Bentley Mall
Tax Lot 217, Section 2, Township 1 South, Range 1 West
Indoor Air Monitoring Report
Fairbanks, Alaska
March 2008

ALASKA RESOURCES & ENVIRONMENTAL SERVICES, LLC

SUBMITTED TO:
Alaska Department of Environmental Conservation
Northern Regional Office
Contaminated Sites Program
610 University Avenue
Fairbanks, Alaska 99709-3643

RAWSON, BLUM AND COMPANY
Law Offices of Thomas H. Bomar
425 California Street, Suite 200
San Francisco, CA 94104

BY:
ALASKA RESOURCES & ENVIRONMENTAL SERVICES, LLC
284 TOPSIDE
P.O. BOX 83050
FAIRBANKS, ALASKA 99708
(907) 374-3226 FAX (907) 374-3219

Bentley Mall
Air Monitoring Report
March 2008

INTRODUCTION

This report was prepared on behalf of Rawson, Blum and Company who has contracted with Alaska Resources & Environmental Services (ARES) to perform indoor air monitoring associated with the historical release of chlorinated solvents into the groundwater (ADEC file #102.38.122).

SITE BACKGROUND

Site Description

The Bentley Mall complex is situated on an approximate 12 acre site located north of College Road near the intersection of the Old Steese Highway (Figure 1). The site as depicted in the U.S. Geological Survey (USGS) Fairbanks D-2 (SE) quadrangle is located in the southwest ¼ of Section 2, Township 1 South, Range 1 West, Fairbanks Meridian. The Mall property includes several satellite buildings in addition to the main mall located in the Bentley Mall complex. The remaining portions of the site are paved. Nearby surface water bodies include Noyes Slough (0.1 miles to the south and west), and the Chena River (0.5 miles to the south).

History

The *Bentley Mall Site Characterization Report* dated April 2006, presented findings of contamination characteristics on Bentley Mall property and properties located hydraulically down-gradient from the site. The site investigation included evaluation of impacts to soil, groundwater, surface water, and evaluation of impacts affecting potential receptors such as water wells and buildings.

A contaminant plume consisting primarily of chlorinated volatile organic compounds tetrachlorethene (PCE) and the associated degradation product trichloroethene (TCE), were found to originate on Bentley Mall property in the vicinity of the East Satellite building with a trend to the west in the generalized direction of the groundwater flow.

In accordance with the work plan submitted June 2006, a soil vapor extraction (SVE) system was installed in September 2006. The SVE system consists of a total of 16 air sparge wells, and nine vapor extraction wells along with associated underground piping and wiring (Appendix A-Figure 1). Operational characteristics of the remedial system were detailed in the *Air-Sparging and Vapor-Extraction System Installation and Start-Up Report* dated January 2007

In order to mitigate levels of PCE and TCE in the buildings (Wells Fargo Bank and East Satellite Building), the HVAC controls were adjusted to maintain a positive building pressure in October 2007. The HVAC controls were inspected periodically to verify positive building pressure was maintained.

The ADEC Record of Decision dated March 1, 2007, stipulated that seasonal indoor air samples be collected to monitor vapor intrusion into buildings within the source area until site cleanup levels are achieved.

INDOOR AIR SAMPLING

Scope of Work

To achieve the stated objectives, ARES performed the following tasks:

- Collected five (5) 24-hour time integrated indoor air samples using 6 liter summa canisters (laboratory provided);
- Collected two (2) grab air samples using 6 liter summa canisters (laboratory provided);
- 24-hour time integrated samples were analyzed for PCE and TCE by method TO-15 SIM. Grab samples were analyzed for chlorinated VOC's by method TO-15 SIM; and
- Data review and report preparation.

Sampling Method

Indoor air samples were collected in January 2008 from buildings located within the core area of the plume and analyzed for PCE and TCE using EPA Method TO-15 to evaluate potential for vapor intrusion. The buildings evaluated included the East Satellite Building, and the Wells Fargo Bank; both of which are located on Bentley Mall property.

The indoor air samples were collected from separate locations throughout the buildings using 6-liter summa canisters with an attached regulated flow control devise. The summa canisters were placed in the same location as previous sampling events to maintain consistency in sampling and for purposes of comparison (Figure 1).

A 24-hour time integrated indoor air sample was taken and subsequently laboratory analyzed for PCE and TCE compounds using the Modified EPA TO-15 Sim method. Laboratory analysis was conducted by Columbia Analytical Services located at 2655 Park Center Drive Suite A, Simi Drive, Ca 90365-0960. The contact number for Columbia Analytical Services is (805) 526-7161.

Analytical Results

Three indoor air samples were collected from Wells Fargo Bank and two samples from the East Satellite Building. Samples were collected to monitor vapor intrusion levels and consisted of 24-hour time integrated samples.

Two air samples (VS1-CI-12008 and VS2-CE-) were also collected from the SVE system influent and effluent ports to monitor system performance. Samples were analyzed for chlorinated VOC's and consisted of grab samples.

A summary of indoor air sampling results is shown in Table 1. Grab sample results collected from the SVE system are discussed in a separate SVE system monitoring report. The laboratory results are shown in Attachment B.

Table 1
Indoor Air Monitoring Analytical Historical Results
(Results shown as µg/m^3)

Sample Location	Sample Date	PCE	TCE
		µg/m^3	µg/m^3
ES-1	07/15/05	**15.0**	**1.4**
	06/13/06	**14**	ND <0.83
	02/20/07	**9.3**	ND <0.93
	01/30/08	3.2	0.054
ES-2	07/15/05	**11**	**0.65**
	06/13/06	**14.0**	ND <0.82
	02/20/07	**9.2**	ND <0.98
	01/30/08	3.2	0.051
WFB-1	07/15/05	6.7	**0.92**
	06/13/06	**15**	0.15
	02/20/07	**12.0**	0.090
	01/30/08	4.5	0.054
WFB-2	07/15/05	5.6	**0.87**
	06/13/06	**15**	0.15
	02/20/07	7.2	0.096
	01/30/08	5.0	0.035
WFB-3	07/15/05	6.4	0.091
	06/13/06	**15**	0.15
	03/20/07	**9.7**	0.10
	01/30/08	4.3	0.046
ADEC/ EPA *Cleanup Levels		8.1	0.22

µg/m^3 – Micrograms/cubic meter
ND - Compound was not detected (less than the practical quantitation limit)
Results above EPA Regulatory Limit in **Bold**.
* EPA: "Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils", November 2002
N/A – Not Applicable

Quality Assurance / Quality Control

Field quality control (QC) procedures for this project included the analysis of a laboratory duplicate and method blank. A total of one laboratory duplicate (DUP) was analyzed for quality control purposes. The QC sample was analyzed to assess the accuracy and precision of the laboratory's analytical procedures.

Precision, expressed as the relative percent difference (RPD) between field duplicate sample results, is an indication of the consistency of sampling, sample handling, preservation, and laboratory analysis. The RPD's for duplicates collected as part of this investigation fell within the acceptable range for the RPD calculation. Analysis of the method blanks showed no analytes above the practical quantitation limit (PQL).

The following laboratory duplicates and associated RFD calculations are as follows:

Table 2
RPD Calculations

Sample ID	Compound	Equation	RPD
WFB-1-12008 & DUP 01/2008	TCE	(.0535 – .0515)/[(.0535 + .0515)/2] x 100 =	3.81%
	PCE	(4.55 – 4.46)/[(4.55 + 4.46)/2] x 100 =	2.00%

The recommended range for RPD for air analysis is < 25%. The RPD fell within that range with the RPD calculation.

Laboratory quality assurance included the procedures outlined in the laboratory's ADEC-approved standard operating procedures documentation. As presented in the laboratory report's QC summary sheet, the laboratory QC parameters fell within the acceptable limits.

Method blanks, surrogate recovery, and matrix spikes were all within acceptable laboratory limits.

Results Analysis

As of January 2008, all levels of PCE and TCE for indoor air samples collected were found to be below the EPA target level in the East Satellite Building and Wells Fargo. The EPA target level (risk factor = 1 X 10E -05) for PCE is 8.1 µg/m³ and TCE is 0.22 µg/m³. The EPA target level is based on both the prescribed risk level and the target hazard index, as shown in Table 2b of the EPA *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils.*

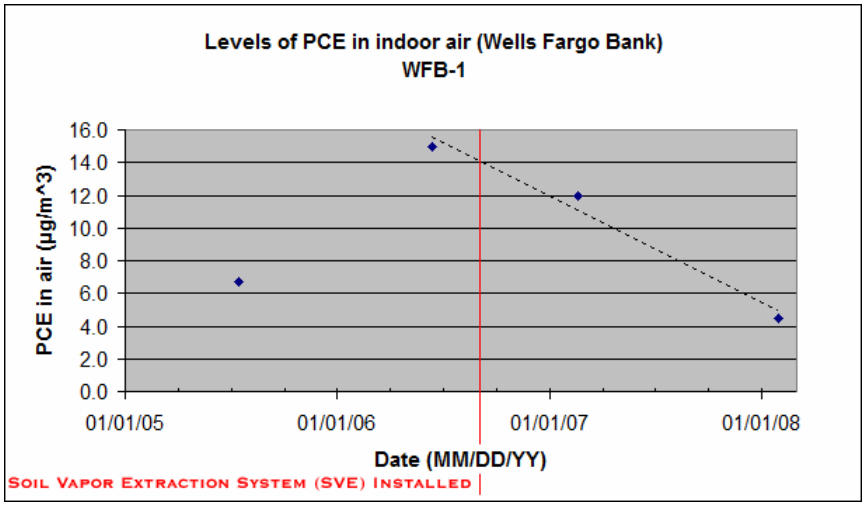
Sample results for 2008 showed overall decreasing levels of both PCE and TCE compounds (Table 1). In addition, all sample results indicate that PCE and TCE contaminant levels are below EPA target levels. Graph 1 depicts the general trend of PCE levels in WFB-1 since the installation of the SVE / Air-sparge system.

The sample dates with corresponding levels of PCE in groundwater are shown in Table 3.

Table 3
WFB-1 PCE Sample Results

Sample Location	Sample Date	PCE µg/m^3
WFB-1	07/15/05	6.7
	06/13/06	15
	02/20/07	12.0
	01/30/08	4.5

WFB-1 PCE results over time



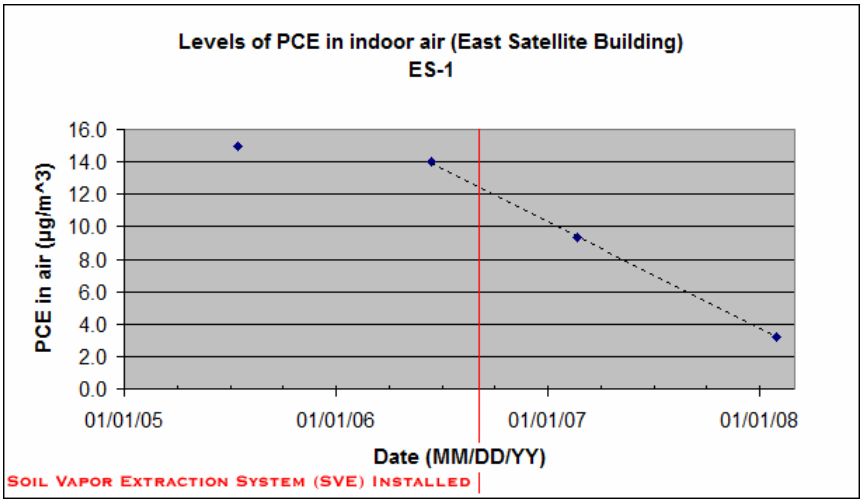
Graph 2 depicts the general trend of PCE levels in ES-1 since the installation of the SVE / Air-sparge system.

The sample dates with corresponding levels of PCE in groundwater are shown in Table 4.

Table 4
ES-1 PCE Sample Results

Sample Location	Sample Date	PCE µg/m^3
ES-1	07/15/05	15.0
	06/13/06	14
	02/20/07	9.3
	01/30/08	3.2

Graph 2
ES-1 PCE results over time



Conclusions and Recommendations

Sample results for 2008 showed overall decreasing levels of both PCE and TCE compounds (Graphs 1, 2 above). In addition, all sample results indicate that PCE and TCE contaminant levels are below EPA target levels.

ARES recommends the following:

- Schedule sampling event of indoor air monitoring for the Wells Fargo Bank and East Satellite Building for July 2008.
- The buildings ventilation systems should maintain a positive pressure to ensure indoor air quality levels are stabilized until a rebound test verify's that levels of contaminants in indoor air remain below EPA target levels.

Limitations

This report presents the analytical results from a limited number of indoor air samples, and should not be construed as a comprehensive study of indoor air quality at the site. The samples were intended to evaluate the presence or absence of contaminants at the locations selected. Detectable levels of analyzed constituents may be present at other locations. It was also not the intent of our sampling and testing to detect the presence of indoor air affected by contaminants other than those for which laboratory analysis were preformed. No conclusions can be drawn on the presence or absence of other contaminants. This is not a geotechnical study.

The data presented in this report should be considered representative of the time of our site observations and sample collection. Changes in site conditions can occur with time because of natural forces or human activity. ARES reserves the right to modify or alter conclusions and recommendations should additional data become available.

This report was prepared for the exclusive use of the Bentley mall and its representatives. If it is made available to others, it should be for information on factual data only and not as a warranty of subsurface conditions.

Qualifications & Signature of Environmental Professional

Lyle Gresehover is an ADEC 'Qualified Person' and has extensive field experience as an environmental project manager and has worked on all aspects of environmental assessments, investigations, and clean-up efforts.

Lyle Gresehover
Project Manager

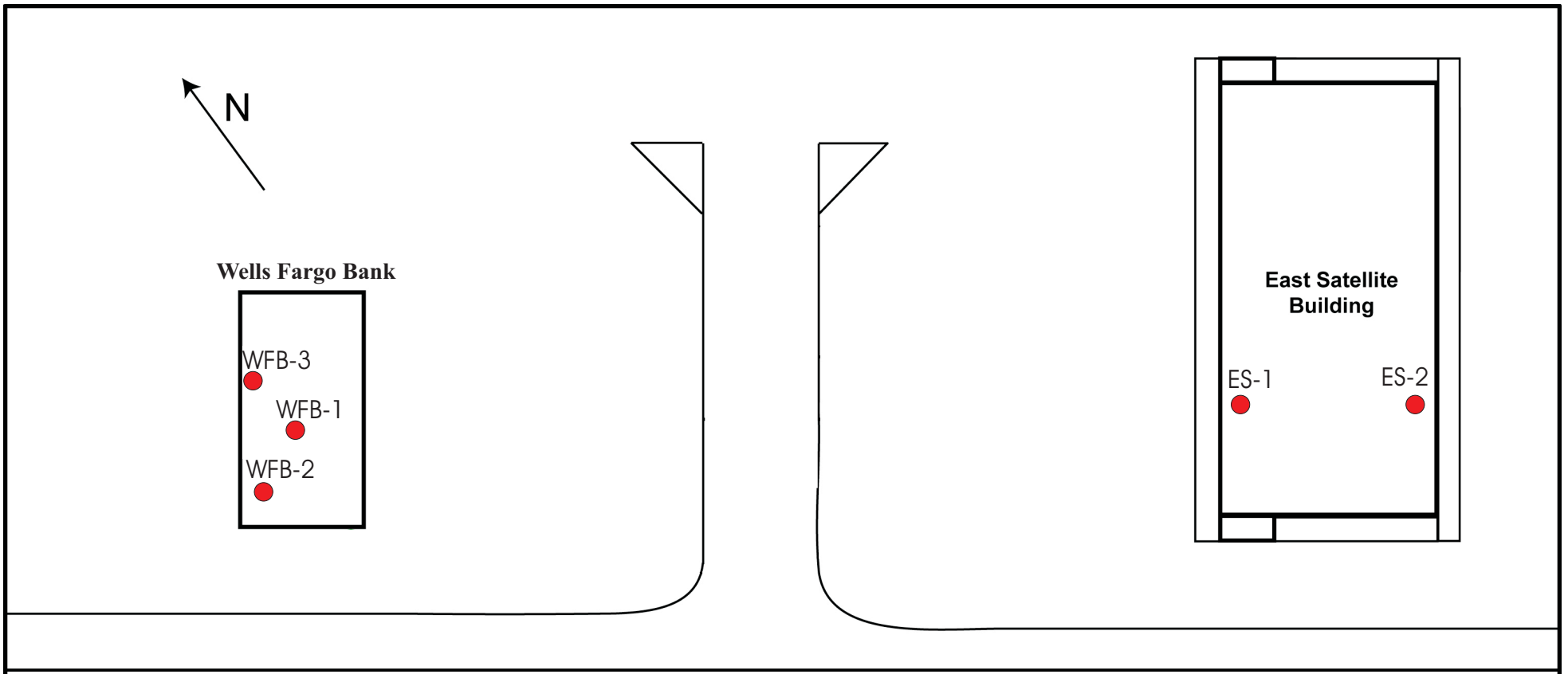
Sincerely,

Lyle Gresehover
Alaska Resources and Environmental Services, LLC

Enclosure: Appendix A Figures
Appendix B Analytical results

APPENDIX A

Figures



ARES
Alaska Resources and Environmental Services, LLC

FIGURE 1

Indoor Air Sample Location Map
Bentley Mall 2008

APPENDIX B

Analytical Results

2655 Park Center Drive, Suite A Simi Valley, California 93065 (805) 526-7161 (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

February 27, 2008

Mr. Lyle D. Gresehover
Alaska Resources & Environmental Services LLC
284 Topside Road
Fairbanks, AK 99712

RE: P2800247
Bentley Mall

Dear Mr. Gresehover:

Enclosed are the results of the sample(s) submitted to our laboratory on February 1, 2008. For your reference, these analyses have been assigned our service request number P2800247.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 113 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

2655 Park Center Drive, Suite A Simi Valley, California 93065 (805) 526-7161 (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

LABORATORY REPORT

Client:	Alaska Resources & Environmental Services LLC	Date of Report:	02/27/08
Address:	284 Topside Road	Date Received:	02/01/08
	Fairbanks, AK 99712	CAS Project No:	P2800247
Contact:	Mr. Lyle D. Gresehover	Purchase Order:	Verbal

Client Project ID: Bentley Mall

Seven (7) Stainless Steel Summa Canisters labeled:

"ES-1-12008"	"ES-2-12008"	"WFB-1-12008"	"WFB-2-12008"
"WFB-3-12008"	"VS1-CI-12008"	"VS2-CE-12008"	

The samples were received at the laboratory under chain of custody on February 1, 2008. The samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Volatile Organic Compounds Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) in SIM mode for selected volatile organic compounds. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of an Agilent Model 5973N GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analyses are given in the attached data package. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved:

Liliana Marghitoiu
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved:

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

Air - Chain of Custody Record & Analytical Service Request

Columbia Analytical Services, Inc.
An Employee - Owned Company
2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle:
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No.: P8800247

CAS Contact:

Company Name & Address (Reporting Information): Alaska Resources and Environmental Services

Project Name: Bentley Mall

Project Number:

Project Manager: Lyle Greschner

Phone: (907) 374-3226 Fax: (907) 374-3219

P.O. # / Billing Information: ARES P.O. Box 83050 Fairbanks, Ak 99708

Email Address for Result Reporting: lyle@ak-res.com

Sampler (Print & Sign): Lyle Greschner

Analysis Method and/or Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tube/Solid)	Canister ID (Bar Code # - AC, SC, etc.)	Flow Controller (Bar Code - FC #)	Sample Volume	TO-15 SIM ACE, TCE	TO-15 SIM Chlorinated Solvent VOCs (All)			Comments e.g. Actual Preservative or specific instructions
ES-1-12008	1-3.3	1/29-1/30	1455-1455	Air	ac00450	fc00147	6L 24hr	X				24hr
ES-2-12008	2-4.1		1456-1456		ac00821	fc00337		X				24hr
WFB-1-12008	3-6.9		1500-1500		ac00968	fc00489		X				24hr
WFB-2-12008	4-10.4		1502-1502		ac01091	fc00507		X				24hr
WFB-3-12008	5-7.7	↓	1504-1504		ac01171	fc00581	↓	X				24hr
VS1-CI-12008	6-4.7	1/30/08	1650		ac01289	N/A	6L Grab		X			Grab
VS2-CE-12008	7-11.1	1/30/08	1637	↓	ac01286	N/A	6L Grab		X			Grab

Report Tier Levels - please select
Tier I - (Results/Default if not specified) ____
Tier II - (Results + QC) X
Tier III - (Data Validation Package) 10% Surcharge ____
Tier V - (client specified) ____
EDD required Yes / No
Type: ____ EDD Units: ____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 1/31/08	Time: 1100	Received by: (Signature)	Date: 1/31/08	Time: 0935
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank 13248
Temperature °C

3

Columbia Analytical Services, Inc.

Sample Acceptance Check Form

Client: Alaska Resources & Environmental Services LLC Work order: P2800247

Project: Bentley Mall

Sample(s) received on: 02/01/08 Date opened: 02/01/08 by: MZ

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature NA °C			
	Blank Temperature NA °C			
8	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Is pH (acid) **preservation** necessary, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** (acid) preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Required pH (as received, if required)	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2800247-001			NA	
P2800247-002			NA	
P2800247-003			NA	
P2800247-004			NA	
P2800247-005			NA	
P2800247-006			NA	
P2800247-007			NA	

Explain any discrepancies: (include lab sample ID numbers):

RESULTS OF VOLATILE ORGANIC ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **ES-1-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-001

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00450

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.6 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
79-01-6	Trichloroethene	**0.054**	0.035	**0.010**	0.0065	
127-18-4	Tetrachloroethene	**3.2**	0.035	**0.48**	0.0051	

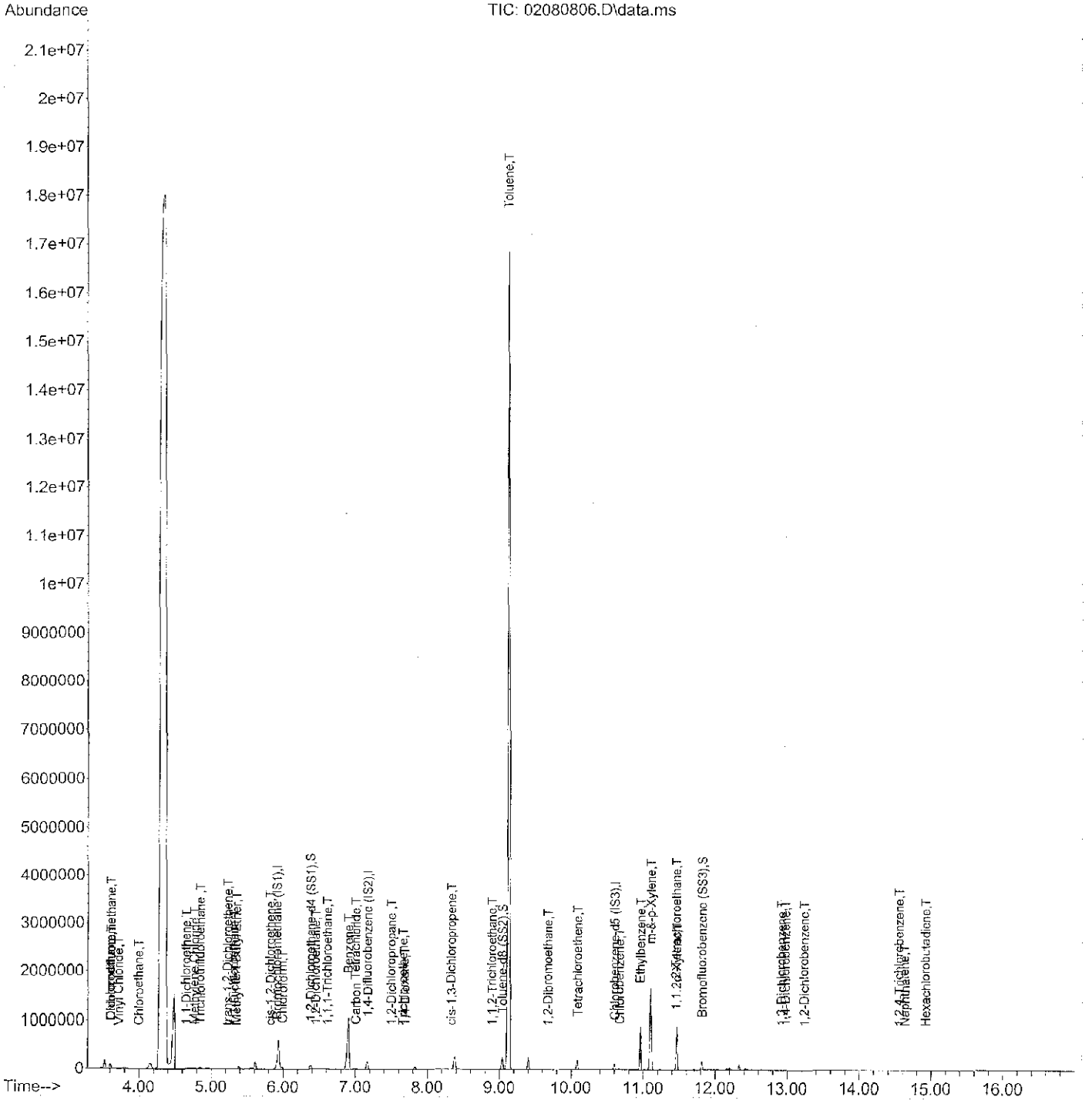
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080806.D
Acq On : 8 Feb 2008 12:18
Operator : LM
Sample : P2800247-001 (1000ml)
Misc : Alaska ES-1-12008 (-1.6,3.5)
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 12 11:00:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



7

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080806.D
Acq On : 8 Feb 2008 12:18
Operator : LM
Sample : P2800247-001 (1000ml)
Misc : Alaska ES-1-12008 (-1.6,3.5)
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 12 11:00:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.91	130	41769	1000.00	pg		0.04
20) 1,4-Difluorobenzene (IS2)	7.17	114	201680	1000.00	pg		0.03
30) Chlorobenzene-d5 (IS3)	10.60	82	100999	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.38	65	78758	1000.28	pg		0.04
Spiked Amount 1000.000			Recovery = 100.03%				
26) Toluene-d8 (SS2)	9.04	98	217111	979.38	pg		0.00
Spiked Amount 1000.000			Recovery = 97.94%				
36) Bromofluorobenzene (SS3)	11.81	174	72642	980.47	pg		0.00
Spiked Amount 1000.000			Recovery = 98.05%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.60	85	14580	127.17	pg		99
3) Chloromethane	3.60	52	26971	695.65	pg		100
4) Vinyl Chloride	3.72	62	827	8.27	pg		91
5) Chloroethane	3.99	64	782	15.53	pg		97
6) Acetone	0.00	58	0	N.D.			
7) 1,1-Dichloroethene	4.65	96	408	8.05	pg	#	89
8) Methylene Chloride	4.77	84	9307	161.04	pg		98
9) Trichlorotrifluoroethane	4.84	151	17177	369.75	pg		97
10) trans-1,2-Dichloroethene	5.22	96	166	2.97	pg	#	83
11) 1,1-Dichloroethane	5.31	63	1415	14.17	pg	#	1
12) Methyl tert-Butyl Ether	5.34	73	3854	26.96	pg	#	1
13) cis-1,2-Dichloroethene	5.81	96	374	6.57	pg	#	19
14) Chloroform	5.98	83	39545	478.11	pg		97
16) 1,2-Dichloroethane	6.44	62	6043	77.06	pg		98
17) 1,1,1-Trichloroethane	6.60	97	4021	48.50	pg		82
18) Benzene	6.90	78	1527458	5485.01	pg		99
19) Carbon Tetrachloride	7.00	117	22668	343.07	pg		99
21) 1,2-Dichloropropane	7.49	63	800	12.64	pg		96
22) Trichloroethene	7.66	130	2293	39.06	pg		89
23) 1,4-Dioxane	7.68	88	741	16.58	pg	#	1
24) cis-1,3-Dichloropropene	8.33	75	153	1.70	pg	#	32
25) 1,1,2-Trichloroethane	8.89	83	351	7.33	pg	#	2
27) Toluene	9.13	91	15423323	60613.71	pg		89
28) 1,2-Dibromoethane	9.67	107	113	1.91	pg		97
29) Tetrachloroethene	10.08	166	135633	2333.99	pg		100
31) Chlorobenzene	10.67	112	14530	95.87	pg	#	48
32) Ethylbenzene	10.96	91	775059	2869.06	pg		98
33) m-&-p-Xylene	11.10	91	1729010	9568.31	pg		99
34) o-Xylene	11.46	91	686715	3619.24	pg		98
35) 1,1,2,2-Tetrachloroethane	11.45	83	529	6.56	pg	#	1

8

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080806.D
Acq On : 8 Feb 2008 12:18
Operator : LM
Sample : P2800247-001 (1000ml)
Misc : Alaska ES-1-12008 (-1.6,3.5)
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 12 11:00:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

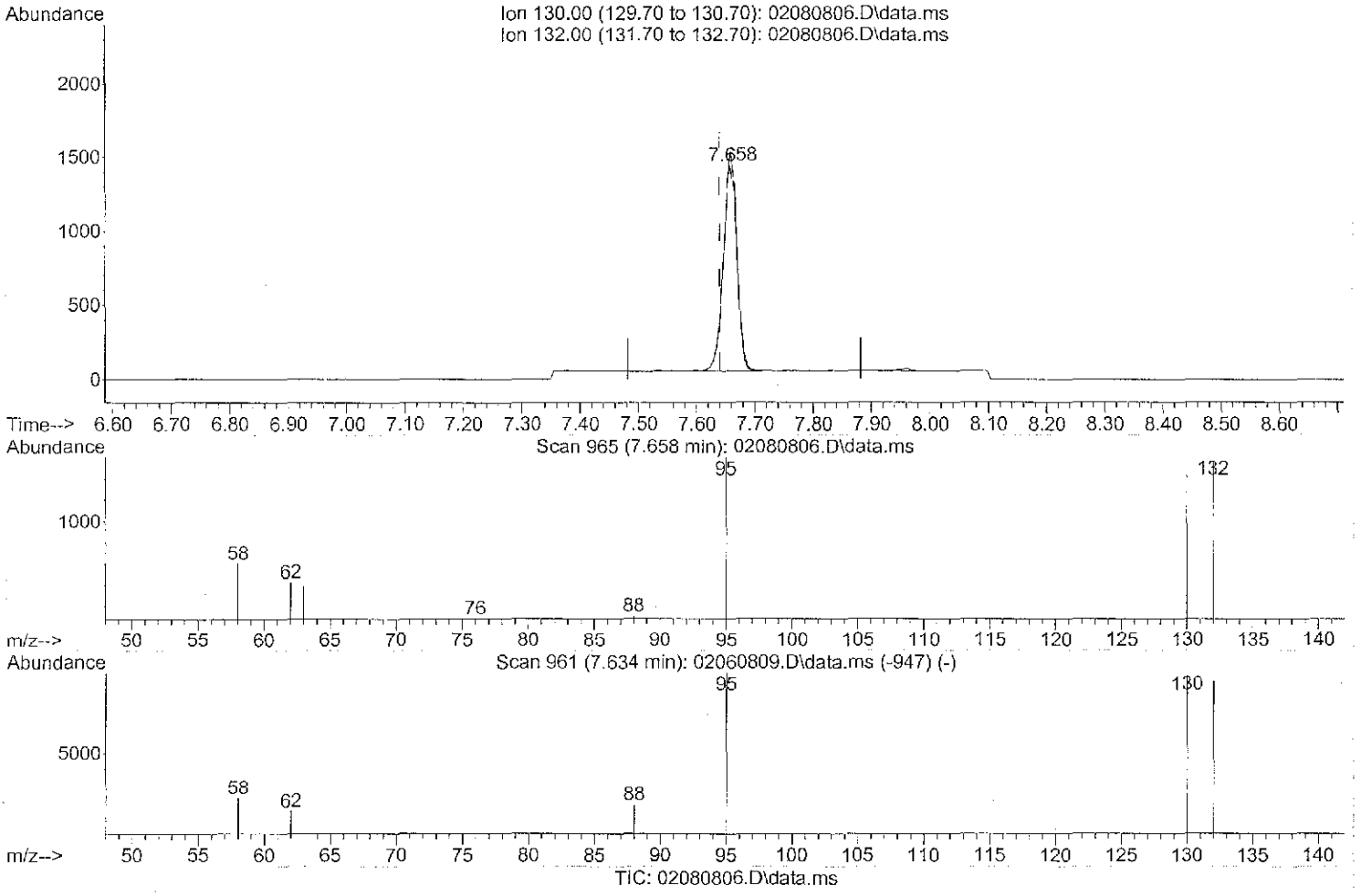
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	374	2.95	pg	99
38) 1,4-Dichlorobenzene	12.97	146	8249	66.76	pg	99
39) 1,2-Dichlorobenzene	13.23	146	504	4.27	pg	99
40) 1,2,4-Trichlorobenzene	14.55	182	1174	14.67	pg	99
41) Naphthalene	14.63	128	4201	21.85	pg	100
42) Hexachlorobutadiene	14.92	225	55	1.23	pg	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080806.D
Acq On : 8 Feb 2008 12:18
Operator : LM
Sample : P2800247-001 (1000ml)
Misc : Alaska ES-1-12008 (-1.6,3.5)
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 12 11:00:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(22) Trichloroethene (T)

