1.50 | 0.41 | 1.82 | 0.41 | 0.41 | 0.30 | 0.33 |
| m/p-Xylene | 31 | 0.55 | 8.61 | 1.88 | 16.60 | 1.88 | 1.88 | 1.54 | 1.65 |
| Styrene/o-xylene | 31 | 0.18 | 2.75 | 0.64 | 5.59 | 0.64 | 0.64 | 0.56 | 0.49 |
| 1,1,2,2-Tetrachloroethane | 1 | 0.08 | 0.08 | 0.08 | 0.57 | 0.004 | 0.003 | 0.08 | 0.00 |
| m-Dichlorobenzene | 3 | 0.02 | 0.55 | 0.34 | 2.06 | 0.04 | 0.03 | 0.44 | 0.28 |
| p-Dichlorobenzene | 11 | 0.07 | 1.49 | 0.29 | 1.76 | 0.13 | 0.10 | 0.15 | 0.43 |
| o-Dichlorobenzene | 5 | 0.04 | 0.16 | 0.09 | 0.56 | 0.02 | 0.01 | 0.06 | 0.06 |

[a] The number of samples in which the compound was identified. The total number of samples was 31.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-5. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR C4IL

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] $\mu g/m^3$ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 3 | 2.20 | 31.74 | 18.40 | 19.92 | 2.49 | 2.04 | 21.27 | 14.98 |
| Propylene | 1 | 16.19 | 16.19 | 16.19 | 28.32 | 0.65 | 0.60 | 16.19 | 0.00 |
| 1,3-Butadiene | 10 | 0.12 | 2.06 | 0.57 | 1.29 | 0.24 | 0.21 | 0.27 | 0.60 |
| Methylene chloride | 13 | 1.72 | 17.26 | 8.43 | 29.76 | 4.09 | 4.06 | 6.93 | 5.51 |
| trans-1,2-Dichloroethylene | 1 | 1.02 | 1.02 | 1.02 | 4.11 | 0.06 | 0.04 | 1.02 | 0.00 |
| Chloroprene | 8 | 0.01 | 0.59 | 0.27 | 1.00 | 0.10 | 0.08 | 0.20 | 0.23 |
| Chloroform | 6 | 0.016 | 0.69 | 0.37 | 1.85 | 0.09 | 0.08 | 0.41 | 0.26 |
| 1,1,1-Trichloroethane | 27 | 0.402 | 15.78 | 2.52 | 13.98 | 2.52 | 2.52 | 1.35 | 3.30 |
| Carbon tetrachloride | 27 | 0.134 | 1.13 | 0.24 | 1.55 | 0.24 | 0.24 | 0.17 | 0.21 |
| 1,2-Dichloroethane | 2 | 0.04 | 0.06 | 0.05 | 0.21 | 0.02 | 0.004 | 0.05 | 0.01 |
| Benzene | 27 | 0.43 | 10.59 | 3.37 | 10.95 | 3.37 | 3.37 | 1.86 | 2.93 |
| Trichloroethylene | 20 | 0.091 | 2.21 | 0.82 | 4.48 | 0.61 | 0.61 | 0.74 | 0.55 |
| 1,2-Dichloropropane | 5 | 0.32 | 3.63 | 1.92 | 9.00 | 0.37 | 0.35 | 1.45 | 1.30 |
| Toluene | 27 | 0.54 | 31.98 | 7.43 | 28.46 | 7.43 | 7.43 | 3.87 | 7.51 |
| n-Octane | 4 | 0.07 | 4.46 | 1.73 | 8.23 | 0.27 | 0.26 | 1.20 | 1.94 |
| n-Octane/trans-1,3-dichloropropylene | 1 | 1.22 | 1.22 | 1.22 | 5.63 | 0.06 | 0.05 | 1.22 | 0.00 |
| Tetrachloroethylene | 12 | 0.09 | 0.99 | 0.35 | 2.38 | 0.17 | 0.15 | 0.29 | 0.24 |
| Chlorobenzene | 2 | 0.20 | 0.25 | 0.22 | 1.05 | 0.03 | 0.02 | 0.23 | 0.04 |
| Ethylbenzene | 27 | 0.10 | 3.24 | 1.05 | 4.64 | 1.05 | 1.05 | 0.62 | 0.87 |
| m/p-Xylene | 27 | 0.36 | 22.35 | 6.42 | 56.64 | 6.42 | 6.42 | 5.24 | 5.63 |
| Styrene/o-xylene | 27 | 0.13 | 5.85 | 1.93 | 16.84 | 1.93 | 1.93 | 1.50 | 1.62 |
| m-Dichlorobenzene | 2 | 0.02 | 0.09 | 0.05 | 0.34 | 0.01 | 0.004 | 0.06 | 0.05 |
| p-Dichlorobenzene | 5 | 0.02 | 0.73 | 0.26 | 1.56 | 0.08 | 0.05 | 0.21 | 0.28 |
| o-Dichlorobenzene | 5 | 0.03 | 1.98 | 0.53 | 3.23 | 0.11 | 0.10 | 0.09 | 0.83 |

[a] The number of samples in which the compound was identified. The total number of samples was 27.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-6. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR CANJ

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] $\mu g/m^3$ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 5 | 0.86 | 13.29 | 6.49 | 7.03 | 1.44 | 1.01 | 3.71 | 6.24 |
| Propylene | 8 | 0.07 | 13.92 | 6.55 | 11.45 | 1.67 | 1.64 | 5.93 | 4.49 |
| 1,3-Butadiene | 19 | 0.06 | 0.90 | 0.30 | 0.67 | 0.20 | 0.18 | 0.27 | 0.22 |
| Chloroethane | 2 | 0.10 | 0.47 | 0.29 | 0.76 | 0.06 | 0.02 | 0.29 | 0.26 |
| Bromomethane | 3 | 0.98 | 2.92 | 1.68 | 6.63 | 0.25 | 0.16 | 1.14 | 1.08 |
| Chloroprene | 10 | 0.02 | 0.20 | 0.12 | 0.45 | 0.06 | 0.04 | 0.14 | 0.06 |
| Chloroform | 2 | 0.11 | 4.26 | 2.18 | 10.84 | 0.14 | 0.14 | 0.11 | 2.93 |
| 1,1,1-Trichloroethane | 32 | 0.31 | 2.08 | 0.76 | 4.21 | 0.76 | 0.76 | 0.65 | 0.38 |
| Carbon tetrachloride | 32 | 0.12 | 0.46 | 0.18 | 1.17 | 0.18 | 0.18 | 0.15 | 0.08 |
| 1,2-Dichloroethane | 1 | 0.21 | 0.21 | 0.21 | 0.86 | 0.03 | 0.01 | 0.21 | 0.00 |
| Benzene | 32 | 0.53 | 8.24 | 1.83 | 5.94 | 1.83 | 1.83 | 1.41 | 1.52 |
| Trichloroethylene | 5 | 0.06 | 0.31 | 0.14 | 0.79 | 0.02 | 0.02 | 0.08 | 0.11 |
| 1,2-Dichloropropane | 3 | 0.37 | 1.13 | 0.67 | 3.13 | 0.08 | 0.06 | 0.50 | 0.41 |
| Toluene | 32 | 1.10 | 22.36 | 4.03 | 15.43 | 4.03 | 4.03 | 3.23 | 3.90 |
| n-Octane | 2 | 0.09 | 0.15 | 0.12 | 0.57 | 0.02 | 0.01 | 0.12 | 0.04 |
| n-Octane/trans-1,3-dichloropropylene | 3 | 0.04 | 0.49 | 0.21 | 0.97 | 0.04 | 0.02 | 0.10 | 0.24 |
| 1,1,2-Trichloroethane | 8 | 0.01 | 2.28 | 0.34 | 1.87 | 0.10 | 0.08 | 0.07 | 0.79 |
| Tetrachloroethylene | 13 | 0.10 | 1.80 | 0.44 | 3.07 | 0.20 | 0.18 | 0.21 | 0.48 |
| Chlorobenzene | 7 | 0.03 | 0.13 | 0.08 | 0.37 | 0.02 | 0.02 | 0.09 | 0.04 |
| Ethylbenzene | 32 | 0.11 | 2.57 | 0.42 | 1.86 | 0.42 | 0.42 | 0.32 | 0.44 |
| m/p-Xylene | 32 | 0.68 | 15.25 | 2.46 | 21.72 | 2.46 | 2.46 | 1.71 | 2.68 |
| Styrene/o-xylene | 32 | 0.24 | 5.80 | 0.85 | 7.47 | 0.85 | 0.85 | 0.54 | 1.01 |
| 1,1,2,2-Tetrachloroethane | 3 | 0.08 | 0.75 | 0.32 | 2.21 | 0.03 | 0.03 | 0.12 | 0.38 |
| m-Dichlorobenzene | 8 | 0.01 | 0.48 | 0.16 | 0.98 | 0.05 | 0.04 | 0.07 | 0.19 |
| p-Dichlorobenzene | 17 | 0.08 | 2.50 | 0.55 | 3.34 | 0.31 | 0.29 | 0.19 | 0.72 |
| o-Dichlorobenzene | 3 | 0.03 | 0.10 | 0.07 | 0.41 | 0.02 | 0.01 | 0.07 | 0.04 |

[a] The number of samples in which the compound was identified. The total number of samples was 32.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-7. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR DLTX

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] $\mu g/m^3$ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 1 | 0.96 | 0.96 | 0.96 | 1.04 | 0.52 | 0.04 | 0.96 | 0.00 |
| 1,3-Butadiene | 8 | 0.04 | 0.29 | 0.14 | 0.32 | 0.08 | 0.05 | 0.11 | 0.09 |
| Chloroethane | 2 | 0.03 | 0.12 | 0.08 | 0.20 | 0.05 | 0.01 | 0.08 | 0.06 |
| Bromomethane | 1 | 0.11 | 0.11 | 0.11 | 0.43 | 0.10 | 0.004 | 0.11 | 0.00 |
| Methylene chloride | 1 | 1.84 | 1.84 | 1.84 | 6.50 | 0.13 | 0.07 | 1.84 | 0.00 |
| trans-1,2-Dichloroethylene | 2 | 0.14 | 0.18 | 0.16 | 0.64 | 0.03 | 0.01 | 0.16 | 0.03 |
| 1,1-Dichloroethane | 2 | 0.03 | 0.08 | 0.05 | 0.23 | 0.02 | 0.004 | 0.05 | 0.04 |
| Chloroprene | 4 | 0.07 | 0.53 | 0.22 | 0.83 | 0.06 | 0.04 | 0.15 | 0.21 |
| Chloroform | 1 | 0.03 | 0.03 | 0.03 | 0.16 | 0.004 | 0.001 | 0.03 | 0.00 |
| 1,1,1-Trichloroethane | 25 | 0.22 | 1.68 | 0.62 | 3.44 | 0.62 | 0.62 | 0.62 | 0.35 |
| Carbon tetrachloride | 25 | 0.12 | 0.36 | 0.16 | 1.05 | 0.16 | 0.16 | 0.15 | 0.06 |
| 1,2-Dichloroethane | 1 | 0.06 | 0.06 | 0.06 | 0.25 | 0.02 | 0.002 | 0.06 | 0.00 |
| Benzene | 25 | 0.32 | 2.07 | 0.92 | 3.00 | 0.92 | 0.92 | 0.92 | 0.38 |
| Trichloroethylene | 18 | 0.01 | 2.23 | 0.36 | 1.94 | 0.26 | 0.26 | 0.17 | 0.51 |
| 1,2-Dichloropropane | 5 | 0.05 | 0.80 | 0.38 | 1.78 | 0.09 | 0.08 | 0.39 | 0.32 |
| Toluene | 25 | 0.26 | 3.40 | 1.66 | 6.36 | 1.66 | 1.66 | 1.44 | 0.85 |
| n-Octane | 4 | 0.03 | 0.23 | 0.10 | 0.46 | 0.03 | 0.02 | 0.06 | 0.09 |
| n-Octane/trans-1,3-dichloropropylene | 2 | 0.03 | 0.14 | 0.08 | 0.39 | 0.03 | 0.01 | 0.08 | 0.08 |
| 1,1,2-Trichloroethane | 5 | 0.03 | 3.18 | 0.70 | 3.86 | 0.16 | 0.14 | 0.08 | 1.39 |
| Tetrachloroethylene | 8 | 0.12 | 0.45 | 0.21 | 1.42 | 0.09 | 0.07 | 0.16 | 0.12 |
| Chlorobenzene | 4 | 0.06 | 0.12 | 0.09 | 0.41 | 0.02 | 0.01 | 0.08 | 0.03 |
| Ethylbenzene | 25 | 0.03 | 0.42 | 0.22 | 0.96 | 0.22 | 0.22 | 0.19 | 0.11 |
| m/p-Xylene | 25 | 0.13 | 2.77 | 1.20 | 10.58 | 1.20 | 1.20 | 1.03 | 0.71 |
| Styrene/o-xylene | 25 | 0.05 | 0.78 | 0.39 | 3.40 | 0.39 | 0.39 | 0.34 | 0.20 |
| m-Dichlorobenzene | 5 | 0.01 | 0.27 | 0.09 | 0.57 | 0.03 | 0.02 | 0.04 | 0.11 |
| p-Dichlorobenzene | 12 | 0.06 | 0.32 | 0.11 | 0.70 | 0.08 | 0.05 | 0.09 | 0.07 |
| o-Dichlorobenzene | 6 | 0.01 | 0.39 | 0.14 | 0.85 | 0.04 | 0.03 | 0.06 | 0.15 |

[a] The number of samples in which the compound was identified. The total number of samples was 25.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-8. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR FLFL

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 4 | 0.45 | 4.03 | 2.36 | 2.56 | 0.74 | 0.30 | 2.49 | 1.49 |
| 1,3-Butadiene | 18 | 0.09 | 0.79 | 0.32 | 0.71 | 0.20 | 0.18 | 0.26 | 0.21 |
| Chloroethane | 1 | 0.21 | 0.21 | 0.21 | 0.56 | 0.06 | 0.01 | 0.21 | 0.00 |
| trans-1,2-Dichloroethylene | 2 | 0.54 | 1.26 | 0.90 | 3.63 | 0.08 | 0.06 | 0.90 | 0.51 |
| 1,1-Dichloroethane | 2 | 0.13 | 0.44 | 0.29 | 1.17 | 0.04 | 0.02 | 0.29 | 0.22 |
| Chloroprene | 12 | 0.03 | 0.34 | 0.17 | 0.61 | 0.08 | 0.06 | 0.12 | 0.12 |
| Chloroform | 3 | 0.08 | 0.23 | 0.16 | 0.79 | 0.02 | 0.02 | 0.17 | 0.07 |
| 1,1,1-Trichloroethane | 30 | 0.25 | 2.01 | 0.48 | 2.66 | 0.46 | 0.46 | 0.37 | 0.32 |
| Carbon tetrachloride | 30 | 0.12 | 0.19 | 0.14 | 0.88 | 0.13 | 0.13 | 0.13 | 0.02 |
| Benzene | 31 | 0.05 | 4.18 | 1.83 | 5.93 | 1.83 | 1.83 | 1.64 | 1.05 |
| Trichloroethylene | 6 | 0.02 | 0.09 | 0.06 | 0.31 | 0.01 | 0.01 | 0.06 | 0.03 |
| 1,2-Dichloropropane | 9 | 0.12 | 2.70 | 0.71 | 3.31 | 0.22 | 0.20 | 0.30 | 0.90 |
| Bromodichloromethane | 2 | 0.04 | 0.05 | 0.05 | 0.31 | 0.003 | 0.003 | 0.05 | 0.01 |
| trans-1,3-Dichloropropylene | 1 | 0.02 | 0.02 | 0.02 | 0.09 | 0.02 | 0.001 | 0.02 | 0.00 |
| Toluene | 31 | 0.08 | 10.53 | 4.86 | 18.60 | 4.86 | 4.86 | 4.26 | 2.53 |
| n-Octane | 5 | 0.12 | 1.21 | 0.50 | 2.36 | 0.09 | 0.08 | 4.26 | 0.43 |
| n-Octane/trans-1,3-dichloropropylene | 1 | 0.21 | 0.21 | 0.21 | 0.97 | 0.03 | 0.01 | 0.21 | 0.00 |
| cis-1,3-dichloropropylene | 1 | 0.23 | 0.23 | 0.23 | 2.15 | 0.03 | 0.01 | 0.23 | 0.00 |
| 1,1,2-Trichloroethane | 4 | 0.06 | 0.10 | 0.07 | 0.40 | 0.03 | 0.01 | 0.07 | 0.02 |
| Tetrachloroethylene | 12 | 0.12 | 0.71 | 0.34 | 2.33 | 0.15 | 0.13 | 0.26 | 0.18 |
| Chlorobenzene | 4 | 0.04 | 0.11 | 0.07 | 0.34 | 0.02 | 0.01 | 0.07 | 0.04 |
| Ethylbenzene | 31 | 0.04 | 1.20 | 0.58 | 2.55 | 0.58 | 0.58 | 0.55 | 0.30 |
| m/p-Xylene | 31 | 0.09 | 6.88 | 3.45 | 30.42 | 3.45 | 3.45 | 3.18 | 1.77 |
| Styrene/o-xylene | 31 | 0.03 | 3.86 | 1.75 | 15.33 | 1.75 | 1.75 | 1.86 | 0.95 |
| m-Dichlorobenzene | 4 | 0.10 | 0.14 | 0.11 | 0.70 | 0.02 | 0.01 | 0.11 | 0.02 |
| p-Dichlorobenzene | 4 | 0.28 | 1.36 | 0.73 | 4.49 | 0.13 | 0.09 | 0.65 | 0.47 |
| o-Dichlorobenzene | 3 | 0.18 | 0.26 | 0.21 | 1.30 | 0.03 | 0.02 | 0.20 | 0.04 |

[a] The number of samples in which the compound was identified. The total number of samples was 31.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-9. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR HITX

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 6 | 0.58 | 32.02 | 7.57 | 8.20 | 1.75 | 1.34 | 3.11 | 12.05 |
| Propylene | 5 | 0.20 | 39.98 | 15.31 | 26.79 | 2.29 | 2.25 | 13.52 | 14.90 |
| 1,3-Butadiene | 23 | 0.12 | 2.16 | 0.87 | 1.95 | 0.60 | 0.59 | 0.77 | 0.52 |
| Vinyl chloride | 2 | 0.59 | 1.76 | 1.17 | 3.05 | 0.16 | 0.07 | 1.17 | 0.83 |
| Chloroethane | 1 | 0.07 | 0.07 | 0.07 | 0.19 | 0.05 | 0.002 | 0.07 | 0.00 |
| Methylene chloride | 1 | 2.90 | 2.90 | 2.90 | 10.24 | 0.14 | 0.09 | 2.90 | 0.00 |
| trans-1,2-Dichloroethylene | 1 | 0.48 | 0.48 | 0.48 | 1.93 | 0.03 | 0.01 | 0.48 | 0.00 |
| 1,1-Dichloroethane | 1 | 0.03 | 0.03 | 0.03 | 0.12 | 0.02 | 0.001 | 0.03 | 0.00 |
| Chloroprene | 13 | 0.01 | 0.95 | 0.22 | 0.81 | 0.10 | 0.08 | 0.09 | 0.26 |
| Chloroform | 8 | 0.18 | 0.57 | 0.33 | 1.64 | 0.08 | 0.08 | 0.32 | 0.30 |
| 1,1,1-Trichloroethane | 34 | 0.23 | 1.69 | 0.68 | 3.77 | 0.68 | 0.68 | 0.61 | 0.35 |
| Carbon tetrachloride | 34 | 0.12 | 1.78 | 0.23 | 1.49 | 0.23 | 0.23 | 0.16 | 0.29 |
| Benzene | 34 | 0.57 | 7.56 | 2.35 | 7.62 | 2.35 | 2.35 | 1.97 | 1.45 |
| Trichloroethylene | 3 | 0.04 | 0.92 | 0.36 | 1.98 | 0.03 | 0.03 | 0.12 | 0.49 |
| 1,2-Dichloropropane | 8 | 0.04 | 3.08 | 0.81 | 3.80 | 0.21 | 0.19 | 0.44 | 1.00 |
| Toluene | 34 | 0.45 | 11.36 | 3.12 | 11.94 | 3.12 | 3.12 | 2.44 | 2.50 |
| n-Octane | 5 | 0.03 | 0.39 | 0.20 | 0.95 | 0.04 | 0.03 | 0.21 | 0.13 |
| n-Octane/trans-1,3-dichloropropylene | 5 | 0.03 | 0.23 | 0.14 | 0.64 | 0.04 | 0.02 | 0.03 | 0.09 |
| cis-1,3-dichloropropylene | 1 | 0.41 | 0.41 | 0.41 | 3.84 | 0.03 | 0.01 | 0.41 | 0.00 |
| 1,1,2-Trichloroethane | 6 | 0.02 | 2.40 | 0.70 | 3.86 | 0.14 | 0.12 | 0.08 | 1.03 |
| Tetrachloroethylene | 15 | 0.01 | 0.56 | 0.16 | 1.10 | 0.09 | 0.07 | 0.12 | 0.14 |
| Chlorobenzene | 7 | 0.01 | 0.32 | 0.08 | 0.37 | 0.02 | 0.02 | 0.04 | 0.11 |
| Ethylbenzene | 34 | 0.02 | 1.61 | 0.45 | 2.01 | 0.45 | 0.45 | 0.41 | 0.32 |
| m/p-Xylene | 34 | 0.35 | 6.38 | 2.22 | 19.59 | 2.22 | 2.22 | 1.95 | 1.39 |
| Styrene/o-xylene | 34 | 0.14 | 2.60 | 0.77 | 6.74 | 0.77 | 0.77 | 0.73 | 0.49 |
| Bromoform | 1 | 0.03 | 0.03 | 0.03 | 0.32 | 0.001 | 0.001 | 0.0 | 0.00 |
| 1,1,2,2-Tetrachloroethane | 1 | 0.06 | 0.06 | 0.06 | 0.42 | 0.003 | 0.002 | 0.0 | 0.00 |
| m-Dichlorobenzene | 6 | 0.01 | 0.05 | 0.03 | 0.17 | 0.01 | 0.01 | 0.0 | 0.01 |
| p-Dichlorobenzene | 13 | 0.07 | 2.19 | 0.43 | 2.62 | 0.19 | 0.16 | 0.1 | 0.65 |
| o-Dichlorobenzene | 4 | 0.06 | 0.26 | 0.13 | 0.81 | 0.02 | 0.02 | 0.1 | 0.09 |

[a] The number of samples in which the compound was identified. The total number of samples was 34.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-10. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR MIFL

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 10 | 0.52 | 7.82 | 2.28 | 2.46 | 1.04 | 0.69 | 1.51 | 2.42 |
| Propylene | 5 | 0.43 | 7.32 | 3.09 | 5.41 | 0.51 | 0.47 | 0.69 | 3.50 |
| 1,3-Butadiene | 7 | 0.08 | 0.90 | 0.33 | 0.74 | 0.11 | 0.07 | 0.39 | 0.28 |
| Chloromethane | 1 | 12.1 | 12.1 | 12.10 | 25.40 | 0.46 | 0.37 | 12.10 | 0.00 |
| Chloroethane | 2 | 0.11 | 0.16 | 0.13 | 0.36 | 0.06 | 0.01 | 0.13 | 0.04 |
| Bromomethane | 2 | 0.03 | 0.29 | 0.16 | 0.63 | 0.10 | 0.01 | 0.16 | 0.18 |
| Methylene chloride | 11 | 2.59 | 10.77 | 6.51 | 23.00 | 2.21 | 2.17 | 5.56 | 2.65 |
| trans-1,2-Dichloroethylene | 3 | 0.15 | 1.73 | 0.68 | 2.75 | 0.08 | 0.06 | 0.17 | 0.91 |
| Chloroprene | 12 | 0.03 | 0.91 | 0.27 | 1.01 | 0.12 | 0.10 | 0.10 | 0.31 |
| Chloroform | 7 | 0.03 | 0.26 | 0.15 | 0.75 | 0.03 | 0.03 | 0.12 | 0.09 |
| 1,1,1-Trichloroethane | 32 | 0.27 | 2.50 | 0.92 | 5.10 | 0.89 | 0.89 | 0.78 | 0.59 |
| Carbon tetrachloride | 32 | 0.12 | 0.19 | 0.14 | 0.92 | 0.14 | 0.14 | 0.14 | 0.02 |
| Benzene | 33 | 0.05 | 4.15 | 1.47 | 4.77 | 1.47 | 1.47 | 1.28 | 0.82 |
| Trichloroethylene | 29 | 0.13 | 3.79 | 1.01 | 5.52 | 0.89 | 0.89 | 0.70 | 0.97 |
| 1,2-Dichloropropane | 17 | 0.09 | 1.94 | 0.68 | 3.21 | 0.36 | 0.35 | 0.46 | 0.55 |
| Bromodichloromethane | 2 | 0.02 | 0.02 | 0.02 | 0.14 | 0.002 | 0.001 | 0.02 | 0.00 |
| trans-1,3-Dichloropropylene | 1 | 0.45 | 0.45 | 0.45 | 2.08 | 0.03 | 0.01 | 0.45 | 0.00 |
| Toluene | 33 | 0.21 | 12.15 | 4.66 | 17.83 | 4.66 | 4.66 | 4.11 | 2.68 |
| n-Octane | 2 | 0.05 | 0.14 | 0.09 | 0.45 | 0.02 | 0.01 | 0.09 | 0.06 |
| n-Octane/trans-1,3-dichloropropylene | 3 | 0.09 | 0.27 | 0.16 | 0.75 | 0.03 | 0.01 | 0.13 | 0.09 |
| cis-1,3-dichloropropylene | 2 | 0.23 | 0.29 | 0.26 | 2.43 | 0.03 | 0.02 | 0.26 | 0.04 |
| 1,1,2-Trichloroethane | 10 | 0.04 | 3.22 | 0.42 | 2.34 | 0.14 | 0.13 | 0.10 | 0.99 |
| Tetrachloroethylene | 18 | 0.05 | 0.91 | 0.33 | 2.29 | 0.20 | 0.18 | 0.28 | 0.26 |
| Chlorobenzene | 6 | 0.06 | 0.18 | 0.12 | 0.58 | 0.03 | 0.02 | 0.15 | 0.05 |
| Ethylbenzene | 33 | 0.02 | 1.38 | 0.55 | 2.43 | 0.55 | 0.55 | 0.52 | 0.29 |
| m/p-Xylene | 33 | 0.14 | 10.26 | 3.33 | 29.37 | 3.33 | 3.33 | 2.92 | 1.97 |
| Styrene/o-xylene | 33 | 0.04 | 3.22 | 1.27 | 11.09 | 1.27 | 1.27 | 1.13 | 0.68 |
| 1,1,2,2-Tetrachloroethane | 2 | 0.03 | 0.04 | 0.03 | 0.24 | 0.003 | 0.002 | 0.03 | 0.01 |
| m-Dichlorobenzene | 4 | 0.01 | 0.04 | 0.03 | 0.17 | 0.01 | 0.003 | 0.03 | 0.01 |
| p-Dichlorobenzene | 8 | 0.14 | 5.86 | 1.68 | 10.28 | 0.44 | 0.41 | 0.42 | 2.18 |
| o-Dichlorobenzene | 3 | 0.13 | 0.51 | 0.31 | 1.91 | 0.04 | 0.03 | 0.30 | 0.19 |

[a] The number of samples in which the compound was identified. The total number of samples was 33.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-13. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR SAIL

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 2 | 10.37 | 36.82 | 23.59 | 25.54 | 1.99 | 1.52 | 23.59 | 18.70 |
| Propylene | 1 | 0.46 | 0.46 | 0.46 | 0.80 | 0.06 | 0.01 | 0.46 | 0.00 |
| 1,3-Butadiene | 7 | 0.06 | 2.00 | 0.69 | 1.56 | 0.20 | 0.16 | 0.58 | 0.65 |
| Vinyl chloride | 1 | 48.89 | 48.89 | 48.89 | 127.03 | 1.67 | 1.58 | 48.89 | 0.00 |
| Methylene chloride | 1 | 5.79 | 5.79 | 5.79 | 20.44 | 0.24 | 0.19 | 5.79 | 0.00 |
| trans-1,2-Dichloroethylene | 2 | 0.03 | 2.06 | 1.04 | 4.21 | 0.09 | 0.07 | 1.04 | 1.44 |
| 1,1-Dichloroethane | 2 | 0.08 | 0.48 | 0.28 | 1.15 | 0.04 | 0.02 | 0.28 | 0.28 |
| Chloroprene | 9 | 0.03 | 4.91 | 1.08 | 3.98 | 0.34 | 0.31 | 0.46 | 1.60 |
| Bromochloromethane | 1 | 0.06 | 0.06 | 0.06 | 0.32 | 0.003 | 0.002 | 0.06 | 0.00 |
| Chloroform | 2 | 0.02 | 80.76 | 40.39 | 200.42 | 2.61 | 2.61 | 40.39 | 57.09 |
| 1,1,1-Trichloroethane | 31 | 0.20 | 65.57 | 5.23 | 29.01 | 5.23 | 5.23 | 0.77 | 12.56 |
| Carbon tetrachloride | 31 | 0.13 | 0.54 | 0.19 | 1.21 | 0.19 | 0.19 | 0.15 | 0.09 |
| Benzene | 31 | 0.23 | 12.44 | 2.93 | 9.50 | 2.93 | 2.93 | 1.74 | 3.11 |
| Trichloroethylene | 15 | 0.06 | 5.60 | 1.08 | 5.88 | 0.52 | 0.52 | 0.33 | 1.55 |
| 1,2-Dichloropropane | 5 | 0.10 | 3.35 | 1.68 | 7.91 | 0.29 | 0.27 | 2.08 | 1.46 |
| Bromodichloromethane | 1 | 0.08 | 0.08 | 0.08 | 0.57 | 0.003 | 0.003 | 0.08 | 0.00 |
| trans-1,3-Dichloropropylene | 1 | 0.02 | 0.02 | 0.02 | 0.09 | 0.02 | 0.001 | 0.02 | 0.00 |
| Toluene | 31 | 0.26 | 217.89 | 15.33 | 58 71 | 15.33 | 15.33 | 2.39 | 41.41 |
| n-Octane | 5 | 0.02 | 1.47 | 0.37 | . /5 | 0.07 | 0.06 | 0.12 | 0.62 |
| n-Octane/trans-1,3-dichloropropylene | 1 | 0.07 | 0.07 | 0.07 | 0.32 | 0.02 | 0.002 | 0.07 | 0.00 |
| cis-1,3-dichloropropylene | 2 | 0.03 | 0.09 | 0.06 | 0.56 | 0.02 | 0.004 | 0.06 | 0.04 |
| 1,1,2-Trichloroethane | 5 | 0.01 | 0.09 | 0.03 | 0.18 | 0.02 | 0.01 | 0 02 | 0.03 |
| Tetrachloroethylene | 17 | 0.05 | 3.37 | 0.52 | 3.57 | 0.30 | 0.28 | 0.16 | 0.84 |
| Chlorobenzene | 24 | 0.01 | 11.72 | 1.26 | 5.90 | 0.98 | 0.98 | 0.38 | 2.51 |
| Ethylbenzene | 31 | 0.06 | 8.74 | 1.37 | 6.04 | 1.37 | 1.37 | 0.36 | 2.06 |
| m/p-Xylene | 31 | 0.17 | 30.26 | 6.95 | 61.38 | 6.95 | 6.95 | 2.19 | 9.56 |
| Styrene/o-xylene | 31 | 0.07 | 16.61 | 2.43 | 21.26 | 2.43 | 2.43 | 0.62 | 3.80 |
| 1,1,2,2-Tetrachloroethane | 2 | 0.04 | 0.12 | 0.08 | 0.57 | 0.01 | 0.01 | 0.08 | 0.06 |
| m-Dichlorobenzene | 7 | 0.02 | 0.26 | 0.12 | 0.72 | 0.03 | 0.03 | 0.05 | 0.10 |
| p-Dichlorobenzene | 13 | 0.09 | 15.72 | 2.98 | 18.22 | 1.28 | 1.25 | 1.30 | 4.29 |
| o Dichlorobenzene | 11 | 0.03 | 2.85 | 0.57 | 3.48 | 0.21 | 0.20 | 0.24 | 0.88 |

TABLE 4-14. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR WIDC

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] $\mu g/m^3$ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 5 | 0.65 | 17.94 | 6.53 | 7.07 | 1.62 | 1.21 | 3.23 | 7.29 |
| Propylene | 8 | 0.17 | 12.16 | 6.57 | 11.50 | 1.98 | 1.95 | 5.73 | 3.84 |
| 1,3-Butadiene | 9 | 0.09 | 0.56 | 0.23 | 0.51 | 0.11 | 0.08 | 0.22 | 0.15 |
| Vinyl chloride | 1 | 0.39 | 0.39 | 0.39 | 1.01 | 0.11 | 0.01 | 0.39 | 0.00 |
| Bromomethane | 1 | 0.04 | 0.04 | 0.04 | 0.16 | 0.10 | 0.001 | 0.04 | 0.00 |
| Methylene chloride | 1 | 3.79 | 3.79 | 3.79 | 13.38 | 0.19 | 0.14 | 3.79 | 0.00 |
| trans-1,2-Dichloroethylene | 1 | 0.10 | 0.10 | 0.10 | 0.40 | 0.02 | 0.004 | 0.10 | 0.00 |
| 1,1-Dichloroethane | 1 | 0.06 | 0.06 | 0.06 | 0.25 | 0.02 | 0.002 | 0.06 | 0.00 |
| Chloroprene | 8 | 0.08 | 1.02 | 0.38 | 1.39 | 0.13 | 0.11 | 0.22 | 0.34 |
| Chloroform | 3 | 0.03 | 0.20 | 0.10 | 0.48 | 0.01 | 0.01 | 0.06 | 0.09 |
| 1,1,1-Trichloroethane | 27 | 0.24 | 0.79 | 0.45 | 2.47 | 0.45 | 0.45 | 0.40 | 0.14 |
| Carbon tetrachloride | 27 | 0.12 | 0.28 | 0.15 | 0.96 | 0.15 | 0.15 | 0.14 | 0.04 |
| Benzene | 27 | 0.66 | 3.87 | 1.38 | 4.49 | 1.38 | 1.38 | 1.14 | 0.77 |
| Trichloroethylene | 8 | 0.01 | 0.21 | 0.08 | 0.43 | 0.02 | 0.02 | 0.05 | 0.07 |
| 1,2-Dichloropropane | 6 | 0.26 | 0.59 | 0.44 | 2.06 | 0.11 | 0.10 | 0.45 | 0.14 |
| Bromodichloromethane | 1 | 0.02 | 0.02 | 0.02 | 0.16 | 0.001 | 0.001 | 0.02 | 0.00 |
| Toluene | 27 | 0.83 | 8.05 | 2.73 | 10.46 | 2.73 | 2.73 | 1.96 | 1.71 |
| n-Octane | 1 | 0.11 | 0.11 | 0.11 | 0.52 | 0.02 | 0.004 | 0.11 | 0.00 |
| n-Octane/trans-1,3-dichloropropylene | 4 | 0.02 | 0.38 | 0.14 | 0.66 | 0.04 | 0.02 | 0.08 | 0.16 |
| 1,1,2-Trichloroethane | 5 | 0.01 | 0.08 | 0.04 | 0.23 | 0.02 | 0.01 | 0.03 | 0.03 |
| Tetrachloroethylene | 9 | 0.09 | 1.45 | 0.62 | 4.30 | 0.23 | 0.21 | 0.45 | 0.52 |
| Ethylbenzene | 27 | 0.11 | 1.01 | 0.33 | 1.46 | 0.33 | 0.33 | 0.27 | 0.22 |
| m/p-Xylene | 27 | 0.58 | 5.87 | 1.81 | 15.93 | 1.81 | 1.81 | 1.30 | 1.24 |
| Styrene/o-xylene | 27 | 0.16 | 2.10 | 0.61 | 5.35 | 0.61 | 0.61 | 0.45 | 0.46 |
| m-Dichlorobenzene | 2 | 0.02 | 0.07 | 0.05 | 0.28 | 0.01 | 0.003 | 0.05 | 0.04 |
| p-Dichlorobenzene | 16 | 0.08 | 0.58 | 0.25 | 1.53 | 0.17 | 0.15 | 0.19 | 0.17 |
| o-Dichlorobenzene | 7 | 0.02 | 0.18 | 0.08 | 0.48 | 0.03 | 0.02 | 0.06 | 0.06 |

[a] The number of samples in which the compound was identified. The total number of samples was 27.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-15. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR W2DC

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] $\mu g/m^3$ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 4 | 1.18 | 20.74 | 11.00 | 11.91 | 2.06 | 1.63 | 11.04 | 10.66 |
| Propylene | 12 | 1.63 | 11.30 | 5.19 | 9.08 | 2.34 | 2.31 | 5.10 | 2.57 |
| 1,3-Butadiene | 19 | 0.11 | 1.50 | 0.40 | 0.89 | 0.29 | 0.28 | 0.24 | 0.35 |
| Chloroethane | 4 | 0.14 | 0.32 | 0.21 | 0.56 | 0.07 | 0.03 | 0.19 | 0.08 |
| Bromomethane | 1 | 0.08 | 0.08 | 0.08 | 0.32 | 0.10 | 0.003 | 0.08 | 0.00 |
| trans-1,2-Dichloroethylene | 1 | 0.21 | 0.21 | 0.21 | 0.85 | 0.03 | 0.01 | 0.21 | 0.00 |
| 1,1-Dichloroethane | 1 | 0.10 | 0.10 | 0.10 | 0.41 | 0.02 | 0.004 | 0.10 | 0.00 |
| Chloroprene | 8 | 0.04 | 1.61 | 0.54 | 2.00 | 0.18 | 0.16 | 0.21 | 0.62 |
| Chloroform | 2 | 0.12 | 0.17 | 0.15 | 0.72 | 0.01 | 0.01 | 0.15 | 0.04 |
| 1,1,1-Trichloroethane | 27 | 0.22 | 2.87 | 0.65 | 3.61 | 0.65 | 0.65 | 0.51 | 0.51 |
| Carbon tetrachloride | 27 | 0.12 | 0.42 | 0.16 | 1.02 | 0.16 | 0.16 | 0.14 | 0.07 |
| 1,2-Dichloroethane | 1 | 0.12 | 0.12 | 0.12 | 0.49 | 0.02 | 0.004 | 0.12 | 0.00 |
| Benzene | 27 | 0.58 | 7.88 | 2.08 | 6.76 | 2.08 | 2.08 | 1.54 | 1.52 |
| Trichloroethylene | 7 | 0.04 | 0.18 | 0.09 | 0.50 | 0.03 | 0.02 | 0.08 | 0.06 |
| 1,2-Dichloropropane | 8 | 0.08 | 1.40 | 0.60 | 2.82 | 0.19 | 0.18 | 0.58 | 0.43 |
| Bromodichloromethane | 1 | 0.10 | 0.10 | 0.11 | 0.72 | 0.004 | 0.004 | 0.11 | 0.00 |
| trans-1,3-Dichloropropylene | 1 | 0.04 | 0.04 | 0.04 | 0.18 | 0.02 | 0.001 | 0.04 | 0.00 |
| Toluene | 27 | 0.98 | 18.40 | 4.94 | 18.92 | 4.94 | 4.94 | 4.08 | 3.45 |
| n-Octane | 4 | 0.07 | 0.13 | 0.10 | 0.46 | 0.03 | 0.01 | 0.10 | 0.03 |
| n-Octane/trans-1,3-dichloropropylene | 5 | 0.02 | 0.34 | 0.14 | 0.64 | 0.04 | 0.03 | 0.11 | 0.12 |
| cis-1,3-dichloropropylene | 1 | 0.36 | 0.36 | 0.36 | 3.37 | 0.03 | 0.01 | 0.11 | 0.00 |
| 1,1,2-Trichloroethane | 4 | 0.01 | 0.15 | 0.05 | 0.29 | 0.02 | 0.01 | 0.02 | 0.07 |
| Tetrachloroethylene | 13 | 0.16 | 1.02 | 0.42 | 2.88 | 0.22 | 0.20 | 0.33 | 0.25 |
| Chlorobenzene | 3 | 0.02 | 0.08 | 0.04 | 0.20 | 0.01 | 0.005 | 0.03 | 0.03 |
| Ethylbenzene | 27 | 0.14 | 2.52 | 0.67 | 2.94 | 0.67 | 0.67 | 0.57 | 0.48 |
| m/p-Xylene | 27 | 0.82 | 14.48 | 3.60 | 31.79 | 3.60 | 3.60 | 2.72 | 2.87 |
| Styrene/o-xylene | 27 | 0.30 | 5.60 | 1.25 | 10.93 | 1.25 | 1.25 | 1.01 | 1.08 |
| 1,1,2,2-Tetrachloroethane | 1 | 0.11 | 0.11 | 0.11 | 0.77 | 0.01 | 0.004 | 0.11 | 0.00 |
| m-Dichlorobenzene | 3 | 0.26 | 1.08 | 0.63 | 3.85 | 0.08 | 0.07 | 0.55 | 0.42 |
| p-Dichlorobenzene | 12 | 0.08 | 0.48 | 0.26 | 1.59 | 0.14 | 0.12 | 0.26 | 0.11 |
| o-Dichlorobenzene | 6 | 0.03 | 0.28 | 0.17 | 1.03 | 0.05 | 0.04 | 0.18 | 0.10 |

[a] The number of samples in which the compound was identified. The total number of samples was 27.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-16. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR WIKS

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 4 | 1.13 | 3.44 | 2.29 | 2.48 | 0.73 | 0.30 | 2.29 | 1.11 |
| Propylene | 2 | 2.14 | 12.89 | 7.51 | 13.15 | 0.53 | 0.48 | 7.52 | 7.60 |
| 1,3-Butadiene | 10 | 0.16 | 1.50 | 0.40 | 0.90 | 0.16 | 0.13 | 0.26 | 0.40 |
| Methylene chloride | 1 | 4.86 | 4.86 | 4.86 | 17.16 | 0.21 | 0.16 | 4.86 | 0.00 |
| 1,1-Dichloroethane | 1 | 0.05 | 0.05 | 0.05 | 0.21 | 0.02 | 0.002 | 0.05 | 0.00 |
| Chloroprene | 9 | 0.04 | 0.51 | 0.16 | 0.59 | 0.07 | 0.05 | 0.10 | 0.17 |
| Chloroform | 3 | 0.03 | 0.14 | 0.09 | 0.42 | 0.01 | 0.01 | 0.08 | 0.06 |
| 1,1,1-Trichloroethane | 31 | 0.18 | 0.63 | 0.32 | 1.76 | 0.32 | 0.32 | 0.29 | 0.11 |
| Carbon tetrachloride | 31 | 0.11 | 0.83 | 0.20 | 1.28 | 0.20 | 0.20 | 0.15 | 0.15 |
| 1,2-Dichloroethane | 1 | 0.04 | 0.04 | 0.04 | 0.16 | 0.02 | 0.001 | 0.04 | 0.00 |
| Benzene | 31 | 0.35 | 3.31 | 0.91 | 2.96 | 0.91 | 0.91 | 0.75 | 0.57 |
| Trichloroethylene | 22 | 0.04 | 3.74 | 0.49 | 2.66 | 0.35 | 0.35 | 0.19 | 0.89 |
| 1,2-Dichloropropane | 4 | 0.25 | 0.60 | 0.46 | 2.15 | 0.08 | 0.06 | 0.49 | 0.16 |
| Bromodichloromethane | 1 | 0.03 | 0.03 | 0.03 | 0.20 | 0.001 | 0.001 | 0.03 | 0.00 |
| trans-1,3-Dichloropropylene | 1 | 0.05 | 0.05 | 0.05 | 0.23 | 0.02 | 0.002 | 0.05 | 0.00 |
| Toluene | 31 | 0.48 | 5.24 | 1.37 | 5.25 | 1.37 | 1.37 | 1.17 | 0.94 |
| n-Octane | 5 | 0.02 | 0.17 | 0.12 | 0.57 | 0.03 | 0.02 | 0.16 | 0.06 |
| n-Octane/trans-1,3-dichloropropylene | 1 | 0.02 | 0.02 | 0.02 | 0.09 | 0.02 | 0.001 | 0.02 | 0.00 |
| cis-1,3-dichloropropylene | 1 | 0.32 | 0.32 | 0.32 | 3.00 | 0.03 | 0.01 | 0.32 | 0.00 |
| 1,1,2-Trichloroethane | 7 | 0.01 | 4.08 | 0.60 | 3.32 | 0.15 | 0.14 | 0.02 | 1.54 |
| Tetrachloroethylene | 12 | 0.05 | 0.29 | 0.12 | 0.82 | 0.07 | 0.05 | 0.09 | 0.08 |
| Chlorobenzene | 6 | 0.02 | 0.08 | 0.05 | 0.23 | 0.02 | 0.01 | 0.05 | 0.02 |
| Ethylbenzene | 31 | 0.06 | 0.80 | 0.20 | 0.87 | 0.20 | 0.20 | 0.17 | 0.14 |
| m/p-Xylene | 31 | 0.35 | 4.71 | 1.14 | 10.05 | 1.14 | 1.14 | 0.98 | 0.86 |
| Styrene/o-xylene | 31 | 0.11 | 1.48 | 0.35 | 3.10 | 0.35 | 0.35 | 0.29 | 0.26 |
| Bromoform | 1 | 0.02 | 0.02 | 0.02 | 0.17 | 0.001 | 0.001 | 0.02 | 0.00 |
| 1,1,2,2-Tetrachloroethane | 1 | 0.03 | 0.03 | 0.03 | 0.21 | 0.002 | 0.001 | 0.03 | 0.00 |
| m-Dichlorobenzene | 7 | 0.01 | 0.12 | 0.04 | 0.22 | 0.02 | 0.01 | 0.02 | 0.04 |
| p-Dichlorobenzene | 12 | 0.12 | 0.50 | 0.20 | 1.23 | 0.11 | 0.08 | 0.14 | 0.12 |
| o-Dichlorobenzene | 8 | 0.04 | 0.10 | 0.07 | 0.40 | 0.02 | 0.02 | 0.06 | 0.03 |

[a] The number of samples in which the compound was identified. The total number of samples was 31.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

TABLE 4-17. 1989 UATMP COMPOUND IDENTIFICATIONS WITH GC/MD FOR W2KS

| Compound | Cases[a] | Minimum ppbv | Maximum ppbv | Mean[b] ppbv | Mean[b] µg/m³ | Mean[c] ppbv | Mean[d] ppbv | Median ppbv | Standard Deviation ppbv |
|---|---|---|---|---|---|---|---|---|---|
| Acetylene | 2 | 2.08 | 2.63 | 2.35 | 2.55 | 0.62 | 0.15 | 2.36 | 0.39 |
| Propylene | 3 | 0.12 | 3.69 | 2.16 | 3.77 | 0.25 | 0.21 | 2.66 | 1.84 |
| 1,3-Butadiene | 7 | 0.05 | 0.49 | 0.21 | 0.46 | 0.09 | 0.05 | 0.11 | 0.18 |
| Chloromethane | 1 | 0.03 | 0.03 | 0.03 | 0.06 | 0.10 | 0.001 | 0.03 | 0.00 |
| Bromomethane | 1 | 0.06 | 0.06 | 0.06 | 0.24 | 0.10 | 0.002 | 0.06 | 0.00 |
| Methylene chloride | 5 | 1.06 | 5.22 | 3.01 | 10.61 | 0.53 | 0.48 | 2.26 | 1.96 |
| trans-1,2-Dichloroethylene | 1 | 0.18 | 0.18 | 0.18 | 0.73 | 0.03 | 0.01 | 0.18 | 0.00 |
| 1,1-Dichloroethane | 1 | 0.09 | 0.09 | 0.09 | 0.37 | 0.02 | 0.003 | 0.09 | 0.00 |
| Chloroprene | 9 | 0.02 | 0.35 | 0.11 | 0.41 | 0.05 | 0.03 | 0.08 | 0.12 |
| Bromochloromethane | 1 | 0.10 | 0.10 | 0.10 | 0.55 | 0.005 | 0.003 | 0.10 | 0.00 |
| Chloroform | 3 | 0.02 | 2.10 | 0.92 | 4.55 | 0.09 | 0.09 | 0.63 | 1.07 |
| 1,1,1-Trichloroethane | 31 | 0.19 | 1.74 | 0.41 | 2.27 | 0.41 | 0.41 | 0.31 | 0.33 |
| Carbon tetrachloride | 31 | 0.12 | 1.62 | 0.24 | 1.51 | 0.24 | 0.24 | 0.15 | 0.27 |
| 1,2-Dichloroethane | 1 | 0.05 | 0.05 | 0.05 | 0.21 | 0.02 | 0.002 | 0.05 | 0.00 |
| Benzene | 31 | 0.37 | 2.70 | 1.07 | 3.48 | 1.07 | 1.07 | 0.86 | 0.70 |
| Trichloroethylene | 17 | 0.02 | 0.92 | 0.34 | 1.83 | 0.18 | 0.18 | 0.29 | 0.27 |
| 1,2-Dichloropropane | 5 | 0.11 | 0.74 | 0.42 | 1.96 | 0.08 | 0.07 | 0.43 | 0.24 |
| Toluene | 31 | 0.32 | 5.18 | 1.71 | 6.57 | 1.71 | 1.71 | 1.29 | 1.33 |
| n-Octane | 5 | 0.05 | 0.27 | 0.12 | 0.55 | 0.03 | 0.02 | 0.09 | 0.09 |
| n-Octane/trans-1,3-dichloropropylene | 4 | 0.01 | 0.82 | 0.22 | 1.03 | 0.05 | 0.03 | 0.03 | 0.40 |
| cis-1,3-dichloropropylene | 1 | 0.12 | 0.12 | 0.12 | 1.12 | 0.02 | 0.004 | 0.12 | 0.00 |
| 1,1,2-Trichloroethane | 11 | 0.01 | 0.16 | 0.03 | 0.19 | 0.02 | 0.01 | 0.02 | 0.04 |
| Tetrachloroethylene | 15 | 0.06 | 0.53 | 0.19 | 1.28 | 0.11 | 0.09 | 0.15 | 0.14 |
| Chlorobenzene | 8 | 0.02 | 0.15 | 0.07 | 0.31 | 0.02 | 0.02 | 0.06 | 0.05 |
| Ethylbenzene | 31 | 0.05 | 0.85 | 0.25 | 1.09 | 0.25 | [illegible] | 0.17 | 0.21 |
| m/p-Xylene | 31 | 0.20 | 4.86 | 1.39 | 12.24 | 1.39 | 1.39 | 0.97 | 1.20 |
| Styrene/o-xylene | 31 | 0.06 | 3.22 | 0.51 | 4.47 | 0.51 | 0.51 | 0.29 | 0.62 |
| m-Dichlorobenzene | 5 | 0.02 | 0.02 | 0.02 | 0.12 | 0.01 | 0.003 | 0.02 | 0.00 |
| p-Dichlorobenzene | 12 | 0.04 | 0.70 | 0.19 | 1.17 | 0.10 | 0.07 | 0.13 | 0.17 |
| o-Dichlorobenzene | 11 | 0.03 | 0.21 | 0.10 | 0.59 | 0.04 | 0.03 | 0.08 | 0.06 |

[a] The number of samples in which the compound was identified. The total number of samples was 31.
[b] The arithmetic average concentration of all the compound identification cases.
[c] The arithmetic average concentration of all samples using half the MDL value for samples in which the compound was not identified.
[d] The arithmetic average concentration of all samples using zero for samples in which the compound was not identified.

## 4.2 PRECISION

Analytical precision was estimated by comparing analytical results for repeated, or replicate, analyses of site samples. The overall precision results are given in Table 4-18 for all compounds and all sites. The "mean" in Table 4-18 refers to the average concentration for each replicate pair analysis for a given compound. The "average" in Table 4-18 is the arithmetic mean of the concentration means of all replicate pairs. The range of concentrations of the means was found to be from 0.01 to 15.37 ppbv. Because of the wide range, the precision reported in Table 4-18 presents a realistic assessment of the performance of the analytical portion of the method. Statistics are given for the standard deviation, the % CV, and the absolute percent difference. The precision results average 8.04% in terms of average % CV and 11.4% in terms of average absolute percent difference. These results indicate a high degree of precision, considering there were 38 compounds and 14 sites. The % CV and absolute percent difference results should be viewed as a measure of analytical precision, not the total method precision. Table 4-19 details the replicate statistics by target compound. Note that % CV values greater than 20 occur for cases in which the number of replicate pairs was six or fewer. The overall average % CV of 8.04 indicated good overall agreement of the repeated analyses, hence precision. Table 4-20 gives the replicate statistics for all compounds by quarters of 1989, and cumulatively for the entire year. The results from this table show consistency throughout the year.

Sampling and analysis precision is summarized in Table 4-21 and was calculated from analyses of duplicate samples. The data in the table include the analytical results from all the sites and all the target compounds. The average % CV and absolute percent difference are 10.7 and 13.8, respectively. These values are slightly larger than the corresponding results for replicate analyses because the duplicate values include the sum of the sampling and analytical error. The % CV and absolute % difference for the duplicate sample analyses results reflect careful sampling and analysis procedures and maintenance of quality control. Table 4-22 details the duplicate statistics by compound. The largest average % CV was for bromochloromethane, which occurred in only one duplicate pair. The overall weighted average % CV for

TABLE 4-18. 1989 UATMP OVERALL PRECISION FOR REPLICATE PAIRS

| Replicate Pair Statistics[a] | Minimum | Maximum | Average |
|---|---|---|---|
| Mean, ppbv | 0.01 | 15.37 | 1.06 |
| Standard Deviation, ppbv | 0.00 | 0.91 | 0.05 |
| % Coefficient of Variation (% CV) | 0.00 | 124.78 | 8.04 |
| Absolute Percent Difference | 0.00 | 176.47 | 11.36 |

[a] 905 compound identifications in the replicate pair analyses.

TABLE 4-19. 1989 UATMP REPLICATE STATISTICS BY COMPOUND

| Compound | Replicate Pairs | Mean ppbv | Average Standard Deviation ppbv | Average % CV |
|---|---|---|---|---|
| Acetylene | 4 | 5.51 | 0.56 | 13.22 |
| Propylene | 12 | 4.17 | 0.34 | 8.20 |
| 1,3-Butadiene | 36 | 0.38 | 0.04 | 11.36 |
| Chloroethane | 1 | 0.20 | 0.02 | 10.88 |
| Bromomethane | 3 | 2.04 | 0.15 | 22.69 |
| Methylene chloride | 3 | 4.33 | 0.23 | 5.37 |
| Chloroprene | 22 | 0.22 | 0.10 | 40.44 |
| Bromochloromethane | 2 | 0.05 | 0.05 | 92.70 |
| Chloroform | 9 | 0.36 | 0.02 | 10.87 |
| 1,1,1-Trichloroethane | 96 | 0.55 | 0.02 | 4.24 |
| Carbon tetrachloride | 96 | 0.18 | 0.01 | 2.98 |
| Benzene | 96 | 1.51 | 0.03 | 2.37 |
| Trichloroethylene | 32 | 0.35 | 0.04 | 12.13 |
| 1,2-Dichloroethane | 7 | 0.84 | 0.15 | 13.27 |
| Bromodichloromethane | 1 | 0.11 | 0.04 | 41.75 |
| Toluene | 96 | 2.74 | 0.09 | 3.20 |
| n-Octane | 18 | 0.13 | 0.02 | 19.05 |
| cis-1,3-Dichloropropylene | 1 | 0.29 | 0.07 | 24.38 |
| 1,1,2-Trichloroethane | 6 | 0.08 | 0.06 | 31.44 |
| Tetrachloroethylene | 33 | 0.27 | 0.04 | 16.23 |
| Chlorobenzene | 17 | 0.22 | 0.02 | 15.67 |
| Ethylbenzene | 96 | 0.40 | 0.02 | 6.24 |
| m/p-Xylene | 96 | 2.25 | 0.07 | 3.90 |
| Sytrene/o-xylene | 96 | 0.75 | 0.04 | 6.75 |
| m-Dichlorobenzene | 2 | 0.22 | 0.23 | 101.68 |
| p-Dichlorobenzene | 19 | 0.43 | 0.08 | 23.72 |
| o-Dichlorobenzene | 5 | 0.11 | 0.01 | 12.23 |
| Overall Weighted Average | | 1.06 | 0.05 | 8.04 |

TABLE 4-20. 1989 UATMP REPLICATE STATISTICS

| Statistics | Mean Conc., ppbv | | | Standard Deviation, ppbv | | | % Coefficient of Variation | | | Absolute % Difference | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean |
| First Quarter, 1989 | 0.02 | 5.52 | 0.89 | 0.00 | 1.03 | 0.08 | 0.00 | 124.28 | 11.55 | 0.00 | 175.76 | 14.39 |
| Second Quarter, 1989 | 0.01 | 4.94 | 0.67 | 0.00 | 0.78 | 0.04 | 0.00 | 80.81 | 9.24 | 0.00 | 114.29 | 11.19 |
| Third Quarter, 1989 | 0.05 | 15.37 | 1.47 | 0.00 | 0.86 | 0.07 | 0.00 | 124.78 | 4.76 | 0.00 | 176.47 | 10.40 |
| Fourth Quarter, 1989 | 0.03 | 14.95 | 1.13 | 0.00 | 0.91 | 0.01 | 0.00 | 121.22 | 6.61 | 0.00 | 171.43 | 10.60 |
| Cumulative, 1989 | 0.01 | 15.37 | 1.06 | 0.00 | 1.03 | 0.05 | 0.00 | 121.22 | 8.04 | 0.00 | 176.47 | 11.36 |

TABLE 4-21. 1989 UATMP OVERALL PRECISION FOR DUPLICATE PAIRS

| Replicate Pair Statistics[a] | Minimum | Maximum | Average |
|---|---|---|---|
| Mean, ppbv | 0.01 | 14.19 | 1.12 |
| Standard Deviation, ppbv | 0.00 | 7.54 | 0.12 |
| % Coefficient of Variation (% CV) | 0.00 | 124.28 | 10.71 |
| Absolute Percent Difference | 0.00 | 175.76 | 13.80 |

[a] 422 compound identifications in the duplicate pair analyses.

TABLE 4-22. 1989 UATMP DUPLICATE STATISTICS BY COMPOUND

| Compound | Duplicate Pairs | Mean ppbv | Average Standard Deviation ppbv | Average % CV |
|---|---|---|---|---|
| Acetylene | 2 | 5.44 | 0.27 | 7.60 |
| Propylene | 6 | 4.14 | 0.52 | 11.43 |
| 1,3-Butadiene | 17 | 0.41 | 0.04 | 14.29 |
| Bromomethane | 1 | 3.01 | 0.01 | 0.23 |
| Methylene chloride | 1 | 5.04 | 0.45 | 8.98 |
| Chloroprene | 7 | 0.31 | 0.18 | 42.56 |
| Bromochloromethane | 1 | 0.02 | 0.02 | 72.15 |
| Chloroform | 4 | 0.41 | 0.01 | 5.36 |
| 1,1,1-Trichloroethane | 48 | 0.56 | 0.06 | 8.98 |
| Carbon tetrachloride | 48 | 0.18 | 0.00 | 2.78 |
| Benzene | 48 | 1.52 | 0.08 | 4.49 |
| Trichloroethylene | 12 | 0.40 | 0.09 | 19.25 |
| 1,2-Dichloropropane | 2 | 0.77 | 0.08 | 8.46 |
| Toluene | 48 | 2.76 | 0.29 | 7.00 |
| n-Octane | 7 | 0.14 | 0.02 | 13.68 |
| 1,1,2-Trichloroethane | 2 | 0.03 | 0.00 | 23.57 |
| Tetrachloroethylene | 13 | 0.25 | 0.04 | 20.01 |
| Chlorobenzene | 7 | 0.24 | 0.04 | 36.99 |
| Ethylbenzene | 48 | 0.40 | 0.04 | 7.73 |
| m/p-Xylene | 48 | 2.26 | 0.29 | 8.10 |
| Styrene/o-xylene | 48 | 0.75 | 0.10 | 11.25 |
| p-Dichlorobenzene | 4 | 0.41 | ^ 03 | 15.90 |
| Overall Weighted Average | | 1.12 | 0.12 | 9.75 |

duplicate samples was 9.75. Table 4-23 presents the duplicate sample statistics by quarters for 1989 and cumulatively for the entire year. Overall mean percent differences appear to decrease from the first quarter 1989 through the fourth quarter of 1989, but the % CV does not track the same trend.

## 4.3 ACCURACY

Accuracy for the GC/MD analysis was measured in terms of external audits received from AREAL, of the EPA. Six analytical audits were conducted in 1989, approximately bimonthly. Both the GC/MD and GC/MS analytical systems were subject to the audits, although GC/MS was used primarily for the purpose of compound identification confirmation, not quantitation.

Table 4-24 summarizes the 1989 UATMP GC/MD analytical audit results. In audit nos. 0780 and 0781, a contaminant that coeluted with methylene chloride was present. This contamination caused inordinately large biases for the GC/MD analysis results of audit nos. 0780, 0781, 0985, and 0986. The high biases for chlorobenzene and o-xylene in audit nos. 0985 and 0986 were attributed to contamination of these two compounds in the audit samples. For these cases, EPA recommended excluding these biases in the overall mean bias calculation for 1989. Aside from these cases in which a contaminant was present, the biases ranged from -35% for vinyl chloride in audit no. 1067, to 75% for tetrachloroethylene in audit no. 0985. These high biases were not consistent for these compounds in other audits, therefore, there was no evidence of a consistent quantitation inaccuracy. Response factors for vinyl chloride in audit no. 1067 and for tetrachloroethylene in audit no. 0985 showed values consistent with previous calibrations. The mean bias for the six audits was -1.2%, overall. All compounds in the audit samples were identified correctly. The reference compounds were present in the audit samples at concentrations that ranged from 2.1 to 8.5 ppbv.