7.658min (+0.018) 39.06pg

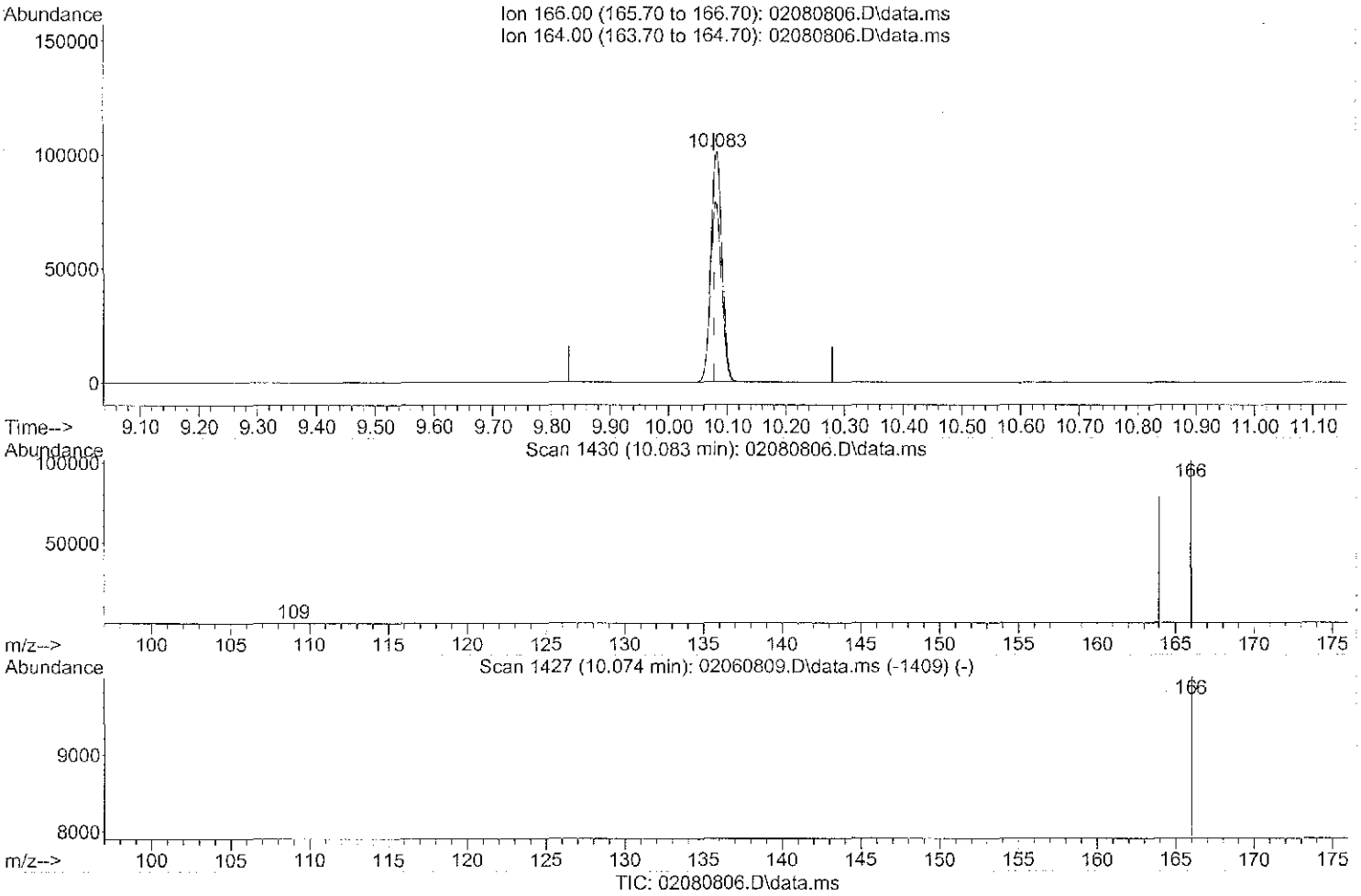
response 2293

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	104.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080806.D
Acq On : 8 Feb 2008 12:18
Operator : LM
Sample : P2800247-001 (1000ml)
Misc : Alaska ES-1-12008 (-1.6,3.5)
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 12 11:00:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(29) Tetrachloroethene (T)

10.083min (+0.006) 2333.99pg

response 135633

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.51
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **ES-2-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-002

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00821

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
79-01-6	Trichloroethene	**0.051**	0.037	**0.0094**	0.0068	
127-18-4	Tetrachloroethene	**3.2**	0.037	**0.47**	0.0054	

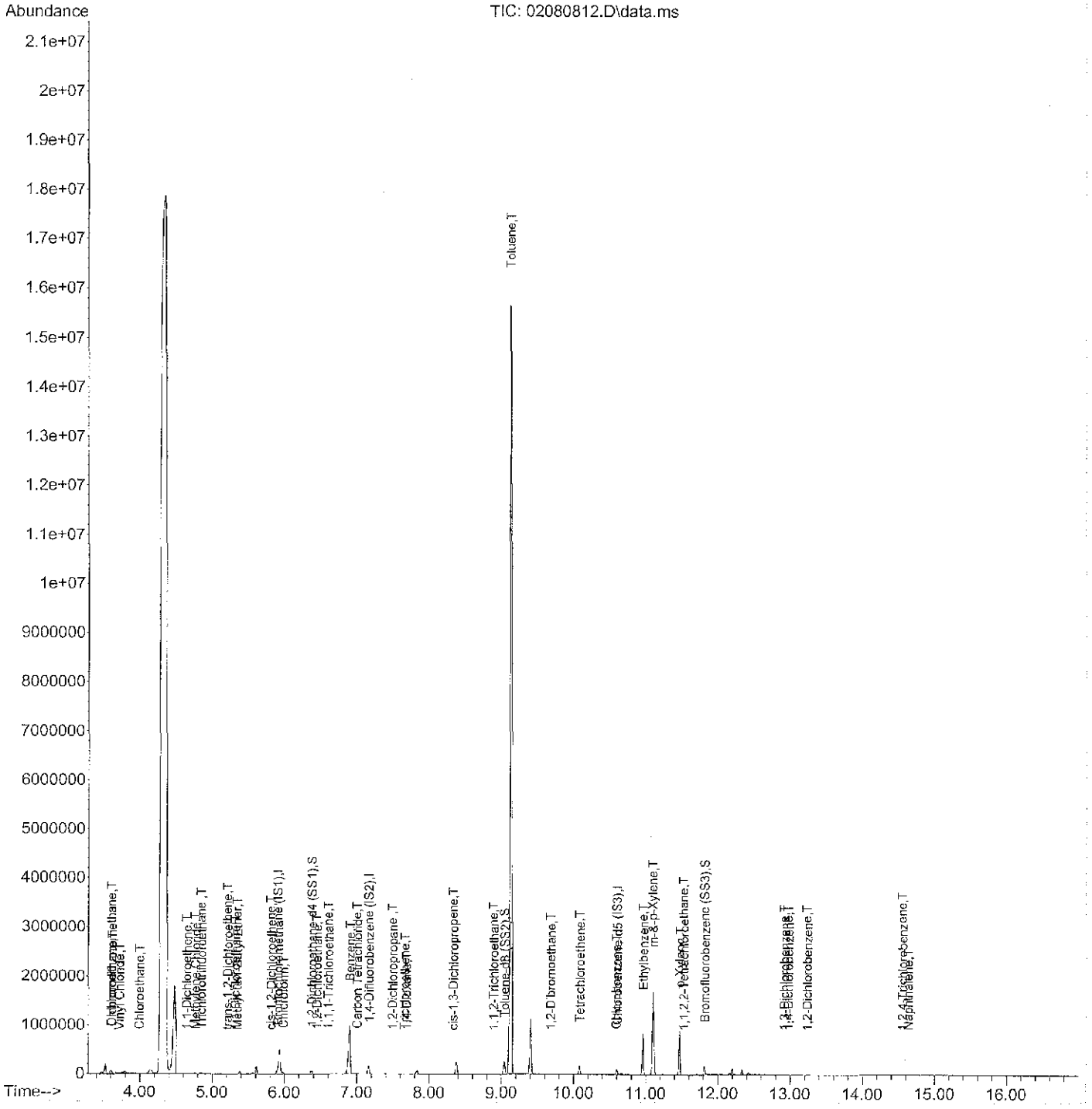
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: KC Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080812.D
Acq On : 8 Feb 2008 17:05
Operator : LM
Sample : P2800247-002 (1000ml)
Misc : Alaska ES-2-12008 (-2.3,3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 12 11:00:58 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080812.D
Acq On : 8 Feb 2008 17:05
Operator : LM
Sample : P2800247-002 (1000ml)
Misc : Alaska ES-2-12008 (-2.3,3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 12 11:00:58 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.90	130	40453	1000.00	pg		0.04
20) 1,4-Difluorobenzene (IS2)	7.16	114	199954	1000.00	pg		0.02
30) Chlorobenzene-d5 (IS3)	10.60	82	100933	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.37	65	75637	991.89	pg		0.03
Spiked Amount 1000.000			Recovery =	99.19%			
26) Toluene-d8 (SS2)	9.04	98	217234	988.39	pg		0.00
Spiked Amount 1000.000			Recovery =	98.84%			
36) Bromofluorobenzene (SS3)	11.81	174	72233	975.58	pg		0.00
Spiked Amount 1000.000			Recovery =	97.56%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.60	85	14297	128.76	pg		99
3) Chloromethane	3.60	52	21244	565.76	pg		100
4) Vinyl Chloride	3.71	62	677	6.99	pg		92
5) Chloroethane	3.99	64	716	14.68	pg		95
6) Acetone	0.00	58	0	N.D.			
7) 1,1-Dichloroethene	4.64	96	322	6.56	pg	#	86
8) Methylene Chloride	4.76	84	8447	150.91	pg		97
9) Trichlorotrifluoroethane	4.84	151	15996	355.53	pg		97
10) trans-1,2-Dichloroethene	5.21	96	72	1.33	pg	#	83
11) 1,1-Dichloroethane	5.31	63	1173	12.13	pg	#	1
12) Methyl tert-Butyl Ether	5.34	73	3154	22.78	pg	#	1
13) cis-1,2-Dichloroethene	5.81	96	169	3.07	pg	#	20
14) Chloroform	5.98	83	34924	435.98	pg		97
16) 1,2-Dichloroethane	6.44	62	5063	66.66	pg		99
17) 1,1,1-Trichloroethane	6.60	97	3595	44.78	pg		86
18) Benzene	6.90	78	1425310	5284.71	pg		99
19) Carbon Tetrachloride	7.00	117	20328	317.67	pg		99
21) 1,2-Dichloropropane	7.49	63	679	10.82	pg		97
22) Trichloroethene	7.65	130	2006	34.46	pg		97
23) 1,4-Dioxane	7.68	88	918	20.72	pg	#	14
24) cis-1,3-Dichloropropene	8.33	75	65	0.73	pg	#	32
25) 1,1,2-Trichloroethane	8.88	83	335	7.06	pg	#	2
27) Toluene	9.13	91	14713401	58322.84	pg		91
28) 1,2-Dibromoethane	9.68	107	48	0.82	pg		87
29) Tetrachloroethene	10.08	166	123710	2147.19	pg		100
31) Chlorobenzene	10.59	112	2311	15.26	pg		66
32) Ethylbenzene	10.96	91	742606	2750.72	pg		98
33) m-&-p-Xylene	11.09	91	1749186	9686.30	pg		100
34) o-Xylene	11.46	91	677546	3573.25	pg		98
35) 1,1,2,2-Tetrachloroethane	11.52	83	15110	187.54	pg	#	28

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080812.D
Acq On : 8 Feb 2008 17:05
Operator : LM
Sample : P2800247-002 (1000ml)
Misc : Alaska ES-2-12008 (-2.3,3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 12 11:00:58 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

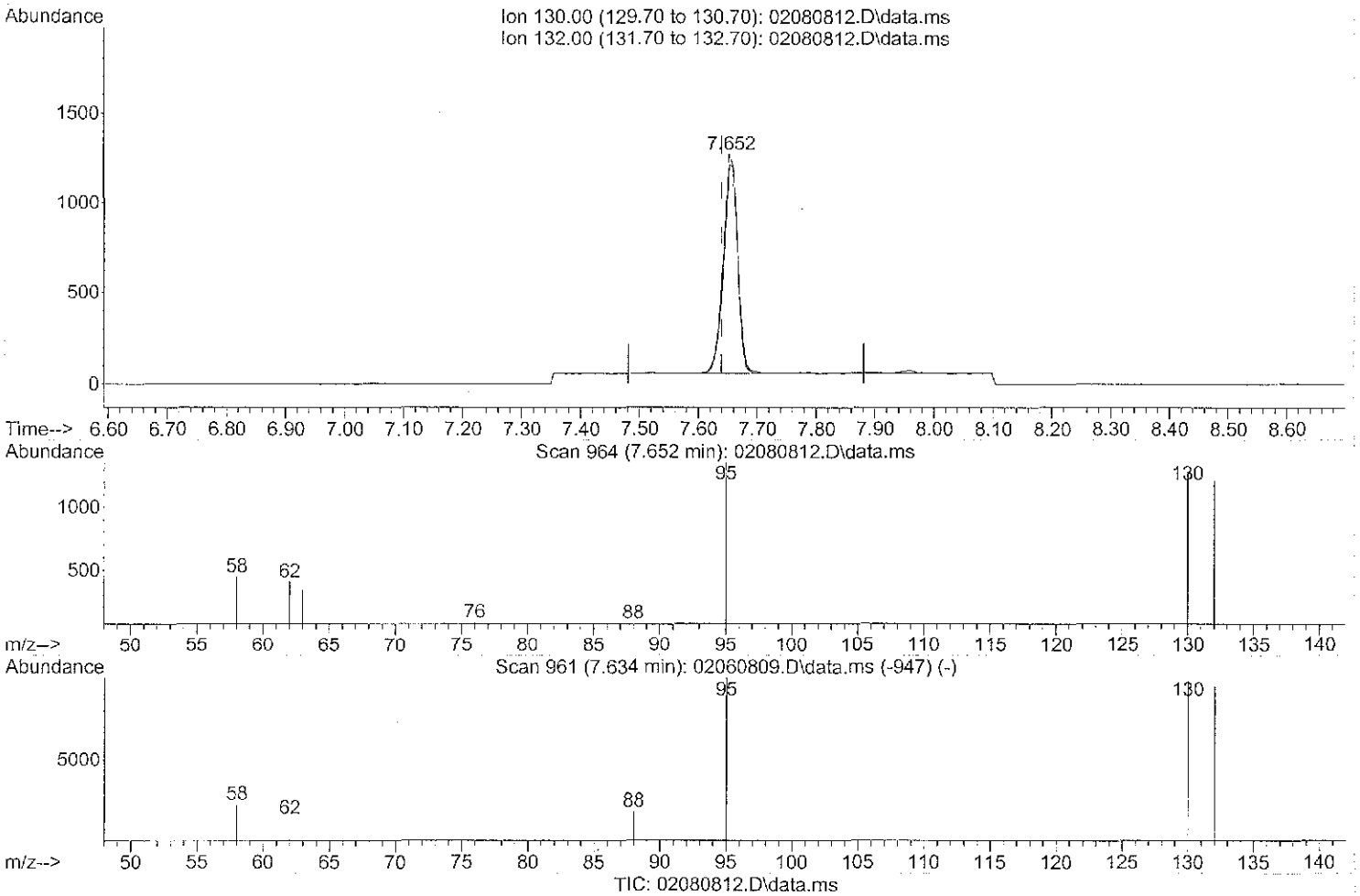
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	154	1.22	pg	92
38) 1,4-Dichlorobenzene	12.97	146	4234	34.29	pg	99
39) 1,2-Dichlorobenzene	13.23	146	399	3.38	pg	95
40) 1,2,4-Trichlorobenzene	14.55	182	241	3.01	pg	96
41) Naphthalene	14.63	128	10646	55.42	pg	100
42) Hexachlorobutadiene	14.93	225	11	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080812.D
Acq On : 8 Feb 2008 17:05
Operator : LM
Sample : P2800247-002 (1000ml)
Misc : Alaska ES-2-12008 (-2.3,3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 12 11:00:58 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(22) Trichloroethene (T)

7.652min (+0.012) 34.46pg

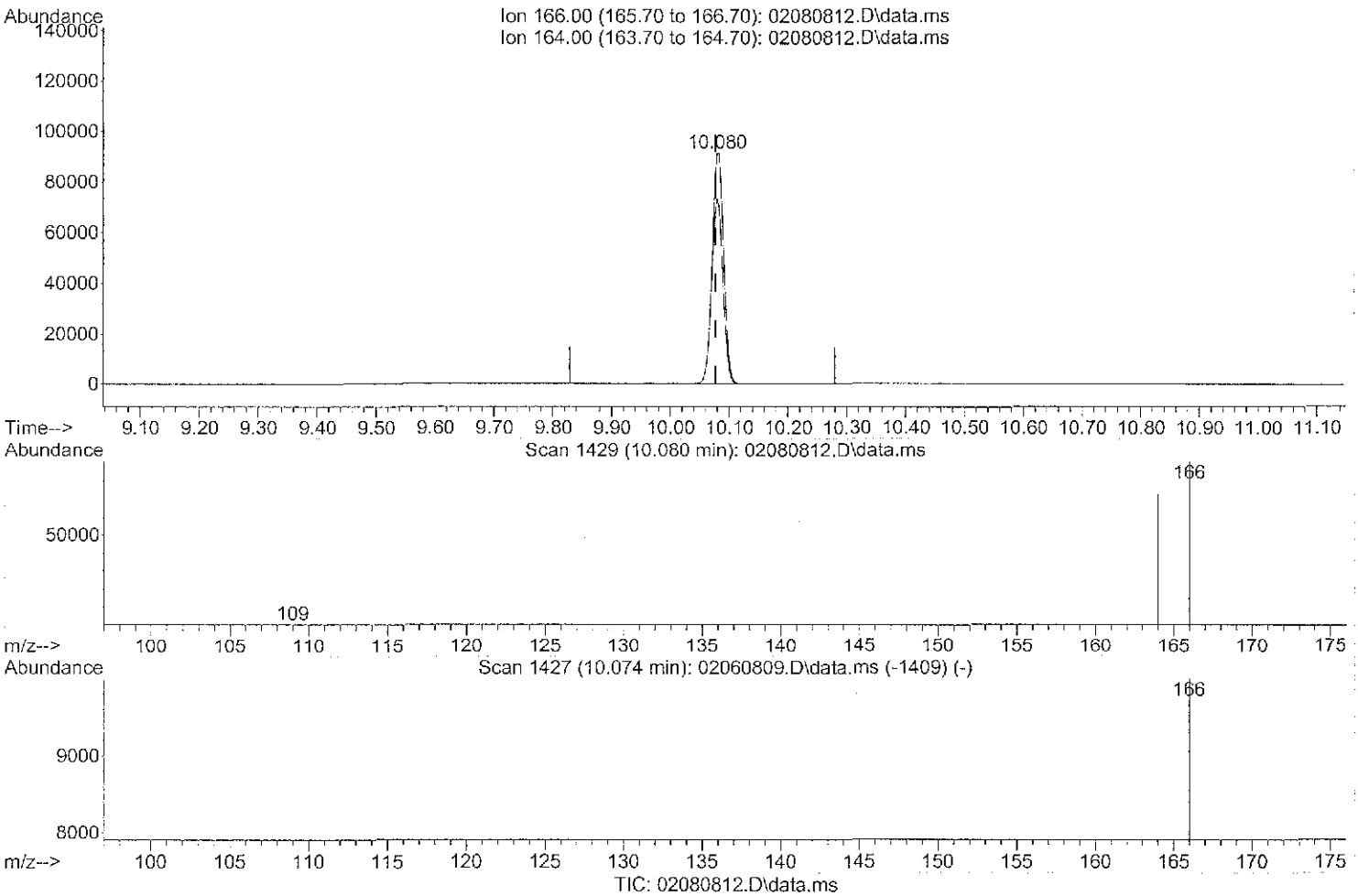
response 2006

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	97.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080812.D
Acq On : 8 Feb 2008 17:05
Operator : LM
Sample : P2800247-002 (1000ml)
Misc : Alaska ES-2-12008 (-2.3,3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 12 11:00:58 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080812.D\data.ms

(29) Tetrachloroethene (T)

10.080min (+0.003) 2147.19pg

response 123710

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.80
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **WFB-1-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-003

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00968

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
79-01-6	Trichloroethene	**0.054**	0.040	**0.010**	0.0075	
127-18-4	Tetrachloroethene	**4.5**	0.040	**0.67**	0.0059	

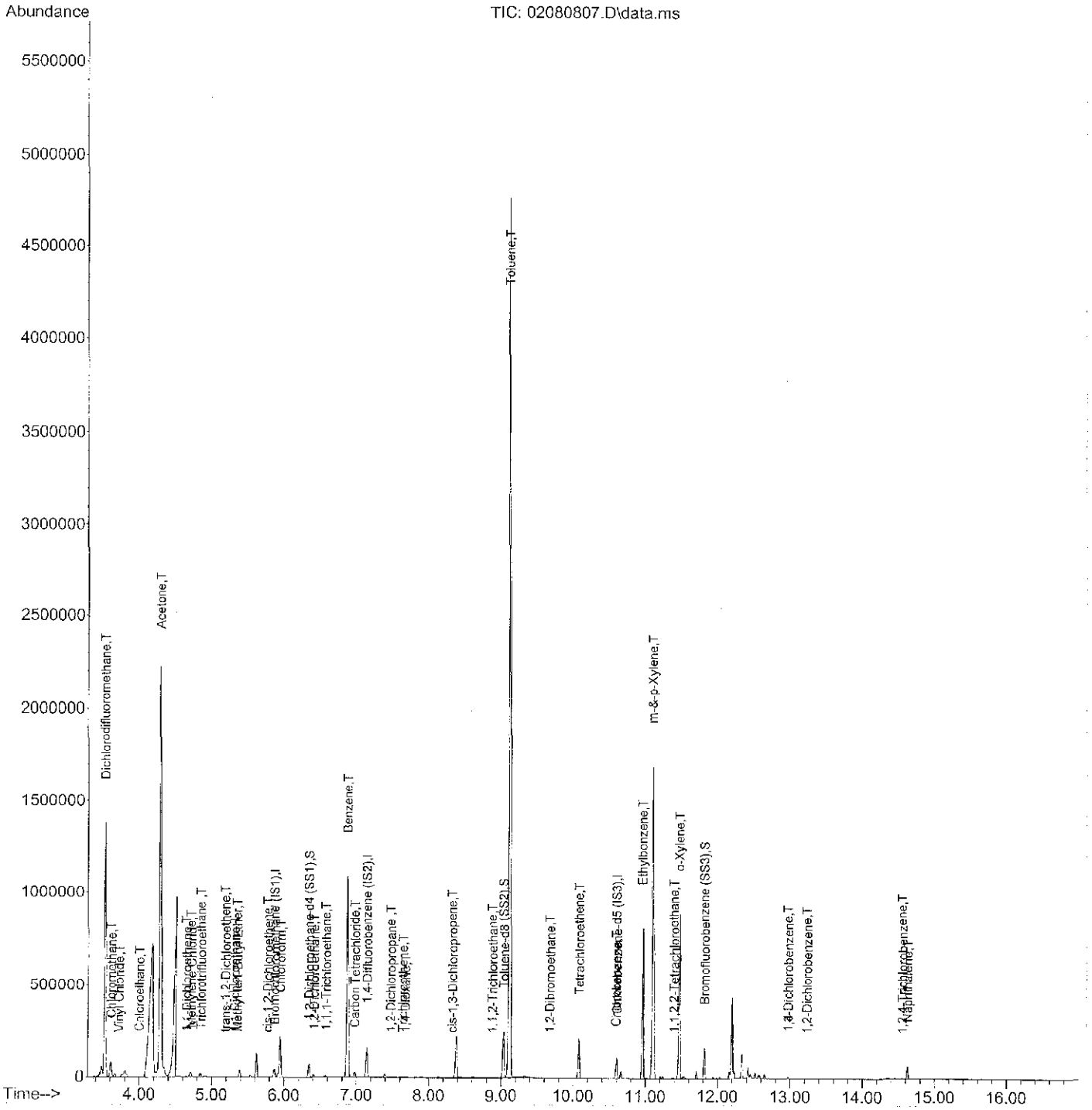
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080807.D
Acq On : 8 Feb 2008 12:49
Operator : LM
Sample : P2800247-003 (1000ml)
Misc : Alaska WFB-1-12008 (-3.4,3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 12 11:01:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080807.D
Acq On : 8 Feb 2008 12:49
Operator : LM
Sample : P2800247-003 (1000ml)
Misc : Alaska WFB-1-12008 (-3.4,3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 12 11:01:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38428	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	188734	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	95951	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	69529	959.84	pg		0.00
Spiked Amount 1000.000			Recovery =	95.98%			
26) Toluene-d8 (SS2)	9.03	98	203652	981.68	pg		0.00
Spiked Amount 1000.000			Recovery =	98.17%			
36) Bromofluorobenzene (SS3)	11.81	174	70231	997.80	pg		0.00
Spiked Amount 1000.000			Recovery =	99.78%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	1316923	12484.85	pg		99
3) Chloromethane	3.61	52	21083	591.06	pg		97
4) Vinyl Chloride	3.72	62	768	8.35	pg		91
5) Chloroethane	3.99	64	825	17.81	pg		98
6) Acetone	4.28	58	723233	5026.12	pg	#	51
7) 1,1-Dichloroethene	4.65	96	722	15.47	pg	#	46
8) Methylene Chloride	4.71	84	11981	225.33	pg		97
9) Trichlorotrifluoroethane	4.85	151	14082	329.49	pg		98
10) trans-1,2-Dichloroethene	5.19	96	117	2.28	pg	#	1
11) 1,1-Dichloroethane	5.31	63	1241	13.51	pg	#	1
12) Methyl tert-Butyl Ether	5.35	73	2363	17.97	pg	#	1
13) cis-1,2-Dichloroethene	5.77	96	355	6.78	pg	#	20
14) Chloroform	5.94	83	201621	2649.61	pg		98
16) 1,2-Dichloroethane	6.41	62	3621	50.19	pg		97
17) 1,1,1-Trichloroethane	6.57	97	7221	94.68	pg		99
18) Benzene	6.87	78	1259585	4916.34	pg		99
19) Carbon Tetrachloride	6.97	117	19196	315.79	pg		99
21) 1,2-Dichloropropane	7.47	63	1077	18.19	pg		98
22) Trichloroethene	7.63	130	1826	33.24	pg		99
23) 1,4-Dioxane	7.67	88	976	23.33	pg	#	1
24) cis-1,3-Dichloropropene	8.32	75	211	2.51	pg	#	32
25) 1,1,2-Trichloroethane	8.88	83	405	9.04	pg	#	2
27) Toluene	9.11	91	4037761	16956.89	pg		100
28) 1,2-Dibromoethane	9.67	107	46	0.83	pg		91
29) Tetrachloroethene	10.08	166	153648	2825.35	pg		100
31) Chlorobenzene	10.59	112	2520	17.50	pg		67
32) Ethylbenzene	10.95	91	739105	2879.91	pg		98
33) m-&-p-Xylene	11.09	91	1710694	9965.01	pg		100
34) o-Xylene	11.46	91	677265	3757.22	pg		98
35) 1,1,2,2-Tetrachloroethane	11.39	83	3132	40.89	pg		90

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080807.D
Acq On : 8 Feb 2008 12:49
Operator : LM
Sample : P2800247-003 (1000ml)
Misc : Alaska WFB-1-12008 (-3.4,3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 12 11:01:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

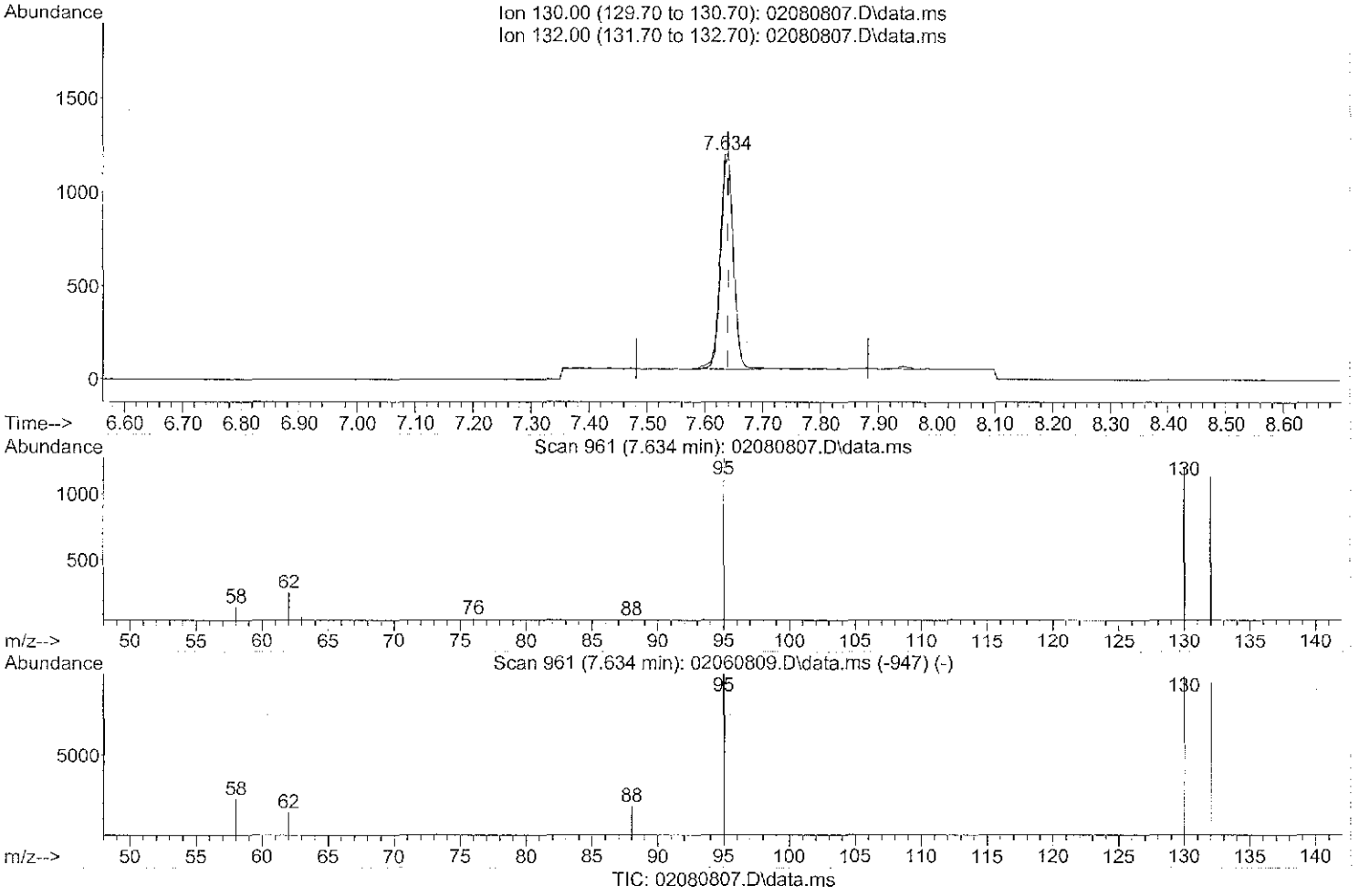
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.97	146	6811	56.57	pg	99
38) 1,4-Dichlorobenzene	12.97	146	6811	58.02	pg	99
39) 1,2-Dichlorobenzene	13.23	146	616	5.49	pg	97
40) 1,2,4-Trichlorobenzene	14.55	182	957	12.59	pg	98
41) Naphthalene	14.62	128	62637	342.98	pg	98
42) Hexachlorobutadiene	14.88	225	12	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080807.D
Acq On : 8 Feb 2008 12:49
Operator : LM
Sample : P2800247-003 (1000ml)
Misc : Alaska WFB-1-12008 (-3.4,3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 12 11:01:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080807.D\data.ms

(22) Trichloroethene (T)

7.634min (-0.006) 33.24pg

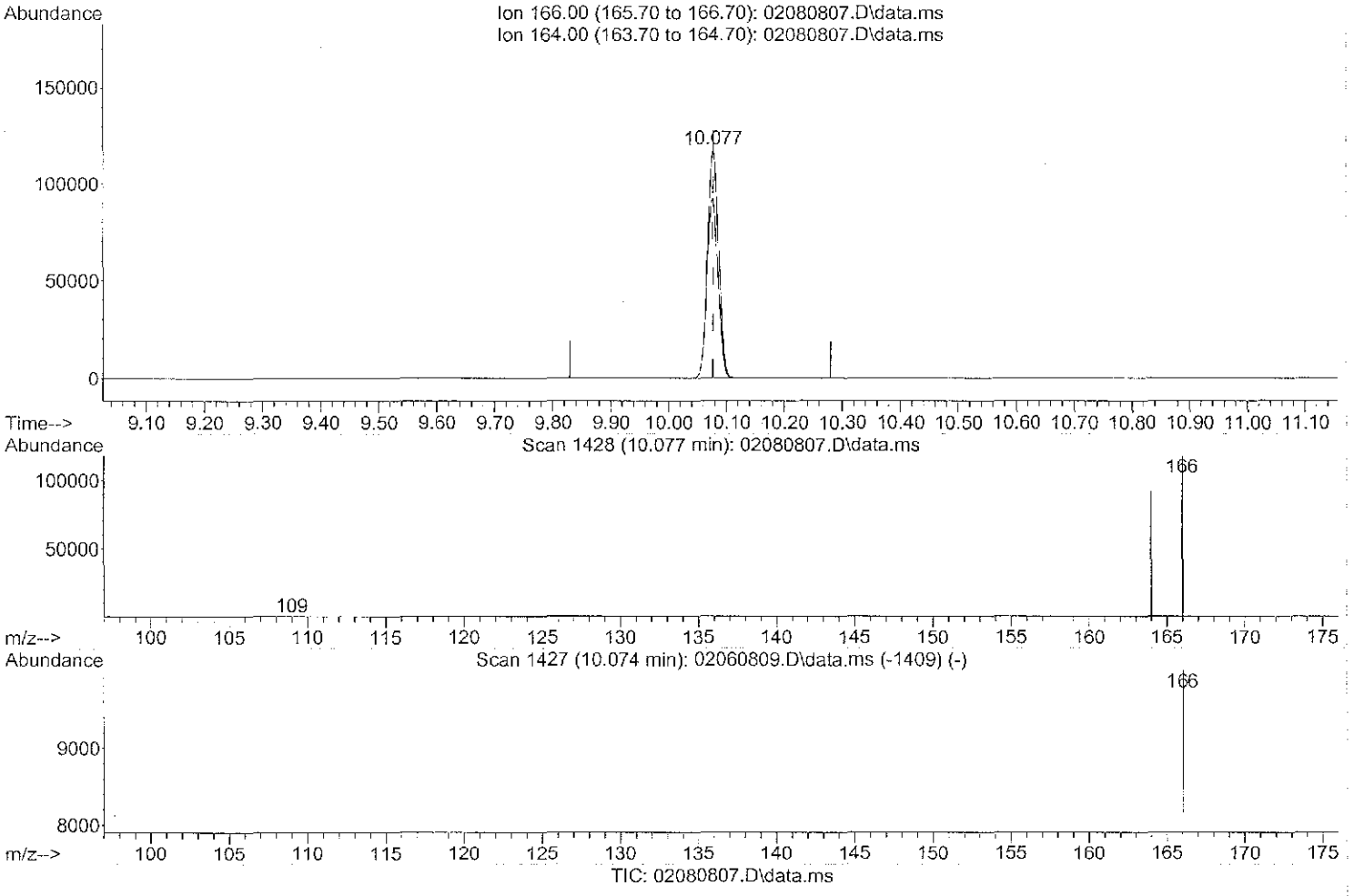
response 1826

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	95.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080807.D
Acq On : 8 Feb 2008 12:49
Operator : LM
Sample : P2800247-003 (1000ml)
Misc : Alaska WFB-1-12008 (-3.4,3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 12 11:01:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080807.D\data.ms

(29) Tetrachloroethene (T)

10.077min (+0.000) 2825.35pg

response 153648

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.63
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **WFB-2-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-004

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC01091

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
79-01-6	Trichloroethene	**0.035**	0.030	**0.0064**	0.0056	
127-18-4	Tetrachloroethene	**5.0**	0.030	**0.73**	0.0045	

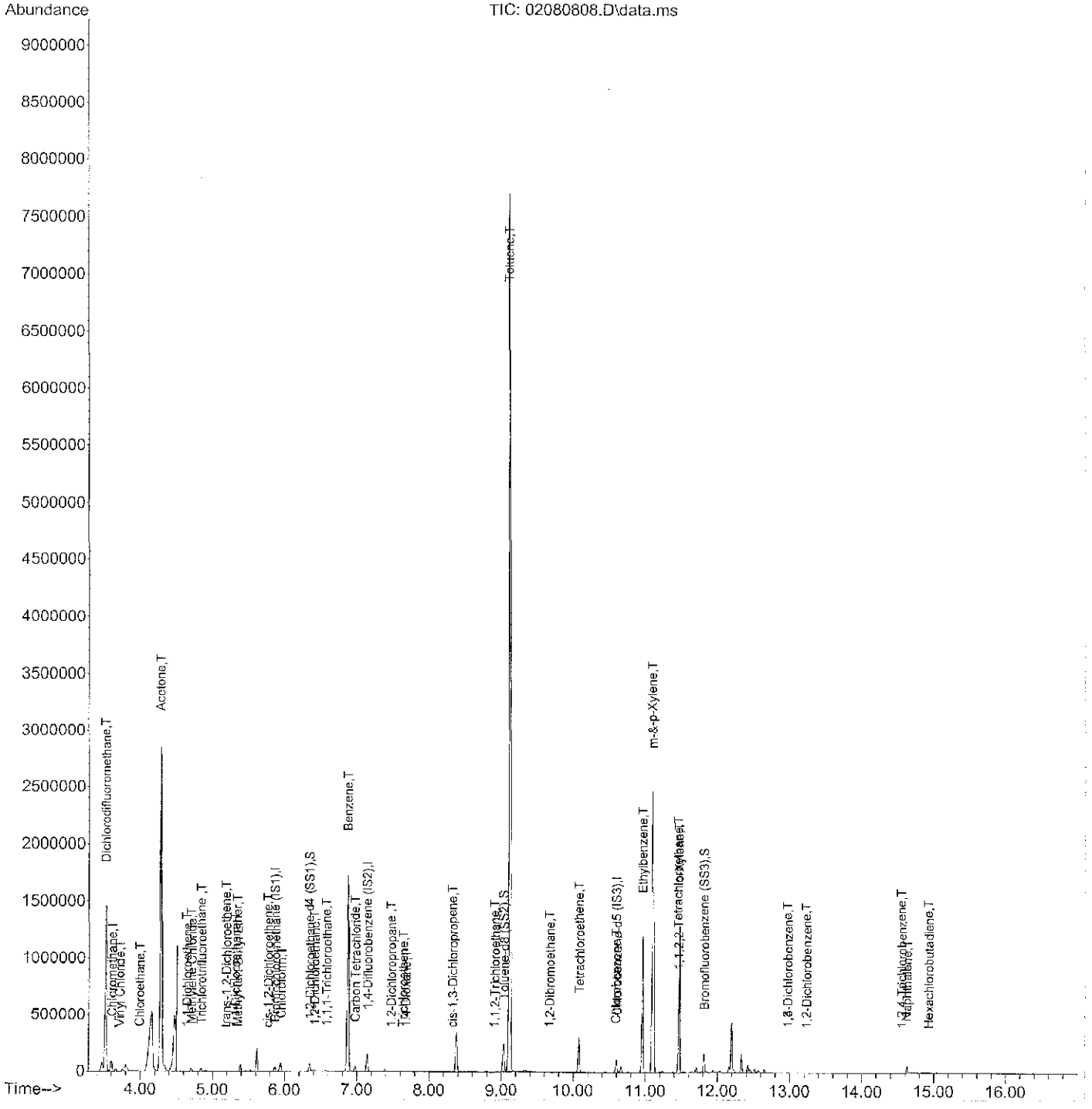
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080808.D
Acq On : 8 Feb 2008 13:20
Operator : LM
Sample : P2800247-004 (1000ml)
Misc : Alaska WFB-2-12008 (0.4,3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 12 11:03:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080808.D
Acq On : 8 Feb 2008 13:20
Operator : LM
Sample : P2800247-004 (1000ml)
Misc : Alaska WFB-2-12008 (0.4,3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 12 11:03:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38662	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	188141	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	96411	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	69095	948.07	pg		0.00
Spiked Amount 1000.000			Recovery =	94.81%			
26) Toluene-d8 (SS2)	9.03	98	204966	991.13	pg		0.00
Spiked Amount 1000.000			Recovery =	99.11%			
36) Bromofluorobenzene (SS3)	11.81	174	69146	977.69	pg		0.00
Spiked Amount 1000.000			Recovery =	97.77%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	1419755	13378.27	pg		99
3) Chloromethane	3.60	52	28494	793.99	pg		100
4) Vinyl Chloride	3.71	62	957	10.34	pg		91
5) Chloroethane	3.99	64	973	20.88	pg		96
6) Acetone	4.28	58	859133	5934.43	pg	#	38
7) 1,1-Dichloroethene	4.64	96	752	16.02	pg	#	85
8) Methylene Chloride	4.71	84	13015	243.29	pg		97
9) Trichlorotrifluoroethane	4.84	151	19370	450.47	pg		98
10) trans-1,2-Dichloroethene	5.19	96	94	1.82	pg	#	12
11) 1,1-Dichloroethane	5.31	63	1722	18.63	pg	#	1
12) Methyl tert-Butyl Ether	5.34	73	3378	25.53	pg	#	52
13) cis-1,2-Dichloroethene	5.77	96	204	3.87	pg	#	20
14) Chloroform	5.94	83	72942	952.77	pg		98
16) 1,2-Dichloroethane	6.41	62	4469	61.57	pg		98
17) 1,1,1-Trichloroethane	6.57	97	9069	118.19	pg		100
18) Benzene	6.87	78	1999903	7758.66	pg		99
19) Carbon Tetrachloride	6.97	117	33629	549.87	pg		99
21) 1,2-Dichloropropane	7.47	63	1169	19.80	pg		89
22) Trichloroethene	7.63	130	1565	28.58	pg		95
23) 1,4-Dioxane	7.67	88	945	22.66	pg	#	1
24) cis-1,3-Dichloropropene	8.32	75	192	2.29	pg	#	32
25) 1,1,2-Trichloroethane	8.91	83	637	14.26	pg	#	2
27) Toluene	9.11	91	6386612	26905.61	pg		99
28) 1,2-Dibromoethane	9.67	107	79	1.43	pg		96
29) Tetrachloroethene	10.08	166	222229	4099.33	pg		100
31) Chlorobenzene	10.59	112	3390	23.43	pg		67
32) Ethylbenzene	10.96	91	1091958	4234.49	pg		98
33) m-&-p-Xylene	11.09	91	2544154	14749.31	pg		99
34) o-Xylene	11.46	91	983181	5428.31	pg		98
35) 1,1,2,2-Tetrachloroethane	11.45	83	1131	14.70	pg	#	1

07/11/08

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080808.D
Acq On : 8 Feb 2008 13:20
Operator : LM
Sample : P2800247-004 (1000ml)
Misc : Alaska WFB-2-12008 (0.4,3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 12 11:03:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.97	146	6163	50.94	pg	100
38) 1,4-Dichlorobenzene	12.97	146	6163	52.25	pg	99
39) 1,2-Dichlorobenzene	13.23	146	373	3.31	pg	94
40) 1,2,4-Trichlorobenzene	14.55	182	748	9.79	pg	95
41) Naphthalene	14.62	128	62842	342.46	pg	100
42) Hexachlorobutadiene	14.93	225	22	0.51	pg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

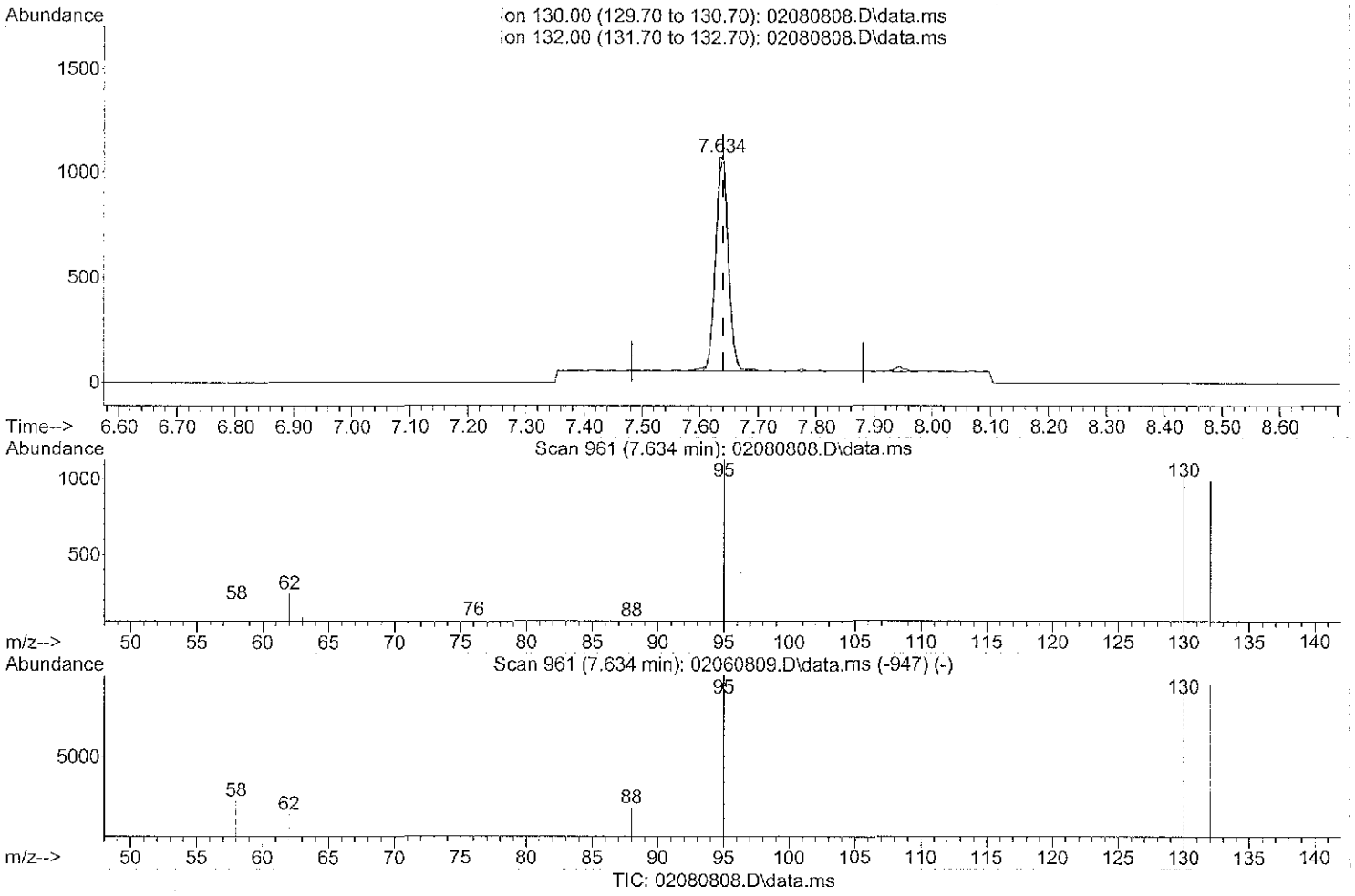
2/12/08

27

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080808.D
Acq On : 8 Feb 2008 13:20
Operator : LM
Sample : P2800247-004 (1000ml)
Misc : Alaska WFB-2-12008 (0.4,3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 12 11:03:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080808.D\data.ms

(22) Trichloroethene (T)

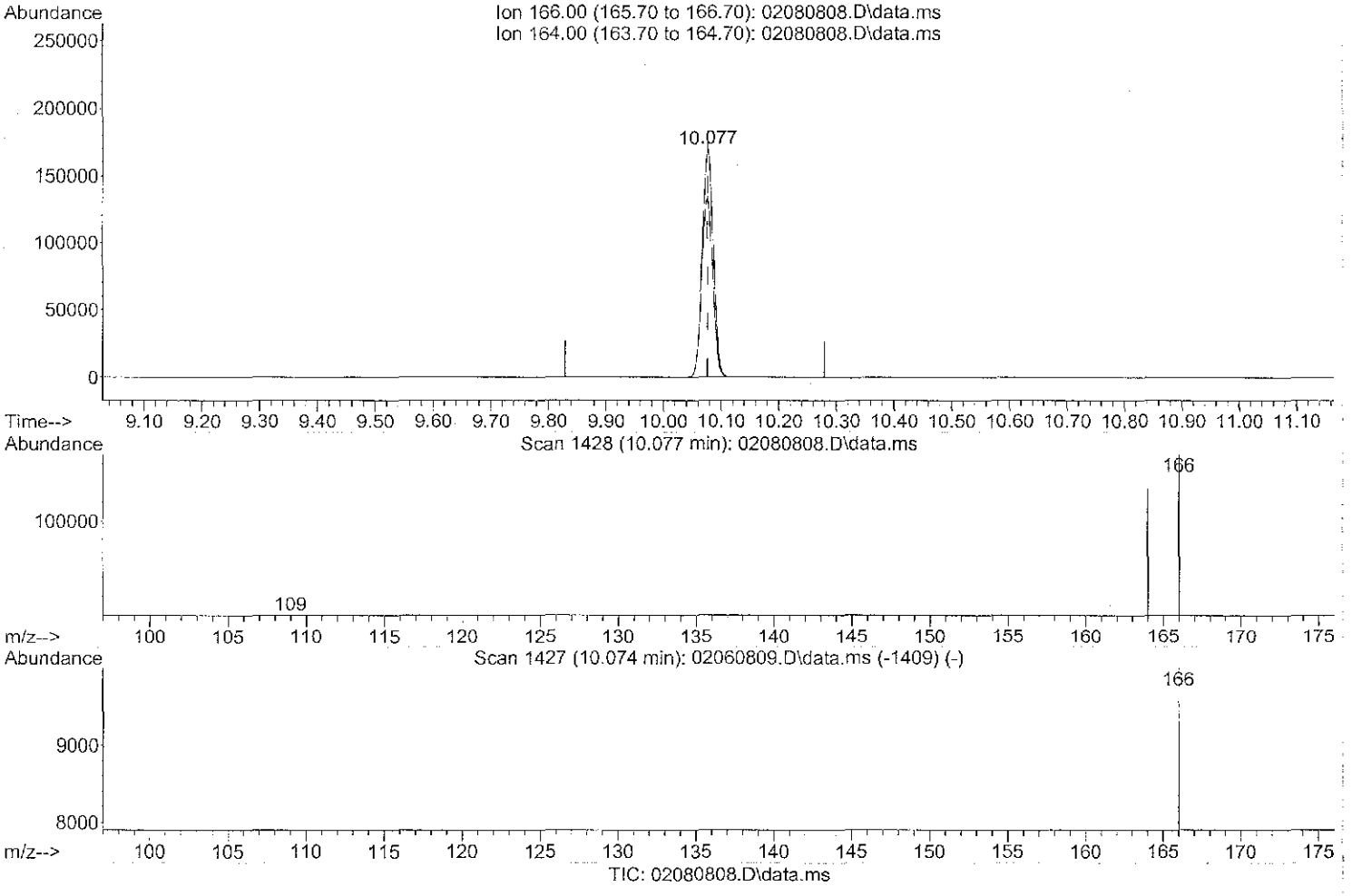
7.634min (-0.006) 28.58pg

response 1565

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	99.62
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080808.D
Acq On : 8 Feb 2008 13:20
Operator : LM
Sample : P2800247-004 (1000ml)
Misc : Alaska WFB-2-12008 (0.4,3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 12 11:03:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080808.D\data.ms

(29) Tetrachloroethene (T)

10.077min (-0.000) 4099.33pg

response 222229

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.58
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **WFB-3-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-005

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC01171

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.8 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
79-01-6	Trichloroethene	**0.046**	0.042	**0.0085**	0.0078	
127-18-4	Tetrachloroethene	**4.3**	0.042	**0.63**	0.0062	

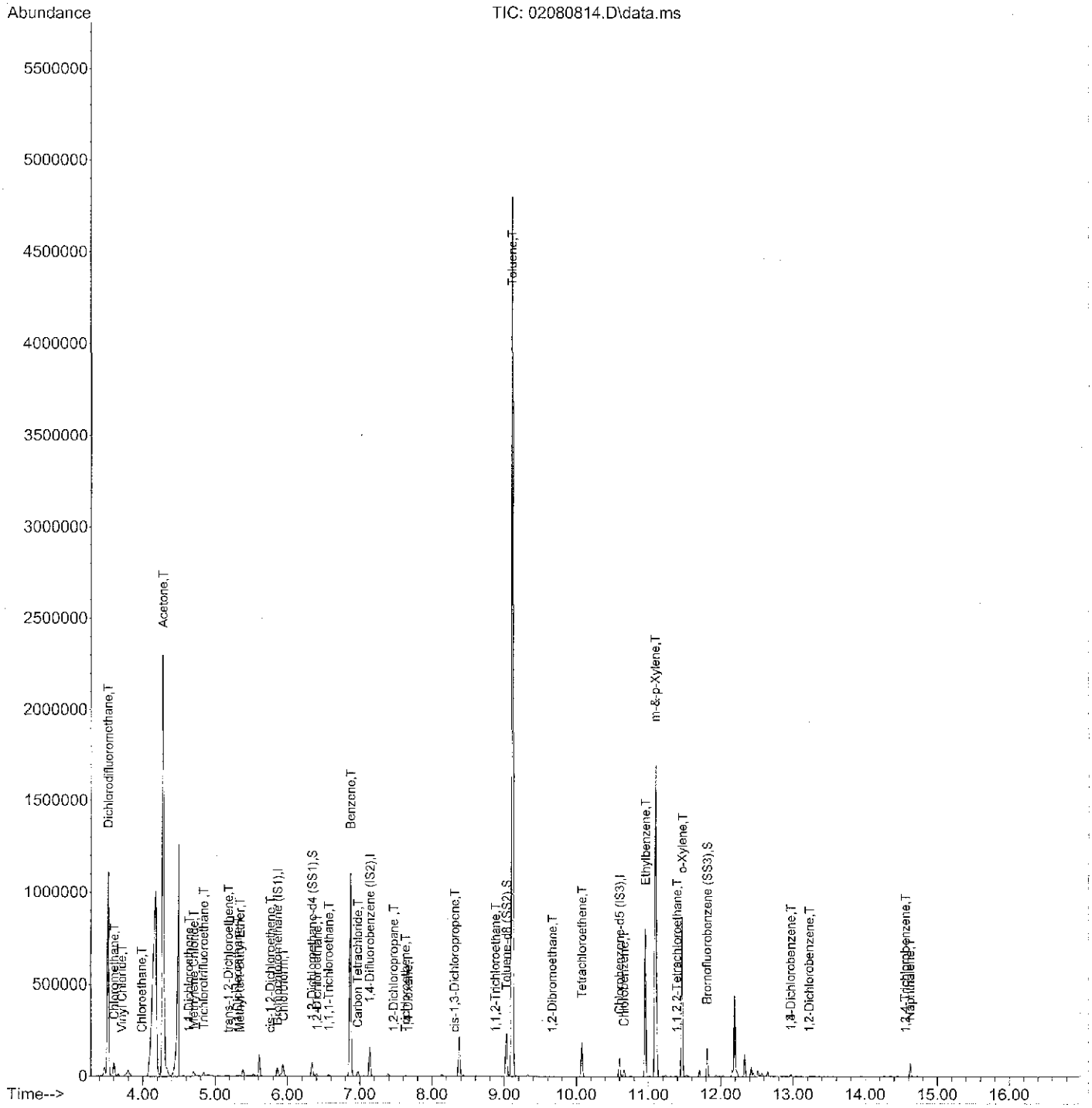
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080814.D
Acq On : 8 Feb 2008 18:04
Operator : LM
Sample : P2800247-005 (1000ml)
Misc : Alaska WFB-3-12008 (-3.8,3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 12 11:04:06 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



31

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080814.D
Acq On : 8 Feb 2008 18:04
Operator : LM
Sample : P2800247-005 (1000ml)
Misc : Alaska WFB-3-12008 (-3.8,3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 12 11:04:06 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38511	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	188014	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	94169	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	68709	946.47	pg		0.00
Spiked Amount 1000.000			Recovery =	94.65%			
26) Toluene-d8 (SS2)	9.03	98	204386	988.99	pg		0.00
Spiked Amount 1000.000			Recovery =	98.90%			
36) Bromofluorobenzene (SS3)	11.82	174	68639	993.63	pg		0.00
Spiked Amount 1000.000			Recovery =	99.36%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	1055362	9983.61	pg		99
3) Chloromethane	3.61	52	20616	576.72	pg		98
4) Vinyl Chloride	3.72	62	632	6.86	pg	#	44
5) Chloroethane	3.99	64	682	14.69	pg		95
6) Acetone	4.28	58	730601	5066.39	pg	#	49
7) 1,1-Dichloroethene	4.64	96	586	12.53	pg	#	30
8) Methylene Chloride	4.71	84	11190	210.00	pg		96
9) Trichlorotrifluoroethane	4.84	151	13505	315.30	pg		98
10) trans-1,2-Dichloroethene	5.19	96	68	1.32	pg	#	1
11) 1,1-Dichloroethane	5.31	63	1051	11.41	pg	#	1
12) Methyl tert-Butyl Ether	5.34	73	2042	15.49	pg	#	52
13) cis-1,2-Dichloroethene	5.77	96	147	2.80	pg	#	18
14) Chloroform	5.94	83	59228	776.67	pg		98
16) 1,2-Dichloroethane	6.41	62	3523	48.73	pg		98
17) 1,1,1-Trichloroethane	6.57	97	5385	70.45	pg		99
18) Benzene	6.87	78	1260554	4909.52	pg		99
19) Carbon Tetrachloride	6.97	117	18897	310.20	pg		99
21) 1,2-Dichloropropane	7.47	63	1167	19.78	pg		96
22) Trichloroethene	7.63	130	1501	27.43	pg		96
23) 1,4-Dioxane	7.67	88	1552	37.25	pg	#	1
24) cis-1,3-Dichloropropene	8.31	75	234	2.79	pg	#	32
25) 1,1,2-Trichloroethane	8.88	83	723	16.20	pg	#	2
27) Toluene	9.11	91	4205312	17728.16	pg		100
28) 1,2-Dibromoethane	9.67	107	35	0.63	pg	#	49
29) Tetrachloroethene	10.08	166	139384	2572.87	pg		100
31) Chlorobenzene	10.66	112	14758	104.44	pg	#	48
32) Ethylbenzene	10.96	91	732806	2909.39	pg		98
33) m-&-p-Xylene	11.09	91	1731268	10275.70	pg		99
34) o-Xylene	11.47	91	683758	3865.02	pg		98
35) 1,1,2,2-Tetrachloroethane	11.39	83	3046	40.52	pg		88

LM 2/12/08

Quantitation Report (~~Not~~ Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080814.D
Acq On : 8 Feb 2008 18:04
Operator : LM
Sample : P2800247-005 (1000ml)
Misc : Alaska WFB-3-12008 (-3.8,3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 12 11:04:06 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