Audit results for GC/MS are summarized in Table 4-25. The biases for the GC/MS analyses of the same audit samples used for GC/MD ranged from -46.2 for methylene chloride in audit no. 0814 to 52.5% for chlorobenzene in Audit No. 1067. The overall mean bias for GC/MS analysis of the six audits was -0.31%.

TABLE 4-23. 1989 UATMP DUPLICATE STATISTICS

| Statistics | Mean Conc., ppbv | | | Standard Deviation, ppbv | | | % Coefficient of Variation | | | % Difference | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean | Minimum | Maximum | Overall Mean |
| First Quarter, 1989 | 0.10 | 10.26 | 1.56 | 0.00 | 7.54 | 0.20 | 0.00 | 96.39 | 15.44 | 0.00 | 136.32 | 18.43 |
| Second Quarter, 1989 | 0.02 | 9.53 | 1.11 | 0.00 | 1.35 | 0.10 | 0.00 | 124.28 | 8.74 | 0.00 | 175.76 | 17.36 |
| Third Quarter, 1989 | 0.01 | 4.93 | 0.68 | 0.00 | 0.29 | 0.07 | 0.00 | 64.28 | 4.57 | 0.00 | 90.91 | 12.28 |
| Fourth Quarter, 1989 | 0.04 | 14.19 | 1.20 | 0.00 | 1.44 | 0.11 | 0.00 | 78.57 | 10.25 | 0.00 | 111.11 | 9.24 |
| Cumulative, 1989 | 0.01 | 14.19 | 1.12 | 0.00 | 7.54 | 0.12 | 0.00 | 124.28 | 9.75 | 0.00 | 175.76 | 13.80 |

TABLE 4-24. 1989 UATMP GC/MD AUDITS

| | Audit #0780 | | | Audit #0781 | | | Audit #0814 | | |
|---|---|---|---|---|---|---|---|---|---|
| Compound | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] |
| Vinyl chloride | 4.2 | 4.5 | 7.1 | 2.5 | 2.0 | -20.0 | 4.1 | 3.5 | -14.6 |
| Bromomethane | 3.7 | 3.0 | -18.9 | 2.2 | 1.8 | 18.2 | 8.5 | 7.2 | -15.3 |
| Methylene chloride | 3.5 | 9.6[b] | 174.3 | 2.1 | 5.3[b] | 152.4 | 3.9 | 4.6[b] | 17.9 |
| Chloroform | 4.0 | 4.7 | 17.5 | 2.4 | 2.6 | 8.3 | 3.4 | 3.4 | 0.0 |
| 1,1,1-Trichloroethane | 4.2 | 5.4 | 28.6 | 2.5 | 2.6 | 4.0 | 8.1 | 7.7 | - 4.9 |
| Carbon tetrachloride | 3.9 | 4.5 | 15.4 | 2.4 | 2.4 | 0.0 | 3.8 | 3.7 | -25.6 |
| Benzene | 4.3 | 4.7 | 9.3 | 2.6 | 2.5 | -3.8 | 4.4 | 3.8 | -13.6 |
| 1,2-Dichloroethane | 4.2 | 4.4 | 4.8 | 2.5 | 2.6 | 4.0 | 4.3 | 3.6 | -16.3 |
| Trichloroethylene | 4.4 | 4.8 | 9.1 | 2.6 | 2.6 | 0.0 | 4.4 | 3.7 | -15.9 |
| 1,2-Dichloropropane | 4.2 | 4.7 | 11.9 | 2.5 | 2.6 | 4.0 | 8.0 | 7.6 | - 5.0 |
| Toluene | 4.4 | 4.6 | 4.5 | 2.6 | 2.0 | -23.1 | 8.2 | 7.7 | - 6.1 |
| Tetrachloroethylene | 4.5 | 4.2 | - 6.7 | 2.7 | 1.8 | -33.3 | 3.8 | 2.6 | -31.6 |
| Chlorobenzene | 4.4 | 5.1 | 15.9 | 2.6 | 2.5 | -3.8 | 8.1 | 8.4 | 3.7 |
| Ethylbenzene | 4.0 | 3.5 | -12.5 | 2.4 | 1.8 | -25.0 | 7.5 | 5.8 | -22.7 |
| o-Xylene | 4.0 | 4.3 | 7.5 | 2.4 | 2.1 | -12.5 | 7.2 | 7.8 | 8.3 |

[a]% bias = $\frac{\text{reported - reference}}{\text{reference}} \times 100$

[b]contaminant present

JQ PPK1

TABLE 4-24. 1989 UATMP GC/MD AUDITS (continued)

| | Audit #0985 | | | Audit #0986 | | | Audit #1067 | | |
|---|---|---|---|---|---|---|---|---|---|
| Compound | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] |
| Vinyl chloride | 3.0 | 2.4 | -20.0 | 4.0 | 3.6 | -10.0 | 2.0 | 1.3 | -35.0 |
| Bromomethane | 6.3 | 5.8 | -7.9 | 8.5 | 8.1 | -4.7 | 4.3 | 3.3 | -23.2 |
| Methylene chloride | 2.4 | 4.4[b] | 83.3 | 3.3 | 4.6[b] | 39.4 | 1.6 | 2.0 | 25.0 |
| Chloroform | 2.9 | 2.6 | -10.3 | 3.8 | 3.4 | -10.5 | 1.9 | 1.9 | 0.0 |
| 1,1,1-Trichloroethane | 6.0 | 6.5 | 8.3 | 8.0 | 8.7 | 8.8 | 4.0 | 3.6 | 10.0 |
| Carbon tetrachloride | 2.8 | 3.5 | 25.0 | 3.7 | 4.3 | 16.2 | 1.9 | .5 | -21.0 |
| Benzene | 3.1 | 2.9 | -6.4 | 4.1 | 4.0 | -2.4 | 2.1 | 1.7 | -19.0 |
| 1,2-Dichloroethane | 3.2 | 3.1 | -3.1 | 4.3 | 4.4 | 2.3 | 2.2 | 1.9 | -13.6 |
| Trichloroethylene | 3.2 | 2.6 | -18.8 | 4.3 | 3.5 | -18.6 | 2.2 | 1.7 | -22.7 |
| 1,2-Dichloropropane | 5.9 | 6.1 | 3.4 | 7.9 | 8.3 | 5.1 | 4.0 | 3.7 | -26.8 |
| Toluene | 6.0 | 5.8 | -3.3 | 8.1 | 7.8 | -3.7 | 4.1 | 3.0 | -26.8 |
| Tetrachloroethylene | 3.2 | 5.6 | 75.0 | 4.2 | 4.6 | 9.5 | 2.1 | 1.7 | -19.0 |
| Chlorobenzene | 6.0 | 9.7[b] | 61.7 | 8.0 | 13.0[b] | 62.5 | 4.0 | 5.2 | 30.0 |
| Ethylbenzene | 5.5 | 5.1 | -7.3 | 7.4 | 7.3 | -1.4 | 3.7 | 3.0 | -18.9 |
| o-Xylene | 5.3 | 8.0[b] | 50.9 | 7.1 | 11.6[b] | 63.4 | 3.6 | 4.0 | 11.1 |

[a]% bias = $\frac{\text{reported - reference}}{\text{reference}}$ x 100

[b]contaminant present

JQ PPK1

TABLE 4-25. 1989 UATMP GC/MS AUDITS

| | Audit #0780 | | | Audit #0781 | | | Audit #0814 | | |
|---|---|---|---|---|---|---|---|---|---|
| Compound | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] |
| Vinyl chloride | 4.2 | 5.6 | 33.3 | 2.5 | 1.7 | -32.0 | 4.1 | 3.4 | -17.1 |
| Bromomethane | 3.7 | 3.3 | -10.8 | 2.2 | 1.5 | 31.8 | 8.5 | 7.0 | -17.6 |
| Methylene Chloride | 3.5 | 3.9 | 11.4 | 2.1 | 1.6 | -23.8 | 3.9 | 2.1 | -46.2 |
| Chloroform | 4.0 | 4.8 | 20.0 | 2.4 | 2.8 | 16.7 | 3.4 | 3.3 | -2.9 |
| 1,1,1-Trichloroethane | 4.2 | 4.9 | 16.7 | 2.5 | 2.9 | 16.0 | 8.1 | 6.7 | -17.3 |
| Carbon tetrachloride | 3.9 | 4.3 | 10.2 | 2.4 | 2.5 | 4.2 | 3.8 | 3.4 | -10.5 |
| Benzene | 4.3 | 4.5 | 4.7 | 2.6 | 2.4 | -7.7 | 4.4 | 2.9 | -34.1 |
| 1,2-Dichloroethane | 4.2 | 4.2 | 0.0 | 2.5 | 2.4 | -4.0 | 4.3 | 3.1 | -27.9 |
| Trichloroethylene | 4.4 | 3.9 | -11.4 | 2.6 | 1.9 | -26.9 | 4.4 | 3.3 | -25.0 |
| 1,2-Dichloropropane | 4.2 | 4.3 | 2.4 | 2.5 | 2.1 | -16.0 | 8.0 | 6.7 | -16.2 |
| Toluene | 4.4 | 4.3 | -2.3 | 2.6 | 1.9 | -26.9 | 8.2 | 6.5 | -20.7 |
| Tetrachloroethylene | 4.5 | 3.8 | -15.6 | 2.7 | 1.7 | -37.0 | 3.8 | 3.1 | -18.4 |
| Chlorobenzene | 4.4 | 4.3 | -2.3 | 2.6 | 2.5 | -3.8 | 8.1 | 6.9 | -14.8 |
| Ethylbenzene | 4.0 | 3.1 | -22.5 | 2.4. | 1.9 | -20.8 | 7.5 | 5.0 | -33.3 |
| O-Xylene | 4.0 | 4.1 | 2.5 | 2.4 | 2.5 | 4.2 | 7.2 | 6.7 | -6.9 |

[a]% bias = $\frac{\text{reported - reference}}{\text{reference}} \times 100$

[b]contaminant present

JQ PPK1

TABLE 4-25. 1989 UATMP GC/MS AUDITS (continued)

| | Audit #0985 | | | Audit #0986 | | | Audit #1067 | | |
|---|---|---|---|---|---|---|---|---|---|
| Compound | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] | Reference ppbv | Reported ppbv | % Bias[a] |
| Vinyl chloride | 3.0 | 3.2 | 6.7 | 4.0 | 4.4 | 10.0 | 2.0 | 1.5 | -25.0 |
| Bromomethane | 6.3 | 7.8 | 23.8 | 8.5 | 10.7 | 25.9 | 4.3 | 4.1 | - 4.6 |
| Methylene chloride | 2.4 | 3.4 | 41.7 | 3.3 | 4.9 | -48.5 | 1.6 | 2.1 | 31.2 |
| Chloroform | 2.9 | 3.4 | 17.2 | 3.8 | 4.6 | 21.0 | 1.9 | 1.9 | 0.0 |
| 1,1,1-Trichloroethane | 6.0 | 7.9 | 31.7 | 8.0 | 10.8 | 35.0 | 4.0 | 4.2 | 5.0 |
| Carbon tetrachloride | 2.8 | 3.4 | 21.4 | 3.7 | 4.5 | 21.6 | 1.9 | 1.7 | -10.5 |
| Benzene | 3.1 | 3.6 | 16.1 | 4.1 | 4.7 | 14.6 | 2.1 | 1.8 | -14.3 |
| 1,2-Dichloroethane | 3.2 | 3.5 | 9.4 | 4.3 | 4.8 | 11.6 | 2.2 | 1.8 | -18.2 |
| Trichloroethylene | 3.2 | 3.1 | - 3.1 | 4.3 | 4.2 | - 2.3 | 2.2 | 1.8 | -18.2 |
| 1,2-Dichloropropane | 5.9 | 7.2 | 22.0 | 7.9 | 9.5 | 20.2 | 4.0 | 4.1 | 2.5 |
| Toluene | 6.0 | 6.9 | 15.0 | 8.1 | 9.3 | 14.8 | 4.1 | 4.4 | 7.3 |
| Tetrachloroethylene | 3.2 | 4.1 | 28.1 | 4.2 | 5.6 | 33.3 | 2.1 | 2.5 | 19.0 |
| Chlorobenzene | 6.0 | 11.2[b] | 86.7 | 8.0 | 15.1[b] | 88.8 | 4.0 | 6.1 | 52.5 |
| Ethylbenzene | 5.5 | 5.6 | 1.8 | 7.4 | 7.6 | 2.7 | 3.7 | 3.2 | -13.5 |
| o-Xylene | 5.3 | 6.9[b] | 30.2 | 7.1 | 9.5[b] | 33.8 | 3.6 | 4.0 | 11.1 |

[a]% bias = $\frac{\text{reported} - \text{reference}}{\text{reference}} \times 100$

[b]contaminant present

JQ PPK1

## 4.4 GC/MS COMPOUND IDENTIFICATION CONFIRMATION RESULTS

Compounds were identified by the GC/MD analytical system using a combination of retention time, PID/FID response ratio, ECD/FID response ratio, and detector specificity. Compound identification confirmation was accomplished by analyzing about 15% of the samples by GC/MS in the MID mode. Table 4-26 summarizes the results of the 1989 UATMP compound identification confirmation. The GC/MS analyses confirmed 94.1% of all the compound identifications resulting from the GC/MD analyses.

In determining the confirmation rate, there were four possible cases:

(1) positive GC/MD identification - positive GC/MS identification,
(2) positive GC/MD identification - negative GC/MS identification,
(3) negative GC/MD identification - positive GC/MS identification, and
(4) negative GC/MD identification - negative GC/MS identification.

A compound identification was confirmed if both GC/MD and GC/MS identified the compound, or both did not identify the compound. If the compound identified on one analytical system was below the estimated IDL of the other system, this was also considered a confirmation.

## 4.5 SAMPLE COMPLETENESS

Percent completeness, defined as the number of scheduled samples that resulted in a valid sample, gauges several quality assurance measures. Site operator performance, training procedures and instructions for site operators, communication between the site operators and the Radian site coordinator, and equipment reliability all affect the number of valid samples obtained. Table 4-27 summarizes the completeness results at each site in the 1989 UATMP. Completeness ranged from 76.3% at DLTX, to 100% at several sites. The overall average percent completeness was 92.7.

Table 4-28 lists the invalidated samples by site code and ID number, along with the reason the sample was invalid. Examination of the reasons for the invalidated samples indicates that site operator error was usually involved. In several cases, samples were invalidated because the canister vacuum was too high upon receipt. High canister vacuum was usually the result of improper setting of the flow rate by the site operator or failure of the site operator to open the canister valve to collect the sample. In three cases, the sampler was not operating properly at the scheduled time of

TABLE 4-26. 1989 UATMP COMPOUND IDENTIFICATION CONFIRMATION[a]

| GC/MD vs. GC/MS Comparison | Cases | Percentage |
|---|---|---|
| Positive GC/MD - Positive GC/MS | 513 | 27.43 |
| Positive GC/MD - Negative GC/MS | 28 | 1.50 |
| Negative GC/MD - Positive GC/MS | 82 | 4.39 |
| Negative GC/MD - Negative GC/MS | 1247 | 66.68 |
| Total | 1870 | 100.00 |

[a] Total positive compound identification confirmation = 27.43% + 66.68% = 94.11%.

TABLE 4-27. 1989 UATMP COMPLETENESS

| Site Code | No. Sampling Events | Duplicate Pairs | Total Scheduled Canister Samples | Total Valid Canister Samples | Percent Completeness |
|---|---|---|---|---|---|
| BRLA | 31 | 4 | 35 | 35 | 100.0 |
| C4IL | 31 | 4 | 35 | 28 | 80.0 |
| CANJ | 32 | 4 | 36 | 36 | 100.0 |
| DLTX | 31 | 7 | 38 | 29 | 76.3 |
| FLFL | 33 | 4 | 37 | 34 | 91.9 |
| H1TX | 38 | 3 | 41 | 37 | 90.2 |
| MIFL | 33 | 6 | 39 | 39 | 100.0 |
| PEFL | 7 | I | 8 | 8 | 100.0 |
| S2MO | 31 | 3 | 34 | 33 | 97.0 |
| SAIL | 31 | 4 | 35 | 35 | 100.0 |
| W1DC | 31 | 4 | 35 | 31 | 88.6 |
| W2DC | 30 | 4 | 34 | 31 | 91.2 |
| W1KS | 31 | 4 | 35 | 35 | 100.0 |
| W2KS | 37 | 4 | 41 | 34 | 82.9 |
| | | | | Average | 92.7% |

TABLE 4-28. 1989 UATMP INVALIDATED SAMPLES

| Site Code | UATMP ID | Reason for Invalidated Sample |
|---|---|---|
| C4IL | 0714D/0715D | Received at 15.0 in. Hg vacuum |
| C4IL | 0735D/0736D | Improper programming at site |
| C4IL | 0844D/0845D | Received at 27.0 in. Hg vacuum |
| C4IL | 1079 | Canister valve closed during sample collection |
| DLTX | 0818 | Received at 22.8 in. Hg vacuum |
| DLTX | 0834 | Received at 16.2 in. Hg vacuum |
| DLTX | 0849D/0850D | Received at 16.7 in. Hg vacuum |
| DLTX | 0863D/0864D | Sampler malfunctioning - Sent to PPK for repairs |
| DLTX | 1034 | Received at 27.5 in. Hg vacuum |
| DLTX | 1117D/1118D | Received at 15.0 in. Hg vacuum |
| FLFL | 0750D/0751D | Received at 11.3 in. Hg vacuum |
| FLFL | 0785 | Received at 27.8 in. Hg vacuum |
| H1TX | 0861 | Received at 21.0 in. Hg vacuum |
| H1TX | 0906 | Received at 18.3 in. Hg vacuum |
| H1TX | 0919 | Received at 12.1 in. Hg vacuum |
| H1TX | 0937 | Received at 14.6 in. Hg vacuum |
| S2MO | 0775 | Received at 26.6 in. Hg vacuum |
| W1DC | 0728 | Sample ran for 59.1 hours |
| W1DC | 0913 | Received at 13.8 in. Hg vacuum |
| W1DC | 1109 | No sample taken due to a water pipe break |
| W1DC | 1124 | No sample taken due to a water pipe break |
| W2DC | 0684 | Received at 0.3 psig |
| W2DC | 0803 | Received at 12.5 in. Hg vacuum |
| W2DC | 0912 | Sampler malfunctioning - Sent to PPK for repairs |
| W2KS | 0823 | Received at 24.1 in. Hg vacuum |
| W2KS | 0870 | Received at 15.9 in. Hg vacuum |
| W2KS | 0885D/0886D | Received at 26.7 in. Hg vacuum |
| W2KS | 0929 | Received at 20.2 in. Hg vacuum |
| W2KS | 0941 | Sampler malfunctioning - Sent to PPK for repairs |
| W2KS | 0967 | Site inoperational |

collection. Additional samplers were provided as needed to enable the sites to continue sampling.

## 4.6 CALIBRATION RESULTS

Summary results for daily calibration of the three detectors in the GC/MD system are given in Tables 4-29, 4-30, and 4-31. The daily calibration factors for the FID, PID, and ECD are given in the three tables in units of ppbv per area count (a.c). Minima, maxima, means, standard deviations, and% CV are given by compound. Overall average % CV are shown for each detector also. Daily calibration factors are used to ensure that the analytical calibration remains stable throughout the year. Calibration checks at 5 ppbv were analyzed daily for each target compound. The calibration checks produced response factors for each compound and cumulative means, standard deviations, and % CV's. Any compound whose cumulative mean, standard deviation, and/or % CV changed more than about 2.0% in a single day could be identified by comparison to the previous cumulative values. Such an occurrence would signal an error in the calibration or malfunction of a detector or other part of the GC/MD system. No such occurrence was noted in the 1989 UATMP.

The average % CV for all compounds for the FID was 17.03, whereas the average % CV for the PID and the ECD were over twice the FID value, at 35.06 and 36.55, respectively. The average % CV for the ECD calibration factors was calculated both including and excluding the 1,2-dichloropropane value. The % CV of 157.59 for 1,2-dichloropropane was much higher than the % CV values for the other compounds. This high % CV was due to the low response of 1,2-dichloropropane on the ECD. This compound is quantitated from the FID, so the high variation in the ECD response factor has no effect on the quantitated amounts reported in samples. For 1,2-dichloropropane, the ECD response was used only for compound identification and not for quantitation.

## 4.7 CANISTER PRESSURE

Monitoring canister pressures is an important aspect of quality assurance in any program involving ambient air sampling. The driving force for collecting a sample is the initial vacuum in the canister. The canister is cleaned and evacuated before being shipped under vacuum to a site. Once the canister is connected to the sampling system, the canister valve is

TABLE 4-29. 1989 UATMP CALIBRATION DATA FOR FLAME IONIZATION DETECTOR

| Compound | Calibration Factor, ppbv/a.c. Minimum | Maximum | Mean | Standard Deviation ppbv/a.c. | % CV |
|---|---|---|---|---|---|
| 1,1,1-Trichlorethane | 3.70E-05 | 5.80E-05 | 4.45E-05 | 3.53E-06 | 7.93 |
| 1,1,2,2-Tetrachloroethane | 3.21E-05 | 1.32E-04 | 7.05E-05 | 2.47E-05 | 35.01 |
| 1,1,2-Trichlorethane | 1.99E-05 | 6.82E-05 | 3.93E-05 | 7.92E-06 | 20.12 |
| 1,1-Dichloroethane | 3.80E-05 | 5.99E-05 | 4.64E-05 | 4.91E-06 | 10.59 |
| 1,2-Dichloroethane | 3.71E-05 | 8.02E-05 | 4.71E-05 | 4.98E-06 | 10.57 |
| 1,2-Dichloropropane | 2.38E-05 | 4.15E-05 | 3.28E-05 | 2.92E-06 | 8.91 |
| 1,3-Butadiene | 1.89E-05 | 4.53E-05 | 3.10E-05 | 6.19E-06 | 19.95 |
| Acetylene | 3.74E-05 | 2.54E-04 | 7.04E-05 | 2.56E-05 | 36.42 |
| Bromochloromethane | 7.03E-05 | 1.24E-04 | 9.13E-05 | 8.61E-06 | 9.43 |
| Bromodichloromethane | 5.15E-05 | 1.51E-04 | 1.14E-04 | 1.46E-05 | 12.76 |
| Benzene | 9.71E-06 | 1.91E-05 | 1.51E-05 | 1.35E-06 | 8.93 |
| Bromoform | 3.81E-05 | 2.02E-04 | 1.01E-04 | 4.14E-05 | 40.98 |
| Bromomethane | 5.34E-05 | 1.26E-04 | 8.48E-05 | 1.06E-05 | 12.55 |
| Carbon tetrachloride | 9.29E-05 | 1.64E-04 | 1.13E-04 | 1.23E-05 | 10.90 |
| Chlorobenzene | 1.43E-05 | 3.05E-05 | 2.24E-05 | 4.47E-06 | 19.99 |
| Chloroethane | 4.12E-05 | 1.21E-04 | 5.02E-05 | 8.15E-06 | 16.24 |
| Chloroform | 1.00E-04 | 1.89E-04 | 1.24E-04 | 1.47E-05 | 11.91 |
| Chloromethane | 2.55E-05 | 1.50E-04 | 9.20E-05 | 2.45E-05 | 26.64 |
| Chloroprene | 3.23E-05 | 7.58E-05 | 4.81E-05 | 8.03E-06 | 16.70 |
| cis-1,3-Dichloropropylene | 2.97E-05 | 6.86E-05 | 4.86E-05 | 7.15E-06 | 14.71 |
| Dibromochloromethane | 5.03E-05 | 1.86E-04 | 1.11E-04 | 2.55E-05 | 22.93 |
| Ethylbenzene | 8.72E-06 | 1.73E-05 | 1.19E-05 | 1.74E-06 | 14.62 |
| m,p-Xylene | 1.57E-05 | 2.49E-05 | 1.98E-05 | 2.03E-06 | 10.24 |
| Methylene chloride | 9.08E-05 | 1.49E-04 | 1.08E-04 | 1.00E-05 | 9.25 |
| m-Dichlorobenzene | 1.18E-05 | 1.97E-05 | 1.56E-05 | 1.45E-06 | 9.32 |
| n-Octane | 1.39E-05 | 3.54E-05 | 1.95E-05 | 3.75E-06 | 19.24 |
| n-Octane/t-1,3-dichloropropylene | 1.46E-05 | 3.26E-05 | 2.49E-05 | 4.57E-06 | 18.36 |
| o-Dichlorobenzene | 1.59E-05 | 2.42E-05 | 1.92E-05 | 1.79E-06 | 9.34 |
| Propylene | 2.88E-05 | 1.94E-04 | 4.32E-05 | 1.37E-05 | 31.70 |
| p-Dichlorobenzene | 1.87E-05 | 3.67E-05 | 2.69E-05 | 3.25E-06 | 12.07 |
| Styrene/o-xylene | 1.21E-05 | 2.41E-05 | 1.72E-05 | 2.86E-06 | 16.68 |
| Tetrachloroethylene | 1.66E-05 | 6.45E-05 | 4.29E-05 | 1.21E-05 | 28.24 |
| Toluene | 1.04E-05 | 1.85E-05 | 1.41E-05 | 1.28E-06 | 9.09 |
| Trichloroethylene | 3.11E-05 | 6.90E-05 | 5.03E-05 | 6.77E-06 | 13.46 |
| trans-1,2-Dichloroethylene | 3.55E-05 | 6.66E-05 | 4.80E-05 | 5.57E-06 | 11.60 |
| trans-1,3-Dichloropropylene | 2.05E-05 | 9.77E-05 | 5.57E-05 | 1.58E-05 | 28.33 |
| Vinyl chloride | 4.18E-05 | 7.68E-05 | 5.70E-05 | 8.31E-06 | 14.58 |
| | | | | Average | 17.03 |

TABLE 4-30. 1989 UATMP CALIBRATION DATA FOR PHOTOIONIZATION DETECTOR

| Compound | Calibration Factor, ppbv/a.c. Minimum | Maximum | Mean | Standard Deviation ppbv/a.c. | % CV |
|---|---|---|---|---|---|
| 1,3-Butadiene | 2.31E-05 | 1.07E-04 | 4.45E-05 | 1.53E-05 | 34.28 |
| Benzene | 2.05E-05 | 6.64E-05 | 3.30E-05 | 9.00E-06 | 27.27 |
| cis-1,3-Dichloropropylene | 2.28E-05 | 5.83E-04 | 1.74E-04 | 1.15E-04 | 66.30 |
| Chlorobenzene | 1.14E-05 | 4.34E-05 | 2.27E-05 | 6.36E-06 | 28.04 |
| Chloroprene | 3.43E-05 | 9.85E-05 | 5.12E-05 | 1.24E-05 | 24.30 |
| Ethylbenzene | 9.30E-06 | 3.98E-05 | 1.90E-05 | 5.86E-06 | 30.80 |
| m,p-Xylene | 1.37E-05 | 5.85E-05 | 2.83E-05 | 8.93E-06 | 31.51 |
| m-Dichlorobenzene | 1.05E-06 | 2.84E-05 | 1.28E-05 | 4.49E-06 | 35.16 |
| n-Octane/t-1,3-dichloropropylene | 5.00E-05 | 1.37E-04 | 8.82E-05 | 2.17E-05 | 24.59 |
| n-Octane | 9.25E-05 | 1.27E-03 | 3.25E-04 | 2.16E-04 | 66.34 |
| o-Dichlorobenzene | 1.01E-05 | 4.18E-05 | 1.87E-05 | 6.41E-06 | 34.20 |
| p-Dichlorobenzene | 1.22E-05 | 5.51E-05 | 2.37E-05 | 8.53E-06 | 36.06 |
| Propylene | 4.68E-05 | 2.30E-04 | 8.58E-05 | 3.02E-05 | 35.20 |
| Styrene/o-xylene | 1.28E-05 | 6.45E-05 | 2.39E-05 | 7.48E-06 | 31.25 |
| trans-1,2-Dichloroethylene | 1.75E-05 | 5.67E-05 | 2.73E-05 | 7.60E-06 | 27.88 |
| trans-1,3-Dichloropropylene | 4.50E-05 | 2.47E-04 | 1.07E-04 | 4.99E-05 | 46.67 |
| Tetrachloroethylene | 1.44E-05 | 5.32E-05 | 2.77E-05 | 7.88E-06 | 28.45 |
| Toluene | 1.40E-05 | 5.37E-05 | 2.42E-05 | 7.71E-06 | 31.87 |
| Trichloroethylene | 2.96E-05 | 1.03E-04 | 4.82E-05 | 1.32E-05 | 27.36 |
| Vinyl chloride | 9.87E-05 | 4.73E-04 | 1.90E-04 | 6.22E-05 | 32.68 |
| | | | | Average | 35.06 |

TABLE 4-31. 1989 UATMP CALIBRATION DATA FOR ELECTRON CAPTURE DETECTOR

| Compound | Calibration Factor, ppbv/a.c. Minimum | Maximum | Mean | Standard Deviation ppbv/a.c. | % CV |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 3.74E-06 | 1.21E-05 | 6.15E-06 | 2.09E-06 | 34.04 |
| 1,1,2,2-Tetrachloroethane | 2.22E-06 | 1.56E-05 | 6.00E-06 | 3.12E-06 | 52.00 |
| 1,1,2-Trichloroethane | 2.02E-05 | 1.64E-04 | 7.63E-05 | 2.69E-05 | 35.30 |
| 1,2-Dichloropropane | 7.13E-05 | 6.29E-03 | 4.11E-04 | 6.48E-04 | 157.59 |
| Bromochloromethane | 1.03E-05 | 3.09E-05 | 1.62E-05 | 5.20E-06 | 32.16 |
| Bromodichloromethane | 1.02E-06 | 6.01E-06 | 3.03E-06 | 9.73E-07 | 32.11 |
| Bromoform | 6.54E-07 | 6.06E-06 | 2.59E-06 | 1.25E-06 | 48.08 |
| Bromomethane | 6.51E-05 | 3.51E-04 | 1.42E-04 | 5.61E-05 | 39.58 |
| cis-1,3-Dichloropropylene | 9.02E-06 | 8.35E-05 | 4.52E-05 | 1.37E-05 | 30.39 |
| Carbon tetrachloride | 2.52E-07 | 3.22E-06 | 1.54E-06 | 5.54E-07 | 36.05 |
| Chloroform | 1.33E-05 | 3.94E-05 | 2.13E-05 | 6.50E-06 | 30.45 |
| Dibromochloromethane | 2.56E-07 | 4.21E-06 | 1.98E-06 | 7.71E-07 | 39.06 |
| m-Dichlorobenzene | 4.20E-05 | 1.91E-04 | 9.15E-05 | 3.59E-05 | 39.21 |
| Methylene chloride | 9.74E-05 | 8.37E-04 | 3.33E-04 | 1.18E-04 | 35.50 |
| o-Dichlorobenzene | 6.34E-05 | 2.72E-04 | 1.23E-04 | 4.99E-05 | 40.68 |
| p-Dichlorobenzene | 1.97E-04 | 7.92E-04 | 3.76E-04 | 1.45E-04 | 38.64 |
| trans-1,3-Dichloropropylene | 1.01E-05 | 1.43E-04 | 8.41E-05 | 2.08E-05 | 24.71 |
| Tetrachloroethylene | 7.92E-08 | 4.57E-06 | 2.17E-06 | 6.76E-07 | 31.19 |
| Trichloroethylene | 8.05E-06 | 2.97E-05 | 1.49E-05 | 5.78E-06 | 38.81 |
| | | | | Average (n=19) | 42.92 |
| | | | | Average (n=18) | 36.55[a] |

[a] Average does not include the % CV for 1,2-dichloropropane.

opened. The UATMP sampler controls when the sample is allowed to enter the canister, the length of time the sample is taken, and the flow rate of air into the canister. The final sampling pressure is important. Ideally, the flow rate is maintained at a constant value throughout the sampling interval of 24 hours so that an integrated sample is taken. An integrated sample represents the integrated average concentration for the sampling period. To permit the flow controller in the sampler to maintain a constant flow rate throughout the sampling period, a pressure drop of at least 0.5 in. Hg must be maintained. Therefore, the final pressure in the canister must be negative, relative to atmospheric pressure, i.e., it must still be under a slight vacuum.

On the other hand, if the final vacuum in the canister is too high, it is difficult to take a sufficient amount of the sample from the canister for analysis. The UATMP sampler was designed to have about 3 to 6 in. Hg vacuum after the 24-hour sampling period. Sixty-seven percent of the invalidated samples in the 1989 UATMP resulted from too high a vacuum. The voided samples are listed in Table 4-28, along with the reasons they were invalidated.

Table 4-32 summarizes the canister pressures measured after receipt in the RTP laboratory. The overall average pressure measured for all the canisters from all the sites was 5.24 in. Hg vacuum. The pressure ranges and distribution are shown in Table 4-32. The third column of the table gives the cumulative number of cases and the fourth column normalizes the number of cases into cumulative percentages. For example, the results show that 9.13% of the canisters had pressures greater than 10-in. Hg vacuum at the time of analysis. Upon receipt in the laboratory after sampling, the canisters typically had at least 18 hours of equilibration time to completely come to laboratory temperature before measuring the gauge pressure (inches Hg vacuum) prior to analysis.

No site had more than four samples invalidated because of vacuum that was too high upon receipt at the laboratory. The analyst notified the Radian site coordinator when a canister was received with an initial vacuum greater than 10 in. Hg so that appropriate corrective action could be taken.

TABLE 4-32. 1989 UATMP CANISTER PRESSURES AFTER SAMPLING

| Analysis Pressure in. Hg Vacuum | Cases | Cumulative Cases | Cumulative Percent |
|---|---|---|---|
| <20.0 | 9 | 9 | 1.87 |
| 18.0-18.99 | 1 | 10 | 2.07 |
| 17.0-17.99 | 0 | 10 | 2.07 |
| 16.0-16.99 | 2 | 12 | 2.49 |
| 15.0-15.99 | 4 | 16 | 3.32 |
| 14.0-14.99 | 1 | 17 | 3.53 |
| 13.0-13.99 | 1 | 18 | 3.73 |
| 12.0-12.99 | 6 | 24 | 4.98 |
| 11.0-11.99 | 8 | 32 | 6.64 |
| 10.0-10.99 | 12 | 44 | 9.13 |
| 9.0- 9.99 | 21 | 65 | 13.49 |
| 8.0- 8.99 | 31 | 96 | 19.92 |
| 7.0- 7.99 | 38 | 134 | 27.80 |
| 6.0- 6.99 | 40 | 174 | 36.10 |
| 5.0- 5.99 | 42 | 216 | 44.81 |
| 4.0- 4.99 | 50 | 266 | 55.19 |
| 3.0- 3.99 | 38 | 304 | 63.07 |
| 2.0- 2.99 | 47 | 351 | 72.82 |
| 1.0- 1.99 | 102 | 453 | 93.98 |
| 0.0- 0.99 | 29 | 482 | 100.00 |
| Total | 482 | | |

# 5.0 DISCUSSION

Three aspects of data characterization are discussed in this section: data frequency, concentration correlations, and concentration ratios for the most frequently identified compounds.

Data frequency distributions are given for the concentrations of the most commonly identified compounds in the 1989 UATMP. These compounds were 1,1,1-trichloroethane, carbon tetrachloride, benzene, toluene, ethylbenzene, m,p-xylene, and styrene/o-xylene. In all cases the frequency distributions approximate the lognormal distribution.

The second aspect of the results of the 1989 UATMP is the correlation between concentrations of the most frequently identified compounds listed above. Strong correlations were almost universally observed between: (1) m,p-xylene and styrene/o-xylene, (2) ethylbenzene and styrene/o-xylene, and (3) ethylbenzene and m,p-xylene. Correlations involving the above components with benzene or toluene were not consistent and were site specific. Site locations in airsheds having several petrochemical facilities, such as H1TX and SAIL, showed little correlation of benzene concentrations with any of the other six compounds listed. This may be due to independent benzene emission sources in the area not involving steady-state and/or photochemical sources of benzene and toluene. There was no correlation between carbon tetrachloride and 1,1,1-trichloroethane, and carbon tetrachloride appeared to be independent of all the other compounds mentioned above.

Thirdly, the ratios of benzene, toluene, m,p-xylene, and styrene/o-xylene to ethylbenzene were calculated. This provides a reference for comparison to other databases that also include this ratio.

## 5.1 CONCENTRATION DISTRIBUTIONS

Figures 5-1 through 5-7 are stem-and-leaf plots of the concentrations of 1,1,1-trichloroethane, carbon tetrachloride, toluene, styrene/o-xylene, m,p-xylene, ethylbenzene, and benzene, respectively. In addition to the stem-and-leaf plot, each of the other statistics are tabulated in each figure, including: the number of cases of identifications, minimum, maximum, mean, standard deviation, lower hinge (25th percentile), median (50th percentile), and upper hinge (75th percentile).

```
  1    789
  2    00000 11112 22222 22233 33333 44444 55555 56666 66666 67777 77888 88888 99999 999
  3 H  00000 00011 11111 12222 22333 33333 34444 55555 55556 66666 67777 77777 88888 88888 99999
  4    00000 01111 22222 23333 33445 55556 66777 77777 77788 89999 9
  5 M  00001 22233 34445 55566 66666 88899 9
  6    00111 22222 23333 33444 55556 66677 78889 99
  7    00012 22333 44556 66778 9999
  8 H  01222 24577 899
  9    00111 22235 66777 8
 10    00123 46777 89
 11    24458 8
 12    14578
 13    14447 8
 14    8
 15    788
 16    67889
 17    234
 18    6
 19    14
 20    03366 78
 21    9
 22    6
 25    0
 26    027
 28    077
 37    7
 45    3
 48    6
 50    2
 52    0
 53    0
 62    8
 64    5
 73    6
 87    0
 96    0
101    9
102    1
117    9
157    8
215    2
655    7
```

| 1,1,1-Trichloroethane, ppbv | |
|---|---|
| Cases | 395 |
| Mean | 1.143 |
| Standard Deviation | 3.752 |
| Minimum | 0.[illegible]8 |
| Lower Hinge (H) 25th percentile | 0 [illegible] |
| Median (M) 50th percentile | 0 [illegible] |
| Upper Hinge (H) 75th percentile | 0. [illegible] |
| Maximum | 65. |

Figure 5-1. Stem-and-leaf plot of 1,1,1-trichloroethane concentrations.

```
 10   9
 11   7789
 12   00001 11222 33333 44444 55555 55666 66666 67777 88888 88889 99999 9
 13 H 00000 11111 22222 22233 33333 34444 44445 55556 66777 77777 77788 88888 88889 99999 9999
 14 M 00001 11111 22222 33333 33344 44444 44455 55556 66666 66666 67777 77888 88889 99999 99
 15   00000 11111 22222 22223 34445 55555 55666 77777 78888 88899
 16   00000 00111 22334 44455 66678 8
 17 H 00002 34555 689
 18   00222 23566 88899
 19   01122 388
 20   0027
 21   02333 5
 22   12248 8
 23   1478
 24   12
 25   1458
 26   01378 9
 27   01568 9
 28   36999
 29   12
 31   0
 33   012
 34   13
 35   2356
 36   7
 40   08
 41   66
 45   569
 46   02
 48   67
 52   3
 54   45
 59   9
 83   0
113   0
162   1
178   1
```

| Carbon tetrachloride, ppbv | |
|---|---|
| Cases | 395 |
| Mean | 0.188 |
| Standard Deviation | 0.145 |
| Minimum | 0.109 |
| Lower Hinge (H) 25th percentile | 0.135 |
| Median (M) 50th percentile | 0.148 |
| Upper Hinge (H) 75th percentile | 0.179 |
| Maximum | 1.781 |

Figure 5-2. Stem-and-leaf plot of carbon tetrachloride concentrations.

```
  0    02222 33344 444
  0    55555 55556 66666 66677 77788 88888 88888 89999
  1 H  00000 00000 01111 11111 22222 22222 23333 33444 44444 444
  1    55555 55555 55666 66666 67777 77777 77788 88889 99999 9
  2    00000 00000 01111 11222 22222 22222 33333 33333 33444 44444
  2 M  55555 55555 66666 67777 78888 88889 99999
  3    00000 11111 12222 33333 33333 33333 44444 444
  3    55555 66777 78889 99
  4 H  00000 01111 22222 23334 444
  4    67778 88888 99
  5    11222 23444 44
  5    55577 8999
  6    23334
  6    57799 9
  7    3
  7    77889
  8    02
  8    4448
  9    23677 8
 10    057
 11    13
 12    1169
 13    4
 15    89
 17    8
 18    146
 20    7
 21    8
 22    3
 31    9
 35    3
 41    6
 47    0
 86    2
217    8
```

**Toluene, ppbv**

| | |
|---|---|
| Cases | 397 |
| Mean | 4.564 |
| Standard Deviation | 12.518 |
| Minimum | 0.080 |
| Lower Hinge (H) 25th percentile | 1.460 |
| Median (M) 50th percentile | 2.500 |
| Upper Hinge (H) 75th percentile | 4.240 |
| Maximum | 217.890 |

Figure 5-3. Stem-and-leaf plot of toluene concentrations.

```
  0   34566 7889
  1   11112 22344 46666 67888 88888 99999
  2   00122 23333 44444 45555 55555 55667 77778 88888 88999 99
  3 H 00011 22234 44445 55666 77888 999
  4   00122 22333 33334 44444 45555 55666 67888 889
  5   00001 12222 22233 33455 56677 788
  6 M 01222 33344 45567 77788 889
  7   00001 11122 22233 34566 67777 88899 9
  8   00222 24444 45577 77888 99
  9   00014 44444 5779
 10   12244 44445 66778 888
 11 H 00123 33444 56667 99
 12   02238
 13   036
 14   23456 78899
 15   00224
 16   00233 3566
 17   023
 18   25667 7
 19   22278
 20   0
 21   0068
 22   27
 23   22
 23   6
 24   4449
 26   024
 27   025
 28   8
 32   22
 33   35
 34   3
 37   00
 38   6
 39   06
 40   1
 42   3
 44   0
 46   1
 48   8
 51   8
 56   0
 58   05
 72   6
 73   3
 79   0
 99   1
143   6
166   1
```

**Styrene/o-xylene, ppbv**

| | |
|---|---|
| Cases | 397 |
| Mean | 1.090 |
| Standard Deviation | 1.580 |
| Minimum | 0.030 |
| Lower Hinge (H) 25th percentile | 0.340 |
| Median (M) 50th percentile | 0.680 |
| Upper Hinge (H) 75th percentile | 1.140 |
| Maximum | 16.610 |

Figure 5-4. Stem-and-leaf plot of styrene/o-xylene concentrations.

```
 0   01112 22223 33333 33444 44444
 0   55555 55555 56666 66666 67777 77777 77777 77777 88888 88888 99999 99999 99999 99
 1 H 00000 00000 00000 00011 11111 22222 22222 22222 23[illegible]
 1 M 55555 55556 66666 66666 66667 77777 77778 88888 88999 99999 9999
 2   00000 01111 11222 22333 33334 44444 4444
 2   55555 55556 66666 66677 77777 88888 88888 89999 99
 3 H 00001 11111 12223 33334 4444
 3   55555 66666 77788 899
 4   00022 23334 4
 4   56666 77888 89
 5   01124
 5   57778
 6   22333 44
 6   6677
 6   8
 7   0099
 8   66
 9   3567
10   2
11   567
12   1
13   0
14   004
15   2
17   8
20   8
22   38
25   489
30   2
50   5
```

**m,p-Xylene, ppbv**

| | |
|---|---|
| Cases | 397 |
| Mean | 3.159 |
| Standard Deviation | 4.563 |
| Minimum | 0.090 |
| Lower Hinge (H) 25th percentile | 1.030 |
| Median (M) 50th percentile | 1.950 |
| Upper Hinge (H) 75th percentile | 3.350 |
| Maximum | 50.500 |

Figure 5-5. Stem-and-leaf plot of m,p-xylene concentrations.

```
 0    2234
 0    55566 66777 77888 88899
 1    00000 01111 11111 22222 22222 33333 44444 4444
 1    55555 56666 66677 77778 88888 99999 99999
 2 H  00000 00111 11222 22222 22233 33333 33444 4
 2    55555 66777 77788 88888 88999 9999
 3    00000 00000 11122 22222 33333 33444 4444
 3 M  56666 67777 79999
 4    00000 01111 12222 23334 4444
 4    55555 66666 77778 888
 5    00000 01122 22222 23344 44
 5    55556 66667 78889 9999
 6 H  00111 22223 33333 3444
 6    66678 88888 99
 7    00000 2234
 7    5788
 8    013
 8    55588
 9    01144
 9    55789
10    013
10    89
11    02
11    69
12    01
12    7
13    68
14    128
15    0
16    12
19    24
20    77
22    4
23    4
24    5
25    227
26    08
28    5
29    4
32    4
48    33
53    4
87    4
97    7
```

| Ethylbenzene, ppbv | |
|---|---|
| Cases | 397 |
| Mean | 0.570 |
| Standard Deviation | 0.884 |
| Minimum | 0.020 |
| Lower Hinge (H) 25th percentile | 0.200 |
| Median (M) 50th percentile | 0.360 |
| Upper Hinge (H) 75th percentile | 0.610 |
| Maximum | 9.770 |

Figure 5-6. Stem-and-leaf plot of ethylbenzene concentrations.

```
 0    00
 0    22233 3333
 0    44444 44444 45555 55555 55555 555
 0    66666 66666 66666 66666 66666 66667 77777 77777 77777 77777 7
 0 H  88888 88888 88888 88999 99999 99999 99999 9999
 1    00000 00000 00000 00000 01111 11111 11111 111
 1 M  22222 22222 22222 22333 33333 33333 3333
 1    44444 44444 44444 55555 55555 5555
 1    66666 66666 66666 77777 77777 77
 1    88888 88888 89999 99999 999
 2 H  00000 00000 01111 11111 111
 2    22333 33333
 2    44444 5555
 2    66666 77777 77
 2    88889 99
 3    00111 1
 3    22233 333
 3    44555
 3    666
 3    889
 4    11357 79
 5    02259
 6    0248
 7    11578 9
 8    29
 9    67
10    5
11    5
12    24
27    6
```

**Benzene, ppbv**

| | |
|---|---|
| Cases | 397 |
| Mean | 1.967 |
| Standard Deviation | 2.227 |
| Minimum | 0.050 |
| Lower Hinge (H) 25th percentile | 0.840 |
| Median (M) 50th percentile | 1.380 |
| Upper Hinge (H) 75th percentile | 2.140 |
| Maximum | 660 |

Figure 5-7. Stem-and-leaf plot of benzene concentrations.

The stem-and-leaf plots show the actual concentrations truncated to two or three decimal points. The digits to the left of the vertical column of open space are called stems and the digits to the right of the column of open space are called leaves. The data are sorted from the smallest at the top of the graph, to the largest at the bottom of the graph. Figure 5-1, for example, shows the minimum to be 0.178 ppbv, which accounts for the "1  7" on the first stem and leaf at the top of the plot, "1  789". The maximum concentration is shown to be 65.57, which accounts for the "655  7" for the last stem-and-leaf at the bottom of the graph. The plot shows 395 leaves, one for each measured concentration of 1,1,1-trichloroethane reported for the 1989 UATMP. The "H's" in the open vertical space locate the stem-and-leaf for the lower and upper hinges or quartiles, and the "M" locates the stem-and-leaf for the median. The median separates the sorted concentrations into two equal halves; the hinges (or quartiles) separate each half into quarters.

The stem-and-leaf plots shown for the most frequently occurring target compounds of the 1989 UATMP show skewed distributions and suggest lognormal distributions. In most cases, however, the tails in the fourth quartiles extend longer than would be expected if the data followed the lognormal distribution exactly.

If the lognormal distribution is the appropriate one to describe equilibrium or steady-state concentrations, the long tails in the fourth quartiles suggest a number of "outliers," that is, concentrations that do not fit the expected distribution. Such occurrences probably result from site-specific nonrandom emissions from special sources.

## 5.2 CORRELATION OF COMPOUND CONCENTRATIONS

The correlations between compound concentrations are presented in Pearson correlation matrices for each site in Figures 5-8 through 5-20. A correlation matrix for PEFL was not calculated because there were so few samples analyzed for this site. Correlations were calculated for 1,1,1-trichloroethane, carbon tetrachloride, toluene, styrene/o-xylene, m,p-xylene, ethylbenzene, and benzene.

The concentration data were grouped for each site. For BRLA, as seen in Figure 5-8, there were 31 days in which the concentrations of the seven compounds were recorded. The Pearson correlation matrix tabulates the

| | |
|---|---|
| ppbv1 | 1,1,1-Tric oroethane |
| ppbv2 | Ca n tetrachloride |
| ppbv3 | To ene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | -0.005 | 1.000 | | | | | |
| ppbv3 | 0.558 | 0.199 | 1.000 | | | | |
| ppbv4 | 0.153 | -0.124 | 0.337 | 1.000 | | | |
| ppbv5 | 0.232 | -0.112 | 0.339 | 0.928 | 1.000 | | |
| ppbv6 | 0.127 | -0.027 | 0.273 | 0.665 | 0.791 | 1.000 | |
| ppbv7 | 0.432 | 0.418 | 0.819 | 0.152 | 0.188 | 0.262 | 1.000 |

Number of observations: 31

Figure 5-8. Pearson correlation matrix for BRLA.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.349 | 1.000 | | | | | |
| ppbv3 | -0.122 | -0.170 | 1.000 | | | | |
| ppbv4 | -0.097 | -0.100 | 0.673 | 1.000 | | | |
| ppbv5 | -0.111 | -0.124 | 0.721 | 0.943 | 1.000 | | |
| ppbv6 | -0.118 | -0.162 | 0.695 | 0.981 | 0.966 | 1.000 | |
| ppbv7 | -0.070 | -0.150 | 0.604 | 0.920 | 0.881 | 0.902 | 1.000 |

Number of observations: 27

Figure 5-9. Pearson correlation matrix for C4IL.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.239 | 1.000 | | | | | |
| ppbv3 | 0.731 | -0.194 | 1.000 | | | | |
| ppbv4 | 0.655 | -0.181 | 0.948 | 1.000 | | | |
| ppbv5 | 0.687 | -0.201 | 0.962 | 0.990 | 1.000 | | |
| ppbv6 | 0.682 | -0.183 | 0.959 | 0.991 | 0.992 | 1.000 | |
| ppbv7 | 0.681 | -0.105 | 0.905 | 0.951 | 0.953 | 0.939 | 1.000 |

Number of observations: 32

Figure 5-10. Pearson correlation matrix for CANJ.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.114 | 1.000 | | | | | |
| ppbv3 | 0.537 | -0.192 | 1.000 | | | | |
| ppbv4 | 0.363 | -0.253 | 0.907 | 1.000 | | | |
| ppbv5 | 0.346 | -0.299 | 0.859 | 0.941 | 1.000 | | |
| ppbv6 | 0.406 | -0.332 | 0.782 | 0.878 | 0.938 | 1.000 | |
| ppbv7 | 0.536 | 0.017 | 0.815 | 0.712 | 0.717 | 0.683 | 1.000 |

Number of observations: 25

Figure 5-11. Pearson correlation matrix for DLTX.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | -0.190 | 1.000 | | | | | |
| ppbv3 | 0.444 | -0.362 | 1.000 | | | | |
| ppbv4 | 0.497 | -0.512 | 0.822 | 1.000 | | | |
| ppbv5 | 0.549 | -0.395 | 0.948 | 0.864 | 1.000 | | |
| ppbv6 | 0.557 | -0.467 | 0.947 | 0.929 | 0.976 | 1.000 | |
| ppbv7 | 0.493 | -0.302 | 0.975 | 0.828 | 0.949 | 0.941 | 1.000 |

Number of observations: 30

Figure 5-12. Pearson correlation matrix for FLFL.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.274 | 1.000 | | | | | |
| ppbv3 | 0.400 | 0.101 | 1.000 | | | | |
| ppbv4 | 0.656 | 0.221 | 0.779 | 1.000 | | | |
| ppbv5 | 0.509 | 0.051 | 0.647 | 0.878 | 1.000 | | |
| ppbv6 | 0.413 | 0.159 | 0.552 | 0.792 | 0.672 | 1.000 | |
| ppbv7 | 0.390 | 0.124 | 0.942 | 0.780 | 0.683 | 0.610 | 1.000 |

Number of observations: 34

Figure 5-13. Pearson correlation matrix for H1TX.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.417 | 1.000 | | | | | |
| ppbv3 | 0.263 | -0.048 | 1.000 | | | | |
| ppbv4 | 0.254 | -0.151 | 0.811 | 1.000 | | | |
| ppbv5 | 0.138 | -0.048 | 0.793 | 0.918 | 1.000 | | |
| ppbv6 | 0.081 | -0.217 | 0.804 | 0.955 | 0.940 | 1.000 | |
| ppbv7 | 0.086 | -0.111 | 0.961 | 0.792 | 0.790 | 0.818 | 1.000 |

Number of observations: 32

Figure 5-14. Pearson correlation matrix for MIFL.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.514 | 1.000 | | | | | |
| ppbv3 | 0.852 | 0.499 | 1.000 | | | | |
| ppbv4 | 0.888 | 0.558 | 0.836 | 1.000 | | | |
| ppbv5 | 0.887 | 0.566 | 0.836 | 0.998 | 1.000 | | |
| ppbv6 | 0.883 | 0.569 | 0.840 | 0.999 | 0.999 | 1.000 | |
| ppbv7 | 0.587 | 0.033 | 0.643 | 0.332 | 0.336 | 0.330 | 1.000 |

Number of observations: 30

Figure 5-15. Pearson correlation matrix for S2MO.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.648 | 1.000 | | | | | |
| ppbv3 | 0.966 | 0.628 | 1.000 | | | | |
| ppbv4 | 0.802 | 0.511 | 0.854 | 1.000 | | | |
| ppbv5 | 0.608 | 0.410 | 0.662 | 0.932 | 1.000 | | |
| ppbv6 | 0.803 | 0.540 | 0.852 | 0.975 | 0.939 | 1.000 | |
| ppbv7 | 0.426 | 0.245 | 0.460 | 0.758 | 0.804 | 0.797 | 1.000 |

Number of observations: 31

Figure 5-16. Pearson correlation matrix for SAIL.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.317 | 1.000 | | | | | |
| ppbv3 | 0.667 | -0.217 | 1.000 | | | | |
| ppbv4 | 0.532 | -0.344 | 0.944 | 1.000 | | | |
| ppbv5 | 0.599 | -0.284 | 0.972 | 0.985 | 1.000 | | |
| ppbv6 | 0.584 | -0.311 | 0.944 | 0.988 | 0.984 | 1.000 | |
| ppbv7 | 0.684 | -0.145 | 0.971 | 0.906 | 0.944 | 0.902 | 1.000 |

Number of observations: 27

Figure 5-17. Pearson correlation matrix for W1DC.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | -0.038 | 1.000 | | | | | |
| ppbv3 | 0.299 | -0.278 | 1.000 | | | | |
| ppbv4 | 0.333 | -0.278 | 0.936 | 1.000 | | | |
| ppbv5 | 0.319 | -0.268 | 0.960 | 0.986 | 1.000 | | |
| ppbv6 | 0.342 | -0.300 | 0.952 | 0.984 | 0.990 | 1.000 | |
| ppbv7 | 0.237 | -0.228 | 0.961 | 0.929 | 0.952 | 0.925 | 1.000 |

Number of observations: 27

Figure 5-18. Pearson correlation matrix for W2DC.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.603 | 1.000 | | | | | |
| ppbv3 | 0.473 | 0.652 | 1.000 | | | | |
| ppbv4 | 0.329 | 0.605 | 0.957 | 1.000 | | | |
| ppbv5 | 0.454 | 0.654 | 0.995 | 0.967 | 1.000 | | |
| ppbv6 | 0.423 | 0.634 | 0.987 | 0.981 | 0.992 | 1.000 | |
| ppbv7 | 0.522 | 0.730 | 0.962 | 0.925 | 0.965 | 0.959 | 1.000 |

Number of observations: 31

Figure 5-19. Pearson correlation matrix for W1KS.

| | |
|---|---|
| ppbv1 | 1,1,1-Trichloroethane |
| ppbv2 | Carbon tetrachloride |
| ppbv3 | Toluene |
| ppbv4 | Styrene/o-xylene |
| ppbv5 | m,p-Xylene |
| ppbv6 | Ethylbenzene |
| ppbv7 | Benzene |

| | ppbv1 | ppbv2 | ppbv3 | ppbv4 | ppbv5 | ppbv6 | ppbv7 |
|---|---|---|---|---|---|---|---|
| ppbv1 | 1.000 | | | | | | |
| ppbv2 | 0.270 | 1.000 | | | | | |
| ppbv3 | 0.137 | 0.144 | 1.000 | | | | |
| ppbv4 | 0.228 | 0.052 | 0.804 | 1.000 | | | |
| ppbv5 | 0.162 | 0.162 | 0.972 | 0.854 | 1.000 | | |
| ppbv6 | 0.120 | 0.137 | 0.963 | 0.839 | 0.993 | 1.000 | |
| ppbv7 | 0.158 | 0.263 | 0.947 | 0.787 | 0.965 | 0.958 | 1.000 |

Number of observations: 31

Figure 5-20. Pearson correlation matrix for W2KS.

correlation coefficient for each possible pair of compounds. The only pair of compounds that shows a significant correlation in BRLA is m/p-xylene and styrene/o-xylene, which show a correlation coefficient of 0.928 in Figure 5-8.

The UATMP site at CANJ (Figure 5-10), on the other hand, shows strong correlations (coefficients of correlation >0.9) for toluene, styrene/o-xylene, m/p-xylene, and ethylbenzene with all the aromatic hydrocarbons correlated. The chlorinated compounds, 1,1,1-trichloroethane and carbon tetrachloride, however, showed little correlation with any of the other compounds tested.

Curiously, at SAIL (Figure 5-16) the correlation coefficient for the 1,1,1-trichloroethane-toluene paired data showed a coefficient of correlation of 0.966. For the other sites, the same compound pair showed correlation coefficients of 0.588, -0.22, 0.731, 0.537, 0.444, 0.263, 0.852, 0.667, 0.299, 0.473, and 0.137, respectively. There must be a special site-specific reason at SAIL why the 1,1,1-trichloroethane-toluene correlation is as high as it is.

Any number in the triangular matrices in Figures 5-8 through 5-20 is a coefficient of correlation. For the correlation to be significant the coefficient should be >0.850 and preferably >0.900.

The Pearson correlation matrices within a city are similar, e.g., between W1DC and W2DC, or W1KS and W2KS. For example, examination of the correlations between ppbv3, ppbv4, ppbv5, ppbv6, and ppbv7 for W1DC and W2DC (Figures 5-17 and 5-18) are almost identical, and all are above 0.9. Similarly, the correlations between ppbv2 (carbon tetrachloride) and all the other compounds for W1DC and W2DC are all negative and greater than -0.35. For ppbv1 (1,1,1-trichloroethane) and all the other compounds shown in Figures 5-17 and 5-18, the correlation coefficients are all positive and greater than 0.237, with the exception of carbon tetrachloride at W2DC. It is interesting to note that for ppbv1, the vertical column of correlation coefficients for W1DC range from 0.317 to 0.684, although at W2DC the same column ranges from -0.038 to 0.342 with little overlap in the ranges between the sites.

The Pearson correlation matrices for the Kansas City, KS, sites W1KS and W2KS also show similarities with each other and some striking differences. Correlations between ppbv3 through ppbv7 are also strong between the two Kansas City sites but range from 0.804 to 0.995. At W1KS (Figure 5-19),

correlation coefficients for ppbv1 and ppbv2 range from 0.329 to 0.730, although for W2KS (Figure 5-20), the same coefficients range from 0.052 to 0.270 with no overlap in the ranges. All coefficients at these two sites are positive.

Although the Pearson correlation matrices for the seven compounds show many similarities, each is site specific. After the 1990 UATMP season, it will be possible to determine how the site-specific correlation matrices change with seasons and years.

As mentioned earlier, concentration correlations were most frequently observed for m,p-xylene and styrene/o-xylene, ethylbenzene and m,p-xylene, and ethylbenzene and styrene/o-xylene. These correlations were observed specifically in C4IL, DLTX, FLFL, S2MO, SAIL, W1DC, and W1KS data. Other observed correlations were between benzene and toluene in CANJ, FLFL, H1TX, MIFL, W1DC, and W1KS results. Carbon tetrachloride and 1,1,1-trichloroethane did not correlate with each other or any other compound concentrations for any of the sites. A lack of correlation between benzene and toluene was observed for BRLA, C4IL, S2MO, and SAIL.

The graphs in Appendix C depict correlation, and lack of correlation, between 1,1,1-trichloroethane and carbon tetrachloride concentrations for all sites (Figures C-1 through C-14). Figures C-15 through C-28 show the correlation of concentrations for benzene, toluene, ethylbenzene, m,p-xylene, and styrene/o-xylene for all sites. Comparisons of concentrations for these compounds are also given for W1DC and W2DC, and for W1KS and W2KS, in Figures C-29 through C-42.

## 5.3 RATIOS OF COMPOUND CONCENTRATIONS

The ratios for benzene, toluene, and the total xylenes to ethylbenzene are shown by site and overall in Table 5-1. The ratios of concentrations among benzene, toluene, and the total xylenes were chosen with respect to ethylbenzene because these compounds are almost universally found in urban ambient air samples, and because the concentration of ethylbenzene is generally lower than the other compounds. Moreover other studies have examined the same ratios found in other data sets, e.g., the TAMS and the National Ambient Volatile Organic Compound Data Base.[5]

TABLE 5-1. 1989 UATMP RATIOS FOR BENZENE, TOLUENE, AND XYLENES TO ETHYLBENZENE

| Site | Benzene:Ethylbenzene | Toluene:Ethylbenzene | Xylenes:Ethylbenzene[a] |
|---|---|---|---|
| BRLA | 5.11 | 5.82 | 6.59 |
| C4IL | 3.51 | 7.40 | 7.89 |
| CANJ | 4.76 | 10.10 | 7.68 |
| DLTX | 5.42 | 9.07 | 7.59 |
| FLFL | 3.08 | 8.36 | 8.93 |
| H1TX | 6.34 | 7.76 | 7.56 |
| MIFL | 2.74 | 8.95 | 8.37 |
| PEFL | 5.32 | 8.75 | 7.50 |
| S2MO | 5.13 | 6.91 | 7.75 |
| SAIL | 4.30 | 7.86 | 6.85 |
| W1DC | 4.59 | 8.53 | 7.23 |
| W2DC | 3.30 | 7.63 | 7.17 |
| W1KS | 5.01 | 7.02 | 7.45 |
| W2KS | 5.11 | 7.29 | 7.30 |
| OVERALL | 4.52 | 7.91 | 7.57 |

[a]Includes m-, o-, p-xylene and styrene in ratio. Styrene and o-xylene coelute so that when styrene is present, it is also included in the "xylene" concentration.

Each compound ratio in Table 5-1 was calculated for each identification case in each sample, then the average of these ratios was determined. The overall average ratio of benzene to ethylbenzene was 4.52, 7.91 for toluene to ethylbenzene, and 7.57 for the total xylenes to ethylbenzene. The ratio for total xylenes to ethylbenzene too high because "total xylenes" include any styrene concentration that was present in the sample. In the GC/MD apparatus and chromatographic column used, stryene and o-xylene coeluted.

# 6.0 RECOMMENDATIONS

Based on the 1989 UATMP, the following recommendations are made regarding canister acceptance criteria, canister cleanup and stability, instrument detection limits (IDLs), and validation of additional compounds.

## 6.1 CANISTER PRESSURE AND ELAPSED TIME ACCEPTANCE CRITERIA

More definitive canister pressure acceptance criteria are needed for future programs. To standardize the canister acceptance criteria, guidelines stating the maximum acceptable canister vacuum, duplicate sample pressure criteria, and elapsed time (for taking the sample) criteria will be thoroughly discussed in the 1990 UATMP QAPP.

## 6.2 CANISTER CLEANUP STUDY

Although preliminary studies indicated that the average concentration of target compounds carried over in canisters was <0.2 ppbv, canister cleanup studies are important to relate the amount of compound carryover in canisters one may expect to observe from one sample to another. Canister cleanup studies can also be used to evaluate canister cleaning strategies for the UATMP. Canister stability studies aid in the determination of how representative the canister sample is of the original ambient air that has been sampled. It is recommended that a canister cleaning study and canister stability study be performed to evaluate these important issues.

## 6.3 INSTRUMENT DETECTION LIMIT STUDY

A study is needed to determine the IDLs for all the target compounds using the GC/MD system. Although the IDLs would not be used to exclude data, it would be beneficial to the UATMP, and to the models for which the data are used, to realize the analytical risks involved in compound identification and quantitation.

## 6.4 ADDITIONAL TARGET COMPOUNDS

The target compounds listed in USEPA Compendium Method TO-14[4] include several compounds not currently targeted for the UATMP. It is recommended that these compounds be included in the UATMP target compound list. This would require validating the identification and quantitation of these additional compounds, and calibrating the GC/MD and GC/MS systems with additional standards.

## 6.5 PRESAMPLING CANISTER DATA

Prior to the start of sampling, the canisters designated for each site were cleaned and blanked by both PDFID and GC/MD. These data need to be collated to summarize the frequency of identification of target compounds in these cleaned canisters. In addition, any relationship between the blanked PDF10 concentrations and GC/MD concentrations should be investigated.

# 7.0 REFERENCES


1. McAllister, Robert A., Bradley W. Nelson, Wendy H. Moore, Dave-Paul Dayton, Joann Rice, Robert F. Jongleux, Raymond G. Merrill, Jr., Joan T. Bursey, and Phyllis L. O'Hara, "1989 Nonmethane Organic Compound and Three-Hour Air Toxics Monitoring Program." Radian Corporation DCN No. 89-262-045-89, Prepared for Neil J. Berg, Jr., Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, EPA Contract No. 68D80014, Research Triangle Park, NC, February 16, 1990.

2. "1989 Nonmethane Organic Compound Monitoring and Three-Hour Urban Air Toxics Monitoring Program. Work Plan and Quality Assurance Project Plan." Radian Corporation, Research Triangle Park, NC, DCN No. 89-262-045-67, May 1989.

3. "1989 Urban Air Toxics Monitoring Program. Work Plan and Quality Assurance Project Plan," Radian Corporation, Research Triangle Park, NC DCN 89-262-045-68, April 1989.

4. "Compendium Method TO-14. The Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using SUMMA® Passivated Canister Sampling and Gas Chromatographic Analysis, Quality Assurance Division, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

5. Edgerton, S.A., M.W. Holdren, D.L. Smith, and J.J. Shah, "Inter-Urban Comparison of Ambient Volatile Organic Compound Concentrations in U.S. Cities," JAPCA, 39, No(5), 729 (May 1989).

# APPENDIX A
## Urban Air Toxics Monitoring Program
## Site Data Summaries for GC/MD Analyses

APPENDIX A


| Table | | Page |
|---|---|---|
| A1 | Multiple Detector Speciated UATMP Data Summary for BRLA . . . . | A1 |
| A2 | Multiple Detector Speciated UATMP Data Summary for C4IL . . . . | A10 |
| A3 | Multiple Detector Speciated UATMP Data Summary for CANJ . . . . | A16 |
| A4 | Multiple Detector Speciated UATMP Data Summary for DLTX . . . . | A25 |
| A5 | Multiple Detector Speciated UATMP Data Summary for FLFL . . . . | A33 |
| A6 | Multiple Detector Speciated UATMP Data Summary for H1TX . . . . | A41 |
| A7 | Multiple Detector Speciated UATMP Data Summary for MIFL . . . . | A50 |
| A8 | Multiple Detector Speciated UATMP Data Summary for PEFL . . . . | A61 |
| A9 | Multiple Detector Speciated UATMP Data Summary for S2MO . . . . | A63 |
| A10 | Multiple Detector Speciated UATMP Data Summary for SAIL . . . . | A71 |
| A11 | Multiple Detector Speciated UATMP Data Summary for W1DC . . . . | A80 |
| A12 | Multiple Detector Speciated UATMP Data Summary for W2DC . . . . | A88 |
| A13 | Multiple Detector Speciated UATMP Data Summary for W1KS . . . . | A96 |
| A14 | Multiple Detector Speciated UATMP Data Summary for W2KS . . . . | A105 |

TABLE A1. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR BRLA

| Sample Date | 01/16/89 | 01/31/89 | 02/09/89 | 02/09/89 | 02/09/89 |
|---|---|---|---|---|---|
| Sample ID | 0666 | 0678 | 0691D | 0692D | 0691R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | 72.76 (L) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.18 (H) | 1.51 (H) | 0.26 (H) | 0.20 (M) | 0.24 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.09 (L) | <0.06 | 0.15 (M) |
| Bromochloromethane | <0.003 | <0.003 | 0.037(H) | 0.012(L) | 0.013(L) |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.201(L) | 0.530(L) | 0.504(H) | 0.514(H) | 0.356(L) |
| Carbon tetrachloride | 0.162(L) | 0.188(L) | 0.301(L) | 0.307(L) | 0.187(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.34 (H) | 2.98 (H) | 1.31 (M) | 1.28 (H) | 1.31 (H) |
| Trichloroethylene | <0.004 | 0.169(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.84 (H) | 4.35 (M) | 1.04 (M) | 1.04 (M) | 1.20 (L) |
| n-Octane | <0.03 | 0.47 (M) | 0.19 (M) | 0.16 (M) | 0.16 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.15 (M) | 0.35 (H) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.21 (H) | 0.61 (M) | 0.18 (M) | 0.14 (H) | 0.16 (H) |
| m/p-Xylene | 0.99 (M) | 3.86 (M) | 0.58 (M) | 0.53 (M) | 0.54 (M) |
| Styrene/o-Xylene | 0.50 (H) | 1.04 (H) | 0.19 (L) | 0.19 (L) | 0.19 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.02 (L) | 0.17 (H) |
| p-Dichlorobenzene | 0.07 (H) | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.06 (M) | <0.02 | 0.05 (M) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A1. BRLA (Continued)

| Sample Date | 02/09/89 | 02/21/89 | 03/05/89 | 03/17/89 | 03/31/89 |
|---|---|---|---|---|---|
| Sample ID | 0692R | 0708 | 0719 | 0733 | 0755 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | 0.42 (H) | <0.20 | 1.92 (H) |
| 1,3-Butadiene | 0.20 (H) | 0.74 (H) | 0.16 (M) | 1.14 (M) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | 0.130(L) | 0.006(L) | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | 0.426(H) | 0.153(H) |
| 1,1,1-Trichloroethane | 0.521(H) | 0.399(L) | 0.398(H) | 0.653(M) | 0.317(L) |
| Carbon tetrachloride | 0.305(L) | 0.192(L) | 0.221(L) | 0.283(L) | 0.213(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.2[illegible] (L) | 1.82 (H) | 1.74 (M) | 2.14 (H) | 2.35 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | 0.069(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | 1.52 (L) | <0.04 | <0.04 | 1.81 (H) |
| Bromodichloromethane | <0.001 | 0.086(H) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.07 (M) | 1.64 (M) | 2.03 (L) | 2.09 (H) | 1.65 (M) |
| n-Octane | 0.18 (M) | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | 0.05 (L) | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.01 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.13 (L) | 0.21 (L) | 0.36 (L) | 0.11 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.02 (M) | <0.02 | 0.02 (H) | <0.02 | <0.02 |
| Ethylbenzene | 0.16 (H) | 0.48 (H) | 0.57 (M) | 0.44 (H) | 0.40 (M) |
| m/p-Xylene | 0.54 (L) | 1.41 (H) | 1.65 (M) | 1.54 (H) | 1.23 (M) |
| Styrene/o-Xylene | 0.17 (M) | 0.25 (H) | 0.28 (L) | 0.44 (H) | 0.42 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.07 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A1. BRLA (Continued)

| Sample Date | 04/10/89 | 04/22/89 | 05/10/89 | 05/16/89 | 06/09/89 |
|---|---|---|---|---|---|
| Sample ID | 0766 | 0783 | 0806 | 0817 | 0846 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | 0.35 (H) | <0.20 | <0.20 |
| 1,3-Butadiene | 0.08 (H) | 4.78 (M) | 0.27 (M) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | 0.06 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.02 (L) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | 0.125(H) | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.220(L) | 0.151(L) | <0.006 | 0.269(L) |
| 1,1,1-Trichloroethane | 0.351(L) | 0.698(L) | 0.286(L) | 0.260(L) | 0.373(L) |
| Carbon tetrachloride | 0.165(L) | 0.215(L) | 0.213(L) | 0.162(L) | 0.154(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.94 (M) | 2.64 (H) | 1.96 (H) | 0.86 (H) | 1.32 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 1.78 (M) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.38 (M) | 2.89 (H) | 1.87 (H) | 1.13 (L) | 1.91 (L) |
| n-Octane | <0.03 | 0.51 (L) | <0.03 | <0.03 | 0.18 (H) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.12 (L) | 0.28 (L) | <0.07 | 0.08 (L) | 0.05 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.03 (M) | <0.02 | <0.02 |
| Ethylbenzene | 0.19 (H) | 0.50 (L) | 1.42 (H) | 0.16 (H) | 0.23 (M) |
| m/p-Xylene | 0.96 (H) | 2.14 (H) | 1.78 (H) | 0.94 (H) | 1.25 (M) |
| Styrene/o-Xylene | 0.67 (L) | 0.77 (H) | 0.39 (H) | 0.65 (L) | 0.45 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.05 (L) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A1. BRLA (Continued)

| Sample Date | 06/21/89 | 07/03/89 | 07/15/89 | 07/27/89 | 08/08/89 |
|---|---|---|---|---|---|
| Sample ID | 0865 | 0877 | 0891 | 0907 | 09230 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | 0.26 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.052(M) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.434(M) | 0.310(L) | 0.228(L) | 0.426(L) | 0.206(L) |
| Carbon tetrachloride | 0.289(L) | 0.167(L) | 0.144(L) | 0.183(L) | 0.323(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.31 (M) | 0.92 (H) | 0.62 (H) | 1.60 (H) | 2.12 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | 0.027(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.66 (H) | <0.04 | 1.08 (M) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.51 (M) | 1.10 (H) | 0.84 (L) | 2.51 (H) | 2.22 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.18 (L) | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.06 (H) | 0.43 (M) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.29 (H) | 0.19 (H) | 0.12 (L) | 0.95 (H) | 0.31 (H) |
| m/p-Xylene | 1.39 (M) | 0.72 (M) | 0.65 (L) | 5.76 (H) | 1.77 (H) |
| Styrene/o-Xylene | 0.46 (M) | 0.90 (M) | 0.26 (L) | 1.43 (L) | 0.63 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.55 (M) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A1. BRLA (Continued)

| Sample Date | 08/08/89 | 08/08/89 | 08/08/89 | 08/20/89 | 08/20/89 |
|---|---|---|---|---|---|
| Sample ID | 0924D | 0923R | 0924R | 0938D | 0939D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.88 (M) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.24 (L) | 0.18 (H) | 0.20 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.224(H) | 0.227(H) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.223(L) | 0.215(L) | 0.217(L) | 0.384(L) | 0.412(L) |
| Carbon tetrachloride | 0.338(L) | 0.330(L) | 0.329(L) | 0.474(L) | 0.497(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.16 (H) | 2.13 (H) | 2.12 (H) | 2.13 (H) | 2.20 (H) |
| Trichloroethylene | 0.023(L) | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.88 (H) | 0.90 (H) | 0.72 (L) | 0.57 (L) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.12 (L) | 2.31 (H) | 2.14 (M) | 2.47 (L) | 2.68 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.06 (L) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.12 (H) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.05 (L) | <0.07 | 0.14 (M) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | 0.11 (M) | <0.02 |
| Ethylbenzene | 0.28 (H) | 0.31 (H) | 0.32 (H) | 0.37 (L) | 0.35 (H) |
| m/p-Xylene | 1.78 (H) | 1.70 (H) | 1.63 (H) | 1.72 (L) | 1.60 (H) |
| Styrene/o-Xylene | 0.69 (H) | 0.61 (L) | 0.59 (H) | 0.70 (L) | 0.66 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | 0.081(L) |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.15 (H) | <0.02 |
| p-Dichlorobenzene | 0.13 (M) | 0.18 (H) | <0.09 | 1.49 (L) | <0.09 |
| o-Dichlorobenzene | 0.03 (M) | 0.06 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A1. BRLA (Continued)

| Sample Date | 08/20/89 | 08/20/89 | 09/01/89 | 09/13/89 | 09/25/89 |
|---|---|---|---|---|---|
| Sample ID | 0938R | 0939R | 0951 | 0968 | 0981 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | 0.31 (L) | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.56 (H) | 0.42 (H) | <0.06 | 0.13 (M) | 0.62 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.119(L) | <0.006 | 1.339(H) | 0.071(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.379(L) | 0.374(L) | 0.237(L) | 0.352(L) | 0.246(L) |
| Carbon tetrachloride | 0.476(L) | 0.496(L) | 0.129(L) | 0.145(L) | 0.155(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.09 (H) | 2.14 (H) | 0.68 (H) | 1.12 (H) | 0.79 (M) |
| Trichloroethylene | <0.004 | <0.004 | 0.026(M) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | 0.35 (L) | <0.04 | 0.02 (H) | <0.04 | <0.04 |
| Toluene | 2.61 (H) | 2.78 (H) | 0.95 (M) | 2.14 (H) | 0.88 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | 0.08 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.06 (H |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.08 (L) | 0.10 (H) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.40 (H) | 0.35 (H) | 0.48 (H) | 0.40 (M) | 0.27 (M |
| m/p-Xylene | 1.77 (H) | 1.59 (H) | 2.61 (H) | 1.99 (M) | 1.52 (M |
| Styrene/o-Xylene | 0.73 (H) | 0.63 (H) | 0.77 (L) | 0.63 (H) | 0.43 (L |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.74 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.08 (L |
| o-Dichlorobenzene | 0.19 (L) | 0.14 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A1. BRLA (Continued)

| Sample Date | 10/07/89 | 10/19/89 | 10/31/89 | 11/12/89 | 11/12/89 |
|---|---|---|---|---|---|
| Sample ID | 1000 | 1014 | 1029 | 1049D | 1050D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 1.36 (L) | 1.24 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.268(L) | 0.273(L) | 0.196(L) | 0.372(M) | 0.379(L) |
| Carbon tetrachloride | 0.261(L) | 0.150(L) | 0.146(L) | 0.154(L) | 0.154(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.84 (H) | 1.25 (H) | 1.84 (H) | 2.67 (H) | 2.75 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.58 (M) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | 0.28 (M) | <0.04 | <0.04 | <0.04 |
| Toluene | 2.37 (M) | 1.60 (L) | 1.74 (H) | 3.95 (M) | 3.98 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.03 (H) | 0.02 (M) | 0.02 (M) |
| Tetrachloroethylene | <0.07 | 0.18 (H) | <0.07 | 0.27 (M) | 0.28 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.12 (L) | <0.02 | <0.02 | 0.03 (L) | 0.04 (H) |
| Ethylbenzene | 0.36 (H) | 1.50 (M) | 0.30 (H) | 0.59 (H) | 0.61 (H) |
| m/p-Xylene | 1.69 (M) | 8.61 (M) | 1.68 (H) | 3.55 (H) | 3.48 (H) |
| Styrene/o-Xylene | 0.64 (M) | 2.75 (M) | 0.69 (H) | 1.24 (H) | 1.28 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.19 (L) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A1. BRLA (Continued)

| Sample Date | 11/12/89 | 11/12/89 | 11/24/89 | 12/06/89 | 12/17/89 |
|---|---|---|---|---|---|
| Sample ID | 1049R | 1050R | 1064 | 1085 | 9 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 4.92 (L) | 4.63 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.88 (L) | 1.09 (L) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.10 (M) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.061(L) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.353(M) | 0.350(L) | 0.218(L) | 0.270(L) | 0.223(L) |
| Carbon tetrachloride | 0.156(L) | 0.156(L) | 0.124(L) | 0.234(L) | 0.139(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.68 (H) | 2.74 (H) | 0.68 (H) | 1.33 (H) | 0.96 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | 0.059(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | 0.041(H) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.96 (M) | 3.93 (M) | 0.66 (M) | 1.73 (L) | 0.61 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.27 (M) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.60 (L) | 0.66 (H) | 0.15 (M) | 0.29 (M) | 0.15 (H) |
| m/p-Xylene | 3.48 (L) | 3.66 (H) | 0.79 (M) | 1.60 (M) | 0.84 (H) |
| Styrene/o-Xylene | 1.29 (L) | 1.30 (H) | 0.24 (M) | 0.57 (H) | 0.23 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.65 (L) | 0.08 (M) | 0.15 (H) | <0.09 |
| o-Dichlorobenzene | 0.15 (M) | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A1. BRLA (Continued)

| Sample Date | 12/30/89 | 01/09/90 | 01/23/90 |
|---|---|---|---|
| Sample ID | 1115 | 1130 | 1151 |
| Compound | Concentration, ppbv | | |
| Acetylene | <1.00 | <1.00 | 2.93 (L) |
| Propylene | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.170(L) |
| 1,1,1-Trichloroethane | 0.205(L) | 0.265(L) | 0.490(L) |
| Carbon tetrachloride | 0.198(L) | 0.164(L) | 0.289(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Benzene | 1.16 (H) | 1.72 (H) | 1.93 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.451(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| Toluene | 0.80 (H) | 1.69 (H) | 2.33 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.09 (M) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.02 (L) |
| Ethylbenzene | 0.17 (H) | 0.19 (H) | 0.29 (H) |
| m/p-Xylene | 0.61 (H) | 0.99 (H) | 1.61 (H) |
| Styrene/o-Xylene | 0.25 (H) | 0.37 (H) | 0.56 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.07 (M) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A2. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR C4IL

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | 03/[illegible]/89 | 03/29/89 |
|---|---|---|---|---|---|
| Sample ID | 0673 | 0688 | 0698 | 0743 | 0752 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 31.74 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 16.19 (H) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 1.05 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | 15.77 (M) | 6.93 (H) | 10.41 (M) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.11 (H) | <0.06 | 0.01 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.553(H) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.402(M) | 1.283(M) | 1.258(M) | 0.731(M) | 2.070(H) |
| Carbon tetrachloride | 0.242(L) | 0.254(L) | 0.191(L) | 0.192(L) | 0.172(L) |
| 1,2-Dichloroethane | <0.04 | 0.06 (H) | <0.04 | <0.04 | <0.04 |
| Benzene | 0.43 (M) | 1.22 (M) | 5.22 (H) | 1.86 (M) | 1.81 (M) |
| Trichloroethylene | 0.091(L) | 0.431(H) | 0.903(H) | <0.004 | 0.909(H) |
| 1,2-Dichloropropane | 0.32 (H) | <0.04 | 1.40 (M) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.54 (M) | 3.32 (M) | 9.22 (M) | 3.87 (H) | 2.79 (M) |
| n-Octane | 0.07 (H) | <0.03 | <0.03 | <0.03 | 0.68 (H) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.09 (L) | 0.29 (L) | 0.34 (L) | 0.14 (L) | 0.28 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.20 (M) | <0.02 | <0.02 |
| Ethylbenzene | 0.11 (H) | 0.61 (H) | 0.99 (M) | 0.60 (H) | 0.48 (M) |
| m/p-Xylene | 0.36 (M) | 2.38 (M) | 6.20 (H) | 3.41 (H) | 2.27 (M) |
| Styrene/o-Xylene | 0.13 (H) | 0.55 (H) | 1.63 (H) | 1.65 (H) | 0.72 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.09 (H) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.09 (M) | <0.09 | <0.09 | 0.23 (L) |
| o-Dichlorobenzene | 0.03 (M) | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

(Continued)

TABLE A2. C4IL (Continued)

| Sample Date | 04/04/89 | 04/16/89 | 04/28/89 | 05/10/89 | 05/24/89 |
|---|---|---|---|---|---|
| Sample ID | 0757 | 0782 | 0794 | 0811 | 0827 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.18 (H) | 0.24 (H) | <0.10 | <0.10 | 0.27 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | 3.77 (L) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | 0.27 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.843(L) | 1.664(L) | 0.983(L) | 1.311(H) | 1.942(H) |
| Carbon tetrachloride | 0.145(L) | 0.148(L) | 0.160(L) | 0.155(L) | 0.148(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.77 (M) | 3.11 (H) | 10.59 (L) | 0.52 (H) | 2.01 (M) |
| Trichloroethylene | 0.580(M) | 1.602(L) | 0.331(M) | 1.802(L) | 2.213(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | 3.63 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.40 (H) | 4.75 (H) | 18.68 (H) | 1.25 (H) | 4.67 (L) |
| n-Octane | <0.03 | 1.72 (M) | 4.46 (M) | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.17 (L) | 0.22 (L) | <0.07 | 0.99 (H) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.25 (L) |
| Ethylbenzene | 0.50 (H) | 0.62 (H) | 3.24 (M) | 0.10 (H) | 0.95 (L) |
| m/p-Xylene | 2.85 (H) | 4.41 (H) | 20.84 (M) | 0.79 (H) | 6.61 (L) |
| Styrene/o-Xylene | 0.76 (H) | 1.08 (H) | 5.85 (M) | 0.20 (H) | 1.50 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A2. C4IL (Continued)

| Sample Date | 06/16/89 | [illegible]/27/89 | 07/[illegible]/89 | 07/[illegible]/89 | [illegible]8/02/89 |
|---|---|---|---|---|---|
| Sample ID | 0860 | [illegible]69 | 0890 | 0902 | 0911 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.[illegible]0 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.44 (H) | 0.83 (H) | <0.10 | 0.28 (M) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 14.79 (H) | 4.85 (H) | 17.26 (L) | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.13 (H) | 0.[illegible] (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.016(L) | 0.142(M) | <0.006 |
| 1,1,1-Trichloroethane | 1.185(L) | 2.621(L) | 1.348(M) | 0.697(M) | 1.912(M) |
| Carbon tetrachloride | 0.151(L) | 0.188(L) | 1.130(L) | 0.160(L) | 0.180(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 4.50 (H) | 7.98 (H) | 1.54 (H) | 2.51 (H) | 5.54 (H) |
| Trichloroethylene | 0.719(H) | <0.004 | 0.528(H) | 0.229(L) | 0.318(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | 1.43 (L) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 10.09 (H) | 17.80 (L) | 3.02 (L) | 31.98 (H) | 20.79 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.23 (L) | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 1.36 (H) | 2.94 (L) | 0.63 (H) | 1.48 (H) | 1.94 (H) |
| m/p-Xylene | 9.61 (H) | 22.35 (L) | 5.24 (H) | 8.67 (H) | 12.16 (H) |
| Styrene/o-Xylene | 2.44 (H) | 5.18 (L) | 1.62 (M) | 2.64 (H) | 3.43 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 1.98 (M |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A2. C4IL (Continued)

| Sample Date | 08/14/89 | 09/07/89 | 09/21/89 | 10/01/89 | 10/13/89 |
|---|---|---|---|---|---|
| Sample ID | 0935 | 0964 | 0984 | 0995 | 1012 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 2.20 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 0.26 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 1.72 (L) | 3.82 (H) | <0.11 | 4.01 (H) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.744(L) | 0.851(M) | 1.670(H) | 15.784(H) | 1.346(M) |
| Carbon tetrachloride | 0.182(L) | 0.143(L) | 0.137(L) | 0.462(L) | 0.279(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 6.44 (H) | 1.02 (M) | 0.97 (M) | 1.08 (H) | 1.51 (M) |
| Trichloroethylene | <0.004 | 0.334(L) | 1.170(H) | 0.891(H) | 0.939(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.78 (H) | 2.00 (H) | 3.06 (M) | 2.42 (L) | 4.24 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.42 (L) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 2.34 (L) | 0.34 (H) | 0.44 (L) | 0.34 (M) | 0.41 (H) |
| m/p-Xylene | 9.57 (H) | 1.99 (H) | 3.35 (L) | 2.03 (H) | 2.45 (H) |
| Styrene/o-Xylene | 4.88 (M) | 0.70 (H) | 1.06 (L) | 0.68 (H) | 0.71 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.21 (L) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A2. C4IL (Continued)

| Sample Date | 10/25/89 | 11/06/89 | 11/30/89 | 11/30/89 | 11/30/89 |
|---|---|---|---|---|---|
| Sample ID | 1031 | 1048 | 1080D | 1081D | 1080R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 21.27 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 2.06 (L) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | 10.27 (H) | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | 1.02 (L) | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.50 (H) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 4.860(H) | 1.680(L) | 1.396(H) | 2.389(H) | 1.318(H) |
| Carbon tetrachloride | 0.150(L) | 0.134(L) | 0.140(L) | 0.149(L) | 0.249(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | 0.04 (L) | <0.04 | <0.04 |
| Benzene | 2.78 (L) | 9.70 (L) | 0.77 (M) | 0.79 (M) | 0.78 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | 0.769(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 7.85 (H) | 12.13 (M) | 0.99 (M) | 1.13 (M) | 0.94 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.46 (L) | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.98 (H) | 1.92 (L) | 0.13 (H) | 0.14 (H) | 0.11 (M |
| m/p-Xylene | 6.30 (H) | 11.70 (L) | 0.62 (H) | 0.84 (H) | 0.61 (M |
| Styrene/o-Xylene | 1.87 (H) | 3.90 (L) | 0.23 (H) | 0.25 (H) | 0.20 (M |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.73 (L) | <0.09 | 0.02 (M) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A2. C41L (Continued)

| Sample Date | 11/30/89 | 12/13/89 | 12/24/89 | 01/05/90 | 01/17/90 |
|---|---|---|---|---|---|
| Sample ID | 1081R | 1104 | 1120 | 1140 | 1155 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.12 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | 2.44 (H) | 13.53 (H) | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.49 (H) | <0.06 | <0.06 | 0.59 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.333(H) | 0.494(H) | 0.697(L) |
| 1,1,1-Trichloroethane | 2.363(H) | 6.456(L) | 9.607(L) | 1.089(H) | 0.921(L) |
| Carbon tetrachloride | 0.142(L) | 0.455(L) | 0.523(L) | 0.147(L) | 0.160(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.83 (H) | 7.71 (H) | 1.66 (H) | 1.54 (H) | 5.25 (H) |
| Trichloroethylene | <0.004 | 1.098(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.12 (M) | 13.44 (H) | 2.26 (H) | 2.50 (H) | 9.70 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 1.22 (L) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.51 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.12 (M) | 2.07 (H) | 0.27 (L) | 1.41 (H) | 1.19 (H) |
| m/p-Xylene | 0.82 (M) | 11.56 (H) | 1.63 (L) | 6.79 (H) | 7.02 (H) |
| Styrene/o-Xylene | 0.28 (M) | 4.01 (H) | 0.55 (L) | 1.66 (H) | 2.36 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | 0.09 (M) | <0.02 | 0.06 (L) | <0.02 | 0.48 (M) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

R Replicate analysis

TABLE A3. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR CANJ

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | [illegible]/27/89 | 03/11/89 |
|---|---|---|---|---|---|
| Sample ID | 0672 | 0685 | 0696 | 0710 | 07300 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 13.29 (L) | <1.00 | <1.00 | 13.15 (L) | <1.00 |
| Propylene | <0.10 | 5.09 (L) | 13.92 (M) | 0.07 (M) | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.44 (H) | 0.14 (H) | 0.76 (H) | 0.19 (H) | 0.21 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | 3.02 (H) |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| [illegible]ans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| [illegible]roethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| [illegible] | <0.06 | <0.06 | 0.06 (H) | 0.08 (M) | <0.06 |
| [illegible]omethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.556(M) | 0.915(M) | 1.576(M) | 1.274(H) | 1.107(L) |
| Carbon tetrachloride | 0.260(L) | 0.179(L) | 0.186(L) | 0.292(L) | 0.315(L) |
| 1,2-Dichloroethane | 0.21 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.35 (M) | 1.03 (H) | 2.81 (H) | 1.39 (L) | 1.65 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.70 (M) | 2.48 (M) | 7.96 (M) | 3.39 (M) | 2.11 (M) |
| n-Octane | <0.03 | 0.09 (L) | <0.03 | <0.03 | 0.11 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (L) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.12 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.13 (L) | <0.02 | <0.02 |
| Ethylbenzene | 0.32 (H) | 0.28 (H) | 0.59 (M) | 0.34 (H) | 0.34 (M) |
| m/p-Xylene | 1.66 (M) | 1.68 (M) | 4.38 (M) | 1.70 (M) | 1.31 (H) |
| Styrene/o-Xylene | 1.15 (L) | 0.52 (L) | 1.17 (M) | 0.53 (M) | 0.48 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.08 (M) | 0.48 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.19 (L) | <0.09 | 0.14 (M) | 0.32 (L) |
| o-Dichlorobenzene | <0.02 | 0.07 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A3. CANJ (Continued)

| Sample Date | 03/11/89 | 03/11/89 | 03/11/89 | 03/23/89 | 04/04/89 |
|---|---|---|---|---|---|
| Sample ID | 0731D | 0730R | 0731R | 0742 | 0760 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | 6.76 (L) | 6.93 (M) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.17 (H) | 0.21 (M) | 0.14 (H) | 0.17 (M) | 0.33 (M) |
| Bromomethane | 3.01 (H) | 2.92 (H) | 2.72 (H) | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | 0.10 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.02 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.126(M) | 0.753(H) | 1.092(M) | 0.639(M) | 0.794(L) |
| Carbon tetrachloride | 0.317(L) | 0.303(L) | 0.305(L) | 0.270(L) | 0.152(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.64 (M) | 1.66 (M) | 1.69 (M) | 0.95 (M) | 0.96 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.22 (H) | 2.12 (H) | 2.13 (H) | 4.46 (H) | 2.22 (H) |
| n-Octane | 0.21 (L) | 0.14 (H) | 0.15 (M) | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (M) | <0.02 | <0.02 |
| Tetrachloroethylene | 0.18 (L) | 0.12 (L) | 0.17 (L) | 0.14 (L) | 0.52 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.29 (H) | 0.39 (M) | 0.32 (H) | 0.37 (H) | 0.37 (M) |
| m/p-Xylene | 1.37 (H) | 1.37 (H) | 1.40 (H) | 1.71 (H) | 1.30 (H) |
| Styrene/o-Xylene | 0.43 (H) | 0.45 (H) | 0.41 (H) | 0.49 (H) | 0.45 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | 0.750(M) | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.25 (L) | 0.15 (M) | <0.09 | 0.11 (H) | 0.22 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.20 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A3. CANJ (Continued)

| Sample Date | 04/16/89 | 04/28/89 | 05/10/89 | 05/22/89 | 06/03/89 |
|---|---|---|---|---|---|
| Sample ID | 0777 | 0793 | 0808 | 0822 | 0843 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 11.82 (M) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.35 (H) | 0.06 (M) | <0.10 | 0.33 (M) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.432(L) | 0.504(L) | 0.760(L) | 0.661(L) | 0.666(L |
| Carbon tetrachloride | 0.149(L) | 0.144(L) | 0.149(L) | 0.156(L) | 0.157(L |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.50 (H) | 0.53 (M) | 0.65 (M) | 1.84 (H) | 0.81 (H |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.37 (H) | <0.04 | 0.50 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.38 (M) | 1.10 (H) | 5.93 (H) | 3.38 (H) | 1.51 (H |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.18 (L) | <0.07 | <0.07 | 0.16 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.09 (L) | <0.02 | 0.03 ( |
| Ethylbenzene | 0.46 (M) | 0.18 (L) | 0.22 (L) | 0.33 (H) | 0.15 ( |
| m/p-Xylene | 2.54 (H) | 0.87 (M) | 0.89 (H) | 2.48 (H) | 0.90 ( |
| Styrene/o-Xylene | 0.88 (M) | 0.27 (M) | 0.25 (H) | 0.71 (H) | 0.25 ( |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.124(H) | <0.002 | 0.077(H) | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.81 (L) | 1.01 ( |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

(Continued

TABLE A3. CANJ (Continued)

| Sample Date | 06/15/89 | 06/27/89 | 06/27/89 | 06/27/89 | 06/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0852 | 0873D | 0874D | 0873R | 0874R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 1.44 (L) | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 3.34 (M) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.07 (L) | 0.28 (H) | 0.25 (H) | 0.29 (H) | 0.24 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.20 (L) | 0.18 (H) | 0.16 (H) | 0.25 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.541(H) | 0.707(H) | 0.770(M) | 0.713(H) | 0.771(H) |
| Carbon tetrachloride | 0.146(L) | 0.172(L) | 0.174(L) | 0.175(L) | 0.173(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.82 (H) | 2.17 (H) | 2.20 (H) | 1.99 (H) | 1.98 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.080(L) | <0.004 | 0.078(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.54 (H) | 0.44 (M) |
| Toluene | 2.78 (M) | 2.75 (L) | 2.90 (L) | 3.86 (H) | 2.92 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.07 (L) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.42 (M) | 0.36 (H) | 0.34 (L) | 0.46 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.04 (L) | 0.16 (M) | 0.09 (M) | 0.09 (H) |
| Ethylbenzene | 0.21 (M) | 0.25 (L) | 0.39 (H) | 0.26 (M) | 0.29 (M) |
| m/p-Xylene | 1.39 (M) | 1.72 (M) | 1.80 (H) | 1.74 (M) | 1.71 (M) |
| Styrene/o-Xylene | 0.39 (H) | 0.71 (H) | 0.54 (H) | 0.50 (M) | 0.51 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 2.23 (L) | <0.09 | 1.86 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A3. CANJ (Continued)

| Sample Date | 07/09/89 | 07/21/89 | 08/02/89 | 08/14/89 | 08/26/89 |
|---|---|---|---|---|---|
| Sample ID | 0888 | 0900 | 0916 | 0926 | 0948 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 3.71 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.27 (L) | 0.08 (M) | 0.31 (L) | 0.27 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.18 (M) | 0.15 (H) | <0.06 | 0.16 (H) | 0.12 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.447(L) | 0.644(L) | 0.650(L) | 0.476(L) | 0.504(L) |
| Carbon tetrachloride | 0.139(L) | 0.141(L) | 0.143(L) | 0.160(L) | 0.134(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.12 (H) | 0.90 (H) | 1.89 (H) | 1.41 (H) | 1.40 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.34 (L) | 3.51 (H) | 3.99 (H) | 2.85 (M) | 2.51 (H |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 2.28 (M) | 0.14 (H) | <0.02 | 0.07 (H) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.21 (H) | <0.07 | <0.07 | 0.27 (L |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | 0.12 (H) | <0.02 |
| Ethylbenzene | 0.43 (H) | 0.22 (H) | 0.52 (H) | 0.46 (H) | 0.31 (H |
| m/p-Xylene | 2.62 (H) | 1.32 (M) | 2.88 (H) | 2.38 (H) | 1.64 (H |
| Styrene/o-Xylene | 0.94 (H) | 0.43 (H) | 1.05 (H) | 0.87 (H) | 0.52 (H |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.01 (H) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 2.50 (L) | 0.11 (M) | <0.09 | <0.09 | 0.12 (H |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.10 (L |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A3. CANJ (Continued)

| Sample Date | 09/07/89 | 09/07/89 | 09/07/89 | 09/07/89 | 09/19/89 |
|---|---|---|---|---|---|
| Sample ID | 0958D | 0959D | 0958R | 0959R | 0971 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 4.43 (M) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 0.17 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | 0.47 (L) | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.11 (L) | 0.09 (H) | <0.06 | 0.03 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.960(L) | 0.869(M) | 0.956(L) | 0.914(L) | 0.620(L) |
| Carbon tetrachloride | 0.138(L) | 0.139(L) | 0.140(L) | 0.142(L) | 0.131(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.19 (M) | 2.29 (M) | 2.26 (L) | 2.46 (L) | 0.97 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.056(M) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 6.55 (H) | 6.03 (H) | 6.27 (H) | 6.50 (H) | 3.52 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.96 (L) | <0.07 | <0.07 | <0.07 | 0.69 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.46 (H) | 0.43 (H) | 0.44 (H) | 0.48 (H) | 0.30 (M) |
| m/p-Xylene | 2.53 (H) | 2.46 (H) | 2.54 (H) | 2.66 (H) | 1.91 (M) |
| Styrene/o-Xylene | 0.91 (H) | 0.92 (H) | 0.92 (M) | 0.90 (H) | 0.67 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.01 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.17 (L) | <0.09 | 1.00 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A3. CANJ (Continued)

| Sample Date | 10/01/89 | 10/13/89 | 10/25/89 | 11/06/89 | 11/18/89 |
|---|---|---|---|---|---|
| Sample ID | 0989 | 1005 | 1028 | 1042 | 1056 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 0.86 (L) | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.90 (L) | <0.10 | 0.35 (L) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | 1.14 (H) | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.16 (H) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.368(M) | 0.951(L) | 2.086(L) | 0.555(H) | 0.335(L) |
| Carbon tetrachloride | 0.125(L) | 0.152(L) | 0.139(L) | 0.132(L) | 0.146(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.60 (M) | 4.73 (H) | 8.24 (M) | 1.73 (L) | 0.97 (H) |
| Trichloroethylene | <0.004 | 0.201(H) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 1.13 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.44 (L) | 9.74 (H) | 22.36 (H) | 4.29 (M) | 1.28 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.04 (L) | 0.10 (M) |
| 1,1,2-Trichloroethane | 0.01 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.10 (L) | 1.80 (L) | <0.07 | 0.20 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.04 (L) |
| Ethylbenzene | 0.14 (L) | 1.08 (H) | 2.57 (H) | 0.52 (M) | 0.15 (M) |
| m/p-Xylene | 0.91 (M) | 7.07 (H) | 15.25 (H) | 2.97 (M) | 0.93 (M) |
| Styrene/o-Xylene | 0.29 (M) | 2.44 (H) | 5.80 (H) | 1.07 (L) | 0.28 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.44 (M) | <0.02 | <0.02 | <0.02 | 0.15 (H) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.08 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.03 (H) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A3. CANJ (Continued)

| Sample Date | 11/30/89 | 12/12/89 | 12/24/89 | 12/24/89 | 12/24/89 |
|---|---|---|---|---|---|
| Sample ID | 1076 | 1096 | 1107D | 1108D | 1107R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.139(H) | 0.113(L) | 0.101(M) |
| 1,1,1-Trichloroethane | 0.591(M) | 1.041(M) | 1.108(L) | 1.085(L) | 1.060(L) |
| Carbon tetrachloride | 0.331(L) | 0.224(L) | 0.472(L) | 0.476(L) | 0.440(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.41 (M) | 3.57 (H) | 0.94 (M) | 0.84 (M) | 0.94 (M) |
| Trichloroethylene | 0.076(L) | 0.313(M) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.55 (M) | 5.53 (H) | 1.15 (M) | 1.11 (M) | 1.10 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.04 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.04 (M) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.14 (M) | 0.56 (H) | 0.13 (M) | 0.12 (M) | 0.14 (H) |
| m/p-Xylene | 0.86 (M) | 3.43 (H) | 0.76 (H) | 0.65 (H) | 0.79 (H) |
| Styrene/o-Xylene | 0.28 (H) | 1.16 (H) | 0.26 (H) | 0.21 (H) | 0.30 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.11 (M) | <0.09 | 0.22 (M) | <0.09 | 0.08 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A3. CANJ (Continued)

| Sample Date | 12/24/89 | 01/05/90 | [illegible]/90 | [illegible]/90 |
|---|---|---|---|---|
| Sample ID | 1108R | 1128 | 1144 | 1153 |
| Compound | Concentration, ppbv | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | 0.98 (M) | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.088(M) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.045(L) | 1.156(H) | 0.656(L) | 0.314(L) |
| Carbon tetrachloride | 0.453(L) | 0.157(L) | 0.141(L) | 0.143(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.78 (M) | 1.78 (H) | 3.61 (H) | 0.67 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.11 (M) | 2.31 (M) | 5.41 (H) | 1.27 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.08 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.12 (M) | 0.29 (L) | 0.68 (H) | 0.11 (H) |
| m/p-Xylene | 0.68 (H) | 1.82 (L) | 4.21 (H) | 0.68 (L) |
| Styrene/o-Xylene | 0.24 (H) | 0.63 (L) | 1.45 (H) | 0.24 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.05 (L) | 0.06 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.30 (L) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

R Replicate analysis

TABLE A4. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR DLTX

| Sample Date | 01/16/89 | 01/28/89 | 02/09/89 | 02/21/89 | 03/05/89 |
|---|---|---|---|---|---|
| Sample ID | 0664 | 0677 | 0693 | 0707 | 0723 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.29 (M) | 0.09 (M) | 0.12 (M) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | 0.08 (H) | <0.04 |
| Chloroprene | 0.12 (H) | <0.06 | 0.07 (M) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.768(L) | 0.705(M) | 1.143(M) | 0.622(H) | 0.624(L) |
| Carbon tetrachloride | 0.160(L) | 0.161(L) | 0.263(L) | 0.163(L) | 0.355(L) |
| 1,2-Dichloroethane | <0.04 | 0.06 (L) | <0.04 | <0.04 | <0.04 |
| Benzene | 2.07 (H) | 1.11 (H) | 1.22 (L) | 0.77 (H) | 0.32 (L) |
| Trichloroethylene | <0.004 | 0.411(L) | 0.543(L) | 0.430(L) | 0.274(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.09 (H) | 0.05 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.03 (H) |
| Toluene | 3.33 (H) | 1.28 (L) | 2.35 (M) | 1.02 (M) | 0.26 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | 0.03 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.16 (L) | <0.07 | 0.13 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.06 (L) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.42 (H) | 0.19 (M) | 0.05 (M) | 0.15 (M) | 0.03 (L) |
| m/p-Xylene | 2.52 (H) | 1.00 (M) | 0.52 (H) | 0.81 (M) | 0.13 (L) |
| Styrene/o-Xylene | 0.70 (H) | 0.28 (M) | 0.42 (L) | 0.23 (L) | 0.05 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.01 (L) | <0.02 | <0.02 | 0.13 (M) |
| p-Dichlorobenzene | <0.09 | 0.14 (L) | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A4. DLTX (Continued)

| Sample Date | 03/17/89 | 03/17/89 | 03/17/89 | 03/17/89 | 03/29/89 |
|---|---|---|---|---|---|
| Sample ID | 0737D | 0738D | 0737R | 0738R | 0754 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | 0.03 (L) |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.315(L) | 0.295(M) | 0.304(L) | 0.275(L) | 1.079(H) |
| Carbon tetrachloride | 0.165(L) | 0.166(L) | 0.164(L) | 0.164(L) | 0.158(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.57 (M) | 0.56 (M) | 0.61 (M) | 0.59 (L) | 1.62 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | 0.39 (M) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.14 (M) | 1.02 (H) | 1.02 (H) | 0.99 (H) | 3.40 (M) |
| n-Octane | 0.06 (H) | 0.06 (L) | 0.12 (L) | 0.10 (M) | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.05 (L) | 0.11 (L) | 0.17 (H) | 0.16 (M) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.12 (L) |
| Ethylbenzene | 0.11 (H) | 0.10 (H) | 0.12 (M) | 0.10 (M) | 0.40 (L) |
| m/p-Xylene | 0.61 (H) | 0.51 (H) | 0.59 (M) | 0.58 (M) | 2.62 (M) |
| Styrene/o-Xylene | 0.16 (H) | 0.18 (M) | 0.21 (M) | 0.19 (M) | 0.71 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A4. DLTX (Continued)

| Sample Date | 04/10/89 | 04/22/89 | 05/04/89 | 07/15/89 | 07/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0770 | 0789 | 0802 | 0895 | 0908 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 0.96 (L) | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.10 (L) | <0.10 | 0.08 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | 0.14 (M) | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.18 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.683(L) | 0.366(L) | 1.060(H) | 0.429(M) | 0.339(L) |
| Carbon tetrachloride | 0.150(L) | 0.146(L) | 0.151(L) | 0.129(L) | 0.136(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.14 (H) | 0.71 (M) | 1.00 (H) | 0.76 (H) | 0.67 (H) |
| Trichloroethylene | 2.230(H) | 0.156(M) | 0.235(M) | 0.110(M) | 0.113(M) |
| 1,2-Dichloropropane | <0.04 | 0.57 (L) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.53 (M) | 0.94 (H) | 2.36 (L) | 1.85 (H) | 1.26 (H) |
| n-Octane | <0.03 | 0.05 (H) | 0.23 (H) | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.08 (H) | <0.02 | 0.11 (H) |
| Tetrachloroethylene | <0.07 | <0.07 | 0.31 (M) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.32 (H) | 0.11 (H) | 0.25 (L) | 0.19 (H) | 0.18 (H) |
| m/p-Xylene | 1.17 (H) | 0.58 (H) | 1.36 (L) | 1.21 (H) | 1.25 (M) |
| Styrene/o-Xylene | 0.35 (M) | 0.19 (M) | 0.39 (L) | 0.52 (L) | 0.37 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.08 (M) | <0.09 | 0.08 (M) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.01 (H) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A4. DLTX (Continued)

| Sample Date | 08/08/89 | 08/20/89 | [illegible] | 09/13/89 | 09/13/89 |
|---|---|---|---|---|---|
| Sample ID | 0922 | 0940 | 0954 | 0965D | 0966D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | 0.11 (H) | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | 0.12 (L) | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 1.84 (M) | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.53 (L) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.793(M) | 0.243(L) | 0.283(L) | 0.621(M) | 1.022(M) |
| Carbon tetrachloride | 0.150(L) | 0.138(L) | 0.124(L) | 0.131(L) | 0.136(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.03 (H) | 0.42 (H) | 0.55 (H) | 0.80 (H) | 1.16 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.099(H) | 0.522(H) | 1.047(H) |
| 1,2-Dichloropropane | <0.04 | 0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | ).001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.63 (H) | 0.76 (L) | 1.16 (L) | 2.02 (L) | 3.31 (L |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.14 (L) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.08 (H) | <0.02 | 3.18 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | 0.45 (L) | <0.07 | <0.07 | <0.07 | 0.20 (L |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.39 (H) | 0.22 (L) | 0.11 (L) | 0.28 (H) | 0.38 (M |
| m/p-Xylene | 1.86 (H) | 0.63 (L) | 0.74 (L) | 1.55 (M) | 2.60 (H |
| Styrene/o-Xylene | 0.68 (H) | 0.25 (H) | 0.25 (H) | 0.52 (L) | 0.73 (H |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.12 (L) | 0.24 (H) | 0.39 (L |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.39 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A4. DLTX (Continued)

| Sample Date | 09/13/89 | 09/13/89 | 09/25/89 | 10/07/89 | 10/19/89 |
|---|---|---|---|---|---|
| Sample ID | 0965R | 0966R | 0980 | 1001 | 1020 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.24 (H) | 0.04 (M) | 0.19 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | 0.03 (L) | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | 0.18 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.032(L) | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.639(M) | 0.975(M) | 0.778(M) | 0.434(M) | 0.616(H) |
| Carbon tetrachloride | 0.132(L) | 0.133(L) | 0.132(L) | 0.127(L) | 0.139(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.76 (H) | 1.01 (M) | 1.35 (H) | 0.62 (M) | 1.02 (L) |
| Trichloroethylene | 0.419(H) | 1.045(H) | <0.004 | 0.012(L) | 0.443(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.01 (M) | 3.89 (H) | 2.70 (L) | 1.53 (H) | 2.25 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.03 (M) | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.16 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.11 (L) | <0.02 | <0.02 |
| Ethylbenzene | 0.24 (M) | 0.33 (M) | 0.35 (L) | 0.20 (L) | 0.42 (L) |
| m/p-Xylene | 1.44 (M) | 2.32 (H) | 1.97 (L) | 1.03 (L) | 2.77 (H) |
| Styrene/o-Xylene | 0.49 (H) | 0.74 (H) | 0.64 (L) | 0.30 (L) | 0.78 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.02 (L) | 0.27 (L) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.12 (M) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.09 (M) | <0.02 | 0.08 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A4. DLTX (Continued)

| Sample Date | 11/12/89 | 11/24/89 | 12/06/89 | 12/18/89 | 01/11/90 |
|---|---|---|---|---|---|
| Sample ID | 1052 | 1068 | 1086 | 1106 | 11340 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.285(L) | 0.221(L) | 0.469(M) | 0.388(M) | 0.644(H) |
| Carbon tetrachloride | 0.128(L) | 0.123(L) | 0.121(L) | 0.353(L) | 0.142(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.92 (H) | 0.68 (H) | 0.65 (H) | 1.13 (H) | 0.77 (H) |
| Trichloroethylene | 0.050(L) | <0.004 | 0.185(L) | 0.127(H) | 0.163(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.44 (M) | 0.66 (M) | 0.86 (M) | 1.21 (H) | 1.33 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.12 (L) | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.06 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.24 (M) | 0.11 (M) | 0.12 (M) | 0.19 (H) | 0.16 (H) |
| m/p-Xylene | 1.26 (M) | 0.54 (M) | 0.63 (M) | 0.95 (H) | 0.86 (H) |
| Styrene/o-Xylene | 0.48 (H) | 0.18 (H) | 0.19 (H) | 0.32 (H) | 0.31 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.13 (L) | 0.07 (L) | 0.09 (M) | 0.06 (M) | <0.09 |
| o-Dichlorobenzene | 0.27 (M) | 0.05 (M) | 0.03 (H) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A4. DLTX (Continued)

| Sample Date | 01/11/90 | 01/11/90 | 01/11/90 | 01/23/90 | 01/23/90 |
|---|---|---|---|---|---|
| Sample ID | 1135D | 1134R | 1135R | 1148D | 1149D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.669(H) | 0.673(H) | 0.652(H) | 0.391(M) | 0.401(M) |
| Carbon tetrachloride | 0.145(L) | 0.155(L) | 0.153(L) | 0.137(L) | 0.140(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.81 (H) | 0.81 (H) | 0.80 (H) | 0.97 (H) | 0.95 (H) |
| Trichloroethylene | 0.140(H) | 0.193(L) | 0.150(L) | <0.004 | 0.071(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.40 (H) | 1.33 (H) | 1.34 (H) | 1.55 (H) | 1.56 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.17 (H) | 0.16 (H) | 0.17 (H) | 0.21 (H) | 0.19 (H) |
| m/p-Xylene | 0.81 (H) | 0.78 (H) | 0.81 (H) | 1.04 (H) | 1.03 (H) |
| Styrene/o-Xylene | 0.29 (H) | 0.26 (H) | 0.25 (H) | 0.34 (H) | 0.34 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.07 (M) | 0.08 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A4. DLTX (Continued)

| Sample Date | 01/23/90 | _,90 |
|---|---|---|
| Sample ID | 1148R | 1149R |
| Compound | Concentration, ppbv | |
| Acetylene | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.382(M) | 0.388(M) |
| Carbon tetrachloride | 0.135(L) | 0.136(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 |
| Benzene | 0.94 (H) | 0.95 (H) |
| Trichloroethylene | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 |
| Toluene | 1.52 (H) | 1.55 (H) |
| n-Octane | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 |
| Ethylbenzene | 0.19 (H) | 0.20 (H) |
| m/p-Xylene | 1.02 (H) | 1.03 (H) |
| Styrene/o-Xylene | 0.31 (H) | 0.35 (H) |
| Bromoform | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.04 (L) |
| p-Dichlorobenzene | 0.08 (L) | 0.05 (M) |
| o-Dichlorobenzene | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