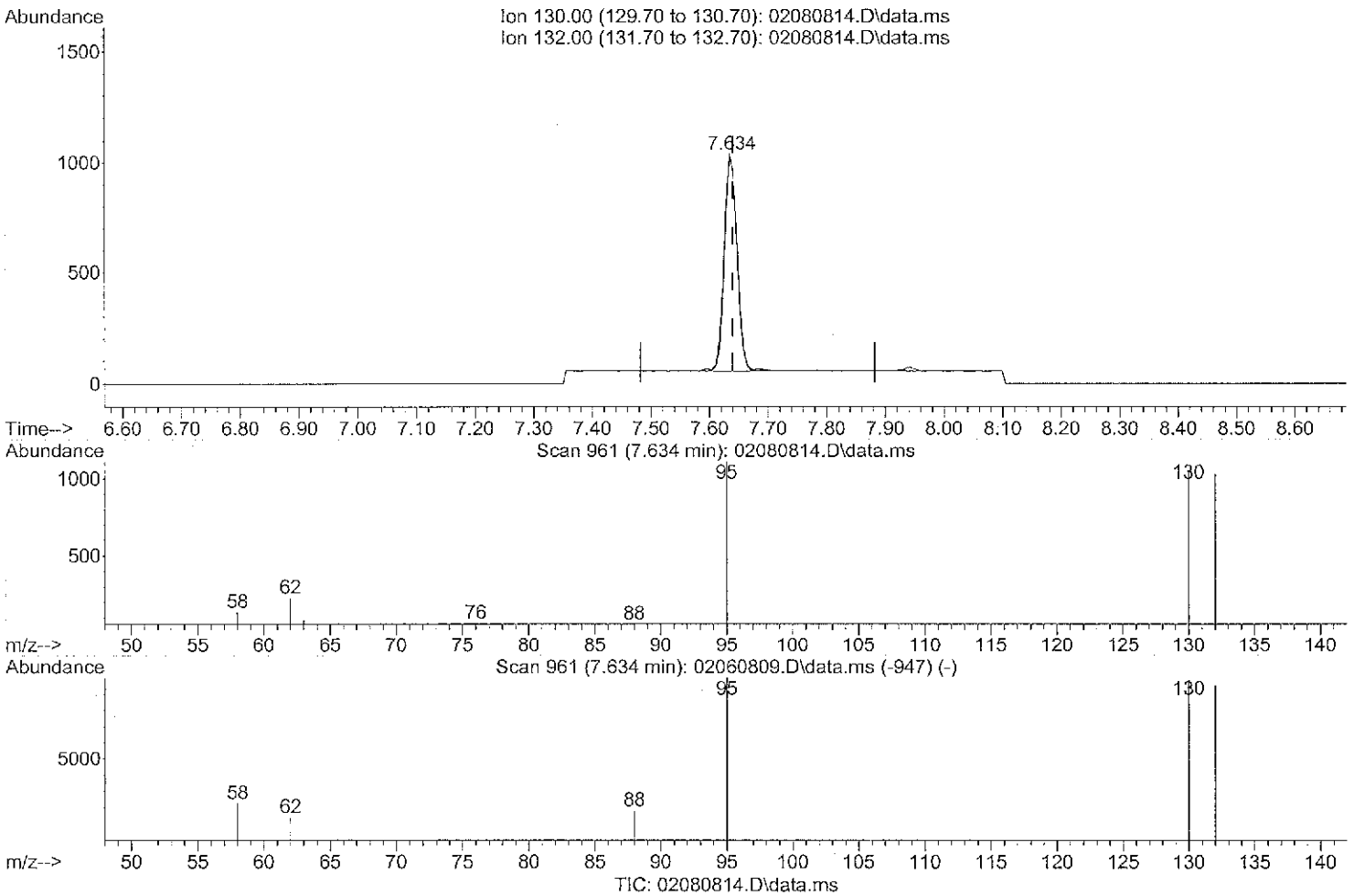
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.97	146	8153	68.99	pg	100
38) 1,4-Dichlorobenzene	12.97	146	8153	70.77	pg	99
39) 1,2-Dichlorobenzene	13.23	146	500	4.54	pg	95
40) 1,2,4-Trichlorobenzene	14.56	182	266	3.57	pg	85
41) Naphthalene	14.62	128	71874	401.01	pg	98
42) Hexachlorobutadiene	14.93	225	16	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/12/08

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080814.D
Acq On : 8 Feb 2008 18:04
Operator : LM
Sample : P2800247-005 (1000ml)
Misc : Alaska WFB-3-12008 (-3.8,3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 12 11:04:06 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(22) Trichloroethene (T)

7.634min (-0.006) 27.43pg

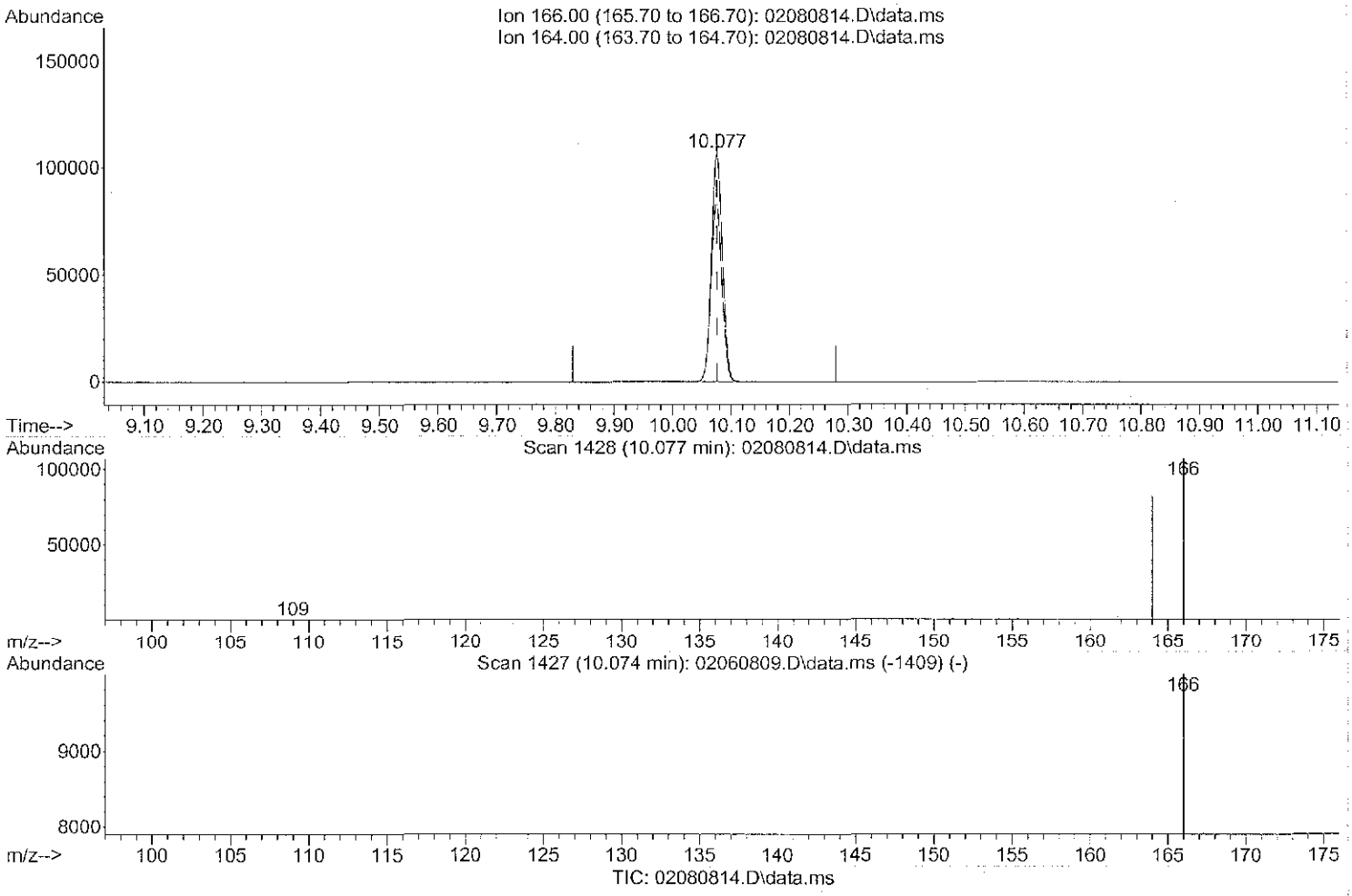
response 1501

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	98.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080814.D
Acq On : 8 Feb 2008 18:04
Operator : LM
Sample : P2800247-005 (1000ml)
Misc : Alaska WFB-3-12008 (-3.8,3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 12 11:04:06 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080814.D\data.ms

(29) Tetrachloroethene (T)

10.077min (+0.000) 2572.87pg

response 139384

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.61
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **VS1-CI-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-006

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC01289

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 0.010 Liter(s)

Initial Pressure (psig): -2.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	3.7	ND	1.4	
75-35-4	1,1-Dichloroethene	ND	3.7	ND	0.93	
156-60-5	trans-1,2-Dichloroethene	ND	3.7	ND	0.93	
156-59-2	cis-1,2-Dichloroethene	ND	3.7	ND	0.93	
67-66-3	Chloroform	ND	15	ND	3.0	
71-55-6	1,1,1-Trichloroethane	ND	3.7	ND	0.67	
56-23-5	Carbon Tetrachloride	ND	3.7	ND	0.58	
79-01-6	Trichloroethene	**3.9**	3.7	**0.72**	0.68	
79-00-5	1,1,2-Trichloroethane	ND	3.7	ND	0.67	
127-18-4	Tetrachloroethene	**1,800**	3.7	**270**	0.54	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.7	ND	0.54	

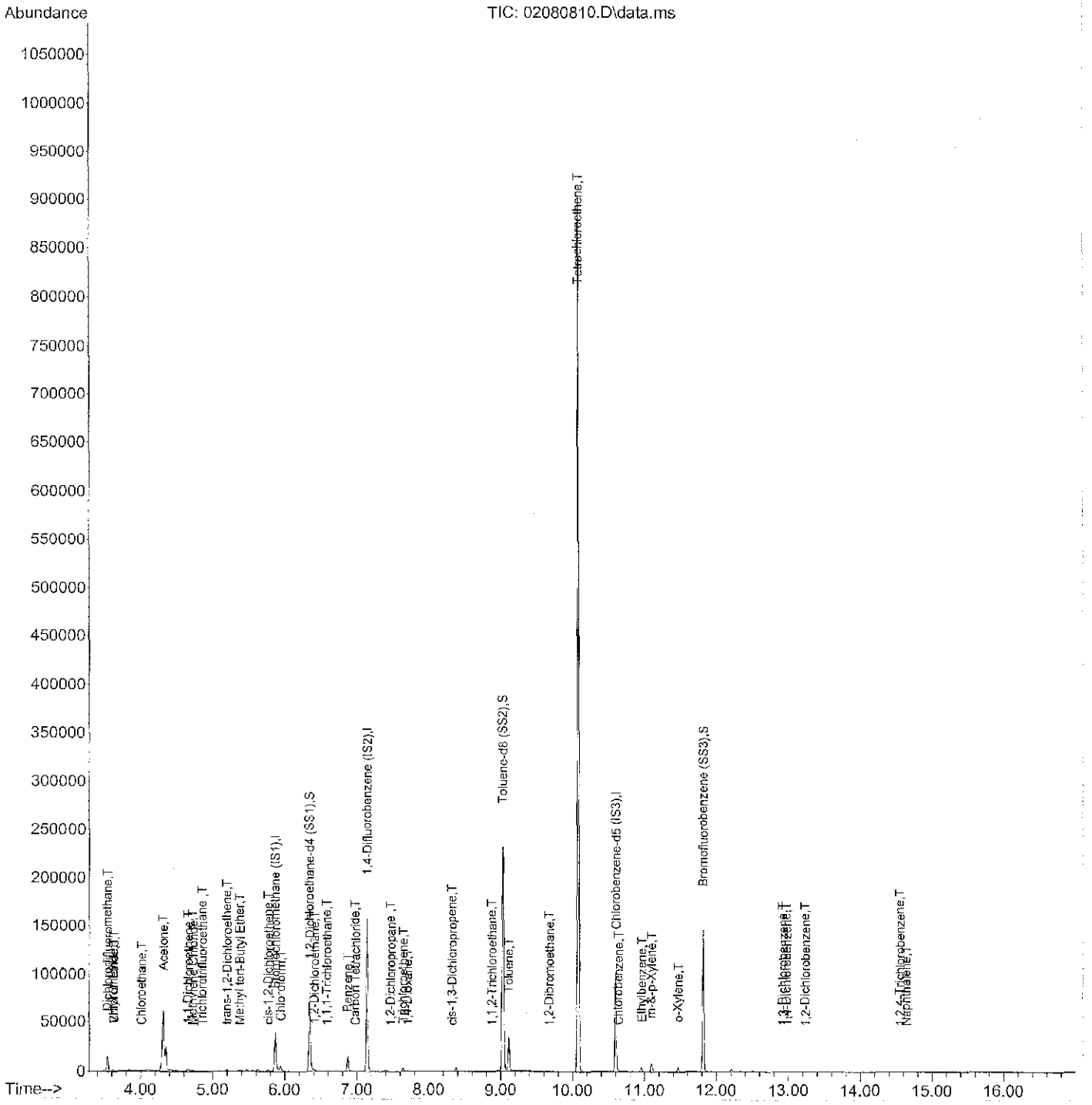
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080810.D
Acq On : 8 Feb 2008 14:53
Operator : LM
Sample : P2800247-006 (10.0ml)
Misc : Alaska WS1-CI-12008 (-2.3,3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:06:19 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080810.D
Acq On : 8 Feb 2008 14:53
Operator : LM
Sample : P2800247-006 (10.0ml)
Misc : Alaska WS1-CI-12008 (-2.3,3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:06:19 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38225	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	185744	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	94572	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	73744	1023.43	pg		0.00
Spiked Amount 1000.000			Recovery = 102.34%				
26) Toluene-d8 (SS2)	9.02	98	203887	998.64	pg		0.00
Spiked Amount 1000.000			Recovery = 99.86%				
36) Bromofluorobenzene (SS3)	11.81	174	68442	986.56	pg		0.00
Spiked Amount 1000.000			Recovery = 98.66%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.54	85	14665	139.77	pg		99
3) Chloromethane	3.63	52	357	10.06	pg	#	90
4) Vinyl Chloride	3.62	62	75	0.82	pg	#	1
5) Chloroethane	4.01	64	63	1.37	pg	#	63
6) Acetone	4.31	58	31709	221.53	pg	#	77
7) 1,1-Dichloroethene	4.66	96	848	18.27	pg		91
8) Methylene Chloride	4.72	84	341	6.45	pg		97
9) Trichlorotrifluoroethane	4.85	151	177	4.16	pg		95
10) trans-1,2-Dichloroethene	5.20	96	392	7.67	pg		92
11) 1,1-Dichloroethane	5.37	63	17	N.D.			
12) Methyl tert-Butyl Ether	5.37	73	390	2.98	pg		95
13) cis-1,2-Dichloroethene	5.77	96	601	11.54	pg		99
14) Chloroform	5.94	83	4062	53.66	pg		98
16) 1,2-Dichloroethane	6.41	62	316	4.40	pg		95
17) 1,1,1-Trichloroethane	6.58	97	61	0.80	pg		88
18) Benzene	6.87	78	16768	65.80	pg		99
19) Carbon Tetrachloride	6.98	117	244	4.04	pg		90
21) 1,2-Dichloropropane	7.47	63	33	0.57	pg		93
22) Trichloroethene	7.64	130	1419	26.24	pg		96
23) 1,4-Dioxane	7.70	88	188	4.57	pg	#	66
24) cis-1,3-Dichloropropene	8.32	75	48	0.58	pg	#	48
25) 1,1,2-Trichloroethane	8.88	83	32	0.73	pg	#	20
27) Toluene	9.11	91	29296	125.01	pg		100
28) 1,2-Dibromoethane	9.67	107	43	0.79	pg		89
29) Tetrachloroethene	10.07	166	661178	12353.77	pg		100
31) Chlorobenzene	10.64	112	186	1.31	pg		96
32) Ethylbenzene	10.96	91	3975	15.71	pg		99
33) m-&-p-Xylene	11.09	91	8964	52.98	pg		99
34) o-Xylene	11.46	91	3559	20.03	pg		97
35) 1,1,2,2-Tetrachloroethane	11.43	83	14	N.D.			

38

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080810.D
Acq On : 8 Feb 2008 14:53
Operator : LM
Sample : P2800247-006 (10.0ml)
Misc : Alaska WS1-CI-12008 (-2.3,3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:06:19 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	104	0.88	pg	82
38) 1,4-Dichlorobenzene	12.97	146	202	1.75	pg	97
39) 1,2-Dichlorobenzene	13.23	146	72	0.65	pg	94
40) 1,2,4-Trichlorobenzene	14.55	182	124	1.66	pg	85
41) Naphthalene	14.63	128	870	4.83	pg	91
42) Hexachlorobutadiene	14.92	225	11	N.D.		

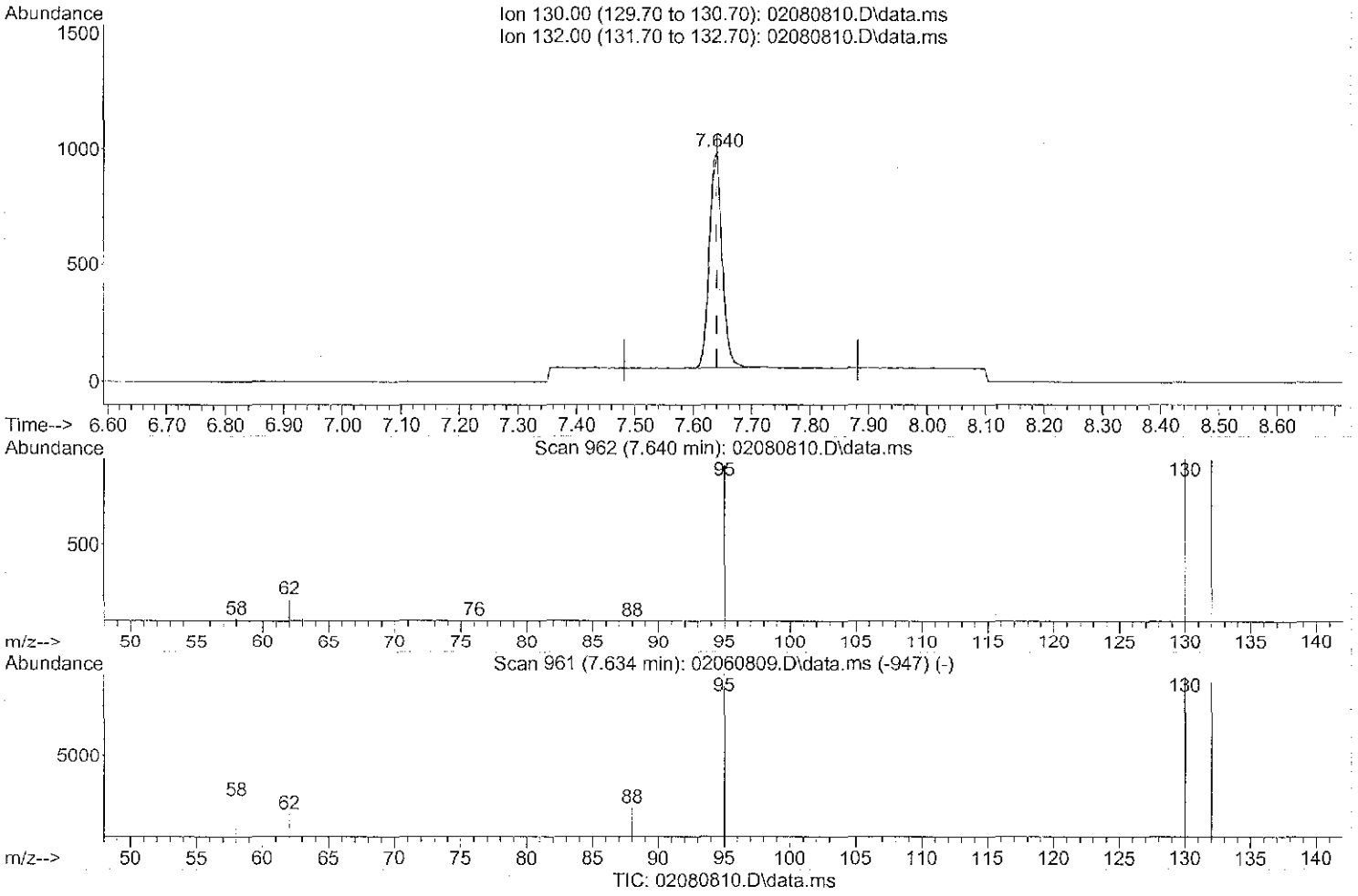
(#) = qualifier out of range (m) = manual integration (+) = signals summed

IM 2/14/08

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080810.D
Acq On : 8 Feb 2008 14:53
Operator : LM
Sample : P2800247-006 (10.0ml)
Misc : Alaska WS1-CI-12008 (-2.3,3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:06:19 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(22) Trichloroethene (T)

7.640min (+0.000) 26.24pg

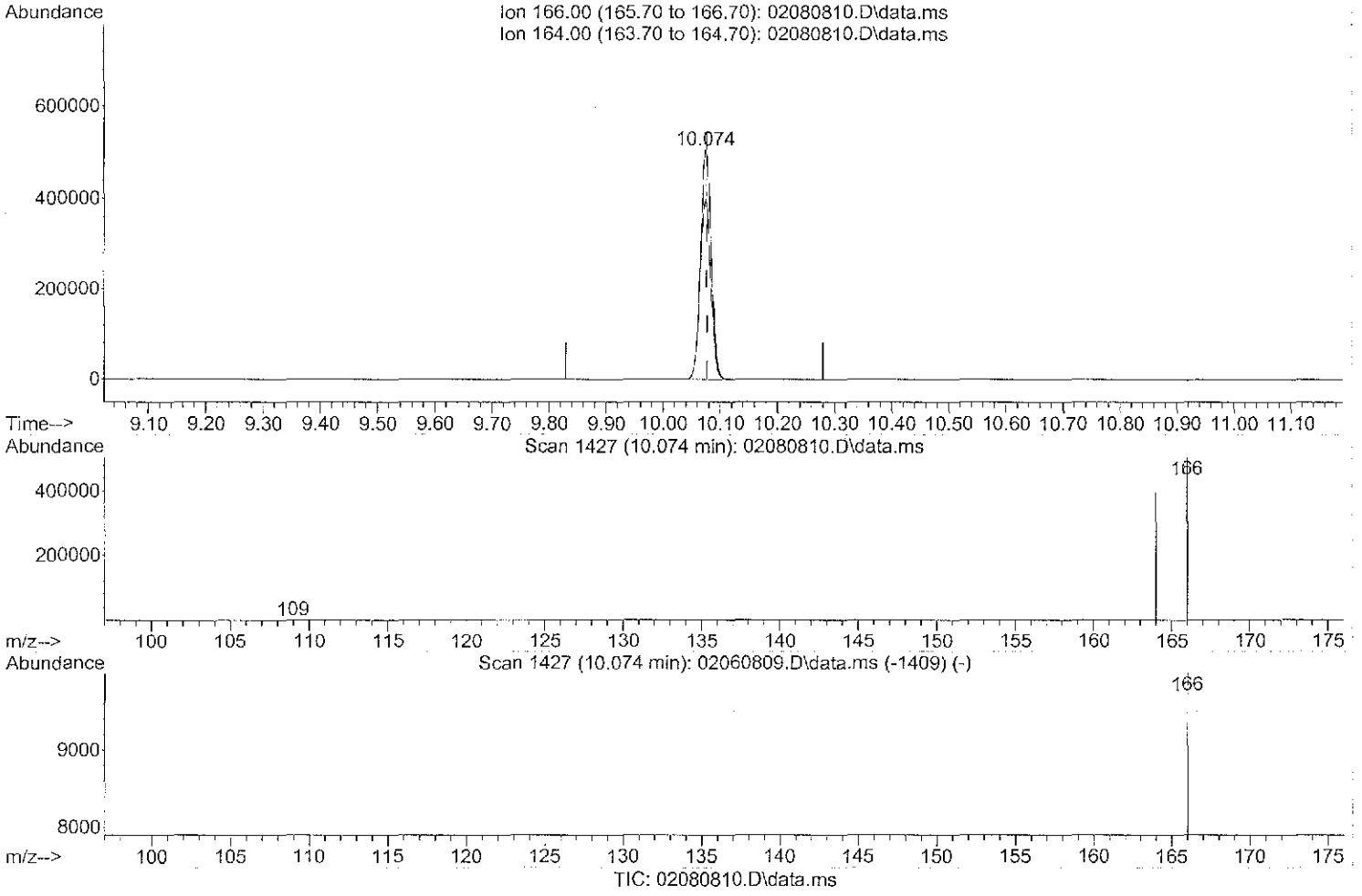
response 1419

Ion	Exp%	Act%
130.00	100	100
132.00	94.50	98.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080810.D
Acq On : 8 Feb 2008 14:53
Operator : LM
Sample : P2800247-006 (10.0ml)
Misc : Alaska WS1-CI-12008 (-2.3,3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:06:19 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080810.D\data.ms

(29) Tetrachloroethene (T)

10.074min (-0.003) 12353.77pg

response 661178

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.73
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **VS2-CE-12008**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P2800247-007

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:
Container ID: AC01286

Date Collected: 1/30/08
Date Received: 2/1/08
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.15

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	**0.045**	0.029	**0.018**	0.011	
75-35-4	1,1-Dichloroethene	**0.036**	0.029	**0.0090**	0.0073	
156-60-5	trans-1,2-Dichloroethene	ND	0.029	ND	0.0073	
156-59-2	cis-1,2-Dichloroethene	ND	0.029	ND	0.0073	
67-66-3	Chloroform	ND	0.12	ND	0.024	
71-55-6	1,1,1-Trichloroethane	ND	0.029	ND	0.0053	
56-23-5	Carbon Tetrachloride	ND	0.029	ND	0.0046	
79-01-6	Trichloroethene	ND	0.029	ND	0.0054	
79-00-5	1,1,2-Trichloroethane	ND	0.029	ND	0.0053	
127-18-4	Tetrachloroethene	**1.6**	0.029	**0.24**	0.0042	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.029	ND	0.0042	

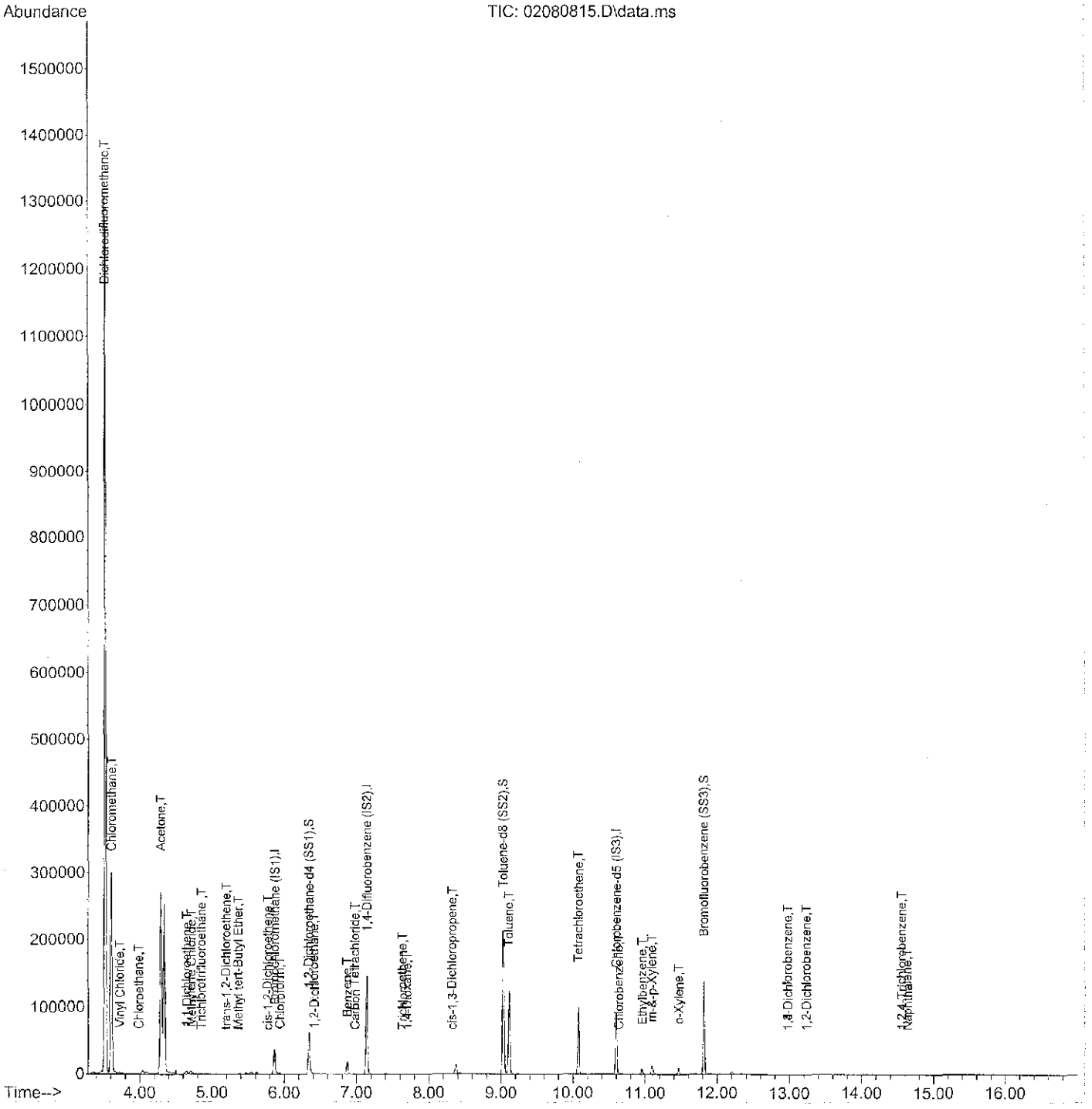
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	37158	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	178812	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	88951	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	67189	959.24	pg		0.00
Spiked Amount 1000.000			Recovery =	95.92%			
26) Toluene-d8 (SS2)	9.02	98	194175	987.94	pg		0.00
Spiked Amount 1000.000			Recovery =	98.79%			
36) Bromofluorobenzene (SS3)	11.81	174	64676	991.19	pg		0.00
Spiked Amount 1000.000			Recovery =	99.12%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	1224146	12001.95	pg		99
3) Chloromethane	3.61	52	18082	524.25	pg	#	53
4) Vinyl Chloride	3.72	62	3518	39.55	pg	#	44
5) Chloroethane	3.99	64	552	12.32	pg	#	1
6) Acetone	4.29	58	126735	910.85	pg	#	82
7) 1,1-Dichloroethene	4.65	96	1394	30.90	pg		89
8) Methylene Chloride	4.71	84	2111	41.06	pg		96
9) Trichlorotrifluoroethane	4.85	151	140	3.39	pg		100
10) trans-1,2-Dichloroethene	5.19	96	56	1.13	pg	#	78
11) 1,1-Dichloroethane	5.36	63	10	N.D.			
12) Methyl tert-Butyl Ether	5.36	73	151	1.19	pg	#	1
13) cis-1,2-Dichloroethene	5.77	96	58	1.15	pg		90
14) Chloroform	5.94	83	929	12.63	pg		97
16) 1,2-Dichloroethane	6.41	62	67	0.96	pg		69
17) 1,1,1-Trichloroethane	6.57	97	32	N.D.			
18) Benzene	6.87	78	22163	89.46	pg		100
19) Carbon Tetrachloride	6.98	117	153	2.60	pg		95
21) 1,2-Dichloropropane	7.47	63	9	N.D.			
22) Trichloroethene	7.63	130	210	4.03	pg		89
23) 1,4-Dioxane	7.69	88	173	4.37	pg	#	70
24) cis-1,3-Dichloropropene	8.32	75	68	0.85	pg	#	1
25) 1,1,2-Trichloroethane	8.88	83	16	N.D.			
27) Toluene	9.11	91	110560	490.07	pg		100
28) 1,2-Dibromoethane	9.77	107	4	N.D.			
29) Tetrachloroethene	10.07	166	73858	1433.50	pg		100
31) Chlorobenzene	10.64	112	109	0.82	pg		94
32) Ethylbenzene	10.96	91	8031	33.76	pg		98
33) m-&-p-Xylene	11.09	91	13471	84.65	pg		100
34) o-Xylene	11.46	91	7375	44.13	pg		98
35) 1,1,2,2-Tetrachloroethane	11.62	83	19	N.D.			