R Replicate analysis

TABLE A5. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR FLFL

| Sample Date | 01/16/89 | 01/28/89 | 02/09/89 | 02/21/89 | 03/05/89 |
|---|---|---|---|---|---|
| Sample ID | 0667 | 0676 | 0690 | 0704 | 0721 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.64 (H) | 0.79 (H) | 0.27 (H) | 0.16 (H) | 0.14 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | 1.26 (M) | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.34 (H) | 0.10 (H) | <0.06 | 0.12 (M) | 0.10 (L) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | 0.227(M) |
| 1,1,1-Trichloroethane | 0.506(L) | 0.599(L) | 0.596(H) | 0.305(L) | 0.367(H) |
| Carbon tetrachloride | 0.142(L) | 0.158(L) | 0.164(L) | 0.168(L) | 0.190(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.68 (H) | 3.97 (H) | 1.64 (H) | 0.72 (H) | 0.78 (H) |
| Trichloroethylene | <0.004 | 0.065(L) | 0.086(M) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 1.72 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | 0.054(H) | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 7.38 (H) | 9.62 (M) | 4.01 (L) | 2.52 (H) | 2.26 (M) |
| n-Octane | 1.21 (L) | 0.34 (M) | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.26 (H) | 0.25 (M) | <0.07 | 0.56 (M) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.11 (L) | <0.02 | 0.04 (L) | <0.02 | <0.02 |
| Ethylbenzene | 0.70 (L) | 0.97 (M) | 0.39 (M) | 0.30 (H) | 0.22 (L) |
| m/p-Xylene | 4.66 (M) | 6.46 (H) | 2.53 (M) | 2.09 (H) | 1.39 (L) |
| Styrene/o-Xylene | 1.44 (H) | 2.27 (H) | 1.07 (M) | 0.85 (H) | 0.76 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.11 (H) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 1.36 (L) | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.20 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A5. FLFL (Continued)

| Sample Date | 03/17/89 | 04/10/89 | 04/29/89 | 05/04/89 | 05/16/89 |
|---|---|---|---|---|---|
| Sample ID | 0732 | 0767 | 0790 | 0801 | 0815 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 4.03 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.16 (H) | 0.50 (H) | 0.51 (L) | 0.12 (M) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | 0.21 (L) | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | 0.13 (L) | 0.44 (L) | <0.04 | <0.04 |
| Chloroprene | 0.03 (H) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.327(L) | 0.420(L) | 0.477(M) | 0.334(M) | <0.001 |
| Carbon tetrachloride | 0.175(L) | 0.155(L) | 0.141(L) | 0.148(L) | <0.001 |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.98 (M) | 2.03 (H) | 2.61 (M) | 0.78 (H) | 0.05 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.14 (M) | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.71 (M) | 4.18 (H) | 6.48 (H) | 2.22 (H) | 0.08 (L) |
| n-Octane | 0.12 (H) | 0.55 (H) | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | 0.02 (M) | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.06 (M) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.12 (H) | 0.16 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.29 (H) | 0.54 (H) | 0.70 (H) | 0.21 (H) | 0.04 (L) |
| m/p-Xylene | 1.95 (H) | 3.18 (H) | 4.57 (H) | 1.31 (H) | 0.09 (L) |
| Styrene/o-Xylene | 0.84 (H) | 1.86 (H) | 1.92 (H) | 0.74 (H) | 0.03 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A5. FLFL (Continued)

| Sample Date | 05/28/89 | 05/28/89 | 05/28/89 | 05/28/89 | 06/09/89 |
|---|---|---|---|---|---|
| Sample ID | 0830D | 0831D | 0830R | 0831R | 0847 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.07 (H) | 0.11 (H) | 0.09 (H) | 0.08 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.324(M) | 0.321(M) | 0.331(H) | 0.314(L) | 0.349(M) |
| Carbon tetrachloride | 0.136(L) | 0.138(L) | 0.135(L) | 0.138(L) | 0.144(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.86 (H) | 0.89 (L) | 0.84 (M) | 0.85 (M) | 0.71 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | 0.022(H) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | 2.70 (L) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.43 (M) | 2.40 (H) | 2.42 (M) | 2.47 (M) | 2.34 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.10 (M) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.26 (L) | 0.25 (M) | 0.24 (M) | 0.25 (M) | 0.28 (M) |
| m/p-Xylene | 1.53 (M) | 1.52 (L) | 1.43 (M) | 1.47 (L) | 1.67 (M) |
| Styrene/o-Xylene | 0.55 (L) | 0.75 (H) | 0.79 (L) | 0.69 (H) | 1.12 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.18 (L) | 0.04 (H) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.28 (L) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A5. FLFL (Continued)

| Sample Date | 06/21/89 | 07/03/89 | [illegible] | 07/03/89 | 07/03/89 |
|---|---|---|---|---|---|
| Sample ID | 0862 | 0878D | 0879D | 0878R | 0879R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.15 (M) | 0.28 (L) | 0.30 (H) | 0.32 (L) | 0.27 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.33 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.376(H) | 0.354(M) | 0.391(M) | 0.405(H) | 0.397(L) |
| Carbon tetrachloride | 0.139(L) | 0.127(L) | 0.131(L) | 0.131(L) | 0.129(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.17 (H) | 2.03 (H) | 2.01 (H) | 2.05 (H) | 2.08 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.27 (H) | 4.94 (H) | 4.82 (M) | 4.76 (H) | 4.66 (M) |
| n-Octane | 0.27 (M) | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.06 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.48 (L) | <0.07 | <0.07 | 0.23 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.37 (H) | 0.65 (L) | 0.63 (H) | 0.60 (L) | 0.63 (H) |
| m/p-Xylene | 2.40 (H) | 3.44 (L) | 3.62 (H) | 3.47 (L) | 3.56 (H) |
| Styrene/o-Xylene | 0.18 (L) | 1.94 (L) | 2.00 (H) | 1.94 (L) | 1.98 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A5. FLFL (Continued)

| Sample Date | 07/15/89 | 07/27/89 | 08/08/89 | 08/20/89 | 09/01/89 |
|---|---|---|---|---|---|
| Sample ID | 0892 | 0905 | 0920 | 0934 | 0952 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.31 (M) | 0.17 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.08 (H) | <0.06 | 0.12 (H) | 0.12 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.168(M) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.478(M) | 0.370(L) | 0.452(M) | 0.309(L) | 0.333(M) |
| Carbon tetrachloride | 0.130(L) | 0.128(L) | 0.126(L) | 0.135(L) | 0.128(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.48 (H) | 1.00 (H) | 1.68 (H) | 1.03 (H) | 1.48 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.088(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.60 (M) | <0.04 | <0.04 | <0.04 | 0.38 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | 0.036(L) |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 6.73 (M) | 3.11 (M) | 5.10 (H) | 3.00 (M) | 4.87 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.23 (L) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.24 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.81 (H) | 0.36 (H) | 0.60 (H) | 0.52 (L) | 0.62 (H) |
| m/p-Xylene | 4.96 (H) | 1.84 (H) | 3.57 (H) | 2.57 (L) | 3.55 (H) |
| Styrene/o-Xylene | 2.44 (H) | 1.14 (H) | 2.18 (H) | 1.70 (L) | 1.92 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.10 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.79 (H) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A5. FLFL (Continued)

| Sample Date | 09/13/89 | 09/25/89 | 09/25/89 | 09/25/89 | 09/25/89 |
|---|---|---|---|---|---|
| Sample ID | 0963 | 0977D | 0978D | 0977R | 0978R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 0.45 (L) | 1.93 (L) | <1.00 | <1.00 | 2.42 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.23 (H) | <0.10 | <0.10 | 0.24 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.04 (M) | 0.03 (H) | <0.06 | 0.06 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.253(L) | 0.422(M) | 0.311(L) | 0.309(M) | 0.310(L) |
| Carbon tetrachloride | 0.125(L) | 0.124(L) | 0.126(L) | 0.125(L) | 0.128(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.79 (M) | 1.39 (H) | 1.35 (H) | 1.42 (H) | 1.36 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.12 (L) | <0.04 | 0.20 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.33 (M) | 4.25 (M) | 4.27 (L) | 4.34 (M) | 4.20 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.21 (L) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.10 (L) | 0.25 (M) | 0.17 (H) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.04 (L) | <0.02 | 0.10 (L) | <0.02 | <0.02 |
| Ethylbenzene | 0.33 (H) | 0.49 (M) | 0.51 (M) | 0.49 (M) | 0.50 (L) |
| m/p-Xylene | 3.28 (M) | 2.84 (M) | 2.97 (M) | 2.74 (M) | 2.81 (L) |
| Styrene/o-Xylene | 0.84 (H) | 1.94 (M) | 1.88 (M) | 1.96 (L) | 1.68 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.05 (L) | 0.08 (L) | <0.02 | 0.28 (M) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.26 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A5. FLFL (Continued)

| Sample Date | 10/07/89 | 10/19/89 | 10/31/89 | 11/12/89 | 11/24/89 |
|---|---|---|---|---|---|
| Sample ID | 0996 | 1013 | 1030 | 1045 | 1063 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 0.27 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.33 (H) | 0.28 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.260(L) | 0.369(L) | 2.009(H) | 0.372(M) | 0.369(L) |
| Carbon tetrachloride | 0.121(L) | 0.117(L) | 0.122(L) | 0.129(L) | 0.121(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.39 (H) | 2.14 (M) | 3.00 (H) | 1.43 (L) | 1.66 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.19 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.35 (M) | 5.98 (H) | 6.92 (H) | 4.09 (L) | 5.58 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.52 (L) | 0.71 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.41 (M) | 0.85 (H) | 1.10 (H) | 0.55 (L) | 0.59 (L) |
| m/p-Xylene | 2.20 (M) | 4.64 (H) | 6.44 (H) | 2.89 (L) | 3.16 (H) |
| Styrene/o-Xylene | 1.54 (H) | 2.88 (H) | 3.35 (H) | 1.98 (L) | 1.85 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.51 (M) | <0.09 |
| o-Dichlorobenzene | 0.18 (L) | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A5. FLFL (Continued)

| Sample Date | 12/06/89 | 12/18/89 | 12/30/89 | [illegible]/90 | 01/23/90 |
|---|---|---|---|---|---|
| Sample ID | 1083 | 1098 | 1112 | 1133 | 1147 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 2.79 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.25 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | 0.54 (H) | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.080(H) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.756(M) | 0.613(M) | 0.460(M) | 0.602(H) | 0.687(M) |
| Carbon tetrachloride | 0.120(L) | 0.120(L) | 0.137(L) | 0.123(L) | 0.132(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 3.43 (H) | 4.18 (H) | 3.58 (H) | 2.80 (H) | 2.16 (M) |
| Trichloroethylene | <0.004 | 0.056(M) | <0.004 | <0.004 | 0.020(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | 0.30 (L) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 9.84 (H) | 10.53 (H) | 8.43 (H) | 6.32 (H) | 5.77 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.07 (M) |
| Tetrachloroethylene | <0.07 | 0.44 (H) | <0.07 | <0.07 | 0.27 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 1.09 (H) | 1.20 (H) | 1.12 (H) | 0.72 (H) | 0.63 (H) |
| m/p-Xylene | 6.32 (H) | 6.88 (H) | 6.63 (H) | 4.26 (L) | 3.49 (H) |
| Styrene/o-Xylene | 2.72 (H) | 3.70 (H) | 3.86 (H) | 2.32 (L) | 2.32 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A6. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR H1TX

| Sample Date | 01/16/89 | 01/28/89 | 02/09/89 | 02/22/89 | 03/05/89 |
|---|---|---|---|---|---|
| Sample ID | 0665 | 0675 | 0689 | 0705 | 0720 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 4.45 (L) |
| Propylene | <0.10 | 39.98 (M) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 1.15 (H) | 0.67 (H) | 0.47 (H) | 0.12 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.09 (H) | 0.32 (H) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.287(M) | 0.177(L) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.971(L) | 0.494(L) | 0.471(L) | 0.491(H) | 0.587(M) |
| Carbon tetrachloride | 0.160(L) | 0.352(L) | 0.255(L) | 0.182(L) | 0.341(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.77 (H) | 1.97 (H) | 2.18 (M) | 1.08 (H) | 0.57 (L) |
| Trichloroethylene | <0.004 | <0.004 | 0.120(L) | <0.004 | 0.044(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.00 (H) | 1.77 (L) | 3.34 (M) | 1.31 (M) | 0.45 (L) |
| n-Octane | <0.03 | <0.03 | 0.21 (H) | <0.03 | 0.03 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.24 (H) | <0.07 | 0.08 (L) | 0.12 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.54 (H) | 0.50 (H) | 0.51 (M) | 0.17 (M) | 0.02 (M) |
| m/p-Xylene | 2.47 (H) | 1.48 (H) | 3.26 (M) | 1.04 (M) | 0.35 (L) |
| Styrene/o-Xylene | 0.79 (H) | 0.51 (L) | 0.82 (H) | 0.34 (H) | 0.14 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.02 (M) | 0.03 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.15 (H) | 0.09 (H) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.06 (M) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A6. H1TX (Continued)

| Sample Date | 03/17/89 | 03/29/89 | 04/10/89 | 04/22/89 | 05/04/89 |
|---|---|---|---|---|---|
| Sample ID | 0734 | 0753 | 0768 | 0784 | 0800 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 2.16 (L) | <1.00 |
| Propylene | <0.10 | 0.20 (M) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | 1.76 (H) | <0.20 | <0.20 | 0.59 (L) |
| 1,3-Butadiene | 0.77 (H) | 0.97 (M) | 0.19 (H) | 0.67 (M) | 0.56 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | 0.03 (L) | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.07 (M) | <0.06 | <0.06 | <0.06 | 0.02 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.189(M) | <0.006 | 0.522(H) | 0.325(L) |
| 1,1,1-Trichloroethane | 0.389(L) | 0.651(L) | 0.337(L) | 0.548(L) | 0.281(L) |
| Carbon tetrachloride | 0.175(L) | 0.166(L) | 0.126(L) | 0.143(L) | 0.150(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.97 (H) | 3.20 (L) | 0.82 (H) | 3.51 (M) | 1.41 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.71 (H) | <0.04 | <0.04 | 0.41 (M) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.05 (L) | 3.12 (M) | 1.30 (H) | 5.45 (H) | 1.46 (L) |
| n-Octane | 0.16 (L) | <0.03 | <0.03 | 0.39 (H) | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 2.40 (M) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.05 (L) | <0.07 | 0.09 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.27 (H) | 0.41 (M) | 0.20 (H) | 0.50 (H) | 0.23 (M) |
| m/p-Xylene | 1.56 (H) | 2.97 (M) | 0.74 (M) | 3.10 (H) | 1.95 (H) |
| Styrene/o-Xylene | 0.46 (H) | 0.89 (M) | 0.24 (M) | 0.88 (H) | 0.51 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.06 (H) | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A6. H1TX (Continued)

| Sample Date | 05/18/89 | 05/28/89 | 05/28/89 | 05/28/89 | 05/28/89 |
|---|---|---|---|---|---|
| Sample ID | 0819 | 0832D | 0833D | 0832R | 0833R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.98 (H) | 0.92 (H) | 1.00 (H) | 0.93 (H) | 0.98 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.78 (H) | 0.29 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.577(L) | 0.562(L) | 0.593(H) | 0.542(H) |
| 1,1,1-Trichloroethane | 0.356(L) | 0.248(L) | 0.253(L) | 0.254(H) | 0.259(L) |
| Carbon tetrachloride | 0.146(L) | 0.159(L) | 0.153(L) | 0.154(L) | 0.152(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.46 (H) | 1.43 (H) | 1.44 (H) | 1.50 (H) | 1.56 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.47 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | 0.15 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.74 (H) | 2.58 (M) | 2.55 (H) | 2.56 (L) | 2.52 (M) |
| n-Octane | <0.03 | <0.03 | 0.22 (L) | <0.03 | 0.20 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 1.57 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.03 (H) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.01 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.15 (H) | 0.21 (H) | 0.21 (L) | 0.21 (M) | 0.28 (M) |
| m/p-Xylene | 0.60 (H) | 1.18 (H) | 1.04 (L) | 1.12 (M) | 1.32 (H) |
| Styrene/o-Xylene | 0.20 (H) | 0.29 (L) | 0.31 (L) | 0.30 (L) | 0.31 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A6. H1TX (Continued)

| Sample Date | 06/09/89 | 07/03/89 | 07/15/89 | [illegible]/15/89 | [illegible]/15/89 |
|---|---|---|---|---|---|
| Sample ID | 0848 | 0881 | 08930 | 08940 | 393R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.29 (L) | 0.66 (H) | 0.98 (H) | 1.00 (H) | 1.06 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.16 (L) | 0.11 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.180(M) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.406(L) | 0.705(L) | 0.235(L) | 0.246(L) | 0.206(L) |
| Carbon tetrachloride | 0.289(L) | 0.125(L) | 0.147(L) | 0.137(L) | 0.132(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.12 (L) | 2.40 (H) | 1.39 (H) | 1.35 (H) | 1.32 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.33 (H) | <0.04 | 0.30 (L |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.41 (L) | <0.04 | <0.04 |
| Toluene | 2.50 (L) | 3.58 (H) | 1.58 (L) | 1.50 (L) | 1.65 (H |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.12 (L) | <0.07 | 0.08 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.03 (L) | <0.02 | <0.02 |
| Ethylbenzene | 0.32 (M) | 0.52 (H) | 0.32 (H) | 0.32 (M) | 0.25 (H |
| m/p-Xylene | 1.77 (M) | 3.18 (H) | 2.03 (H) | 2.46 (M) | 1.95 (H |
| Styrene/o-Xylene | 0.52 (M) | 1.04 (H) | 0.59 (L) | 0.70 (H) | 0.58 (L |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.03 (L) | <0.02 | 0.01 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 2.19 (L) | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

D Duplicate sample R Replicate analysis

ontinued.

TABLE A6. H1TX (Continued)

| Sample Date | 07/15/89 | 09/27/89 | 10/03/89 | 10/07/89 | 10/13/89 |
|---|---|---|---|---|---|
| Sample ID | 0894R | 0982 | 0991 | 0997 | 1007 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 32.02 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 1.09 (H) | <0.10 | 1.02 (M) | <0.10 | 1.47 (L) |
| Bromomethane | 0.07 (L) | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 2.90 (L) | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.18 (M) | 0.08 (H) | 0.01 (M) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.241(L) | 0.827(H) | 1.690(M) | 0.969(L) | 0.629(L) |
| Carbon tetrachloride | 0.136(L) | 0.127(L) | 0.130(L) | 0.130(L) | 0.228(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.35 (H) | 1.20 (H) | 4.70 (H) | 1.90 (H) | 3.15 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.10 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.48 (H) | 1.84 (M) | 8.46 (M) | 2.85 (H) | 3.36 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.22 (M) | <0.04 |
| 1,1,2-Trichloroethane | 0.06 (M) | 0.02 (L) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.18 (L) | <0.07 | 0.21 (M) | 0.36 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.08 (H) |
| Ethylbenzene | 0.22 (H) | 0.28 (M) | 1.27 (M) | 0.45 (H) | 0.68 (H) |
| m/p-Xylene | 1.94 (H) | 1.42 (M) | 6.38 (H) | 2.04 (H) | 2.82 (H) |
| Styrene/o-Xylene | 0.61 (H) | 0.57 (M) | 2.60 (H) | 0.79 (H) | 1.22 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | 0.030(H) | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.16 (H) | <0.09 | 0.14 (H) | 1.51 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.13 (M) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A6. H1TX (Continued)

| Sample Date | 10/19/89 | 10/19/89 | 10/19/89 | 10/19/89 | 10/25/89 |
|---|---|---|---|---|---|
| Sample ID | 1018D | 1019D | 1018R | 1019R | 1027 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 0.58 (L) | 2.89 (L) |
| Propylene | 15.35 (M) | 11.70 (L) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.18 (H) | 0.25 (H) | 0.15 (H) | 0.20 (L) | 1.50 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.06 (H) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.494(L) | 0.336(L) | 0.491(L) | 0.322(L) | 0.649(L) |
| Carbon tetrachloride | 0.128(L) | 0.141(L) | 0.131(L) | 0.128(L) | 0.213(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.33 (H) | 1.23 (H) | 1.37 (H) | 1.31 (H) | 2.53 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 1.34 (L) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.96 (M) | 1.88 (M) | 1.85 (M) | 1.87 (M) | 2.65 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.03 (L) | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (H) | 0.06 (M) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.13 (L) | 0.16 (M) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.25 (M) | 0.24 (M) | 0.25 (M) | 0.26 (L) | 1.61 (H) |
| m/p-Xylene | 1.34 (M) | 1.35 (H) | 1.33 (H) | 1.32 (L) | 3.05 (H) |
| Styrene/o-Xylene | 0.52 (L) | 0.45 (L) | 0.51 (L) | 0.43 (H) | 1.13 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.12 (M) | 0.11 (H) | 0.13 (M) | <0.09 | 0.16 (M) |
| o-Dichlorobenzene | <0.02 | 0.09 (L) | 0.09 (M) | 0.06 (L) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

D Duplicate sample R Replicate analysis

TABLE A6. H1TX (Continued)

| Sample Date | 10/31/89 | 11/06/89 | 11/12/89 | 11/18/89 | 11/24/89 |
|---|---|---|---|---|---|
| Sample ID | 1033 | 1039 | 1053 | 1058 | 1066 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 14.40 (H) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 1.63 (H) | 1.48 (H) | 0.50 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.22 (L) | 0.27 (M) | 0.95 (H) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.633(L) | 1.098(L) | 1.344(L) | 0.568(L) | 0.735(L) |
| Carbon tetrachloride | 0.128(L) | 0.166(L) | 1.781(L) | 0.599(L) | 0.168(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 6.00 (L) | 1.96 (L) | 3.61 (L) | 2.36 (H) | 2.40 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 11.36 (H) | 2.40 (H) | 5.46 (M) | 2.24 (M) | 2.54 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | 0.06 (L) | <0.04 | 0.23 (M) | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.56 (L) | <0.07 | 0.01 (L) | 0.09 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.05 (M) | <0.02 | 0.02 (H) | 0.04 (H) |
| Ethylbenzene | 0.66 (M) | 0.44 (H) | 0.64 (L) | 0.88 (M) | 0.47 (M) |
| m/p-Xylene | 2.75 (M) | 2.43 (H) | 2.98 (L) | 1.58 (M) | 1.73 (M) |
| Styrene/o-Xylene | 1.33 (L) | 0.94 (H) | 1.48 (L) | 0.84 (H) | 0.76 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.15 (M) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.26 (M) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A6. HITX (Continued)

| Sample Date | 11/30/89 | 12/06/89 | [illegible] | [illegible] | 01/03/90 |
|---|---|---|---|---|---|
| Sample ID | 1074 | 1082 | 1094 | 1100 | 1119 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 3.34 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 8.47 (M) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 2.16 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.08 (M) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.493(L) | 0.612(L) | 0.561(M) | 1.582(H) | 0.631(L) |
| Carbon tetrachloride | 0.128(L) | 0.158(L) | 0.141(L) | 0.145(L) | 0.164(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.25 (H) | 1.66 (H) | 1.39 (H) | 1.17 (H) | 3.17 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | 0.921(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.04 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.42 (M) | 2.62 (H) | 1.69 (H) | 1.21 (M) | 2.33 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.12 (H) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.32 (H) |
| Ethylbenzene | 0.23 (L) | 0.33 (M) | .25 (H) | 0.21 (M) | 0.30 (H) |
| m/p-Xylene | 1.21 (L) | 2.87 (H) | 26 (H) | 1.10 (H) | 1.06 (H) |
| Styrene/o-Xylene | 0.44 (L) | 0.73 (H) | 0.48 (H) | 0.48 (H) | 0.52 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.05 (M) | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.42 (M) | 0.12 (L) | 0.07 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A6. H1TX (Continued)

| Sample Date | 01/11/90 | 01/17/90 | 01/23/90 |
|---|---|---|---|
| Sample ID | 1132 | 1137 | 1152 |
| Compound | Concentration, ppbv | | |
| Acetylene | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.50 (L) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | 0.48 (H) | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.356(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.901(L) | 0.606(L) | 1.006(L) |
| Carbon tetrachloride | 0.176(L) | 0.138(L) | 0.159(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Benzene | 2.59 (H) | 1.58 (L) | 7.56 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 3.08 (M) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| Toluene | 2.35 (H) | 2.44 (H) | 10.72 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.52 (H) | 0.23 (L) | 0.91 (H) |
| m/p-Xylene | 5.78 (H) | 0.91 (L) | 5.01 (H) |
| Styrene/o-Xylene | 1.08 (H) | 0.42 (L) | 1.66 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.03 (L) |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.29 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A7. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR MIFL

| Sample Date | 01/19/89 | 01/30/89 | 02/09/89 | [illegible]/89 | 02/09/89 |
|---|---|---|---|---|---|
| Sample ID | 0663 | 0679 | 0694D | 0695D | 0694R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 6.50 (M) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.42 (H) | 0.90 (H) | 0.32 (H) | 0.31 (H) | 0.29 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | 1.73 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.88 (H) | 0.13 (L) | 0.10 (M) | 0.10 (L) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.934(L) | 0.917(M) | 1.063(H) | 0.879(M) | 1.022(H) |
| Carbon tetrachloride | 0.139(L) | 0.151(L) | 0.183(L) | 0.178(L) | 0.178(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.94 (M) | 4.15 (H) | 1.67 (H) | 1.64 (H) | 1.69 (H) |
| Trichloroethylene | 1.81 (H) | 0.870(M) | 0.729(M) | 0.246(M) | 0.506(H) |
| 1,2-Dichloropropane | 0.46 (M) | 0.78 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 8.81 (H) | 12.15 (H) | 5.54 (H) | 5.34 (M) | 5.50 (H) |
| n-Octane | <0.03 | <0.03 | 0.18 (H) | 0.14 (L) | 0.13 (H) |
| trans-1,3-Dichloropropylene | 0.45 (M) | 0.81 (H) | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 1.19 (H) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.39 (H) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.18 (L) | <0.02 | 0.15 (M) | 0.13 (L) | 0.13 (L) |
| Ethylbenzene | 0.85 (H) | 1.16 (M) | 0.44 (M) | 0.44 (M) | 0.48 (H) |
| m/p-Xylene | 5.72 (L) | 7.99 (M) | 2.86 (M) | 2.85 (M) | 3.00 (M) |
| Styrene/o-Xylene | 2.00 (H) | 2.49 (H) | 1.06 (M) | 1.04 (M) | 1.19 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 4.15 (M) | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 02/09/89 | 02/21/89 | 03/05/89 | 03/18/89 | 03/29/89 |
|---|---|---|---|---|---|
| Sample ID | 0695R | 0706 | 0722 | 0749 | 0756 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 0.71 (L) |
| Propylene | <0.10 | 0.53 (H) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.29 (H) | <0.10 | 0.08 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.06 (L) | 0.07 (M) | <0.06 | 0.03 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | 0.217(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.928(H) | <0.001 | 1.019(H) | 0.423(L) | 0.450(L) |
| Carbon tetrachloride | 0.183(L) | <0.001 | 0.191(L) | 0.161(L) | 0.160(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.60 (H) | 0.05 (H) | 0.67 (H) | 1.12 (L) | 1.24 (L) |
| Trichloroethylene | 0.251(M) | <0.004 | 1.166(H) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.13 (L) | <0.04 | <0.04 |
| Toluene | 5.19 (M) | 0.21 (L) | 2.20 (L) | 3.71 (L) | 3.12 (L) |
| n-Octane | 0.11 (L) | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.09 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.16 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.12 (L) | 0.06 (M) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.44 (M) | 0.02 (L) | 0.20 (M) | 0.33 (L) | 0.36 (L) |
| m/p-Xylene | 2.80 (M) | 0.14 (M) | 1.64 (H) | 2.39 (L) | 2.62 (L) |
| Styrene/o-Xylene | 1.02 (M) | 0.04 (H) | 0.50 (L) | 0.82 (L) | 0.77 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | 0.040(H) | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.04 (H) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 5.86 (M) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 04/10/89 | 04/22/89 | 04/22/89 | [illegible]/22/89 | 04/22/89 |
|---|---|---|---|---|---|
| Sample ID | 0774 | 0787D | 0788D | 0787R | 0788R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 1.45 (L) | 1.24 (L) | 2.13 (L) | 1.10 (L) |
| Propylene | 0.43 (H) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.11 (L) | 0.16 (M) | 0.14 (L) | 0.11 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.082(M) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.706(H) | 0.537(H) | 0.392(L) | 0.516(L) | 0.407(L) |
| Carbon tetrachloride | 0.136(L) | 0.138(L) | 0.136(L) | 0.143(L) | 0.141(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.01 (H) | 0.85 (M) | 0.85 (M) | 0.86 (M) | 0.91 (M) |
| Trichloroethylene | 1.033(H) | 0.389(H) | <0.004 | 0.457(L) | <0.004 |
| 1,2-Dichloropropane | 1.26 (M) | <0.04 | 0.56 (H) | <0.04 | 0.67 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.30 (H) | 2.33 (L) | 2.33 (L) | 2.46 (H) | 2.42 (L) |
| n-Octane | <0.03 | <0.03 | 0.04 (M) | 0.02 (H) | 0.08 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.05 (L) | 0.05 (H) | 0.05 (H) | 0.06 (L) |
| Tetrachloroethylene | 0.91 (H) | <0.07 | <0.07 | 0.06 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.63 (H) | 0.19 (H) | 0.18 (H) | 0.25 (M) | 0.18 (H) |
| m/p-Xylene | 4.66 (H) | 1.26 (H) | 1.19 (H) | 1.42 (M) | 1.29 (H) |
| Styrene/o-Xylene | 1.13 (H) | 0.43 (H) | 0.41 (H) | 0.48 (H) | 0.43 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 1.91 (L) | <0.09 | 0.35 (L) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 05/04/89 | 05/16/89 | 05/28/89 | 06/09/89 | 06/21/89 |
|---|---|---|---|---|---|
| Sample ID | 0805 | 0820 | 0835 | 0851 | 0880 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 1.86 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.12 (M) | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 7.87 (H) | <0.11 | 2.59 (L) | 10.77 (M) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.15 (M) |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.07 (H) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.710(H) | 2.504(H) | 1.587(L) | 1.487(H) | 2.195(H) |
| Carbon tetrachloride | 0.149(L) | 0.166(L) | 0.144(L) | 0.149(L) | 0.158(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.69 (H) | 1.85 (H) | 1.13 (H) | 0.24 (H) | 1.04 (H) |
| Trichloroethylene | 0.644(H) | 3.788(M) | 1.373 (H) | 0.856(M) | 3.568(H) |
| 1,2-Dichloropropane | 1.09 (H) | 1.73 (H) | 0.68 (M) | 0.98 (M) | 0.23 (M) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.97 (H) | 5.84 (H) | 5.26 (H) | 4.19 (L) | 4.11 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.10 (M) | 0.18 (M) | 0.087(H) | 0.06 (H) | 0.11 (H) |
| Tetrachloroethylene | 0.07 (L) | 0.13 (L) | 0.05 (L) | <0.07 | 0.41 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.53 (H) | 0.68 (H) | 0.33 (H) | 0.30 (H) | 0.56 (H) |
| m/p-Xylene | 3.82 (H) | 4.38 (H) | 2.26 (H) | 1.70 (H) | 4.04 (H) |
| Styrene/o-Xylene | 0.94 (H) | 1.82 (H) | 0.78 (H) | 0.58 (H) | 1.60 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A7. MIFL (Continued)

| Sample Date | 07/03/89 | 07/15/89 | 07/27/89 | 07/27/89 | 07/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0876 | 0896 | 0909D | 0910D | 0909R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 5.52 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | 12.10 (L) | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.35 (L) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | 4.88 (H) | 8.50 (M) | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.91 (L) | <0.06 | 0.05 (H) | 0.15 (M) | 0.08 (L) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.238(H) | 0.106(H) | 0.102(H) | 0.131(H) |
| 1,1,1-Trichloroethane | 0.800(H) | 2.031(H) | 0.410(M) | 0.329(M) | 0.471(H) |
| Carbon tetrachloride | 0.134(L) | 0.152(L) | 0.132(L) | 0.130(L) | 0.135(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.82 (H) | 1.38 (H) | 1.36 (H) | 1.31 (H) | 1.30 (H) |
| Trichloroethylene | 1.051(H) | 2.797(M) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.26 (L) | 0.20 (M) |
| Bromodichloromethane | 0.024(M) | <0.001 | <0.001 | <0.001 | 0.018(L) |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.24 (H) | <0.04 | 0.34 (L) |
| Toluene | 4.88 (H) | 4.94 (H) | 4.73 (H) | 4.40 (H) | 4.56 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.09 (L) | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.81 (M) | <0.07 | 0.69 (H) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.16 (H) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.55 (H) | 0.52 (H) | 0.53 (H) | 0.55 (M) | 0.44 (H) |
| m/p-Xylene | 3.31 (H) | 2.97 (H) | 2.60 (H) | 2.67 (H) | 2.55 (H) |
| Styrene/o-Xylene | 1.47 (L) | 1.49 (L) | 1.15 (L) | 1.24 (M) | 1.17 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.04 (L) |
| p-Dichlorobenzene | 0.34 (H) | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 07/27/89 | 08/08/89 | 08/20/89 | 08/26/89 | 08/26/89 |
|---|---|---|---|---|---|
| Sample ID | 0910R | 0925 | 0936 | 0949D | 0950D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 1.72 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | 0.69 (H) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | 3.17 (H) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.10 (H) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.100(L) | <0.006 | 0.124(M) | 0.260(L) | <0.006 |
| 1,1,1-Trichloroethane | 0.336(M) | 0.482(M) | 0.387(L) | 0.859(L) | 0.444(L) |
| Carbon tetrachloride | 0.133(L) | 0.138(L) | 0.142(L) | 0.154(L) | 0.136(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.30 (H) | 1.59 (H) | 0.60 (H) | 4.14 (M) | 1.09 (H) |
| Trichloroethylene | 0.212(L) | 0.316(H) | 0.409(L) | 0.238(M) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 1.48 (M) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.21 (H) | 4.83 (H) | 1.89 (H) | 13.15 (H) | 2.49 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.38 (M) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.49 (H) | 0.74 (M) | 0.41 (L) | 2.19 (H) | 0.63 (H) |
| m/p-Xylene | 2.50 (H) | 3.35 (H) | 1.30 (M) | 15.43 (H) | 5.09 (H) |
| Styrene/o-Xylene | 1.02 (H) | 1.52 (M) | 0.55 (L) | 4.70 (L) | 1.82 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.01 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 08/26/89 | 08/26/89 | [illegible] | [illegible] | 09/25/89 |
|---|---|---|---|---|---|
| Sample ID | 0949R | 0950R | 0953 | 0969 | 09[illegible]3 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 0.52 (L) | 1.03 (L) | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | 0.03 (H) | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | 2.89 (M) | <0.11 | <0.11 | 8.60 (H) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.17 (H) |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.08 (L) | 0.30 (H) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.826(L) | 0.439(L) | 0.297(L) | 0.299(L) | 1.729(H) |
| Carbon tetrachloride | 0.154(L) | 0.133(L) | 0.126(L) | 0.123(L) | 0.148(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 4.03 (M) | 1.24 (M) | 1.22 (H) | 0.31 (M) | 0.76 (H) |
| Trichloroethylene | 0.241(L) | <0.004 | 0.185(H) | <0.004 | 2.120(H) |
| 1,2-Dichloropropane | 2.40 (L) | <0.04 | 0.16 (L) | 0.09 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 12.98 (H) | 2.55 (H) | 3.54 (H) | 2.42 (H) | 3.52 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.22 (L) | <0.07 | 0.49 (M) | <0.07 | 0.09 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.06 (L) | <0.02 | <0.02 |
| Ethylbenzene | 2.12 (H) | 0.60 (H) | 0.41 (H) | 0.32 (H) | 0.34 (H) |
| m/p-Xylene | 15.30 (H) | 5.20 (H) | 2.10 (H) | 1.96 (L) | 2.11 (H) |
| Styrene/o-Xylene | 4.42 (H) | 1.96 (H) | 0.87 (L) | 0.84 (H) | 0.99 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.14 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 10/07/89 | 10/19/89 | 10/19/89 | 10/19/89 | 10/19/89 |
|---|---|---|---|---|---|
| Sample ID | 1010 | 1015D | 1016D | 1015R | 1016R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 1.54 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | 0.17 (H) | <0.20 | 0.41 (H) |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.37 (M) | 0.04 (M) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.024(L) | <0.006 | 0.036(L) | 0.026(L) |
| 1,1,1-Trichloroethane | 0.307(L) | 0.287(L) | 0.260(L) | 0.283(M) | 0.240(L) |
| Carbon tetrachloride | 0.125(L) | 0.123(L) | 0.124(L) | 0.121(L) | 0.120(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.84 (H) | 1.54 (L) | 1.37 (H) | 1.35 (H) | 1.33 (H) |
| Trichloroethylene | 0.177(H) | 0.134(L) | 0.117(M) | 0.140(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.43 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.29 (H) | 3.37 (H) | 3.58 (H) | 3.48 (H) | 3.15 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.04 (M) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.51 (M) | 0.48 (H) | 0.44 (H) | 0.44 (H) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.30 (H) | 0.62 (H) | 0.61 (H) | 1.16 (L) | 0.47 (H) |
| m/p-Xylene | 1.63 (H) | 2.80 (H) | 2.74 (H) | 4.09 (M) | 2.42 (H) |
| Styrene/o-Xylene | 0.77 (M) | 1.17 (H) | 1.07 (H) | 1.95 (L) | 0.99 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.72 (H) | <0.09 | 0.28 (M) | 0.48 (H) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 10/31/89 | 10/31/89 | 10/31/89 | 10/31/89 | 11/12/89 |
|---|---|---|---|---|---|
| Sample ID | 1035D | 1036D | 1035R | 1036R | 1051 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 7.82 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | 9.27 (H) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.36 (L) | 0.30 (L) | 0.35 (L) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.627(M) | 0.636(H) | 0.734(H) | 0.679(H) | 1.385(H) |
| Carbon tetrachloride | 0.120(L) | 0.124(L) | 0.139(L) | 0.127(L) | 0.135(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.43 (L) | 2.36 (L) | 2.31 (L) | 2.40 (M) | 1.60 (H) |
| Trichloroethylene | 0.520(L) | <0.004 | 0.246(L) | 0.232(L) | 1.495(H) |
| 1,2-Dichloropropane | <0.04 | 0.39 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 8.08 (L) | 6.27 (M) | 6.36 (M) | 6.14 (M) | 6.23 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | 0.27 (L) | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.04 (H) | <0.02 | 0.52 (L) | <0.02 | 3.22 (M) |
| Tetrachloroethylene | 0.52 (L) | <0.07 | <0.07 | 0.56 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.16 (L) |
| Ethylbenzene | 0.94 (M) | 0.93 (M) | 0.90 (M) | 0.86 (H) | 0.94 (H) |
| m/p-Xylene | 4.63 (M) | 4.73 (M) | 4.79 (M) | 4.67 (M) | 4.89 (H) |
| Styrene/o-Xylene | 1.90 (L) | 1.91 (L) | 2.02 (L) | 1.87 (L) | 2.62 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.51 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A7. MIFL (Continued)

| Sample Date | 11/24/89 | 12/06/89 | 12/18/89 | 12/30/89 | 01/11/90 |
|---|---|---|---|---|---|
| Sample ID | 1069 | 1088 | 1105 | 1114 | 1136 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 0.57 (L) | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | 7.32 (M) | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | 0.11 (L) | 0.16 (L) |
| Methylene chloride | 5.56 (H) | 5.51 (H) | 5.08 (H) | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.874(H) | 1.217(H) | 1.127(H) | 0.296(H) | 1.033(H) |
| Carbon tetrachloride | 0.144(L) | 0.125(L) | 0.138(L) | 0.136(L) | 0.146(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.02 (H) | 2.81 (H) | 2.20 (H) | 1.28 (H) | 2.03 (H) |
| Trichloroethylene | 0.959(H) | 0.702(H) | 0.934(H) | 0.140(M) | 0.646(M) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | 0.23 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.48 (H) | 8.46 (H) | 6.95 (H) | 3.81 (H) | 5.58 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.25 (L) | <0.07 | 0.63 (L) | 0.07 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.43 (M) | 0.88 (H) | 0.63 (H) | 0.40 (H) | 0.68 (H) |
| m/p-Xylene | 2.39 (M) | 5.19 (H) | 3.54 (H) | 2.37 (H) | 3.69 (H) |
| Styrene/o-Xylene | 1.04 (H) | 2.10 (H) | 1.49 (H) | 0.90 (H) | 1.46 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.030(M) | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | 0.13 (H) | <0.02 | 0.30 (M) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A7. MIFL (Continued)

| Sample Date | 01/23/90 |
|---|---|
| Sample ID | 1150 |
| **Compound** | **Concentration, ppbv** |
| Acetylene | <1.00 |
| Propylene | <0.10 |
| Chloromethane | <0.20 |
| Vinyl chloride | <0.20 |
| 1,3-Butadiene | <0.10 |
| Bromomethane | <0.20 |
| Chloroethane | <0.10 |
| Methylene chloride | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 |
| 1,1-Dichloroethane | <0.04 |
| Chloroprene | <0.06 |
| Bromochloromethane | <0.003 |
| Chloroform | <0.006 |
| 1,1,1-Trichloroethane | 0.756(H) |
| Carbon tetrachloride | 0.142(L) |
| 1,2-Dichloroethane | <0.04 |
| Benzene | 1.54 (H) |
| Trichloroethylene | 0.500(H) |
| 1,2-Dichloropropane | 0.31 (M) |
| Bromodichloromethane | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 |
| Toluene | 4.79 (H) |
| n-Octane | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 |
| 1,1,2-Trichloroethane | <0.02 |
| Tetrachloroethylene | 0.30 (M) |
| Dibromochloromethane | <0.001 |
| Chlorobenzene | <0.02 |
| Ethylbenzene | 0.55 (H) |
| m/p-Xylene | 2.92 (H) |
| Styrene/o-Xylene | 1.19 (H) |
| Bromoform | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 |
| m-Dichlorobenzene | <0.02 |
| p-Dichlorobenzene | 0.21 (L) |
| o-Dichlorobenzene | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A8. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR PEFL

| Sample Date | 04/22/89 | 12/11/89 | 12/18/89 | 01/04/90 | 01/11/90 |
|---|---|---|---|---|---|
| Sample ID | 0786 | 1087 | 1101 | 1122 | 1131 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | 0.08 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.313(L) | 0.738(M) | 0.237(M) | 0.310(M) | 0.387(L) |
| Carbon tetrachloride | 0.153(L) | 0.130(L) | 0.137(L) | 0.139(L) | 0.155(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.72 (M) | 0.76 (H) | 0.40 (H) | 0.38 (H) | 1.01 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | 0.408(M) |
| 1,2-Dichloropropane | 0.58 (M) | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.24 (H) | 0.92 (M) | 0.40 (M) | 1.06 (M) | 1.24 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.02 (H) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.14 (H) | 0.11 (M) | 0.06 (H) | 0.10 (H) | 0.12 (H) |
| m/p-Xylene | 1.02 (H) | 0.68 (M) | 0.24 (H) | 0.51 (H) | 0.73 (H) |
| Styrene/o-Xylene | 0.28 (H) | 0.25 (H) | 0.18 (M) | 0.18 (H) | 0.28 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.07 (H) | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | 0.03 (H) | <0.02 | 0.20 (L) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A8. PEFL (Continued)

| Sample Date | 01/17/90 | 01/17/90 | 01/17/90 | 01/17/90 | 01/29/90 |
|---|---|---|---|---|---|
| Sample ID | 1141D | 1142D | 1141R | 1142R | 1154 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 1.04 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.830(H) | 0.857(H) | 0.748(H) | 0.840(H) | <0.006 |
| 1,1,1-Trichloroethane | 2.063(H) | 2.011(H) | 2.045(H) | 2.017(H) | 0.234(L) |
| Carbon tetrachloride | 0.143(L) | 0.141(L) | 0.142(L) | 0.144(L) | 0.149(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.63 (M) | 0.64 (M) | 0.66 (M) | 0.64 (M) | 0.29 (M) |
| Trichloroethylene | 1.888(H) | 1.707(H) | 1.689(H) | 2.009(M) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | 0.061(H) |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.01 (L) |
| Toluene | 3.52 (H) | 3.26 (H) | 3.08 (H) | 3.06 (H) | 0.24 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (L) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | 0.020(H) | <0.001 |
| Chlorobenzene | 0.03 (M) | 0.03 (M) | 0.04 (M) | <0.02 | <0.02 |
| Ethylbenzene | 0.26 (H) | 0.23 (H) | 0.27 (M) | 0.22 (H) | 0.08 (L) |
| m/p-Xylene | 1.21 (H) | 1.15 (H) | 1.15 (M) | 1.06 (H) | 0.38 (L) |
| Styrene/o-Xylene | 0.48 (H) | 0.45 (H) | 0.49 (M) | 0.44 (L) | 0.08 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

D Duplicate sample R Replicate analysis

TABLE A9. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR S2MO

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | 02/27/89 | 02/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0669 | 0681 | 0697 | 07160 | 07170 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | 6.02 (L) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.11 (H) | 0.11 (H) | <0.10 | 0.25 (L) | 0.13 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.244(L) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.566(H) | 0.483(H) | 1.003(L) | 0.999(H) | 1.156(L) |
| Carbon tetrachloride | 0.200(L) | 0.157(L) | 0.186(L) | 0.262(L) | 0.278(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 4.91 (M) | 1.31 (H) | 1.70 (H) | 1.08 (L) | 1.74 (L) |
| Trichloroethylene | <0.004 | 0.156(H) | 0.556(L) | 0.116(H) | 0.106(L) |
| 1,2-Dichloropropane | <0.04 | 0.19 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.48 (L) | <0.04 | <0.04 |
| Toluene | 1.94 (H) | 3.01 (M) | 6.94 (M) | 3.31 (M) | 3.43 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | 0.15 (M) | 0.14 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.12 (L) | 0.12 (M) | 0.19 (L) | 0.19 (L) | 0.14 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.21 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.18 (H) | 0.68 (M) | 0.46 (M) | 0.72 (M) | 0.57 (M) |
| m/p-Xylene | 1.11 (H) | 4.85 (H) | 2.82 (M) | 5.34 (M) | 3.99 (M) |
| Styrene/o-Xylene | 0.35 (H) | 1.06 (H) | 0.73 (H) | 1.17 (L) | 0.89 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.01 (M) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.09 (H) | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | 0.10 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A9. S2MO (Continued)

| Sample Date | 02/27/89 | 02/27/89 | 03/11/89 | 03/25/89 | 04/05/89 |
|---|---|---|---|---|---|
| Sample ID | 0716R | 0717R | 0739 | 0744 | 0763 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 5.26 (H) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.14 (M) | 0.16 (H) | 0.38 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.13 (H) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.065(M) | 1.074(M) | 2.262(H) | 0.793(L) | 0.678(L) |
| Carbon tetrachloride | 0.257(L) | 0.274(L) | 0.189(L) | 0.175(L) | 0.149(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.81 (L) | 1.74 (L) | 12.29 (H) | 2.79 (M) | 1.47 (H) |
| Trichloroethylene | 0.110(M) | 0.108(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 1.30 (M) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.19 (M) | 3.29 (M) | 5.44 (H) | 3.74 (H) | 5.74 (H) |
| n-Octane | 0.12 (L) | 0.12 (L) | 0.18 (H) | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | 0.17 (L) | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (H) | <0.02 | 0.03 (M) |
| Tetrachloroethylene | 0.19 (L) | 0.18 (L) | <0.07 | 0.20 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.39 (M) | 0.18 (M) | <0.02 |
| Ethylbenzene | 0.69 (M) | 0.57 (M) | 0.94 (H) | 0.70 (M) | 0.59 (H) |
| m/p-Xylene | 5.11 (M) | 4.04 (M) | 6.76 (H) | 4.48 (M) | 3.60 (H) |
| Styrene/o-Xylene | 1.11 (H) | 0.92 (L) | 1.60 (H) | 1.10 (M) | 0.97 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | 0.265(H) |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 1.18 (H) | <0.09 | 1.38 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A9. S2MO (Continued)

| Sample Date | 04/28/89 | 05/10/89 | 05/22/89 | 06/03/89 | 06/15/89 |
|---|---|---|---|---|---|
| Sample ID | 0791 | 0809 | 0821 | 0841 | 0855 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 0.97 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 2.14 (M) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.06 (M) | 0.20 (L) | 0.04 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | 0.12 (L) | <0.10 | <0.10 | <0.10 | 0.12 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | 0.36 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 1.140(H) | 0.692(H) | 0.771(H) | 0.914(H) | 0.580(H) |
| Carbon tetrachloride | 0.146(L) | 0.148(L) | 0.146(L) | 0.152(L) | 0.147(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.88 (M) | 1.01 (H) | 1.90 (H) | 9.63 (H) | 0.60 (H) |
| Trichloroethylene | <0.004 | 0.342(M) | 0.195(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.35 (H) | 7.88 (H) | 2.02 (H) | 1.77 (H) | 1.71 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.16 (L) | 0.11 (L) | 0.16 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.30 (L) | <0.02 | 0.21 (H) | 3.01 (H) | <0.02 |
| Ethylbenzene | 0.61 (M) | 0.63 (H) | 0.70 (H) | 0.62 (H) | 0.29 (M) |
| m/p-Xylene | 3.78 (M) | 4.29 (H) | 5.18 (H) | 3.73 (H) | 1.84 (H) |
| Styrene/o-Xylene | 0.95 (H) | 0.94 (H) | 0.16 (H) | 0.89 (H) | 0.43 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.380(M) | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.41 (L) | 0.94 (H) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A9. S2MO (Continued)

| Sample Date | 06/27/89 | 07/09/89 | 07/21/89 | 08/02/89 | 08/15/89 |
|---|---|---|---|---|---|
| Sample ID | 0868 | 0882 | 0898 | 0914 | [illegible]1D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 2.46 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | 5.62 (L) | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.09 (H) | 0.11 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.19 (H) | 1.62 (M) | 0.10 (H) | <0.06 | 0.47 (M) |
| Bromochloromethane | 0.162(M) | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.400(H) | 0.208(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.897(H) | 0.526(H) | 0.726(H) | 2.873(H) | 0.830(M) |
| Carbon tetrachloride | 0.158(L) | 0.151(L) | 0.141(L) | 0.157(L) | 0.133(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.18 (M) | 0.97 (H) | 1.65 (H) | 8.99 (H) | 3.20 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.141(M) | 0.750(M) | <0.004 |
| 1,2-Dichloropropane | 0.35 (H) | <0.04 | 0.23 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | 0.058(L) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 1.30 (L) | <0.04 |
| Toluene | 2.81 (L) | 2.28 (L) | 2.56 (L) | 9.34 (M) | 2.95 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.08 (H) | 1.62 (H) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.21 (H) | 0.23 (L) | 5.81 (H) | 0.34 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.36 (L) | 0.13 (M) | 2.38 (H) | 0.32 (M) |
| Ethylbenzene | 0.34 (L) | 0.47 (M) | 0.42 (H) | 2.60 (H) | 0.53 (H) |
| m/p-Xylene | 2.04 (L) | 2.76 (M) | 2.60 (H) | 14.09 (H) | 3.01 (H) |
| Styrene/o-Xylene | 0.50 (L) | 0.87 (H) | 0.79 (H) | 3.96 (H) | 0.88 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.06 (L) | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 3.16 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A9. S2MO (Continued)

| Sample Date | 08/15/89 | 08/15/89 | 08/15/89 | 08/26/89 | 09/07/89 |
|---|---|---|---|---|---|
| Sample ID | 0932D | 0931R | 0932R | 0943 | 0957 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.16 (H) | 0.11 (L) | 0.12 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | 0.41 (L) | <0.10 | 0.22 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.49 (M) | 0.44 (M) | 0.52 (M) | 0.09 (M) | 0.28 (L) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.129(H) | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.796(M) | 0.817(H) | 0.842(H) | 0.829(H) | 0.726(H) |
| Carbon tetrachloride | 0.130(L) | 0.131(L) | 0.133(L) | 0.133(L) | 0.133(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 3.07 (H) | 3.12 (H) | 3.10 (H) | 1.42 (H) | 1.62 (H) |
| Trichloroethylene | 0.060(H) | 0.065(M) | 0.065(H) | 0.110(H) | 0.071(M) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | 0.15 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.87 (H) | 2.73 (H) | 2.88 (M) | 2.64 (L) | 1.97 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.04 (H) | <0.02 | 0.08 (H) | <0.02 |
| Tetrachloroethylene | 0.45 (M) | 0.24 (L) | <0.07 | <0.07 | 2.98 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.31 (M) | 0.30 (M) | 1.03 (H) | 0.26 (H) |
| Ethylbenzene | 0.56 (H) | 0.48 (H) | 0.58 (H) | 0.63 (H) | 0.40 (H) |
| m/p-Xylene | 3.36 (H) | 2.85 (H) | 3.51 (H) | 3.48 (H) | 2.23 (H) |
| Styrene/o-Xylene | 1.02 (H) | 0.85 (H) | 1.02 (H) | 1.04 (H) | 0.68 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.51 (L) | 0.78 (M) | 0.01 (H) | <0.02 |
| p-Dichlorobenzene | 1.23 (L) | 0.07 (H) | <0.09 | <0.09 | 0.59 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.10 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A9. S2MO (Continued)

| Sample Date | 09/20/89 | 10/01/89 | 10/13/89 | [illegible] | 11/08/89 |
|---|---|---|---|---|---|
| Sample ID | 0976 | 0988 | 1003 | 1022 | 10430 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 0.33 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | 4.02 (H) | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.01 (H) | 0.12 (M) | <0.06 | 0.17 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.488(H) | 1.243(H) | 0.978(M) | 2.676(H) | 0.383(H) |
| Carbon tetrachloride | 0.137(L) | 0.133(L) | 0.138(L) | 0.137(L) | 0.153(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.05 (H) | 2.44 (H) | 2.70 (H) | 4.36 (H) | 1.82 (H) |
| Trichloroethylene | 0.046(M) | 0.176(L) | <0.004 | 0.857(H) | <0.004 |
| 1,2-Dichloropropane | 0.21 (H) | <0.04 | <0.04 | 0.18 (H) | <0.04 |
| Bromodichloromethane | 0.060(H) | 0.053(M) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.06 (L) | 3.47 (L) | 4.15 (H) | 2.48 (M) | 5.28 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.02 (L) | 0.09 (L) | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.08 (L) |
| Tetrachloroethylene | 0.12 (L) | <0.07 | <0.07 | <0.07 | 0.28 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.38 (H) | 0.15 (M) | 0.11 (H) | 0.79 (H) | <0.02 |
| Ethylbenzene | 0.64 (M) | 0.90 (M) | 0.83 (H) | 1.00 (M) | 0.55 (M) |
| m/p-Xylene | 3.41 (M) | 5.47 (M) | 4.88 (H) | 6.28 (H) | 2.88 (H) |
| Styrene/o-Xylene | 0.97 (M) | 1.72 (H) | 1.52 (H) | 1.73 (H) | 1.07 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.08 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | 1.06 (M) | 0.91 (M) | 1.58 (H) | 1.12 (H) | <0.09 |
| o-Dichlorobenzene | 0.22 (L) | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A9. S2MO (Continued)

| Sample Date | 11/08/89 | 11/08/89 | 11/08/89 | 11/18/89 | 11/30/89 |
|---|---|---|---|---|---|
| Sample ID | 1044D | 1043R | 1044R | 1057 | 1075 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 5.90 (H) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.24 (M) | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.02 (M) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.363(H) | 0.328(M) | 0.332(H) | 0.892(H) | 0.927(H) |
| Carbon tetrachloride | 0.127(L) | 0.130(L) | 0.123(L) | 0.356(L) | 0.343(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.74 (H) | 1.85 (H) | 1.79 (H) | 3.37 (M) | 1.58 (M) |
| Trichloroethylene | <0.004 | 0.021(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 5.03 (H) | 4.54 (H) | 4.96 (H) | 12.62 (M) | 2.68 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.18 (L) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.19 (M) | <0.07 | 0.12 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.56 (H) | 0.55 (M) | 0.60 (H) | 0.46 (L) | 0.48 (M) |
| m/p-Xylene | 3.00 (H) | 2.91 (M) | 3.00 (H) | 2.88 (L) | 2.86 (H) |
| Styrene/o-Xylene | 1.10 (H) | 1.00 (H) | 1.01 (H) | 0.66 (L) | 0.82 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.51 (L) | 0.18 (M) | 0.21 (L) | <0.09 | 0.25 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A9. S2MO (Continued)

| Sample Date | 12/12/89 | 12/24/89 | 01/05/90 | 01/17/90 |
|---|---|---|---|---|
| Sample ID | 1095 | 1102 | 1121 | 1139 |
| Compound | Concentration, ppbv | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 2.066(L) | 7.362(M) | 4.536(M) | 2.805(H) |
| Carbon tetrachloride | 0.408(L) | 0.487(L) | 0.158(L) | 0.153(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.18 (H) | 7.11 (M) | 27.66 (H) | 3.66 (H) |
| Trichloroethylene | 0.271(M) | 0.089(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.89 (H) | 41.69 (H) | 35.34 (H) | 2.08 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.82 (H) | 1.67 (H) |
| Ethylbenzene | 0.70 (H) | 9.77 (H) | 2.45 (H) | 0.59 (H) |
| m/p-Xylene | 4.02 (H) | 50.50 (H) | 13.06 (H) | 3.64 (H) |
| Styrene/o-Xylene | 1.11 (H) | 14.36 (H) | 3.70 (H) | 1.10 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.04 (L) | <0.02 |
| p-Dichlorobenzene | 2.47 (M) | 5.44 (H) | 4.18 (M) | 1.69 (L) |
| o-Dichlorobenzene | 0.08 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A10. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR SAIL

| Sample Date | 01/22/89 | 02/02/89 | 02/16/89 | 02/27/89 | 03/11/89 |
|---|---|---|---|---|---|
| Sample ID | 0668 | 0680 | 0703 | 0718 | 07260 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 2.00 (H) | <0.10 | 0.80 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | 0.03 (L) | <0.04 | 2.06 (L) | <0.04 | <0.04 |
| 1,1-Dichloroethane | 0.08 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 2.11 (H) | <0.06 | 0.08 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.302(L) | 0.375(H) | 2.605(H) | 0.524(L) | 0.783(H) |
| Carbon tetrachloride | 0.231(L) | 0.152(L) | 0.202(L) | 0.278(L) | 0.180(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.44 (M) | 1.60 (H) | 3.27 (L) | 0.84 (L) | 2.99 (H) |
| Trichloroethylene | <0.004 | 0.111(M) | 0.989(H) | <0.004 | 0.212(H) |
| 1,2-Dichloropropane | 0.22 (H) | 0.10 (L) | 2.08 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.44 (M) | 0.82 (M) | 12.90 (H) | 0.77 (L) | 4.48 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | 0.04 (H) | 0.20 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.01 (H) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.08 (L) | 0.62 (L) | 0.06 (L) | 0.19 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.27 (H) | <0.02 | 0.08 (H) | 0.22 (H) |
| Ethylbenzene | 0.08 (L) | 0.13 (M) | 2.85 (H) | 0.13 (L) | 0.56 (H) |
| m/p-Xylene | 0.35 (M) | 0.78 (M) | 17.82 (H) | 0.76 (M) | 3.06 (H) |
| Styrene/o-Xylene | 0.14 (L) | 0.19 (M) | 4.40 (H) | 0.16 (M) | 0.77 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.12 (M) | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.05 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 3.60 (H) | <0.09 | 0.59 (L) | 1.27 (H) |
| o-Dichlorobenzene | <0.02 | 0.27 (L) | <0.02 | 0.04 (H) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A10. SAIL (Continued)

| Sample Date | 03/11/89 | 03/11/89 | 03/11/89 | 03/23/89 | 04/04/89 |
|---|---|---|---|---|---|
| Sample ID | 0727D | 0726R | 0727R | 0745 | 0762 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.99 (L) | 0.90 (M) | 0.68 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | 5.79 (L) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.754(H) | 0.830(H) | 0.803(M) | 0.396(L) | 11.796(H) |
| Carbon tetrachloride | 0.174(L) | 0.189(L) | 0.185(L) | 0.189(L) | 0.164(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.84 (H) | 2.97 (H) | 2.97 (H) | 3.21 (H) | 3.32 (H) |
| Trichloroethylene | 0.370(L) | 0.331(L) | 0.396(L) | <0.004 | 2.681(M) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.19 (H) | 4.31 (H) | 4.02 (H) | 1.98 (H) | 3.19 (L) |
| n-Octane | 0.18 (L) | 0.24 (H) | 0.16 (H) | 1.47 (M) | <0.03 |
| trans-1,3-Dichloropropylene | 0.01 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.22 (L) | 0.23 (L) | 0.22 (L) | <0.07 | 0.11 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.23 (M) | 0.18 (H) | 0.16 (H) | <0.02 | 0.57 (L) |
| Ethylbenzene | 0.51 (H) | 0.50 (H) | 0.48 (H) | 2.52 (M) | 0.37 (H) |
| m/p-Xylene | 2.79 (H) | 2.69 (M) | 2.58 (H) | 25.94 (M) | 1.95 (H) |
| Styrene/o-Xylene | 0.72 (H) | 0.71 (H) | 0.68 (H) | 7.26 (M) | 0.45 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 1.21 (H) | 1.19 (H) | 1.54 (H) | <0.09 | <0.09 |
| o-Dichlorobenzene | 0.20 (H) | <0.02 | 0.16 (H) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A10. SAIL (Continued)

| Sample Date | 04/18/89 | 05/02/89 | 05/10/89 | 05/22/89 | 05/22/89 |
|---|---|---|---|---|---|
| Sample ID | 0779 | 0799 | 0807 | 0828D | 0829D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.58 (M) | <0.10 | 0.08 (H) | 0.04 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.03 (L) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.383(L) | 8.707(M) | 0.459(H) | 0.298(H) | 0.262(H) |
| Carbon tetrachloride | 0.138(L) | 0.170(L) | 0.152(L) | 0.143(L) | 0.141(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.79 (H) | 11.51 (M) | 2.19 (H) | 0.50 (L) | 0.48 (L) |
| Trichloroethylene | <0.004 | 5.601(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.64 (H) | 18.17 (L) | 3.45 (H) | 0.56 (L) | 0.58 (L) |
| n-Octane | <0.03 | <0.03 | 0.12 (H) | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | 0.02 (H) | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.01 (M) | 0.02 (L) |
| Tetrachloroethylene | 0.05 (L) | 1.10 (H) | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.13 (M) | 3.38 (M) | 0.53 (H) | 0.08 (M) | 0.03 (L) |
| Ethylbenzene | 0.13 (H) | 4.83 (M) | 0.34 (H) | 0.07 (L) | 0.07 (L) |
| m/p-Xylene | 0.71 (H) | 25.44 (M) | 2.55 (H) | 0.33 (L) | 0.40 (L) |
| Styrene/o-Xylene | 0.16 (H) | 7.33 (M) | 0.58 (H) | 0.08 (M) | 0.12 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (L) | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.54 (M) | 15.72 (M) | 5.29 (H) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | 1.63 (M) | 0.47 (H) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A10. SAIL (Continued)

| Sample Date | 05/22/89 | 05/22/89 | 06/03/89 | [illegible]/3/89 | 06/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0828R | 0829R | 0842 | 0856 | 0866 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 0.46 (H) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | 48.89 (H) | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.36 (M) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.11 (M) | <0.06 | <0.06 | <0.06 | 0.51 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.264(H) | 0.286(H) | 0.565(L) | 21.529(L) | 0.821(L) |
| Carbon tetrachloride | 0.141(L) | 0.146(L) | 0.149(L) | 0.210(L) | 0.152(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.50 (M) | 0.49 (M) | 0.67 (H) | 6.23 (H) | 0.23 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.157(L) | <0.004 | 0.197(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 3.35 (M) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.59 (L) | 0.56 (L) | 1.18 (H) | 86.29 (M) | 1.41 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | 0.02 (M) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.01 (L) | 0.01 (L) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.12 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.08 (L) | 0.07 (M) | 0.42 (H) | 3.37 (L) | 0.38 (H) |
| Ethylbenzene | 0.08 (L) | 0.08 (L) | 0.36 (H) | 5.34 (L) | 0.26 (H) |
| m/p-Xylene | 0.44 (L) | 0.40 (L) | 2.19 (H) | 25.89 (L) | 1.25 (H) |
| Styrene/o-Xylene | 0.12 (L) | 0.13 (L) | 0.72 (H) | 7.90 (L) | 0.38 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 5.67 (L) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.20 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A10. SAIL (Continued)

| Sample Date | 07/08/89 | 07/21/89 | 08/02/89 | 08/15/89 | 08/26/89 |
|---|---|---|---|---|---|
| Sample ID | 0889 | 0904 | 0918 | 0930 | 0944D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 10.37 (L) | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.21 (L) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 1.37 (M) | <0.06 | 0.17 (M) | 0.46 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.241(M) | 5.205(L) | 0.768(M) | 6.281(H) | 0.356(M) |
| Carbon tetrachloride | 0.138(L) | 0.148(L) | 0.146(L) | 0.147(L) | 0.133(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.29 (H) | 1.92 (M) | 1.40 (H) | 2.40 (H) | 0.81 (H) |
| Trichloroethylene | <0.004 | 0.787(H) | <0.004 | 0.811(M) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | 0.084(H) | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.09 (L) |
| Toluene | 0.56 (L) | 15.91 (H) | 2.56 (M) | 2.07 (H) | 1.43 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.07 (M) | <0.04 |
| 1,1,2-Trichloroethane | 0.09 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.12 (L) | <0.07 | 0.41 (L) | 0.42 (H) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.20 (H) | 0.38 (H) | 11.72 (H) | 0.13 (H) |
| Ethylbenzene | 0.07 (H) | 0.69 (H) | 0.28 (H) | 0.56 (H) | 0.21 (M) |
| m/p-Xylene | 0.45 (H) | 2.47 (H) | 1.23 (H) | 2.48 (H) | 0.84 (H) |
| Styrene/o-Xylene | 0.22 (M) | 1.87 (H) | 0.47 (H) | 0.82 (H) | 0.40 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | 0.042(M) | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.05 (M) | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 2.77 (H) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A10. SAIL (Continued)

| Sample Date | 08/26/89 | 08/26/89 | 08/26/89 | [illegible] | 09/19/89 |
|---|---|---|---|---|---|
| Sample ID | 0945D | 0944R | 0945R | 0955 | 097[illegible] |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.10 (L) | <0.06 | 0.03 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | 80.755(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.611(M) | 0.365(L) | 0.576(M) | 65.572(L) | 0.292(L) |
| Carbon tetrachloride | 0.138(L) | 0.135(L) | 0.134(L) | 0.544(L) | 0.133(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.86 (H) | 0.85 (H) | 0.82 (H) | 5.87 (M) | 0.97 (H) |
| Trichloroethylene | 0.061(L) | <0.004 | 0.056(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.61 (H) | 1.58 (H) | 2.46 (H) | 217.89 (M) | 2.90 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.16 (M) | <0.07 | <0.07 | 3.37 (L) | 0.12 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.26 (M) | 0.13 (H) | 0.21 (M) | <0.02 | 0.02 (M) |
| Ethylbenzene | 0.24 (M) | 0.21 (M) | 0.29 (M) | 8.74 (L) | 0.21 (M) |
| m/p-Xylene | 1.04 (H) | 0.89 (H) | 1.09 (H) | 30.26 (L) | 1.01 (M) |
| Styrene/o-Xylene | 0.44 (L) | 0.37 (M) | 0.40 (M) | 16.61 (L) | 0.34 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.09 (H) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 2.85 (L) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A10. SAIL (Continued)

| Sample Date | 10/03/89 | 10/13/89 | 10/25/89 | 11/07/89 | 11/18/89 |
|---|---|---|---|---|---|
| Sample ID | 0998 | 1006 | 1026 | 1047 | 10590 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | 0.48 (L) | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 4.91 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.414(M) | 2.065(H) | 0.203(H) | 5.029(M) | 0.889(L) |
| Carbon tetrachloride | 0.137(L) | 0.131(L) | 0.129(L) | 0.137(L) | 0.362(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.74 (H) | 1.58 (H) | 0.34 (H) | 12.44 (M) | 5.98 (L) |
| Trichloroethylene | <0.004 | 0.189(H) | <0.004 | 0.959(L) | 0.117(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 2.67 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.03 (L) | <0.04 | <0.04 |
| Toluene | 0.81 (M) | 2.39 (H) | 0.46 (M) | 47.09 (L) | 0.51 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.02 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.11 (L) | 0.25 (L) | <0.07 | 1.49 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.67 (H) | 0.04 (H) | <0.02 | 0.72 (L) | 0.95 (M) |
| Ethylbenzene | 0.52 (M) | 0.28 (H) | 0.07 (H) | 4.83 (L) | 2.82 (H) |
| m/p-Xylene | 2.66 (M) | 1.39 (H) | 0.24 (H) | 22.84 (L) | 15.20 (H) |
| Styrene/o-Xylene | 0.64 (H) | 0.44 (L) | 0.09 (L) | 9.91 (M) | 2.87 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.03 (M) | <0.02 | <0.02 | <0.02 | 0.35 (L) |
| p-Dichlorobenzene | 2.35 (H) | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | 0.03 (L) | 0.30 (M) | 0.24 (M) | <0.02 | 0.06 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A10. SAIL (Continued)

| Sample Date | 11/18/89 | 11/18/89 | 11/18/89 | [illegible] | 12/12/89 |
|---|---|---|---|---|---|
| Sample ID | 10600 | 1059R | 1060R | 1072 | 1093 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 36.82 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | 0.060(H) | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.889(L) | 0.921(L) | 0.916(L) | 3.774(L) | 10.190(H) |
| Carbon tetrachloride | 0.365(L) | 0.383(L) | 0.358(L) | 0.159(L) | 0.286(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 6.00 (L) | 5.88 (L) | 5.93 (L) | 3.48 (M) | 7.13 (H) |
| Trichloroethylene | 0.126(L) | 0.167(M) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.48 (L) | 0.50 (M) | 0.52 (M) | 2.89 (M) | 15.88 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.92 (H) | 0.95 (H) | 0.91 (M) | <0.02 | 3.97 (H) |
| Ethylbenzene | 2.57 (H) | 2.74 (H) | 2.58 (H) | 0.59 (L) | 2.24 (H) |
| m/p-Xylene | 13.17 (H) | 14.70 (H) | 13.16 (H) | 3.23 (L) | 11.62 (H) |
| Styrene/o-Xylene | 2.54 (L) | 2.82 (L) | 2.57 (L) | 0.85 (L) | 4.23 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.16 (H) | <0.02 | <0.02 | 0.18 (H) | 0.24 (L) |
| p-Dichlorobenzene | <0.09 | 0.52 (H) | <0.09 | 0.12 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A10. SAIL (Continued)

| Sample Date | 12/24/89 | 01/05/90 | 01/17/90 |
|---|---|---|---|
| Sample ID | 1113 | 1129 | 1143 |
| Compound | Concentration, ppbv | | |
| Acetylene | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.80 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.015(L) | <0.006 |
| 1,1,1-Trichloroethane | 0.428(L) | 0.563(H) | 10.214(H) |
| Carbon tetrachloride | 0.416(M) | 0.161(L) | 0.163(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Benzene | 0.43 (M) | 1.90 (M) | 3.32 (M) |
| Trichloroethylene | <0.004 | 0.121(M) | 3.026(M) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| Toluene | 0.26 (M) | 2.95 (H) | 21.89 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.03 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.01 (H) | 0.03 (H) | 2.00 (H) |
| Ethylbenzene | 0.06 (H) | 0.36 (H) | 2.07 (H) |
| m/p-Xylene | 0.17 (H) | 1.90 (H) | 9.79 (L) |
| Styrene/o-Xylene | 0.07 (H) | 0.62 (H) | 4.61 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.19 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