44

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.98	146	206	1.85	pg	96
38) 1,4-Dichlorobenzene	12.98	146	206	1.89	pg	96
39) 1,2-Dichlorobenzene	13.23	146	66	0.63	pg	99
40) 1,2,4-Trichlorobenzene	14.56	182	160	2.27	pg	93
41) Naphthalene	14.63	128	491	2.90	pg	96
42) Hexachlorobutadiene	14.93	225	18	N.D.		

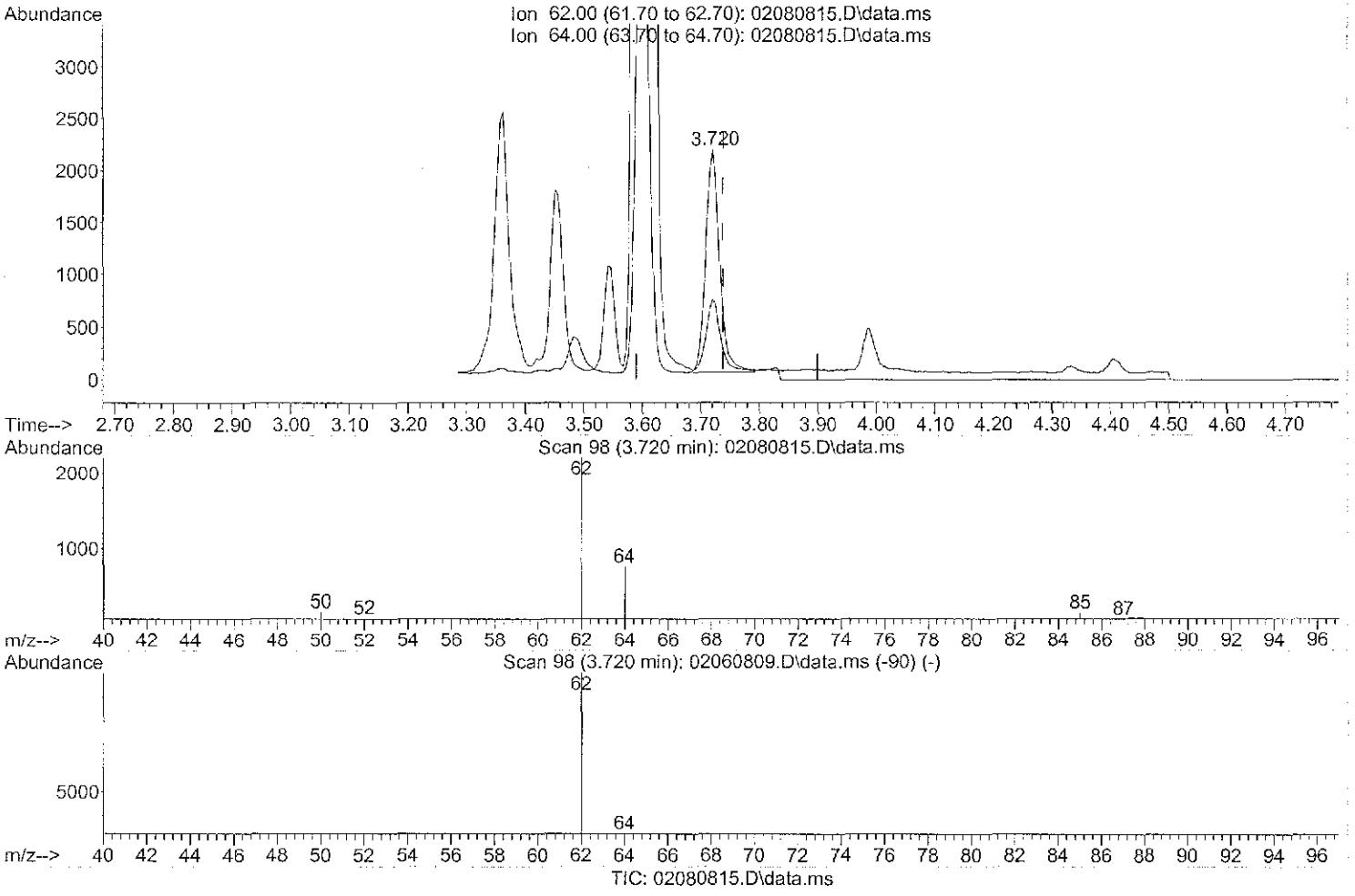
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/12/08

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



TIC: 02080815.D\data.ms

(4) Vinyl Chloride (T)

3.720min (-0.018) 39.55pg

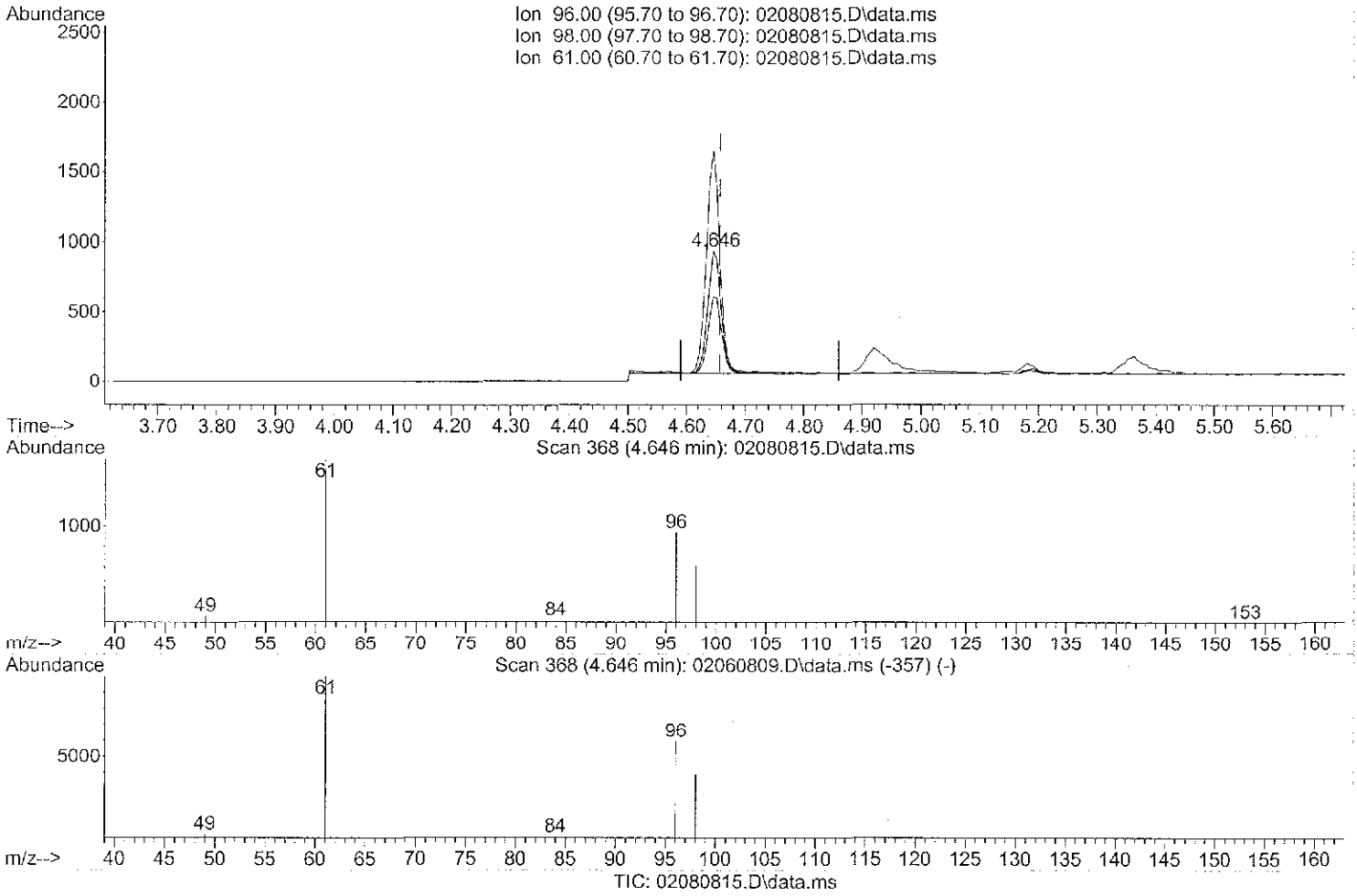
response 3518

Ion	Exp%	Act%
62.00	100	100
64.00	30.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(7) 1,1-Dichloroethene (T)

4.646min (-0.012) 30.90pg

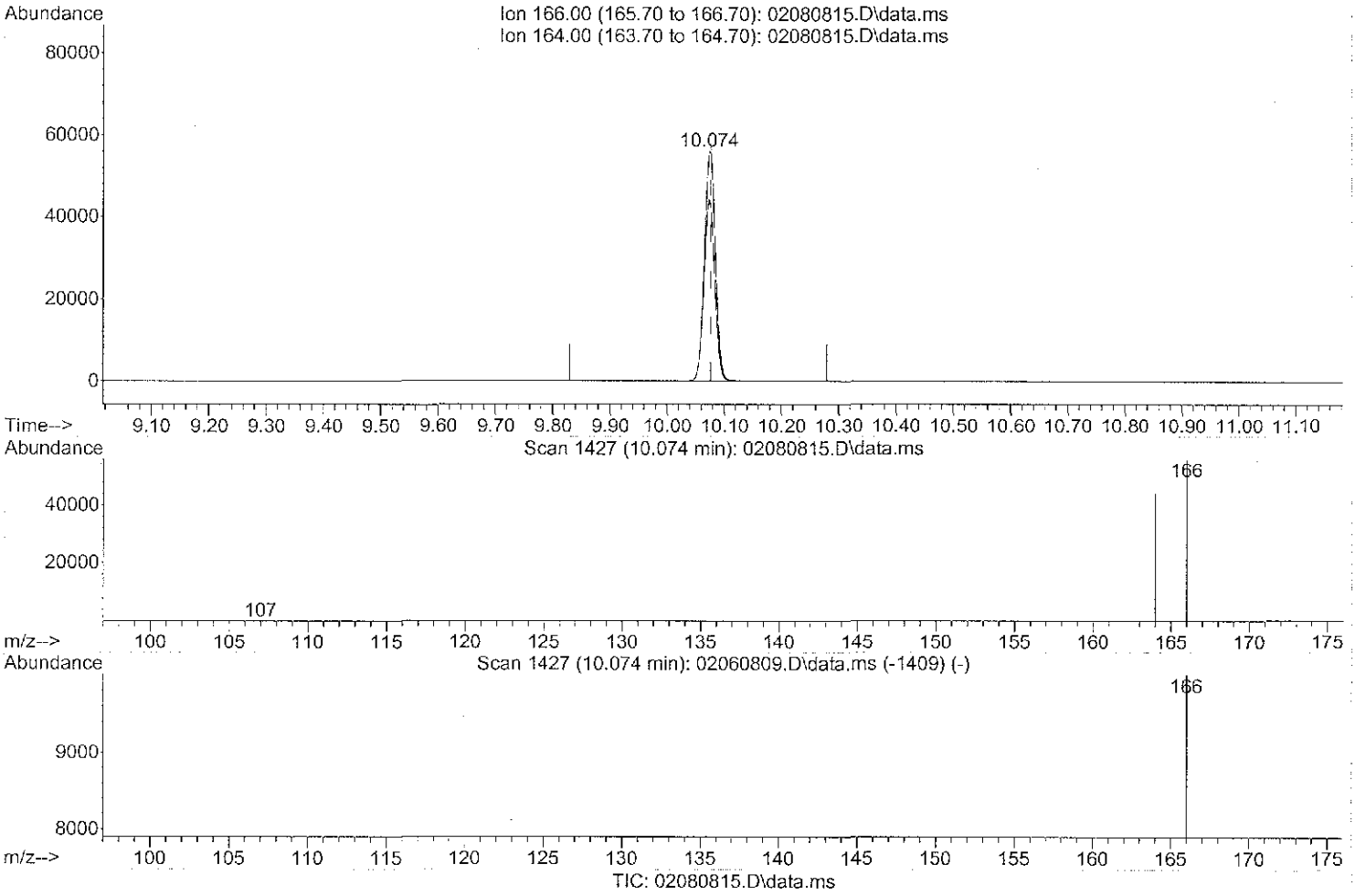
response 1394

Ion	Exp%	Act%
96.00	100	100
98.00	65.70	63.92
61.00	160.40	180.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080815.D
Acq On : 8 Feb 2008 18:34
Operator : LM
Sample : P2800247-007 (1000ml)
Misc : Alaska VS2-CE-12008 (1.1,3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 12 11:07:31 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



(29) Tetrachloroethene (T)

10.074min (-0.003) 1433.50pg

response 73858

Ion	Exp%	Act%
166.00	100	100
164.00	78.40	78.34
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Alaska Resources & Environmental Services LLC**
Client Sample ID: **Method Blank**
Client Project ID: **Bentley Mall**

CAS Project ID: P2800247
CAS Sample ID: P080208-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Liliana Marghitoiu
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/8/08
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
79-00-5	1,1,2-Trichloroethane	ND	0.025	ND	0.0046	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	

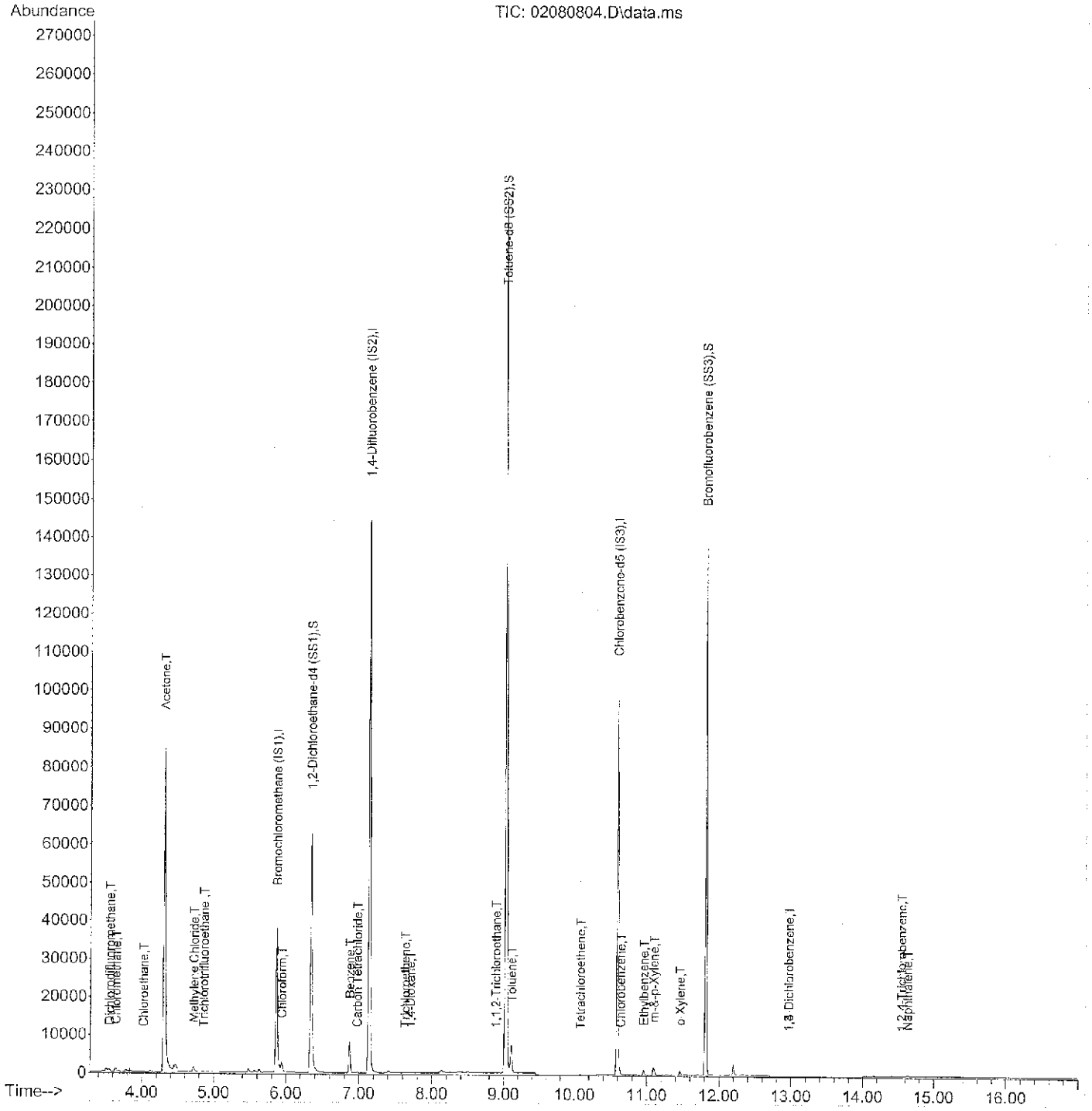
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 2/15/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080804.D
Acq On : 8 Feb 2008 10:39
Operator : LM
Sample : CAS CAN/FC/AVG QC (1000ml)
Misc : AC00959/FC00618/AVG00680
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:18:35 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080804.D
Acq On : 8 Feb 2008 10:39
Operator : LM
Sample : CAS CAN/FC/AVG QC (1000ml)
Misc : AC00959/FC00618/AVG00680
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:18:35 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.87	130	37608	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	180353	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	90365	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	69205	976.20	pg		0.00
Spiked Amount 1000.000			Recovery =	97.62%			
26) Toluene-d8 (SS2)	9.03	98	196425	990.85	pg		0.00
Spiked Amount 1000.000			Recovery =	99.09%			
36) Bromofluorobenzene (SS3)	11.82	174	64578	974.20	pg		0.00
Spiked Amount 1000.000			Recovery =	97.42%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.55	85	531	5.14	pg		99
3) Chloromethane	3.64	52	385	11.03	pg		90
4) Vinyl Chloride	3.75	62	34	N.D.			
5) Chloroethane	4.02	64	146	3.22	pg		96
6) Acetone	4.31	58	40402	286.90	pg	#	90
7) 1,1-Dichloroethene	4.66	96	16	N.D.			
8) Methylene Chloride	4.72	84	658	12.64	pg		93
9) Trichlorotrifluoroethane	4.86	151	72	1.72	pg		89
10) trans-1,2-Dichloroethene	5.20	96	11	N.D.			
11) 1,1-Dichloroethane	5.26	63	8	N.D.			
12) Methyl tert-Butyl Ether	5.38	73	39	N.D.			
13) cis-1,2-Dichloroethene	5.78	96	6	N.D.			
14) Chloroform	5.94	83	1746	23.45	pg		100
16) 1,2-Dichloroethane	6.41	62	27	N.D.			
17) 1,1,1-Trichloroethane	6.57	97	36	N.D.			
18) Benzene	6.87	78	9395	37.47	pg		100
19) Carbon Tetrachloride	6.98	117	162	2.72	pg		96
21) 1,2-Dichloropropane	7.59	63	3	N.D.			
22) Trichloroethene	7.63	130	85	1.62	pg		90
23) 1,4-Dioxane	7.71	88	96	2.40	pg	#	58
24) cis-1,3-Dichloropropene	8.31	75	5	N.D.			
25) 1,1,2-Trichloroethane	8.89	83	24	0.56	pg	#	32
27) Toluene	9.11	91	5768	25.35	pg		99
28) 1,2-Dibromoethane	9.70	107	4	N.D.			
29) Tetrachloroethene	10.08	166	165	3.18	pg		93
31) Chlorobenzene	10.64	112	70	0.52	pg		97
32) Ethylbenzene	10.96	91	1082	4.48	pg		97
33) m-&-p-Xylene	11.10	91	2323	14.37	pg		97
34) o-Xylene	11.47	91	888	5.23	pg		98
35) 1,1,2,2-Tetrachloroethane	11.37	83	10	N.D.			

51

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060806.D
Acq On : 6 Feb 2008 11:28
Operator : LM
Sample : 25pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290801
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:34:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:35 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	37606	1000.000	pg		-0.01
20) 1,4-Difluorobenzene (IS2)	7.14	114	178434	1000.000	pg		-0.01
30) Chlorobenzene-d5 (IS3)	10.60	82	89972	1000.000	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	71580	1009.752	pg		-0.01
Spiked Amount 1000.000			Recovery = 100.97%				
26) Toluene-d8 (SS2)	9.03	98	196430	1001.527	pg		0.00
Spiked Amount 1000.000			Recovery = 100.15%				
36) Bromofluorobenzene (SS3)	11.81	174	65566	993.422	pg		0.00
Spiked Amount 1000.000			Recovery = 99.34%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.55	85	2741	26.554	pg		98
3) Chloromethane	3.63	52	965	27.645	pg		95
4) Vinyl Chloride	3.74	62	2308m	25.603	pg		
5) Chloroethane	4.01	64	1179	26.008	pg		97
6) Acetone	4.31	58	18432	278.361	pg	#	77
7) 1,1-Dichloroethene	4.66	96	1249	27.355	pg	#	88
8) Methylene Chloride	4.72	84	3512	67.495	pg		96
9) Trichlorotrifluoroethane	4.85	151	1274	30.460	pg		98
10) trans-1,2-Dichloroethene	5.20	96	1338	26.599	pg		94
11) 1,1-Dichloroethane	5.31	63	2335	25.966	pg		100
12) Methyl tert-Butyl Ether	5.36	73	3486	27.087	pg		99
13) cis-1,2-Dichloroethene	5.77	96	1366	26.652	pg		96
14) Chloroform	5.94	83	2834	38.057	pg		98
16) 1,2-Dichloroethane	6.41	62	1963	27.803	pg		98
17) 1,1,1-Trichloroethane	6.57	97	1959	26.280	pg		100
18) Benzene	6.87	78	15477	61.729	pg		99
19) Carbon Tetrachloride	6.98	117	1362	22.895	pg		97
21) 1,2-Dichloropropane	7.47	63	1496	26.722	pg		96
22) Trichloroethene	7.64	130	1503	28.936	pg		97
23) 1,4-Dioxane	7.68	88	1338	33.678	pg	#	73
24) cis-1,3-Dichloropropene	8.32	75	2004	25.171	pg		96
25) 1,1,2-Trichloroethane	8.88	83	1200	28.334	pg		94
27) Toluene	9.11	91	6560	29.139	pg		100
28) 1,2-Dibromoethane	9.67	107	1442	27.495	pg		99
29) Tetrachloroethene	10.08	166	1357	26.394	pg		100
31) Chlorobenzene	10.64	112	3635	26.924	pg		97
32) Ethylbenzene	10.96	91	6352	26.395	pg		99
33) m-&-p-Xylene	11.11	91	9819	60.998	pg		98
34) o-Xylene	11.46	91	4917	29.090	pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	2128	29.629	pg		96

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060806.D
Acq On : 6 Feb 2008 11:28
Operator : LM
Sample : 25pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290801
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:34:54 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:35 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	2965	26.262	pg	99
38) 1,4-Dichlorobenzene	12.97	146	3019	27.426	pg	99
39) 1,2-Dichlorobenzene	13.23	146	2879	27.367	pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	2625	36.828	pg	99
41) Naphthalene	14.63	128	5706	33.321	pg	98
42) Hexachlorobutadiene	14.93	225	1388	34.808	pg	100

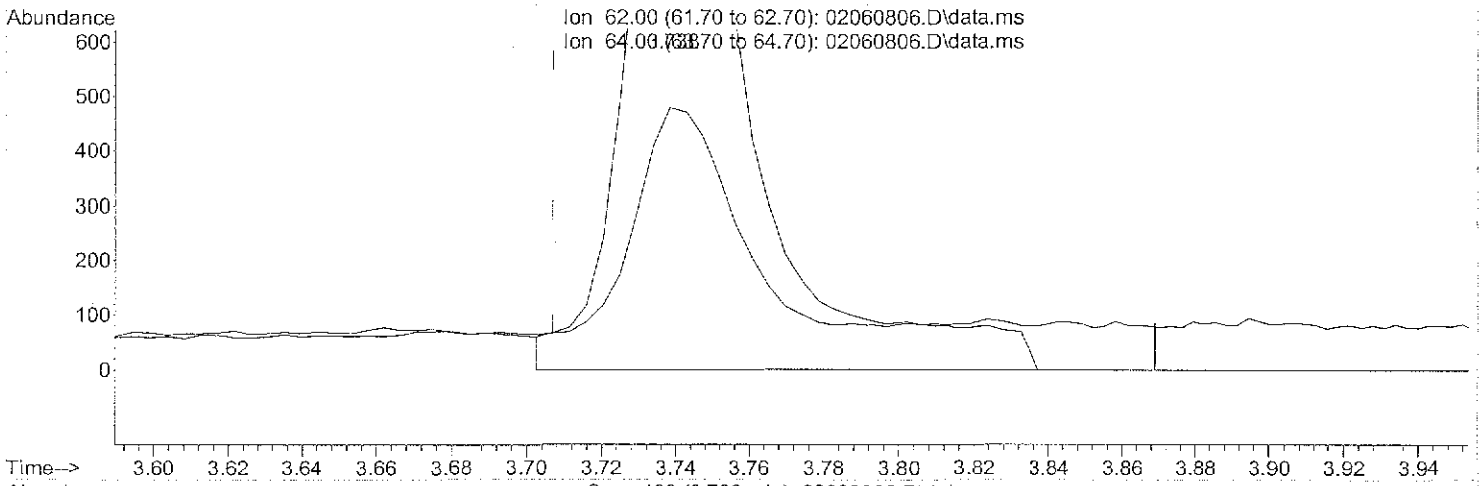
(#) = qualifier out of range (m) = manual integration (+) = signals summed

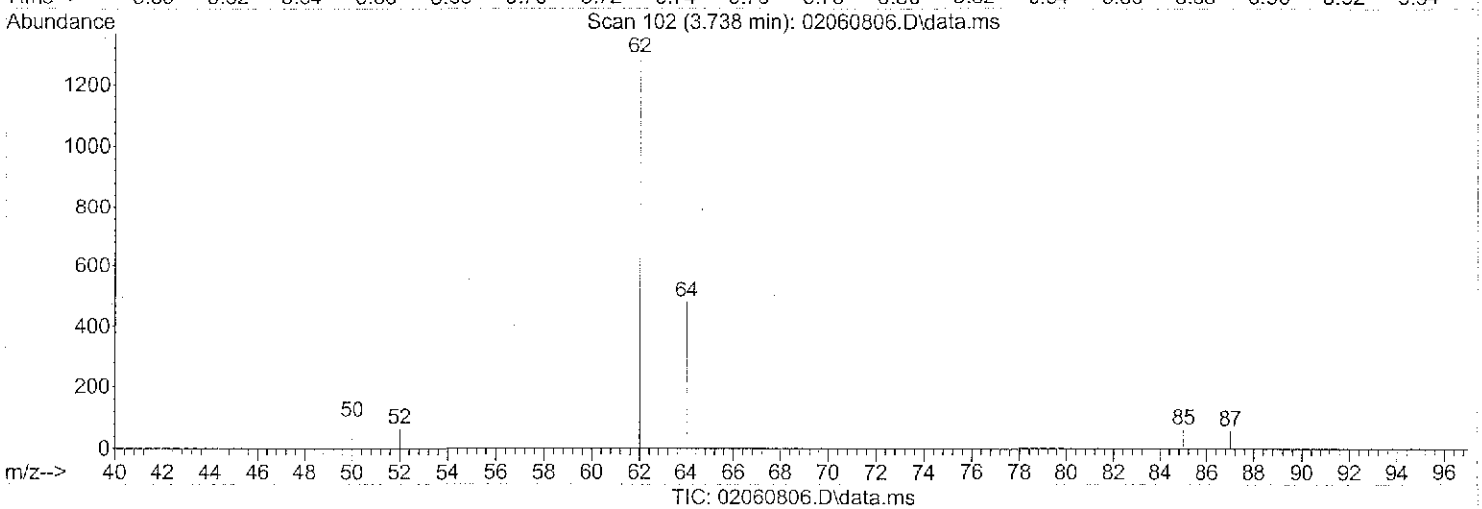
2/7/08

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060806.D
Acq On : 6 Feb 2008 11:28
Operator : LM
Sample : 25pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290801
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:33:56 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:35 2008
Response via : Initial Calibration





TIC: 02060806.D\data.ms

(4) Vinyl Chloride (T)

3.738min (+0.031) 31.05pg

response 2799

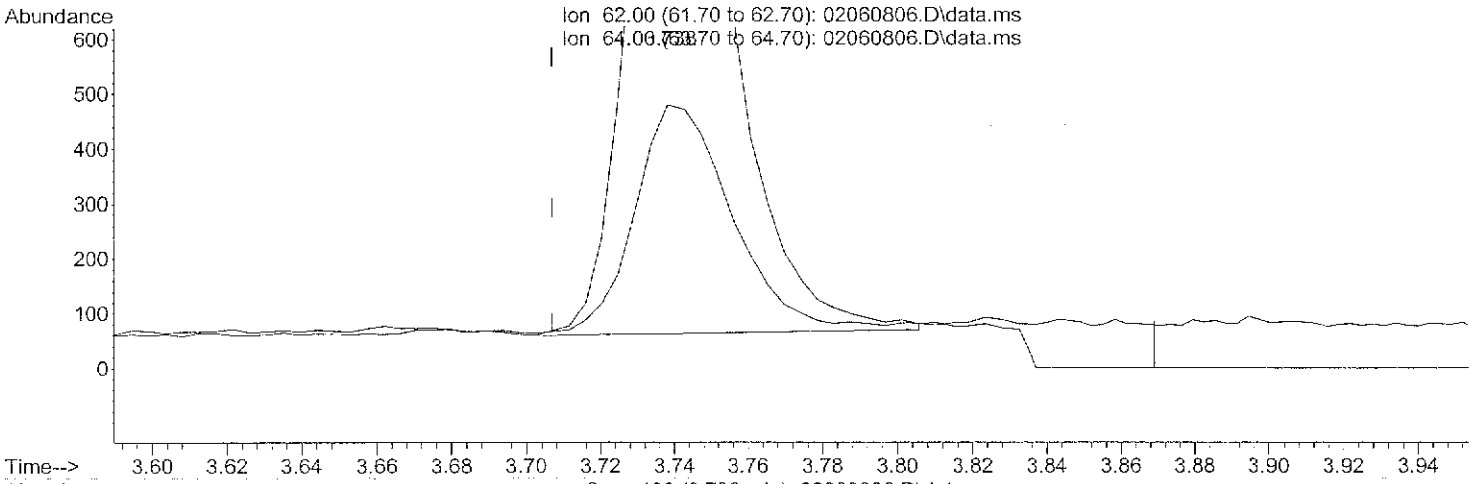
Ion	Exp%	Act%
62.00	100	100
64.00	30.70	27.37
0.00	0.00	0.00
0.00	0.00	0.00