TABLE A11. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR W1DC

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | [illegible] | 03/23/89 |
|---|---|---|---|---|---|
| Sample ID | 0674 | 0687 | 0699 | 0712 | 0746D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 17.94 (L) | <1.00 | <1.00 |
| Propylene | 7.73 (M) | <0.10 | 12.16 (H) | <0.10 | 4.80 (M) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.22 (H) | <0.10 | 0.27 (H) | <0.10 | 0.10 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.633(H) | 0.376(M) | 0.788(H) | 0.684(L) | 0.401(H) |
| Carbon tetrachloride | 0.238(L) | 0.157(L) | 0.173(L) | 0.276(L) | 0.179(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.04 (M) | 1.10 (H) | 2.35 (H) | 0.85 (M) | 1.03 (L) |
| Trichloroethylene | <0.004 | <0.004 | 0.213(L) | 0.048(L) | 0.067(L) |
| 1,2-Dichloropropane | <0.04 | 0.26 (M) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.04 (M) | 1.70 (M) | 4.46 (M) | 1.01 (M) | 1.74 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | 0.09 (M) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.02 (L) | <0.02 |
| Tetrachloroethylene | <0.07 | 0.30 (L) | <0.07 | <0.07 | 0.13 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.32 (L) | 0.19 (M) | 0.42 (M) | 0.11 (M) | 0.18 (H) |
| m/p-Xylene | 1.94 (L) | 1.02 (M) | 2.45 (M) | 0.67 (M) | 1.04 (H) |
| Styrene/o-Xylene | 0.53 (L) | 0.34 (M) | 0.73 (M) | 0.16 (M) | 0.31 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.07 (H) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.11 (M) | 0.22 (L) | 0.34 (L) | <0.09 | 0.10 (H) |
| o-Dichlorobenzene | 0.03 (M) | 0.11 (H) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A11. W1DC (Continued)

| Sample Date | 03/23/89 | 03/23/89 | 03/23/89 | 04/04/89 | 04/16/89 |
|---|---|---|---|---|---|
| Sample ID | 0747D | 0746R | 0747R | 0758 | 0776 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 5.11 (M) | 4.93 (M) | 4.56 (M) | <0.10 | 0.17 (H) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.11 (L) | 0.09 (H) | 0.08 (L) | <0.10 | 0.09 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | 0.06 (L) |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.437(H) | 0.433(H) | 0.439(H) | 0.341(L) | 0.314(L) |
| Carbon tetrachloride | 0.200(L) | 0.203(L) | 0.208(L) | 0.139(L) | 0.135(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.03 (M) | 1.02 (M) | 1.01 (L) | 0.79 (H) | 1.01 (H) |
| Trichloroethylene | 0.069(L) | 0.064(L) | 0.090(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.58 (H) | 0.30 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.89 (H) | 1.72 (H) | 1.82 (H) | 1.66 (H) | 1.96 (H) |
| n-Octane | <0.03 | 0.12 (L) | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.15 (L) | 0.14 (L) | 0.17 (L) | 1.13 (L) | 0.09 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.06 (M) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.20 (H) | 0.18 (H) | 0.18 (H) | 0.20 (H) | 0.17 (H) |
| m/p-Xylene | 1.10 (H) | 1.06 (H) | 1.02 (H) | 0.97 (H) | 1.07 (H) |
| Styrene/o-Xylene | 0.26 (H) | 0.32 (H) | 0.24 (H) | 0.32 (H) | 0.31 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.09 (H) | <0.09 | <0.09 | 0.10 (L) |
| o-Dichlorobenzene | 0.14 (L) | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A11. WIDC (Continued)

| Sample Date | 04/28/89 | 05/10/89 | 05/22/89 | 06/03/89 | 06/03/89 |
|---|---|---|---|---|---|
| Sample ID | 0792 | 0804 | 0824 | 0837D | 0838D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 3.23 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 5.26 (H) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.26 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | 0.08 (M) | 0.11 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.332(H) | 0.344(H) | 0.438(M) | 0.387(M) | 0.459(H) |
| Carbon tetrachloride | 0.140(L) | 0.146(L) | 0.137(L) | 0.146(L) | 0.152(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.66 (M) | 0.66 (H) | 1.73 (L) | 1.01 (H) | 0.98 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.41 (L) | 0.49 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.63 (M) | 1.08 (H) | 3.47 (L) | 1.90 (M) | 1.73 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (M) | <0.02 | 0.07 (M) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | 0.25 (L) | 0.24 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.14 (H) | 0.13 (H) | 0.39 (L) | 0.20 (H) | 0.18 (H) |
| m/p-Xylene | 0.75 (H) | 0.77 (H) | 2.65 (L) | 1.10 (H) | 1.10 (H) |
| Styrene/o-Xylene | 0.26 (M) | 0.23 (H) | 0.70 (L) | 0.32 (H) | 0.35 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.30 (L) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.02 (M) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A11. W1DC (Continued)

| Sample Date | 06/03/89 | 06/03/89 | 06/19/89 | 06/27/89 | 07/09/89 |
|---|---|---|---|---|---|
| Sample ID | 0837R | 0838R | 0857 | 0867 | 0884 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | 0.39 (L) | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.10 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.17 (M) | <0.06 | 0.11 (H) | 0.66 (H) | 0.47 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.404(M) | 0.389(L) | 0.404(H) | 0.540(L) | 0.285(L) |
| Carbon tetrachloride | 0.144(L) | 0.146(L) | 0.139(L) | 0.154(L) | 0.122(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.99 (H) | 0.96 (H) | 1.34 (H) | 1.22 (M) | 0.90 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.59 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.78 (M) | 1.72 (M) | 3.02 (M) | 2.58 (L) | 1.76 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.11 (L) |
| 1,1,2-Trichloroethane | <0.02 | 0.06 (H) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.23 (L) | 0.23 (L) | <0.07 | 0.45 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.18 (H) | 0.17 (H) | 0.28 (H) | 0.40 (H) | 0.22 (H) |
| m/p-Xylene | 1.03 (H) | 1.08 (H) | 1.80 (H) | 1.84 (H) | 1.30 (H) |
| Styrene/o-Xylene | 0.36 (H) | 0.35 (H) | 0.53 (H) | 0.53 (M) | 0.45 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.11 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A11. W1DC (Continued)

| Sample Date | 07/21/89 | 08/14/89 | 08/20/89 | [illegible]/89 | 09/07/89 |
|---|---|---|---|---|---|
| Sample ID | 0899 | 0928 | 0933 | 0947 | 0961D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 9.81 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 5.40 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.20 (H) | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 1.02 (L) | <0.06 | <0.06 | <0.06 | 0.09 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.387(L) | 0.638(L) | 0.359(L) | 0.568(L) | 0.523(M) |
| Carbon tetrachloride | 0.133(L) | 0.139(L) | 0.148(L) | 0.126(L) | 0.128(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.49 (H) | 2.08 (H) | 0.67 (H) | 1.70 (H) | 1.53 (M) |
| Trichloroethylene | 0.014(L) | <0.004 | <0.004 | <0.004 | 0.040(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | 0.024(L) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.22 (H) | 4.71 (H) | 1.43 (H) | 3.46 (M) | 3.65 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.08 (H) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.53 (H) | 1.45 (M) | <0.07 | <0.07 | 1.28 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.53 (M) | 0.75 (H) | 0.27 (H) | 0.42 (H) | 0.45 (M) |
| m/p-Xylene | 2.75 (H) | 3.73 (H) | 0.92 (H) | 2.29 (H) | 2.45 (M) |
| Styrene/o-Xylene | 1.13 (L) | 1.36 (H) | 0.36 (H) | 0.80 (H) | 0.92 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (M) | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.36 (L) | 0.45 (L) | 0.58 ( | 0.58 (L) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A11. W1DC (Continued)

| Sample Date | 09/07/89 | 09/07/89 | 09/07/89 | 09/17/89 | 10/01/89 |
|---|---|---|---|---|---|
| Sample ID | 0962D | 0961R | 0962R | 0973 | 0990 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 9.25 (L) | 8.66 (L) | 10.47 (L) | <1.00 | <1.00 |
| Propylene | 6.67 (L) | 6.47 (L) | 6.21 (L) | <0.10 | 4.94 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.21 (M) | <0.10 | 0.26 (H) | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | 3.79 (L) | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.19 (H) | 0.09 (M) | 0.07 (L) | <0.06 | 0.44 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.056(L) | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.535(M) | 0.530(L) | 0.532(M) | 0.384(L) | 0.327(L) |
| Carbon tetrachloride | 0.125(L) | 0.131(L) | 0.130(L) | 0.120(L) | 0.123(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.59 (M) | 1.66 (M) | 1.64 (M) | 0.70 (M) | 1.14 (L) |
| Trichloroethylene | 0.056(L) | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.67 (M) | 3.78 (L) | 3.74 (M) | 1.58 (M) | 2.13 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.38 (L) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.03 (H) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.43 (M) | 0.45 (L) | 0.44 (M) | 0.23 (M) | 0.30 (L) |
| m/p-Xylene | 2.31 (M) | 2.42 (L) | 2.31 (M) | 1.09 (M) | 1.50 (L) |
| Styrene/o-Xylene | 0.85 (H) | 0.89 (L) | 0.85 (H) | 0.40 (H) | 0.54 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.13 (M) | 0.24 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.06 (M) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A11. W1DC (Continued)

| Sample Date | 10/13/89 | 10/25/89 | 11/06/89 | 11/18/89 | 11/30/89 |
|---|---|---|---|---|---|
| Sample ID | 1004 | 1024 | 1038 | 1054 | 1070D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 11.30 (L) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.56 (H) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.10 (M) |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.204(M) | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.531(L) | 0.685(L) | 0.424(L) | 0.235(H) | 0.298(H) |
| Carbon tetrachloride | 0.128(L) | 0.124(L) | 0.127(L) | 0.222(L) | 0.135(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 3.04 (H) | 3.87 (L) | 1.21 (M) | 0.67 (L) | 0.59 (L) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | 0.024(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 6.50 (H) | 8.05 (H) | 2.99 (M) | 0.83 (M) | 1.40 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.02 (H) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.78 (H) | 1.01 (L) | 0.34 (H) | 0.12 (M) | 0.18 (M) |
| m/p-Xylene | 4.39 (H) | 5.87 (L) | 1.72 (H) | 0.58 (L) | 0.82 (M) |
| Styrene/o-Xylene | 1.63 (H) | 2.10 (L) | 0.67 (M) | 0.18 (M) | 0.23 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.17 (L) | 0.13 (M) | 0.07 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.18 (L) | <0.02 | 0.03 (H) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A11. W1DC (Continued)

| Sample Date | 11/30/89 | 11/30/89 | 11/30/89 | 12/12/89 |
|---|---|---|---|---|
| Sample ID | 1071D | 1070R | 1071R | 1091 |
| Compound | Concentration, ppbv | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | 1.28 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | 0.04 (L) | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | 0.033(L) | <0.006 |
| 1,1,1-Trichloroethane | 0.263(H) | 0.309(H) | 0.274(H) | 0.360(M) |
| Carbon tetrachloride | 0.121(L) | 0.137(L) | 0.122(L) | 0.117(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.03 (H) | 1.00 (L) | 1.06 (H) | 1.50 (H) |
| Trichloroethylene | <0.004 | 0.043(L) | <0.004 | 0.177(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.45 (M) | 1.42 (M) | 1.47 (M) | 1.72 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.06 (M) | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.20 (M) | 0.17 (M) | 0.20 (M) | 0.22 (H) |
| m/p-Xylene | 1.12 (M) | 0.76 (M) | 1.10 (M) | 1.21 (H) |
| Styrene/o-Xylene | 0.42 (H) | 0.24 (H) | 0.38 (H) | 0.43 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.11 (M) | 0.05 (M) | <0.09 | 0.12 (H) |
| o-Dichlorobenzene | 0.05 (H) | <0.02 | 0.05 (M) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

D Duplicate sample R Replicate analysis

TABLE A12. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR W2DC

| Sample Date | 02/03/89 | 02/15/89 | 02/27/89 | [illegible] | 03/23/89 |
|---|---|---|---|---|---|
| Sample ID | 0686 | 0700 | 0713 | 0729 | 0748 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 19.69 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | 5.87 (M) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.23 (H) | 0.33 (H) | 0.11 (M) | 0.24 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.11 (H) | 0.05 (H) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.398(M) | 0.880(H) | 0.677(L) | 0.749(L) | 0.450(M) |
| Carbon tetrachloride | 0.157(L) | 0.178(L) | 0.269(L) | 0.291(L) | 0.185(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.95 (H) | 2.68 (H) | 1.24 (L) | 1.78 (M) | 1.54 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | 0.051(L) | 0.075(L) |
| 1,2-Dichloropropane | 0.26 (H) | 1.40 (L) | <0.04 | <0.04 | 0.24 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 5.90 (H) | 6.34 (M) | 2.31 (M) | 3.91 (H) | 3.32 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | 0.13 (H) | 0.12 (H) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.04 (H) | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.49 (L) | 0.58 (M) | 0.18 (L) | 0.27 (L) | 0.19 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.58 (H) | 0.69 (H) | 0.31 (H) | 0.39 (H) | 0.43 (M) |
| m/p-Xylene | 2.53 (M) | 3.81 (M) | 1.69 (M) | 2.46 (H) | 2.02 (H) |
| Styrene/o-Xylene | 0.72 (M) | 1.20 (H) | 0.48 (H) | 0.71 (H) | 0.72 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | 0.110(L) | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.55 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.25 (M) | 0.32 (H) | 0.14 (H) | 0.29 (L) | 0.22 (H) |
| o-Dichlorobenzene | <0.02 | 0.27 (L) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A12. W2DC (Continued)

| Sample Date | 04/04/89 | 04/04/89 | 04/04/89 | 04/04/89 | 04/16/89 |
|---|---|---|---|---|---|
| Sample ID | 0764D | 0765D | 0764R | 0765R | 0778 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 2.28 (M) | 2.54 (M) | 2.97 (L) | 2.42 (L) | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 1.03 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.571(M) | 0.510(M) | 0.530(M) | 0.510(M) | 0.552(M) |
| Carbon tetrachloride | 0.154(L) | 0.152(L) | 0.148(L) | 0.148(L) | 0.142(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.78 (H) | 0.82 (L) | 0.77 (H) | 0.81 (H) | 5.05 (M) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | 0.074(M) | <0.001 | 0.136(L) | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.20 (H) | 2.03 (H) | 2.20 (H) | 1.98 (M) | 11.19 (H) |
| n-Octane | 0.08 (L) | 0.07 (L) | 0.07 (M) | 0.07 (M) | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.13 (L) | 0.13 (L) | 0.17 (L) | 0.19 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.27 (H) | 0.20 (H) | 0.21 (H) | 0.20 (H) | 1.21 (H) |
| m/p-Xylene | 1.42 (H) | 1.05 (H) | 1.34 (H) | 1.04 (H) | 7.96 (H) |
| Styrene/o-Xylene | 0.49 (H) | 0.36 (H) | 0.44 (H) | 0.36 (H) | 2.22 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A12. W2DC (Continued)

| Sample Date | 04/28/89 | 05/22/89 | 06/03/89 | 06/15/89 | 06/15/89 |
|---|---|---|---|---|---|
| Sample ID | 0795 | 0825 | 0836 | 08580 | 08590 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 3.18 (H) | <0.10 | <0.10 | 4.18 (M) | 3.77 (H) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.15 (M) | 0.23 (L) | 0.18 (M) | 0.32 (H) | 0.26 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | 0.18 (H) | <0.10 | <0.10 | <0.10 | 0.21 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | 0.10 (L) | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.12 (H) | <0.06 | 0.17 (M) | 0.28 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.672(L) | 0.507(H) | 0.528(L) | 0.381(M) | 0.375(M) |
| Carbon tetrachloride | 0.146(L) | 0.137(L) | 0.144(L) | 0.146(L) | 0.141(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.05 (M) | 2.12 (M) | 1.54 (H) | 1.54 (H) | 1.49 (H) |
| Trichloroethylene | 0.182(L) | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.88 (H) | <0.04 | 0.79 (M) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.40 (M) | 5.20 (L) | 3.61 (H) | 5.10 (H) | 4.76 (L) |
| n-Octane | 0.07 (H) | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.01 (M) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.26 (H) | <0.07 | 0.33 (L) | 0.49 (H) | 0.64 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.46 (H) | 0.78 (L) | 0.52 (H) | 0.43 (M) | 0.49 (H) |
| m/p-Xylene | 1.83 (M) | 3.60 (L) | 2.64 (H) | 2.67 (H) | 2.71 (H) |
| Styrene/o-Xylene | 0.65 (M) | 1.01 (L) | 0.76 (H) | 0.75 (H) | 0.78 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A12. W2DC (Continued)

| Sample Date | 06/15/89 | 06/15/89 | 06/27/89 | 07/09/89 | 07/21/89 |
|---|---|---|---|---|---|
| Sample ID | 0858R | 0859R | 0875 | 0883 | 0897 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 3.85 (L) | 3.89 (H) | 6.34 (M) | 3.68 (L) | 5.37 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.26 (H) | 0.27 (H) | 0.35 (H) | 0.20 (L) | 0.21 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | 0.18 (L) | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.22 (H) | 0.30 (L) | 1.04 (H) | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | 0.117(L) | <0.006 |
| 1,1,1-Trichloroethane | 0.373(H) | 0.367(H) | 0.585(L) | 0.372(L) | 2.871(H) |
| Carbon tetrachloride | 0.138(L) | 0.138(L) | 0.170(L) | 0.126(L) | 0.134(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.48 (H) | 1.48 (H) | 0.58 (H) | 1.22 (H) | 1.73 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | 0.34 (H) | <0.04 | 0.36 (L) |
| Toluene | 4.77 (L) | 4.72 (L) | 4.08 (L) | 3.30 (M) | 4.83 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.15 (L) |
| Tetrachloroethylene | 0.52 (H) | 0.62 (M) | 0.32 (H) | <0.07 | 0.36 (H) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.47 (H) | 0.50 (H) | 0.68 (H) | 0.45 (H) | 0.77 (M) |
| m/p-Xylene | 2.65 (H) | 2.84 (H) | 3.09 (H) | 2.47 (H) | 3.93 (H) |
| Styrene/o-Xylene | 0.74 (H) | 0.95 (H) | 0.94 (H) | 1.02 (H) | 1.42 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 1.08 (L) | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.48 (L) | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A12. W2DC (Continued)

| Sample Date | 08/26/89 | 09/07/89 | 09/19/89 | 09/19/89 | 09/19/89 |
|---|---|---|---|---|---|
| Sample ID | 0946 | 0960 | 0974D | 0975D | 0974R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 2.40 (L) |
| Propylene | <0.10 | <0.10 | 3.83 (H) | 5.74 (L) | 4.83 (H) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.25 (H) | 0.21 (H) | 0.26 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 1.14 (L) | <0.06 | 0.03 (M) | 0.05 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.634(L) | 0.432(M) | 0.460(M) | 0.515(H) | 0.443(H) |
| Carbon tetrachloride | 0.131(L) | 0.134(L) | 0.129(L) | 0.134(L) | 0.129(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.34 (H) | 1.83 (H) | 1.47 (H) | 1.46 (H) | 1.40 (H) |
| Trichloroethylene | <0.004 | <0.004 | 0.037(L) | <0.004 | <0.004 |
| 1,2-Dichloropropane | 0.08 (M) | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.68 (M) | 4.33 (H) | 3.29 (H) | 3.14 (M) | 3.16 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | 0.11 (M) | <0.04 | 0.10 (L) | 0.11 (L) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 1.02 (L) | 0.45 (M) | 0.64 (L) | 0.91 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.02 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.58 (H) | 0.67 (M) | 0.50 (M) | 0.50 (H) | 0.44 (M) |
| m/p-Xylene | 2.71 (H) | 3.11 (H) | 2.45 (M) | 2.50 (M) | 2.27 (M) |
| Styrene/o-Xylene | 1.04 (L) | 1.23 (H) | 0.93 (H) | 0.96 (H) | 0.86 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | 0.48 (M) | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.37 (M) | 0.27 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | 0.28 (M) | 0.17 (L) | 0.18 (M) | 0.16 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A12. W2DC (Continued)

| Sample Date | 09/19/89 | 10/01/89 | 10/13/89 | 10/25/89 | 11/06/89 |
|---|---|---|---|---|---|
| Sample ID | 0975R | 0987 | 1002 | 1025 | 1037 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 20.74 (L) | <1.00 | <1.00 |
| Propylene | 4.89 (H) | 6.28 (M) | 11.30 (H) | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.24 (L) | 0.39 (H) | 0.74 (H) | 1.50 (L) | 0.20 (L) |
| Bromomethane | <0.20 | 0.08 (H) | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 1.61 (L) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.174(H) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.482(H) | 0.441(L) | 0.467(M) | 1.371(L) | 0.962(H) |
| Carbon tetrachloride | 0.131(L) | 0.124(L) | 0.126(L) | 0.135(L) | 0.120(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.38 (H) | 2.07 (H) | 3.31 (H) | 7.88 (H) | 1.50 (H) |
| Trichloroethylene | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.46 (H) | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 3.29 (M) | 5.44 (L) | 7.77 (H) | 18.40 (H) | 5.20 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.02 (L) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | 0.82 (L) | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.08 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.45 (M) | 0.73 (M) | 1.03 (H) | 2.52 (H) | 0.56 (M) |
| m/p-Xylene | 2.35 (M) | 3.91 (M) | 5.58 (H) | 14.48 (L) | 3.03 (H) |
| Styrene/o-Xylene | 0.87 (M) | 1.50 (M) | 2.16 (H) | 5.60 (L) | 1.14 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.03 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.26 (M) | <0.09 | <0.09 | <0.09 | 0.27 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.08 (L) | <0.02 | 0.18 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A12. W2DC (Continued)

| Sample Date | 11/18/89 | 11/30/89 | 12/12/89 | 12/12/89 | 12/12/89 |
|---|---|---|---|---|---|
| Sample ID | 1055 | 1073 | 1089D | 1090D | 1089R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 1.84 (H) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.35 (M) | 0.45 (L) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | 0.21 (L) | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.233(H) | 0.266(L) | 0.454(M) | 0.482(M) | 0.461(M) |
| Carbon tetrachloride | 0.129(L) | 0.119(L) | 0.121(L) | 0.130(L) | 0.128(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.97 (M) | 1.47 (H) | 2.70 (H) | 2.74 (H) | 2.77 (H) |
| Trichloroethylene | 0.035(L) | <0.004 | <0.004 | 0.139(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | 0.69 (M) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.10 (M) | 2.25 (M) | 4.27 (H) | 4.36 (H) | 4.28 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | 0.12 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.04 (M) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.03 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.23 (M) | 0.32 (L) | 0.56 (H) | 0.58 (H) | 0.57 (H) |
| m/p-Xylene | 1.29 (M) | 1.92 (L) | 3.29 (H) | 3.36 (H) | 3.29 (H) |
| Styrene/o-Xylene | 0.46 (M) | 0.67 (L) | 1.17 (H) | 1.17 (H) | 1.14 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.12 (H) | <0.09 | 0.31 (L) | 0.21 (L) | 0.27 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A12. W2DC (Continued)

| Sample Date | 12/12/89 | 12/24/89 | 01/05/90 | 01/17/90 |
|---|---|---|---|---|
| Sample ID | 1090R | 1103 | 1123 | 1138 |
| Compound | Concentration, ppbv | | | |
| Acetylene | <1.00 | 1.18 (L) | <1.00 | <1.00 |
| Propylene | 12.89 (M) | <0.10 | <0.10 | 1.63 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.52 (L) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | 0.14 (L) | 0.32 (L) |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.487(H) | 0.474(L) | 0.408(M) | 0.724(M) |
| Carbon tetrachloride | 0.133(L) | 0.416(L) | 0.138(L) | 0.138(L) |
| 1,2-Dichloroethane | 0.12 (L) | <0.04 | <0.04 | <0.04 |
| Benzene | 2.72 (H) | 0.72 (M) | 2.34 (H) | 3.83 (M) |
| Trichloroethylene | <0.004 | <0.004 | 0.128(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.29 (H) | 0.98 (M) | 4.06 (H) | 8.28 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.56 (H) | 0.14 (H) | 0.58 (H) | 1.62 (H) |
| m/p-Xylene | 3.35 (H) | 0.82 (H) | 3.38 (H) | 9.34 (H) |
| Styrene/o-Xylene | 1.17 (H) | 0.30 (H) | 1.19 (H) | 3.33 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.21 (L) | 0.08 (M) | 0.40 (M) | <0.09 |
| o-Dichlorobenzene | <0.02 | 0.03 (H) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

R Replicate analysis

TABLE A13. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR WIKS

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | [illegible] | 03/11/89 |
|---|---|---|---|---|---|
| Sample ID | 0671 | 0683 | 0701 | 0709 | 0724 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | 2.14 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.27 (H) | <0.10 | 0.26 (H) | 0.28 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | 0.05 (H) |
| Chloroprene | <0.06 | <0.06 | 0.10 (L) | 0.04 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.292(L) | 0.333(H) | 0.299(M) | 0.409(M) | 0.560(H) |
| Carbon tetrachloride | 0.228(L) | 0.258(L) | 0.188(L) | 0.400(L) | 0.267(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.53 (M) | 0.55 (L) | 0.48 (L) | 1.39 (L) | 1.21 (M) |
| Trichloroethylene | 0.094(H) | 0.127(L) | 0.090(L) | 0.257(H) | 0.150(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.60 (M) | 0.51 (L) | 0.59 (L) | 2.03 (M) | 1.37 (L) |
| n-Octane | <0.03 | 0.09 (L) | 0.02 (H) | 0.16 (H) | 0.17 (L) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.05 (H) |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.08 (M) | <0.07 | <0.07 | 0.11 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.08 (M) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.10 (M) | 0.07 (M) | 0.08 (M) | 0.26 (M) | 0.16 (L) |
| m/p-Xylene | 0.48 (M) | 0.37 (M) | 0.48 (M) | 1.85 (H) | 1.06 (L) |
| Styrene/o-Xylene | 0.16 (L) | 0.11 (H) | 0.12 (M) | 0.43 (M) | 0.24 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.03 (L) | <0.02 | <0.02 | 0.05 (L) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.12 (H) | <0.09 |
| o-Dichlorobenzene | 0.04 (L) | 0.08 (L) | 0.07 (L) | <0.02 | 0.10 (H) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A13. W1KS (Continued)

| Sample Date | 03/23/89 | 04/04/89 | 04/16/89 | 04/16/89 | 04/16/89 |
|---|---|---|---|---|---|
| Sample ID | 0740 | 0761 | 0771D | 0772D | 0771R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.294(L) | 0.348(L) | 0.617(H) | 0.611(H) | 0.608(H) |
| Carbon tetrachloride | 0.271(L) | 0.152(L) | 0.146(L) | 0.144(L) | 0.144(L) |
| 1,2-Dichloroethane | 0.04 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.61 (M) | 0.63 (H) | 0.49 (H) | 0.47 (H) | 0.51 (M) |
| Trichloroethylene | 2.183(L) | <0.004 | 0.077(L) | 0.080(L) | 0.076(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.58 (H) | 0.56 (H) | 0.64 (L) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.80 (H) | 0.79 (H) | 0.47 (H) | 0.49 (H) | 0.48 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.07 (L) | <0.07 | 0.08 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | 0.01 (H) | 0.02 (L) | 0.01 (L) |
| Ethylbenzene | 0.10 (H) | 0.11 (H) | 0.07 (H) | 0.07 (H) | 0.06 (H) |
| m/p-Xylene | 0.63 (H) | 0.70 (H) | 0.36 (H) | 0.35 (H) | 0.32 (H) |
| Styrene/o-Xylene | 0.18 (H) | 0.18 (H) | 0.13 (H) | 0.11 (H) | 0.09 (H) |
| Bromoform | <0.001 | <0.001 | 0.016(L) | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | 0.030(M) | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | 0.02 (H) | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.04 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 04/16/89 | 04/28/89 | 05/10/89 | 05/22/89 | 06/03/89 |
|---|---|---|---|---|---|
| Sample ID | 0772R | 0798 | 0813 | 0826 | 0839 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 1.57 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 1.50 (H) | <0.10 | 0.24 (M) | 0.16 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | 0.12 (L) | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.616(H) | 0.307(L) | 0.492(L) | 0.354(M) | 0.303(M) |
| Carbon tetrachloride | 0.145(L) | 0.144(L) | 0.155(L) | 0.145(L) | 0.143(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.48 (H) | 0.96 (M) | 1.02 (H) | 1.07 (L) | 0.85 (H) |
| Trichloroethylene | 0.044(L) | <0.004 | 0.367(L) | 1.491(L) | <0.004 |
| 1,2-Dichloropropane | 0.61 (L) | <0.04 | <0.04 | 0.58 (L) | 0.25 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.48 (H) | 1.44 (M) | 1.90 (H) | 2.14 (H) | 1.46 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | 0.16 (M) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | 0.02 (H) | <0.02 |
| Tetrachloroethylene | 0.08 (L) | <0.07 | 0.06 (L) | <0.07 | 0.10 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.02 (L) | <0.02 | 0.03 (H) | 0.06 (L) | <0.02 |
| Ethylbenzene | 0.06 (H) | 0.19 (L) | 0.28 (H) | 0.27 (L) | 0.17 (H) |
| m/p-Xylene | 0.36 (H) | 1.08 (L) | 1.63 (H) | 1.75 (L) | 1.08 (H) |
| Styrene/o-Xylene | 0.11 (H) | 0.27 (L) | 0.38 (H) | 0.44 (L) | 0.29 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.01 (L) | <0.02 | <0.02 | 0.01 (L) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.05 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 06/15/89 | 06/27/89 | 06/27/89 | 06/27/89 | 06/27/89 |
|---|---|---|---|---|---|
| Sample ID | 0854 | 0871D | 0872D | 0871R | 0872R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 12.89 (H) | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | 0.56 (H) | 0.33 (H) | 0.30 (H) | 0.30 (H) | 0.28 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.258(L) | 0.272(H) | 0.263(H) | 0.262(H) | 0.264(H) |
| Carbon tetrachloride | 0.143(L) | 0.152(L) | 0.156(L) | 0.156(L) | 0.156(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 1.13 (H) | 0.57 (H) | 0.57 (H) | 0.56 (H) | 0.56 (H) |
| Trichloroethylene | 0.168(M) | 0.153(H) | 0.156(H) | 0.172(H) | 0.152(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 2.21 (M) | 1.03 (L) | 1.09 (L) | 0.97 (L) | 1.06 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.02 (M) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.07 (H) | 0.06 (M) | 0.04 (L) | 0.05 (H) | 0.04 (H) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.06 (L) | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.33 (H) | 0.12 (M) | 0.12 (M) | 0.12 (M) | 0.12 (M) |
| m/p-Xylene | 2.02 (H) | 0.76 (M) | 0.77 (M) | 0.71 (M) | 0.73 (M) |
| Styrene/o-Xylene | 0.60 (H) | 0.22 (M) | 0.22 (M) | 0.20 (M) | 0.21 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.38 (M) | <0.09 | 0.35 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 07/09/89 | 07/21/89 | 08/02/89 | [illegible] | 08/26/89 |
|---|---|---|---|---|---|
| Sample ID | 0887 | 0901 | 0917 | 0927 | 0942 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.20 (L) | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | 4.86 (M) |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.34 (M) | 0.04 (M) | <0.06 | <0.06 | 0.22 (L) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | 0.077(L) | <0.006 | <0.006 | 0.033(L) | <0.006 |
| 1,1,1-Trichloroethane | 0.178(L) | 0.514(L) | 0.257(M) | 0.280(L) | 0.216(L) |
| Carbon tetrachloride | 0.132(L) | 0.134(L) | 0.146(L) | 0.134(L) | 0.109(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.35 (H) | 1.11 (H) | 0.51 (H) | 0.75 (H) | 0.65 (M) |
| Trichloroethylene | 0.058(L) | 0.067(L) | 0.113(L) | 0.247(H) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | 0.029(H) | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.32 (L) | <0.04 |
| Toluene | 0.62 (L) | 1.95 (H) | 0.84 (L) | 1.17 (L) | 1.08 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | 0.02 (L) | <0.04 |
| 1,1,2-Trichloroethane | 4.08 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.10 (H) | 0.08 (H) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.04 (H) |
| Ethylbenzene | 0.09 (M) | 0.29 (H) | 0.12 (H) | 0.22 (H) | 0.17 (L) |
| m/p-Xylene | 0.46 (H) | 1.57 (M) | 0.70 (M) | 1.14 (H) | 0.92 (L) |
| Styrene/o-Xylene | 0.29 (H) | 0.52 (M) | 0.25 (M) | 0.42 (H) | 0.43 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.13 (L) | 0.50 (L) | <0.09 | 0.17 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A13. W1KS (Continued)

| Sample Date | 09/07/89 | 09/19/89 | 10/01/89 | 10/01/89 | 10/01/89 |
|---|---|---|---|---|---|
| Sample ID | 0956 | 0970 | 0992D | 0993D | 0992R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | 3.01 (L) | 1.13 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.51 (L) | 0.04 (H) | <0.06 | 0.01 (H) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.205(L) | 0.254(L) | 0.213(L) | 0.192(L) | 0.198(L) |
| Carbon tetrachloride | 0.124(L) | 0.131(L) | 0.119(L) | 0.124(L) | 0.123(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.79 (H) | 0.69 (M) | 0.57 (H) | 0.57 (H) | 0.64 (H) |
| Trichloroethylene | 0.374(H) | <0.004 | 0.353(M) | 0.313(H) | 0.211(H) |
| 1,2-Dichloropropane | <0.04 | 0.40 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.45 (M) | 1.37 (L) | 0.84 (L) | 0.77 (L) | 0.81 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.02 (M) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | 0.28 (M) | <0.07 | 0.18 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.20 (M) | 0.18 (L) | 0.13 (M) | 0.12 (L) | 0.12 (M) |
| m/p-Xylene | 1.04 (M) | 0.98 (L) | 0.60 (L) | 0.62 (L) | 0.63 (M) |
| Styrene/o-Xylene | 0.36 (L) | 0.33 (L) | 0.18 (M) | 0.25 (M) | 0.24 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.01 (L) | 0.12 (L) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.13 (L) | <0.09 | 0.37 (L) | <0.09 | 0.26 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.04 (M) | 0.16 (M) | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 10/01/89 | 10/13/89 | 10/25/89 | [illegible] | 11/18/89 |
|---|---|---|---|---|---|
| Sample ID | 0993R | 1101 | 1023 | 1040 | 1062 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | 0.23 (L) | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.08 (H) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.199(L) | 0.252(L) | 0.228(L) | 0.315(L) | 0.243(M) |
| Carbon tetrachloride | 0.127(L) | 0.132(L) | 0.125(L) | 0.188(L) | 0.140(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.60 (H) | 1.01 (H) | 0.60 (H) | 1.17 (L) | 0.56 (H) |
| Trichloroethylene | 0.337(M) | <0.004 | 0.311(H) | 0.215(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.90 (M) | 1.35 (H) | 0.88 (M) | 1.78 (H) | 0.53 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.02 (L) |
| Tetrachloroethylene | 0.42 (L) | 0.25 (L) | <0.07 | 0.16 (L) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.11 (M) | 0.22 (H) | 0.15 (M) | 0.28 (H) | 0.08 (L) |
| m/p-Xylene | 0.63 (M) | 1.11 (H) | 0.72 (M) | 1.59 (H) | 0.42 (L) |
| Styrene/o-Xylene | 0.21 (M) | 0.38 (H) | 0.25 (L) | 0.61 (L) | 0.12 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.14 (L) | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 11/30/89 | 12/12/89 | 12/30/89 | 12/30/89 | 12/30/89 |
|---|---|---|---|---|---|
| Sample ID | 1077 | 1092 | 1110D | 1111D | 1110R |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | 3.44 (L) | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.145(L) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.479(L) | 0.629(H) | 0.289(L) | 0.277(H) | 0.237(L) |
| Carbon tetrachloride | 0.830(L) | 0.545(L) | 0.164(L) | 0.160(L) | 0.156(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 3.31 (M) | 1.20 (H) | 0.69 (H) | 0.67 (H) | 0.68 (H) |
| Trichloroethylene | <0.004 | 0.228(M) | 0.032(L) | 0.049(L) | 0.040(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 5.24 (M) | 1.63 (H) | 0.62 (M) | 0.61 (M) | 0.63 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.02 (H) | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.80 (L) | 0.22 (H) | 0.10 (H) | 0.10 (H) | 0.09 (H) |
| m/p-Xylene | 4.71 (L) | 1.26 (H) | 0.50 (H) | 0.45 (M) | 0.51 (H) |
| Styrene/o-Xylene | 1.48 (L) | 0.36 (H) | 0.17 (H) | 0.16 (H) | 0.17 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.13 (L) | 0.20 (L) | <0.09 | 0.19 (L) |
| o-Dichlorobenzene | <0.02 | 0.05 (H) | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A13. W1KS (Continued)

| Sample Date | 12/30/89 | 01/05/90 | [illegible] |
|---|---|---|---|
| Sample ID | 1111R | 1127 | 1145 |
| Compound | Concentration, ppbv | | |
| Acetylene | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.221(L) | 0.324(L) | 0.279(L) |
| Carbon tetrachloride | 0.142(L) | 0.182(L) | 0.156(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 |
| Benzene | 0.69 (H) | 2.09 (M) | 0.76 (H) |
| Trichloroethylene | 0.032(L) | 0.235(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| Toluene | 0.63 (H) | 2.91 (M) | 0.86 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.01 (M) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.09 (H) | 0.44 (H) | 0.16 (H) |
| m/p-Xylene | 0.48 (H) | 2.59 (H) | 0.75 (H) |
| Styrene/o-Xylene | 0.17 (H) | 0.78 (L) | 0.29 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.03 (M) | 0.14 (L) | 0.13 (L) |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) L[illegible] [illegible]idence level

R Replicate analysis

TABLE A14. MULTIPLE DETECTOR SPECIATED UATMP DATA SUMMARY FOR W2KS

| Sample Date | 01/22/89 | 02/03/89 | 02/15/89 | 02/27/89 | 03/11/89 |
|---|---|---|---|---|---|
| Sample ID | 0670 | 0682 | 0702 | 0711 | 0725 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | 0.12 (H) | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | 0.03 (L) |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.11 (H) | 0.28 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | 0.18 (M) | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | 0.09 (L) |
| Chloroprene | 0.10 (H) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | 0.102(H) | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | 2.103(H) | <0.006 |
| 1,1,1-Trichloroethane | 0.281(M) | 0.332(H) | 0.323(L) | 1.739(L) | 0.350(L) |
| Carbon tetrachloride | 0.222(L) | 0.241(L) | 0.193(L) | 0.456(L) | 0.207(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.43 (M) | 0.59 (L) | 0.86 (H) | 0.79 (L) | 1.61 (H) |
| Trichloroethylene | <0.004 | 0.050(L) | 0.387(M) | 0.204(H) | 0.921(L) |
| 1,2-Dichloropropane | <0.04 | 0.11 (H) | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.36 (M) | 0.61 (L) | 1.10 (M) | 1.00 (M) | 2.27 (H) |
| n-Octane | 0.09 (M) | 0.08 (H) | <0.03 | 0.09 (H) | 0.27 (H) |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.02 (L) | 0.01 (H) | <0.02 | 0.02 (M) | <0.02 |
| Tetrachloroethylene | 0.09 (H) | <0.07 | <0.07 | <0.07 | 0.22 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.06 (M) | 0.05 (L) | 0.16 (M) | 0.14 (M) | 0.33 (H) |
| m/p-Xylene | 0.26 (L) | 0.24 (M) | 1.03 (M) | 0.93 (M) | 2.10 (H) |
| Styrene/o-Xylene | 0.08 (L) | 0.06 (L) | 0.27 (M) | 0.23 (H) | 0.52 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | 0.02 (H) | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.27 (H) |
| o-Dichlorobenzene | 0.03 (M) | <0.02 | 0.05 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A14. W2KS (Continued)

| Sample Date | 03/23/89 | 04/04/89 | 04/16/89 | 04/28/89 | 04/28/89 |
|---|---|---|---|---|---|
| Sample ID | 0741 | 0750 | 0773 | 0796D | 0797D |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | 2.08 (L) | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | 2.78 (L) | 2.55 (M) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | 0.05 (L) | 0.05 (H) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | 1.06 (M) | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.02 (H) | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.273(L) | 0.261(L) | 0.235(L) | 0.210(L) | 0.223(L) |
| Carbon tetrachloride | 0.251(L) | 0.147(L) | 0.158(L) | 0.144(L) | 0.144(L) |
| 1,2-Dichloroethane | 0.05 (L) | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.53 (H) | 0.56 (H) | 0.37 (H) | 0.56 (M) | 0.53 (M) |
| Trichloroethylene | <0.004 | 0.424(L) | <0.004 | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | 0.74 (M) | 0.42 (M) | 0.44 (H) |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | 0.82 (L) |
| Toluene | 0.50 (H) | 0.58 (M) | 0.39 (M) | 0.66 (L) | 0.69 (L) |
| n-Octane | <0.03 | <0.03 | <0.03 | 0.06 (M) | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | 0.01 (H) | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.15 (L) | <0.07 | 0.07 (M) | 0.08 (M) | 0.04 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.04 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.07 (M) | 0.10 (H) | 0.08 (H) | 0.09 (L) | 0.12 (H) |
| m/p-Xylene | 0.43 (H) | 0.59 (H) | 0.40 (H) | 0.51 (L) | 0.63 (M) |
| Styrene/o-Xylene | 0.12 (M) | 0.19 (H) | 0.11 (H) | 0.16 (M) | 0.18 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.24 (L) | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample

TABLE A14. W2KS (Continued)

| Sample Date | 04/28/89 | 04/28/89 | 05/10/89 | 06/03/89 | 06/15/89 |
|---|---|---|---|---|---|
| Sample ID | 0796R | 0797R | 0812 | 0840 | 0853 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | 2.53 (L) | 2.79 (L) | <0.10 | <0.10 | 3.69 (L) |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | 0.04 (L) | <0.10 | 0.05 (H) | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | 0.03 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.217(L) | 0.224(L) | 0.454(M) | 0.310(H) | 0.227(M) |
| Carbon tetrachloride | 0.142(L) | 0.144(L) | 0.152(L) | 0.147(L) | 0.144(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.55 (H) | 0.50 (M) | 1.12 (H) | 0.77 (H) | 0.69 (M) |
| Trichloroethylene | <0.004 | <0.004 | 0.866(L) | 0.289(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.81 (M) | 0.65 (L) | 2.90 (H) | 1.29 (M) | 1.17 (M) |
| n-Octane | 0.04 (L) | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | 0.01 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | 0.06 (L) | 0.06 (H) | 0.19 (L) | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.07 (L) | 0.08 (M) | 0.25 (H) | 0.17 (H) | 0.18 (M) |
| m/p-Xylene | 0.43 (M) | 0.51 (M) | 1.54 (H) | 0.93 (H) | 1.02 (H) |
| Styrene/o-Xylene | 0.12 (H) | 0.17 (M) | 0.45 (H) | 0.25 (H) | 0.27 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | <0.09 |
| o-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

R Replicate analysis

TABLE A14. W2KS (Continued)

| Sample Date | 07/21/89 | 08/02/89 | 09/25/89 | [illegible] | 10/07/89 |
|---|---|---|---|---|---|
| Sample ID | 0903 | 0915 | 0979 | 0994 | 0999 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | 0.39 (H) | <0.10 | 0.07 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | 0.06 (M) | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | 1.51 (H) | <0.11 | <0.11 | 2.26 (M) | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | 0.14 (M) | 0.24 (H) | <0.06 | 0.08 (H) | 0.02 (H) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.021(L) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.308(L) | 0.358(L) | 0.559(L) | 0.222(L) | 0.290(L) |
| Carbon tetrachloride | 0.134(L) | 0.143(L) | 0.212(L) | 0.127(L) | 0.126(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.91 (H) | 0.37 (H) | 2.23 (H) | 0.51 (H) | 1.26 (H) |
| Trichloroethylene | 0.090(L) | 0.426(L) | <0.004 | <0.004 | 0.191(H) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.53 (M) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 1.50 (H) | 1.55 (M) | 4.46 (M) | 1.44 (M) | 2.02 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.04 (L) | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.16 (H) | <0.02 | 0.03 (L) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.23 (M) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | 0.06 (M) | 0.15 (L) | 0.07 (H) | 0.05 (H) |
| Ethylbenzene | 0.27 (H) | 0.12 (H) | 0.66 (L) | 0.14 (M) | 0.23 (M) |
| m/p-Xylene | 1.30 (H) | 0.82 (H) | 3.68 (L) | 0.71 (M) | 1.24 (M) |
| Styrene/o-Xylene | 0.45 (H) | 0.31 (H) | 1.22 (L) | 0.29 (H) | 0.50 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.02 (M) | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | 0.70 (L) | 0.13 (L) |
| o-Dichlorobenzene | 0.11 (L) | <0.02 | 0.21 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A14. W2KS (Continued)

| Sample Date | 10/13/89 | 10/13/89 | 10/13/89 | 10/13/89 | 10/19/89 |
|---|---|---|---|---|---|
| Sample ID | 1008D | 1009D | 1008R | 1009R | 1017 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | 0.49 (M) |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | 5.36 (L) | 4.72 (H) | 4.89 (L) | 4.93 (H) | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | 0.35 (M) |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.222(L) | 0.227(L) | 0.223(L) | 0.231(L) | 0.406(H) |
| Carbon tetrachloride | 0.131(L) | 0.129(L) | 0.127(L) | 0.129(L) | 0.332(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.64 (H) | 0.66 (H) | 0.65 (H) | 0.64 (H) | 1.18 (L) |
| Trichloroethylene | <0.004 | <0.004 | 0.018(L) | <0.004 | 0.595(L) |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | 0.28 (H) | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.78 (H) | 0.74 (H) | 0.80 (H) | 0.76 (H) | 1.63 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | 0.02 (L) | <0.04 | 0.01 (M) |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | 0.03 (H) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | 0.14 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.02 (L) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.12 (H) | 0.13 (H) | 0.12 (H) | 0.12 (H) | 0.30 (M) |
| m/p-Xylene | 0.52 (H) | 0.57 (H) | 0.55 (H) | 0.55 (H) | 1.58 (M) |
| Styrene/o-Xylene | 0.23 (H) | 0.21 (H) | 0.22 (H) | 0.21 (H) | 0.57 (L) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.02 (M) |
| p-Dichlorobenzene | <0.09 | <0.09 | <0.09 | <0.09 | 0.12 (H) |
| o-Dichlorobenzene | <0.02 | 0.12 (H) | 0.03 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

D Duplicate sample R Replicate analysis

TABLE A14. W2KS (Continued)

| Sample Date | 10/25/89 | 10/31/89 | 11/06/89 | [illegible]/12/89 | 11/18/89 |
|---|---|---|---|---|---|
| Sample ID | 1021 | 1032 | 1041 | 1046 | 1061 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | 5.22 (M) | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.263(L) | 0.320(L) | 0.233(L) | 0.370(L) | 1.187(H) |
| Carbon tetrachloride | 0.126(L) | 0.139(L) | 0.138(L) | 0.145(L) | 0.155(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.46 (H) | 1.96 (M) | 0.96 (M) | 2.70 (H) | 0.51 (H) |
| Trichloroethylene | <0.004 | 0.253(L) | 0.336(H) | <0.004 | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | 0.12 (M) | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.89 (M) | 2.88 (H) | 1.58 (H) | 5.18 (L) | 0.60 (M) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Tetrachloroethylene | <0.07 | 0.23 (M) | 0.23 (L) | 0.42 (H) | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | 0.02 (H) |
| Ethylbenzene | 0.17 (L) | 0.54 (H) | 0.23 (H) | 0.85 (L) | 0.07 (M) |
| m/p-Xylene | 0.57 (L) | 2.82 (H) | 1.26 (H) | 4.86 (L) | 0.38 (M) |
| Styrene/o-Xylene | 0.27 (L) | 1.08 (H) | 0.44 (L) | 1.63 (L) | 0.14 (M) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <[illegible] | <0.02 | <0.02 |
| p-Dichlorobenzene | <0.09 | <0.09 | 0.[illegible]2 (L) | <0.09 | 0.11 (H) |
| o-Dichlorobenzene | 0.21 (M) | <0.02 | 0.05 (L) | <0.02 | 0.10 (M) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A14. W2KS (Continued)

| Sample Date | 11/24/89 | 11/30/89 | 12/06/89 | 12/12/89 | 12/24/89 |
|---|---|---|---|---|---|
| Sample ID | 1065 | 1078 | 1084 | 1097 | 1116 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | 0.02 (M) | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | 0.626(H) | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.189(L) | 0.622(L) | 0.870(M) | 0.477(H) | 0.262(L) |
| Carbon tetrachloride | 0.125(L) | 1.621(L) | 0.130(L) | 0.459(L) | 0.237(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 0.42 (H) | 2.13 (M) | 2.36 (H) | 0.92 (H) | 1.23 (H) |
| Trichloroethylene | 0.036(L) | <0.004 | <0.004 | 0.097(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 0.32 (M) | 3.11 (M) | 4.24 (H) | 1.01 (H) | 1.56 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.04 (M) | <0.02 | <0.02 |
| Tetrachloroethylene | 0.08 (L) | <0.07 | <0.07 | 0.07 (L) | 0.08 (L) |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.05 (M) | 0.45 (M) | 0.66 (H) | 0.14 (H) | 0.24 (H) |
| m/p-Xylene | 0.20 (M) | 2.68 (H) | 4.02 (H) | 0.81 (H) | 1.34 (H) |
| Styrene/o-Xylene | 0.06 (L) | 0.87 (H) | 3.22 (H) | 0.24 (H) | 0.43 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | 0.02 (L) | <0.02 | <0.02 | 0.02 (H) | <0.02 |
| p-Dichlorobenzene | <0.09 | 0.06 (M) | 0.20 (M) | <0.09 | 0.04 (H) |
| o-Dichlorobenzene | <0.02 | 0.09 (L) | <0.02 | <0.02 | 0.06 (L) |

(H) High confidence level (M) Medium confidence level (L) Low confidence level (Continued)

TABLE A14. W2KS (Continued)

| Sample Date | 01/05/90 | 01/05/90 | 01/05/90 | 01/05/90 | 01/17/90 |
|---|---|---|---|---|---|
| Sample ID | 1125D | 1126D | 1125R | 1126R | 1146 |
| Compound | Concentration, ppbv | | | | |
| Acetylene | <1.00 | <1.00 | <1.00 | <1.00 | 2.63 (L) |
| Propylene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Chloromethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Vinyl chloride | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 1,3-Butadiene | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Bromomethane | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Chloroethane | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methylene chloride | <0.11 | <0.11 | <0.11 | <0.11 | <0.11 |
| trans-1,2-Dichloroethylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Chloroprene | <0.06 | <0.06 | <0.06 | <0.06 | <0.06 |
| Bromochloromethane | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Chloroform | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,1-Trichloroethane | 0.362(L) | 0.461(L) | 0.406(L) | 0.420(L) | 0.271(L) |
| Carbon tetrachloride | 0.178(L) | 0.210(L) | 0.200(L) | 0.203(L) | 0.170(L) |
| 1,2-Dichloroethane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Benzene | 2.58 (M) | 2.52 (M) | 2.63 (M) | 2.58 (M) | 0.98 (H) |
| Trichloroethylene | 0.501(L) | 0.551(L) | 0.510(M) | 0.530(L) | <0.004 |
| 1,2-Dichloropropane | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Bromodichloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| cis-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| Toluene | 4.22 (H) | 4.25 (H) | 4.30 (H) | 4.20 (H) | 1.29 (H) |
| n-Octane | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| trans-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| n-Octane/t-1,3-Dichloropropylene | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 |
| 1,1,2-Trichloroethane | <0.02 | <0.02 | 0.03 (M) | <0.02 | 0.01 (L) |
| Tetrachloroethylene | <0.07 | <0.07 | <0.07 | <0.07 | <0.07 |
| Dibromochloromethane | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chlorobenzene | 0.12 (H) | <0.02 | <0.02 | <0.02 | <0.02 |
| Ethylbenzene | 0.54 (M) | 0.56 (H) | 0.55 (H) | 0.56 (H) | 0.22 (H) |
| m/p-Xylene | 3.13 (H) | 3.21 (H) | 3.17 (H) | 3.25 (H) | 0.97 (H) |
| Styrene/o-Xylene | 0.98 (H) | 0.28 (L) | 1.00 (H) | 1.08 (H) | 0.35 (H) |
| Bromoform | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| 1,1,2,2-Tetrachloroethane | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| m-Dichlorobenzene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p-Dichlorobenzene | 0.18 (L) | <0.09 | 0.14 (L) | 0.20 (L) | 0.13 (H) |
| o-Dichlorobenzene | <0.02 | <0.02 | 0.08 (L) | <0.02 | <0.02 |

(H) High confidence level (M) Medium confidence level (L) Low confidence level

D Duplicate sample R Replicate analysis

# APPENDIX B
## Urban Air Toxics Monitoring Program
## AIRS Site Data

EPA-REGION: 03

STATE (11): DISTRICT OF COLUMBIA

UATMP SITE CODE: W1DC

SITE ID : 11-001-0025 CITY (00000): NOT IN A CITY
CITY POPULATION : 1 COUNTY (001): WASHINGTON
AQCR POPULATION : 2,956,793 AQCR (047): NATIONAL CAPITAL
DATE ESTABLISHED: / / LAND USE (2): COMMERCIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: TAKOMA SC. PINEY BRANCH RD & DAHLIA ST N
URBAN AREA (8840): WASHINGTON, DC-MD-VA
SUPPORTING AGENCY (001): ENVIRONMENTAL CONTROL DIV.,D. C., DCRA
COMMENTS: TSP ON ROOF OF GYMNASIUM BLDG. 03 MONITOR IN BOILER ROOM OF GYM-
SITE-USER-INFO: NASIUM BUILDING (FIRST FLOOR). START DATE 03-01-80.

LATITUDE : 38:56:31 N UTM EASTING : 324771
LONGITUDE: 77:01:22 W DIFF. GMT : 05
UTM ZONE : 18 ELEVATION ABOVE MSL: 91 M
UTM NORTHING: 4315771 RECORD LAST UPDATED: 89/11/22
MO EVAL DATE: / / LAST REG EVAL : 82/08/31
DISTANCE CITY: 008 COMPASS SECTOR : NW
MC IND: MET DATA : N
MSA (8840): WASHINGTON, DC-MD-VA

UATMP SITE CODE: W2DC

SITE ID : 11-001-0039 CITY (00000): NOT IN A CITY
CITY POPULATION : 1 COUNTY (001): WASHINGTON
AQCR POPULATION : 2,956,793 AQCR (047): NATIONAL CAPITAL
DATE ESTABLISHED: / / LAND USE (2): COMMERCIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: 2150 RAILROAD AVE. S.E. WASHINGTON D.C.
URBAN AREA (8840): WASHINGTON, DC-MD-VA
SUPPORTING AGENCY (001): ENVIRONMENTAL CONTROL DIV.,D. C., DCRA
COMMENTS: DC POLICE PROPERTY DIVISION WAREHOUSE NEXT TO ROUTE I-295.
SITE-USER-INFO: NEIGHBORHOOD SCALE LEAD MONITORING SITE. SAMPLING BEGUN 06-01-83

LATITUDE : 38:51:51 N UTM EASTING : 327173
LONGITUDE: 76:59:31 W DIFF. GMT : 05
UTM ZONE : 18 ELEVATION ABOVE MSL: 24 M
UTM NORTHING: 4303381 RECORD LAST UPDATED: 89/11/22
MO EVAL DATE: / / LAST REG EVAL : 83/03/30
DISTANCE CITY: COMPASS SECTOR : SE
MC IND: MET DATA : N
MSA (8840): WASHINGTON, DC-MD-VA

EPA-REGION: 05

STATE (17): ILLINOIS

UATMP SITE CODE: SAIL

SITE ID : 17-163-1110 CITY (00000): NOT IN A CITY
CITY POPULATION : 1 COUNTY (163): ST CLAIR CO
AQCR POPULATION : 2,423,778 AQCR (170): METROPOLITAN ST. LOUIS
DATE ESTABLISHED: / / LAND USE (3): INDUSTRIAL
DATE TERMINATED : / / LOCATION SETTING (2): SUBURBAN
SITE ADDR: IEPA TRAILER, LITTLE AVE.
URBAN AREA (7040): ST. LOUIS, MO-IL
SUPPORTING AGENCY (901): ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
COMMENTS:

LATITUDE : 38:35:31 N UTM EASTING : 747037
LONGITUDE: 90:09:49 W DIFF. GMT : 06
UTM ZONE : 15 ELEVATION ABOVE MSL: 198 M
UTM NORTHING: 4275122 RECORD LAST UPDATED: 89/11/22
RQ EVAL DATE: / / LAST REQ EVAL : / /
DISTANCE CITY: COMPASS SECTOR :
RC IND: MET DATA :
MSA (7040): ST. LOUIS, MO-IL

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
SITE DESCRIPTION INVENTORY



EPA-REGION: 07

STATE (20): KANSAS

UATMP SITE CODE: WIKS

SITE ID : 20-173-0010 CITY (79000): WICHITA
CITY POPULATION : 279,835 COUNTY (173): SEDGWICK CO
AQCR POPULATION : 602,705 AQCR (099): SOUTH CENTRAL KANSAS
DATE ESTABLISHED: / / LAND USE (1): RESIDENTIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: HEALTH DEPT., 1900 EAST 9TH ST.
URBAN AREA (9040): WICHITA, KS
SUPPORTING AGENCY (001): KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
COMMENTS: SITE OPERATED BY WICHITA-SEDGWICK CO HEALTH DEPT
SITE-USER-INFO: AT CITY-COUNTY HEALTH BLDG ACTIVE 1/1/73

LATITUDE : 37:42:04 N UTM EASTING : 648644
LONGITUDE: 97:18:50 W DIFF. GMT : 06
UTM ZONE : 14 ELEVATION ABOVE MSL: 396 M
UTM NORTHING: 4173780 RECORD LAST UPDATED: 89/11/22
MO EVAL DATE: / / LAST REG EVAL : 79/09/17
DISTANCE CITY: 003 COMPASS SECTOR : NE
MC IND: MET DATA : N
MSA (9040): WICHITA, KS

EPA-REGION: 04 STATE (12): FLORIDA

UATMP SITE CODE: FLFL

```
SITE ID          : 12-011-1103 CITY (2400 ): FORT LAUDERDALE          LATITUDE :  26:07:44 N  UTM EASTING          :  583110
CITY POPULATION :     153,279  COUNTY (011): BROWARD CO               LONGITUDE:  80:10:07 W  DIFF. GMT            : 05
AQCR POPULATION :   3,515,388  AQCR   (050): SOUTHEAST FLORIDA         UTM ZONE : 17           ELEVATION ABOVE MSL:     2 M
DATE ESTABLISHED:    /  /      LAND USE (2): COMMERCIAL                UTM NORTHING: 2890085   RECORD LAST UPDATED: 89/11/22
DATE TERMINATED :    /  /      LOCATION SETTING (1): URBAN AND CENTER CITY  MO EVAL DATE:   /  /   LAST REQ EVAL      :   /  /
SITE ADDR: 2101 NW SIXTH STREET                                        DISTANCE CITY:          COMPASS SECTOR       :
URBAN AREA (2680): FORT LAUDERDALE-HOLLYWOOD, FL                       MC IND:                 MET DATA             :
SUPPORTING AGENCY (000): ************** DESCRIPTION UNKNOWN ***************  MSA (2680): FT LAUDERDALE-HOLLYWOOD-POMPANO BE
COMMENTS: FT LAUDERDALE UTILITIES PLANT "A"
```

UATMP SITE CODE: MIFL

```
SITE ID          : 12-025-4002 CITY (45000): MIAMI                    LATITUDE :  25:47:52 N  UTM EASTING          :  579171
CITY POPULATION :     346,865  COUNTY (025): DADE CO                  LONGITUDE:  80:12:37 W  DIFF. GMT            : 05
AQCR POPULATION :   3,515,388  AQCR   (050): SOUTHEAST FLORIDA         UTM ZONE : 17           ELEVATION ABOVE MSL:     5 M
DATE ESTABLISHED:    /  /      LAND USE (2): COMMERCIAL                UTM NORTHING: 2853365   RECORD LAST UPDATED: 89/11/22
DATE TERMINATED :    /  /      LOCATION SETTING (1): URBAN AND CENTER CITY  MO EVAL DATE:   /  /   LAST REQ EVAL      :   /  /
SITE ADDR: METRO ANNEX 604 NW 3RD STREET                               DISTANCE CITY: 029      COMPASS SECTOR       :
URBAN AREA (5000): MIAMI, FL                                           MC IND: Y               MET DATA             :
SUPPORTING AGENCY (018): DADE COUNTY DEPARTMENT ENVIRONMENTAL RESOURCES MANA MSA (5000): MIAMI-HIALEAH, FL
COMMENTS: DCPC #1
```

UATMP SITE CODE PEFL

```
SITE ID          : 12-033-0004 CITY (10225): CANTONMENT               LATITUDE :  30:32:00 N  UTM EASTING          :  480814
CITY POPULATION :      23,369  COUNTY (033): ESCAMBIA CO               LONGITUDE:  87:12:00 W  DIFF. GMT            : 06
AQCR POPULATION :   2,512,539  AQCR   (005): MOBILE-PENSACOLA-PANAMA CITY-S  UTM ZONE : 16     ELEVATION ABOVE MSL:    35 M
DATE ESTABLISHED: 75/01/01     LAND USE (3): INDUSTRIAL                UTM NORTHING: 3377716   RECORD LAST UPDATED: 89/11/22
DATE TERMINATED :    /  /      LOCATION SETTING (2): SUBURBAN          MO EVAL DATE:   /  /   LAST REQ EVAL      : 88/01/20
SITE ADDR: ELLYSON INDUSTRIAL PARK-CUPTER ROAD                         DISTANCE CITY: 008      COMPASS SECTOR       : N
URBAN AREA (6080): PENSACOLA, FL                                       MC IND: Y               MET DATA             : Y
SUPPORTING AGENCY  001): FLORIDA DEPT ENVIRONMENTAL REGULATION, NORTHWEST DI MSA (6080): PENSACOLA, FL
COMMENTS: ADD NOX  ISTRUMENT---DELETE CO INSTRUMENT
```

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
SITE DESCRIPTION INVENTORY

EPA-REGION: 05

STATE (17): ILLINOIS

UATMP SITE CODE: C41L

SITE ID : 17-031-0060 CITY (14000): CHICAGO
CITY POPULATION : 3,005,072 COUNTY (031): COOK CO
AQCR POPULATION : 7,917,109 AQCR (067): METROPOLITAN CHICAGO
DATE ESTABLISHED: 87/10/30 LAND USE (1): RESIDENTIAL
DATE TERMINATED : / / LOCATION SETTING (2): SUBURBAN
SITE ADDR: 13100 S DOTY
URBAN AREA (1601): CHICAGO, IL-NORTHWESTERN IN
SUPPORTING AGENCY (031): ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
COMMENTS:
SITE-USER-INFO: CARVER H.S.

LATITUDE : 41:39:08 N UTM EASTING : 449860
LONGITUDE: 87:36:08 W DIFF. GMT : 06
UTM ZONE : 16 ELEVATION ABOVE MSL: 177 M
UTM NORTHING: 4611156 RECORD LAST UPDATED: 90/01/04
HQ EVAL DATE: / / LAST REG EVAL : / /
DISTANCE CITY: COMPASS SECTOR :
HC IND: N MET DATA : N
MSA (1600): CHICAGO, IL

EPA-REGION: 07

STATE (201): KANSAS

UATMP SITE CODE: W2KS

SITE ID : 20-173-0009 CITY (79000): WICHITA
CITY POPULATION : 279,835 COUNTY (173): SEDGWICK CO
AQCR POPULATION : 602,705 AQCR (099): SOUTH CENTRAL KANSAS
DATE ESTABLISHED: / / LAND USE (1): RESIDENTIAL
DATE TERMINATED : / / LOCATION SETTING (2): SUBURBAN
SITE ADDR: FIRE STATION 12 GLEN & PAWNEE
URBAN AREA (9040): WICHITA, KS
SUPPORTING AGENCY (001): KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
COMMENTS: SITE OPERATED BY WICHITA SEDGWICK CO HEALTH DEPT.
SITE-USER-INFO: AT FIRE STATION #12 ACTIVE 9/1/72

LATITUDE : 37:39:04 N
LONGITUDE: 97:21:44 W
UTM ZONE : 14
UTM NORTHING: 4168163
MO EVAL DATE: / /
DISTANCE CITY: 005
MC IND:
MSA (9040): WICHITA, KS

UTM EASTING : 644480
DIFF. GMT : 06
ELEVATION ABOVE MSL: 393 M
RECORD LAST UPDATED: 89/12/20
LAST REG EVAL : 79/09/18
COMPASS SECTOR : SW
MET DATA : N

AIR QUALITY SUBSYSTEM
SITE DESCRIPTION INVENTORY

EPA-REGION: 06 STATE (22): LOUISIANA

DATMP SITE CODE: BRLA

SITE ID : 22-033-0[illegible] CITY ([illegible]): BATON ROUGE
CITY POPULATION : 219,419 COUNTY ([illegible]): EAST BATON ROUGE PAR
AQCR POPULATION : 3,921,588 AQCR (1[illegible]): SOUTHERN LOUISIANA-SOUTHEAST T
DATE ESTABLISHED: / / LAND USE (2): COMMERCIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: 1500 RIVERSIDE ROAD
URBAN AREA (0760): BATON ROUGE, LA
SUPPORTING AGENCY (001): LOUISIANA STATE DEPARTMENT OF NATURAL RESOURCES
COMMENTS:

LATITUDE : 30:27:39 N UTM EASTING : 673989
LONGITUDE: 91:11:16 W DIFF. GMT : 06
UTM ZONE : 15 ELEVATION ABOVE MSL: 9 M
UTM NORTHING: 3371065 RECORD LAST UPDATED: 89/11/22
HQ EVAL DATE: 80/09/10 LAST REM EVAL : 87/03/25
DISTANCE CITY: 001 COMPASS SECTOR : N
MC IND: Y MET DATA : N
MSA (0760): BATON ROUGE, LA

EPA-REGION: 07 STATE (29): MISSOURI

UATMP SITE CODE: S2MO

SITE ID : 29-510-0072 CITY (05000): ST LOUIS
CITY POPULATION : 453,085 COUNTY (510): ST LOUIS
AQCR POPULATION : 2,423,778 AQCR (070): METROPOLITAN ST. LOUIS
DATE ESTABLISHED: / / LAND USE (2): COMMERCIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: 1122 CLARK
URBAN AREA (7040): ST. LOUIS, MO-IL
SUPPORTING AGENCY (303): ST LOUIS CITY DIVISION OF AIR POLLUTION CONTROL
COMMENTS: START-END OF 74

LATITUDE : 38:37:28 N UTM EASTING : 743882
LONGITUDE: 90:11:55 W DIFF. GMT : 06
UTM ZONE : 15 ELEVATION ABOVE MSL: 154 M
UTM NORTHING: 4278610 RECORD LAST UPDATED: 89/08/10
HQ EVAL DATE: / / LAST REG EVAL : / /
DISTANCE CITY: 001 COMPASS SECTOR : W
HC IND: Y MET DATA :
MSA (7040): ST. LOUIS, MO-IL

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
SITE DESCRIPTION INVENTORY



EPA-REGION: 02 STATE (34): NEW JERSEY

UATMP SITE CODE: CANJ

SITE ID : 34-007-0003 CITY (10000): CAMDEN
CITY POPULATION : 84,910 COUNTY (007): CAMDEN CO
AQCR POPULATION : 5,487,472 AQCR (045): METROPOLITAN PHILADELPHIA
DATE ESTABLISHED: / / LAND USE (1): RESIDENTIAL
DATE TERMINATED : / / LOCATION SETTING (2): SUBURBAN
SITE ADDR: CAMDEN TRAILER,COPEWOOD AND DAVIS STREET
URBAN AREA (6160): PHILADELPHIA, PA-NJ
SUPPORTING AGENCY (001): NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTEC
COMMENTS: NJ #04081, START SO2,03,1/1/68,NJ #058(TSP)START 9/3/83, SO4 10/83
SITE-USER-INFO: START IP #2 10/83,SSI,SLAMS-TSP,CO 10/1/84;TSP DISC,12/31/86

LATITUDE : 39:55:23 N
LONGITUDE: 75:05:50 W
UTM ZONE : 18
UTM NORTHING: 4419012
MO EVAL DATE: 81/09/16
DISTANCE CITY: 007
MC IND: Y
MSA (6160): PHILADELPHIA, PA-NJ

UTM EASTING : 491692
DIFF. GMT : 05
ELEVATION ABOVE MSL : 6 M
RECORD LAST UPDATED: 89/11/22
LAST REQ EVAL : 80/02/25
COMPASS SECTOR : SE
MET DATA : Y

EPA-REGION: 06 STATE (48): TEXAS

DATMP SITE CODE: DLTX

SITE ID : 48-113-0069 CITY (19000): DALLAS
CITY POPULATION : 904,078 COUNTY (113): DALLAS CO
AQCR POPULATION : 3,257,903 AQCR (215): METROPOLITAN DALLAS-FORT WORTH
DATE ESTABLISHED: / / LAND USE (2): COMMERCIAL
DATE TERMINATED : / / LOCATION SETTING (1): URBAN AND CENTER CITY
SITE ADDR: 1415 HILTON ST.
URBAN AREA (1920): DALLAS-FORT WORTH, TX
SUPPORTING AGENCY (000): ********** DESCRIPTION UNKNOWN **********
COMMENTS: FORMERLY MONITORING SITE 4513100480U1
SITE-USER-INFO: OFFICES MOVED, NEW SITE NEEDED

LATITUDE : 32:49:34 N UTM EASTING : 699960
LONGITUDE: 96:51:50 W DIFF. GMT : 06
UTM ZONE : 14 ELEVATION ABOVE MSL: 125 M
UTM NORTHING: 3633840 RECORD LAST UPDATED: 89/11/22
MO EVAL DATE: / / LAST REQ EVAL : 86/12/11
DISTANCE CITY: COMPASS SECTOR :
MC IND: Y MET DATA :
MSA (1920): DALLAS, TX

DATMP SITE CODE: HITX

SITE ID : 48-201-1034 CITY (35000): HOUSTON
CITY POPULATION : 1,595,138 COUNTY (201): HARRIS CO
AQCR POPULATION : 3,276,239 AQCR (215): METROPOLITAN HOUSTON-GALVESTON
DATE ESTABLISHED: / / LAND USE (1): RESIDENTIAL
DATE TERMINATED : / / LOCATION SETTING (2): SUBURBAN
SITE ADDR: HARRIS CLEM SCH 1202 MAE DRIVE
URBAN AREA (3360): HOUSTON, TX
SUPPORTING AGENCY (001): TEXAS AIR CONTROL BOARD
COMMENTS: EMSL TRACE METALS SAMPLING SITE

LATITUDE : 29:46:17 N UTM EASTING : 285150
LONGITUDE: 95:13:20 W DIFF. GMT : 06
UTM ZONE : 15 ELEVATION ABOVE MSL: 14 M
UTM NORTHING: 3295344 RECORD LAST UPDATED: 90/01/08
MO EVAL DATE: / / LAST REQ EVAL : 83/03/03
DISTANCE CITY: COMPASS SECTOR :
MC IND: Y MET DATA : Y
MSA (3360): HOUSTON, TX

# APPENDIX C
## Urban Air Toxics Monitoring Program
## Concentration Correlation Graphs

APPENDIX C


| Figure | | Page |
|---|---|---|
| C1 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in BRLA 1989 UATMP samples. . . . . | C1 |
| C2 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in C4IL 1989 UATMP samples. . . . . | C2 |
| C3 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in CANJ 1989 UATMP samples. . . . . | C3 |
| C4 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in DLTX 1989 UATMP samples. . . . . | C4 |
| C5 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in FLFL 1989 UATMP samples. . . . . | C5 |
| C6 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in H1TX 1989 UATMP samples. . . . . | C6 |
| C7 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in MIFL 1989 UATMP samples. . . . . | C7 |
| C8 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in PEFL 1989 UATMP samples. . . . . | C8 |
| C9 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in S2MO 1989 UATMP samples. . . . . | C9 |
| C10 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in SAIL 1989 UATMP samples. . . . . | C10 |
| C11 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in W1DC 1989 UATMP samples. . . . . | C11 |
| C12 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in W2DC 1989 UATMP samples. . . . . | C12 |

APPENDIX C (Continued)


| Figure | | Page |
|---|---|---|
| C13 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in W1KS 1989 UATMP samples. . . . . | C13 |
| C14 | 1,1,1-Trichloroethane and carbon tetrachloride concentrations in W2KS 1989 UATMP samples. . . . . | C14 |
| C15 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in BRLA 1989 UATMP samples . . . . . | C15 |
| C16 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in C4IL 1989 UATMP samples . . . . . | C16 |
| C17 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in CANJ 1989 UATMP samples . . . . . | C17 |
| C18 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in DLTX 1989 UATMP samples . . . . . | C18 |
| C19 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in FLFL 1989 UATMP samples . . . . . | C19 |
| C20 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in H1TX 1989 UATMP samples . . . . . | C20 |
| C21 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in MIFL 1989 UATMP samples . . . . . | C21 |
| C22 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in PEFL 1989 UATMP samples . . . . . | C22 |
| C23 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in S2MO 1989 UATMP samples . . . . . | C23 |
| C24 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in SAIL 1989 UATMP samples . . . . . | C24 |
| C25 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in W1DC 1989 UATMP samples . . . . . | C25 |

APPENDIX C (Continued)


| Figure | | Page |
|---|---|---|
| C26 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in W2DC 1989 UATMP samples . . . . . | C26 |
| C27 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in W1KS 1989 UATMP samples . . . . . | C27 |
| C28 | Benzene, ethylbenzene, m,p-xylene, styrene/o-xylene, and toluene concentrations in W2KS 1989 UATMP samples . . . . . | C28 |
| C29 | Comparison of 1,1,1-trichloroethane concentrations in W1DC and W2DC 1989 UATMP samples . . . . . | C29 |
| C30 | Comparison of benzene concentrations in W1DC and W2DC 1989 UATMP samples . . . . . | C30 |
| C31 | Comparison of carbon tetrachloride concentrations in W1DC and W2DC 1989 UATMP samples. . . . . | C31 |
| C32 | Comparison of ethylbenzene concentrations in W1DC and W2DC 1989 UATMP samples. . . . . | C32 |
| C33 | Comparison of m,p-xylene concentrations in W1DC and W2DC 1989 UATMP samples. . . . . | C33 |
| C34 | Comparison of styrene/o-xylene concentrations in W1DC and W2DC 1989 UATMP samples. . . . . | C34 |
| C35 | Comparison of toluene concentrations in W1DC and W2DC 1989 UATMP samples . . . . . | C35 |
| C36 | Comparison of 1,1,1-trichloroethane concentrations in W1KS and W2KS 1989 UATMP samples . . . . . | C36 |
| C37 | Comparison of benzene concentrations in W1KS and W2KS 1989 UATMP samples . . . . . | C37 |

APPENDIX C (Continued)


| Figure | | Page |
|---|---|---|
| C38 | Comparison of carbon tetrachloride concentrations in W1KS and W2KS 1989 UATMP samples . . . . . | C38 |
| C39 | Comparison of ethylbenzene concentrations in W1KS and W2KS 1989 UATMP samples. . . . . | C39 |
| C40 | Comparison of m,p-xylene cncentrations in W1KS and W2KS 1989 UATMP samples. . . . . | C40 |
| | Comparison of styrene/o-xylene concentrations in W1KS and W2KS 1989 UATMP samples. . . . . | C41 |
| C42 | Comparison of toluene concentrations in W1KS and W2KS 1989 UATMP samples . . . . . | C42 |

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

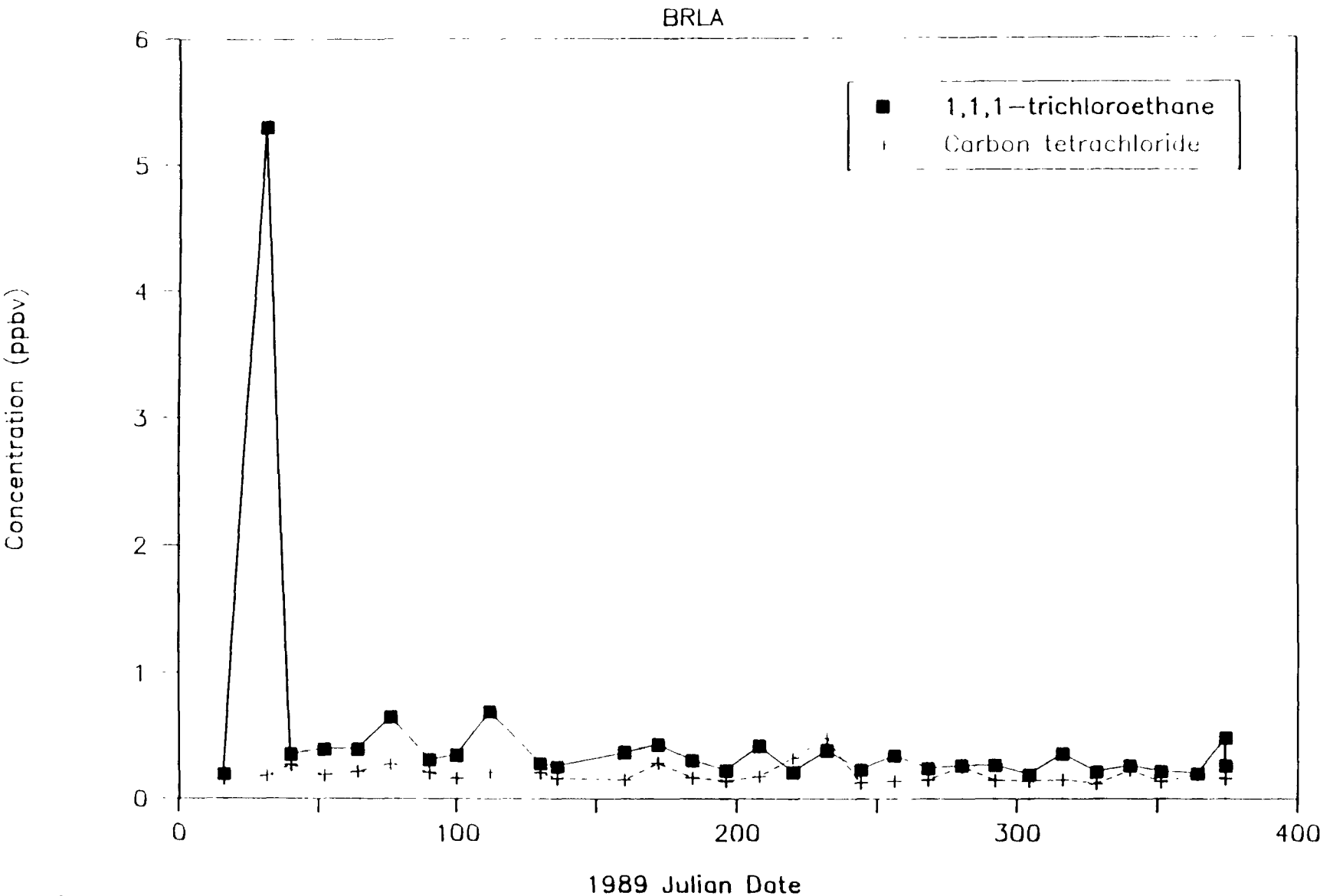



Figure C-1. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in BRLA 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

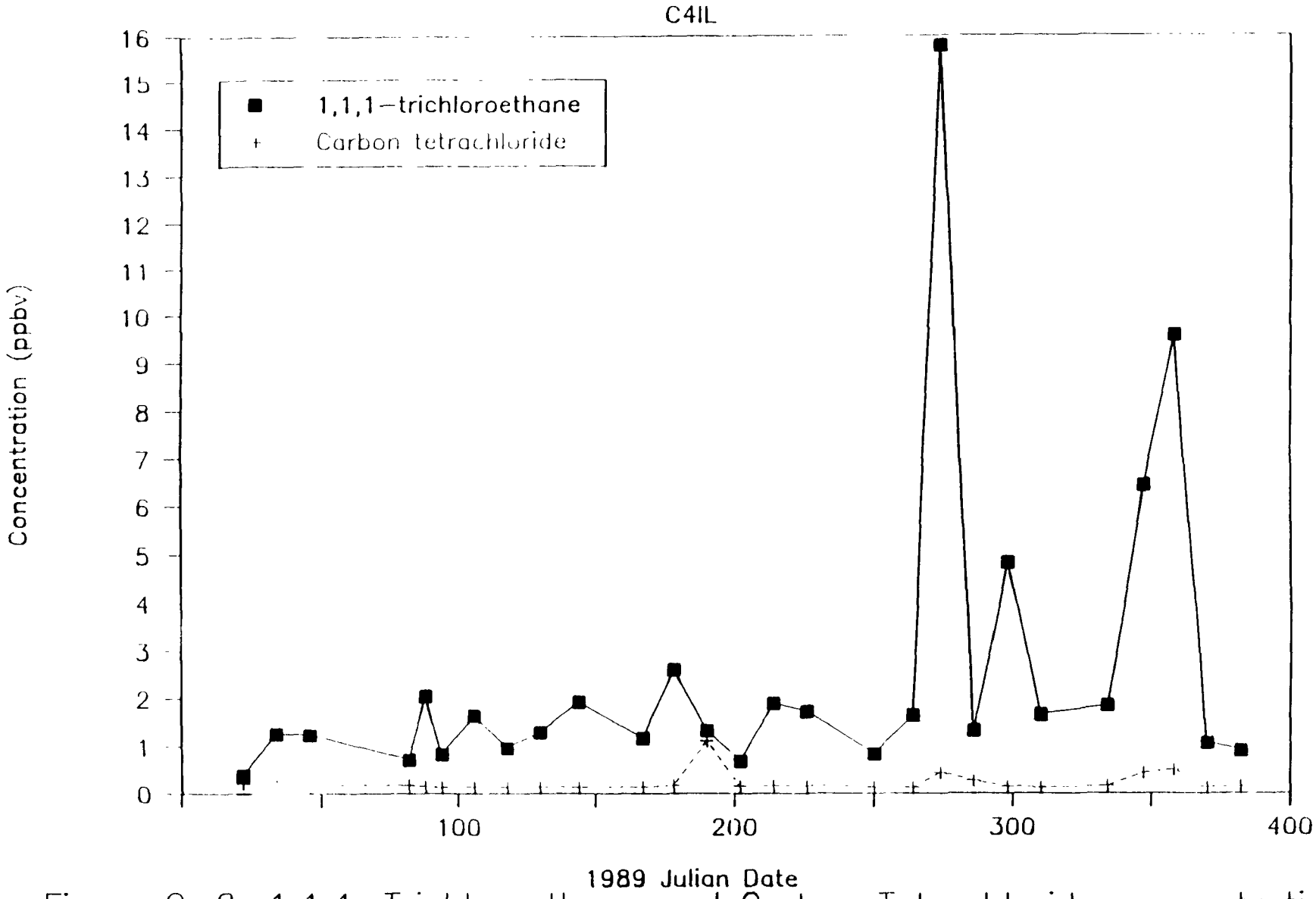



Figure C-2. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in C4IL 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

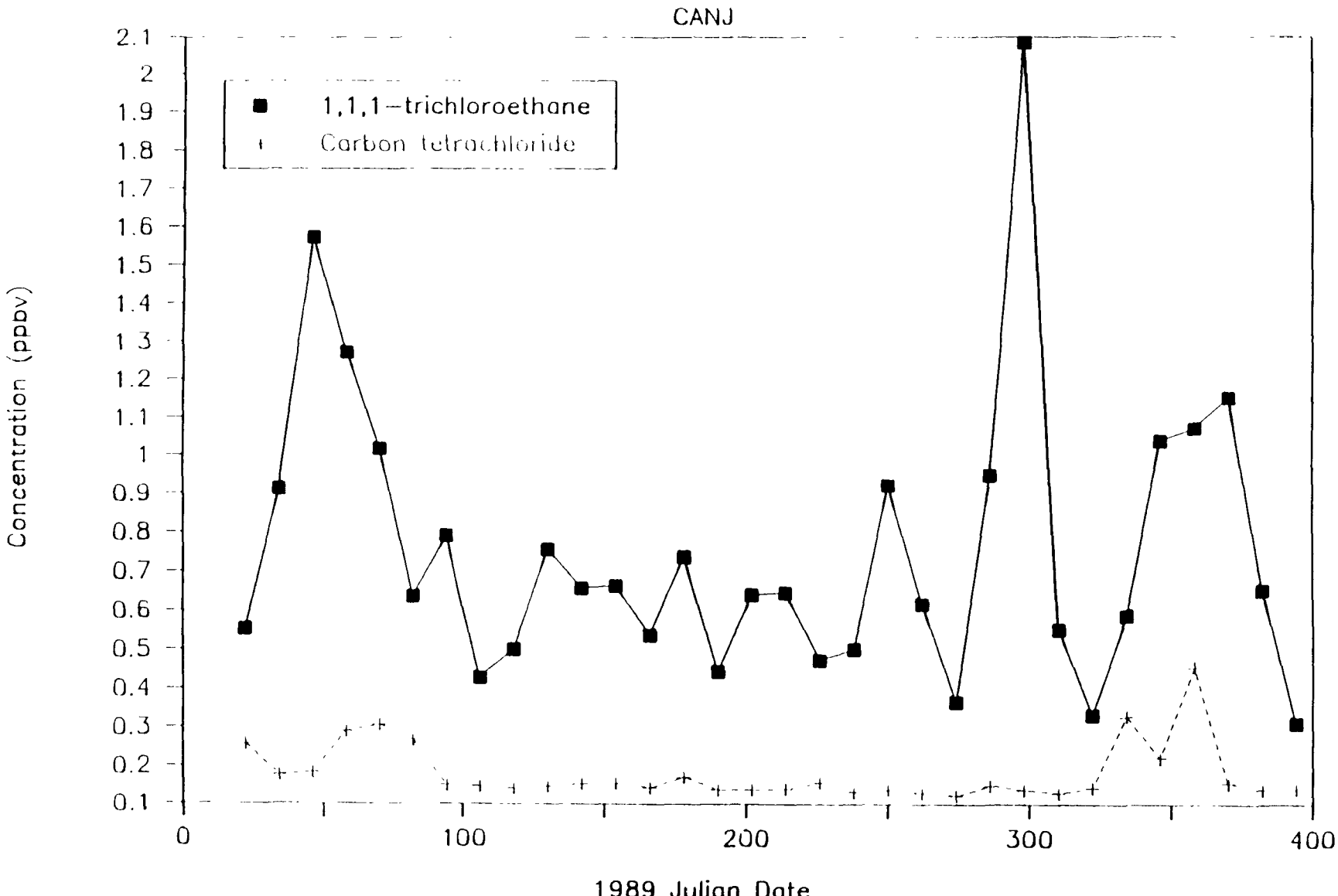



Figure C-3. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in CANJ 1989 UATMP Samples.

# 1,1,1–TRICHLOROETHANE AND CARBON TETRACHLORIDE

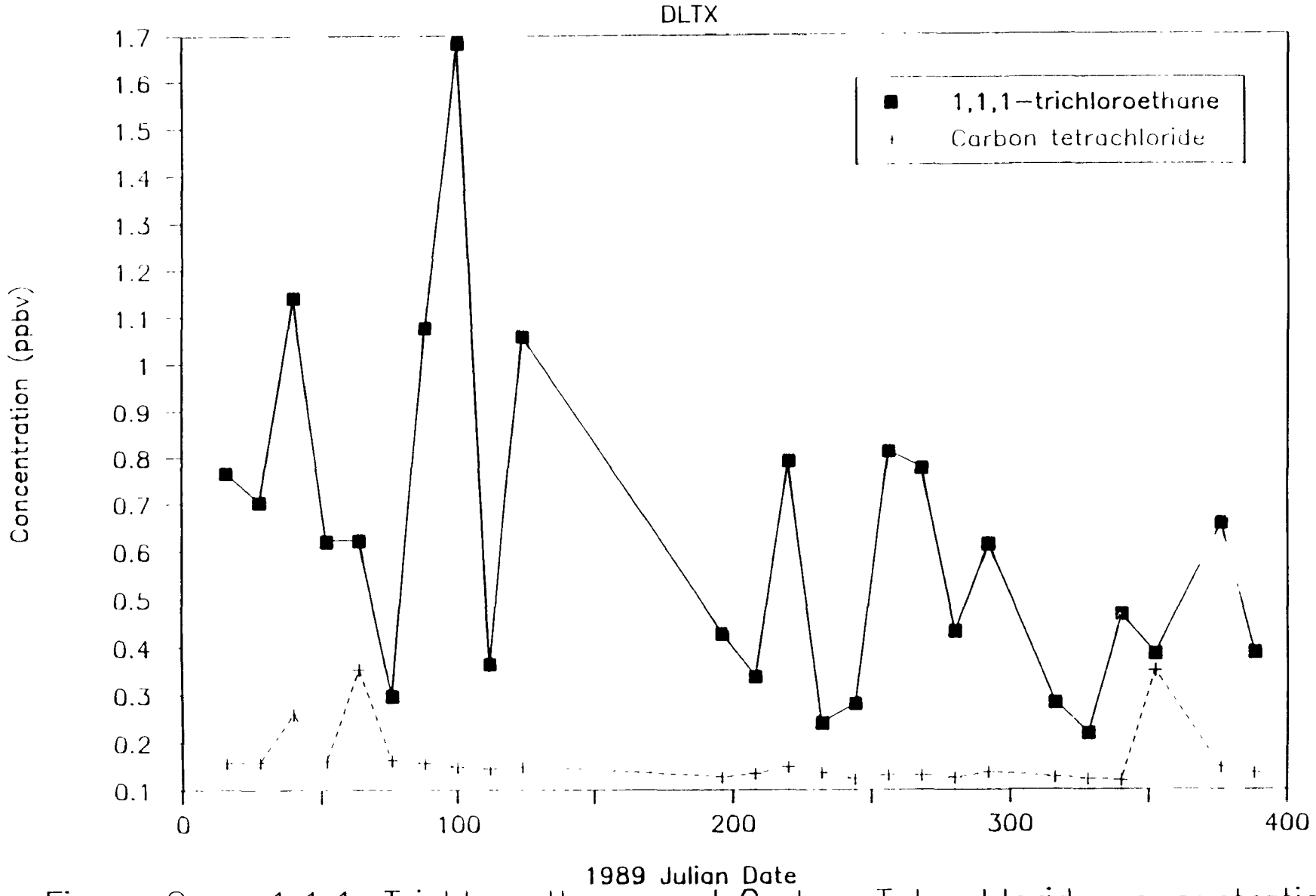



Figure C-4. 1,1,1–Trichloroethane and Carbon Tetrachloride concentration in DLTX 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

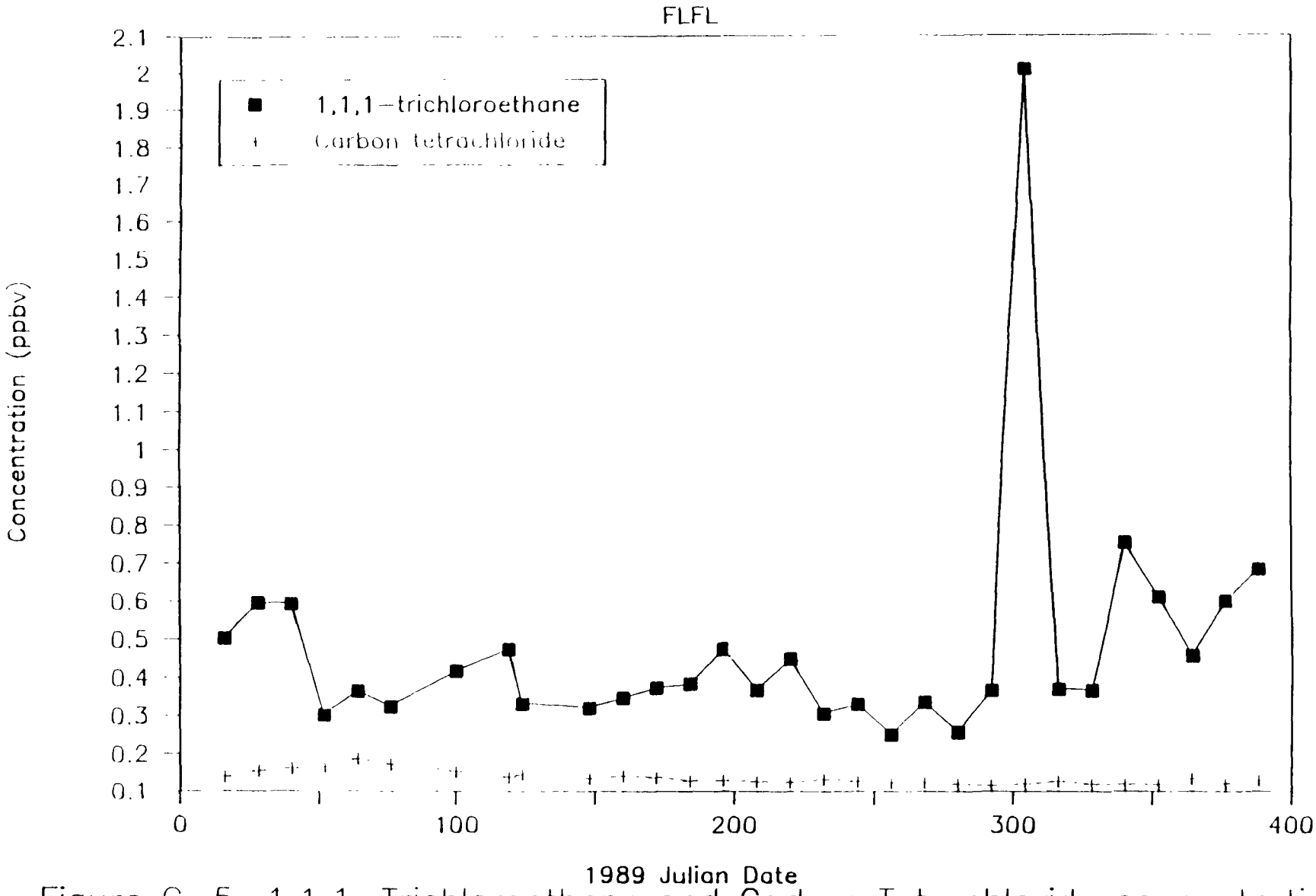



Figure C-5. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in FLFL 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

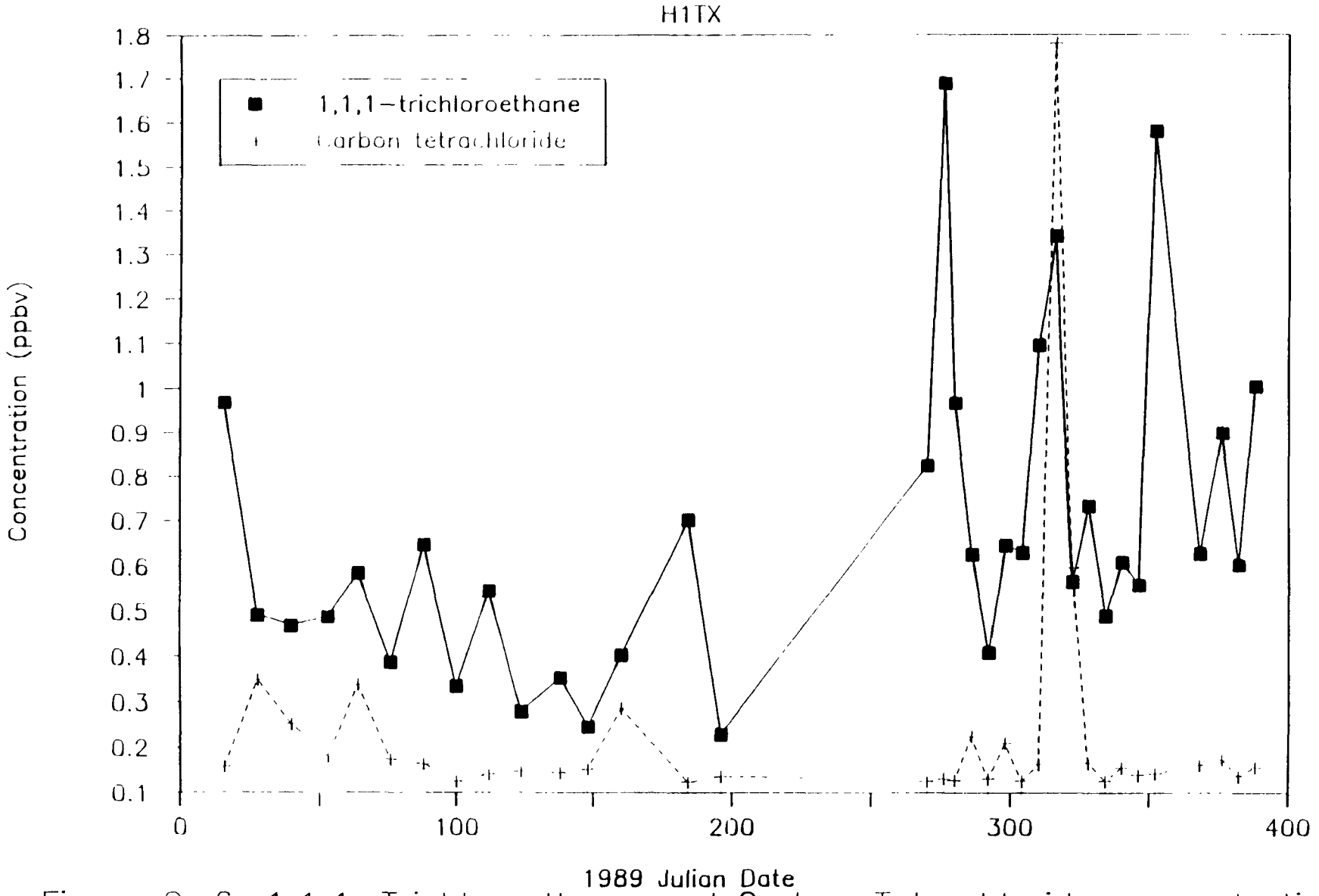



Figure C-6. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in H1TX 1989 UATMP Samples.

# 1,1,1–TRICHLOROETHANE AND CARBON TETRACHLORIDE

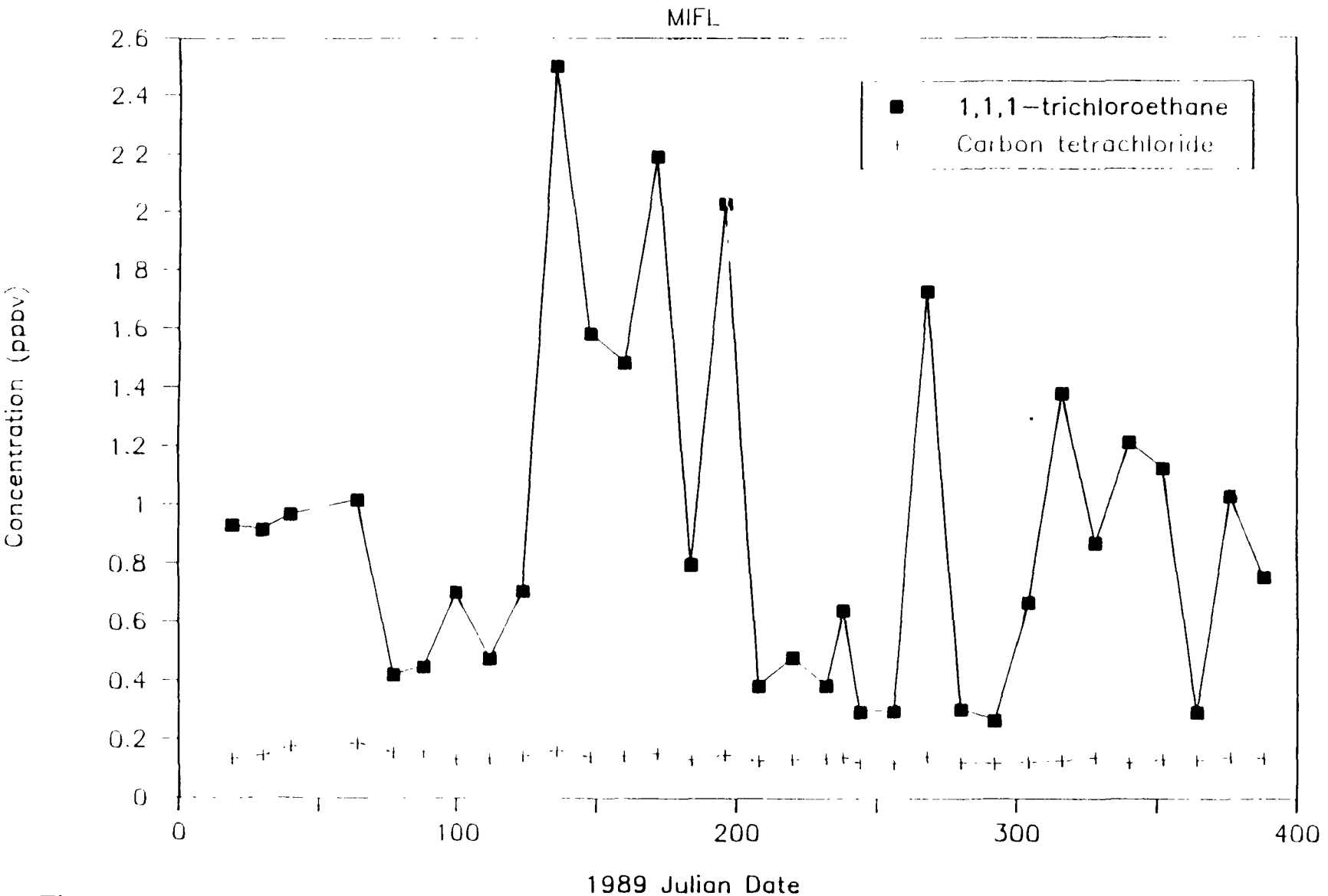



Figure C–7. 1,1,1–Trichloroethane and Carbon Tetrachloride concentration in MIFL 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

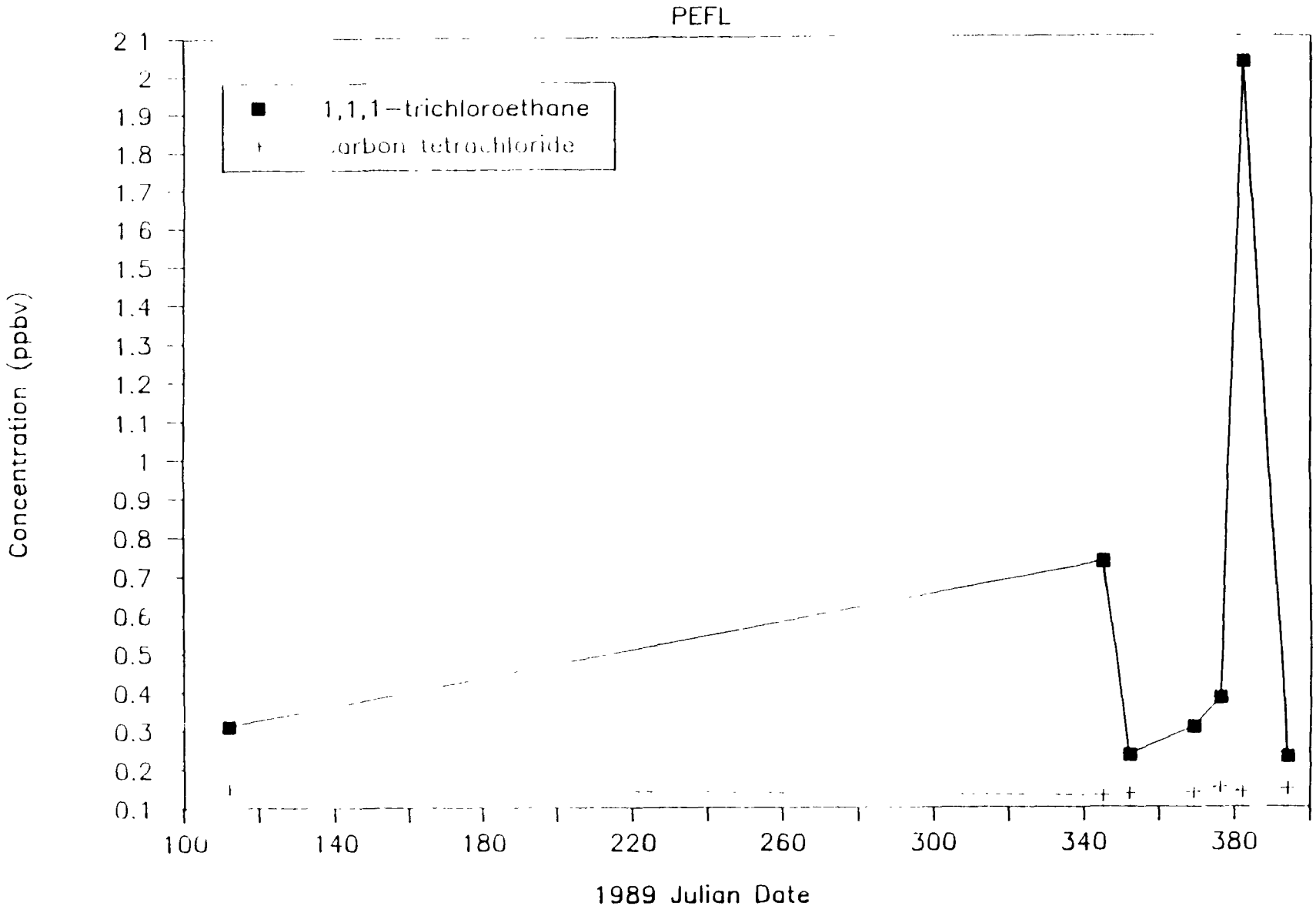



Figure C-8. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in PEFL 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

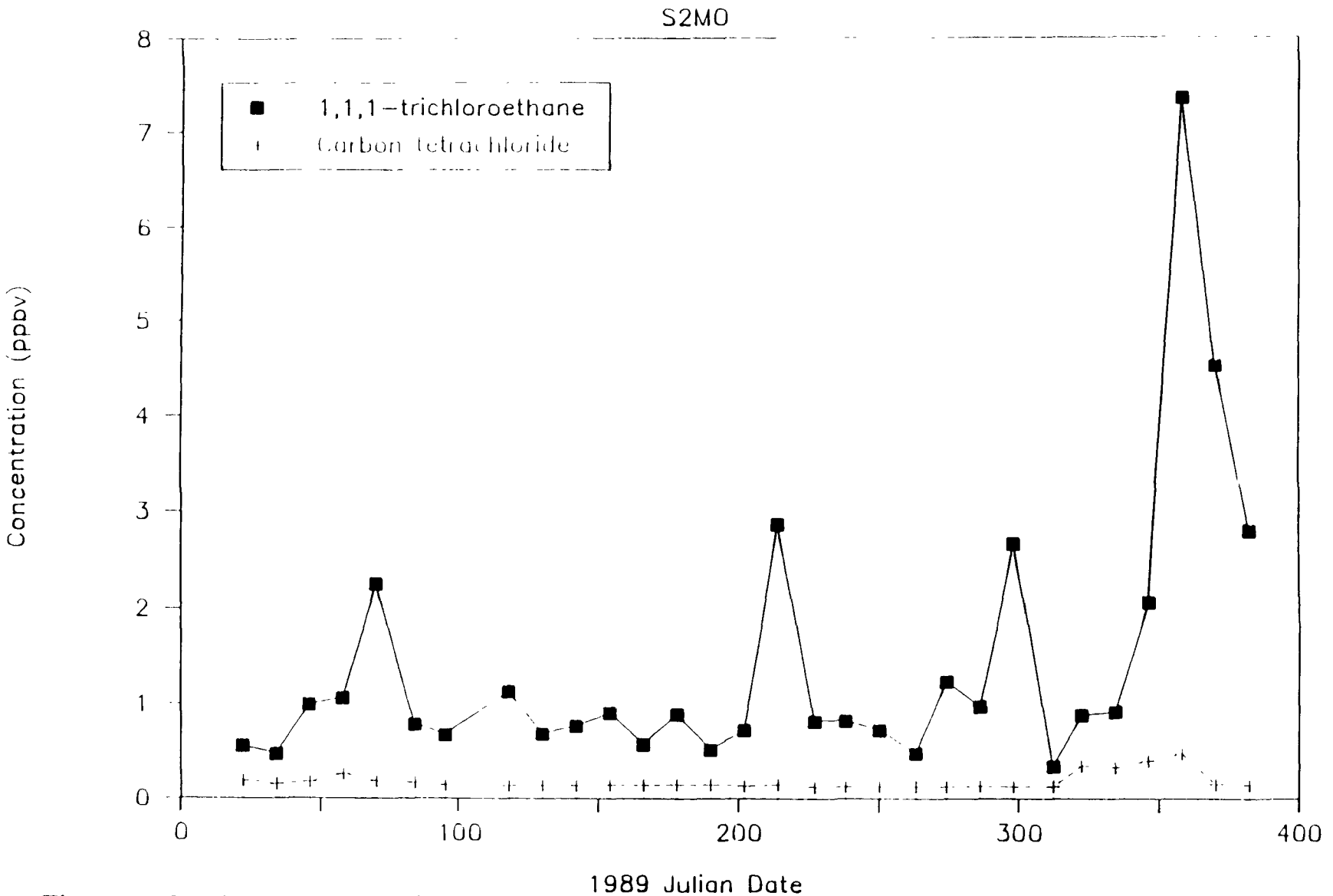



Figure C-9. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in S2MO 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

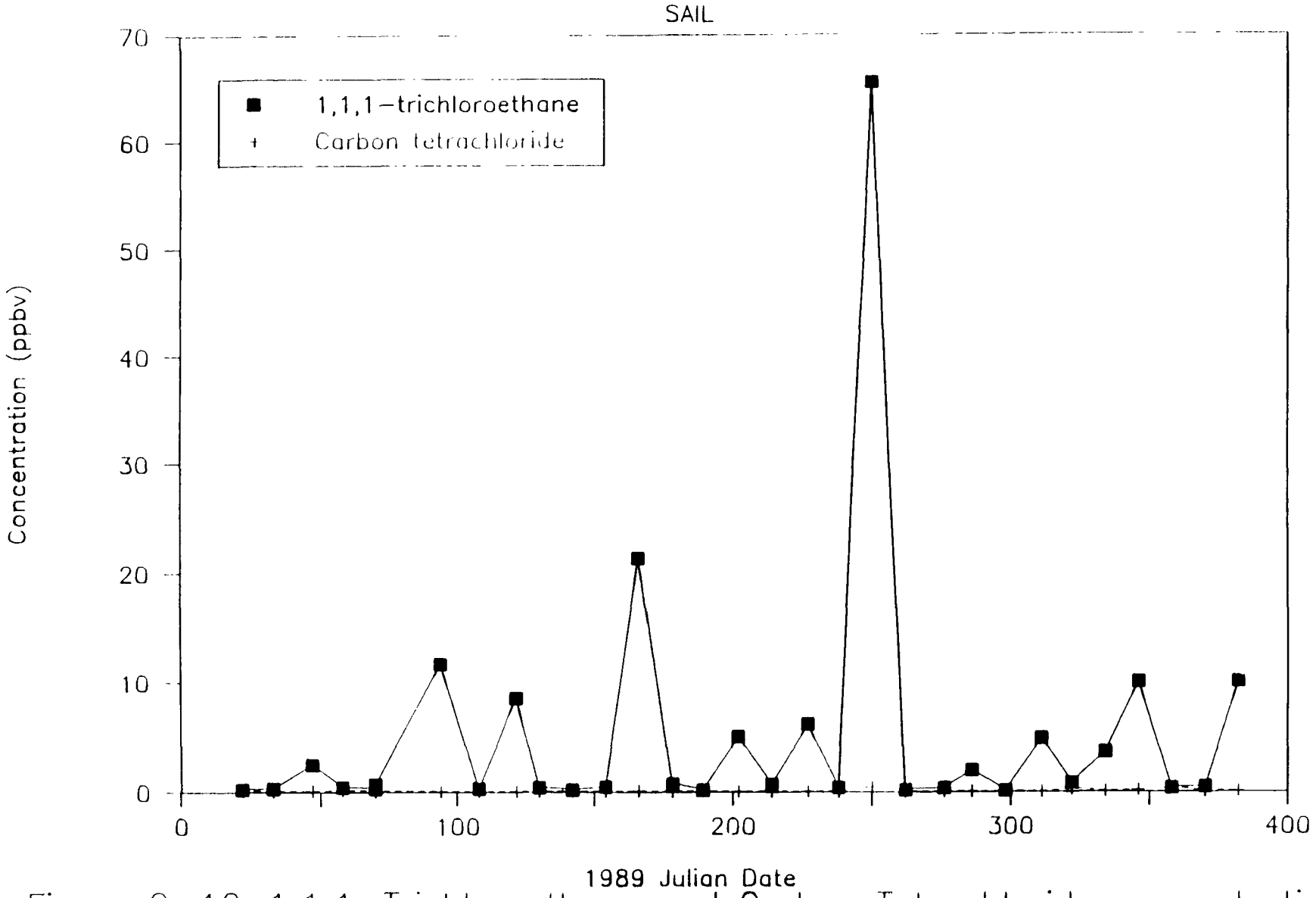



Figure C-10. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in SAIL 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

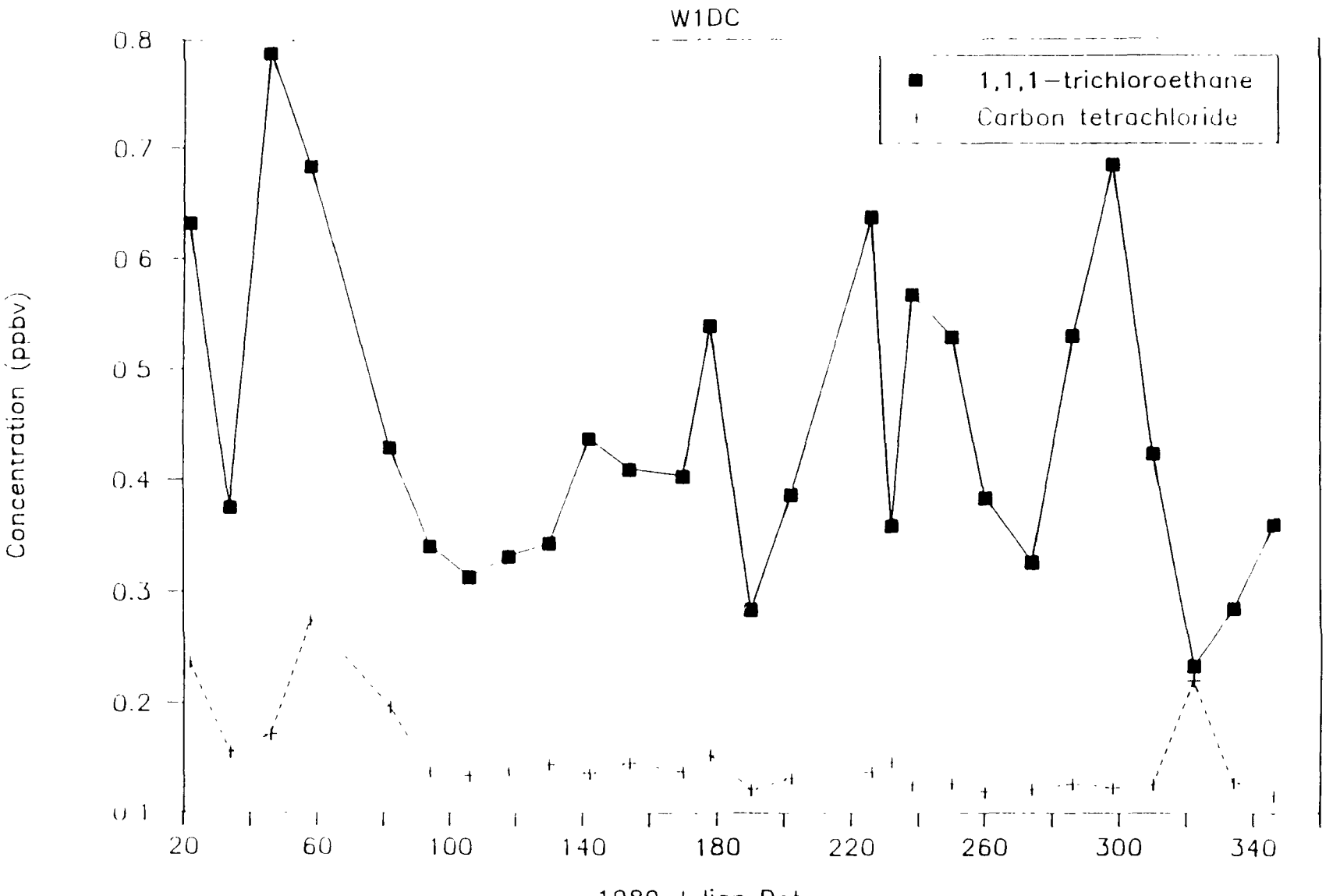



Figure C-11. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in W1DC 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

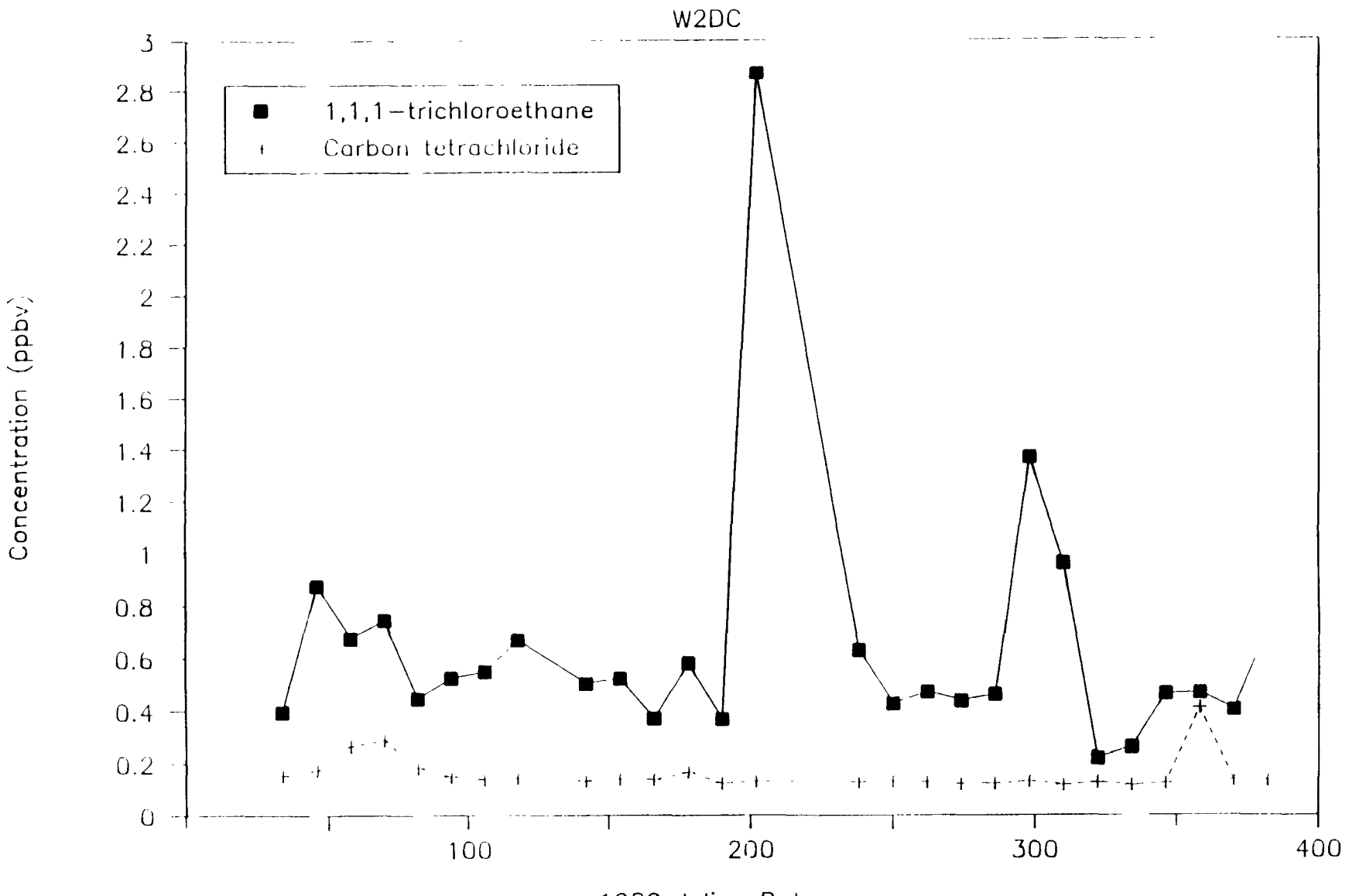



Figure C-12. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in W2DC 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

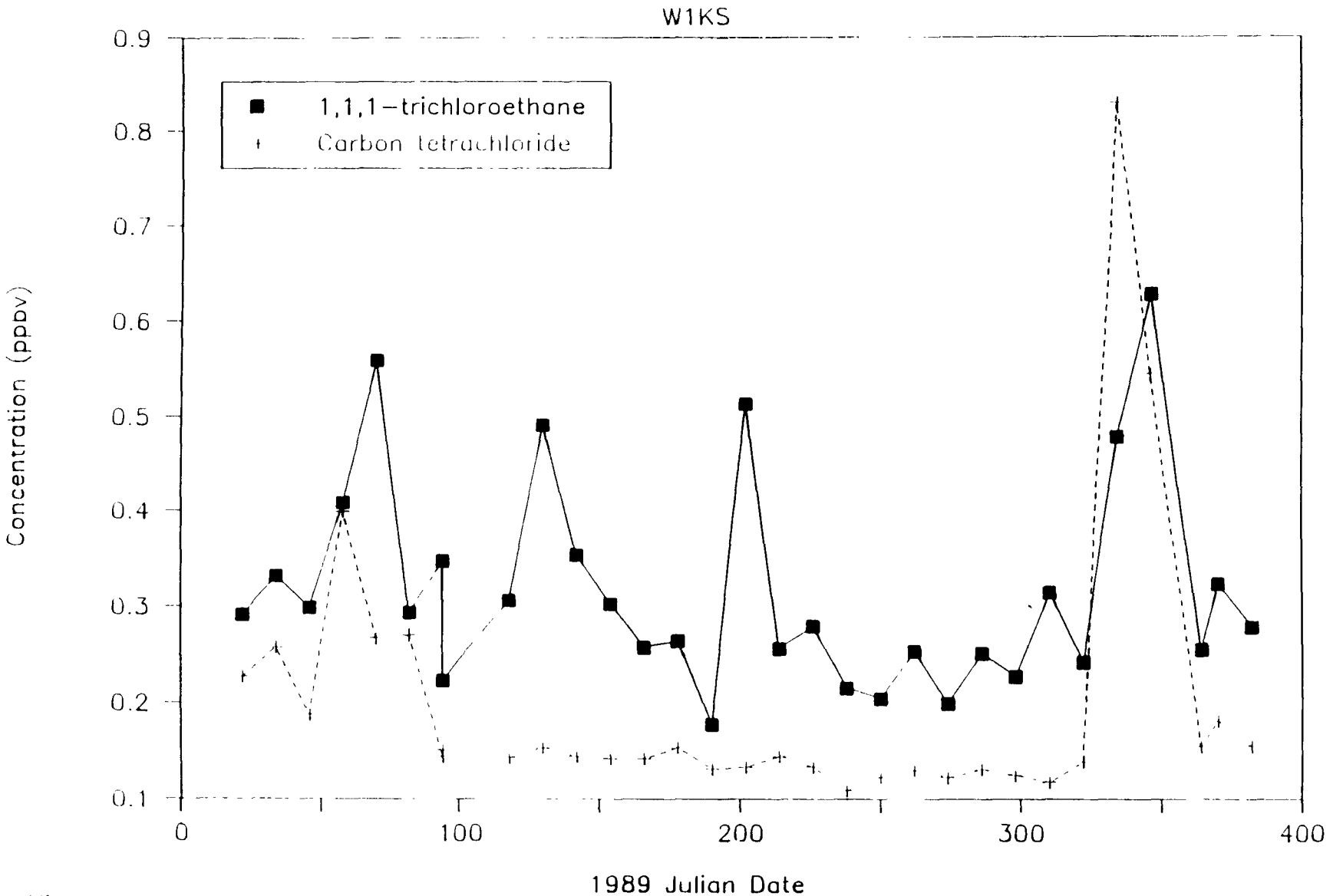



Figure C-13. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in W1KS 1989 UATMP Samples.