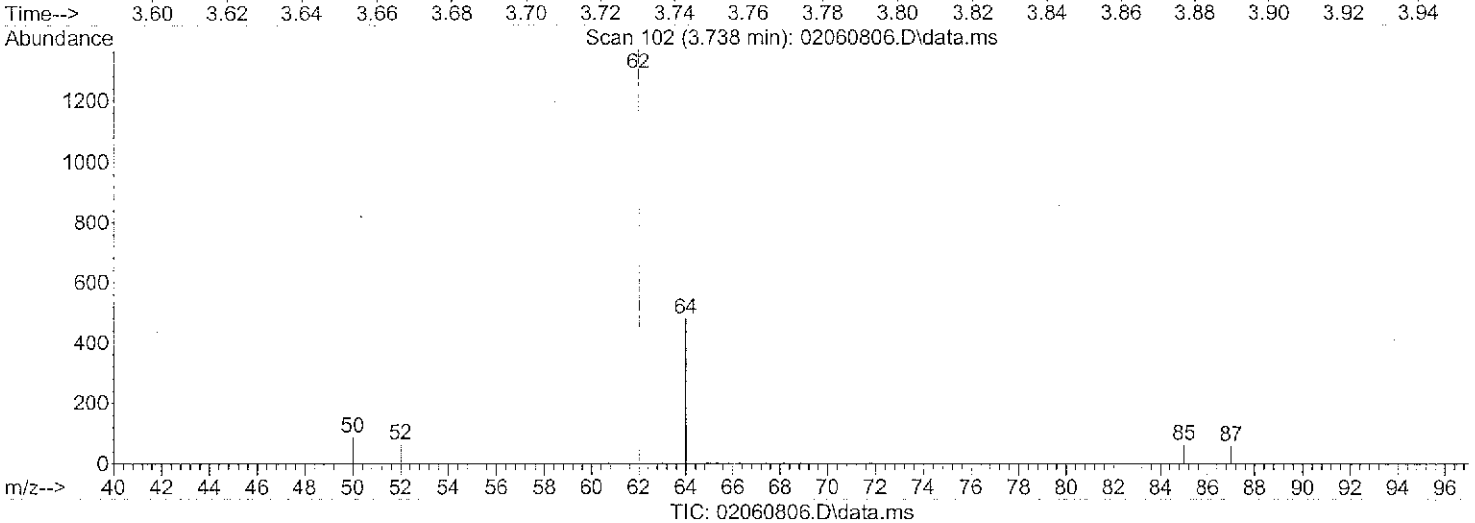
Base line overtailing and adding extra area
on 2/7/08

Quantitation Report (Qedit)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060806.D
Acq On : 6 Feb 2008 11:28
Operator : LM
Sample : 25pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290801
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:33:56 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:35 2008
Response via : Initial Calibration





TIC: 02060806.D\data.ms

(4) Vinyl Chloride (T)

3.738min (+0.031) 25.60pg m

response 2308

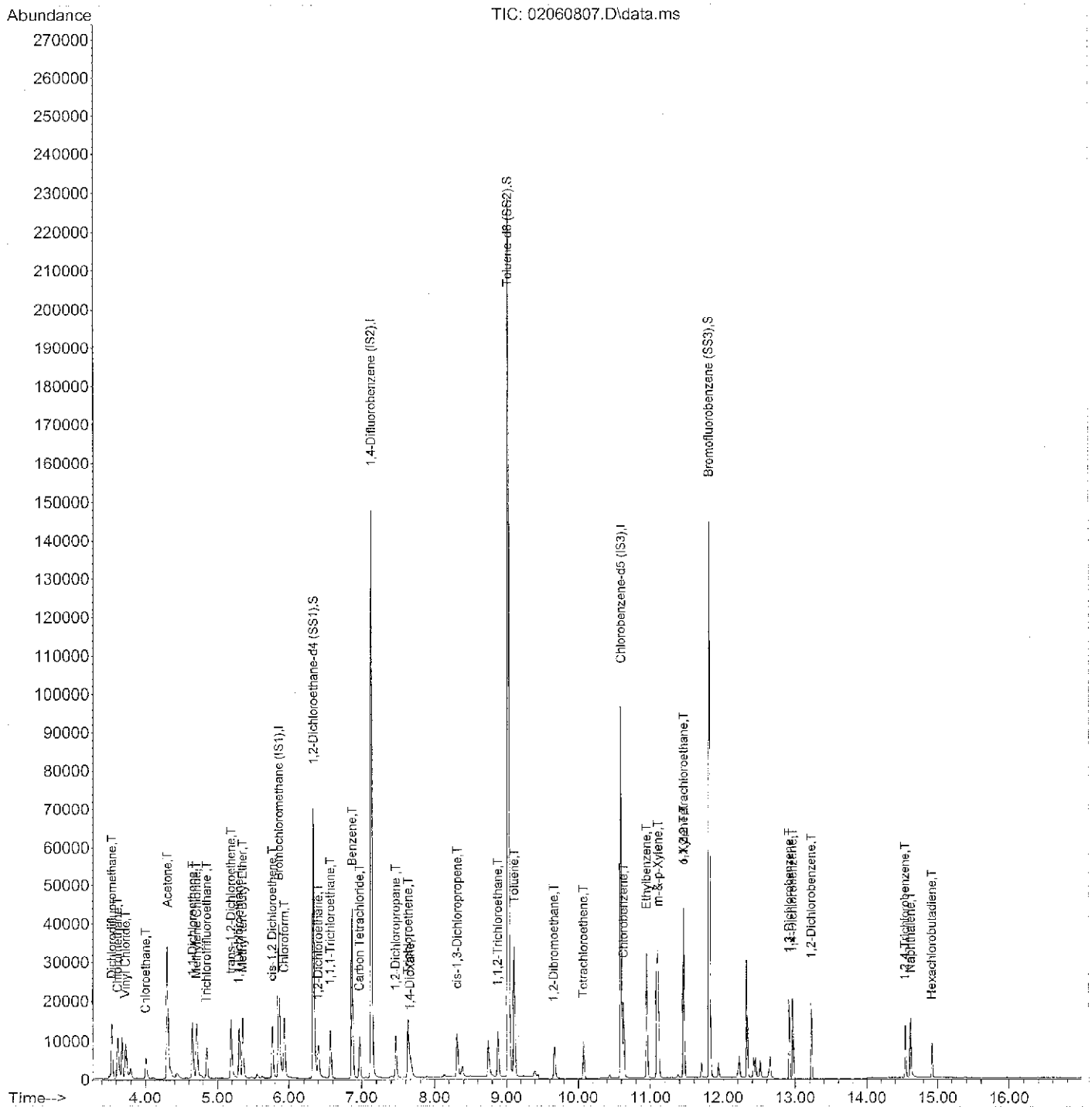
Ion	Exp%	Act%
62.00	100	100
64.00	30.70	33.19
0.00	0.00	0.00
0.00	0.00	0.00

Remove tailing by changing Base Line
LM 2/7/08
2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060807.D
Acq On : 6 Feb 2008 11:56
Operator : LM
Sample : 100pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:26:11 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 18:11:00 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060807.D
Acq On : 6 Feb 2008 11:56
Operator : LM
Sample : 100pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:26:11 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 18:11:00 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38114	1000.000	pg		-0.01
20) 1,4-Difluorobenzene (IS2)	7.14	114	177587	1000.000	pg		-0.01
30) Chlorobenzene-d5 (IS3)	10.60	82	90349	1000.000	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	74307	1034.226	pg		-0.01
Spiked Amount 1000.000			Recovery = 103.42%				
26) Toluene-d8 (SS2)	9.03	98	196215	1005.202	pg		0.00
Spiked Amount 1000.000			Recovery = 100.52%				
36) Bromofluorobenzene (SS3)	11.81	174	66313	1000.548	pg		0.00
Spiked Amount 1000.000			Recovery = 100.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.55	85	13899	132.853	pg		99
3) Chloromethane	3.63	52	4470	126.161	pg		94
4) Vinyl Chloride	3.73	62	12288	134.496	pg		100
5) Chloroethane	4.01	64	5981	130.181	pg		97
6) Acetone	4.31	58	14991	223.378	pg	#	83
7) 1,1-Dichloroethene	4.66	96	6501	140.494	pg		89
8) Methylene Chloride	4.72	84	7310	138.613	pg		92
9) Trichlorotrifluoroethane	4.85	151	5912	139.466	pg		98
10) trans-1,2-Dichloroethene	5.19	96	6749	132.379	pg		99
11) 1,1-Dichloroethane	5.30	63	12766	140.071	pg		99
12) Methyl tert-Butyl Ether	5.35	73	17967	137.857	pg		99
13) cis-1,2-Dichloroethene	5.77	96	6990	134.562	pg		97
14) Chloroform	5.94	83	12762	169.094	pg		97
16) 1,2-Dichloroethane	6.41	62	9513	132.930	pg		99
17) 1,1,1-Trichloroethane	6.57	97	10034	132.823	pg		99
18) Benzene	6.87	78	50882	200.236	pg		100
19) Carbon Tetrachloride	6.98	117	7784	129.106	pg		100
21) 1,2-Dichloropropane	7.47	63	7412	133.028	pg		96
22) Trichloroethene	7.64	130	7504	145.157	pg		100
23) 1,4-Dioxane	7.66	88	5177	130.927	pg	#	66
24) cis-1,3-Dichloropropene	8.32	75	9925	125.256	pg		98
25) 1,1,2-Trichloroethane	8.88	83	5538	131.385	pg		97
27) Toluene	9.11	91	28534	127.352	pg		100
28) 1,2-Dibromoethane	9.67	107	6782	129.931	pg		99
29) Tetrachloroethene	10.08	166	6870	134.258	pg		99
31) Chlorobenzene	10.64	112	18101	133.510	pg		99
32) Ethylbenzene	10.95	91	29816	123.381	pg		98
33) m-&-p-Xylene	11.11	91	47005	290.787	pg	#	65
34) o-Xylene	11.46	91	23495	138.423	pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	9849	136.559	pg		96

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060807.D
Acq On : 6 Feb 2008 11:56
Operator : LM
Sample : 100pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:26:11 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 18:11:00 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	13750	121.278	pg	100
38) 1,4-Dichlorobenzene	12.97	146	13786	124.717	pg	99
39) 1,2-Dichlorobenzene	13.23	146	12856	121.695	pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	9322	130.238	pg	98
41) Naphthalene	14.63	128	17938	104.313	pg	99
42) Hexachlorobutadiene	14.93	225	5201	129.885	pg	99

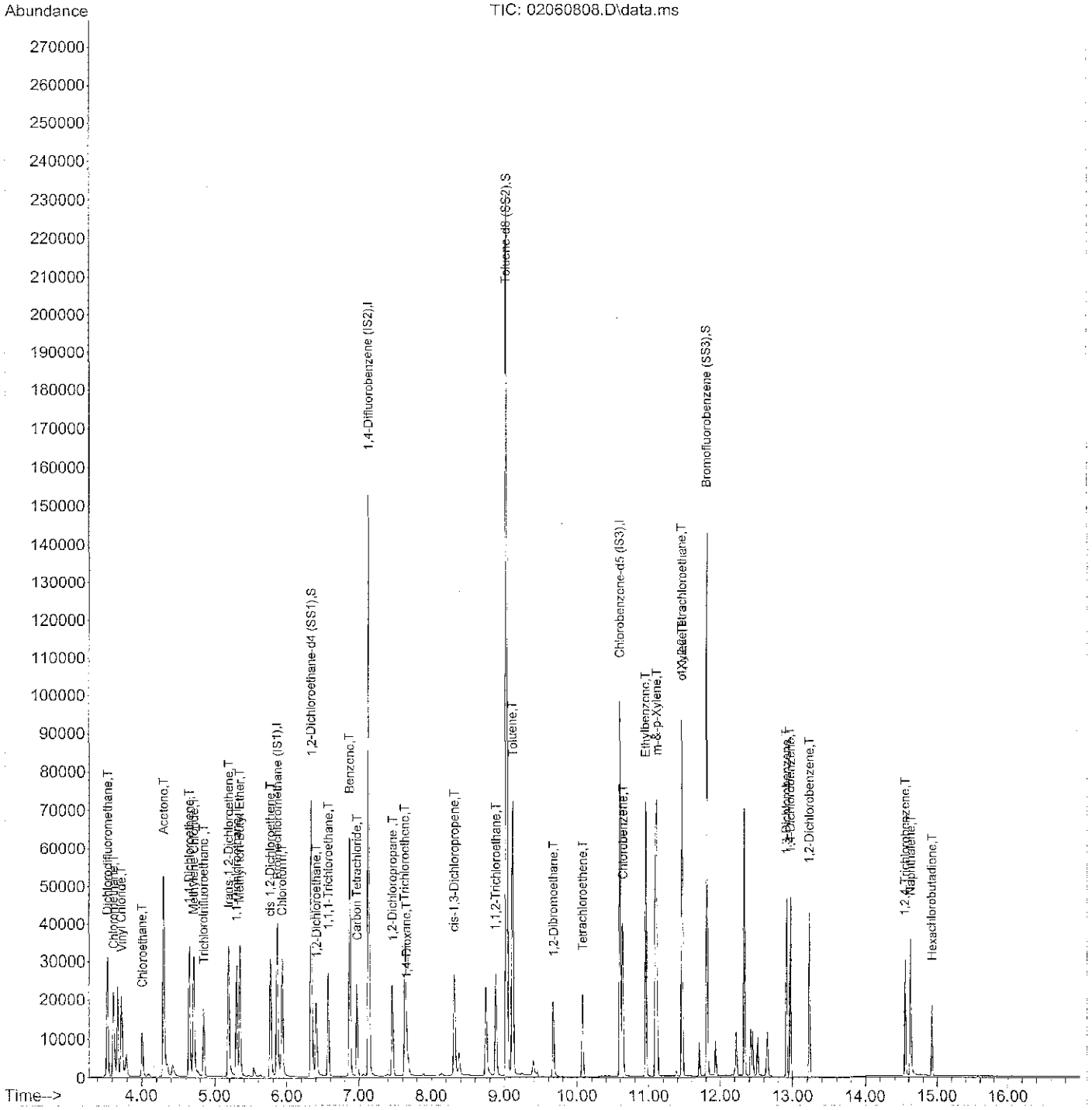
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060808.D
Acq On : 6 Feb 2008 12:25
Operator : LM
Sample : 250pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:27:56 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:27:28 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060808.D
Acq On : 6 Feb 2008 12:25
Operator : LM
Sample : 250pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:27:56 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:27:28 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	37960	1000.000	pg		-0.01
20) 1,4-Difluorobenzene (IS2)	7.14	114	183376	1000.000	pg		-0.01
30) Chlorobenzene-d5 (IS3)	10.60	82	89580	1000.000	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	74181	1036.661	pg		-0.01
Spiked Amount 1000.000			Recovery = 103.67%				
26) Toluene-d8 (SS2)	9.03	98	200927	996.846	pg		0.00
Spiked Amount 1000.000			Recovery = 99.69%				
36) Bromofluorobenzene (SS3)	11.82	174	65958	1003.735	pg		0.00
Spiked Amount 1000.000			Recovery = 100.37%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.54	85	29301	281.208	pg		99
3) Chloromethane	3.62	52	8962	254.079	pg		95
4) Vinyl Chloride	3.73	62	25716	282.611	pg		100
5) Chloroethane	4.01	64	12935	282.682	pg		98
6) Acetone	4.30	58	21809	326.290	pg	#	86
7) 1,1-Dichloroethene	4.65	96	14067	305.238	pg	#	88
8) Methylene Chloride	4.71	84	15788	300.589	pg		92
9) Trichlorotrifluoroethane	4.85	151	12818	303.609	pg		97
10) trans-1,2-Dichloroethene	5.19	96	14855	292.557	pg		99
11) 1,1-Dichloroethane	5.30	63	27375	301.582	pg		99
12) Methyl tert-Butyl Ether	5.34	73	38041	292.955	pg		99
13) cis-1,2-Dichloroethene	5.77	96	15514	299.867	pg		98
14) Chloroform	5.94	83	26420	351.480	pg		97
16) 1,2-Dichloroethane	6.41	62	21055	295.422	pg		99
17) 1,1,1-Trichloroethane	6.57	97	21991	292.274	pg		99
18) Benzene	6.87	78	72908	288.079	pg		100
19) Carbon Tetrachloride	6.97	117	16888	281.242	pg		99
21) 1,2-Dichloropropane	7.47	63	16695	290.177	pg		98
22) Trichloroethene	7.63	130	16059	300.838	pg		98
23) 1,4-Dioxane	7.66	88	11039	270.364	pg	#	66
24) cis-1,3-Dichloropropene	8.31	75	22010	269.003	pg		98
25) 1,1,2-Trichloroethane	8.88	83	12217	280.690	pg		97
27) Toluene	9.11	91	62622	270.670	pg		100
28) 1,2-Dibromoethane	9.67	107	15056	279.341	pg		99
29) Tetrachloroethene	10.08	166	15327	290.075	pg		100
31) Chlorobenzene	10.64	112	38947	289.733	pg		99
32) Ethylbenzene	10.96	91	65548	273.571	pg		99
33) m-&-p-Xylene	11.11	91	103890	648.213	pg		98
34) o-Xylene	11.47	91	52019	309.107	pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	22556	315.431	pg		96

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060808.D
Acq On : 6 Feb 2008 12:25
Operator : LM
Sample : 250pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:27:56 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:27:28 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	30551	271.780	pg	99
38) 1,4-Dichlorobenzene	12.97	146	30821	281.219	pg	99
39) 1,2-Dichlorobenzene	13.23	146	28656	273.585	pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	20191	284.511	pg	99
41) Naphthalene	14.63	128	39680	232.729	pg	99
42) Hexachlorobutadiene	14.93	225	10630	267.743	pg	99

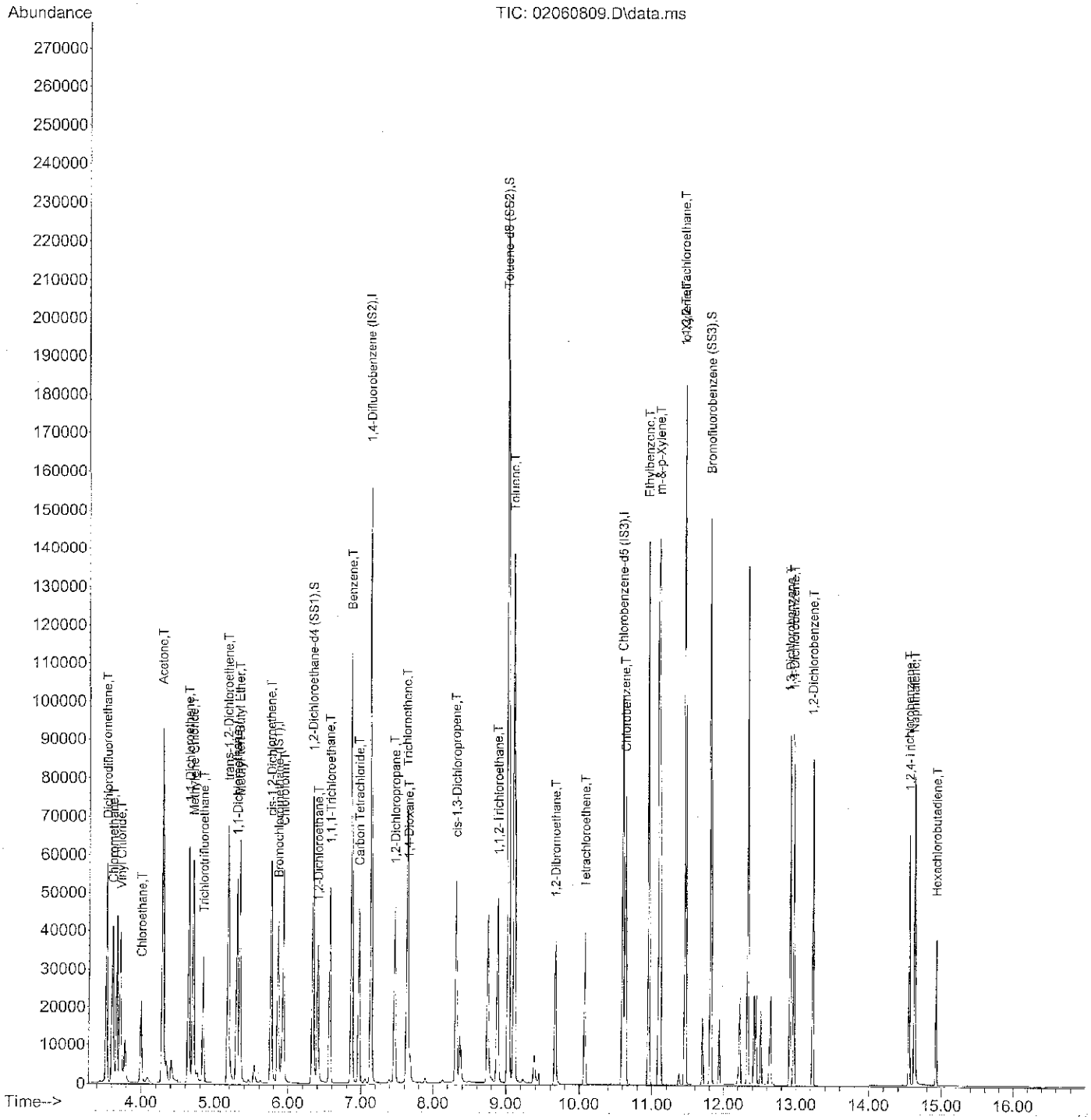
(#) = qualifier out of range (m) = manual integration (+) = signals summed

LM 2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060809.D
Acq On : 6 Feb 2008 12:54
Operator : LM
Sample : 500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 06 15:41:44 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 15:41:29 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060809.D
Acq On : 6 Feb 2008 12:54
Operator : LM
Sample : 500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 06 15:41:44 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 15:41:29 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38685	1000.000	pg	0.00
20) 1,4-Difluorobenzene (IS2)	7.13	114	184083	1000.000	pg	0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	91278	1000.000	pg	0.00
System Monitoring Compounds						
15) 1,2-Dichloroethane-d4 ...	6.34	65	74866	1040.198	pg	0.00
Spiked Amount 1000.000			Recovery = 104.02%			
26) Toluene-d8 (SS2)	9.02	98	202443	1032.835	pg	0.00
Spiked Amount 1000.000			Recovery = 103.28%			
36) Bromofluorobenzene (SS3)	11.81	174	67157	1025.679	pg	0.00
Spiked Amount 1000.000			Recovery = 102.57%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	54656	443.757	pg	99
3) Chloromethane	3.61	52	16791	403.827	pg	95
4) Vinyl Chloride	3.72	62	47953	438.567	pg	99
5) Chloroethane	4.00	64	24368	452.395	pg	100
6) Acetone	4.29	58	36595	140.780	pg	90
7) 1,1-Dichloroethene	4.65	96	26751	483.339	pg	89
8) Methylene Chloride	4.71	84	29938	371.592	pg	94
9) Trichlorotrifluoroethane	4.84	151	24136	482.474	pg	98
10) trans-1,2-Dichloroethene	5.18	96	28625	469.105	pg	98
11) 1,1-Dichloroethane	5.30	63	52054	473.382	pg	99
12) Methyl tert-Butyl Ether	5.33	73	72213	457.112	pg	99
13) cis-1,2-Dichloroethene	5.76	96	29537	473.135	pg	98
14) Chloroform	5.94	83	48921	486.680	pg	97
16) 1,2-Dichloroethane	6.40	62	40319	467.938	pg	99
17) 1,1,1-Trichloroethane	6.57	97	42264	471.248	pg	99
18) Benzene	6.87	78	131450	309.830	pg	100
19) Carbon Tetrachloride	6.97	117	32805	466.031	pg	99
21) 1,2-Dichloropropane	7.46	63	31359	461.474	pg	97
22) Trichloroethene	7.63	130	29858	478.741	pg	98
23) 1,4-Dioxane	7.65	88	20950	424.663	pg	93
24) cis-1,3-Dichloropropene	8.31	75	42295	437.101	pg	98
25) 1,1,2-Trichloroethane	8.88	83	23233	454.843	pg	98
27) Toluene	9.11	91	118624	439.577	pg	100
28) 1,2-Dibromoethane	9.67	107	28959	456.047	pg	100
29) Tetrachloroethene	10.07	166	29110	471.604	pg	100
31) Chlorobenzene	10.63	112	74239	449.974	pg	99
32) Ethylbenzene	10.95	91	126834	431.983	pg	98
33) m-&-p-Xylene	11.11	91	203235	1034.061	pg	98
34) o-Xylene	11.46	91	101930	493.356	pg	98
35) 1,1,2,2-Tetrachloroethane	11.46	83	44104	496.656	pg	96

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060809.D
Acq On : 6 Feb 2008 12:54
Operator : LM
Sample : 500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 06 15:41:44 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Feb 06 15:41:29 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	58405	416.277	pg	100
38) 1,4-Dichlorobenzene	12.97	146	59138	431.044	pg	99
39) 1,2-Dichlorobenzene	13.23	146	55403	421.904	pg	97
40) 1,2,4-Trichlorobenzene	14.55	182	41649	323.353	pg	99
41) Naphthalene	14.62	128	82835	240.585	pg	99
42) Hexachlorobutadiene	14.93	225	22035	271.862	pg	98

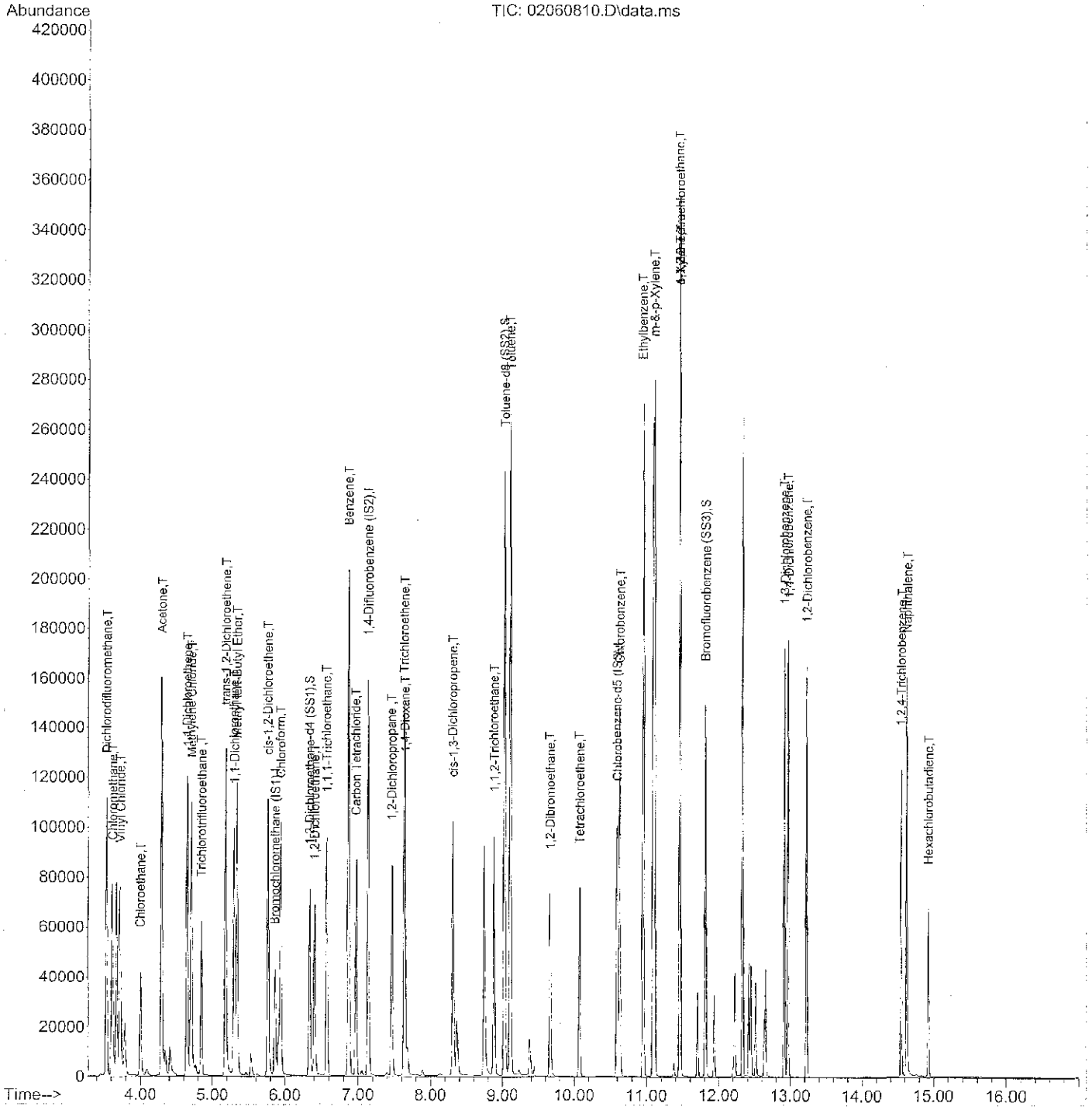
(#) = qualifier out of range (m) = manual integration (+) = signals summed

LM 2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060810.D
Acq On : 6 Feb 2008 13:22
Operator : LM
Sample : 1000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:31:35 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:18 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060810.D
Acq On : 6 Feb 2008 13:22
Operator : LM
Sample : 1000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:31:35 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:18 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	38545	1000.000 pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	187031	1000.000 pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	92060	1000.000 pg		0.00
System Monitoring Compounds						
15) 1,2-Dichloroethane-d4 ...	6.34	65	73938	1017.606 pg		0.00
Spiked Amount 1000.000			Recovery = 101.76%			
26) Toluene-d8 (SS2)	9.03	98	204743	995.928 pg		0.00
Spiked Amount 1000.000			Recovery = 99.59%			
36) Bromofluorobenzene (SS3)	11.82	174	67330	997.012 pg		0.00
Spiked Amount 1000.000			Recovery = 99.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.54	85	103950	982.488 pg		99
3) Chloromethane	3.62	52	32035	895.284 pg		95
4) Vinyl Chloride	3.73	62	91655	991.973 pg		100
5) Chloroethane	4.00	64	46707	1005.244 pg		100
6) Acetone	4.29	58	61426	905.061 pg		93
7) 1,1-Dichloroethene	4.65	96	50549	1080.141 pg	#	88
8) Methylene Chloride	4.71	84	56751	1064.088 pg		94
9) Trichlorotrifluoroethane	4.85	151	45588	1063.414 pg		97
10) trans-1,2-Dichloroethene	5.19	96	53888	1045.172 pg		99
11) 1,1-Dichloroethane	5.30	63	96456	1046.482 pg		99
12) Methyl tert-Butyl Ether	5.34	73	130648	990.445 pg		99
13) cis-1,2-Dichloroethene	5.77	96	55572	1057.837 pg		98
14) Chloroform	5.94	83	89885	1177.642 pg		97
16) 1,2-Dichloroethane	6.41	62	77074	1065.066 pg		99
17) 1,1,1-Trichloroethane	6.57	97	79928	1046.108 pg		99
18) Benzene	6.87	78	236738	921.217 pg		100
19) Carbon Tetrachloride	6.97	117	62594	1026.582 pg		100
21) 1,2-Dichloropropane	7.46	63	60303	1027.646 pg		97
22) Trichloroethene	7.63	130	56687	1041.183 pg		99
23) 1,4-Dioxane	7.65	88	40471	971.833 pg		95
24) cis-1,3-Dichloropropene	8.31	75	82048	983.183 pg		98
25) 1,1,2-Trichloroethane	8.88	83	44614	1004.991 pg		98
27) Toluene	9.11	91	225658	956.297 pg		100
28) 1,2-Dibromoethane	9.67	107	56136	1021.163 pg		100
29) Tetrachloroethene	10.08	166	55257	1025.344 pg		100
31) Chlorobenzene	10.64	112	141942	1027.485 pg		99
32) Ethylbenzene	10.96	91	246511	1001.122 pg		99
33) m-&-p-Xylene	11.11	91	396534	2407.490 pg	#	65
34) o-Xylene	11.47	91	197351	1141.106 pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	87158	1186.013 pg		96

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060810.D
Acq On : 6 Feb 2008 13:22
Operator : LM
Sample : 1000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:31:35 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:18 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	112237	971.557 pg	100
38) 1,4-Dichlorobenzene	12.97	146	114086	1012.910 pg	99
39) 1,2-Dichlorobenzene	13.23	146	105857	983.416 pg	97
40) 1,2,4-Trichlorobenzene	14.55	182	77840	1067.295 pg	99
41) Naphthalene	14.62	128	158077	902.167 pg	99
42) Hexachlorobutadiene	14.93	225	40695	997.393 pg	99

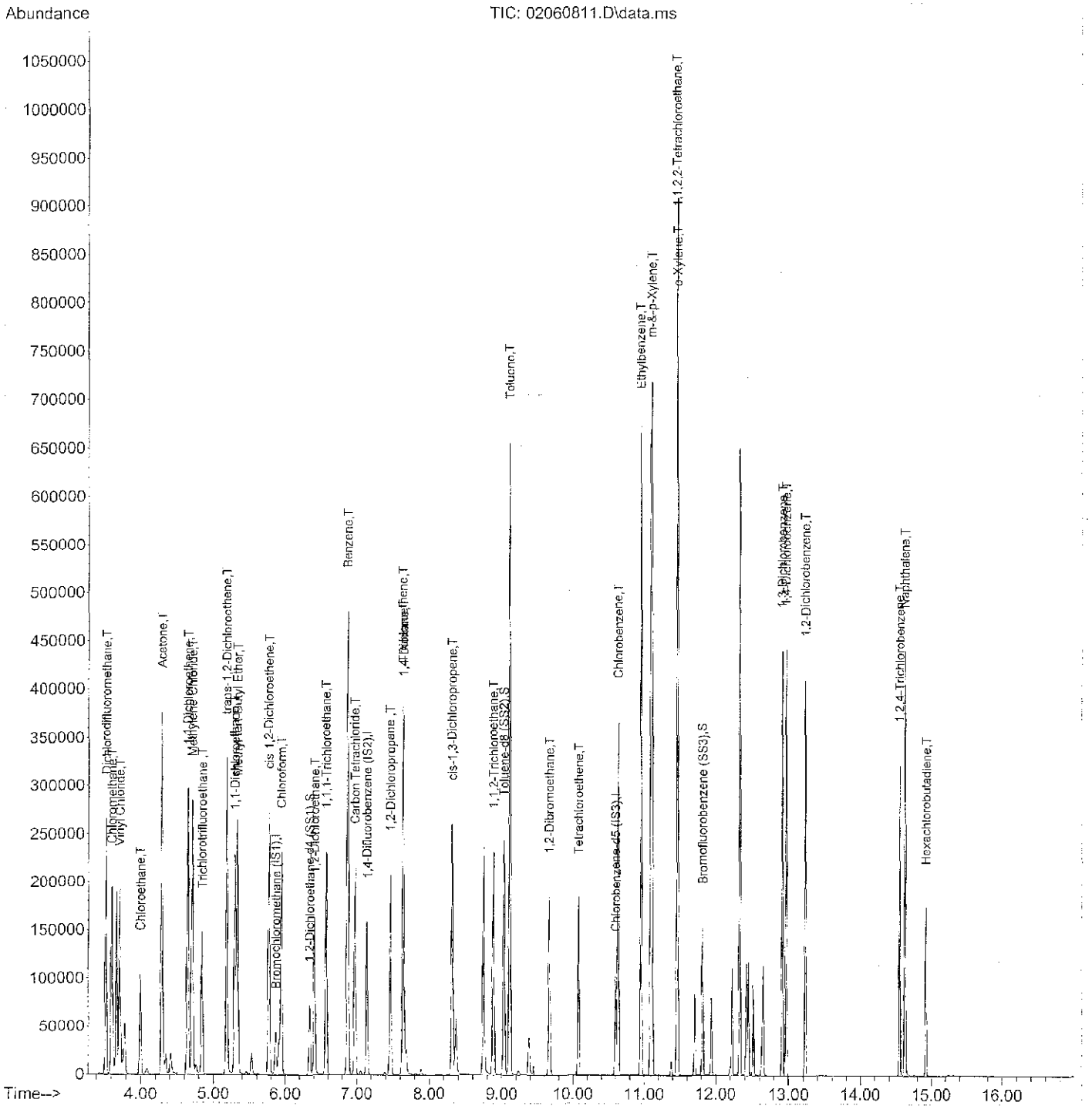
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060811.D
Acq On : 6 Feb 2008 13:50
Operator : LM
Sample : 2500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:32:09 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:57 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060811.D
Acq On : 6 Feb 2008 13:50
Operator : LM
Sample : 2500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:32:09 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:57 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	39004	1000.000 pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	187784	1000.000 pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	91921	1000.000 pg		0.00
System Monitoring Compounds						
15) 1,2-Dichloroethane-d4 ...	6.34	65	70815	963.155 pg		0.00
Spiked Amount 1000.000			Recovery =	96.31%		
26) Toluene-d8 (SS2)	9.03	98	203762	987.182 pg		0.00
Spiked Amount 1000.000			Recovery =	98.72%		
36) Bromofluorobenzene (SS3)	11.81	174	68391	1014.254 pg		0.00
Spiked Amount 1000.000			Recovery =	101.43%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	249516	2330.559 pg		99
3) Chloromethane	3.61	52	77393	2137.667 pg		95
4) Vinyl Chloride	3.72	62	220606	2359.500 pg		98
5) Chloroethane	3.99	64	113485	2413.720 pg		100
6) Acetone	4.29	58	144459	2103.435 pg		94
7) 1,1-Dichloroethene	4.65	96	125220	2644.238 pg	#	88
8) Methylene Chloride	4.71	84	140118	2596.313 pg		95
9) Trichlorotrifluoroethane	4.84	151	110472	2546.613 pg		98
10) trans-1,2-Dichloroethene	5.18	96	133681	2562.266 pg		98
11) 1,1-Dichloroethane	5.30	63	238545	2557.596 pg		99
12) Methyl tert-Butyl Ether	5.33	73	301156	2256.203 pg		100
13) cis-1,2-Dichloroethene	5.77	96	136929	2575.829 pg		98
14) Chloroform	5.94	83	212956	2757.242 pg		98
16) 1,2-Dichloroethane	6.41	62	184722	2522.530 pg		99
17) 1,1,1-Trichloroethane	6.57	97	198567	2568.288 pg		99
18) Benzene	6.87	78	569550	2190.206 pg		100
19) Carbon Tetrachloride	6.97	117	156889	2542.800 pg		99
21) 1,2-Dichloropropane	7.46	63	147893	2510.194 pg		97
22) Trichloroethene	7.63	130	136991	2506.055 pg		99
23) 1,4-Dioxane	7.64	88	100071	2393.377 pg		96
24) cis-1,3-Dichloropropene	8.31	75	203700	2431.153 pg		98
25) 1,1,2-Trichloroethane	8.88	83	109825	2464.037 pg		98
27) Toluene	9.11	91	550905	2325.272 pg		100
28) 1,2-Dibromoethane	9.67	107	139394	2525.532 pg		100
29) Tetrachloroethene	10.08	166	133555	2468.297 pg		100
31) Chlorobenzene	10.64	112	348032	2523.133 pg		99
32) Ethylbenzene	10.95	91	620579	2524.085 pg		98
33) m-&-p-Xylene	11.11	91	1007767	6127.741 pg		98
34) o-Xylene	11.46	91	501872	2906.269 pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	224543	3060.116 pg		96

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060811.D
Acq On : 6 Feb 2008 13:50
Operator : LM
Sample : 2500pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 13:32:09 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:31:57 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	279761	2425.358	pg	100
38) 1,4-Dichlorobenzene	12.97	146	285443	2538.132	pg	99
39) 1,2-Dichlorobenzene	13.23	146	263888	2455.237	pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	198491	2725.703	pg	99
41) Naphthalene	14.62	128	416243	2379.148	pg	99
42) Hexachlorobutadiene	14.93	225	103090	2530.450	pg	99

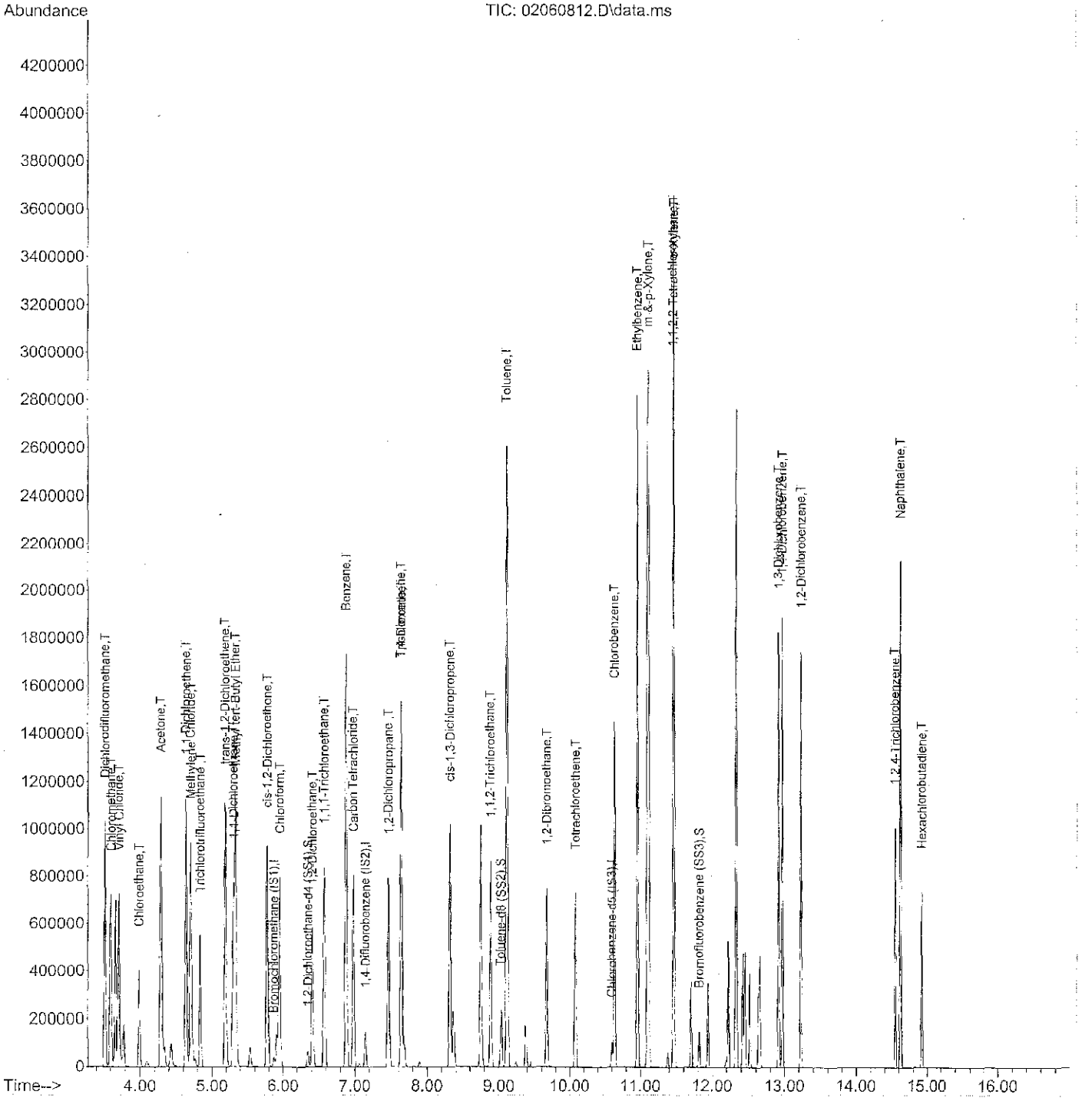
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060812.D
Acq On : 6 Feb 2008 14:17
Operator : LM
Sample : 10000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:32:41 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:32:30 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060812.D
Acq On : 6 Feb 2008 14:17
Operator : LM
Sample : 10000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:32:41 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:32:30 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	5.87	130	38241	1000.000 pg	0.00
20) 1,4-Difluorobenzene (IS2)	7.15	114	189081	1000.000 pg	0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	93698	1000.000 pg	0.00
System Monitoring Compounds					
15) 1,2-Dichloroethane-d4 ...	6.35	65	69534	964.602 pg	0.00
Spiked Amount 1000.000			Recovery =	96.46%	
26) Toluene-d8 (SS2)	9.03	98	209734	1009.145 pg	0.00
Spiked Amount 1000.000			Recovery =	100.91%	
36) Bromofluorobenzene (SS3)	11.82	174	69293	1008.142 pg	0.00
Spiked Amount 1000.000			Recovery =	100.81%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.52	85	947001	9021.775 pg	99
3) Chloromethane	3.60	52	288357	8123.606 pg	97
4) Vinyl Chloride	3.71	62	814474	8885.050 pg	99
5) Chloroethane	3.99	64	438746	9517.908 pg	99
6) Acetone	4.29	58	488398	7253.343 pg	92
7) 1,1-Dichloroethene	4.64	96	480412	10347.146 pg	89
8) Methylene Chloride	4.71	84	547314	10343.787 pg	96
9) Trichlorotrifluoroethane	4.84	151	439331	10329.577 pg	98
10) trans-1,2-Dichloroethene	5.19	96	537468	10507.201 pg	99
11) 1,1-Dichloroethane	5.30	63	959655	10494.377 pg	99
12) Methyl tert-Butyl Ether	5.33	73	1358177	10378.220 pg	100
13) cis-1,2-Dichloroethene	5.78	96	547151	10498.052 pg	98
14) Chloroform	5.95	83	836858	11051.383 pg	98
16) 1,2-Dichloroethane	6.41	62	723282	10074.079 pg	99
17) 1,1,1-Trichloroethane	6.57	97	806562	10640.311 pg	99
18) Benzene	6.88	78	2254612	8843.104 pg	99
19) Carbon Tetrachloride	6.98	117	653566	10804.112 pg	99
21) 1,2-Dichloropropane	7.47	63	594213	10016.421 pg	97
22) Trichloroethene	7.64	130	552478	10037.468 pg	99
23) 1,4-Dioxane	7.64	88	426939	10140.966 pg	100
24) cis-1,3-Dichloropropene	8.32	75	856929	10157.266 pg	98
25) 1,1,2-Trichloroethane	8.88	83	450428	10036.496 pg	99
27) Toluene	9.11	91	2270110	9516.007 pg	100
28) 1,2-Dibromoethane	9.67	107	577478	10390.942 pg	100
29) Tetrachloroethene	10.08	166	547779	10054.334 pg	100
31) Chlorobenzene	10.64	112	1425578	10139.030 pg	99
32) Ethylbenzene	10.96	91	2563366	10228.264 pg	98
33) m-&-p-Xylene	11.11	91	4141946	24707.516 pg	98
34) o-Xylene	11.47	91	2035593	11564.271 pg	98
35) 1,1,2,2-Tetrachloroethane	11.46	83	934786	12497.841 pg	96

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060812.D
Acq On : 6 Feb 2008 14:17
Operator : LM
Sample : 10000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:32:41 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:32:30 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	1172829	9974.882 pg	99
38) 1,4-Dichlorobenzene	12.97	146	1197451	10445.687 pg	99
39) 1,2-Dichlorobenzene	13.23	146	1104601	10082.394 pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	646894	8714.757 pg	99
41) Naphthalene	14.62	128	2039032	11433.599 pg	99
42) Hexachlorobutadiene	14.93	225	421188	10142.423 pg	99

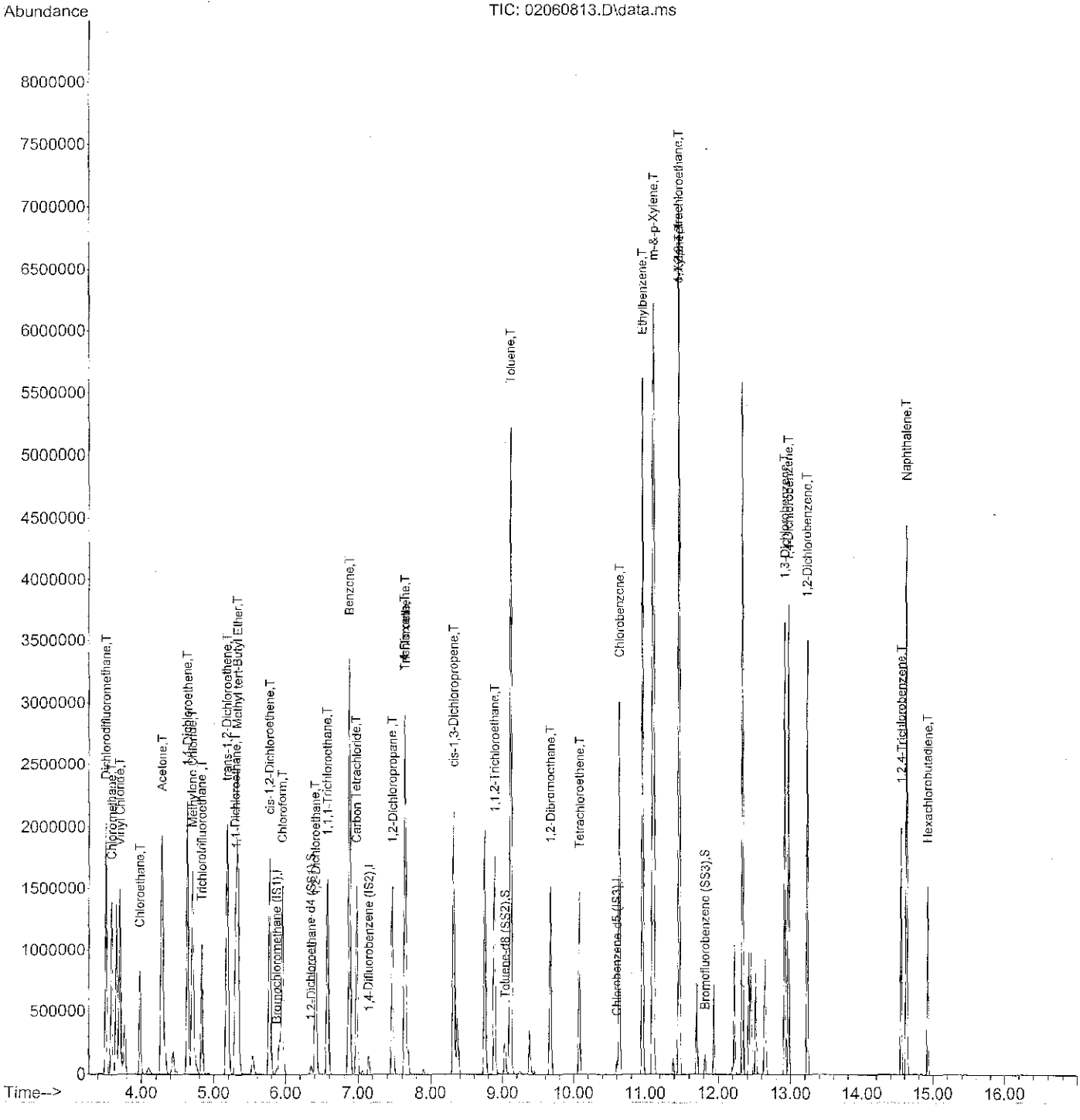
(#) = qualifier out of range (m) = manual integration (+) = signals summed

LM 2/7/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060813.D
Acq On : 6 Feb 2008 14:47
Operator : LM
Sample : 20000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:33:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:09 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060813.D
Acq On : 6 Feb 2008 14:47
Operator : LM
Sample : 20000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:33:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:09 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	5.88	130	41181	1000.000	pg	0.00
20) 1,4-Difluorobenzene (IS2)	7.15	114	196956	1000.000	pg	0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	96797	1000.000	pg	0.00
System Monitoring Compounds						
15) 1,2-Dichloroethane-d4 ...	6.35	65	70684	910.551	pg	0.00
Spiked Amount 1000.000			Recovery = 91.05%			
26) Toluene-d8 (SS2)	9.04	98	218710	1010.257	pg	0.00
Spiked Amount 1000.000			Recovery = 101.03%			
36) Bromofluorobenzene (SS3)	11.82	174	71942	1013.172	pg	0.00
Spiked Amount 1000.000			Recovery = 101.32%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.52	85	1874456	16582.467	pg	99
3) Chloromethane	3.60	52	546979	14309.398	pg	97
4) Vinyl Chloride	3.71	62	1677965	16998.003	pg	99
5) Chloroethane	3.99	64	915278	18437.997	pg	99
6) Acetone	4.29	58	998716	13773.323	pg	93
7) 1,1-Dichloroethene	4.64	96	1018160	20363.625	pg	89
8) Methylene Chloride	4.71	84	1134931	19917.959	pg	99
9) Trichlorotrifluoroethane	4.84	151	843721	18421.368	pg	98
10) trans-1,2-Dichloroethene	5.19	96	1137365	20647.461	pg	96
11) 1,1-Dichloroethane	5.31	63	1982896	20136.028	pg	99
12) Methyl tert-Butyl Ether	5.33	73	3203095	22728.390	pg	100
13) cis-1,2-Dichloroethene	5.78	96	1129339	20121.399	pg	99
14) Chloroform	5.96	83	1702945	20883.238	pg	98
16) 1,2-Dichloroethane	6.42	62	1428713	18478.854	pg	99
17) 1,1,1-Trichloroethane	6.58	97	1667635	20429.133	pg	99
18) Benzene	6.88	78	4636729	16887.953	pg	99
19) Carbon Tetrachloride	6.98	117	1356290	20820.183	pg	99
21) 1,2-Dichloropropane	7.47	63	1223804	19804.367	pg	97
22) Trichloroethene	7.65	130	1136609	19824.350	pg	99
23) 1,4-Dioxane	7.64	88	860878	19630.609	pg	99
24) cis-1,3-Dichloropropene	8.32	75	1778088	20233.170	pg	98
25) 1,1,2-Trichloroethane	8.89	83	918226	19641.968	pg	99
27) Toluene	9.12	91	4684915	18853.337	pg	100
28) 1,2-Dibromoethane	9.67	107	1185578	20479.922	pg	100
29) Tetrachloroethene	10.08	166	1125580	19833.665	pg	100
31) Chlorobenzene	10.64	112	2930107	20172.389	pg	99
32) Ethylbenzene	10.96	91	5282560	20403.476	pg	98
33) m-&-p-Xylene	11.12	91	8568853	49478.414	pg	98
34) o-Xylene	11.47	91	4217765	23194.131	pg	98
35) 1,1,2,2-Tetrachloroethane	11.47	83	1922037	24874.421	pg	96

97

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060813.D
Acq On : 6 Feb 2008 14:47
Operator : LM
Sample : 20000pg TO-15 SIM ICAL STD
Misc : S20-01220801/S20-02040802
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 07 13:33:20 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VCA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:33:09 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	2377971	19577.087	pg	99
38) 1,4-Dichlorobenzene	12.98	146	2404442	20303.084	pg	99
39) 1,2-Dichlorobenzene	13.23	146	2225917	19666.887	pg	96
40) 1,2,4-Trichlorobenzene	14.56	182	1327412	17309.970	pg	98
41) Naphthalene	14.63	128	4231700	22969.007	pg	100
42) Hexachlorobutadiene	14.93	225	867396	20218.622	pg	99

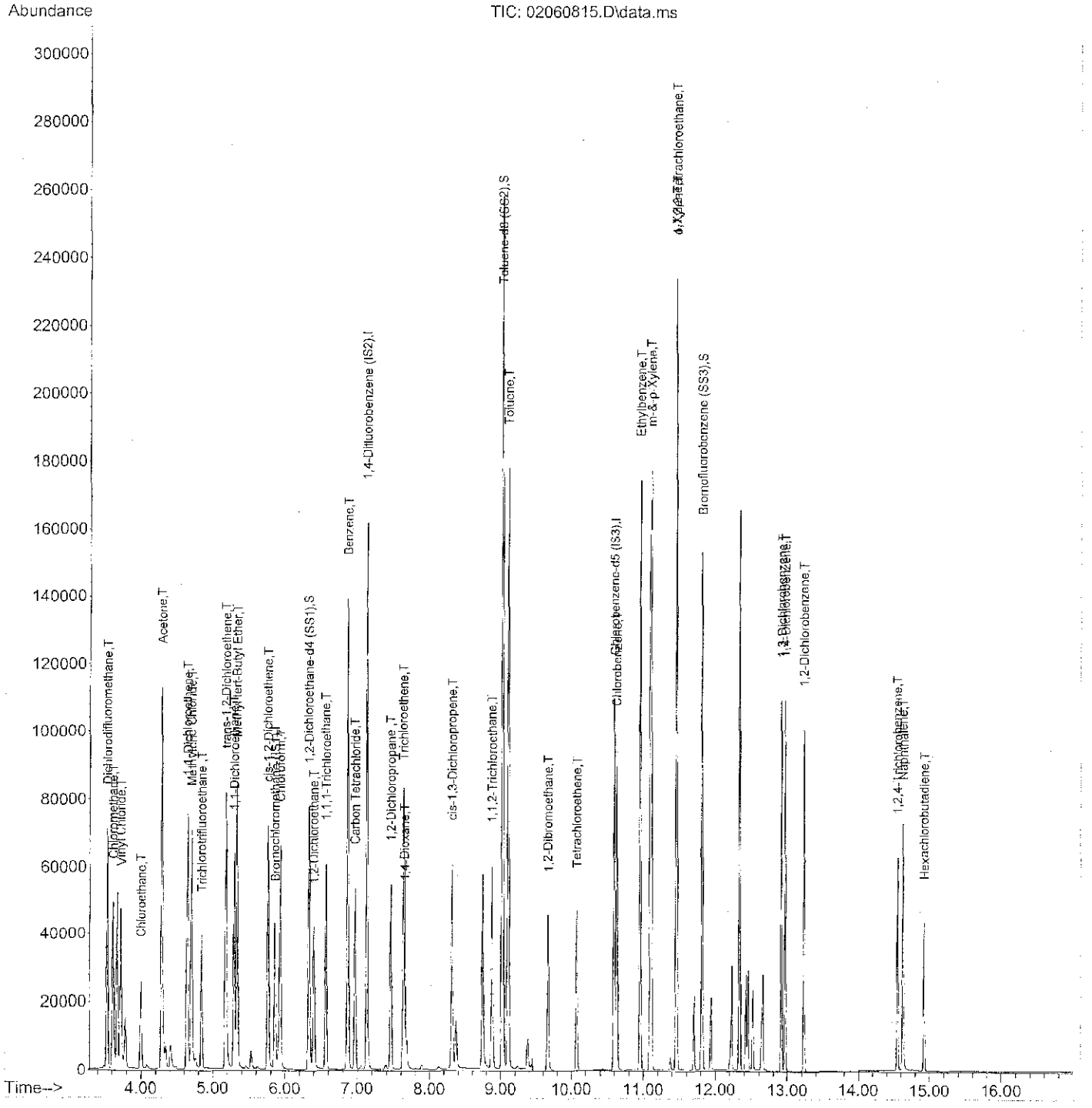
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/7/08

Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060815.D
Acq On : 6 Feb 2008 16:36
Operator : LM
Sample : 500pg TO-15 SIM ICV STD
Misc : S20-01220801/S20-02040804
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 07 13:49:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060815.D
Acq On : 6 Feb 2008 16:36
Operator : LM
Sample : 500pg TO-15 SIM ICV STD
Misc : S20-01220801/S20-02040804
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 07 13:49:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	39780	1000.000 pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.13	114	194419	1000.000 pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	98098	1000.000 pg		0.00
System Monitoring Compounds						
15) 1,2-Dichloroethane-d4 ...	6.33	65	77493	1033.422 pg		0.00
Spiked Amount 1000.000			Recovery = 103.34%			
26) Toluene-d8 (SS2)	9.02	98	213764	1000.295 pg		0.00
Spiked Amount 1000.000			Recovery = 100.03%			
36) Bromofluorobenzene (SS3)	11.82	174	72964	1013.937 pg		0.00
Spiked Amount 1000.000			Recovery = 101.39%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	65081	596.019 pg		99
3) Chloromethane	3.61	52	19875	538.257 pg		95
4) Vinyl Chloride	3.72	62	55803	586.012 pg		99
5) Chloroethane	4.00	64	28280	589.756 pg		99
6) Acetone	4.29	58	44644	299.710 pg	#	87
7) 1,1-Dichloroethene	4.65	96	32165	665.970 pg	#	88
8) Methylene Chloride	4.71	84	36060	655.139 pg		94
9) Trichlorotrifluoroethane	4.84	151	28710	648.916 pg		98
10) trans-1,2-Dichloroethene	5.18	96	34082	640.507 pg		98
11) 1,1-Dichloroethane	5.30	63	62268	654.592 pg		99
12) Methyl tert-Butyl Ether	5.33	73	93724	688.465 pg		99
13) cis-1,2-Dichloroethene	5.76	96	35669	657.895 pg		99
14) Chloroform	5.93	83	58651	744.569 pg		97
16) 1,2-Dichloroethane	6.40	62	47474	635.650 pg		99
17) 1,1,1-Trichloroethane	6.56	97	50142	635.099 pg		99
18) Benzene	6.87	78	158928	599.236 pg		100
19) Carbon Tetrachloride	6.97	117	38277	608.278 pg		99
21) 1,2-Dichloropropane	7.46	63	38368	628.997 pg		97
22) Trichloroethene	7.63	130	35288	623.513 pg		98
23) 1,4-Dioxane	7.65	88	23587	547.420 pg		95
24) cis-1,3-Dichloropropene	8.31	75	51164	589.801 pg		98
25) 1,1,2-Trichloroethane	8.88	83	28232	611.797 pg		98
27) Toluene	9.11	91	144563	589.351 pg		100
28) 1,2-Dibromoethane	9.66	107	35143	614.989 pg		100
29) Tetrachloroethene	10.07	166	34501	615.870 pg		100
31) Chlorobenzene	10.63	112	90202	612.762 pg		99
32) Ethylbenzene	10.96	91	157723	601.114 pg		98
33) m-&-p-Xylene	11.11	91	250093	1424.939 pg		98
34) o-Xylene	11.46	91	125309	679.954 pg		98
35) 1,1,2,2-Tetrachloroethane	11.46	83	54604	697.296 pg		96

100

um 2/7/08

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060815.D
Acq On : 6 Feb 2008 16:36
Operator : LM
Sample : 500pg TO-15 SIM ICV STD
Misc : S20-01220801/S20-02040804
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 07 13:49:18 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	70574	573.308	pg	99
38) 1,4-Dichlorobenzene	12.97	146	71020	591.739	pg	99
39) 1,2-Dichlorobenzene	13.23	146	65521	571.227	pg	97
40) 1,2,4-Trichlorobenzene	14.55	182	40467	520.707	pg	98
41) Naphthalene	14.63	128	76144	407.816	pg	99
42) Hexachlorobutadiene	14.93	225	25074	576.713	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

IM 2/7/08

TO-15/SIM ICV Recovery Summary - MS07

Data File Name: 02060815.D
Data File Path: J:\Ms07\DATA\2008_02\06\
Operator: LM
Instrument Name: MSD7
Sample Name: 500pg TO-15 SIM ICV STD
Misc Info: S20-01220801/S20-02040804
Date Acquired: 2/6/2008 16:36
Acq. Method File: TO15SIM