# 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE

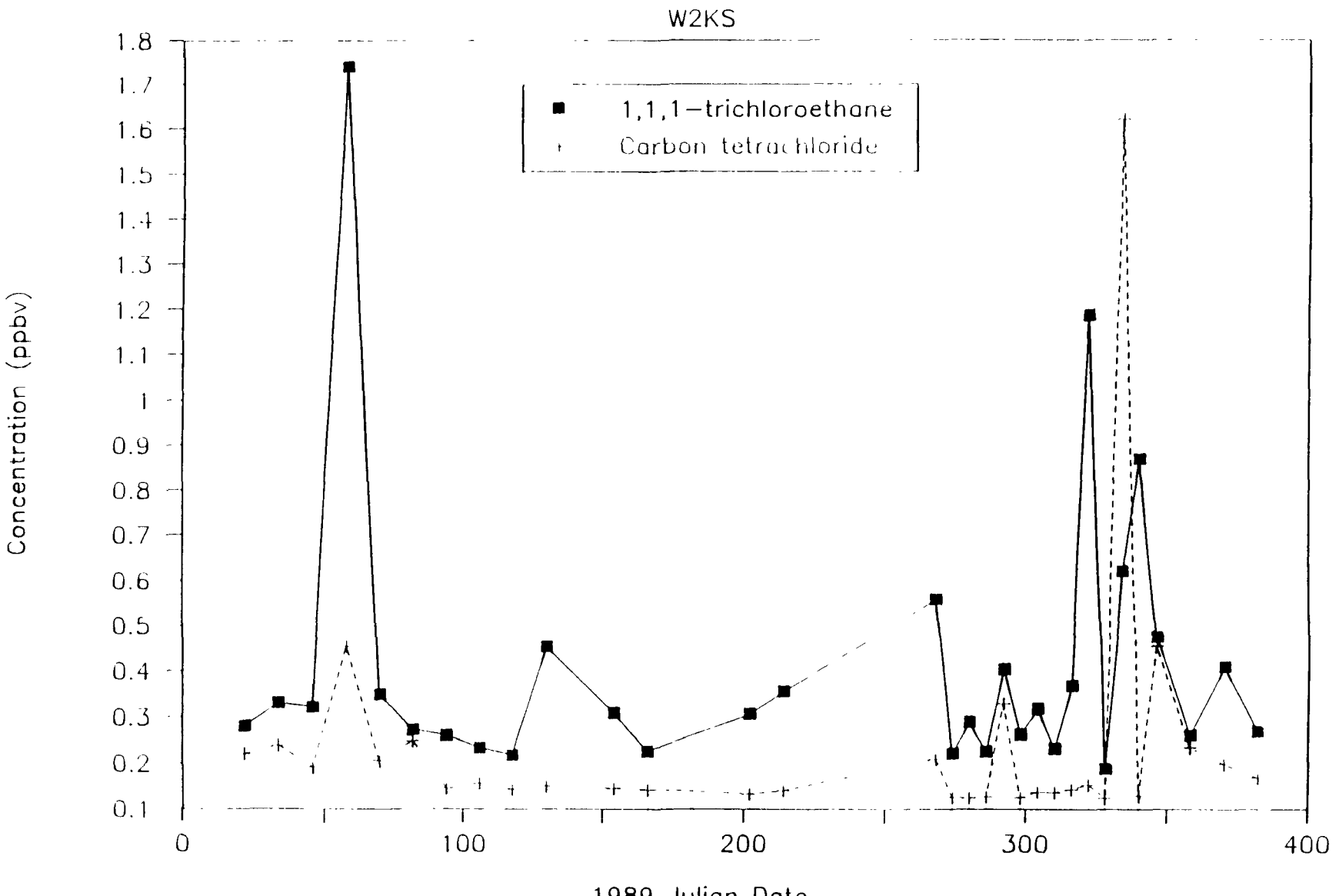



Figure C-14. 1,1,1-Trichloroethane and Carbon Tetrachloride concentration in W2KS 1989 UATMP Samples.

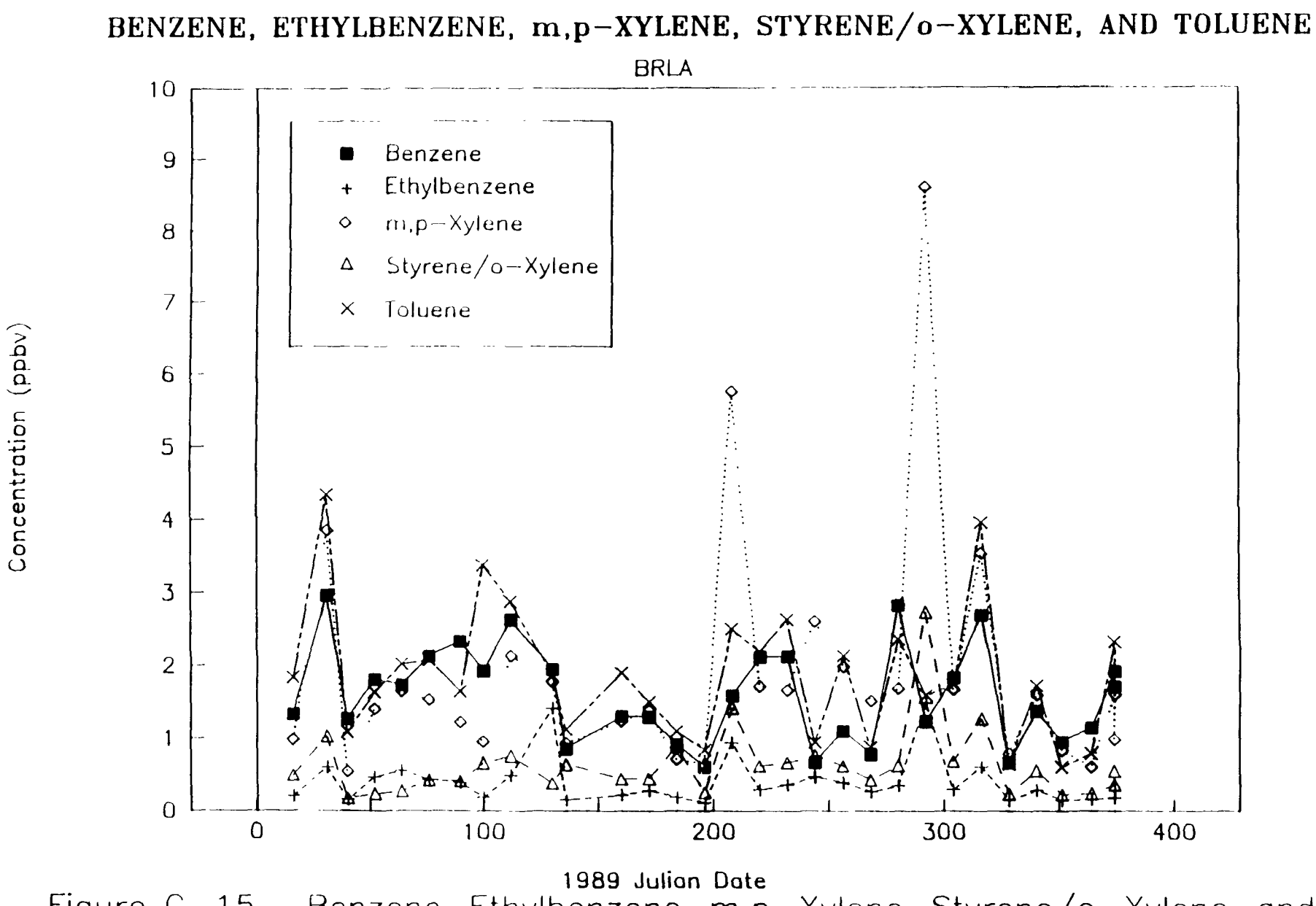



Figure C-15. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in BRLA 1989 UATMP Samples.

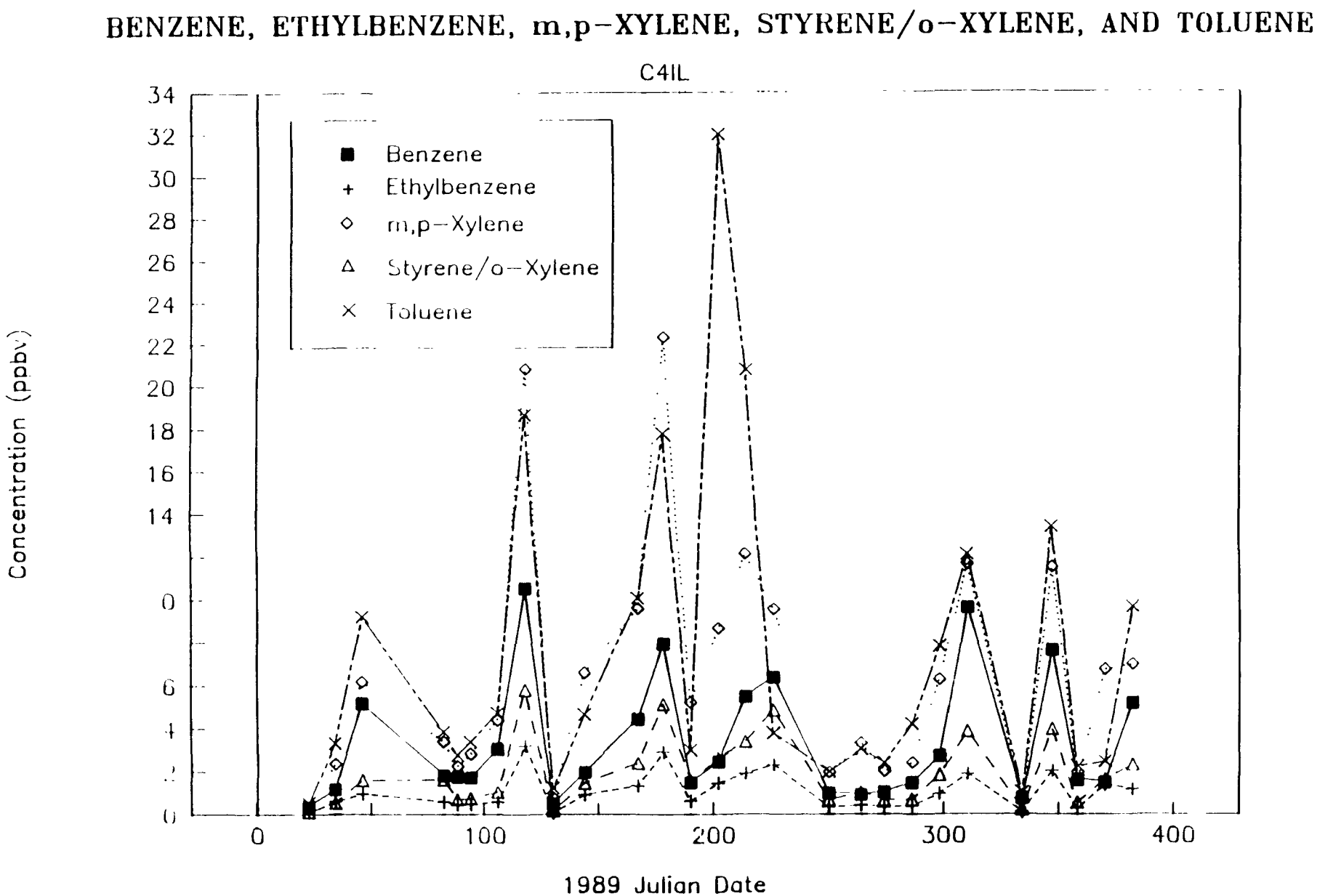



Figure C-16. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in C4IL 1989 UATMP Samples.

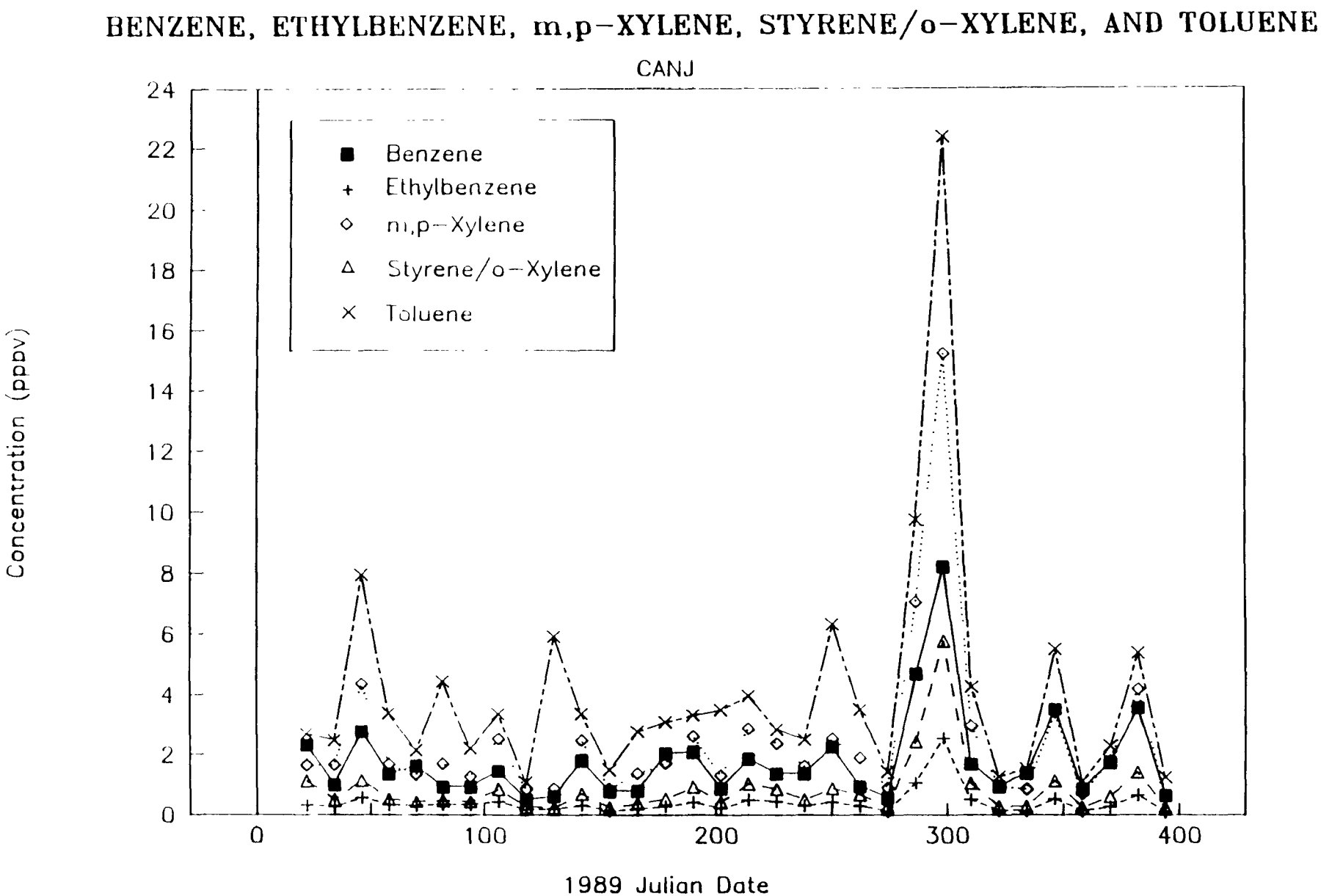



Figure C-17. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in CANJ 1989 UATMP Samples.

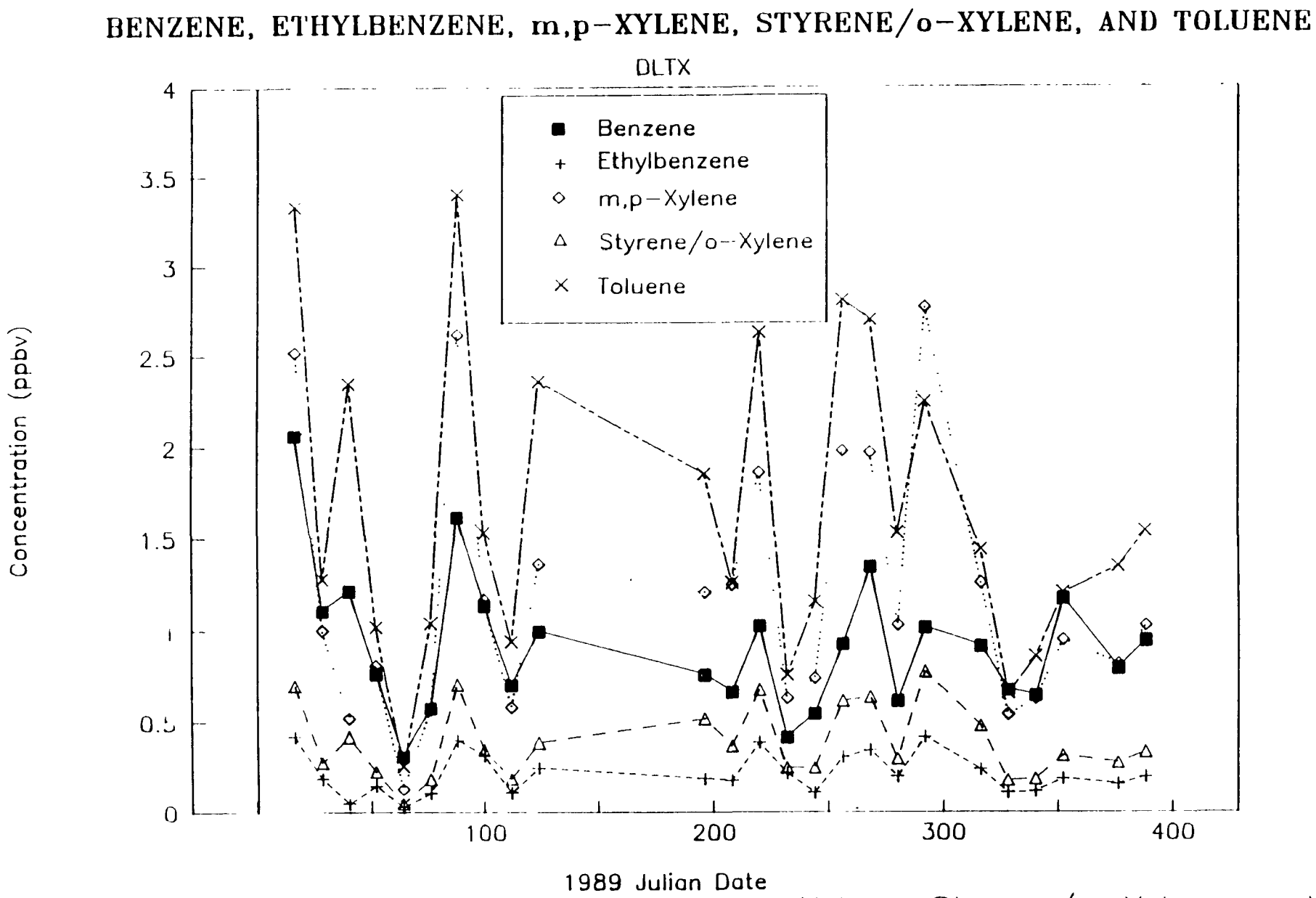



Figure C-18. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in DLTX 1989 UATMP Samples.

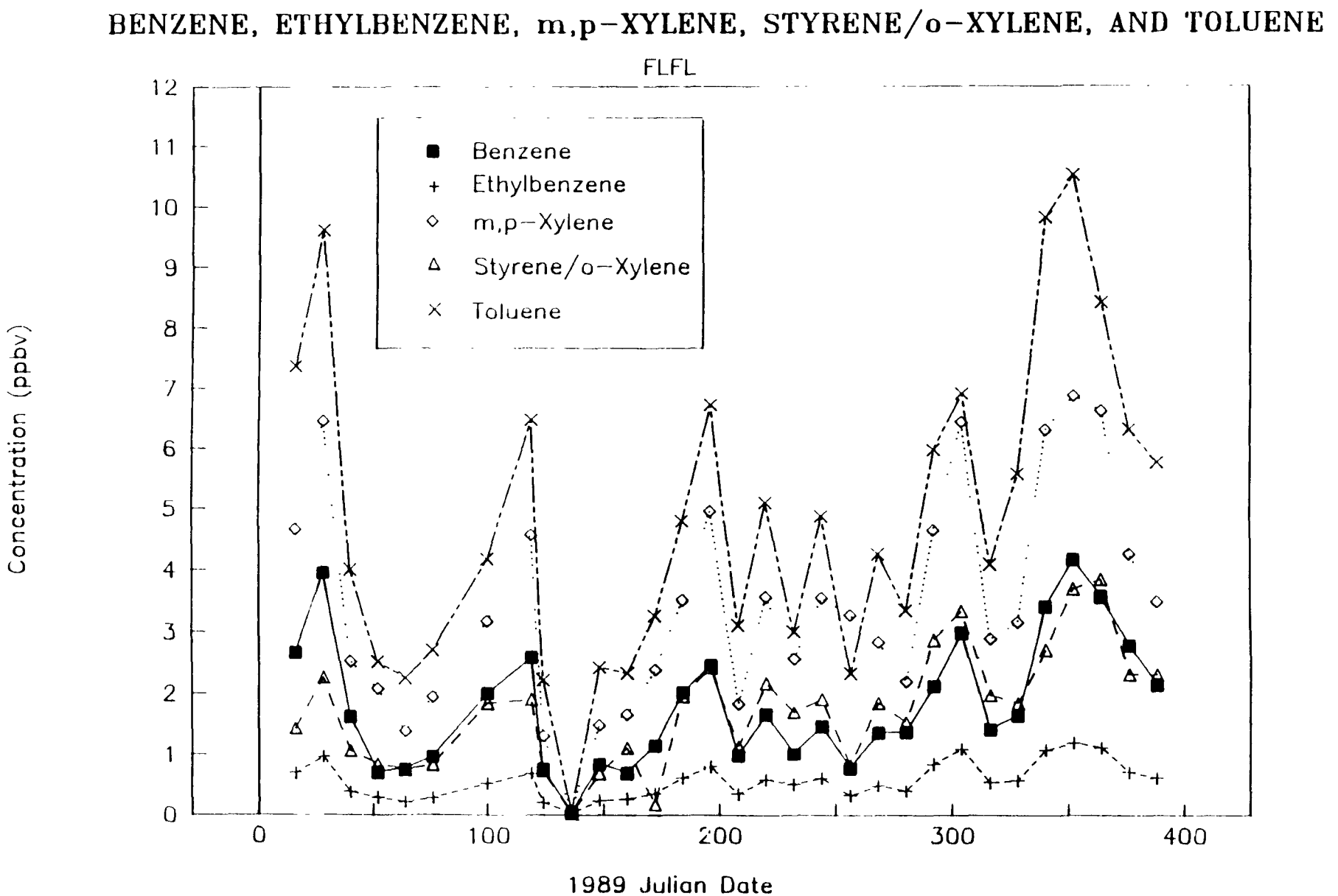



Figure C-19. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in FLFL 1989 UATMP Samples.

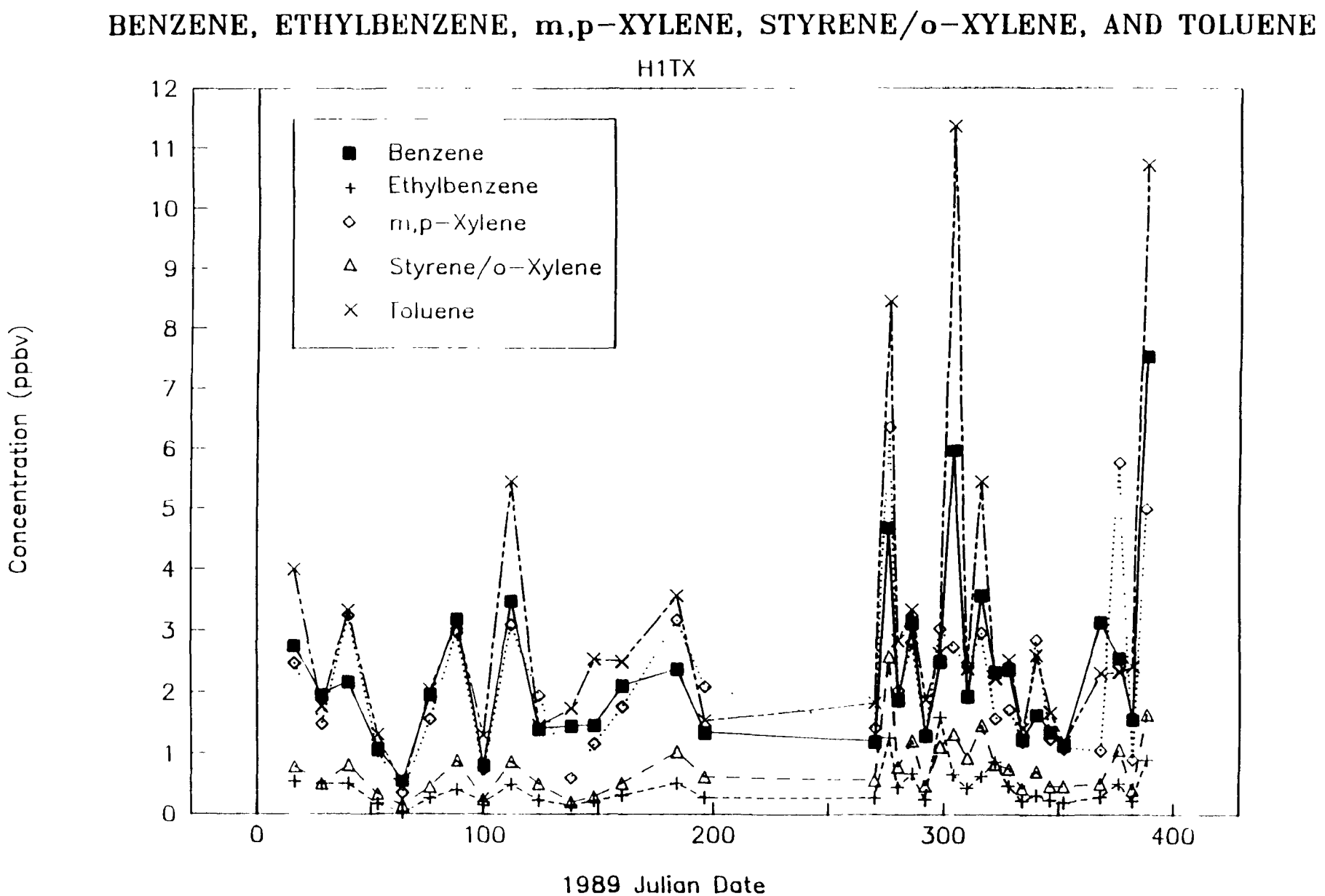



Figure C-20. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in H1TX 1989 UATMP Samples.

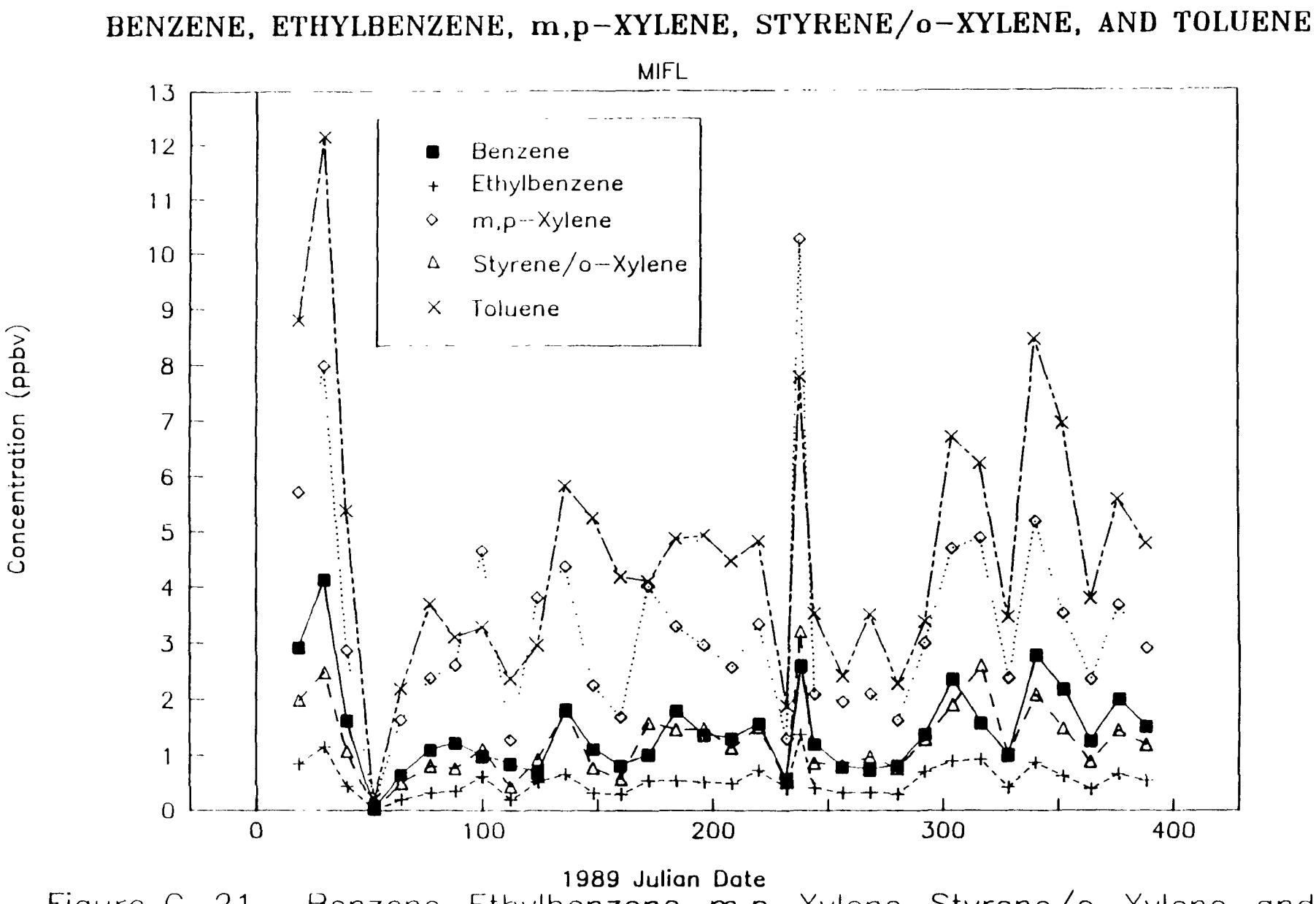



Figure C-21. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in MIFL 1989 UATMP Samples.

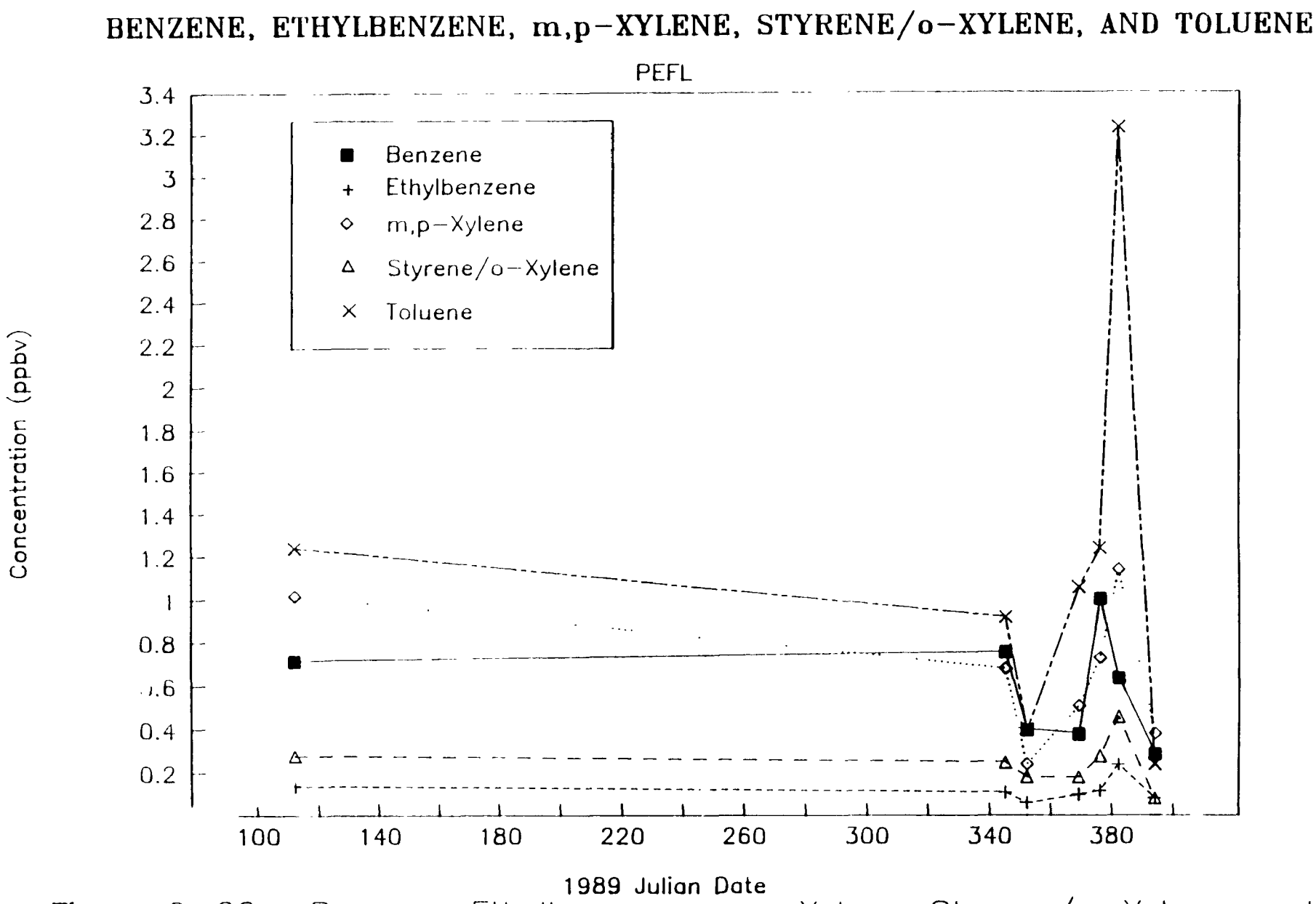



Figure C-22. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in PEFL 1989 UATMP Samples.

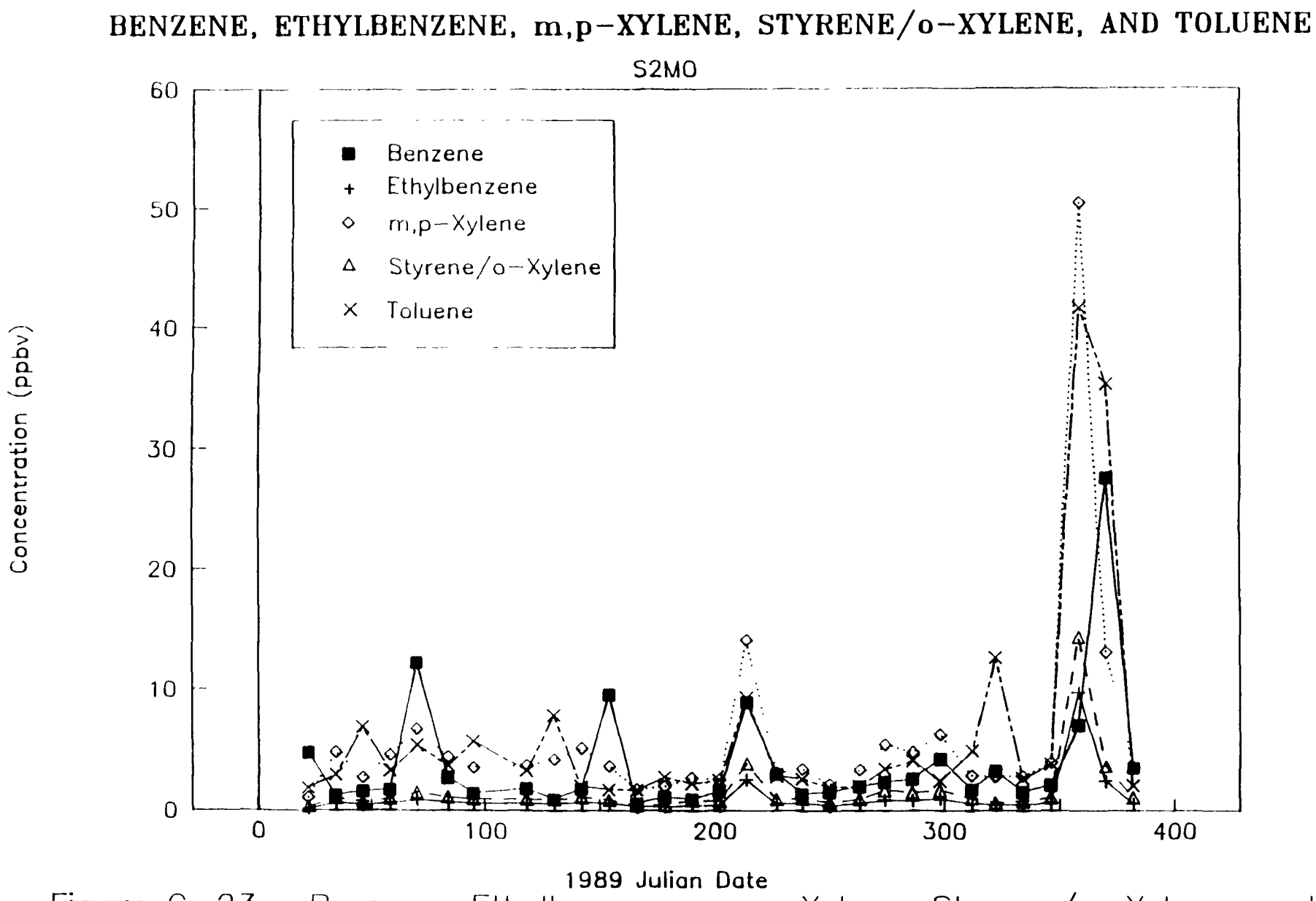



Figure C-23. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in S2MO 1989 UATMP Samples.

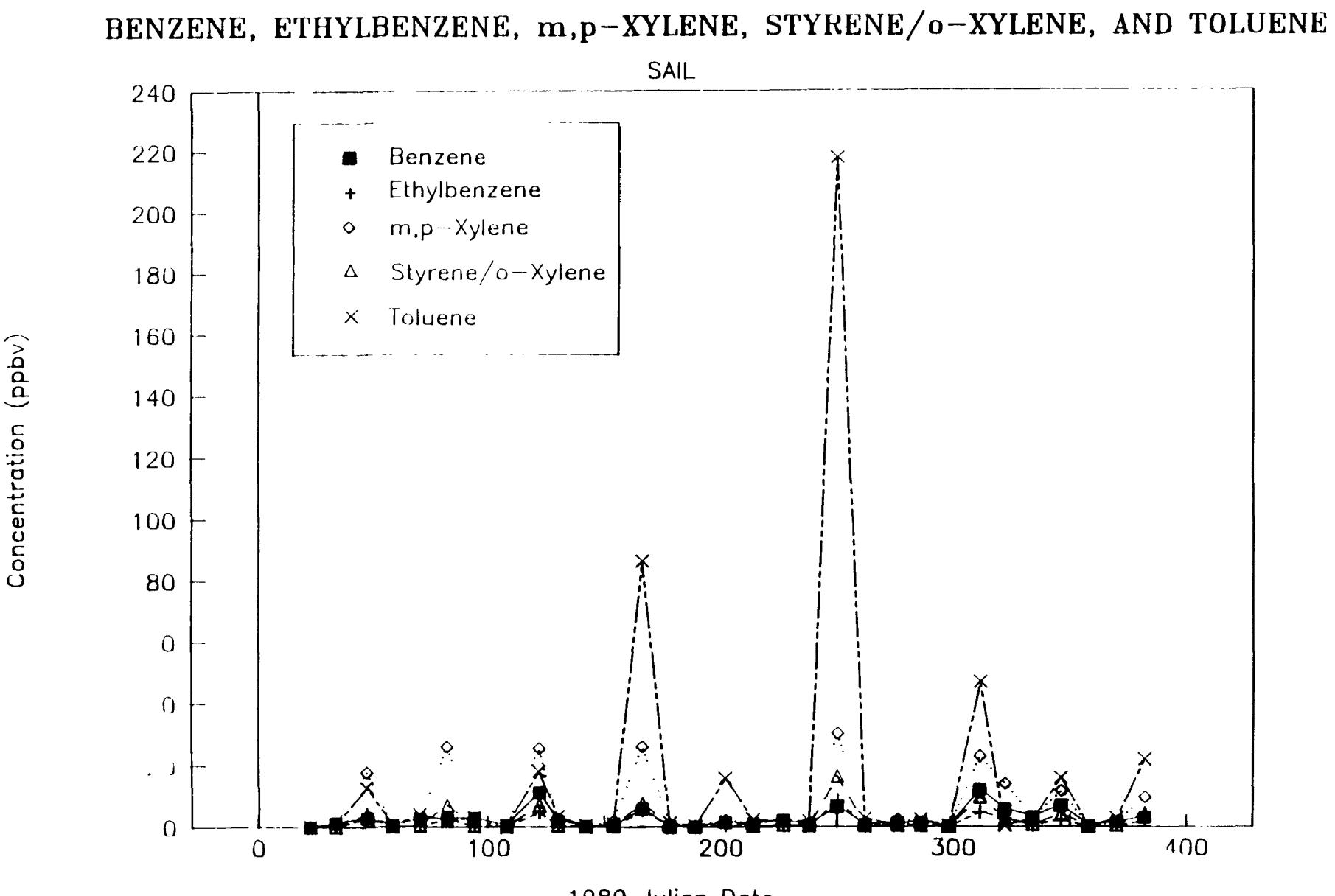



Figure C-24. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in SAIL 1989 UATMP Samples.

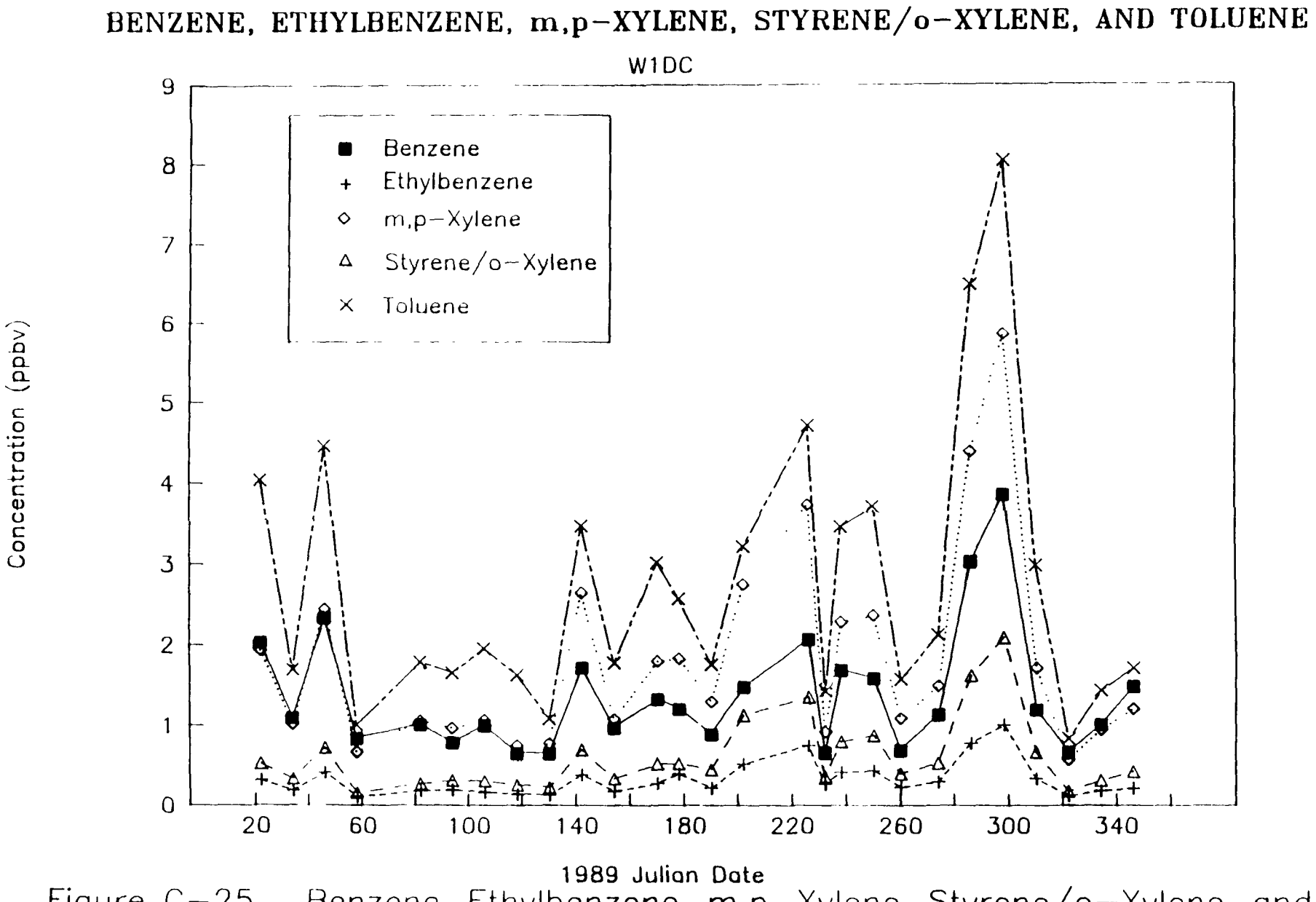



Figure C-25. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in W1DC 1989 UATMP Samples.

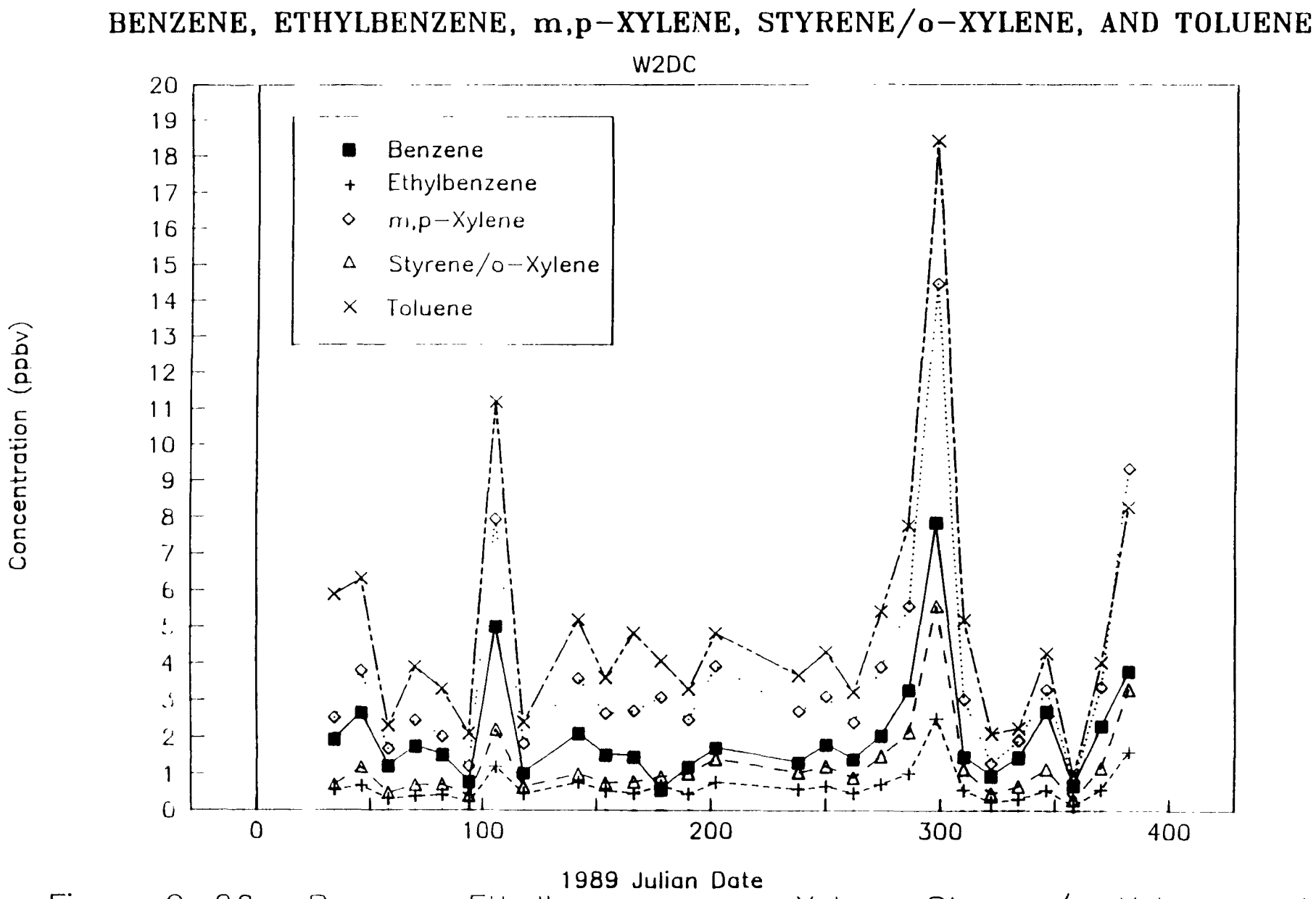



Figure C-26. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in W2DC 1989 UATMP Samples.

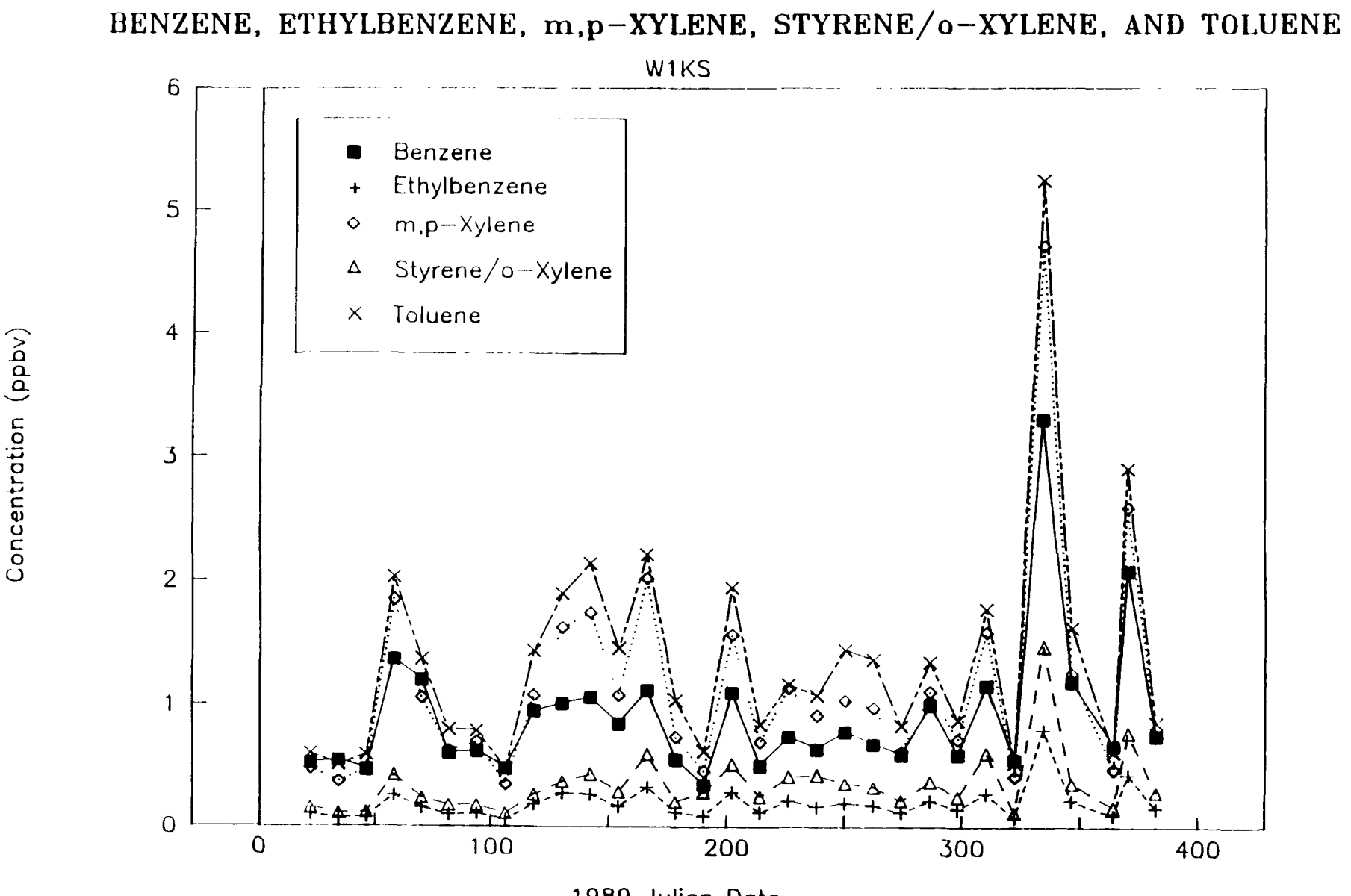



Figure C-27. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in W1KS 1989 UATMP Samples.

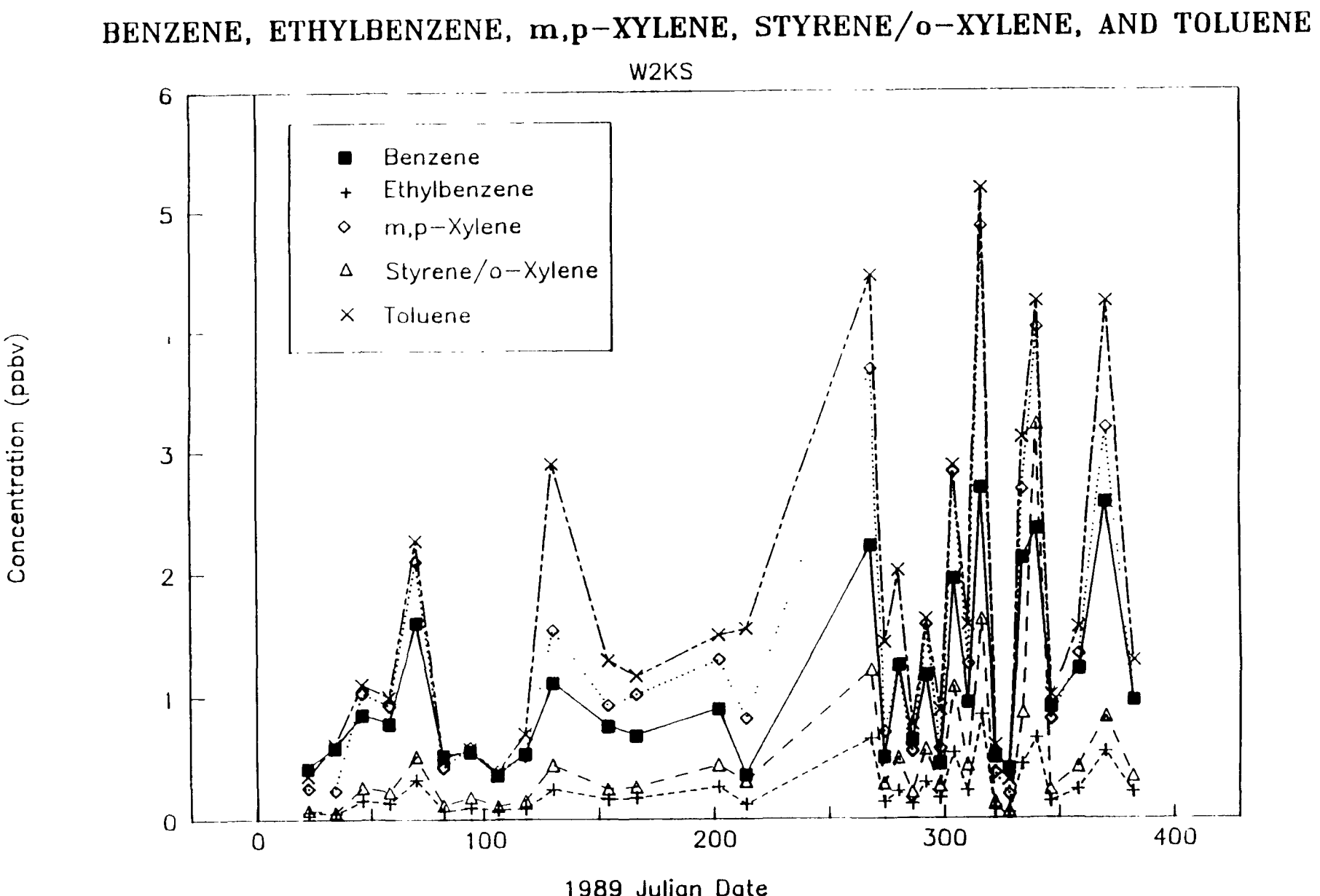



Figure C-28. Benzene, Ethylbenzene, m,p-Xylene, Styrene/o-Xylene, and Toluene concentration in W2KS 1989 UATMP Samples.

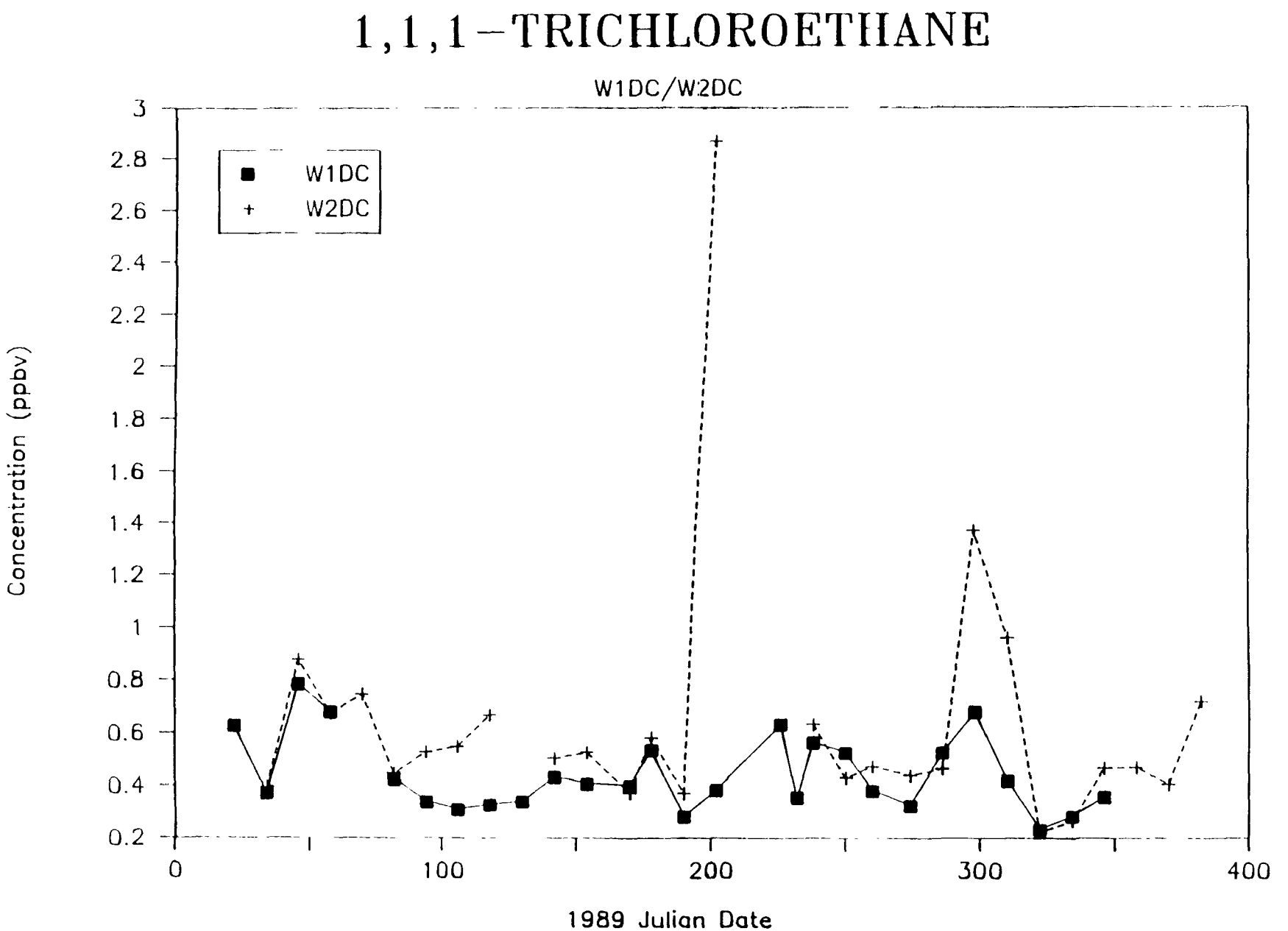



Figure C-29. Comparison of 1,1,1-Trichloroethane Concentrations in W1DC and W2DC 1989 UATMP Samples.

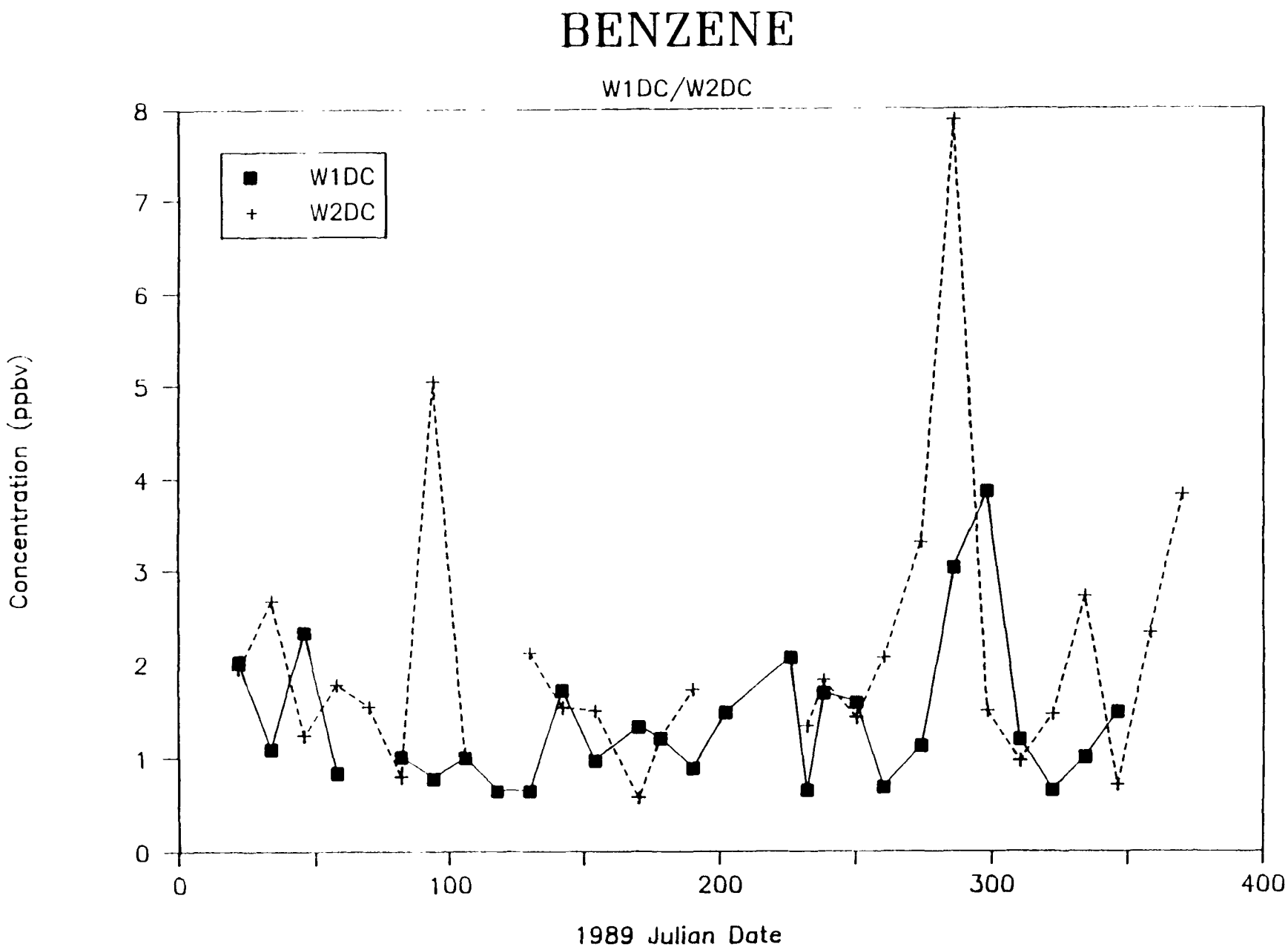



Figure C–30. Comparison of Benzene Concentrations in W1DC and W2DC 1989 UATMP Samples.

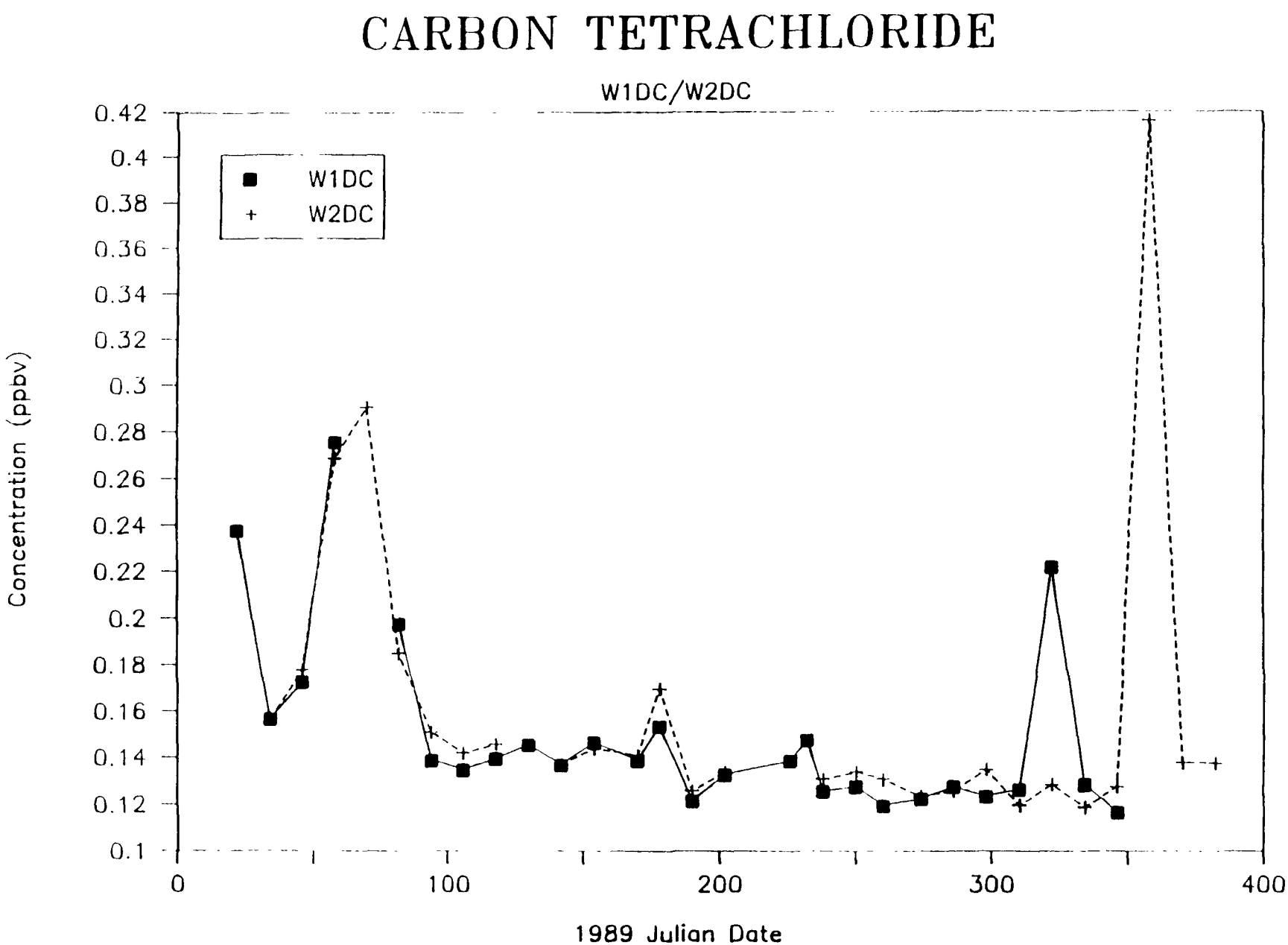



Figure C–31. Comparison of Carbon Tetrachloride Concentrations in W1DC and W2DC 1989 UATMP Samples.

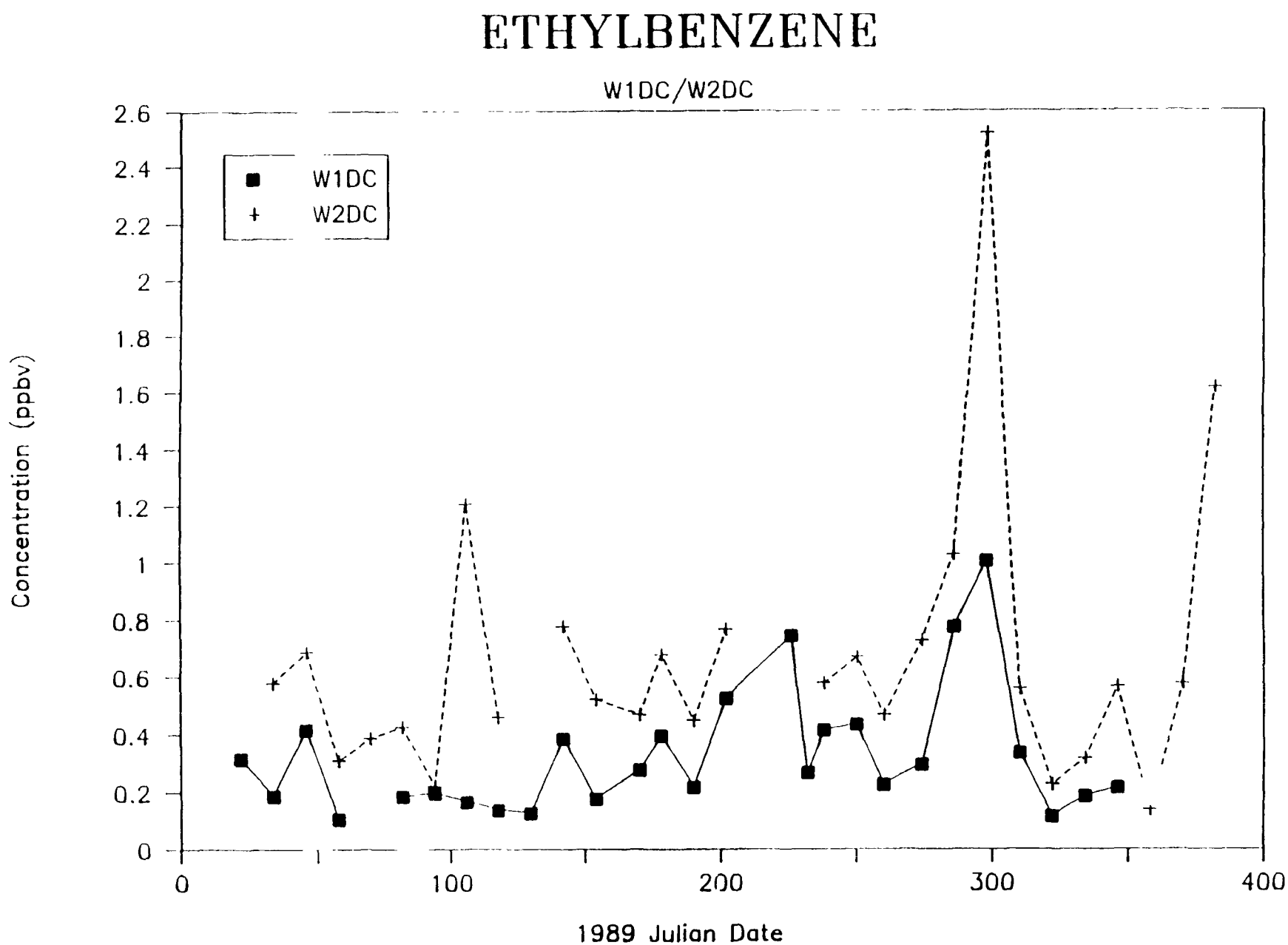



Figure C–32. Comparison of Ethylbenzene Concentrations in W1DC and W2DC 1989 UATMP Samples.

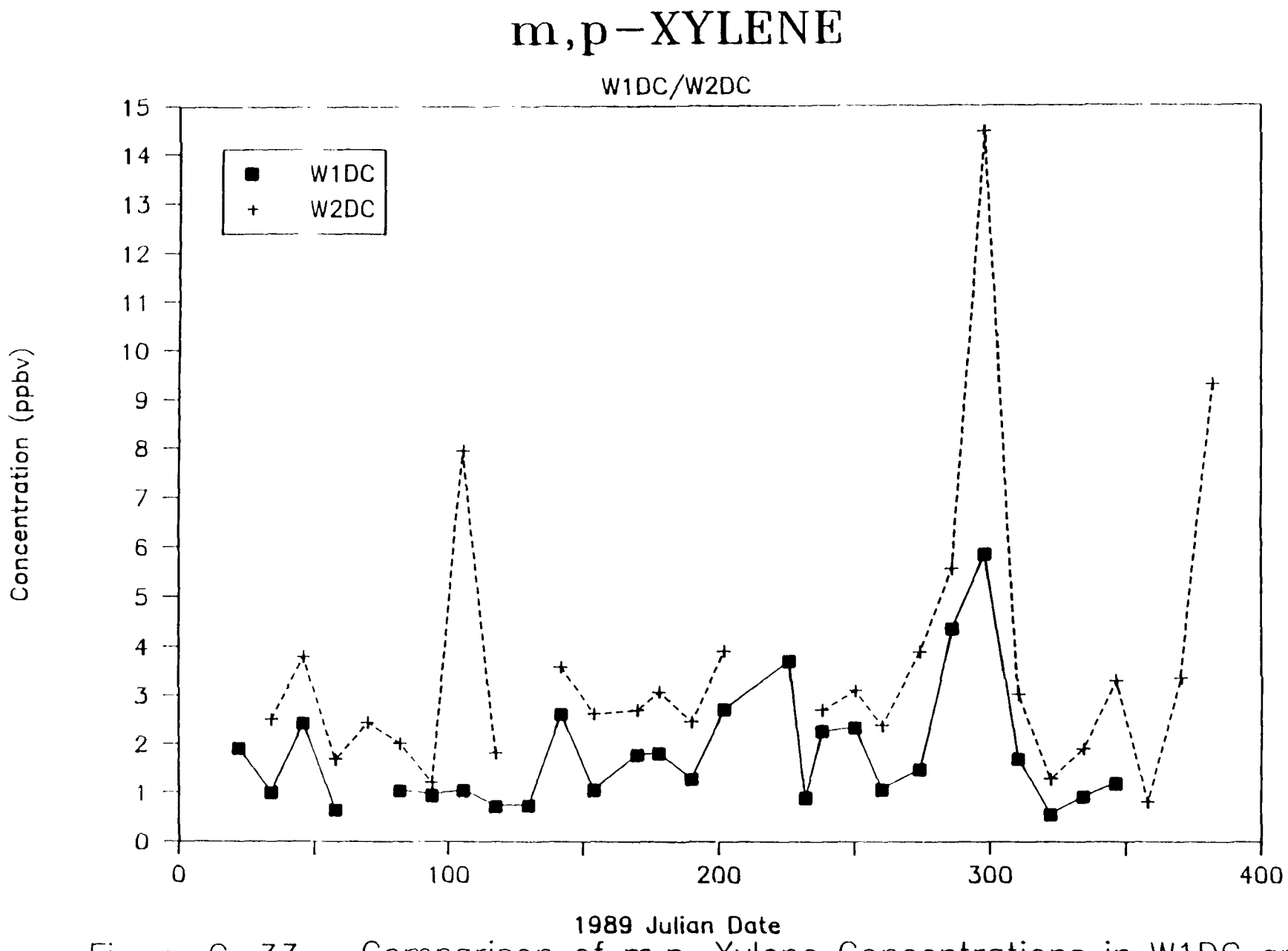



Figure C-33. Comparison of m,p-Xylene Concentrations in W1DC and W2DC 1989 UATMP Samples.

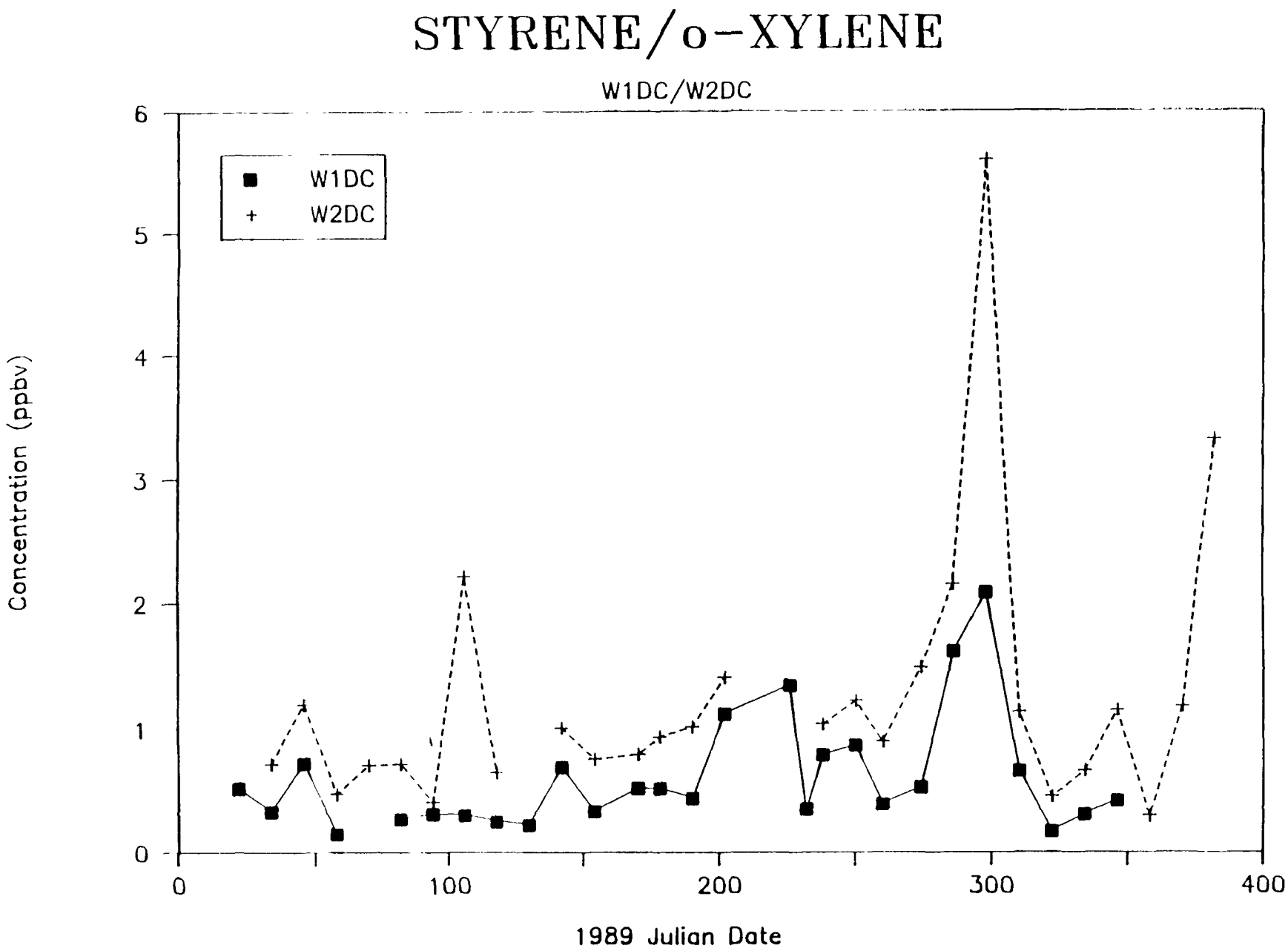



Figure C-34. Comparison of Styrene/o-Xylene Concentrations in W1DC and W2DC 1989 UATMP Samples.

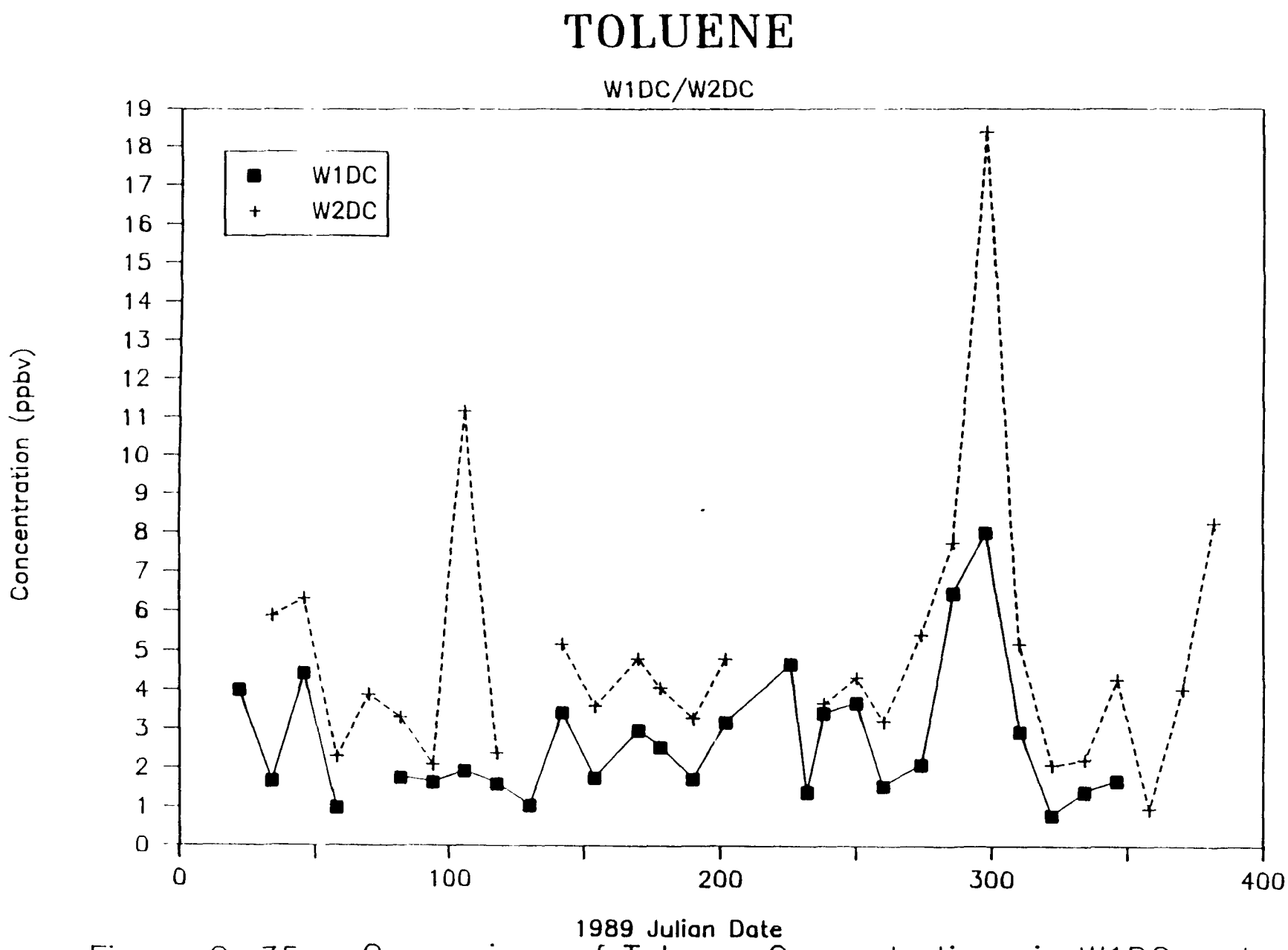



Figure C–35. Comparison of Toluene Concentrations in W1DC and W2DC 1989 UATMP Samples.

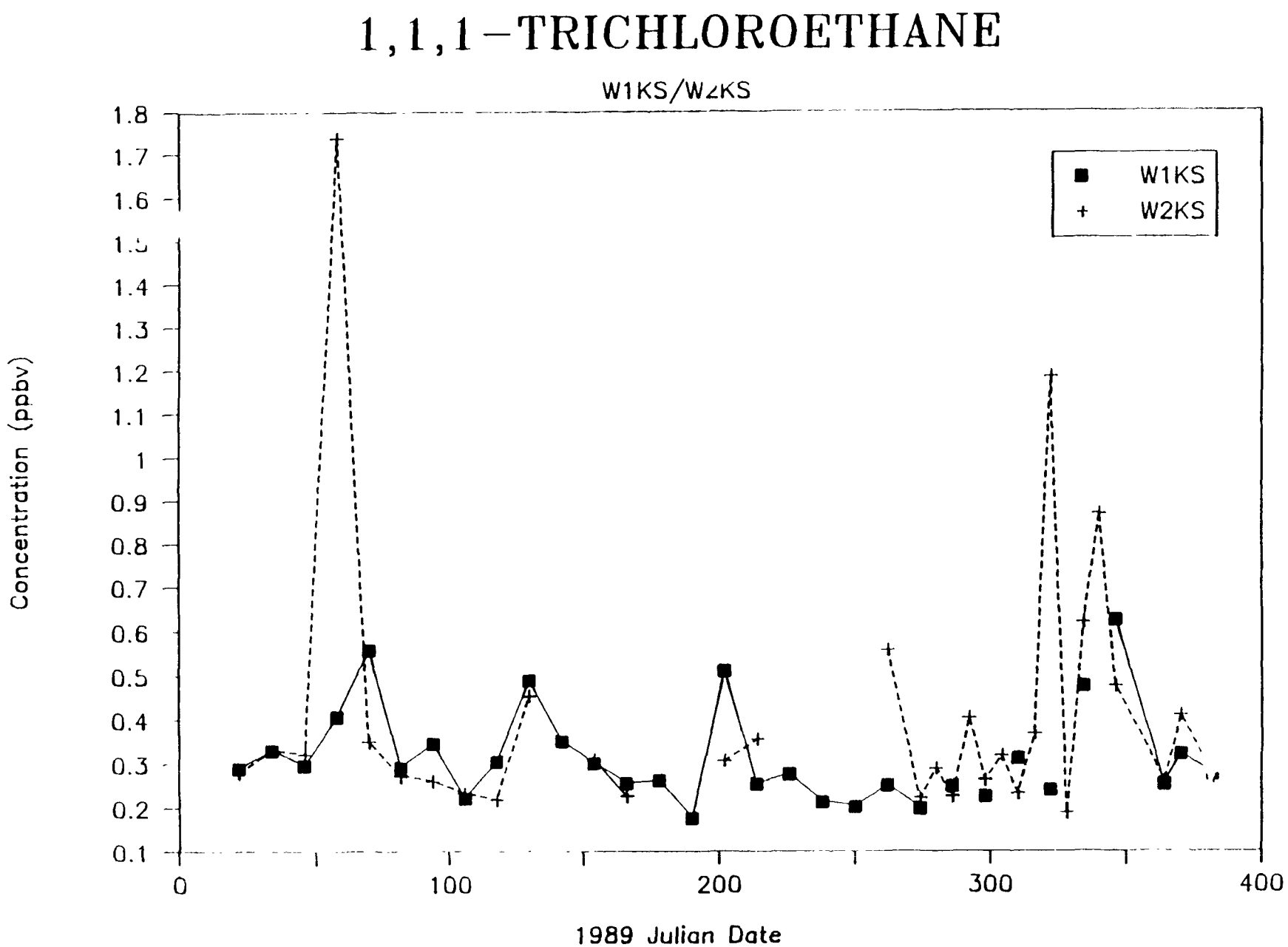



Figure C-36. Comparison of 1,1,1-Trichloroethane Concentrations in W1KS and W2KS 1989 UATMP Samples.

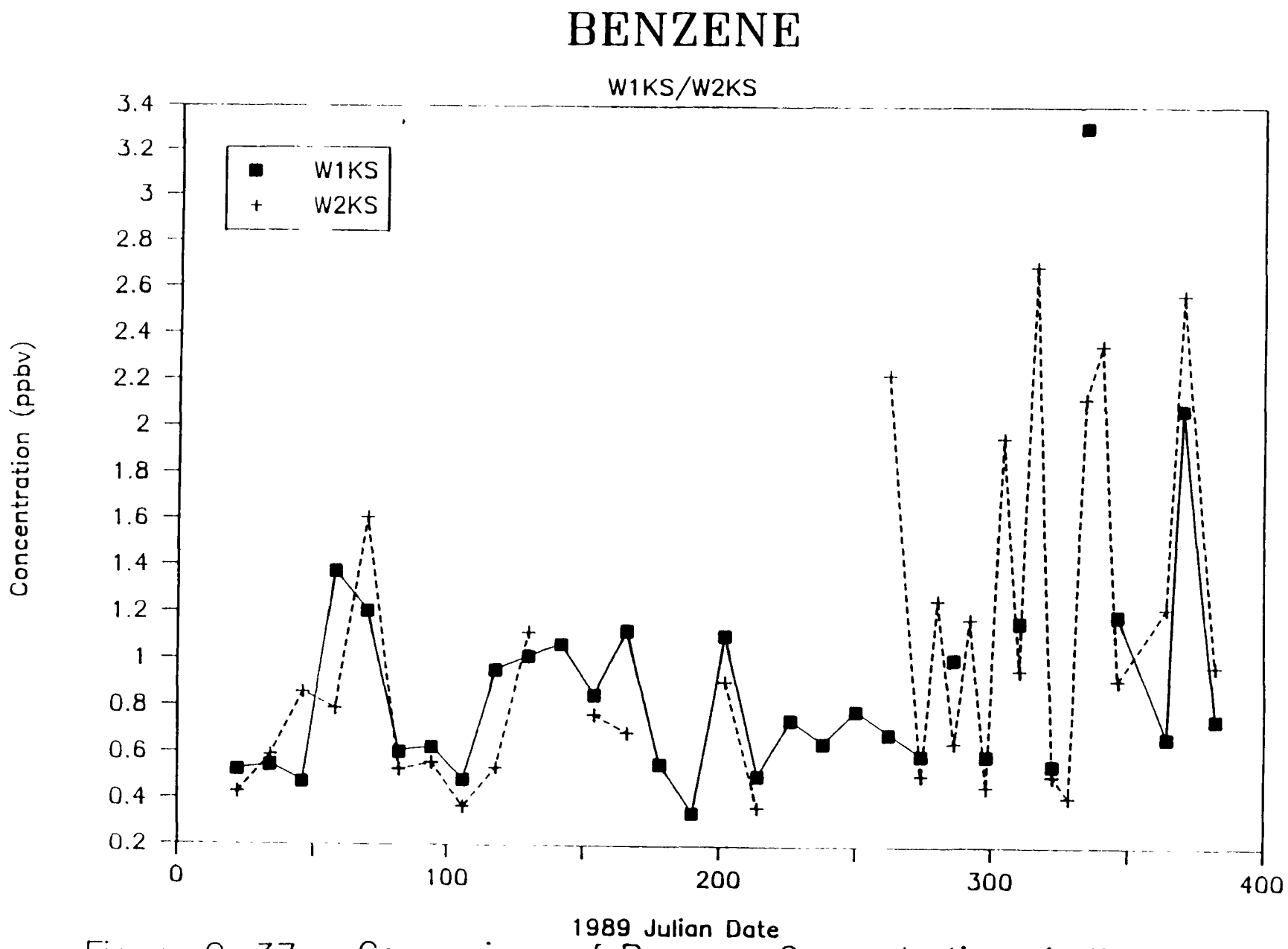



Figure C–37. Comparison of Benzene Concentrations in W1KS and W2KS 1989 UATMP Samples.

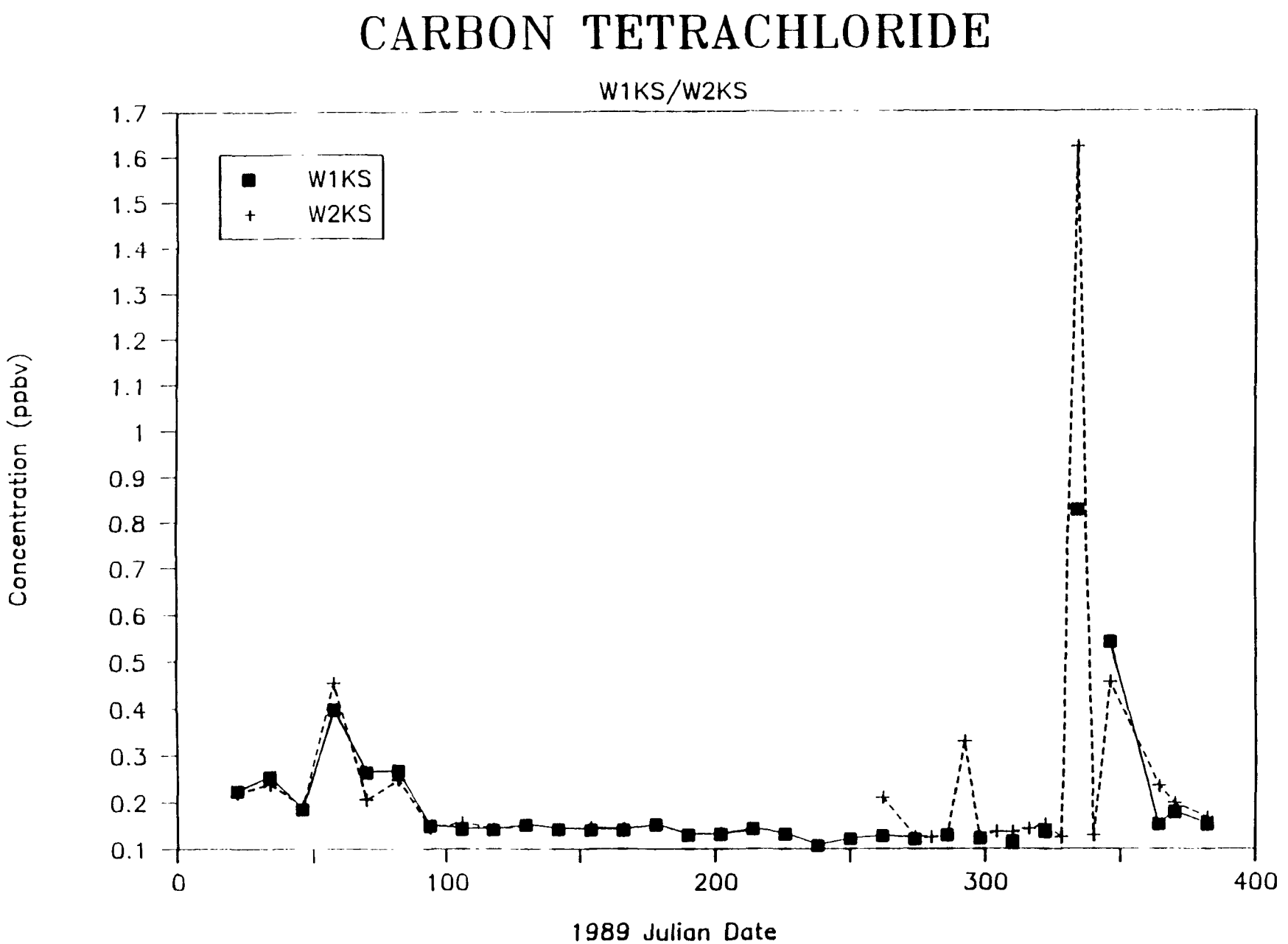



Figure C–38. Comparison of Carbon Tetrachloride Concentrations in W1KS and W2KS 1989 UATMP Samples.

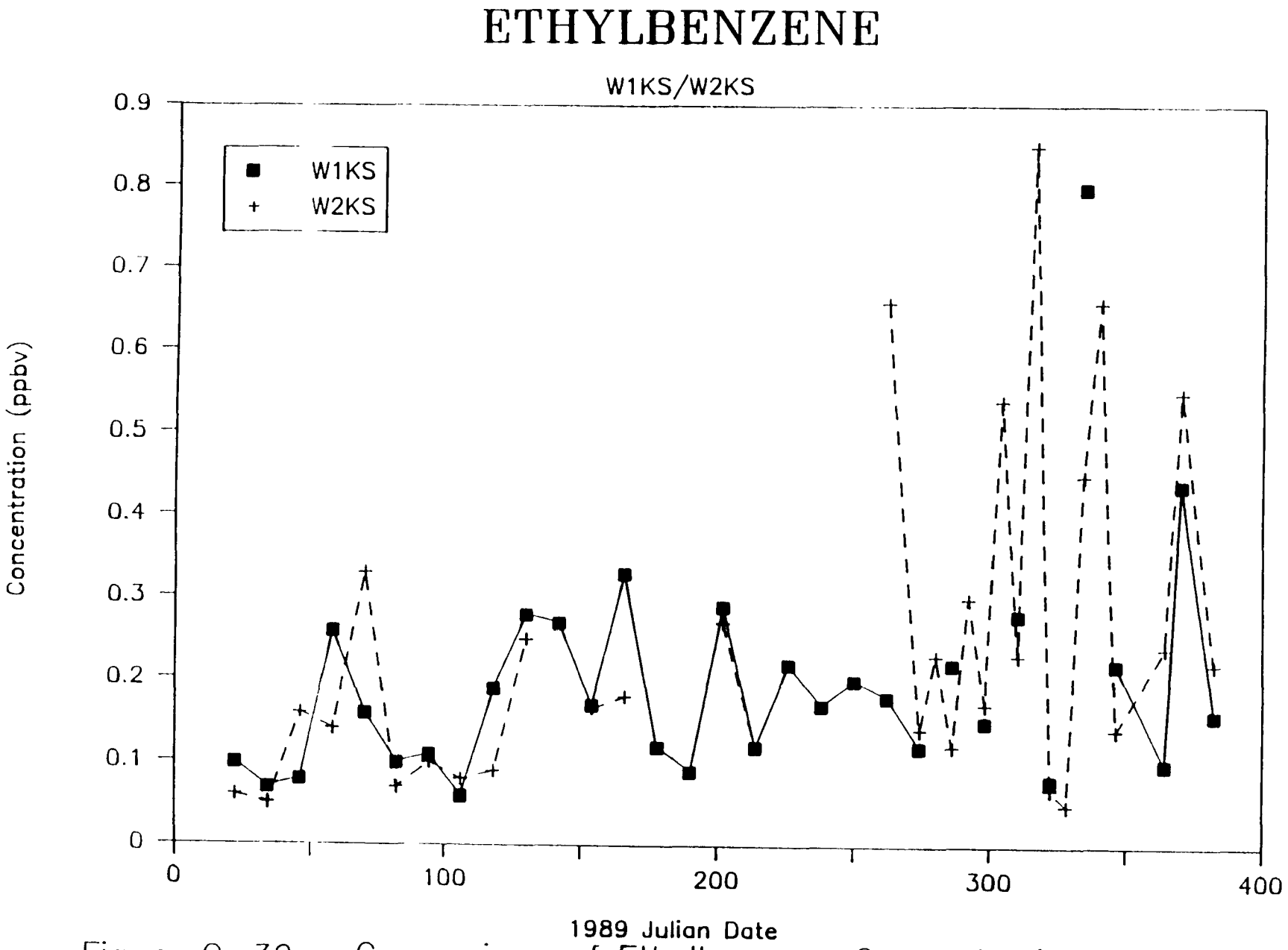



Figure C–39. Comparison of Ethylbenzene Concentrations in W1KS and W2KS 1989 UATMP Samples.

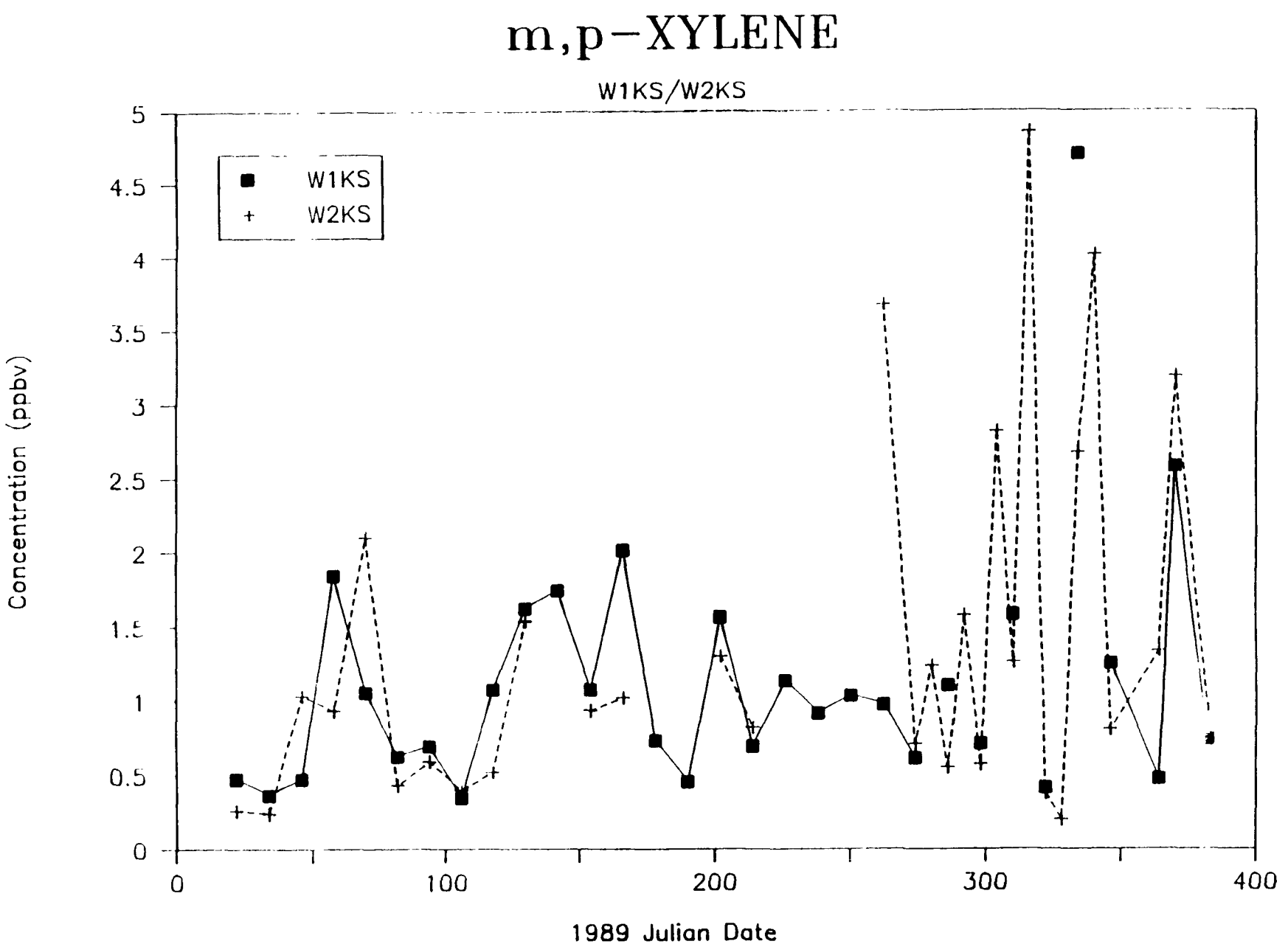



Figure C-40. Comparison of m,p-Xylene Concentrations in W1KS and W2KS 1989 UATMP Samples.

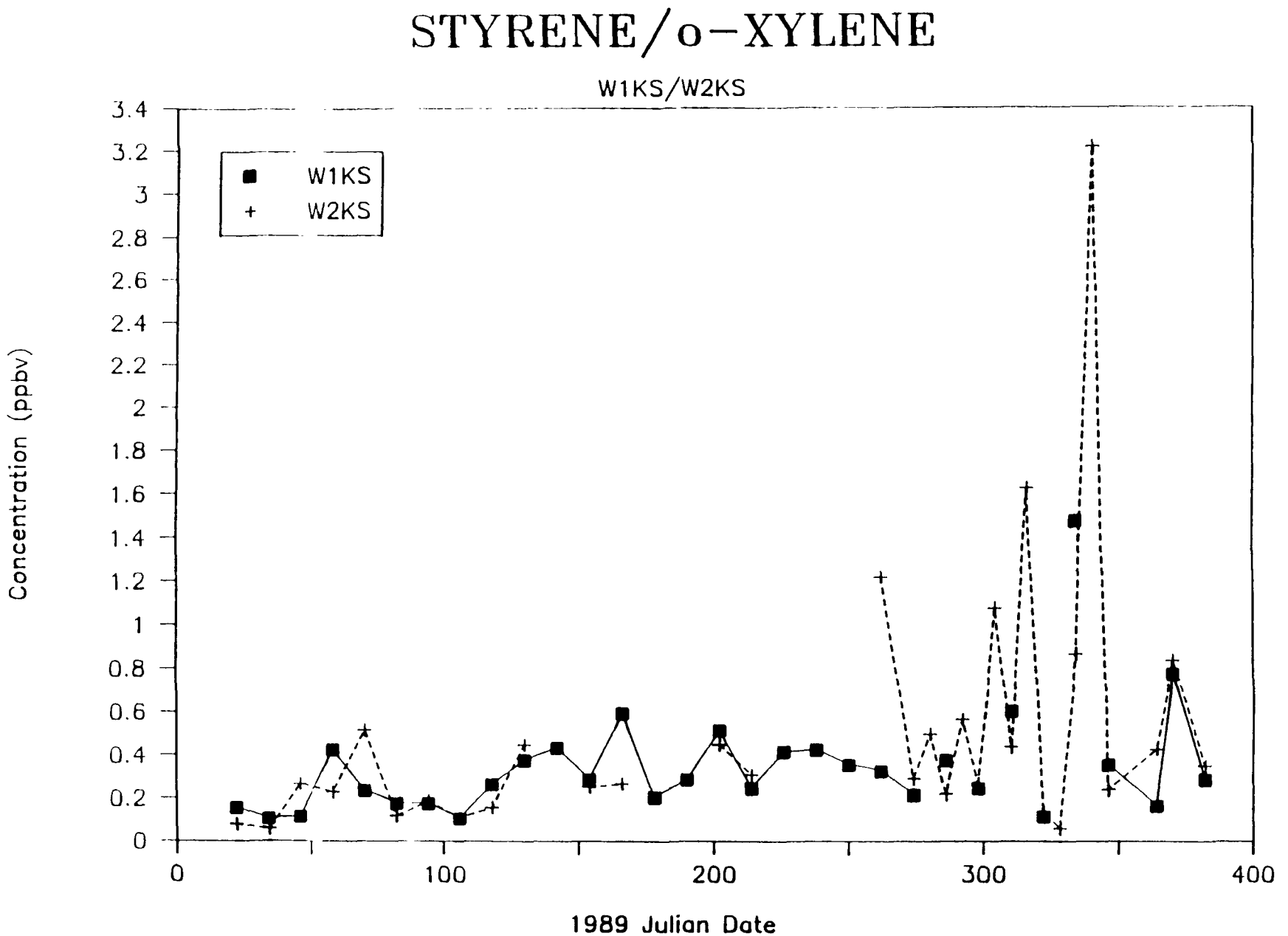



Figure C-41. Comparison of Styrene/o-Xylene Concentrations in W1KS and W2KS 1989 UATMP Samples.

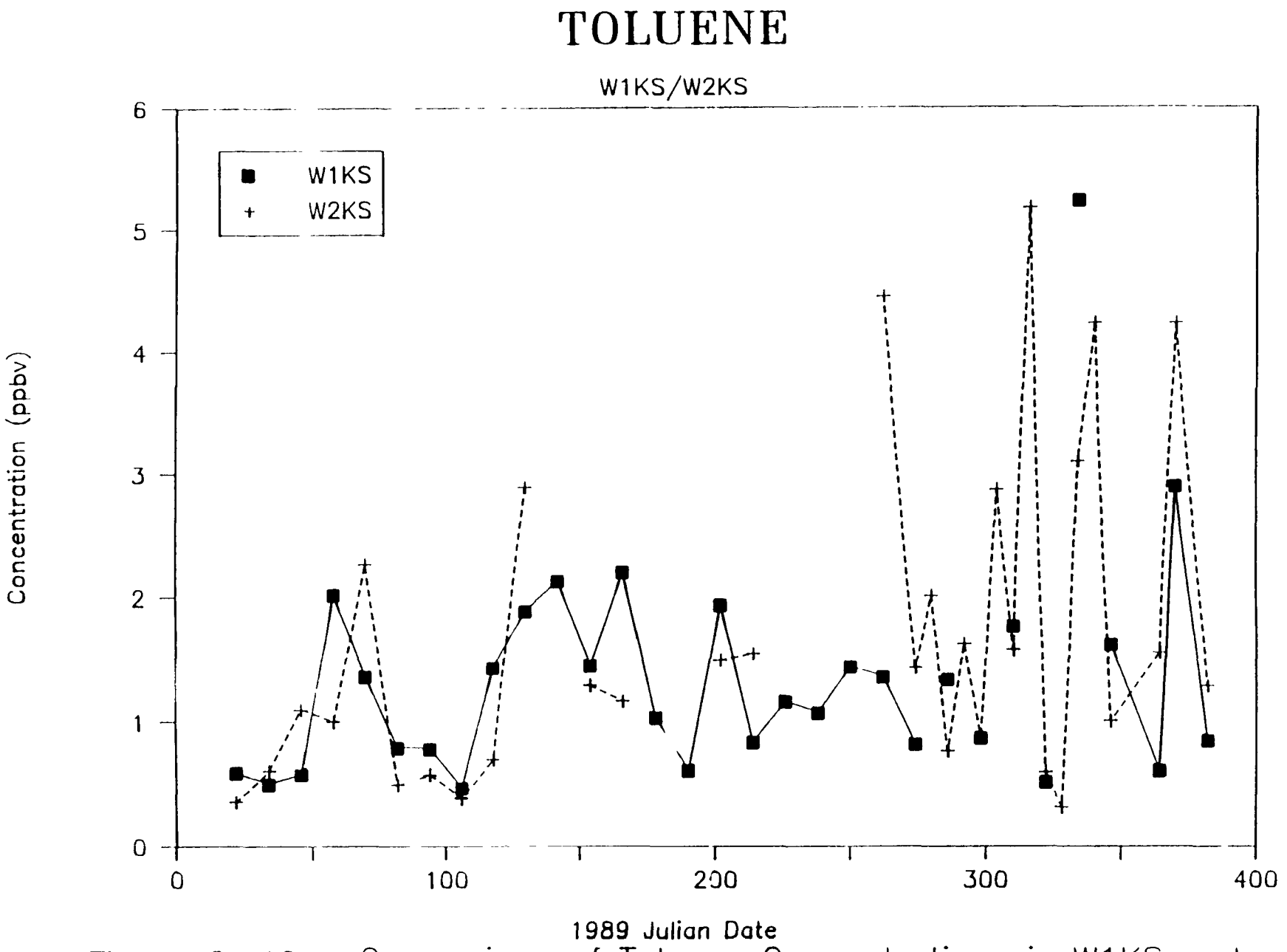



Figure C-42. Comparison of Toluene Concentrations in W1KS and W2KS 1989 UATMP Samples.

## TECHNICAL REPORT DATA
*(Please read Instructions on the reverse before completing)*

| | | |
|---|---|---|
| 1. REPORT NO. EPA-450/4-91-001 | 2. | 3. RECIPIENT'S ACCESSION NO. |
| 4. TITLE AND SUBTITLE 1989 Urban Air Toxics Monitoring Program | | 5. REPORT DATE September 1990 |
| | | 6. PERFORMING ORGANIZATION CODE |
| 7. AUTHOR(S) | | 8. PERFORMING ORGANIZATION REPORT NO. |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS Radian Corporation Research Triangle Park, N.C. 27709 | | 10. PROGRAM ELEMENT NO. |
| | | 11. CONTRACT/GRANT NO. 68-08-0014 |
| 12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Research Triangle Park, N.C. 27711 | | 13. TYPE OF REPORT AND PERIOD COVERED |
| | | 14. SPONSORING AGENCY CODE |
| 15. SUPPLEMENTARY NOTES | | |

16. ABSTRACT

From January 1989 through January 1990 samples of ambient air were collected at 14 sites in the eastern part of the U.S. Every 12 days, air was integrated over 24-hour periods into passivated stainless steel canisters. Simultaneously, air was drawn through cartridges containing dinitrophenylhydrazine to collect carbonyl compounds. The samples were analyzed at a central laboratory for a total of 37 halogenated and aromatic hydrocarbons, formaldehyde, acetaldehyde, and other oxygenated species. The hydrocarbon species were analyzed by gas chromatography/multiple detectors and gas chromatography/mass spectrometry, while the carbonyl species were analyzed by liquid chromatography. An extensive quality assurance program was carried on to secure high quality data. Complete data for all the hydrocarbon samples are presented in this report.

17. KEY WORDS AND DOCUMENT ANALYSIS

| a. DESCRIPTORS | b. IDENTIFIERS/OPEN ENDED TERMS | c. COSATI Field/Group |
|---|---|---|
| UATMP - 89<br>Toxic Hydrocarbons<br>Toxic Species | | |

| | | |
|---|---|---|
| 18. DISTRIBUTION STATEMENT Unlimited | 19. SECURITY CLASS *(This Report)* Unclassified | 21. NO. OF PAGES 286 |
| | 20. SECURITY CLASS *(This page)* Unclassified | 22. PRICE |

EPA Form 2220-1 (Rev. 4-77) PREVIOUS EDITION IS OBSOLETE

## INSTRUCTIONS

1. **REPORT NUMBER**
Insert the LPA report number as it appears on the cover of the publication.

2. **LEAVE BLANK**

3. **RECIPIENTS ACCESSION NUMBER**
Reserved for use by each report recipient.

4. **TITLE AND SUBTITLE**
Title should indicate clearly and briefly the subject coverage of the report, and be displayed prominently. Set subtitle, if used, in smaller type or otherwise subordinate it to main title. When a report is prepared in more than one volume, repeat the primary title, add volume number and include subtitle for the specific title.

5. **REPORT DATE**
Each report shall carry a date indicating at least month and year. Indicate the basis on which it was selected *(e.g., date of issue, date of approval, date of preparation, etc.)*.

6. **PERFORMING ORGANIZATION CODE**
Leave blank.

7. **AUTHOR(S)**
Give name(s) in conventional order *(John R. Doe, J. Robert Doe, etc.)*. List author's affiliation if it differs from the performing organization.

8. **PERFORMING ORGANIZATION REPORT NUMBER**
Insert if performing organization wishes to assign this number.

9. **PERFORMING ORGANIZATION NAME AND ADDRESS**
Give name, street, city, state, and ZIP code. List no more than two levels of an organizational hirearchy.

10. **PROGRAM ELEMENT NUMBER**
Use the program element number under which the report was prepared. Subordinate numbers may be included in parentheses.

11. **CONTRACT/GRANT NUMBER**
Insert contract or grant number under which report was prepared.

12. **SPONSORING AGENCY NAME AND ADDRESS**
Include ZIP code.

13. **TYPE OF REPORT AND PERIOD COVERED**
Indicate interim final, etc., and if applicable, dates covered.

14. **SPONSORING AGENCY CODE**
Insert appropriate code.

15. **SUPPLEMENTARY NOTES**
Enter information not included elsewhere but useful, such as: Prepared in cooperation with, Translation of, Presented at conference of, To be published in, Supersedes, Supplements, etc.

16. **ABSTRACT**
Include a brief *(200 words or less)* factual summary of the most significant information contained in the report. If the report contains a significant bibliography or literature survey, mention it here.

17. **KEY WORDS AND DOCUMENT ANALYSIS**
(a) DESCRIPTORS - Select from the Thesaurus of Engineering and Scientific Terms the proper authorized terms that identify the major concept of the research and are sufficiently specific and precise to be used as index entries for cataloging.

(b) IDENTIFIERS AND OPEN-ENDED TERMS - Use identifiers for project names, code names, equipment designators, etc. Use open-ended terms written in descriptor form for those subjects for which no descriptor exists.

(c) COSATI FIELD GROUP - Field and group assignments are to be taken from the 1965 COSATI Subject Category List. Since the majority of documents are multidisciplinary in nature, the Primary Field/Group assignment(s) will be specific discipline, area of human endeavor, or type of physical object. The application(s) will be cross-referenced with secondary Field/Group assignments that will follow the primary posting(s).

18. **DISTRIBUTION STATEMENT**
Denote releasability to the public or limitation for reasons other than security for example "Release Unlimited." Cite any availability to the public, with address and price.

19. & 20. **SECURITY CLASSIFICATION**
DO NOT submit classified reports to the National Technical Information service.

21. **NUMBER OF PAGES**
Insert the total number of pages, including this one and unnumbered pages, but exclude distribution list, if any.

22. **PRICE**
Insert the price set by the National Technical Information Service or the Government Printing Office, if known