#	Compound Name	Ret. Time	Amount Spiked (pg)	Amount Found (pg)	Percent Recovery	Lower Limit	Upper Limit	Flag
2)	Dichlorodifluoromethane	3.53	510.00	596.02	116.9	70	130	*
3)	Chloromethane	3.61	490.00	538.26	109.8	70	130	*
4)	Vinyl Chloride	3.72	495.00	586.01	118.4	70	130	*
5)	Chloroethane	4.00	500.00	589.76	118.0	70	130	*
6)	Acetone	4.29	535.00	299.71	56.0	70	130	Fail
7)	1,1-Dichloroethene	4.65	555.00	665.97	120.0	70	130	*
8)	Methylene Chloride	4.71	555.00	655.14	118.0	70	130	*
9)	Trichlorotrifluoroethane	4.84	555.00	648.92	116.9	70	130	*
10)	trans-1,2-Dichloroethene	5.18	530.00	640.51	120.9	70	130	*
11)	1,1-Dichloroethane	5.30	535.00	654.59	122.4	70	130	*
12)	Methyl tert-Butyl Ether	5.33	535.00	688.46	128.7	70	130	*
13)	cis-1,2-Dichloroethene	5.76	540.00	657.90	121.8	70	130	*
14)	Chloroform	5.93	595.00	744.57	125.1	70	130	*
16)	1,2-Dichloroethane	6.40	525.00	635.65	121.1	70	130	*
17)	1,1,1-Trichloroethane	6.56	535.00	635.10	118.7	70	130	*
18)	Benzene	6.87	540.00	599.24	111.0	70	130	*
19)	Carbon Tetrachloride	6.97	520.00	608.28	117.0	70	130	*
21)	1,2-Dichloropropane	7.46	530.00	629.00	118.7	70	130	*
22)	Trichloroethene	7.63	545.00	623.51	114.4	70	130	*
23)	1,4-Dioxane	7.65	550.00	547.42	99.5	70	130	*
24)	cis-1,3-Dichloropropene	8.31	500.00	589.80	118.0	70	130	*
25)	1,1,2-Trichloroethane	8.88	525.00	611.80	116.5	70	130	*
27)	Toluene	9.11	530.00	589.35	111.2	70	130	*
28)	1,2-Dibromoethane	9.66	525.00	614.99	117.1	70	130	*
29)	Tetrachloroethene	10.07	520.00	615.87	118.4	70	130	*
31)	Chlorobenzene	10.63	530.00	612.76	115.6	70	130	*
32)	Ethylbenzene	10.96	525.00	601.11	114.5	70	130	*
33)	m-&-p-Xylene	11.11	1250.00	1424.94	114.0	70	130	*
34)	o-Xylene	11.46	595.00	679.95	114.3	70	130	*
35)	1,1,2,2-Tetrachloroethane	11.46	595.00	697.30	117.2	70	130	*
37)	1,3-Dichlorobenzene	12.92	510.00	573.31	112.4	70	130	*
38)	1,4-Dichlorobenzene	12.97	525.00	591.74	112.7	70	130	*
39)	1,2-Dichlorobenzene	13.23	515.00	571.23	110.9	70	130	*
40)	1,2,4-Trichlorobenzene	14.55	520.00	520.71	100.1	70	130	*
41)	Naphthalene	14.63	525.00	407.82	77.7	70	130	*
42)	Hexachlorobutadiene	14.93	525.00	576.71	109.9	70	130	*

CONTINUING CALIBRATION STANDARDS

Evaluate Continuing Calibration Report

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080803.D
Acq On : 8 Feb 2008 9:52
Operator : LM
Sample : 500pg TO-15 SIM CCV STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:17:47 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane (IS1)	1.000	1.000	0.0	97	0.00
2	T	Dichlorodifluoromethane	2.745	2.617	4.7	93	-0.01
3	T	Chloromethane	0.928	0.827	10.9	95	0.00
4	T	Vinyl Chloride	2.394	2.295	4.1	92	-0.01
5	T	Chloroethane	1.205	1.143	5.1	92	-0.01
6	T	Acetone	3.745	1.787	52.3#	102	-0.02
7	T	1,1-Dichloroethene	1.214	1.155	4.9	91	-0.01
8	T	Methylene Chloride	1.384	1.324	4.3	93	-0.01
9	T	Trichlorotrifluoroethane	1.112	1.046	5.9	93	0.00
10	T	trans-1,2-Dichloroethene	1.338	1.285	4.0	93	-0.01
11	T	1,1-Dichloroethane	2.391	2.326	2.7	93	-0.01
12	T	Methyl tert-Butyl Ether	3.422	3.229	5.6	93	-0.03
13	T	cis-1,2-Dichloroethene	1.363	1.320	3.2	93	0.00
14	T	Chloroform	1.980	1.933	2.4	96	0.00
15	S	1,2-Dichloroethane-d4 (SS1)	1.885	1.953	-3.6	98	0.00
16	T	1,2-Dichloroethane	1.877	1.822	2.9	93	0.00
17	T	1,1,1-Trichloroethane	1.985	1.893	4.6	92	0.00
18	T	Benzene	6.667	6.260	6.1	98	0.00
19	T	Carbon Tetrachloride	1.582	1.520	3.9	93	0.00
20	I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	98	0.00
21	T	1,2-Dichloropropane	0.314	0.297	5.4	94	0.00
22	T	Trichloroethene	0.291	0.275	5.5	95	0.00
23	T	1,4-Dioxane	0.222	0.189	14.9	94	-0.04
24	T	cis-1,3-Dichloropropene	0.446	0.418	6.3	93	0.00
25	T	1,1,2-Trichloroethane	0.237	0.221	6.8	94	0.00
26	S	Toluene-d8 (SS2)	1.099	1.102	-0.3	99	0.00
27	T	Toluene	1.262	1.120	11.3	94	0.00
28	T	1,2-Dibromoethane	0.294	0.276	6.1	94	0.00
29	T	Tetrachloroethene	0.288	0.276	4.2	94	0.00
30	I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	100	0.00
31	T	Chlorobenzene	1.501	1.397	6.9	94	0.00
32	T	Ethylbenzene	2.675	2.440	8.8	95	0.00
33	T	m-&-p-Xylene	1.789	1.632	8.8	94	0.00
34	T	o-Xylene	1.879	1.731	7.9	94	0.00
35	T	1,1,2,2-Tetrachloroethane	0.798	0.727	8.9	92	0.00
36	S	Bromofluorobenzene (SS3)	0.734	0.730	0.5	99	0.00
37	T	1,3-Dichlorobenzene	1.255	1.125	10.4	93	0.00

Evaluate Continuing Calibration Report

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080803.D
Acq On : 8 Feb 2008 9:52
Operator : LM
Sample : 500pg TO-15 SIM CCV STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:17:47 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
38 T	1,4-Dichlorobenzene	1.223	1.095	10.5	93	0.00
39 T	1,2-Dichlorobenzene	1.169	1.040	11.0	92	0.00
40 T	1,2,4-Trichlorobenzene	0.792	0.746	5.8	91	0.00
41 T	Naphthalene	1.903	1.566	17.7	90	0.00
42 T	Hexachlorobutadiene	0.443	0.401	9.5	92	0.00

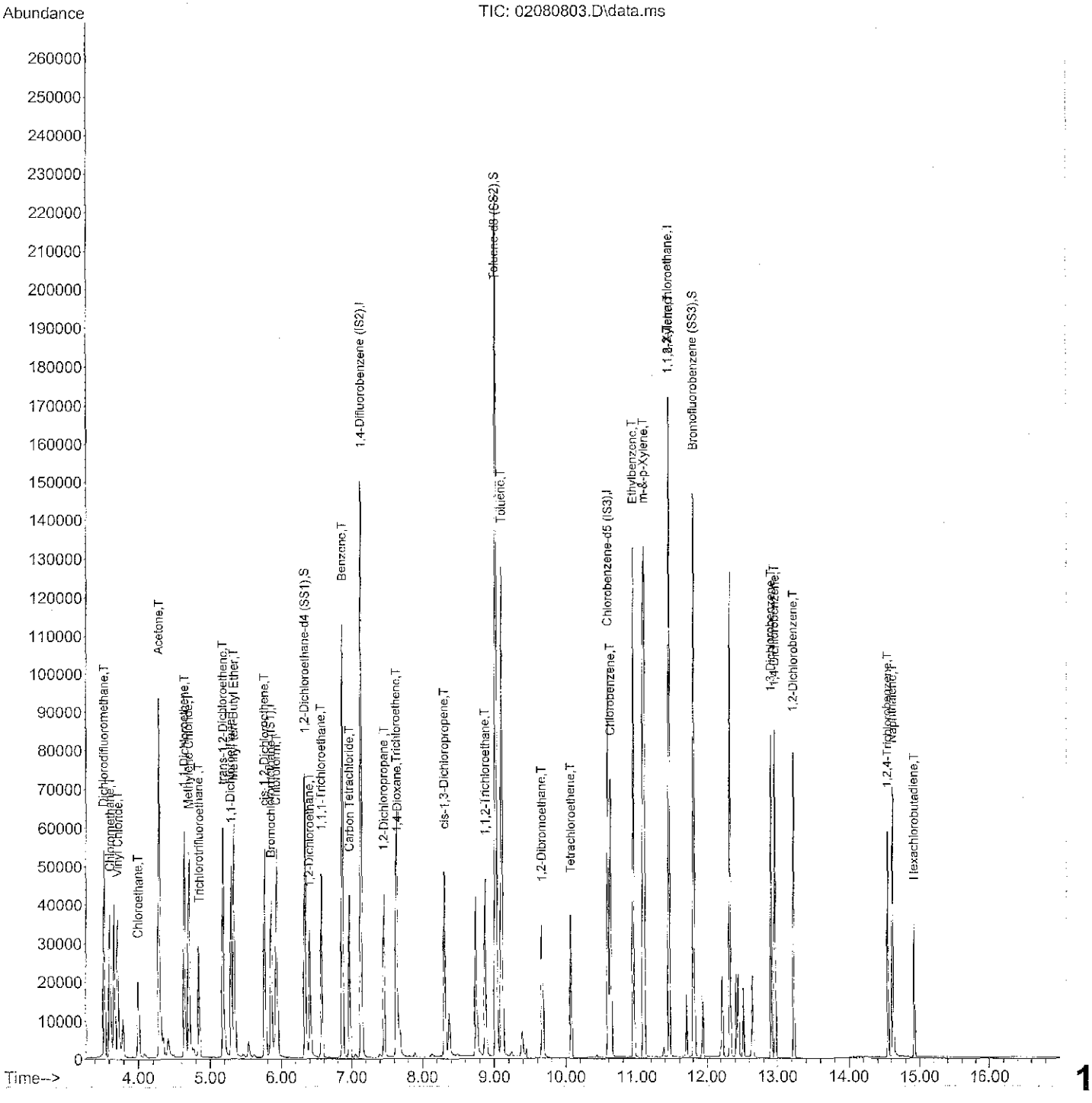
(#) = Out of Range SPCC's out = 0 CCC's out = 0

VM 2/12/08

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080803.D
Acq On : 8 Feb 2008 9:52
Operator : LM
Sample : 500pg TO-15 SIM CCV STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:17:47 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080803.D
Acq On : 8 Feb 2008 9:52
Operator : LM
Sample : 500pg TO-15 SIM CCV STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:17:47 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	5.86	130	37494	1000.00	pg		0.00
20) 1,4-Difluorobenzene (IS2)	7.14	114	181202	1000.00	pg		0.00
30) Chlorobenzene-d5 (IS3)	10.60	82	91038	1000.00	pg		0.00
System Monitoring Compounds							
15) 1,2-Dichloroethane-d4 ...	6.34	65	73233	1036.16	pg		0.00
Spiked Amount 1000.000			Recovery = 103.62%				
26) Toluene-d8 (SS2)	9.02	98	199651	1002.40	pg		0.00
Spiked Amount 1000.000			Recovery = 100.24%				
36) Bromofluorobenzene (SS3)	11.81	174	66497	995.73	pg		0.00
Spiked Amount 1000.000			Recovery = 99.57%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.53	85	51017	495.71	pg		99
3) Chloromethane	3.62	52	15823	454.65	pg		94
4) Vinyl Chloride	3.72	62	44310	493.69	pg		100
5) Chloroethane	4.00	64	22509	498.03	pg		99
6) Acetone	4.29	58	37194	264.92	pg	#	90
7) 1,1-Dichloroethene	4.65	96	24469	537.51	pg	#	88
8) Methylene Chloride	4.71	84	27802	535.90	pg		94
9) Trichlorotrifluoroethane	4.85	151	22346	535.87	pg		97
10) trans-1,2-Dichloroethene	5.19	96	26492	528.22	pg		98
11) 1,1-Dichloroethane	5.30	63	48402	539.85	pg		99
12) Methyl tert-Butyl Ether	5.34	73	67185	523.61	pg		99
13) cis-1,2-Dichloroethene	5.77	96	27461	537.38	pg		98
14) Chloroform	5.94	83	46751	629.68	pg		97
16) 1,2-Dichloroethane	6.40	62	37579	533.84	pg		99
17) 1,1,1-Trichloroethane	6.57	97	39044	524.68	pg		99
18) Benzene	6.87	78	129099	516.44	pg		100
19) Carbon Tetrachloride	6.97	117	30489	514.06	pg		99
21) 1,2-Dichloropropane	7.46	63	29351	516.27	pg		98
22) Trichloroethene	7.63	130	28431	539.00	pg		99
23) 1,4-Dioxane	7.65	88	19653	489.39	pg		88
24) cis-1,3-Dichloropropene	8.31	75	39380	487.07	pg		98
25) 1,1,2-Trichloroethane	8.88	83	21819	507.31	pg		98
27) Toluene	9.11	91	111635	488.31	pg		100
28) 1,2-Dibromoethane	9.67	107	27211	510.92	pg		100
29) Tetrachloroethene	10.08	166	27239	521.70	pg		100
31) Chlorobenzene	10.64	112	69946	512.01	pg		99
32) Ethylbenzene	10.95	91	119944	492.58	pg		99
33) m-&-p-Xylene	11.11	91	191654	1176.66	pg	#	67
34) o-Xylene	11.46	91	96152	562.20	pg		99
35) 1,1,2,2-Tetrachloroethane	11.46	83	40677	559.73	pg		97

LM 2/12/08

107

Quantitation Report (Not Reviewed)

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080803.D
Acq On : 8 Feb 2008 9:52
Operator : LM
Sample : 500pg TO-15 SIM CCV STD
Misc : S20-01220801/S20-01290802
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 11:17:47 2008
Quant Method : J:\Ms07\METHODS\X7020608.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 07 13:37:04 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,3-Dichlorobenzene	12.92	146	54291	475.24	pg	100
38) 1,4-Dichlorobenzene	12.97	146	54848	492.43	pg	99
39) 1,2-Dichlorobenzene	13.23	146	51141	480.44	pg	96
40) 1,2,4-Trichlorobenzene	14.55	182	38055	527.64	pg	99
41) Naphthalene	14.62	128	74860	432.03	pg	99
42) Hexachlorobutadiene	14.93	225	20264	502.23	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

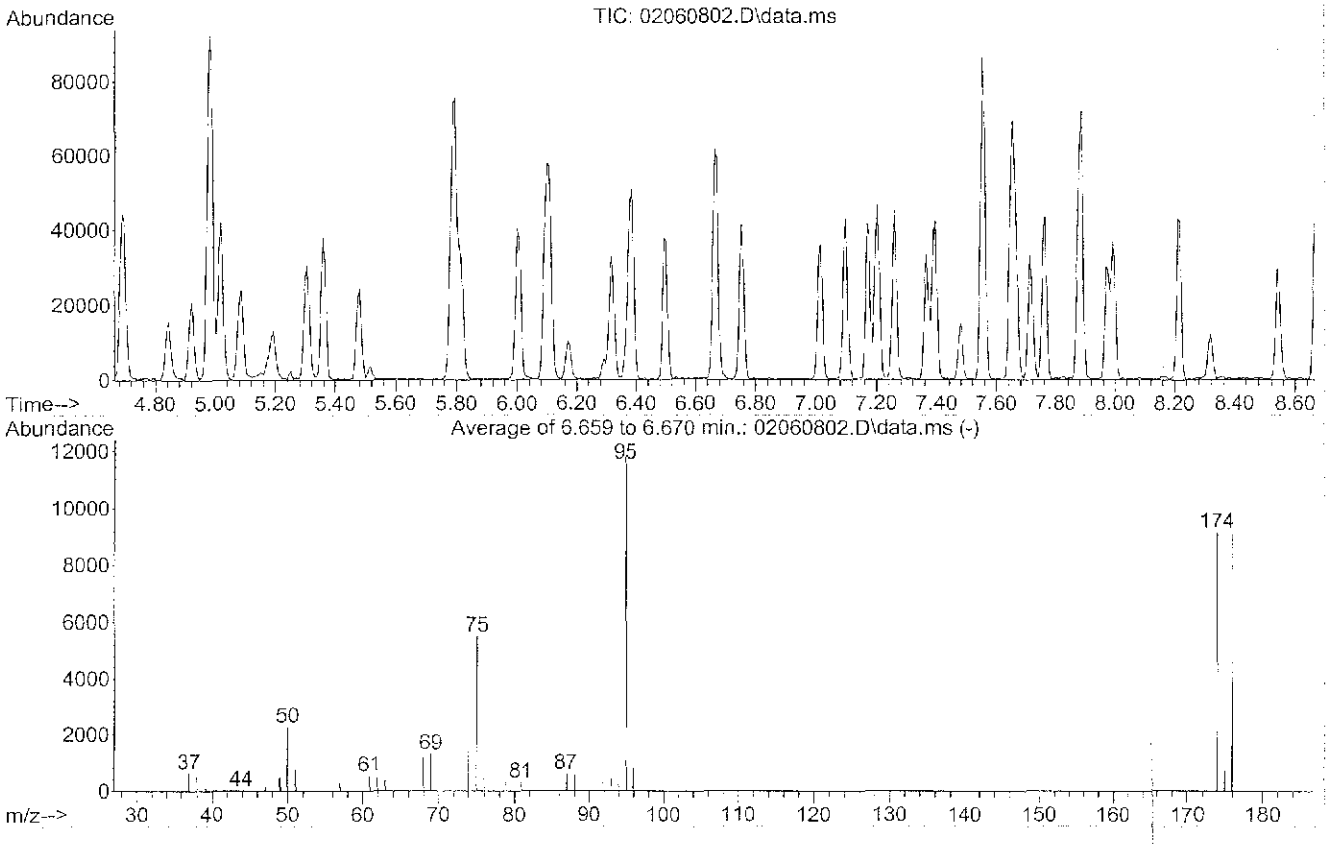
2/12/08

BFB TUNING & MASS CALIBRATIONS

Data Path : J:\Ms07\DATA\2008_02\06\
Data File : 02060802.D
Acq On : 6 Feb 2008 8:51
Operator : LM
Sample : 25ng BFB STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : J:\Ms07\METHODS\X7020608.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Feb 07 13:37:04 2008



AutoFind: Scans 379, 380, 381; Background Corrected with Scan 373

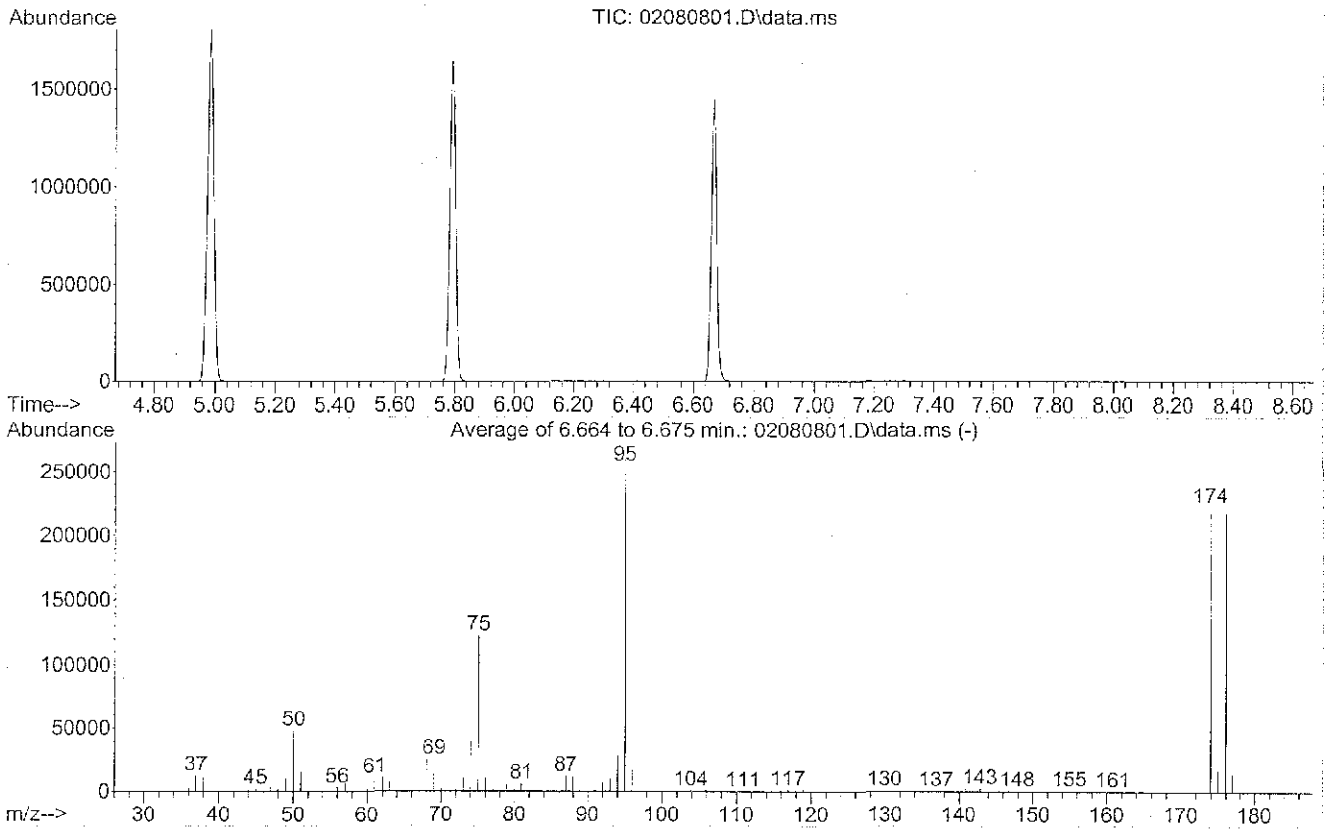
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.1	2249	PASS
75	95	30	66	46.5	5485	PASS
95	95	100	100	100.0	11802	PASS
96	95	5	9	6.6	777	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	77.2	9116	PASS
175	174	4	9	7.5	685	PASS
176	174	93	101	99.3	9051	PASS
177	176	5	9	6.9	627	PASS

109A

Data Path : J:\Ms07\DATA\2008_02\08\
Data File : 02080801.D
Acq On : 8 Feb 2008 9:02
Operator : LM
Sample : 25ng BFB STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : J:\Ms07\METHODS\X7020608.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Feb 07 13:37:04 2008



AutoFind: Scans 380, 381, 382; Background Corrected with Scan 372

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.6	48461	PASS
75	95	30	66	47.0	122443	PASS
95	95	100	100	100.0	260395	PASS
96	95	5	9	6.5	16838	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	85.5	222613	PASS
175	174	4	9	7.4	16564	PASS
176	174	93	101	97.7	217493	PASS
177	176	5	9	6.5	14114	PASS

2/12/08

RUN LOGS

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
16	02/05/08 18:39	02050816.D	CAS CAN/FC QC (1000ml)	AC01080/FC00442	LM	2	
17	02/05/08 19:10	02050817.D	CAS CAN/FC QC (1000ml)	AC00985/FC00177	LM	3	
18	02/05/08 19:41	02050818.D	CAS CAN/FC QC (1000ml)	AC00900/FC00435	LM	4	
19	02/05/08 20:11	02050819.D	CAS CAN/FC QC (1000ml)	AC00951/FC00242	LM	5	
20	02/05/08 20:42	02050820.D	CAS CAN/FC QC (1000ml)	AC01304/FC00228	LM	6	
21	02/05/08 21:13	02050821.D	CAS CAN/FC QC (1000ml)	AC00285/FC00693	LM	7	
22	02/05/08 21:45	02050822.D	CAS CAN/FC QC (1000ml)	AC00995/FC00305	LM	8	
23	02/05/08 22:16	02050823.D	CAS CAN/FC QC (1000ml)	AC01072/FC00585	LM	9	
24	02/05/08 22:46	02050824.D	CAS CAN/FC QC (1000ml)	AC01088/FC00427	LM	10	
25	02/05/08 23:16	02050825.D	CAS CAN/FC QC (1000ml)	AC00811/FC00154	LM	11	
26	02/05/08 23:47	02050826.D	CAS CAN/FC QC (1000ml)	AC01413/FC00565	LM	12	
27	02/06/08 0:17	02050827.D	CAS CAN/FC QC (1000ml)	AC00906/FC00282	LM	13	
28	02/06/08 0:48	02050828.D	CAS CAN/FC QC (1000ml)	AC00849/FC00335	LM	14	
29	02/06/08 1:18	02050829.D	CAS CAN/FC QC (1000ml)	AC00096/FC00404	LM	15	
30	02/06/08 1:49	02050830.D	CAS CAN/FC QC (1000ml)	AC01037/FC00596	LM	16	

1	02/06/08 8:22	02060801.D	25ng BFB STD		LM	2	
2	02/06/08 8:51	02060802.D	25ng BFB STD		LM	2	s (quick tune perfor mod) Pass
3	02/06/08 9:38	02060803.D	blank (200ml)		LM	1	
4	02/06/08 10:16	02060804.D	blank (200ml)		LM	1	Pass Calib. Blank
5	02/06/08 10:59	02060805.D	10pg TO-15 SIM ICAL STD	S20-01220801/S20-01290801	LM	1	ICAL OK all comp.
6	02/06/08 11:28	02060806.D	25pg TO-15 SIM ICAL STD	S20-01220801/S20-01290801	LM	1	10pg-20000pg,
7	02/06/08 11:58	02060807.D	100pg TO-15 SIM ICAL STD	S20-01220801/S20-01290802	LM	1	except chloroform, 1,2,4-TCB, Naphthalene Hexachloro Butadiene
8	02/06/08 12:25	02060808.D	250pg TO-15 SIM ICAL STD	S20-01220801/S20-01290802	LM	1	25pg-20000pg
9	02/06/08 12:54	02060809.D	500pg TO-15 SIM ICAL STD	S20-01220801/S20-01290802	LM	1	MeCl2 & Benzene ok 100pg->20000pg
10	02/06/08 13:22	02060810.D	1000pg TO-15 SIM ICAL STD	S20-01220801/S20-01290802	LM	1	
11	02/06/08 13:50	02060811.D	2500pg TO-15 SIM ICAL STD	S20-01220801/S20-01290802	LM	1	
12	02/06/08 14:17	02060812.D	10000pg TO-15 SIM ICAL STD	S20-01220801/S20-02040802	LM	3	
13	02/06/08 14:47	02060813.D	20000pg TO-15 SIM ICAL STD	S20-01220801/S20-02040802	LM	3	
14	02/06/08 15:15	02060814.D	500pg TO-15 SIM ICV STD	S20-01220801/S20-02040804	LM	4	Naphthalene bias low (Rerun)
15	02/06/08 15:36	02060815.D	500pg TO-15 SIM ICV STD	S20-01220801/S20-02040804	LM	4	Pass all comp.
16	02/06/08 17:33	02060816.D	Blank (200ml)	check system	LM	1	
17	02/06/08 18:02	02060817.D	Blank (200ml)	check system	LM	1	
18	02/06/08 18:31	02060818.D	10pg TO-15/SIM MDL#1 STD	S20-01220801/S20-01290801	LM	1	
19	02/06/08 19:01	02060819.D	10pg TO-15/SIM MDL#2 STD	S20-01220801/S20-01290801	LM	1	
20	02/06/08 19:30	02060820.D	10pg TO-15/SIM MDL#3 STD	S20-01220801/S20-01290801	LM	1	
21	02/06/08 19:59	02060821.D	10pg TO-15/SIM MDL#4 STD	S20-01220801/S20-01290801	LM	1	
22	02/06/08 20:28	02060822.D	10pg TO-15/SIM MDL#5 STD	S20-01220801/S20-01290801	LM	1	
23	02/06/08 20:58	02060823.D	10pg TO-15/SIM MDL#6 STD	S20-01220801/S20-01290801	LM	1	
24	02/06/08 21:27	02060824.D	10pg TO-15/SIM MDL#7 STD	S20-01220801/S20-01290801	LM	1	
25	02/06/08 21:56	02060825.D	10pg TO-15/SIM MDL#8 STD	S20-01220801/S20-01290801	LM	1	
26	02/06/08 22:25	02060826.D	5pg TO-15/SIM MDL Verification STD	S20-01220801/S20-01290801	LM	1	

LM 2/7/08

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	02/08/08 9:02	02080801.D	25ng BFB STD		LM	2	Pass
2	02/08/08 9:24	02080802.D	blank (100ml)		LM	1	
3	02/08/08 9:52	02080803.D	500pg TO-15 SIM CCV STD	S20-01220801/S20-01290802	LM	1	Pass
4	02/08/08 10:39	02080804.D	CAS CAN/FC/AVG QC (1000ml)	AC00959/FC00618/AVG00680	LM	1	Pass used as MB
5	02/08/08 11:18	02080805.D	500pg TO-15 SIM LCS STD	S20-01220801/S20-01150802	LM	3	Pass
6	02/08/08 12:18	02080806.D	P2800247-001 (1000ml)	Alaska ES-1-12008 (-1.6,3.5)	LM	4	
7	02/08/08 12:49	02080807.D	P2800247-003 (1000ml)	Alaska WFB-1-12008 (-3.4,3.5)	LM	5	
8	02/08/08 13:20	02080808.D	P2800247-004 (1000ml)	Alaska WFB-2-12008 (0.4,3.5)	LM	6	
9	02/08/08 14:03	02080809.D	P2800247-003 dup (1000ml)	Alaska WFB-1-12008 (-3.4,3.5)	LM	5	Pass as lab dup
10	02/08/08 14:53	02080810.D	P2800247-006 (10.0ml)	Alaska WS1-CI-12008 (-2.3,3.5)	LM	1	
11	02/08/08 16:00	02080811.D	P2800247-002 (500ml)	Alaska ES-2-12008 (-2.3,3.5)	LM	2	Case file, Run higher Val
12	02/08/08 17:05	02080812.D	P2800247-002 (1000ml)	Alaska ES-2-12008 (-2.3,3.5)	LM	7	
13	02/08/08 17:33	02080813.D	blank(100ml)	rinse	LM	1	
14	02/08/08 18:04	02080814.D	P2800247-005 (1000ml)	Alaska WFB-3-12008 (-3.8,3.5)	LM	2	
15	02/08/08 18:34	02080815.D	P2800247-007 (1000ml)	Alaska VS2-CE-12008 (1.1,3.5)	LM	3	
16	02/08/08 19:03	02080816.D	blank (200ml)	rinse	LM	12	
17	02/08/08 19:34	02080817.D	CAS CAN/FC/AVG (1000ml)	AC01280/FC00104/AVG00490	LM	12	
18	02/08/08 20:04	02080818.D	CAS CAN/FC/AVG (1000ml)	AC00701/FC00234/AVG00552	LM	13	
19	02/08/08 20:35	02080819.D	CAS CAN/FC/AVG (1000ml)	AC00593/FC00202/AVG00582	LM	14	
20	02/08/08 21:05	02080820.D	CAS CAN/FC/AVG (1000ml)	AC01475/FC00479/AVG00478	LM	15	
21	02/08/08 21:36	02080821.D	CAS CAN/FC/AVG (1000ml)	AC00753/FC00054/AVG00665	LM	16	